

license comment

To add or remove a comment about a feature license, use the **license comment** command in privileged EXEC mode.

Cisco ASR 1001 Router Platforms

license comment {**add feature** *feature-name comment* | **delete feature** *feature-name*}

Cisco 860, 880, and 890 Series Routers, and Cisco 1900, 2900, and 3900 Series Integrated Services Router Platforms

license comment {**add** *feature-name comment* | **delete** *feature-name*}

Cisco Catalyst 3560-E Switch Platforms

license comment {**add** *feature-name comment* | **delete** *feature-name*}

Cisco Catalyst 3750-E Switch Platforms

license comment {**add** *feature-name comment* | **delete** *feature-name*} [**switch** *switch-num*]

Cisco Catalyst 3750-E Switch Mixed Stack Platforms

license comment {**add** *feature-name comment* | **delete** *feature-name*} **switch** *switch-num*

Syntax Description

add	Adds a comment about a feature license.
feature	Specifies the feature name.
<i>feature-name</i>	Name of the licensed feature.
<i>comment</i>	String of a maximum of 99 characters, including special characters.
delete	Deletes a comment about a licensed feature.
switch <i>switch-num</i>	Specifies a switch in a switch stack or in a mixed switch stack. The switch number range is 1 to 9.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
12.2(35)SE2	This command was introduced.
12.4(15)XZ	This command was integrated into Cisco IOS Release 12.4(15)XZ.
12.4(20)T	This command was integrated into Cisco IOS Release 12.4(20)T.
Cisco IOS XE Release 3.2S	This command was modified. The feature keyword was added for the Cisco ASR 1001 router.

Usage Guidelines

This command is useful for tracking a license when multiple licenses are stored on a device, and for adding or deleting information about a specific license. You can also use the **license comment** command to verify that a license associated with the specified feature is present in license storage.

Use the **show license file** command to display comments added to the license file.

The **license comment** command performs these operations:

- Verifies that the license associated with the specified feature is present in the license storage.
- If there are multiple license lines, the command prompts for license line selection.
- If a comment exists in the license line, the command displays the comment first before prompting for a new comment. Up to 99 characters are stored in license storage.
- If a switch number is specified, this command is executed on the specified switch.

Examples

The following example shows how to add a comment to a license file on the Cisco ASR 1001 router by using the **license comment** command and by verifying it with the **show license file** command:

```
Router# license comment add feature throughput newest
Feature: throughput
  1 License Type: Permanent
    License State: Active, In Use
    License Addition: Exclusive
    License Count: Non-Counted
    Comment: --
    Store Name: Primary License Storage

% Success: Updating comment "--" with "newest" succeeded

Router# show license file

License Store: Primary License Storage
Store Index: 0
License: 11 throughput 1.0 LONG NORMAL STANDALONE EXCL INFINITE_KEYS INFIN
ITE_KEYS NEVER NEVER NiL SLM_CODE CL_ND_LCK NiL *12MDFXFB6TEQR54
00 NiL NiL NiL 5_MINS <UDI><PID>ASR1001</PID><SN>JAE14020AT5</SN>
</UDI> :0oy5aopCvhfLBBk3:10fBb4Kr3EwMLaYAHDV93ClpLXhJGOUE1ZuBusC,
0B2QIQlVvo6eUrKn27faF3zOYTtyjLRCGA8UMkemMyqmvjcg0Jhfm$<WLC>AQEBIQA
B//8szae77QGOnFBXBoP02Obx6Fq2XtGPUJnh5pGplTkDzw9J5aqkkUjTNku04sv4
FYORqWInXo3s+nsLU7rOtdOxoIxyZAo3LYmUJ+MFzsqlhKoJV1PyEvQ8H21MNUjVb
hoN0gyIWsyiJam8AQIkVBQFzhr10GYo1VzdzfJfEPQIx6tZ++/Vtc/q3SF/5Ko8XC
Y=</WLC>

Comment: newest
Hash: ZJJz5MveEOPePQA3ATs6+OxF4bw=
```

The following example shows how to add a comment to a license file. You are prompted to select the index number of the license to add the comment to.

```
Router# license comment add advsecurity "Permanent License"
Feature: advsecurity
  1 License Type: Permanent
    License State: Active, In Use
    License Addition: Exclusive
    Comment:
    Store Index: 0
    Store Name: Primary License Storage

  2 License Type: Evaluation
    License State: Inactive
      Evaluation total period: 8 weeks 4 days
```

```

    Evaluation period left: 8 weeks 4 days
License Addition: Additive
Comment:
Store Index: 1
Store Name: Primary License Storage

```

```

Select Index to Add Comment [1-2]: 1
% Success: Adding comment "Permanent License" succeeded

```

The following example shows the output from **show license file** command for verification purposes:

```
Router# show license file
```

```

License Store: Primary License Storage
Store Index: 0
License: 11 advsecurity 1.0 LONG NORMAL STANDALONE EXCL INFINITE_KEYS INFI
NITE_KEYS NEVER NEVER NiL SLM_CODE CL_ND_LCK NiL *1F8CTTRHMU8DBMZ
400 NiL NiL NiL 5_MINS <UDI><PID>CISCO861W</PID><SN>FHH112400KA</
SN></UDI> DjRM8tEsBrR7ayv1U6CWL7JIe1Nmu60biRNQuFWM8sV2dUQhQSS, iB4
WgUgos4KILZJ, 4xrseQQCwOqeASii:SVNCL1Cdffc, Oph8TQkzxbX3q$<WLC>AQEB
IQAB//9fp/DSeV2xPKc+d4T/DiUhG8UQwBA786dE+HuT2GMU3uDvMbIOdbpmBQ00Q
tQTGTRKqWInXo3s+nsLU7rOtdOxoIxyZAo3LYmUJ+MFzsq1hKoJV1PyEvQ8H21MNU
jVbhoN0gyIWsyiJam8AQIkVBQFzhr10GYo1VzdzfJfEPQIx6tZ++/Vtc/q3SF/5Ko
8XCY=</WLC>
Comment: Permanent License
Hash: Mx0Sy+VmbfaB7uRctuPLsblzpbU=

```

Related Commands

Command	Description
license clear	Removes a license entry from a permanent license file.
license install	Installs a stored license file.
license save	Saves a copy of a permanent license to a specified license file.
show license file	Displays information in a Cisco IOS software license file.

license expand nvram

To expand the memory allocation for license storage in NVRAM for Cisco 2800 and Cisco 3800 series integrated services router platforms, use the **license expand nvram** command in privileged EXEC mode.

license expand nvram

Syntax Description This command has no arguments or keywords.

Command Default No license storage expansion is configured.

Command Modes Privileged EXEC (#)

Command History	Release	Modification
	12.4(20)T	This command was introduced for the Cisco 2800 and Cisco 3800 series integrated services router platforms

Usage Guidelines License storage expansion reduces the amount of NVRAM available for configuration file storage. If the configuration files are too large to fit into the reduced NVRAM, you must run file compression on the configuration files by using the **service compress-config** command.

