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Text Part Number: 78EE117C99-1030890646

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1.3 libsepol 2.4-2

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Version 2.1, February 1999

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1.6 cyrus-sasl 2.1.22

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1.8 zlib 1.2.3

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/* zlib.h -- interface of the 'zlib' general purpose compression library version 1.2.11, January 15th, 2017

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1.9 open-ldap 2.4.42+dfsg 2ubuntu3.2

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1.11 kerberos 1.13.2+dfsg 5ubuntu2

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cmd/krb5/slave/kpropd_rpc.c
lib/gss_mechs/mech_krb5/et/kdb5_err.c
lib/gss_mechs/mech_spnego/mech/gssapiP_spnego.h
lib/gss_mechs/mech_spnego/mech/spnego_mech.c
lib/krb5/kadm5/kadm_host_srv_names.c

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 k rel="stylesheet" href=" static/kerb.css" type="text/css" />
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   VERSION: '1.17',
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 <script type="text/javascript" src="_static/doctools.js"></script>
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 k rel="prev" title="MIT Kerberos features" href="mitK5features.html" />
</head>
<body>
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      accesskey="C">Contents</a> |
   <a href="mitK5features.html" title="MIT Kerberos features"
      accesskey="P">previous</a> |
   <a href="copyright.html" title="Copyright"
      accesskey="N">next</a> |
   <a href="genindex.html" title="General Index"
      accesskey="I">index</a> |
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<code class="docutils literal"><span class="pre">src/lib/gssapi</span></code>, including the following files:
<div class="highlight-default"><div class="highlight"><span></span><span class="n">lib</span><span</pre>
class="o">/</span><span class="n">gssapi</span><span class="o">/</span><span
class="n">generic</span><span class="o">/</span><span class="n">gssapi_err_generic</span><span
class="o">.</span><span class="n">et</span>
<span class="n">lib</span><span class="o">/</span><span class="n">gssapi</span><span</pre>
class="o">/</span><span class="n">mechglue</span><span class="o">/</span><span
class="n">g_accept_sec_context</span><span class="o">.</span><span class="n">c</span>
<span class="n">lib</span><span class="o">/</span><span class="n">gssapi</span><span</pre>
class="o">/</span><span class="n">mechglue</span><span class="o">/</span><span
class="n">g_acquire_cred</span><span class="o">.</span><span class="n">c</span>
<span class="n">lib</span><span class="o">/</span><span class="n">gssapi</span><span</pre>
class="o">/</span><span class="n">mechglue</span><span class="o">/</span><span
class="n">g_canon_name</span><span class="o">.</span><span class="n">c</span>
<span class="n">lib</span><span class="o">/</span><span class="n">gssapi</span><span</pre>
class="o">/</span><span class="n">mechglue</span><span class="o">/</span><span
class="n">g_compare_name</span><span class="0">.</span><span class="n">c</span>
<span class="n">lib</span><span class="o">/</span><span class="n">gssapi</span><span</pre>
class="o">/</span><span class="n">mechglue</span><span class="o">/</span><span
class="n">g_context_time</span><span class="o">.</span><span class="n">c</span>
<span class="n">lib</span><span class="o">/</span><span class="n">gssapi</span><span</pre>
```

class="o">/mechglue/g delete sec context.c lib/gssapi<span</pre> class="o">/mechglue/g_dsp_name.c lib/gssapi<span</pre> class="o">/mechglue/g_dsp_status.c lib/gssapi<span</pre> class="o">/mechglue/g_dup_name.c lib/gssapi<span</pre> class="o">/mechglue/g_exp_sec_context.c lib/gssapi<span</pre> class="o">/mechglue/g_export_name.c lib/gssapi/mechglue/g_glue.c lib/gssapi/mechglue/g_imp_name.c lib/gssapi/mechglue/g imp sec context.c lib/gssapi/mechglue/g init sec context.c lib/gssapi/mechglue/g initialize.c lib/gssapi/mechglue/g_inquire_context.c lib/gssapi<span</pre> class="o">/mechglue/g_inquire_cred.c lib/gssapi<span</pre> class="o">/mechglue/g_inquire_names.c lib/gssapi<span</pre> class="o">/mechglue/g_process_context.c lib/gssapi<span</pre> class="o">/mechglue/g_rel_buffer.c lib/gssapi<span</pre>

