



Cisco Software Activation Document for Dell

March 4, 2009

This document describes the Cisco software activation process for the Cisco Catalyst Blade Switch 3130 for Dell or blade switch stack, hereafter referred to as the *switch*.

For more information, see these documents on Cisco.com:

- *Getting Started with Cisco License Manager 1.0 on Windows XP*
- Cisco License Manager online help
- *API Reference Guide for Cisco License Manager on Windows XP*
- Cisco Catalyst Blade Switch 3130 and 3032 for Dell documents (software configuration guide, command reference, and system message guide)



Note

Unless otherwise noted, for complete syntax and usage information for the commands used in this document, see the *Cisco Software Activation Tasks and Commands* feature module.

For information about how Cisco implements Cisco IOS software activation, go to this URL:

http://www.cisco.com/en/US/products/ps9677/products_ios_technology_home.html

For more information about software activation concepts, tasks, and commands:

- See the *Cisco Software Activation Tasks and Commands* feature module at this URL:
http://www.cisco.com/en/US/docs/ios/csa/configuration/guide/csa_commands.html
- Use the Search field on Cisco.com to locate Cisco IOS software documentation. For example, if you want information about software activation, you can enter *Cisco Software Activation Tasks and Commands* in the search field.

The document has this information:

- [Software Activation, page 2](#)
- [Related Publications, page 21](#)
- [Obtaining Documentation and Submitting a Service Request, page 23](#)



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Software Activation

The switch runs the *universal software image* that has the Cisco IOS code for multiple *feature sets*. To enable a specific feature set, you must use the *software activation* feature to install the *software license* for that feature set. With software activation, you can

- Generate a software license.
- Install the software license on your switch.
- Enable a feature set.
- Upgrade a feature set.

Beginning with Cisco IOS Release 12.2(46)SE, the switches support these features:

- Temporary software licenses
- Rehosting a software license
- Cisco License Call Home

This section has this information:

- [Feature Sets, page 2](#)
- [Understanding Software Licenses, page 3](#)
- [Getting and Installing Software Licenses, page 4](#)
- [Displaying Software License Information, page 14](#)
- [Examples of Activating Software, page 17](#)



Note

To connect your management station or PC to the Cisco Product License Registration Portal, use a file transfer protocol such as the Xmodem Protocol or TFTP.

If you are connecting your PC to the Cisco License Manager server, you do not need to use one of these protocols.

Feature Sets

The switch supports these feature sets:

- IP base
- IP services

The software licenses are not affected by Cisco IOS software upgrades.

The switch supports the feature sets in [Table 1](#).

Table 1 Supported Feature Combinations

Feature Combination	Feature Set on the Switch
Layer 2+, basic Layer 3 routing	IP base, noncryptographic
Layer 2+ and basic Layer 3 routing, Kerberos, SSH ¹ , and SSL ²	IP base, cryptographic

Table 1 Supported Feature Combinations (continued)

Feature Combination	Feature Set on the Switch
Layer 2+, full Layer 3 routing, and unicast routing of IPv6 ³ packets	IP services, noncryptographic
Layer 2+, full Layer 3 routing, unicast routing of IPv6 packets, Kerberos, SSH, and SSL	IP services, cryptographic

1. SSH = Secure Shell
2. SSL = Secure Socket Layer
3. IPv6 = IP Version 6

Understanding Software Licenses

A software license applies only to a specific feature set. A switch can have more than one software license, but you can enable only one license at a time.

By default, if more than one software license is installed on the switch, this hierarchy determines the first software license to locate in the flash memory and to install:

1. IP services
2. IP base

If all the licenses are installed on the switch, the switch uses the highest license level, the IP services feature set.

To run the IP base feature set on the switch:

- If the switch is running a software image earlier than Cisco IOS 12.2(46)SE, remove the IP services license from the switch, save the switch running configuration, and reload the switch.
- If the switch is running Cisco IOS Release 12.2(46)SE or later, enter the **license boot level ipbase** privileged EXEC command, save the switch running configuration, and reload the switch.