Examples The following example shows how to expand the allocation for license storage in NVRAM:

```
Router# license expand nvram
Caution: IOS configuration space will be re-partitioned in NVRAM.
You must back up your IOS configuration before running this command.
Do you wish to continue NVRAM re-partition?[confirm]
Router# y
```

The following response indicates that the operation was successful:

```
License storage expanded successfully.
IOS must be restarted for changes to take effect.
```

The following response shows that the existing configuration files need compression before the licensing file system can be expanded:

```
Error: startup-config is too large. Compress the config with "service compress-config"
followed by "copy system:running-config nvram:startup-config" and rerun "licence expand
nvram".
```

The following response shows that a configuration file is still too large for the resized NVRAM:

```
Error: cannot expand the license storage. Insufficient NVRAM to store compressed
configuration.
```

■ license expand nvram

The following response shows that expansion cannot take place because the size of the block files is too large:

```
Error: cannot expand the license storage. Existing block files are too large. Back up existing block files, delete them from nvram and reissue "license expand nvram".
```

The following response indicates that this command is being issued on an already expanded NVRAM:

```
Error: license storage already expanded to maximum size.
```

Related Commands

Command	Description
service compress-config	Compresses startup configuration files.

license feature

To activate the memory license feature, use the **license feature** command in global configuration mode. To deactivate the memory license feature, use the **no** form of this command.

license feature *feature-name*

no license feature *feature-name*

Syntax Description	<i>feature-name</i>	Software feature name.
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Command Default	The memory license feature is not activated.
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Command Modes	Global configuration (config)
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Command History	Release	Modification
	15.0(1)M	This command was introduced for the Cisco 1905 integrated services router platform.

Usage Guidelines	Use the license feature command to activate the memory license feature.
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Examples	The following example shows how to activate the memory license feature:
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```
Router(config)# license feature MEM-1900-256U512MB
Feature Name:MEM-1900-256U512MB
```

```
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```

```
You hereby acknowledge and agree that the product feature license
is terminable and that the product feature enabled by such license
may be shut down or terminated by Cisco after expiration of the
applicable term of the license (e.g., 30-day trial period). Cisco
reserves the right to terminate or shut down any such product feature
electronically or by any other means available. While alerts or such
messages may be provided, it is your sole responsibility to monitor
your terminable usage of any product feature enabled by the license
and to ensure that your systems and networks are prepared for the shut
down of the product feature. You acknowledge and agree that Cisco will
not have any liability whatsoever for any damages, including, but not
limited to, direct, indirect, special, or consequential damages related
to any product feature being shutdown or terminated. By clicking the
"accept" button or typing "yes" you are indicating you have read and
agree to be bound by all the terms provided herein.
```

```

ACCEPT? [yes/no]: yes
Router(config)#
*Nov 17 23:48:18.891: %XFR_EXT_MEMORY_LICENSING-6-LICENSE_NOT_ACTIVATED: License
MEM-1900-256U512MB will take effect af reboot.

*Nov 17 23:48:19.779: %LICENSE-6-EULA_ACCEPTED: EULA for feature MEM-1900-256U512MB 1.0
has been accepted. UDI=CISCO1920B; StoreIndex=3:Evaluation License Storage

Router# license install tftp://223.255.254.254/FCW1345000B_20091118190946245.lic
Installing licenses from "tftp://223.255.254.254/FCW1345000B_20091118190946245.lic"

Loading colbywen/FCW1345000B_20091118190946245.lic from 223.255.254.254 (via
GigabitEthernet0/0): !
[OK - 1171 bytes]
Installing...Feature:MEM-1900-256U512MB...Successful:Supported
1/1 licenses were successfully installed
0/1 licenses were existing licenses
0/1 licenses were failed to install

Router#
*Nov 19 00:14:48.603: %XFR_EXT_MEMORY_LICENSING-6-LICENSE_NOT_ACTIVATED: License
MEM-1900-256U512MB will take effect after the system reboot.

*Nov 19 00:14:48.607: %LICENSE-6-INSTALL: Feature MEM-1900-256U512MB 1.0 was installed in
this device. UDI=CISCO1921/K9:FCW1345000B; StoreIndex=0:Primary License Storage

```

Related Commands

Command	Description
license install	Installs a stored license file.
license revoke	Revokes a software license from one device and transfers it to another.

license feature snasw

To activate the SNA Switching (SNASw) feature license, use the **license feature snasw** command in global configuration mode. To deactivate the SNASw feature license, use the **no** form of this command.

license feature snasw

no license feature snasw

Syntax Description This command has no arguments or keywords.

Command Default The SNASw feature license is not activated.

Command Modes Global configuration (config)

Command History	Release	Modification
	15.0(1)M	This command was introduced for the Cisco 3900, 2900, and the 1900 series integrated services router platforms.

Usage Guidelines The **license feature snasw** command is used to activate the SNASw feature license.

Examples The following example shows how to enable the SNASw feature license:

```
Router(config)# license feature snasw
```

Related Commands	Command	Description
	license install	Installs a stored license file.

license install

To install a stored license file, use the **license install** command in privileged EXEC mode.

license install *stored-location-url*

ASR 1001 Router Platforms

license install file *stored-location-url*

Cisco Catalyst 4500E Series Switch Platforms

license install *stored-location-url* [**standby**]

Syntax Description		
<i>stored-location-url</i>		he location within a device where Cisco IOS software licenses are stored. Depending on the hardware platform, valid URL location file systems might be: archive , bootflash , bs , flash , flashn , ftp , http , https , null , nvr am, pram , rcp , scp , syslog , system , tftp , ttmpsys , usb0 , vb . <ul style="list-style-type: none"> The bs://, null://, and vb:// file systems do not accept filenames. The bs file system is available only on mixed Cisco 3750-E switch stacks. The archive, pram, scp, and syslog file systems are available only on router platforms. The flashn file system, where <i>n</i> is an integer in the range from 1 to 9, is available only on Cisco 3750-E switches and stacks. The https file system is not available on mixed Cisco 3750-E switch stacks and the Cisco 3560-E switch.
file		Installs a license file.
standby		(Optional) Specifies that the installation occurs on the standby device only.

Command Default A license is not installed.

Command Modes Privileged EXEC (#)

Command History	Release	Modification
	12.2(35)SE2	This command was introduced.
	12.4(15)XZ	This command was integrated into Cisco IOS Release 12.4(15)XZ.
	12.4(20)T	This command was integrated into Cisco IOS Release 12.4(20)T.
	Cisco IOS XE Release 3.1.0.SG	This command was modified. The standby keyword was added for the Catalyst 4500E series switches.
	Cisco IOS XE Release 3.2S	This command was modified. The file keyword was added for the Cisco ASR 1001 router.

Usage Guidelines

You must have already purchased the license and obtained the license file from either the Cisco licensing portal or by using the **license save EXEC** command.

When the **license install** command is issued, these actions are initiated:

- The license module parses the license file and retrieves the universal device identifier (UDI), license line, and license comments.
- If the UDI in the license file is not local, this command passes the license line and user comments to the specified switch where the information is provided to the license security application.
- If the license is a trial license, this command initiates an end-user license agreement prompting you to accept it. If you do not accept the end-user license agreement, the license line installation is stopped.
- Upon successful completion, the application notifies you about the installation of the license.
- The command displays an information message stating that the license installation is successful and whether the licensed feature is present in the current image.

The installation process does not install duplicate licenses. This message appears when duplicate licenses are detected:

```
Installing...Feature:xxx-xxx-xxx...Skipped:Duplicate
```

On some hardware platforms, you must reload (or reboot) the device to make a newly installed license active.

When the **standby** keyword is specified, the license is available only on the standby device. The active supervisor is not able to use it.