class="o">/mechglue/g_rel_cred.c lib/gssapi<span</pre> class="o">/mechglue/g_rel_name.c lib/gssapi<span</pre> class="o">/mechglue/g_rel_oid_set.c lib/gssapi<span</pre> class="o">/mechglue/g_seal.c lib/gssapi<span</pre> class="o">/mechglue/g_sign.c lib/gssapi<span</pre> class="o">/mechglue/g_store_cred.c lib/gssapi/mechglue/g_unseal.c lib/gssapi/mechglue/g_userok.c lib/gssapi/mechglue/g utils.c lib/gssapi/mechglue/g verify.c lib/gssapi/mechglue/gssd_pname_to_uid.c lib/gssapi/mechglue/mglueP.h lib/gssapi<span</pre> class="o">/mechglue/oid_ops.c lib/gssapi<span</pre> class="o">/spnego/gssapiP_spnego.h lib/gssapi<span</pre> class="o">/spnego/spnego_mech.c </div> </div> and the initial implementation of incremental propagation, including the following new or changed files:

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<div class="highlight-default"><div class="highlight"><span></span><span class="n">include</span><span</pre>
class="0">/</span><span class="n">iprop_hdr</span><span class="0">.</span><span class="n">h</span>
<span class="n">kadmin</span><span class="o">/</span><span class="n">server</span><span</pre>
class="o">/</span><span class="n">ipropd_svc</span><span class="o">.</span><span class="n">c</span>
<span class="n">lib</span><span class="o">/</span><span class="n">kdb</span><span class="o">/</span><span
class="n">iprop</span><span class="o">.</span><span class="n">x</span>
<span class="n">lib</span><span class="o">/</span><span class="n">kdb</span><span class="o">/</span><span</pre>
class="n">kdb_convert</span><span class="o">.</span><span class="n">c</span>
<span class="n">lib</span><span class="o">/</span><span class="n">kdb</span><span class="o">/</span><span
class="n">kdb log</span><span class="o">.</span><span class="n">c</span>
<span class="n">lib</span><span class="o">/</span><span class="n">kdb</span><span class="o">/</span><span
class="n">kdb_log</span><span class="o">.</span><span class="n">h</span>
<span class="n">lib</span><span class="o">/</span><span class="n">krb5</span><span</pre>
class="o">/</span><span class="n">error_tables</span><span class="o">/</span><span
class="n">kdb5_err</span><span class="o">.</span><span class="n">et</span>
<span class="n">kprop</span><span class="0">/</span><span class="n">kpropd rpc</span><span</pre>
class="o">.</span><span class="n">c</span>
<span class="n">kprop</span><span class="o">/</span><span class="n">kproplog</span><span</pre>
class="o">.</span><span class="n">c</span>
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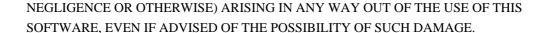
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.. parsed-literal::

lib/gssapi/generic/gssapi err generic.et lib/gssapi/mechglue/g_accept_sec_context.c lib/gssapi/mechglue/g_acquire_cred.c lib/gssapi/mechglue/g_canon_name.c lib/gssapi/mechglue/g_compare_name.c lib/gssapi/mechglue/g_context_time.c lib/gssapi/mechglue/g_delete_sec_context.c lib/gssapi/mechglue/g_dsp_name.c lib/gssapi/mechglue/g_dsp_status.c lib/gssapi/mechglue/g_dup_name.c lib/gssapi/mechglue/g_exp_sec_context.c lib/gssapi/mechglue/g_export_name.c lib/gssapi/mechglue/g_glue.c lib/gssapi/mechglue/g_imp_name.c lib/gssapi/mechglue/g_imp_sec_context.c lib/gssapi/mechglue/g_init_sec_context.c lib/gssapi/mechglue/g_initialize.c lib/gssapi/mechglue/g_inquire_context.c lib/gssapi/mechglue/g_inquire_cred.c lib/gssapi/mechglue/g_inquire_names.c lib/gssapi/mechglue/g_process_context.c lib/gssapi/mechglue/g_rel_buffer.c lib/gssapi/mechglue/g_rel_cred.c lib/gssapi/mechglue/g_rel_name.c lib/gssapi/mechglue/g_rel_oid_set.c lib/gssapi/mechglue/g_seal.c lib/gssapi/mechglue/g_sign.c lib/gssapi/mechglue/g_store_cred.c lib/gssapi/mechglue/g_unseal.c

lib/gssapi/mechglue/g_userok.c lib/gssapi/mechglue/g_utils.c

lib/gssapi/mechglue/g_verify.c lib/gssapi/mechglue/gssd_pname_to_uid.c lib/gssapi/mechglue/mglueP.h lib/gssapi/mechglue/oid_ops.c lib/gssapi/spnego/gssapiP_spnego.h lib/gssapi/spnego/spnego_mech.c

and the initial implementation of incremental propagation, including the following new or changed files:

.. parsed-literal::

include/iprop_hdr.h kadmin/server/ipropd_svc.c lib/kdb/iprop.x lib/kdb/kdb_convert.c lib/kdb/kdb_log.c lib/kdb/kdb_log.h lib/krb5/error_tables/kdb5_err.et kprop/kpropd_rpc.c kprop/kproplog.c