The switch supports permanent and temporary software licenses.

The permanent license is *node-locked* because it is bound to the unique device identifier (UDI) of the switch and can only be used on that switch. When you order a new switch, the switch has the permanent software license that you selected.

A temporary software license is limited to a usage period and can be one of these types:

- Embedded evaluation license in the software image

The evaluation license is node-locked and is valid for 60 days.

You can use this license to minimize network downtime if a switch fails and the replacement switch does not have the same software license. You can also use the license to evaluate a feature set on the switch.
- Extension license

You can get this license from Cisco TAC. It is node-locked and is valid for 60 days.
- Grace-period license

During the rehost process, when the license on a switch is revoked and transferred to another switch, this license is automatically installed to prevent network disruption. It is valid for 60 days.

After the usage period expires, the switch continues to use the temporary software license until it is restarted. Before it restarts, warning messages state the switch is running the feature set without a valid license. After the switch restarts, the switch uses a valid software license based on the previously described hierarchy. If the switch does not have a valid license, it uses the IP base software license. For examples of using a temporary license, see the “[Changing the Software License on the Switch](#)” section on page 21.

For more information about software licenses, see the *Cisco Software Activation Conceptual Overview* feature module at this URL:

http://www.cisco.com/en/US/docs/ios/csa/configuration/guide/csa_overview.html

Getting and Installing Software Licenses

This section has these procedures:

- [Getting Software Licenses, page 4](#)
- [Installing Software Licenses by Using the Cisco License Manager, page 6](#)
- [Installing Software Licenses Using Cisco License Call Home, page 7](#)
- [Installing Software Licenses Using the Cisco IOS CLI, page 9](#)
- [Rehosting Software Licenses Using the Cisco License Manager, page 11](#)
- [Rehosting Software Licenses Using Cisco License Call Home, page 11](#)
- [Requesting that Software Licenses be Reailed Using Cisco License Call Home, page 13](#)
- [Managing the Software Licenses Using the Cisco IOS CLI, page 14](#)

Getting Software Licenses

Use one of these methods to get a software license:

- When ordering a switch, specify the software image and feature set to be installed.
- If you want your switch to run a different feature set, purchase the software license for that feature set, and get a product activation key (PAK). Use one of these processes to install the software license:
 - Use the Cisco License Manager.
 - a. Enter the PAK in the GUI.
 - b. The Cisco License Manager installs the software license for you.
 - Use the Cisco Product License Registration Portal.
 - a. To register your software license by using the PAK, go to www.cisco.com/go/license.
 - b. The software license file is e-mailed to you. We recommend that you copy the file on your switch flash memory.
 - c. Install the software license on the switch by using Cisco IOS CLI commands.
 - Use the Cisco License Call Home feature.

- Rehost the software license.
 - Revoke a license from a source switch, and transfer it to a destination switch.
 - We recommend that you use the Cisco License Manager when rehosting a software license.
 - You cannot rehost an evaluation software license.
- Request that the software license file be re-mailed from the Cisco Product License Registration Portal if the file is corrupted.

Cisco Product License Registration Portal

Follow these steps to get a PAK and a software license for a feature set:

-
- Step 1** After deciding on the feature set that you want, contact Cisco TAC to request a PAK.
 - Step 2** After you purchase the software license, the PAK is sent to you.
 - Step 3** Go to the Cisco Product License Registration Portal at www.cisco.com/go/license.
 - Step 4** Use the PAK and the switch UDI to create a software license file.
 - Step 5** The software license file is e-mailed to you.
-

Cisco License Manager

With Cisco License Manager, you can perform these tasks from one application:

- Automatically discover software licenses on your switches
- Install software licenses
- Track the software license status in your network

Use the Cisco License Manager GUI to perform all of these licensing tasks. You can also use the Cisco License Manager application programming interface (API) to write programs for your specific licensing tasks.

