



Configuring the Cisco IOS Software Activation Feature

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This document describes the tasks used to activate software by using the Cisco IOS Software Activation feature, license keys, and Cisco EXEC commands. When you activate software from a Cisco device, you can license software without the need for additional application software.

Finding Feature Information in This Module

Your software release might not support all the features documented in this module. For the latest feature information and caveats, see the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the [“Feature Information for Cisco IOS Software Activation”](#) section on page 20.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>. An account on Cisco.com is not required.

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Restrictions for Cisco IOS Software Activation

Not all Cisco router and switch platforms can use the Cisco IOS Software Activation feature. Use the Cisco Feature Navigator at <http://www.cisco.com/go/cfn> and the table in the “[Feature Information for Cisco IOS Software Activation](#)” section on page 20, to determine which platforms and images support the Cisco IOS Software Activation feature.

For the stackable switches that support the Cisco IOS Software Activation feature, one switch must act as primary and the others as secondaries. The primary switch performs management and administrative operations on itself as well as on the secondary switches.

Information About the Cisco IOS Software Activation

- [License Activation MIB Support, page 2](#)

License Activation MIB Support

The Cisco IOS Software Activation feature introduces the CISCO-LICENSE-MGMT-MIB to allow SNMP-based license management and administrative tasks. A description of this MIB can be found by using tools at this URL: <http://tools.cisco.com/ITDIT/MIBS/servlet/index>

Use the MIB Locator tool and the Search for MIB selection box to select [CISCO-LICENSE-MGMT-MIB](#).

The unique device identifier (UDI) is also associated with the Entity Name and Product Description data elements for the management information base (MIB) system. The MIB nomenclature for Entity Name is entPhysicalName and for Product Description is entPhysicalDescr.

How to Activate Software from a Cisco IOS Device

- [Installing and Upgrading Licenses by Using Software Activation Commands, page 2](#) (required)
- [Managing Licenses by Using Software Activation Commands, page 4](#) (optional)
- [Removing Licenses by Using Software Activation Commands, page 9](#) (optional)
- [Troubleshooting License Operations by Using Software Activation Commands, page 11](#) (optional)

Installing and Upgrading Licenses by Using Software Activation Commands

Use this task to install or upgrade a license by using the software activation commands.

If you use Microsoft Entourage and receive the license file from Cisco in an e-mail attachment, the license file will contain UTF-8 marking. These extra bytes in the license file cause it to be unusable during license installation. To work around this issue, you can use a text editor to remove the extra characters and then install the license file. For more information about UTF-8 encoding, go to this URL: <http://www.w3.org/International/questions/qa-utf8-bom>.

Prerequisites

Read and understand the concepts in the “License Activation Process” section of the *Cisco IOS Software Activation Conceptual Overview* module.

You can perform this task to install or upgrade a license by using the Cisco IOS **license install** command. You must have already received the license file from the Cisco Product License Registration portal at <http://www.cisco.com/go/license> (or you already backed up the license by using the Cisco IOS **license save** command).

Restrictions

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

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

SUMMARY STEPS

1. Obtain the product authorization key (PAK).
2. **enable**
3. **show license udi**
4. Convert the PAK to a license by entering the PAK and the unique device identifier (UDI) into the Cisco Product License Registration portal: <http://www.cisco.com/go/license>.
5. **license install** *stored-location-url*
6. **reload**

DETAILED STEPS

	Command or Action	Purpose
Step 1	Obtain the PAK.	The PAK is provided to you when you order or purchase the right to use a feature set for a particular platform. <ul style="list-style-type: none"> The PAK serves as a receipt and is used as part of the process to obtain a license.
Step 2	<code>enable</code> Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> Enter your password if prompted.
Step 3	<code>show license udi</code> Example: Router# show license udi	Displays all the UDI values that can be licensed in a system. <ul style="list-style-type: none"> You need the UDI of the device as part of the process to obtain a license.
Step 4	Convert the PAK to a license by entering the PAK and the UDI into the Cisco Product License Registration portal: http://www.cisco.com/go/license .	After entering the appropriate information, you will receive an e-mail containing the license information that you can use to install the license: <ul style="list-style-type: none"> Copy the license file received from the Cisco Product License Registration portal to the appropriate file system on the device. or <ul style="list-style-type: none"> Click the Install button on the web page.
Step 5	<code>license install stored-location-url</code> Example: Router# license install tftp://infra-sun/<user>/license/5400/38a.lic	Installs the license. <ul style="list-style-type: none"> Accept the end-user license agreement if prompted.
Step 6	<code>reload</code> Example: Router# reload	(Optional) Restarts the device to enable the new feature set.