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The implementations of GSSAPI mechglue in GSSAPI-SPNEGO in

"src/lib/gssapi", including the following files:

lib/gssapi/generic/gssapi_err_generic.et

lib/gssapi/mechglue/g_accept_sec_context.c

lib/gssapi/mechglue/g_acquire_cred.c

lib/gssapi/mechglue/g_canon_name.c

lib/gssapi/mechglue/g compare name.c

lib/gssapi/mechglue/g_context_time.c

lib/gssapi/mechglue/g_delete_sec_context.c

lib/gssapi/mechglue/g_dsp_name.c

lib/gssapi/mechglue/g_dsp_status.c

lib/gssapi/mechglue/g_dup_name.c

lib/gssapi/mechglue/g_exp_sec_context.c

lib/gssapi/mechglue/g_export_name.c

lib/gssapi/mechglue/g_glue.c

lib/gssapi/mechglue/g_imp_name.c

lib/gssapi/mechglue/g_imp_sec_context.c

lib/gssapi/mechglue/g_init_sec_context.c

lib/gssapi/mechglue/g_initialize.c

lib/gssapi/mechglue/g_inquire_context.c

lib/gssapi/mechglue/g inquire cred.c

lib/gssapi/mechglue/g_inquire_names.c

lib/gssapi/mechglue/g_process_context.c

lib/gssapi/mechglue/g_rel_buffer.c

lib/gssapi/mechglue/g_rel_cred.c

 $lib/gssapi/mechglue/g_rel_name.c$

lib/gssapi/mechglue/g_rel_oid_set.c

lib/gssapi/mechglue/g_seal.c

lib/gssapi/mechglue/g_sign.c

lib/gssapi/mechglue/g_store_cred.c

lib/gssapi/mechglue/g_unseal.c

lib/gssapi/mechglue/g_userok.c

 $lib/gssapi/mechglue/g_utils.c$

lib/gssapi/mechglue/g_verify.c

lib/gssapi/mechglue/gssd_pname_to_uid.c

lib/gssapi/mechglue/mglueP.h

lib/gssapi/mechglue/oid_ops.c

lib/gssapi/spnego/gssapiP_spnego.h

lib/gssapi/spnego/spnego_mech.c

and the initial implementation of incremental propagation, including the following new or changed files:

include/iprop_hdr.h kadmin/server/ipropd_svc.c lib/kdb/iprop.x lib/kdb/kdb_convert.c lib/kdb/kdb_log.c lib/kdb/kdb_log.h lib/krb5/error_tables/kdb5_err.et kprop/kpropd_rpc.c kprop/kproplog.c

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import os
import sys
import re
def warn(fname, ln, msg):
 print '%s: %d: %s' % (fname, ln + 1, msg)
def indicates license(line):
 return 'Copyright' in line or 'COPYRIGHT' in line or 'License' in line
# Check a comment for boilerplate violations. Return true if the comment
# is a license statement.
def check_comment(comment, fname, ln, code_seen, nonlicense_seen):
 text seen = False
 is license = False
 for line in comment:
    if not is_license and indicates_license(line):
      is license = True
      if text seen:
         warn(fname, ln, 'License begins after first line of comment')
      elif code_seen:
         warn(fname, ln, 'License after code')
      elif nonlicense seen:
         warn(fname, ln, 'License after non-license comments')
    # DB2 licenses start with '/*-' and we don't want to change them.
    if line != " and line != '-':
      text\_seen = True
 return is_license
```

```
def check_file(lines, fname):
 # Skip emacs mode line if present.
 if '-*- mode: c;' in lines[ln]:
    ln += 1
 # Check filename comment if present.
 m = re.match(r'/\ ([^{\land}]*)(-.*)? \ /*/', lines[ln])
 if m:
    if m.group(1) != fname:
       warn(fname, ln, 'Wrong filename in comment')
    ln += 1
 # Scan for license statements.
 in\_comment = False
 code\_seen = False
 nonlicense seen = False
 for line in lines[ln:]:
    # Strip out whitespace and comments contained within a line.
    if not in comment:
      line = re.sub(r'\wedge*.*?\wedge*/', ", line)
    line = line.strip()
    if not in_comment and '/*' in line:
      (line, sep, comment_part) = line.partition('/*')
      comment = [comment_part.strip()]
      comment\_starts\_at = ln
      in comment = True
    elif in_comment and '*/' not in line:
      comment.append(line.lstrip('*').lstrip())
    elif in_comment:
      (comment_part, sep, line) = line.partition('*/')
      comment.append(comment_part.strip())
      is_license = check_comment(comment, fname, comment_starts_at,
                       code_seen, nonlicense_seen)
      nonlicense_seen = nonlicense_seen or not is_license
      in\_comment = False
    elif line.strip() != ":
      code\_seen = True
    ln += 1
for fname in sys.argv[1:]:
 if fname.startswith('./'):
    fname = fname[2:]
 f = open(fname)
 lines = f.readlines()
```

```
f.close()
check_file(lines, fname)
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=======
```