Examples

The following example shows how to install a license from the bootflash system on the Cisco ASR 1001 router. The license is a duplicate and is not installed as shown in the display:

```
Router# license install file bootflash:1ru_bu2-throughput-license
Installing...Feature:throughput...Skipped:Duplicate
0/1 licenses were successfully installed
1/1 licenses were existing licenses
0/1 licenses failed to install
```

The following example shows how to install a license saved in TFTP. You might need to read and accept an end-user license agreement during the installation. The following output has been truncated for easier readability.

```
Router# license install tftp://infra-sun/rifu/2800/normal_better_2.lic00

Installing licenses from "tftp://infra-sun/rifu/2800/normal_better_2.lic00"

Loading rifu/2800/normal_better_2.lic00 from 172.19.211.47 (via GigabitEthernet0/0): !
[OK - 2361 bytes]
```

```
Expiring licenses are being installed in the device with
UDI "CISCO2851:FTX1018A21R" for the following features:
```

```
Feature Name: ios-ips-update
Start Date:      N/A, End Date: Oct 01 2009
```

```
Feature Name: ios-ips-update
Start Date:      N/A, End Date: Oct 01 2008
```

```
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```

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ACCEPT? [yes/no]: **yes**

Installing...Feature:ios-ips-update...Successful:Supported

Installing...Feature:ios-ips-update...Failed:

% Error: Better license exists

1/2 licenses were successfully installed

0/2 licenses were existing licenses

1/2 licenses were failed to install

Router#

Apr 22 23:24:45.727: %LICENSE-6-EULA_ACCEPTED: EULA for feature ios-ips-update 1.0 has been accepted. UDI=CISCO2851:FTX1018A21R; StoreIndex=2:Primary License Storage

Apr 22 23:24:46.263: %LICENSE-6-EULA_ACCEPTED: EULA for feature ios-ips-update 1.0 has been accepted. UDI=CISCO2851:FTX1018A21R; StoreIndex=-1:UNKNOWN License Store

Apr 22 23:24:46.267: %LICENSE-6-INSTALL: Feature ios-ips-update 1.0 was installed in this device. UDI=CISCO2851:FTX1018A21R; StoreIndex=2:Primary License Storage

The following example shows how to initiate license installation from a flash file system on a Cisco switch:

```
Switch# license install flash:flash//test.lic
```

Related Commands

Command	Description
license clear	Removes a license entry from a permanent license file.
license comment	Adds or removes a comment about a feature license.
license save	Saves a copy of a permanent license to a specified license file.
license save credential	Saves license identity information associated with a device to a specified URL.
show license	Displays information about a Cisco IOS software license.

license modify priority

To modify a license priority, use the **license modify priority** command in privileged EXEC mode.

license modify priority *feature-name* {**high** | **low**}

Syntax Description	<i>feature-name</i>	Name of the feature whose priority you want to modify.
	high	Changes priority to high.
	low	Changes priority to low.

Command Modes Privileged EXEC (#)

Command History	Release	Modification
	12.4(24)T	This command was introduced.
	Cisco IOS XE Release 3.2S	This command was integrated into Cisco IOS XE Release 3.2S for the Cisco ASR 1001 router.

Usage Guidelines This command adjusts the priority of a license. This command generates a list of metered licenses available for a feature and prompts you to select one from the list. If only one license is present, it is automatically selected. If the selected license is an evaluation license and the feature has not been activated, the end-user license agreement (EULA) is shown, and you are prompted to accept or reject the agreement. If you accept the EULA, the priority of the selected license to the permanent license increases or decreases, and the selected license becomes the active license.

Examples The following example shows how the **license modify priority** command is used to modify the priority of a license:

```
Router# license modify priority lcabcv10 high

Feature: lcabcv10
Index: 1      License type   : Evaluation
        Lock type         : Locked
        License Count      : 10
        License Priority: None

Index: 2      License type   : Evaluation
        Lock type         : Locked
        License Count      : 5
        License Priority: None

Select Index to Adjust [1-2]2

Are you sure you want to modify priority? (yes/[no]): yes

Increase Precedence of Evaluation License
```

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ACCEPT? [y/n]: **y**

Related Commands

Command	Description
show license	Displays information about a Cisco IOS software license.

license purge

To purge unneeded licenses (licenses that are not associated with the current chassis unique device identifier [UDI]), use the **license purge** command in privileged EXEC mode.

license purge

Syntax Description This command has no arguments or keywords.

Command Default Licenses are retained.

Command Modes Privileged EXEC (#)

Command History	Release	Modification
	Cisco IOS XE Release 3.1.0SG	This command was introduced for the Cisco Catalyst 4500E series switches.

Usage Guidelines Use this command to remove licenses that are not associated with the current chassis UDI. Removing these licenses frees up additional space.

When supervisors are moved from one chassis to another, the licenses that were installed on the supervisor might be tied to the old chassis. These license are not usable when the supervisor is present on the new chassis. This command removes licenses from storage that do not belong to the current chassis.

Examples The following example shows how to purge unneeded licenses:

```
Switch# license purge
Are you sure you want to purge licenses? [y] y
```

Related Commands	Command	Description
	license install	Installs a stored license file.
	license save credential	Saves the identity information associated with a license to a specified URL.

license revoke

To revoke a software license from one device and transfer it to another, use the **license revoke** command in privileged EXEC mode.

license revoke *permission-file-url* *output-rehost-ticket-url*

Syntax Description

<i>permission-file-url</i>	URL of the location to get to the permission ticket.
<i>output-rehost-ticket-url</i>	URL of the location to save the rehost ticket.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
12.4(15)XZ	This command was introduced.
12.4(20)T	This command was integrated into Cisco IOS Release 12.4(20)T.
Cisco IOS XE Release 3.2S	This command was integrated into Cisco IOS XE Release 3.2S for the Cisco ASR 1001 router.

Usage Guidelines

The **license revoke** command removes the original, permanent license from the device and provides a license for the new device by accomplishing these operations:

- Obtains a permission ticket from the Cisco licensing infrastructure portal that allows the license to be moved.
- Parses the permission ticket file to extract data related to generating the rehosting ticket.
- Uploads the rehost ticket to the Cisco licensing infrastructure portal so you can obtain the final license.
- The license security application processes the data and offers a grace-period license.
- Once you accept the end-user license agreement, the licensing infrastructure processes the permission ticket and generates the rehost ticket.



Note

Cisco IOS licensing requires that the license files generated by the Cisco licensing back end for its devices be secure and tamper-resistant. Security features are in place to authenticate a license by means of encrypted license credentials. Rehosting requires a permission ticket. To generate the permission ticket, the Cisco licensing back end requires the device credential information. Use the **license save credential** command to save device credential information to a specified file system.

Examples

The following example shows how to revoke a license stored in TFTP and how to transfer it to a license stored in flash memory. You might need to read and accept the terms and conditions of the license type being transferred. The following example is truncated for readability:

```
Router# license revoke tftp://infra-sun/ramanp/pt.lic flash:rt.lic
```

```
Following Permanent license(s) will be revoked from this device
  Feature Name: gsmamrnb-codec-pack
```

```
Following Extension license(s) will be installed on this device
  Feature Name: gsmamrnb-codec-pack
```

```
PLEASE READ THE FOLLOWING TERMS CAREFULLY. . .
```

```
ACCEPT? [yes/no]: yes
```

```
Issue 'license feature gsmamrnb-codec-pack' command to enable the license
```