Managing Licenses by Using Software Activation Commands

- [Adding a Comment to a License File, page 5](#) (optional)
- [Saving All Licenses to a Specified Storage Area, page 6](#) (optional)
- [Saving License Credential Information Associated with a Device to a Specified Storage Area, page 6](#) (optional)
- [Displaying All Licenses in a Device, page 7](#) (optional)
- [Displaying Detailed Information about Licensed Features, page 8](#) (optional)
- [Displaying Licensed Feature Sets Available in an Image, page 8](#) (optional)

Adding a Comment to a License File

Perform this task to add comments to a license file.

SUMMARY STEPS

1. **enable**
2. **license comment add** *feature-name comment* (Cisco router and Catalyst 3560-E switch platforms)
or
license comment add *feature-name comment switch* *switch-num* (Cisco Catalyst 3750-E switch platforms)
3. **show license file** [**switch** *switch-num*]

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	Cisco router and Catalyst 3560-E switch platforms: license comment add <i>feature-name comment</i> Cisco Catalyst 3750-E switch platforms: license comment add <i>feature-name comment switch</i> <i>switch-num</i> Example: Router# license comment add gsmamrnb-codec-pack "Use this permanent license"	Adds or deletes information about a specific license. <ul style="list-style-type: none"> • If a switch number is specified, this command is executed on the specified switch. • When the license is present in license storage and multiple license lines are stored, you are prompted to select a license line. To select the license, type the number at the Select Index to Add Comment prompt.
Step 3	show license file [switch <i>switch-num</i>] Example: Router# show license file	Displays comments added to a Cisco software license file. <ul style="list-style-type: none"> • If the device is a switch, this command obtains statistics from the specified switch.

Saving All Licenses to a Specified Storage Area

Perform this task to save copies of all licenses to a specified storage area. Saved licenses are restored by using the **license install** command.

SUMMARY STEPS

1. **enable**
2. **license save** *file-sys://lic-location* [**switch** *switch-num*]

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	license save <i>file-sys://lic-location</i> [switch <i>switch-num</i>] Example: Router# license save flash:all_licenses.lic	Saves copies of all licenses in a device and stores them in a format required by the command in the specified storage location. <ul style="list-style-type: none"> • <i>lic-location</i>: The license storage location can be a directory or a URL that points to a file system. Use the ? command to see the storage locations supported by your device. • (Optional) switch <i>switch-num</i>: sends this request to a specific switch in a switch stack.

Saving License Credential Information Associated with a Device to a Specified Storage Area

Perform this task to save license credential information associated with a device to a specified storage area.

Prerequisites

Before you can start the rehost or resend process, a device credential is required. Cisco IOS licensing requires that the license files generated by the Cisco back-end licensing system for its devices be secure and tamper-resistant. Security features are in place to authenticate a license by means of encrypted license credentials. If it becomes necessary to transfer a license from one device to another (which is called rehosting), a permission ticket is required. To generate the permission ticket, the Cisco back-end licensing system requires the device credential information.

SUMMARY STEPS

1. **enable**
2. **license save credential** *file-sys://lic-location* [**switch** *switch-num*]

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> Enter your password if prompted.
Step 2	license save credential file-sys://lic-location [switch <i>switch-num</i>] Example: Router# license save credential flash:cred.lic	Saves credential information associated with a device to a specified URL. <ul style="list-style-type: none"> <i>lic-location</i>: The license storage location can be a directory or a URL that points to a file system. Use the ? command to see the storage locations supported by your device. (Optional) switch <i>switch-num</i>: sends this request to a specific switch in a switch stack.

Displaying All Licenses in a Device

Perform this task to display all licenses in a device.

SUMMARY STEPS

- enable
- show license all

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> Enter your password if prompted.
Step 2	show license all Example: Router# show license all	Displays information about all licenses in the device.

Displaying Detailed Information about Licensed Features

Perform this task to display detailed information about licensed features.

SUMMARY STEPS

1. `enable`
2. `show license detail [feature-name]`

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>enable</code> Example: Router> <code>enable</code>	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	<code>show license detail [feature-name]</code> Example: Router# <code>show license detail</code>	Displays detailed information about all licensed features or the specified licensed feature.

Displaying Licensed Feature Sets Available in an Image

Perform this task to display the licensed feature sets available in an image.