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```
.. toctree::
    :hidden:
    copyright.rst
.. include:: notice.rst
/* -*- mode: c; c-basic-offset: 4; indent-tabs-mode: nil -*- */
/*
```

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*/

1.12 blas 3.8.0

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Contributions to the OpenBLAS project

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- * Optimize BLAS3 on ICT Loongson 3A.
- * Optimize BLAS3 on Intel Sandy Bridge.
- * Werner Saar < wernsaar@googlemail.com>
- * [2013-03-04] Optimize AVX and FMA4 DGEMM on AMD Bulldozer
- * [2013-04-27] Optimize AVX and FMA4 TRSM on AMD Bulldozer
- * [2013-06-09] Optimize AVX and FMA4 SGEMM on AMD Bulldozer
- * [2013-06-11] Optimize AVX and FMA4 ZGEMM on AMD Bulldozer
- * [2013-06-12] Optimize AVX and FMA4 CGEMM on AMD Bulldozer
- * [2013-06-16] Optimize dgemv_n kernel on AMD Bulldozer
- * [2013-06-20] Optimize ddot, daxpy kernel on AMD Bulldozer
- * [2013-06-21] Optimize dcopy kernel on AMD Bulldozer
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- * Optimization on AMD Piledriver
- * Optimization on Intel Haswell
- ## Previous Developers
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- * Build LAPACKE: C interface to LAPACK
- * Improve the windows build.
- * Chen Shaohu <huhumartinwar@gmail.com>
- * Optimize GEMV on the Loongson 3A processor.
- * Luo Wen
- * Intern. Test Level-2 BLAS.
- ## Contributors

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- * pipping http://page.mi.fu-berlin.de/pipping
- * [2011-06-11] Make USE_OPENMP=0 disable openmp.
- * Stefan Karpinski <stefan@karpinski.org>
- * [2011-12-28] Fix a bug about SystemStubs on Mac OS X.

- * Alexander Eberspcher https://github.com/aeberspaecher
- * [2012-05-02] Add note on patch for segfaults on Linux kernel 2.6.32.
- * Mike Nolta <mike@nolta.net>
- * [2012-05-19] Fix building bug on FreeBSD and NetBSD.
- * Sylvestre Ledru https://github.com/sylvestre
- * [2012-07-01] Improve the detection of sparc. Fix building bug under Hurd and kfreebsd.
- * Jameson Nash https://github.com/vtjnash>
- * [2012-08-20] Provide support for passing CFLAGS, FFLAGS, PFLAGS, FPFLAGS to make on the command line.
- * Alexander Nasonov <alnsn@yandex.ru>
- * [2012-11-10] Fix NetBSD build.
- * Sbastien Villemot <sebastien@debian.org>
- * [2012-11-14] Fix compilation with TARGET=GENERIC. Patch applied to Debian package.
- * [2013-08-28] Avoid failure on gemu guests declaring an Athlon CPU without 3dnow!
- * Kang-Che Sung < Explorer 09@gmail.com>
- * [2013-05-17] Fix typo in the document. Re-order the architecture list in getarch.c.
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- * [2013-05-22] Adjust Makefile about downloading LAPACK source files.
- * Lei WANG https://github.com/wlbksy>
- * [2013-05-22] Fix a bug about wget.
- * Dan Luu http://www.linkedin.com/in/danluu
- * [2013-06-30] Add Intel Haswell support (using sandybridge optimizations).
- * grisuthedragon https://github.com/grisuthedragon
- * [2013-07-11] create openblas_get_parallel to retrieve information which parallelization model is used by OpenBLAS.
- * Elliot Saba <staticfloat@gmail.com>
- * [2013-07-22] Add in return value for `interface/trtri.c`
- * Sbastien Fabbro

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- * [2013-07-24] Modify makefile to respect user's LDFLAGS
- * [2013-07-24] Add stack markings for GNU as arch-independent for assembler files
- * Viral B. Shah < viral@mayin.org>
- * [2013-08-21] Patch LAPACK XLASD4.f as discussed in JuliaLang/julia#2340

- * Lars Buitinck https://github.com/larsmans
- * [2013-08-28] get rid of the generated cblas noconst.h file
- * [2013-08-28] Missing threshold in gemm.c
- * [2013-08-28] fix default prefix handling in makefiles
- * yieldthought https://github.com/yieldthought
- * [2013-10-08] Remove -Wl,--retain-symbols-file from dynamic link line to fix tool support
- * Keno Fischer https://github.com/loladiro
- * [2013-10-23] Use FC instead of CC to link the dynamic library on OS X
- * Christopher Meng <cickumqt@gmail.com>
- * [2013-12-09] Add DESTDIR support for easier building on RPM based distros.

 Use install command instead of cp to install files with permissions control.
- * Lucas Beyer < lucasb.eyer.be@gmail.com>
- * [2013-12-10] Added support for NO_SHARED in make install.
- * carlkl <https://github.com/carlkl>
- * [2013-12-13] Fixed LAPACKE building bug on Windows
- * Isaac Dunham https://github.com/idunham
- * [2014-08-03] Fixed link error on Linux/musl
- * Dave Nuechterlein
- * [2014-10-10] trmm and sgemm kernels (optimized for APM's X-Gene 1). ARMv8 support.
- * Jerome Robert < jeromerobert@gmx.com>