Cisco License Manager runs on Windows XP and uses Java to connect to Cisco.com and to Cisco devices. For information about downloading the free Cisco License Manager Client and Server applications or about ordering the optional Cisco License Manager software development kit (SDK), go to this URL:

<http://www.cisco.com/en/US/products/ps7138/index.html>

Cisco License Manager supports devices running the cryptographic or noncryptographic universal software images. For more information, see these documents on Cisco.com:

- *Getting Started with Cisco License Manager for Windows XP* guide at this URL:
http://www.cisco.com/en/US/products/ps7138/prod_installation_guides_list.html
- Other Cisco License Manager documentation at this URL:
http://www.cisco.com/en/US/products/ps7138/tsd_products_support_series_home.html
- *HTTPS - HTTP Server and Client with SSL 3.0* feature description for Cisco IOS Release 12.2(15)T at this URL:
http://www.cisco.com/en/US/docs/ios/12_2t/12_2t15/feature/guide/ftsslsh.html

Cisco License Call Home

The Cisco License Call Home feature supports these tasks only on a switch running the cryptographic universal software license:

- Installing the software license
- Rehosting the license
- Requesting that the software license be remailed

You can use CLI commands to connect the switch to the Cisco licensing infrastructure. For more information on the License Call Home feature and the Cisco licensing process, see the *Cisco Software Activation Tasks and Command* feature module on Cisco.com.

For more information about the License Call Home feature and about transferring software licenses, see the *Cisco Software Activation Conceptual Overview* feature module on Cisco.com.

For information about the License Call Home interface, see the *Cisco Software Activation Tasks and Commands* feature module on Cisco.com.

Installing Software Licenses by Using the Cisco License Manager

Use Cisco License Manager to install and manage software licenses on the switch.

Follow these guidelines when using Cisco License Manager:

- Cisco License Manager only runs on a server with Windows XP.
- Firewalls are not allowed between the Cisco License Manager server and a GUI client.
- For device notification to be successful, ensure that the Cisco License Manager hostname exists in the Domain Name Service (DNS) or that the device has the Cisco License Manager hostname and IP address configured to receive messages.
- Configure your switch to allow Cisco License Manager to manage software licenses by using the **ip http server** privileged EXEC command and the **license agent default authenticate none** global configuration command. For a summary of these commands, see the *Getting Started with Cisco License Manager on Windows XP* guide. For detailed instructions about enabling Cisco License Agent on your device, see the Cisco License Agent documentation.
- Make sure that there is a valid connection from the Cisco License Manager server to Cisco.com.

For additional requirements and guidelines, see the *Getting Started with Cisco License Manager for Windows XP* guide on Cisco.com.

Installing Software Licenses Using Cisco License Call Home

Beginning in privileged EXEC mode, follow these steps to install a software license and to restart the switch.

	Command	Purpose
Step 1		<p>Access the Cisco Product License Registration Portal.</p> <p>Make sure that the switch is configured for the Cisco License Call Home feature. For more information, see the <i>Cisco Software Activation Tasks and Commands</i> feature module on Cisco.com.</p>
Step 2	license call-home install pak <i>pak-id</i> [switch <i>switch-num</i>]	<p>Install a software license file on the switch by using the product activation key (PAK).</p> <ul style="list-style-type: none"> • pak <i>pak-id</i>—PAK that was e-mailed to you. • (Optional) switch <i>switch-num</i>—Stack member number. This parameter is supported only on stacking-capable switches. <p>Repeat this step when installing more than one software license.</p>
Step 3	configure terminal	Enter global configuration mode.
Step 4	license boot level <i>license-level</i> [switch <i>switch-num</i>]	<p>(Optional) Enable a software license on the switch:</p> <ul style="list-style-type: none"> • level <i>license-level</i>—Specify the license level that is ipbase, ipservices, or advipservices. • (Optional) switch <i>switch-num</i>—Specify the stack member. This option is available only on stacking-capable switches.
Step 5	exit	Return to privileged EXEC mode.
Step 6	show license [all [switch <i>switch-num</i>] detail [<i>feature-name</i> switch <i>switch-num</i>] feature [switch <i>switch-num</i>] file [switch <i>switch-num</i>] statistics [switch <i>switch-num</i>] status [switch <i>switch-num</i>] udi [switch <i>switch-num</i>]	<p>Verify the information about the software licenses on the switch.</p> <p>You can enter one of these options:</p> <ul style="list-style-type: none"> • all—All of the software license information. • detail—Detailed software license information. • feature—Information about the feature sets. • file—Information about the software image files. • statistics—Statistics about the software license. • status—Status of the software license. • udi—Switch UDI information. <p>(Optional) These parameters are optional:</p> <ul style="list-style-type: none"> • <i>feature-name</i>—Name of the feature. • switch <i>switch-num</i>—Stack member number. This parameter is supported only on stacking-capable switches.