```
Rehost ticket saved ..... to flash:rt.lic
```

Related Commands

Command	Description
license install	Installs a stored license file.
license save	Saves a copy of a permanent license to a specified license file.

license save

To save a copy of a permanent license in a Cisco IOS device to a specified license file, use the **license save** command in privileged EXEC mode.

Cisco ASR 1001 Router Platforms

license save file *file-sys:filename*

Cisco 860, 880, and 890 Series Routers, and Cisco 1900, 2900, and 3900 Series Integrated Services Router Platforms

license save *file-sys://lic-location*

Cisco Catalyst 3560-E Switch Platforms

license save *file-sys://lic-location*

Cisco Catalyst 3750-E Switch and Switch Stack Platforms

license save *file-sys://lic-location* [**switch** *switch-num*]

Cisco Catalyst 3750-E Switch Mixed Stack Platforms

license save *file-sys://lic-location* **switch** *switch-num*

Syntax Description	file	Saves a license file.
	<i>file-sys:filename</i>	The location and filename within a device where Cisco IOS software licenses are stored. For Cisco ASR 1001 routers, valid file systems are bootflash and usb0 .
	<i>file-sys://lic-location</i>	The location within a device where Cisco IOS software licenses are stored. Depending on the hardware platform, valid file system values might be: archive , bootflash , bs , flash , flashn , http , https , null , nvr , pram , rcp , scp , syslog , system , tftp , tmpsys , vb . The license location can also be a directory with these restrictions: <ul style="list-style-type: none"> • The bs://, null://, and vb:// URLs do not accept filenames. • The bs file system is available only on mixed Cisco 3750-E switch stacks. • The archive, pram, scp, and syslog file systems are available only on router platforms. • The flashn file system, where n is an integer in the range of 1 to 9, is available only on Cisco 3750-E switches and stacks. • The https file system is not available on Cisco 3750-E switch mixed stacks or on the Cisco 3560-E switch.
	switch <i>switch-num</i>	Specifies a switch in a switch stack or in a mixed switch stack. The switch number range is 1 to 9.

Command Default Licenses are not saved.

Command Modes Privileged EXEC (#)

Command History	Release	Modification
	12.2(35)SE2	This command was introduced.
	12.4(15)XZ	This command was integrated into Cisco IOS Release 12.4(15)XZ.
	12.4(20)T	This command was integrated into Cisco IOS Release 12.4(20)T.
	Cisco IOS XE Release 3.2S	This command was modified. The file <i>file-sys:filename</i> keyword and argument were added for the Cisco ASR 1001 router.

Usage Guidelines Issuing this command stores the license line and comment in XML format as required by the command. Issuing this command saves copies of all permanent licenses. Saved licenses can be restored by using the **license install** command.

Examples The following example shows how to save a license named throughput-license to the bootflash on the Cisco ASR 1001 router:

```
Router# license save file bootflash:throughput-license
license lines saved ..... to bootflash/throughput-license
```

The following example shows how to save a license named feat1.lic in the FTP file system:

```
Router# license save ftp:feat1.lic
license lines saved ..... to ftp:feat1.lic
```

Related Commands	Command	Description
	license install	Installs a stored license file.
	license save credential	Saves the identity information associated with a license to a specified URL.

license save credential

To save the identity information associated with a device to a specified URL, use the **license save credential** command in privileged EXEC mode.

Cisco ASR 1001 Routers

license save credential file *file-sys:filename*

Cisco 860, 880, and 890 Series Routers, and Cisco 1900, 2900, and 3900 Series Integrated Services Router Platforms

license save credential *file-sys://lic-location*

Cisco Catalyst 3560-E Switch Platforms

license save credential *file-sys://lic-location*

Cisco Catalyst 3750-E Switch and Switch Stack Platforms

license save credential *file-sys://lic-location* [**switch** *switch-num*]

Cisco Catalyst 3750-E Switch Mixed Stack Platforms

license save credential *file-sys://lic-location* **switch** *switch-num*

Syntax Description	file	Saves a license credential file.
	<i>file-sys:filename</i>	The location and filename within a device where Cisco IOS software licenses are stored. For Cisco ASR 1001 routers, valid file systems are bootflash and usb0 .
	<i>file-sys://lic-location</i>	The location within a device where Cisco IOS software license credentials are stored. Depending on the hardware platform, valid file system values might be: archive , bootflash , bs , flash , flashn , ftp , http , https , null , nvr , pram , rcp , sep , syslog , system , tftp , tmpsys , vb . <ul style="list-style-type: none"> The bs://, null://, and vb:// URLs do not accept filenames. The bs file system is available only on mixed Cisco 3750-E switch stacks. The archive, pram, scp, and syslog file systems are available only on router platforms. The flashn file system, where <i>n</i> is an integer in the range of 1 to 9, is available only on Cisco 3750-E switches and stacks. The https file system is not available on Cisco 3750-E switch mixed stacks or on the Cisco 3560-E switch.
	switch <i>switch-num</i>	Specifies a switch in a switch stack or in a mixed switch stack. The switch number range is 1 to 9.

Command Default

License credentials are not saved.

Command Modes Privileged EXEC (#)

Command History	Release	Modification
	12.2(35)SE2	This command was introduced.
	12.4(15)XZ	This command was integrated into Cisco IOS Release 12.4(15)XZ.
	12.4(20)T	This command was integrated into Cisco IOS Release 12.4(20)T.
	Cisco IOS XE Release 3.2S	This command was modified. The file <i>file-sys:filename</i> keyword and argument were added for the Cisco ASR 1001 router.

Usage Guidelines Use this command to save credential information about a device.

Examples

The following example shows how to save identity information about a license named tput-license to the bootflash system on the Cisco ASR 1001 router:

```
Router# license save credential file bootflash:tput-license
```

```
Device credential saved ..... to /bootflash/tput-license
```

The following example shows how to save identity information about a license named feat1.lic in the http file system:

```
Switch# license save credential http:feat1.lic
```

```
Device credential saved ..... to http:feat1.lic
```

The following example shows how to save identity information about a license named feat2.lic in the scp file system:

```
Router# license save credential scp:feat2.lic
```

```
Device credential saved ..... to scp:feat2.lic
```

Related Commands	Command	Description
	license install	Installs a stored license file.
	license save	Saves a copy of a permanent license to a specified license file.

show license

To display information about a Cisco IOS software license, use the **show license** command in privileged EXEC mode.

Cisco ASR 1001 Routers

```
show license [all | detail [feature-name] | expiring | feature | file | image-levels | in-use |
  permanent | status | udi]
```

Cisco 860, 880, and 890 Series Routers, and Cisco 1900, 2900, and 3900 Series Integrated Services Router Platforms

```
show license [agent {counters | session}] | [all | detail [feature-name] | feature | file | statistics |
  status | udi [modules]]
```

Cisco Catalyst 3560-E and Cisco Catalyst 3750-E Switch and Switch Stack Platforms

```
show license [agent {counters | session}] | [all | detail [feature-name] | feature | file | image levels
  | statistics | status | udi [modules]] switch switch-num
```

Cisco Catalyst 3750-E Mixed Switch Stacks

```
show license [agent {counters | session}] | detail {feature-name switch switch-num | switch
  switch-num} | {all | feature | file | status | udi [modules]} switch switch-num
```

Cisco uBR10012 Universal Broadband Routers

```
show license [agent {counters | session}] | detail {feature-name subslot slot/subslot | subslot
  slot/subslot} | udi [subslot slot/subslot] | [all | feature | file | status] subslot slot/subslot
```

Cisco uBR7225VXR and Cisco uBR7246VXR Universal Broadband Routers