- * [2015-01-01] Speed-up small `ger` and `gemv` using stack allocation (bug #478)
- * [2015-12-23] `stack_check` in `gemv.c` (bug #722)
- * [2015-12-28] Allow to force the number of parallel make job
- * [2015-12-28] Fix detection of AMD E2-3200 detection
- * [2015-12-31] Let `make MAX_STACK_ALLOC=0` do what expected
- * [2016-01-19] Disable multi-threading in `ger` and `swap` for small matrices (bug #731)
- * [2016-01-24] Use `GEMM_MULTITHREAD_THRESHOLD` as a number of ops (bug #742)
- * [2016-01-26] Let `openblas_get_num_threads` return the number of active threads (bug #760)
- * [2016-01-30] Speed-up small `zger`, `zgemv`, `ztrmv` using stack allocation (bug #727)
- * Dan Kortschak
- * [2015-01-07] Added test for droting bug #484.
- * Ton van den Heuvel https://github.com/ton>
- * [2015-03-18] Fix race condition during shutdown causing a crash in gotoblas_set_affinity().
- * Martin Koehler https://github.com/grisuthedragon/
- * [2015-09-07] Improved imatcopy

- * Ashwin Sekhar T K https://github.com/ashwinyes/
- * [2015-11-09] Assembly kernels for Cortex-A57 (ARMv8)
- * [2015-11-20] lapack-test fixes for Cortex-A57
- * [2016-03-14] Additional functional Assembly Kernels for Cortex-A57
- * [2016-03-14] Optimize Dgemm 4x4 for Cortex-A57
- * theoractice theoractice/>
- * [2016-03-20] Fix compiler error in VisualStudio with CMake
- * [2016-03-22] Fix access violation on Windows while static linking
- * Paul Mustire https://github.com/buffer51/
- * [2016-02-04] Fix Android build on ARMV7
- * [2016-04-26] Android build with LAPACK for ARMV7 & ARMV8
- * Shivraj Patil https://github.com/sva-img/
- * [2016-05-03] DGEMM optimization for MIPS P5600 and I6400 using MSA
- * Kaustubh Raste https://github.com/ksraste/
- * [2016-05-09] DTRSM optimization for MIPS P5600 and I6400 using MSA
- * [2016-05-20] STRSM optimization for MIPS P5600 and I6400 using MSA
- * Abdelrauf https://github.com/quickwritereader
- * [2017-01-01] dgemm and dtrmm kernels for IBM z13
- * [2017-02-26] ztrmm kernel for IBM z13
- * [2017-03-13] strmm and ctrmm kernel for IBM z13
- * [2017-09-01] initial Blas Level-1,2 (double precision) for IBM z13
- * [2018-03-07] added missing Blas Level 1-2 (double precision) simd codes
- * [2019-02-01] added missing Blas Level-1,2 (single precision) simd codes
- * [2019-03-14] power9 dgemm/dtrmm kernel
- * [2019-04-29] power9 sgemm/strmm kernel

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1.13 free-type 2.10.1

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src/base/fthash.c
src/base/md5.c
src/base/md5.h
src/bdf/bdf.c
src/bdf/bdf.h
src/bdf/bdfdrivr.c
src/bdf/bdfdrivr.h
src/bdf/bdferror.h
src/bdf/bdflib.c
src/bdf/module.mk
src/bdf/README
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src/pcf/module.mk
src/pcf/pcf.c
src/pcf/pcf.h
src/pcf/pcfdrivr.c
src/pcf/pcfdrivr.h
src/pcf/pcferror.h
src/pcf/pcfread.c
src/pcf/pcfread.h
src/pcf/pcfutil.c
src/pcf/pcfutil.h
src/pcf/README
src/pcf/rules.mk
src/gzip/adler32.c
src/gzip/infblock.c
src/gzip/infblock.h
```

```
src/gzip/infcodes.c
src/gzip/infcodes.h
src/gzip/inffixed.h
src/gzip/inflate.c
src/gzip/inftrees.c
src/gzip/inftrees.h
src/gzip/infutil.c
src/gzip/infutil.h
src/gzip/zconf.h
src/gzip/zutil.c
src/gzip/zutil.c
src/gzip/zutil.c
#
src/tools/apinames.c
src/tools/ftrandom/ftrandom.c
#
# EOF
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1.14 xz 5.1.1alpha+20120614 2ubuntu2

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1.15 libpng 1.6.32

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1.17 bzip2 1.0.6

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Julian Seward, Cambridge, UK.
jseward@acm.org
bzip2/libbzip2 version 1.0.2 of 30 December 2001

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This package was debianized by Colin Walters <walters@debian.org> on Thu. 3 Jul 2003 17:10:57 -0400.

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1.19 pillow 7.1.1

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GIMP Palette

Name: custompalette

Columns: 4

#

0 0 0 Index 3

65 38 30 Index 4

103 62 49 Index 6

79 73 72 Index 7

114 101 97 Index 8

208 127 100 Index 9

151 144 142 Index 10

221 207 199 Index 11

NotoNastaliqUrdu-Regular.ttf and NotoSansSymbols-Regular.ttf, from https://github.com/googlei18n/noto-fonts NotoSansJP-Thin.otf, from https://www.google.com/get/noto/help/cjk/

AdobeVFPrototype.ttf, from https://github.com/adobe-fonts/adobe-variable-font-prototype

TINY5x3GX.ttf, from http://velvetyne.fr/fonts/tiny

ArefRuqaa-Regular.ttf, from https://github.com/google/fonts/tree/master/ofl/arefruqaa

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10x20-ISO8859-1.pcf, from https://packages.ubuntu.com/xenial/xfonts-base