	Command	Purpose
Step 7		Restart the switch. The switch enables the feature set.
Step 8	show version	Display the software licenses installed on the switch.
Step 9	copy running-config	(Optional) Save your entries in the configuration file.

Installing Software Licenses Using the Cisco IOS CLI

Beginning in privileged EXEC mode, follow these steps to install a software license and to restart the switch.

Command	Purpose
Step 1	Log in to the switch by using the console port, the Ethernet management port, or a Telnet session.
Step 2 license install <i>file-sys:file-sys//lic-location</i>	<p>Install a software license file on the switch.</p> <p>Use the <i>file-sys:file-sys//lic-location</i> parameter to specify the location of the software license file. The filename is license-file.xml. These options are supported:</p> <ul style="list-style-type: none"> • Local flash file system syntax on a standalone nonstacking-capable switch: flash: <p>Local flash file system syntax on a stacking-capable standalone switch or stack member: flash member-number:</p> <p>The <i>member-number</i> can be from 1 to 9.</p> • FTP syntax: ftp:[[/username[:password]@location]/directory]/license-file.xml • HTTP server syntax: http://[[username:password]@]{hostname host-ip}/{directory}/license-file.xml • Secure HTTP server syntax: https://[[username:password]@]{hostname host-ip}/{directory}/license-file.xml • Null destination for copies syntax: null: • NVRAM file system syntax: nvr: • Remote Copy Protocol (RCP) syntax: rcp:[[/username@location]/directory]/license-file.xml • System memory syntax: system: • TFTP syntax: tftp:[[/location]/directory]/license-file.xml <p>Repeat this step when installing more than one software license.</p>
Step 3 configure terminal	Enter global configuration mode.

	Command	Purpose
Step 4	license boot level <i>license-level</i> [switch <i>switch-num</i>]	(Optional) Enable a software license on the switch: <ul style="list-style-type: none"> • level <i>license-level</i>—Specify the license level that is ipbase, ipservices, or advipservices. • (Optional) switch <i>switch-num</i>—Specify the stack member. This option is available only on stacking-capable switches.
Step 5	exit	Return to privileged EXEC mode.
Step 6	show license [all [switch <i>switch-num</i>] detail [<i>feature-name</i> switch <i>switch-num</i>] feature [switch <i>switch-num</i>] file [switch <i>switch-num</i>] statistics [switch <i>switch-num</i>] status [switch <i>switch-num</i>] udi [switch <i>switch-num</i>]	Verify the information about the software licenses on the switch. You can enter one of these options: <ul style="list-style-type: none"> • all—All of the software license information. • detail—Detailed software license information. • feature—Information about the feature sets. • file—Information about the software image files. • statistics—Statistics about the software license. • status—Status of the software license. • udi—Switch UDI information. (Optional) These parameters are optional: <ul style="list-style-type: none"> • <i>feature-name</i>—Name of the feature. • switch <i>switch-num</i>—Stack member number. This parameter is supported only on stacking-capable switches.
Step 7	show license agent { counters session }	(Optional) Display the information about the software license agent. You can enter one of these options: <ul style="list-style-type: none"> • counters—License-agent statistic counters. • session—Session information related to the license agent.
Step 8		Restart the switch. The switch enables the feature set.
Step 9	show version	Display the software licenses installed on the switch.
Step 10	copy running-config	(Optional) Save your entries in the configuration file.