SUMMARY STEPS

1. `enable`
2. `show license feature`

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>enable</code> Example: Router> <code>enable</code>	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	<code>show license feature</code> Example: Router# <code>show license feature</code>	Displays a list of licensed features available in an image.

Removing Licenses by Using Software Activation Commands

- [Removing a License Entry from a Permanent License File, page 9](#) (optional)
- [Rehosting \(Revoking and Transferring\) a License, page 10](#) (optional)

Removing a License Entry from a Permanent License File

Perform this task to remove a license entry from a permanent license file.

Restrictions

- The **license clear** command lists all licenses, but some licenses, such as built-in licenses, cannot be cleared.
- Only licenses that have been added by using the **license install** command are removed. Evaluation licenses are not removed.
- If a license is not in use, the **license clear** command displays all the licenses related to this feature and prompts you to make a selection. Different prompts are displayed, depending upon whether single or multiple licenses are available in the device. The selected licenses are removed from the router or switch.
- If a license is in use, the **license clear** command might fail. However, depending on the application policy using the license, some licenses might be cleared.
- When a switch is specified, the **license clear** command is issued on that switch. When a mixed stack platform is used, the primary switch must have installed the minimum licensing features required to support the licensing operations of the secondary switches. When this command is issued from a primary switch, the switch number is required to clear a license on that switch.

SUMMARY STEPS

1. **enable**
2. **license clear** *feature-name*
or
license clear *feature-name* **switch** *switch-num* (Cisco Catalyst 3750-E mixed stack switch and Cisco Catalyst 3560-E switch and switch stack platforms)
3. **show license detail**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> Enter your password if prompted.
Step 2	license clear <i>feature-name</i> [switch <i>switch-num</i>] Example: Router# license clear gsmamrnb-codec-pack	Removes a license entry from license storage once it has been verified that the license line is valid and was explicitly installed. <ul style="list-style-type: none"> The optional switch <i>switch-num</i> keyword and argument send this request to a specific switch in a switch stack. You must select the index number of the license to clear. Enter the number at the Select Index to Clear prompt.
Step 3	show license detail Example: Router# show license detail	Verifies that the license has been cleared.

Rehosting (Revoking and Transferring) a License

Perform this task to rehost (revoke and transfer) a license. The **license revoke** command removes the original, permanent license from the device and provides a license for the new device.

Prerequisites

Read and understand the concepts in the “License Transfer between Devices” section of the [Cisco IOS Software Activation Conceptual Overview](#) module.

Cisco IOS licensing requires that the license files generated by the Cisco back-end licensing system 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 back-end licensing system requires the device credential information. Use the **license save credential** command to save device credential information to a specified file system.

SUMMARY STEPS

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

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> Enter your password if prompted.
Step 2	license revoke <i>permission-file-url</i> <i>output-rehost-ticket-url</i> Example: Router# license revoke tftp://infra-sun/ramanp/pt.lic flash:rt.lic	Revokes and transfers a license by using the permission ticket provided by the Cisco back-end licensing system. <ul style="list-style-type: none"> An end-user license agreement is displayed for all grace-period licenses in the permission ticket. You must read and accept the agreement. If you do not accept the agreement, the rehost operation stops.

Troubleshooting License Operations by Using Software Activation Commands

Perform this task to troubleshoot license operations.

SUMMARY STEPS

- enable
- show license file [**switch** *switch-num*]
- show license statistics
- show license status [**switch** *switch-num*]
- debug license {all | core | errors | events}
- no debug license {all | core | errors | events}

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> Enter your password if prompted.
Step 2	show license file [switch <i>switch-num</i>] Example: Router# show license file	Displays license entries and license details stored in a Cisco software license file. If the device is a switch, this command obtains statistics from the specified switch.
Step 3	show license statistics Example: Router# show license statistics	Displays license statistics information. The display includes relevant statistics for error counts and is useful for troubleshooting licensing-related problems.

	Command or Action	Purpose
Step 4	show license status [<i>switch</i> <i>switch-num</i>] Example: Router# show license status	Displays the status of licenses in the system. If the device is a switch, this command obtains status from the specified switch.
Step 5	debug license { <i>all</i> <i>core</i> <i>errors</i> <i>events</i> } Example: Router# debug license errors	Enables controlled Cisco IOS software license debugging activity on a device.
Step 6	no debug license { <i>all</i> <i>core</i> <i>errors</i> <i>events</i> } Example: Router# no debug license errors	Disables license debugging activity on a device.