```
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GIMP Palette
Name: badpalettefile
Columns: 4
0 0 0 Index 3
34567890123456789
103 62 49 Index 6
79 73 72 Index 7
114 101 97 Index 8
208 127 100 Index 9
151 144 142 Index 10
221 207 199 Index 11
GIMP Palette
Name: Test
Columns: 0
GIMP Palette
Name: badpaletteentry
Columns: 4
0 0 0 Index 3
65 38
103 62 49 Index 6
79 73 72 Index 7
114 101 97 Index 8
208 127 100 Index 9
151 144 142 Index 10
221 207 199 Index 11
```

1.20 libpng 1.6.37

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```
/* intel_init.c - SSE2 optimized filter functions
```

*

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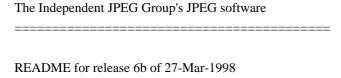
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1.22 libjpeg 9d

1.22.1 Notifications:

This software is based in part on the work of the Independent JPEG Group.

1.22.2 Available under license:



This distribution contains the sixth public release of the Independent JPEG Group's free JPEG software. You are welcome to redistribute this software and to use it for any purpose, subject to the conditions under LEGAL ISSUES, below.

Serious users of this software (particularly those incorporating it into larger programs) should contact IJG at jpeg-info@uunet.uu.net to be added to our electronic mailing list. Mailing list members are notified of updates and have a chance to participate in technical discussions, etc.

This software is the work of Tom Lane, Philip Gladstone, Jim Boucher, Lee Crocker, Julian Minguillon, Luis Ortiz, George Phillips, Davide Rossi, Guido Vollbeding, Ge' Weijers, and other members of the Independent JPEG Group.

IJG is not affiliated with the official ISO JPEG standards committee.

DOCUMENTATION ROADMAP

This file contains the following sections:

OVERVIEW General description of JPEG and the IJG software.

LEGAL ISSUES Copyright, lack of warranty, terms of distribution.

REFERENCES Where to learn more about JPEG.

ARCHIVE LOCATIONS Where to find newer versions of this software.

RELATED SOFTWARE Other stuff you should get. FILE FORMAT WARS Software *not* to get.

TO DO Plans for future IJG releases.

Other documentation files in the distribution are:

User documentation:

install.doc How to configure and install the IJG software.

usage.doc Usage instructions for cjpeg, djpeg, jpegtran,

rdjpgcom, and wrjpgcom.

*.1 Unix-style man pages for programs (same info as usage.doc).

wizard.doc Advanced usage instructions for JPEG wizards only.

change.log Version-to-version change highlights.

Programmer and internal documentation:

libjpeg.doc How to use the JPEG library in your own programs.

example.c Sample code for calling the JPEG library.

structure.doc Overview of the JPEG library's internal structure.

filelist.doc Road map of IJG files.

coderules.doc Coding style rules --- please read if you contribute code.

Please read at least the files install.doc and usage.doc. Useful information can also be found in the JPEG FAQ (Frequently Asked Questions) article. See ARCHIVE LOCATIONS below to find out where to obtain the FAQ article.

If you want to understand how the JPEG code works, we suggest reading one or more of the REFERENCES, then looking at the documentation files (in roughly the order listed) before diving into the code.

OVERVIEW

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This package contains C software to implement JPEG image compression and decompression. JPEG (pronounced "jay-peg") is a standardized compression method for full-color and gray-scale images. JPEG is intended for compressing "real-world" scenes; line drawings, cartoons and other non-realistic images are not its strong suit. JPEG is lossy, meaning that the output image is not exactly identical to the input image. Hence you must not use JPEG if you have to have identical output bits. However, on typical photographic images, very good compression levels can be obtained with no visible change, and remarkably high compression levels are possible if you can tolerate a low-quality image. For more details, see the references, or just experiment with various compression settings.

This software implements JPEG baseline, extended-sequential, and progressive compression processes. Provision is made for supporting all variants of these processes, although some uncommon parameter settings aren't implemented yet. For legal reasons, we are not distributing code for the arithmetic-coding variants of JPEG; see LEGAL ISSUES. We have made no provision for supporting the hierarchical or lossless processes defined in the standard.

We provide a set of library routines for reading and writing JPEG image files, plus two sample applications "cjpeg" and "djpeg", which use the library to

perform conversion between JPEG and some other popular image file formats. The library is intended to be reused in other applications.

In order to support file conversion and viewing software, we have included considerable functionality beyond the bare JPEG coding/decoding capability; for example, the color quantization modules are not strictly part of JPEG decoding, but they are essential for output to colormapped file formats or colormapped displays. These extra functions can be compiled out of the library if not required for a particular application. We have also included "jpegtran", a utility for lossless transcoding between different JPEG processes, and "rdjpgcom" and "wrjpgcom", two simple applications for inserting and extracting textual comments in JFIF files.

The emphasis in designing this software has been on achieving portability and flexibility, while also making it fast enough to be useful. In particular, the software is not intended to be read as a tutorial on JPEG. (See the REFERENCES section for introductory material.) Rather, it is intended to be reliable, portable, industrial-strength code. We do not claim to have achieved that goal in every aspect of the software, but we strive for it.

We welcome the use of this software as a component of commercial products. No royalty is required, but we do ask for an acknowledgement in product documentation, as described under LEGAL ISSUES.

LEGAL ISSUES

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- 2. You can use this software for whatever you want. You don't have to pay us.
- 3. You may not pretend that you wrote this software. If you use it in a program, you must acknowledge somewhere in your documentation that you've used the IJG code.

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These conditions apply to any software derived from or based on the IJG code, not just to the unmodified library. If you use our work, you ought to acknowledge us.