Rehosting Software Licenses Using the Cisco License Manager

In the Cisco License Manager GUI, follow these steps to revoke a software license from the source switch and to transfer it to the destination switch:

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- Step 1** Select the source switch.
 - Step 2** Select the software license to revoke from the source switch.
 - Step 3** Select the destination switch.
 - Step 4** Transfer the software license to the destination switch.
-

Rehosting Software Licenses Using Cisco License Call Home

Beginning in privileged EXEC mode, follow these steps to revoke a software license from the source switch and to transfer it to the destination switch.

	Command	Purpose
Step 1		Log in to the switch by using the console port, the Ethernet management port, or a Telnet session.

Command	Purpose
<p>Step 2 <code>license call-home revoke udi destination-udi file-sys:file-sys//lic-save-location [switch switch-num]</code></p>	<p>Revoke a software license, and create a rehost ticket using the Cisco License Call Home feature:</p> <ul style="list-style-type: none"> • udi destination-udi—Unique device identifier (UDI) of the switch to which the software license is transferred. • file-sys:file-sys//lic-save-location—Location to which the rehost ticket is saved. These options are supported: <ul style="list-style-type: none"> – Local flash file system syntax on a standalone nonstacking-capable switch: flash: Local flash file system syntax on a stacking-capable standalone switch or stack member: flash member-number: The <i>member-number</i> can be from 1 to 9. – FTP syntax: ftp:[[/username[:password]@location]/directory]/license-file.xml – HTTP server syntax: http://[[username:password]@]{hostname host-ip}[/directory]/license-file.xml – Secure HTTP server syntax: https://[[username:password]@]{hostname host-ip}[/directory]/license-file.xml – Null destination for copies syntax: null: – NVRAM file system syntax: nvrn: – Remote Copy Protocol (RCP) syntax: rcp:[[/username@location]/directory]/license-file.xml – System memory syntax: system: – TFTP syntax: tftp:[[/location]/directory]/license-file.xml • (Optional) switch switch-num—Stack member (source switch) from which the software license is transferred or revoked. This parameter is supported only on stacking-capable switches.
<p>Step 3</p>	<p>After entering the previous command, you are prompted to</p> <ol style="list-style-type: none"> 1. Enter your CCO user name and password and to select the software license to transfer to the destination switch. 2. Accept the end user license agreement (EULA). 3. Enter user information for the new license. <p>The software license file is e-mailed to you.</p>

	Command	Purpose
Step 4	<code>show license detail</code>	Verify that the software license has been transferred.
Step 5		Install the software license file on the switch, and enable the software license on the switch. See the “Installing Software Licenses Using the Cisco IOS CLI” section on page 9.

Requesting that Software Licenses be Remailed Using Cisco License Call Home

Beginning in privileged EXEC mode, follow these steps to request that a software license be remailed:

	Command	Purpose
Step 1		Log in to the switch with a valid license by using the console port, the Ethernet management port, or a Telnet session.
Step 2	<code>license call-home resend <i>dest-lic-location</i> [switch <i>switch-num</i>]</code>	Request that the software license file be remailed from the Cisco Product License Registration Portal. Enter these options: <ul style="list-style-type: none"> • <i>dest-lic-location</i>—Location to which the software license file is saved. • (Optional) switch <i>switch-num</i>—Stack member number. This parameter is supported only on stacking-capable switches.
Step 3		After entering the previous command, you are prompted to <ol style="list-style-type: none"> 1. Enter your CCO user name and password and to select the software license to transfer to the destination switch. 2. Enter your e-mail address. <p>The software license file is saved in the <i>dest-lic-location</i> specified in Step 2. The software license file is also e-mailed to you. You can use either file.</p>
Step 4		Install the software license file on the switch. See the “Installing Software Licenses Using the Cisco IOS CLI” section on page 9. <p>If the software license file is saved on the switch, such as in the flash memory, enable the software license and restart the switch.</p> <p>If the software license file is not saved on the switch, such as on a secure HTTP server, save the file on the switch, enable the software license, and restart the switch.</p>