Configuring Examples for Software Licensing

- [Example: Installing and Upgrading Licenses, page 12](#)
- [Example: Adding a Comment to a License File, page 13](#)
- [Example: Saving All Licenses to a Specified Storage Area, page 13](#)
- [Example: Removing Licenses, page 14](#)
- [Example: Rehosting \(Revoking and Transferring\) a License, page 14](#)
- [Example: Generic Command Enhanced with Licensing Information, page 15](#)

Example: Installing and Upgrading Licenses

The following example shows how to use the **license install** command to install a license saved in TFTP on the router. The display is truncated for easier readability:

```
Router# license install tftp://infra-sun/<user>/license/5400/38a.lic
```

```
Installing licenses from "tftp://infra-sun/<user>/license/5400/38a.lic"
```

```
Loading <user>/license/5400/38a.lic from 172.19.211.47 (via GigabitEthernet0/0): !
[OK - 1192 bytes]
```

```
Extension licenses are being installed in the device with UDI "AS54XM-AC-RPS:JAE0948QXKD"
for the following features:
```

```
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
Installing...Feature:gsmamrnb-codec-pack...Successful:Supported
```

Example: Adding a Comment to a License File

The following example shows how to use the **license comment** command to add or delete information about a specific license. The command checks that a license associated with the specified feature is present in license storage. If a switch number is specified, this command is executed on the specified switch.

As the example shows, when the license is present and multiple license lines are stored, you are prompted to select a license line. This action helps to distinguish licenses. Type the number at the Select Index to Add Comment prompt to select the license.

```
Router# license comment add gsmamrnb-codec-pack "Use this permanent license"
```

```
Feature: gsmamrnb-codec-pack
  1 License Type: Evaluation
    License State: Inactive
      Evaluation total period: 20 hours 0 minute
      Evaluation period left: 20 hours 0 minute
    License Addition: Additive
    Comment:
    Store Index: 0
    Store Name: Primary License Storage

  2 License Type: Permanent
    License State: Active, Not in Use
    License Addition: Exclusive
    Comment:
    Store Index: 1
    Store Name: Primary License Storage
```

```
Select Index to Add Comment [1-2]: 2
```

```
% Success: Adding comment "Use this permanent license" succeeded
```

```
Router# show license file
```

```
License Store: Primary License Storage
Store Index: 0
License: 11 gsmamrnb-codec-pack 1.0 LONG TRIAL DISABLED 20 DISABLED STANDALONE ADD INFINITE_KEYS INFINITE_KEYS NEVER NEVER NiL SLM_CODE CL_ND_LCK NiL *1YCHJRBMWKZAED2400 NiL NiL NiL 5_MINS <UDI><PID>AS54XM-AC-RPS</PID><SN>JAE0948QXKD</SN></UDI> ,Jx8qaVf:iXWaH9PsXjkVnmz7gWh:cxdf9nUkzY6o8fRuQbu,7wTUz237Cz6g9VjfrCk,0a2Pdo,0w6LWxcCRFL:xcTxwnffn9i,4,aUWv8rL50opDUdAsFnxLsvoFRkcAfm$<WLC>AQEBIQAB//9NA+1mUwfs/1D0dmdF9kyX8wDrua1TZhnnAy6Mxs1dTboIcRaahKxJJdj40i1w3wscqvPiAmWSaEmUT56rstk6gvmj+EQRfD9A0ime1czrdKxfILt0LaXT416nwmfp92Tya6vIQ4Fn1BdqJ1sMzXeSq8PmVctU9A4o9hil9vKur8N9F885D9GVF0bJHciT5M=</WLC>
Comment: Use this permanent license.
Hash: E1WjIQo4qs19g8cpnpoogP/0DeY=
Router#
```

Example: Saving All Licenses to a Specified Storage Area

The following example shows how to use the **license save** command to save copies of all licenses to the flash file system:

```
Router# license save flash:all_licenses.lic
license lines saved ..... to flash:all_licenses.lic
```

Example: Removing Licenses

The following examples shows how to use the **license clear** command to remove a license entry from license storage once it has been verified that the license line is valid and was explicitly installed.