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The Unix configuration script "configure" was produced with GNU Autoconf. It is copyright by the Free Software Foundation but is freely distributable. The same holds for its supporting scripts (config.guess, config.sub, ltconfig, ltmain.sh). Another support script, install-sh, is copyright by M.I.T. but is also freely distributable.

It appears that the arithmetic coding option of the JPEG spec is covered by patents owned by IBM, AT&T, and Mitsubishi. Hence arithmetic coding cannot legally be used without obtaining one or more licenses. For this reason, support for arithmetic coding has been removed from the free JPEG software. (Since arithmetic coding provides only a marginal gain over the unpatented Huffman mode, it is unlikely that very many implementations will support it.)

So far as we are aware, there are no patent restrictions on the remaining code.

The IJG distribution formerly included code to read and write GIF files. To avoid entanglement with the Unisys LZW patent, GIF reading support has been removed altogether, and the GIF writer has been simplified to produce "uncompressed GIFs". This technique does not use the LZW algorithm; the resulting GIF files are larger than usual, but are readable by all standard GIF decoders.

We are required to state that

"The Graphics Interchange Format(c) is the Copyright property of CompuServe Incorporated. GIF(sm) is a Service Mark property of CompuServe Incorporated."

REFERENCES

We highly recommend reading one or more of these references before trying to understand the innards of the JPEG software.

The best short technical introduction to the JPEG compression algorithm is Wallace, Gregory K. "The JPEG Still Picture Compression Standard", Communications of the ACM, April 1991 (vol. 34 no. 4), pp. 30-44. (Adjacent articles in that issue discuss MPEG motion picture compression, applications of JPEG, and related topics.) If you don't have the CACM issue handy, a PostScript file containing a revised version of Wallace's article is available at ftp://ftp.uu.net/graphics/jpeg/wallace.ps.gz. The file (actually a preprint for an article that appeared in IEEE Trans. Consumer Electronics) omits the sample images that appeared in CACM, but it includes corrections and some added material. Note: the Wallace article is copyright ACM and IEEE, and it may not be used for commercial purposes.

A somewhat less technical, more leisurely introduction to JPEG can be found in "The Data Compression Book" by Mark Nelson and Jean-loup Gailly, published by M&T Books (New York), 2nd ed. 1996, ISBN 1-55851-434-1. This book provides good explanations and example C code for a multitude of compression methods including JPEG. It is an excellent source if you are comfortable reading C code but don't know much about data compression in general. The book's JPEG sample code is far from industrial-strength, but when you are ready to look at a full implementation, you've got one here...

The best full description of JPEG is the textbook "JPEG Still Image Data Compression Standard" by William B. Pennebaker and Joan L. Mitchell, published by Van Nostrand Reinhold, 1993, ISBN 0-442-01272-1. Price US\$59.95, 638 pp. The book includes the complete text of the ISO JPEG standards (DIS 10918-1 and draft DIS 10918-2). This is by far the most complete exposition of JPEG

in existence, and we highly recommend it.

The JPEG standard itself is not available electronically; you must order a paper copy through ISO or ITU. (Unless you feel a need to own a certified official copy, we recommend buying the Pennebaker and Mitchell book instead; it's much cheaper and includes a great deal of useful explanatory material.) In the USA, copies of the standard may be ordered from ANSI Sales at (212) 642-4900, or from Global Engineering Documents at (800) 854-7179. (ANSI doesn't take credit card orders, but Global does.) It's not cheap: as of 1992, ANSI was charging \$95 for Part 1 and \$47 for Part 2, plus 7% shipping/handling. The standard is divided into two parts, Part 1 being the actual specification, while Part 2 covers compliance testing methods. Part 1 is titled "Digital Compression and Coding of Continuous-tone Still Images, Part 1: Requirements and guidelines" and has document numbers ISO/IEC IS 10918-1, ITU-T T.81. Part 2 is titled "Digital Compression and Coding of Continuous-tone Still Images, Part 2: Compliance testing" and has document numbers ISO/IEC IS 10918-2, ITU-T T.83.

Some extensions to the original JPEG standard are defined in JPEG Part 3, a newer ISO standard numbered ISO/IEC IS 10918-3 and ITU-T T.84. IJG currently does not support any Part 3 extensions.

The JPEG standard does not specify all details of an interchangeable file format. For the omitted details we follow the "JFIF" conventions, revision 1.02. A copy of the JFIF spec is available from:

Literature Department

C-Cube Microsystems, Inc.

1778 McCarthy Blvd.

Milpitas, CA 95035

phone (408) 944-6300, fax (408) 944-6314

A PostScript version of this document is available by FTP at ftp://ftp.uu.net/graphics/jpeg/jfif.ps.gz. There is also a plain text version at ftp://ftp.uu.net/graphics/jpeg/jfif.txt.gz, but it is missing the figures.

The TIFF 6.0 file format specification can be obtained by FTP from ftp://ftp.sgi.com/graphics/tiff/TIFF6.ps.gz. The JPEG incorporation scheme found in the TIFF 6.0 spec of 3-June-92 has a number of serious problems. IJG does not recommend use of the TIFF 6.0 design (TIFF Compression tag 6). Instead, we recommend the JPEG design proposed by TIFF Technical Note #2 (Compression tag 7). Copies of this Note can be obtained from ftp.sgi.com or from ftp://ftp.uu.net/graphics/jpeg/. It is expected that the next revision of the TIFF spec will replace the 6.0 JPEG design with the Note's design. Although IJG's own code does not support TIFF/JPEG, the free libtiff library uses our library to implement TIFF/JPEG per the Note. libtiff is available from ftp://ftp.sgi.com/graphics/tiff/.