Managing the Software Licenses Using the Cisco IOS CLI

You can perform any of these tasks:

- Removing a software license from the switch:
 - In software releases earlier than Cisco IOS Release 12.2(46)SE, enter the **license clear license-level** [**switch switch-num**] privileged EXEC command.
Use the *license-level* parameter to specify the software license to remove.
Use the **switch switch-num** parameter to specify the stack member. The **switch switch-num** option is supported only on stacking-capable switches.
 - In Cisco IOS Release 12.2(46)SE or later, if the software license is in use (active):
 - a. Enter the **license boot level license-level** global configuration command to specify a license level different from the current one.
 - b. Restart the switch to enable new software license.
 - c. Enter the **license clear license-level** [**switch switch-num**] privileged EXEC command to remove previous software license.
 - In Cisco IOS Release 12.2(46)SE or later, enter the **license clear license-level** [**switch switch-num**] privileged EXEC command to remove an unused software license.
- Backing up and saving software license information—Enter the **license save {credential url | url}** privileged EXEC command.
 - Use the **credential url** parameter to save the device credential information and to specify the URL to which the information is saved.
 - Use the *url* parameter to specify the URL of the software image.
- Recovering from a corrupt license:
 - Use the Cisco License Call Home feature to request that the software license file be reloaded.
 - Use the Cisco IOS CLI commands to re-install an uncorrupted version of the license on the switch.

Displaying Software License Information

To display information about the software licenses on your switch, use one of these methods:

- Use Cisco License Manager to view license and device information. In the GUI, the discovery and polling features collect all the license and device information that appears in the Properties window. For detailed instructions, see the Cisco License Manager online help.

- Use the Cisco IOS privileged EXEC commands in [Table 2](#).

Table 2 **Commands for Displaying Software License Information**

Command	Description
show license agent { counters session }	Displays the information about the software license agent. For information about the show license agent privileged EXEC command, see the <i>Cisco Software Activation Tasks and Commands</i> feature module.
show license [all [switch <i>switch-num</i>] detail [<i>feature-name</i> switch <i>switch-num</i>] feature [switch <i>switch-num</i>] file [switch <i>switch-num</i>] statistics [switch <i>switch-num</i>] status [switch <i>switch-num</i>] udi [switch <i>switch-num</i>]]	Displays information about the software license. For information about the show license privileged EXEC command, see the <i>Cisco IOS Software Licensing</i> feature module at this URL: http://www.cisco.com/en/US/docs/ios/12_2/12_2se/feature/guide/se_cisl.html
show version	Displays the software licenses installed on the switch. For information about this command, including examples of command output, see the command reference on Cisco.com.

This is an example of output from the **show license** command:

```
Switch# show license detail
Index: 1          Feature: advipservices          Version: 1.0
  License Type: Permanent
  License State: Active, In Use
  Lock type: Node locked
  Vendor info <PID>WS-CBS3130X-S</PID><SN>FHH1128P00F</SN>
  License Addition: Exclusive
  License Generation version 135266304
  License Priority: Medium
  License Count: Non-Counted

Index: 2          Feature: ipbase                Version: 1.0
  License Type: Permanent
  License State: Active, Not in Use
  Lock type: Node locked
  Vendor info <PID>WS-CBS3130X-S</PID><SN>FHH1128P00F</SN>
  License Addition: Exclusive
  License Generation version 135266304
  License Priority: Medium
  License Count: Non-Counted

Index: 3          Feature: ipservices            Version: 1.0
  License Type: Permanent
  License State: Active, Not in Use
  Lock type: Node locked
  Vendor info <PID>WS-CBS3130X-S</PID><SN>FHH1128P00F</SN>>
  License Addition: Exclusive
  License Generation version 135266304
  License Priority: Medium
  License Count: Non-Counted
```