You must select the index number of the license to clear. Type the number at the Select Index to Clear prompt as shown in this example.

```
Router# license clear standard

Feature: standard
  1 License Type: Evaluation
  License State: Inactive
    Evaluation total period: 20 hours 0 minute
    Evaluation period left: 20 hours 0 minute
  License Addition: Additive
  Comment:
  Store Index: 0
  Store Name: Primary License Storage

  2 License Type: Permanent
  License State: Active, Not in Use
  License Addition: Exclusive
  Comment:
  Store Index: 1
  Store Name: Primary License Storage

Select Index to Clear [1-2]: 1
Are you sure you want to clear? (yes/[no]): yes
```

```
Router# show license detail

Feature: premium          Period left: 1 hour 0 minute
Index: 1      Feature: premium          Version: 1.0
License Type: Evaluation
License State: Active, Not in Use, EULA not accepted
  Evaluation total period: 1 hour 0 minute
  Evaluation period left: 1 hour 0 minute
License Count: Non-Counted
License Priority: None
Store Index: 0
Store Name: Evaluation License Storage
```

Example: Rehosting (Revoking and Transferring) a License

The following example shows how to use the **license revoke** command 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 in 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
```

Example: Generic Command Enhanced with Licensing Information

The generic commands described in the following sections are enhanced with licensing information:

- [reload, page 15](#)
- [show running-config, page 15](#)
- [show tech-support, page 16](#)
- [show version, page 17](#)

reload

The **reload** command shows the expired licenses, followed by expiring licenses sorted by the period left and end date:

```
Router# reload
```

```
The following license(s) are expiring or have expired.
Features with expired licenses may not work after Reload.
Feature: uc,Status: expiring, Period Left: 7 wks 5 days
```

```
Proceed with reload? [confirm]
```

show running-config

The **show running-config** command displays the UDI of the device. If the configuration file was copied from a different device, a warning is displayed upon reload. A UDI mismatch warning is also displayed during reload if the startup-config file has a different UDI than the platform UDI.

```
Router# show running-config
```

```
Building configuration...
```

```
Current configuration : 4772 bytes
!
version 12.4
no service pad
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
service internal
!
hostname csl-xfr-enhance-2951
!
...
...

license udi pid CISCO2951 sn FHH1211P037
license boot module c2951 technology-package securityk9 disable
license boot module c2951 technology-package uc
license boot module c2951 technology-package data
license call-home url https://tools-stage.cisco.com/SWIFT/Licensing
license agent listener http plaintext /lic-agent authenticate none
!
!
```

```

archive
 log config
  hidekeys
!
.
.
.

```

show tech-support

The **show tech-support** command displays the output of the **show license udi**, **show license file**, **show license detail**, **show license status**, and the **show license statistics** commands.

```
Router# show tech-support
```

```

----- show license udi -----
Device#      PID                SN                UDI
-----
*0           CISCO2951          FHH1211P037      CISCO2951:FHH1211P037

----- show license feature -----
Feature name      Enforcement  Evaluation  Subscription  Enabled
-----
ipbasek9          no           no           no             no
securityk9        yes          yes          no             no
uc                yes          yes          no             yes
data              yes          yes          no             no
gatekeeper        yes          yes          no             no
LI                yes          no           no             no
SSL_VPN           yes          yes          no             no
ios-ips-update    yes          yes          yes            no
SNASw             yes          yes          no             no

----- show license file -----
License Store: Primary License Storage
License Store: Evaluation License Storage
Store Index: 0
  License: 11 securityk9 1.0 LONG TRIAL DISABLED 1440 DISABLED STANDALONE AD
  D INFINITE_KEYS INFINITE_KEYS NEVER NEVER NiL SLM_CODE DEMO NiL N
  iL Ni NiL NiL 5_MINS NiL GT5YVbrMadt0NY50UcKGfvLTjQ17P2o3g84hE8Tq
  sOfu3Xph0N:2AmMdpMNxxKXSVG$<WLC>AQEBIQAB//+FugzZgqFJn/XhIxoyelg63
  YJD++i6Qx6vVp0MVqrX2EinbufbTfGzc7/GHNZaDZgRqWInXo3s+nsLU7rOtdOxoI
  xYZAo3LYmUJ+MFzsqlhKoJVlPyEvQ8H21MNUjVbhoN0gyIWsyiJaM8AQIkVBQFzhr
  10GYolVzdzfJfEPQIx6tZ++/Vtc/q3SF/5Ko8XCy=</WLC>
Comment:
  Hash: CLWUVZgY84BMRT03JiIYmIqwAQA=

----- 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

----- show license status -----

          License Type Supported
permanent          Non-expiring node locked license
extension          Expiring node locked license
evaluation         Expiring non node locked license
paid subscription Expiring node locked subscription license
                  with valid end date
extension subscription Expiring node locked subscription license
evaluation subscription Expiring node locked subscription license