ARCHIVE LOCATIONS

The "official" archive site for this software is ftp.uu.net (Internet address 192.48.96.9). The most recent released version can always be found there in directory graphics/jpeg. This particular version will be archived as ftp://ftp.uu.net/graphics/jpeg/jpegsrc.v6b.tar.gz. If you don't have direct Internet access, UUNET's archives are also available via UUCP; contact help@uunet.uu.net for information on retrieving files that way.

Numerous Internet sites maintain copies of the UUNET files. However, only ftp.uu.net is guaranteed to have the latest official version.

You can also obtain this software in DOS-compatible "zip" archive format from the SimTel archives (ftp://ftp.simtel.net/pub/simtelnet/msdos/graphics/), or on CompuServe in the Graphics Support forum (GO CIS:GRAPHSUP), library 12 "JPEG Tools". Again, these versions may sometimes lag behind the ftp.uu.net release.

The JPEG FAQ (Frequently Asked Questions) article is a useful source of general information about JPEG. It is updated constantly and therefore is not included in this distribution. The FAQ is posted every two weeks to Usenet newsgroups comp.graphics.misc, news.answers, and other groups. It is available on the World Wide Web at http://www.faqs.org/faqs/jpeg-faq/ and other news.answers archive sites, including the official news.answers archive at rtfm.mit.edu: ftp://rtfm.mit.edu/pub/usenet/news.answers/jpeg-faq/. If you don't have Web or FTP access, send e-mail to mail-server@rtfm.mit.edu with body

send usenet/news.answers/jpeg-faq/part1 send usenet/news.answers/jpeg-faq/part2

RELATED SOFTWARE

Numerous viewing and image manipulation programs now support JPEG. (Quite a few of them use this library to do so.) The JPEG FAQ described above lists some of the more popular free and shareware viewers, and tells where to obtain them on Internet.

If you are on a Unix machine, we highly recommend Jef Poskanzer's free PBMPLUS software, which provides many useful operations on PPM-format image files. In particular, it can convert PPM images to and from a wide range of other formats, thus making cjpeg/djpeg considerably more useful. The latest version is distributed by the NetPBM group, and is available from numerous sites, notably ftp://wuarchive.wustl.edu/graphics/graphics/packages/NetPBM/. Unfortunately PBMPLUS/NETPBM is not nearly as portable as the IJG software is; you are likely to have difficulty making it work on any non-Unix machine.

A different free JPEG implementation, written by the PVRG group at Stanford, is available from ftp://havefun.stanford.edu/pub/jpeg/. This program is designed for research and experimentation rather than production use; it is slower, harder to use, and less portable than the IJG code, but it is easier to read and modify. Also, the PVRG code supports lossless JPEG, which we do not. (On the other hand, it doesn't do progressive JPEG.)

FILE FORMAT WARS

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Some JPEG programs produce files that are not compatible with our library. The root of the problem is that the ISO JPEG committee failed to specify a concrete file format. Some vendors "filled in the blanks" on their own, creating proprietary formats that no one else could read. (For example, none of the early commercial JPEG implementations for the Macintosh were able to exchange compressed files.)

The file format we have adopted is called JFIF (see REFERENCES). This format has been agreed to by a number of major commercial JPEG vendors, and it has become the de facto standard. JFIF is a minimal or "low end" representation. We recommend the use of TIFF/JPEG (TIFF revision 6.0 as modified by TIFF Technical Note #2) for "high end" applications that need to record a lot of additional data about an image. TIFF/JPEG is fairly new and not yet widely supported, unfortunately.

The upcoming JPEG Part 3 standard defines a file format called SPIFF. SPIFF is interoperable with JFIF, in the sense that most JFIF decoders should be able to read the most common variant of SPIFF. SPIFF has some technical advantages over JFIF, but its major claim to fame is simply that it is an official standard rather than an informal one. At this point it is unclear whether SPIFF will supersede JFIF or whether JFIF will remain the de-facto standard. IJG intends to support SPIFF once the standard is frozen, but we have not decided whether it should become our default output format or not. (In any case, our decoder will remain capable of reading JFIF indefinitely.)

Various proprietary file formats incorporating JPEG compression also exist. We have little or no sympathy for the existence of these formats. Indeed, one of the original reasons for developing this free software was to help force convergence on common, open format standards for JPEG files. Don't use a proprietary file format!

TO DO

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The major thrust for v7 will probably be improvement of visual quality.

The current method for scaling the quantization tables is known not to be very good at low Q values. We also intend to investigate block boundary smoothing, "poor man's variable quantization", and other means of improving quality-vs-file-size performance without sacrificing compatibility.

In future versions, we are considering supporting some of the upcoming JPEG Part 3 extensions --- principally, variable quantization and the SPIFF file format.

As always, speeding things up is of great interest.

Please send bug reports, offers of help, etc. to jpeg-info@uunet.uu.net.

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