```
show license [agent {counters | session}] | detail {feature-name slot slot | slot slot} | udi [slot slot]
  | [all | feature | file | status] {slot slot}
```

Syntax Description	
agent	(Optional) Shows information about a license agent.
counters	Shows statistics counters for the license agent.
session	Shows session information related to a license agent.
all	(Optional) Shows information about all licenses in the system.
detail <i>feature-name</i>	(Optional) Shows detailed information about a specified licensed feature.
expiring	(Optional) Shows all available expiring licenses.
feature	(Optional) Shows a list of licensed features available in an image.
file	(Optional) Shows license entries stored in the license file.
image levels	(Optional) Shows license image levels.
image-levels	(Optional) Shows license image levels.
in-use	(Optional) Show all available in-use licenses.
permanent	(Optional) Show all available permanent licenses.
statistics	(Optional) Shows license statistics information.

status	(Optional) Shows information about supported license types and license operations, and provides device status.
udi	(Optional) Shows all the unique device identifier (UDI) values that can be licensed in a system.
modules	(Optional) Shows the hierarchical relationship between the UDI modules.
switch <i>switch-num</i>	Specifies a switch in a switch stack or in a mixed switch stack. The range is 1 to 9.
subslot	Shows the slot and subslot information of a line card.
slot	Shows the slot information of a line card.
<i>slot/</i>	Slot where the line card resides: <ul style="list-style-type: none"> • Cisco uBR7246VXR router—The range is 3 to 6. • Cisco uBR7225VXR router—The range is 1 to 2. • Cisco uBR10012 router—The range is 5 to 8.
<i>subslot</i>	The subslot number is 0 or 1.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
12.2(35)SE2	This command was introduced.
12.4(20)T	This command was integrated into Cisco IOS Release 12.4(20)T.
12.2(33)SCC	This command was integrated into Cisco IOS Release 12.2(33)SCC on the Cisco UBR-10 MC20X20V line card.
15.0(1)M	This command was modified. The modules keyword was added.
12.2(33)SCD	This command was modified. The subslot <i>slot/subslot</i> keyword and arguments were added for the Cisco uBR7225VXR and Cisco uBR7246VXR routers.
Cisco IOS XE Release 3.2S	This command was modified. The expiring , image-levels , in-use , and permanent keywords were added for the Cisco ASR 1001 router.

Usage Guidelines

Use this command to display license information and to help with troubleshooting issues related to Cisco IOS software licenses. This command displays all the licenses in the system.

This command also displays the features that are available but not licensed to execute. Output is grouped according to how the features are stored in license storage.

If a switch number is specified, information from that switch is displayed. If a switch number is not specified, details of the local switch are displayed.

If the **show license all** command displays the license as “Active, Not in Use, EULA not accepted,” you can use the **license boot module** global configuration command to enable the license and accept the end-user license agreement (EULA). Do not confuse the **license boot module** global configuration command with a similarly named command available in privileged EXEC mode.

Cisco uBR10012 Universal Broadband Router Usage Guidelines

In a Cisco uBR10012 router, the line card is identified with a slot ID, which is a combination of the *slot/subslot*. Use the **subslot** keyword as an extension to the **show license** command syntax, when appropriate.

The **show license udi** command shows the UDI values for all cable interface line cards. When the command is used with the **subslot** keyword, the UDI value for the specified line card is displayed.

Keywords such as **all**, **detail**, **feature**, **file**, and **status** require the **subslot slot/subslot** keyword and arguments to execute the **show license** command.

To enable evaluation license on the Cisco uBR10012 router, use the **license modify** command.

Cisco uBR7225VXR and Cisco uBR7246VXR Universal Broadband Routers Usage Guidelines

To enable evaluation license on the Cisco uBR7225VXR and Cisco uBR7246VXR routers, use the **license modify** command.

**Note**

The **agent** keyword is not supported in Cisco IOS Release 12.2(33)SCD on the Cisco uBR7225VXR and on the Cisco uBR7246VXR routers.

Examples

The following is sample output from the **show license agent counters** command:

```
Router# show license agent counters

License Agent Counters
Request Messages Received:0: Messages with Errors:0
Request Operations Received:0: Operations with Errors:0
Notification Messages Sent:0: Transmission Errors:0: Soap Errors:0
```

The following is sample output from the **show license all** command on the Cisco ASR 1001 router:

```
Router# show license all

License Store: Primary License Storage
StoreIndex: 0 Feature: throughput Version: 1.0
License Type: Permanent
License State: Active, In Use
License Count: Non-Counted
License Priority: Medium
License Store: Primary License Storage
StoreIndex: 4 Feature: adventerprisek9 Version: 1.0
License Type: Permanent
License State: Active, In Use
License Count: Non-Counted
License Priority: Medium
```

[Table 1](#) describes the significant fields shown in the display.

Table 1 *show license Field Descriptions*

Field	Description
License Store	Name of the license line in the license storage.
StoreIndex	Index of the license line in the license storage.
Feature	Name of the feature.
License Type	Type of license; for example, Permanent or Trial.

Table 1 *show license Field Descriptions (continued)*

Field	Description
License State	Status of the license; for example, Active or In Use.
Lock type	Association of a license to a specific device; for example, Node locked.
Vendor info	Information about the vendor associated with the device UDI.
License Addition	Additive or exclusive status of the license; for example, Additive.
License Generation version	Version of license generated.
License Count	Number of available count and in use.
License Priority	Priority of the license; for example, high or low.

The following is sample output from the **show license detail** command:

```
Router# show license detail
```

```

Index: 1          Feature: SNASw                      Version: 1.0
  License Type: Evaluation
  License State: Active, Not in Use, EULA not accepted
    Evaluation total period: 8 weeks 4 days
    Evaluation period left: 8 weeks 4 days
  Lock type: Non Node locked
  Vendor info:
  License Addition: Additive
  License Generation version: 0x8100000
  License Count: Non-Counted
  License Priority: None
  Store Index: 5
  Store Name: Evaluation License Storage
Index: 2          Feature: SSL_VPN                    Version: 1.0
  License Type: Evaluation
  License State: Active, Not in Use, EULA accepted
    Evaluation total period: 8 weeks 4 days
    Evaluation period left: 0 minute 0 second
  Lock type: Non Node locked
  Vendor info:
  License Addition: Additive
  License Generation version: 0x8100000
  License Count: 200/0/0 (Active/In-use/Violation)
  License Priority: Low
  Store Index: 4
  Store Name: Evaluation License Storage
Index: 3          Feature: datak9                     Version: 1.0
  License Type: Evaluation
  License State: Active, Not in Use, EULA not accepted
    Evaluation total period: 8 weeks 4 days
    Evaluation period left: 8 weeks 4 days
  Lock type: Non Node locked
  Vendor info:
  License Addition: Additive
  License Generation version: 0x8100000
  License Count: Non-Counted
  License Priority: None
  Store Index: 2
  Store Name: Evaluation License Storage
Index: 4          Feature: gatekeeper                 Version: 1.0
  License Type: Evaluation

```

show license

```

License State: Active, Not in Use, EULA accepted
  Evaluation total period: 8 weeks 4 days
  Evaluation period left: 0 minute 0 second
Lock type: Non Node locked
Vendor info:
License Addition: Additive
License Generation version: 0x8100000
License Count: Non-Counted
License Priority: Low
Store Index: 3
Store Name: Evaluation License Storage
Index: 5      Feature: ios-ips-update      Version: 1.0
License Type: Paid Subscription
Start Date:      N/A, End Date: Jun 16 2010
License State: Active, Not in Use
Lock type: Node locked
Vendor info: <UDI><PID>CISCO3900-MPE140</PID><SN>FHH123000G9</SN></UDI><T>PAS</T>
License Addition: Exclusive
License Generation version: 0x8200000
License Count: Non-Counted
License Priority: Medium
Store Index: 0
Store Name: Primary License Storage

```

The following is sample output from the **show license feature** command on the Cisco ASR 1001 router:

```
Router# show license feature
```

Feature name	Enforcement	Evaluation	Clear Allowed	Enabled
adventerprisek9	yes	no	yes	yes
advipservicesk9	yes	no	yes	no
ipbasek9	no	no	yes	no
throughput	yes	no	yes	yes

The following is sample output from the **show license file** command:

```
Router# show license file
```

```

License Store: Primary License Storage
Store Index: 0
  License: 11 throughput 1.0 LONG NORMAL STANDALONE EXCL INFINITE_KEYS INFIN
ITE_KEYS NEVER NEVER NiL SLM_CODE CL_ND_LCK NiL *12MDFXFBE6TEQR54
00 NiL NiL NiL 5_MINS <UDI><PID>ASR1001</PID><SN>JAE14020AT5</SN>
</UDI> :0oy5aopCvhfLBBk3:10fBb4Kr3EwMLaYAHdV93ClpLXhJGOUElZuBusC,
0B2QIQLv06eUrKn27faF3zOYTTyJLRcGA8UMkemMyqmvjcg0Jhfm$<WLC>AQEBIQA
B//8szae77QGOnFBXBoP020bx6Fq2XtGPUJnh5pGplTkdzw9J5aqkkUjTNku04sv4
FYORqWInXo3s+nsLU7rOtdOxoIXYZAo3LYmUJ+MFzsqLhKojVlPyEvQ8H21MNUjVb
hoN0gyIWsyiJaM8AQIkVBQFzhr10GYolVzdzfJfEPQIx6tZ++/Vtc/q3SF/5Ko8XC
Y=</WLC>
  Comment: --
  Hash: ZJJz5MveEOPePQA3ATs6+OxF4bw=
Store Index: 1
  License: 11 adventerprisek9 1.0 LONG NORMAL STANDALONE EXCL INFINITE_KEYS
INFINITE_KEYS NEVER NEVER NiL SLM_CODE CL_ND_LCK NiL *12MDFXFBE6T
EQR5400 NiL NiL NiL 5_MINS <UDI><PID>ASR1001</PID><SN>JAE14020AT5
</SN></UDI> dFCG4MGqCj5nRQGYuTNELNjulmgkdTIXsGBaysKmB1f8it6t76IbU
1nDky:q5h843EeHBw9JMwZWcmfbveX8j93UWZckXYU8gSab1S79TVo5Vg$<WLC>AQ
EBIQAB///Y5fwUA9AySxZ1dkpw8MgMeMEbPYi4rEAcDnsmUIwbp0xMUblmtUwhaC
QMg/pCaGRqWInXo3s+nsLU7rOtdOxoIXYZAo3LYmUJ+MFzsqLhKojVlPyEvQ8H21M
NUjVbhoN0gyIWsyiJaM8AQIkVBQFzhr10GYolVzdzfJfEPQIx6tZ++/Vtc/q3SF/5
Ko8XCY=</WLC>
  Comment:
  Hash: 7A1Bc9W0+DqIdv/3EGOMsXW19Xs=

```

The following is sample output from the **show license image levels** command on the Catalyst 3750E switch:

```
Switch# show license image levels

Module name  Image level(s)  Priority  Configure  Valid license(s)
c3750e       ipservices      2        YES        ipservices;advipservices
              ipbase          3        NO         ipbase
```

The following is sample output from the **show license image-levels** command on the Cisco ASR 1001 router:

```
Router# show license image-levels

Module name  Image level      Priority  Configured  Valid license
asr1001k9    adventerprisek9  1        NO          adventerprisek9
              advipservicesk9  2        NO          advipservicesk9
              ipbasek9         3        NO          ipbasek9
```

The following is sample output from the **show license in-use** command on the Cisco ASR 1001 router:

```
Router# show license in-use

StoreIndex: 0 Feature: throughput          Version: 1.0
License Type: Permanent
License State: Active, In Use
License Count: Non-Counted
License Priority: Medium
StoreIndex: 1 Feature: adventerprisek9     Version: 1.0
License Type: Permanent
License State: Active, In Use
License Count: Non-Counted
License Priority: Medium
```

The following is sample output from the **show license permanent** command on the Cisco ASR 1001 router:

```
Router# show license permanent

StoreIndex: 0 Feature: throughput          Version: 1.0
License Type: Permanent
License State: Active, In Use
License Count: Non-Counted
License Priority: Medium
StoreIndex: 1 Feature: adventerprisek9     Version: 1.0
License Type: Permanent
License State: Active, In Use
License Count: Non-Counted
License Priority: Medium
```

The following is sample output from the **show license status** command:

```
Switch# show license status

License Type Supported
permanent Non-expiring node locked license
extension Expiring node locked license
evaluation Expiring non node locked license

License Operation Supported
install   Install license
clear    Clear license
annotate Comment license
save     Save license
```

```

revoke      Revoke license
call-home   License call-home

          Call-home Operation Supported
show pak    Display license pak via call-home
install     Install license via call-home
revoke     Revoke license via call-home
resend     Fetch license via call-home

          Device status
Device Credential type: DEVICE
Device Credential Verification: PASS
Rehost Type: DC_OR_IC

```

```

SWIFT url status
Swift URL set to default value : https://tools.cisco.com/SWIFT/Licensing

```

The following is sample output from the **show license udi modules** command:

```
Router# show license udi modules
```

Location	PID	SN	UDI
Slot0	WS-C3750E-24TD-E	CAT1146R04N	WS-C3750E-24TD-E:CAT1146R04N
Slot0/1	WS-C3750E-24TD-E	CAT1146R04X	WS-C3750E-24TD-E:CAT1146R04X
Slot0/1/1	WS-C3750E-24TD-E	CAT1146R04Y	WS-C3750E-24TD-E:CAT1146R04Y

Cisco uBR10012 Universal Broadband Routers

The following is sample output from the **show license all** command, where “subslot 8/1” denotes the line card for which all license information is requested. [Table 1](#) describes the fields shown in the command output:

```
Router# show license all subslot 8/1
```

```

License Store: Primary License Storage
StoreIndex: 0  Feature: DS_License                               Version: 1.0
License Type: Permanent
License State: Inactive
License Count: 10/0/0 (Active/In-use/Violation)
License Priority: Medium
StoreIndex: 1  Feature: DS_License                               Version: 1.0
License Type: Evaluation
License State: Active, In Use
Evaluation total period: 8 weeks 4 days
Evaluation period left: 8 weeks 3 days
Expiry date: Nov 24 2009 14:13:34
License Count: 20/20/0 (Active/In-use/Violation)
License Priority: High
License Store: Evaluation License Storage
StoreIndex: 0  Feature: US_License                               Version: 1.0
License Type: Evaluation
License State: Active, Not in Use, EULA not accepted
Evaluation total period: 8 weeks 4 days
Evaluation period left: 8 weeks 4 days
License Count: 20/0/0 (Active/In-use/Violation)
License Priority: None
StoreIndex: 1  Feature: DS_License                               Version: 1.0
License Type: Evaluation
License State: Inactive
Evaluation total period: 8 weeks 4 days
Evaluation period left: 8 weeks 4 days
License Count: 20/0/0 (Active/In-use/Violation)

```

License Priority: Low

The following is sample output from the **show license detail** command, where “subslot 8/1” specifies the line card for which detailed feature information is requested:

```
Router# show license detail subslot 8/1

Index: 1      Feature: DS_License      Version: 1.0
License Type: Evaluation
License State: Active, In Use
    Evaluation total period: 8 weeks 4 days
    Evaluation period left: 8 weeks 3 days
    Expiry date: Nov 24 2009 14:13:35
License Count: 20/20/0 (Active/In-use/Violation)
License Priority: High
Store Index: 1
Store Name: Primary License Storage
Index: 2      Feature: DS_License      Version: 1.0
License Type: Permanent
License State: Inactive
License Count: 10/0/0 (Active/In-use/Violation)
License Priority: Medium
Store Index: 0
Store Name: Primary License Storage
Index: 3      Feature: DS_License      Version: 1.0
License Type: Evaluation
License State: Inactive
    Evaluation total period: 8 weeks 4 days
    Evaluation period left: 8 weeks 4 days
License Count: 20/0/0 (Active/In-use/Violation)
License Priority: Low
Store Index: 1
Store Name: Evaluation License Storage
Index: 4      Feature: US_License      Version: 1.0
License Type: Evaluation
License State: Active, Not in Use, EULA not accepted
    Evaluation total period: 8 weeks 4 days
    Evaluation period left: 8 weeks 4 days
License Count: 20/0/0 (Active/In-use/Violation)
License Priority: None
Store Index: 0
Store Name: Evaluation License Storage
```

The following is sample output from the **show license status** command, where “subslot 8/1” denotes the line card for which license information is requested:

```
Router# show license status subslot 8/1

License Type Supported
permanent      Non-expiring node locked license
extension      Expiring node locked license
evaluation      Expiring non node locked license

License Operation Supported
install      Install license
clear      Clear license
annotate      Comment license
save      Save license
Modify      Modify license
revoke      Revoke license
call-home      License call-home

Call-home Operation Supported
```

show license

```

show pak    Display license pak via call-home
install    Install license via call-home
revoke     Revoke license via call-home
resend     Fetch license via call-home

```

```

Device status
Device Credential type: DEVICE
Device Credential Verification: PASS
Rehost Type: DC_OR_IC

```

```

SWIFT url status
Swift URL set to default value : https://tools.cisco.com/SWIFT/Licensing

```

The following is sample output from the **show license feature** command, for the Upstream (US) and Downstream (DS) feature:

```

Router# show license feature subslot 8/1

Feature name      Enforcement  Evaluation  Subscription  Enabled
US_License        yes          yes         no            no
DS_License        yes          yes         no            yes

```

[Table 2](#) describes the fields as shown in the display.

Table 2 show license feature Field Descriptions

Field	Description
Feature name	Shows the feature name; for example, Downstream (DS) license.
Enforcement	Shows whether license enforcement exists or not.
Evaluation	Shows whether the license is under evaluation or not.
Subscription	Shows whether the license is coming up for subscription.
Enabled	Shows whether the license feature is enabled on the line card.

The following is sample output from the **show license udi** command, where “subslot 8/1” specifies the line card for which UDI information is requested:

```

Router# show license udi subslot 8/1

SlotID  PID                      SN                      UDI
-----
*8/1    UBR10-MC20X20H-D        CSJ12179004            UBR10-MC20X20H-D:CSJ12179004
Router#

```

The following is sample output from the **show license udi** command, when the **subslot** keyword is not specified:

```

Router# show license udi

SlotID  PID                      SN                      UDI
-----
6/1     UBR10-MC20X20H-D        CSJ12339112            UBR10-MC20X20H-D:CSJ12339112
8/1     UBR10-MC20X20H-D        CSJ12179004            UBR10-MC20X20H-D:CSJ12179004

```

Table 3 describes the significant fields shown in the display.

Table 3 show license udi Field Descriptions

Field	Description
SlotID	The slot/subslot number of the line card on the uBR10012 router.
PID	Product identification number. The name by which the product can be ordered.
SN	Serial number. Used to identify an individual, specific instance of a product.
UDI	Unique device identifier. This information is printed on the device as well as stored electronically on the device to facilitate remote retrieval.

The following is sample output from the **show license file** command:

```
Router# show license file subslot 8/1

License Store: Primary License Storage
Store Index: 0
License: 11 DS_License 1.0 LONG NORMAL STANDALONE EXCL 12_KEYS INFINITE_KEYS NEVER NEVER NiL SLM_CODE CL_ND_LCK NiL *12C6WKA8862SGEW400 NiL NiL NiL 5_MINS <UDI><PID>UBR10-MC20X20H-D</PID><SN>CSJ12179004</SN></UDI> UXmw4uz2YY6zajf9MeCq3YIL9zQ296cJcD5WpvEgweLLqi9T, LvwVOB941QGpyUE3AGrpBxRqY5svo26jDlkD6VVcXLnwFgTftbn4k0ZGZCC3li, C9Hs2fHbGaj9HBc0fefj$<WLC>AQEBIQAB//n5p8RRMcZgKmNabY6jLElFSa5DRh/dkqBQ29j/MCMiUoRgwGb4XkhTQwyPXzQOaKRqwInXo3s+nsLU7rOtdOxoIxYZAo3LYmUJ+MFzsqlhKoJVlPyEvQ8H21MNUjVbhoN0gyIWsyiJam8AQIkVBQFzhr10GYo1VzdzfJfEPQIx6tZ++/Vtc/q3SF/5Ko8XCY=</WLC>

Comment:
Hash: aYPyovZMfUzVD7Mj8O9eh6HyMP0=
```

Cisco uBR7225VXR and Cisco uBR7246VXR Universal Broadband Routers

The following is sample output from the **show license all** command, where “slot 5” denotes the line card for which the license information is requested. Table 1 describes the fields shown in the command output.

```
Router# show license all slot 5

License Store: Primary License Storage
StoreIndex: 0 Feature: DS_License Version: 1.0
License Type: Permanent
License State: Active, In Use
License Count: 8/8/0 (Active/In-use/Violation)
License Priority: Medium
StoreIndex: 1 Feature: US_License Version: 1.0
License Type: Permanent
License State: Active, In Use
License Count: 8/8/0 (Active/In-use/Violation)
License Priority: Medium
License Store: Evaluation License Storage
StoreIndex: 0 Feature: US_License Version: 1.0
License Type: Evaluation
License State: Inactive
Evaluation total period: 8 weeks 4 days
Evaluation period left: 8 weeks 4 days
License Count: 8/0/0 (Active/In-use/Violation)
License Priority: None
StoreIndex: 1 Feature: DS_License Version: 1.0
```

```

License Type: Evaluation
License State: Inactive
  Evaluation total period: 8 weeks 4 days
  Evaluation period left: 8 weeks 4 days
License Count: 8/0/0 (Active/In-use/Violation)
License Priority: None

```

The following is sample output from the **show license detail** command, where “slot 5” specifies the line card for which detailed feature information is requested:

```

Router# show license detail slot 5

Index: 1      Feature: DS_License                      Version: 1.0
License Type: Permanent
License State: Active, In Use
License Count: 8/8/0 (Active/In-use/Violation)
License Priority: Medium
Store Index: 0
Store Name: Primary License Storage
Index: 2      Feature: DS_License                      Version: 1.0
License Type: Evaluation
License State: Inactive
  Evaluation total period: 8 weeks 4 days
  Evaluation period left: 8 weeks 4 days
License Count: 8/0/0 (Active/In-use/Violation)
License Priority: None
Store Index: 1
Store Name: Evaluation License Storage
Index: 3      Feature: US_License                      Version: 1.0
License Type: Permanent
License State: Active, In Use
License Count: 8/8/0 (Active/In-use/Violation)
License Priority: Medium
Store Index: 1
Store Name: Primary License Storage
Index: 4      Feature: US_License                      Version: 1.0
License Type: Evaluation
License State: Inactive
  Evaluation total period: 8 weeks 4 days
  Evaluation period left: 8 weeks 4 days
License Count: 8/0/0 (Active/In-use/Violation)
License Priority: None
Store Index: 0
Store Name: Evaluation License Storage

```

The following is sample output from the **show license status** command, where “slot 5” denotes the line card for which license information is requested:

```

Router# show license status slot 5

License Type Supported
permanent          Non-expiring node locked license
extension          Expiring node locked license
evaluation         Expiring non node locked license

License Operation Supported
install           Install license
clear             Clear license
annotate         Comment license
save             Save license
Modify           Modify license
revoke           Revoke license
call-home        License call-home

```

```

Call-home Operation Supported
show pak   Display license pak via call-home
install    Install license via call-home
revoke     Revoke license via call-home
resend     Fetch license via call-home

```

```

Device status
Device Credential type: DEVICE
Device Credential Verification: PASS
Rehost Type: DC_OR_IC

```

```

SWIFT url status
Swift URL set to default value : https://tools.cisco.com/SWIFT/Licensing

```

The following is sample output from the **show license feature** command, for the Upstream (US) and Downstream (DS) feature:

```

Router# show license feature slot 5

Feature name           Enforcement  Evaluation  Subscription  Enabled
US_License             yes         yes         no            yes
DS_License             yes         yes         no            yes

```

The following is sample output from the **show license udi** command, where “slot 5” specifies the line card for which UDI information is requested:

```

Router# show license udi slot 5

SlotID  PID                SN                UDI
-----
*5      UBR-MC88U         CSJ12514210     UBR-MC88U:CSJ12514210

```

The following is sample output from the **show license udi** command, when the **slot** keyword is not specified:

```

Router# show license udi

SlotID  PID                SN                UDI
-----
5       UBR-MC88U         CSJ12514210     UBR-MC88U:CSJ12514210

```

[Table 4](#) describes the significant fields shown in the display.

Table 4 *show license udi* Field Descriptions

Field	Description
SlotID	The slot number of the line card on the Cisco uBR7225VXR or Cisco uBR7246VXR router.
PID	Product identification number. The name by which the product can be ordered.
SN	Serial number. Used to identify an individual, specific instance of a product.
UDI	Unique device identifier. This information is printed on the device and stored electronically on the device to facilitate remote retrieval.

The following is sample output from the **show license file** command:

```
Router# show license file slot 5

License Store: Primary License Storage
Store Index: 0
  License: 11 DS_License 1.0 LONG NORMAL STANDALONE EXCL 8_KEYS INFINITE_KEY
S NEVER NEVER NiL SLM_CODE CL_ND_LCK NiL *1VDWSEZNBXMDUF6400 NiL
NiL NiL 5_MINS <UDI><PID>UBR-MC88U</PID><SN>CSJ12514210</SN></UDI
> dai:f7mhotuFuD:1f1GnfTcbjqqZNSj4w2ZOJKr1VM3riaI6MhGUsnGkIbk83bi
U3SpE1bzN4X1TQ8x9HRC93fVHK9eTcFaMsLX6I,G4p4wWfimLew3H0SUSfdspJvyz
ikLZ$<WLC>AQEBIQAB///Z8GMgzMS3HccHkeioc4KXGR28VwY2ckacKin9G6PtV18
N/XB0WkMA+Mj6R0tJ+RmRqWInXo3s+nsLU7rOtdOxoIxyZAo3LYmUJ+MFzsqlhKoJ
VlPyEvQ8H21MNUjVbhoN0gyIWsyiJam8AQIkVBQFzhr10GYo1VzdzfJfEPQIx6tZ+
+/Vtc/q3SF/5Ko8XCY=</WLC>
  Comment:
  Hash: rYH1S/Q7961pN+kZpf3LQ9UR+dY=
Store Index: 1
  License: 11 US_License 1.0 LONG NORMAL STANDALONE EXCL 8_KEYS INFINITE_KEY
S NEVER NEVER NiL SLM_CODE CL_ND_LCK NiL *1VDWSEZNBXMDUF6400 NiL
NiL NiL 5_MINS <UDI><PID>UBR-MC88U</PID><SN>CSJ12514210</SN></UDI
> yxU,2eYAsVZXLX1Uh0:zfDWS4rE7OZr5g:cYy:rCOcVBi97MjRUZUzWb6Vi8MB2
3VVvaQBN4tni,0BsTsfqgJjXaryA,NexvAPyp09AJRh3soHjqW,COT2V6fbgzPt
5u35$<WLC>AQEBIQAB//9uV7Zp1YcBuFy6gMM/gAYOXR7dm/+006pGceLT3qUNUug
14skFZoucJkLd0ojdk+mRqWInXo3s+nsLU7rOtdOxoIxyZAo3LYmUJ+MFzsqlhKoJ
VlPyEvQ8H21MNUjVbhoN0gyIWsyiJam8AQIkVBQFzhr10GYo1VzdzfJfEPQIx6tZ+
+/Vtc/q3SF/5Ko8XCY=</WLC>
  Comment:
  Hash: Hg6bxVO8ZZITGbFg7NoAQU/QGhs=
License Store: Evaluation License Storage
Store Index: 0
  License: 11 US_License 1.0 LONG TRIAL DISABLED 1440 DISABLED STANDALONE AD
D 8_KEYS INFINITE_KEYS NEVER NEVER NiL SLM_CODE DEMO NiL NiL Ni N
iL NiL 5_MINS NiL V7kIRj,EZLjQ4gpW6nQYL40zCTx,wvk1k9buST3EOhLRys9
slYKaMRsXbMSuz3ihfA$<WLC>AQEBIQAB///QgcWxs1rLFOkfnLaMbSpr5sFnSmYb
dL0ZcysI1rlNaK9yrCLEw3aidzf+WNvFg86RqWInXo3s+nsLU7rOtdOxoIxyZAo3L
YmUJ+MFzsqlhKoJv1PyEvQ8H21MNUjVbhoN0gyIWsyiJam8AQIkVBQFzhr10GYo1V
zdzfJfEPQIx6tZ++/Vtc/q3SF/5Ko8XCY=</WLC>
  Comment:
  Hash: Rox9tmRbNJOygotZlWYmr00OvY4=
Store Index: 1
  License: 11 DS_License 1.0 LONG TRIAL DISABLED 1440 DISABLED STANDALONE AD
D 8_KEYS INFINITE_KEYS NEVER NEVER NiL SLM_CODE DEMO NiL NiL Ni N
iL NiL 5_MINS NiL Hp5gBr76OsVcoCNVW8Hi33rQs2xMyd5YU6sDI6oQsdVTrxI
vaLwepwAB4GXyk1zvLP$<WLC>AQEBIQAB//8c0JDyC40fqQGUTy1DKqaN/AyL43ZV
PdJH0Ho1JAgOF5mjctCLuw5RaXRSPAJO9LaRqWInXo3s+nsLU7rOtdOxoIxyZAo3L
YmUJ+MFzsqlhKoJv1PyEvQ8H21MNUjVbhoN0gyIWsyiJam8AQIkVBQFzhr10GYo1V
zdzfJfEPQIx6tZ++/Vtc/q3SF/5Ko8XCY=</WLC>
  Comment:
  Hash: 3bm6gofelR14J0rO/J44poj+dEY=
```

Related Commands

Command	Description
license boot module	Boots a new software license.
license call-home install	Installs a license using the Cisco License Call Home feature.
license call-home resend	Restores a lost license by using the Cisco License Call Home feature.
license call-home revoke	Revokes and transfers a license by using the Cisco License Call Home feature.
license clear	Removes a license entry from license storage.

Command	Description
license comment	Add or removes a comment about a feature license.
license modify priority	Modifies a license priority.
license save	Saves a copy of a permanent license to a specified license file.