...
----- show license statistics -----

          Administrative statistics
Install success count: 0
Install failure count: 0
Install duplicate count: 0
Comment add count: 0
Comment delete count: 0
Clear count: 0
Save count: 0
Save cred count: 1

          Client statistics
Request success count: 1
Request failure count: 3
Release count: 0
Global Notify count: 4

```

show version

The **show version** command displays the license UDI information:

```

Router> show version

Cisco IOS Software, C2951 Software (C2951-UNIVERSALK9-M), Experimental Version
12.4(20090326:052343)
 [rifu-xformers_3_25 130]
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ROM: System Bootstrap, Version 12.4(20090303:092436)
 [BLD-xformers_dev.XFR_20090303-20090303_0101-53
 107], DEVELOPMENT SOFTWARE

csl-xfr-enhance-2951 uptime is 3 days, 4 hours, 28 minutes
System returned to ROM by reload at 18:48:45 PST Mon Nov 26 1956
System image file is "flash0:c2951-universalk9-mz.SSA"
Last reload reason: Reload Command

...

Cisco C2951 (revision 1.0) with 1005568K/43008K bytes of memory.
Processor board ID FHH1211P037
3 Gigabit Ethernet interfaces
1 terminal line
1 cisco Special Services Engine(s)

```

```

DRAM configuration is 72 bits wide with parity enabled.
255K bytes of non-volatile configuration memory.
250880K bytes of ATA System CompactFlash 0 (Read/Write)

```

```
License Info:
```

```
License UDI:
```

```

-----
Device#   PID                SN
-----
*0        CISCO2951          FHH1211P037

```

```
Technology Package License Information for Module:'c2951'
```

```

-----
Technology   Technology-package   Technology-package
              Current         Type                 Next reboot
-----
ipbase       ipbasek9             None                 ipbasek9
security     disable              None                 disable
uc           uc                   Evaluation           uc
data         None                 None                 None

```

```
Configuration register is 0x0
```

Additional References

Related Documents

Related Topic	Document Title
Cisco License Manager application	User Guide for Cisco License Manager
Cisco IOS Software Activation conceptual overview	Cisco IOS Software Activation Conceptual Overview
Cisco IOS Software Activation Command Reference	Cisco IOS Software Activation Command Reference
Cisco IOS commands	Cisco IOS Master Commands List, All Releases
Integrated Services Routers licensing	Software Activation on Cisco Integrated Services Routers

Standards

Standard	Title
None	—

MIBs

MIB	MIBs Link
CISCO-LICENSE-MGMT-MIB	To locate and download MIBs for selected platforms, Cisco software releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

RFCs

RFC	Title
None	—

Technical Assistance

Description	Link
The Cisco Support and Documentation website provides online resources to download documentation, software, and tools. Use these resources to install and configure the software and to troubleshoot and resolve technical issues with Cisco products and technologies. Access to most tools on the Cisco Support and Documentation website requires a Cisco.com user ID and password.	http://www.cisco.com/cisco/web/support/index.html

Feature Information for Cisco IOS Software Activation

Table 1 lists the features in this module and provides links to specific configuration information.

Use Cisco Feature Navigator to find information about platform support and software image support. Cisco Feature Navigator enables you to determine which software images support a specific software release, feature set, or platform. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>. An account on Cisco.com is not required.


Note

Table 1 lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

Table 1 Feature Information for Cisco IOS Software Activation

Feature Name	Releases	Feature Information
Cisco IOS Software Activation	12.4(15)XZ 12.4(20)T 15.0(1)M	<p>Cisco IOS Software Activation EXEC commands support basic licensing processes.</p> <p>This feature is platform-independent.</p> <p>These sections provide information about this feature:</p> <ul style="list-style-type: none"> • Installing and Upgrading Licenses by Using Software Activation Commands, page 2 • Managing Licenses by Using Software Activation Commands, page 4 • Removing Licenses by Using Software Activation Commands, page 9 • Troubleshooting License Operations by Using Software Activation Commands, page 11 <p>These commands were introduced or modified by this feature: debug license, license clear, license comment, license install, license revoke, license save, license save credential, show license all, show license detail, show license feature, show license file, show license statistics, show license status, show license udi.</p>
CISL-SNMP support (MIB)	12.4(20)T 15.0(1)M	<p>SNMP support for the CISCO-LICENSE-MGMT-MIB was added.</p> <p>The following sections provide information about this feature:</p> <ul style="list-style-type: none"> • License Activation MIB Support, page 2 • MIBs, page 19 <p>These commands were introduced or modified by this feature: snmp-server enable traps, snmp-server host.</p>

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