This is an example of output from the **show license feature** command:

```
Switch# show license feature
Feature name      Enforcement  Evaluation  Clear Allowed  Enabled
advipservices    yes         yes         yes           no
ipervices        yes         yes         yes           no
ipbase           no          no          yes           yes
```

This is an example of output from the **show license file** command:

```
Switch# show license file
License Store: Primary License Storage
Store Index: 0
License: 11 advipservices 1.0 LONG NORMAL STANDALONE EXCL INFINITE_KEYS IN
FINITE_KEYS NEVER NEVER NiL SLM_CODE CL_ND_LCK NiL *1GXTAN6SWZLFG
PL400 NiL NiL NiL 5_MINS <UDI><PID>WS-WS-CBS3130X-S</PID><SN>FHH
1128P00F</SN></UDI> 0HurYu7c2pSyykIVdJe7f2Pfk8FP9JozlqB:9uZHhFVkmH
bB17q6GZYHB91Qs9bffknap1x9JPevJ:1WGPYhOZVpYs8A:ZXi9r7vW67ct2LcLjb
QDsxlw3DMKpI2c9591234$<WLC>AQEBIQAB//01IhupmYJseU4uN7uAuI8vmuaMU
/JLIEFY0w7gjwGBuuNMxetNM/4mI30pPbC3scqvPiAmWSaEmUT56rstk6gvmj+EQ
KRfD9A0ime1cZrdKxfILT0LaXT416nwmfp92Tya6vIQ4FnlBdqJ1sMzXesq8PmVcT
U9A4o9hil9vKur8N9F885D9GVF0bJHciT5M=</WLC>

Comment:
Hash: /DjCLyoejF40nAUcu8buXPtA+s8=
Store Index: 1
License: 11 ipbase 1.0 LONG NORMAL STANDALONE EXCL INFINITE_KEYS INFINITE_
KEYS NEVER NEVER NiL SLM_CODE CL_ND_LCK NiL *1GXTAN6SWZLFGPL400 N
iL NiL NiL 5_MINS <UDI><PID>WS-WS-CBS3130X-S</PID><SN>FHH1128P00F
</SN></UDI> 6OKG2h1SUGiUwXJ9AoiXV:EAeJwNjZzqnMKEoE0zVYLA0fKLuu:oa
iugFV:k1Yxef,XYLv8xsEN51Veh4qNOW8LkCMjHuluyfKka:xU3M39NfUwMCeiU:P
,THWvJ0zSejf3c$<WLC>AQEBIQAB//+xThXYlKd1gNvLPLu+9kCQBa844qSPYCctD
tPxcM5K3hnsN/+l2wSYNshE55JRCicqvPiAmWSaEmUT56rstk6gvmj+EQKRfD9A0
ime1cZrdKxfILT0LaXT416nwmfp92Tya6vIQ4FnlBdqJ1sMzXesq8PmVcTU9A4o9h
il9vKur8N9F885D9GVF0bJHciT5M=</WLC>

<output truncated>
```

This is an example of output from the **show license statistics** command:

```
Switch# show license statistics
Administrative status
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: 0

Client statistics
Request success count 1
Request failure count 0
Release count 0
Global Notify count 0
```

This is an example of 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
```

This is an example of output from the **show license udi** command for a switch stack:

```

Switch# show license udi
Device#  PID                SN                UDI
-----
*1       WS-CBS3130X-S FHH1128P00F     WS-CBS3130X-S:FHH1128P00F
2        WS-CBS3130X-S FSJC0712722     WS-CBS3130X-S:FSJC0712722

```

Examples of Activating Software

This section has this information:

- [Using TFTP to Install a Software License, page 17](#)
- [Using Cisco License Call Home to Rehost a Software License, page 18](#)
- [Using Cisco License Call Home to Rehost a Software License, page 18](#)
- [Changing the Software License on the Switch, page 21](#)

Using TFTP to Install a Software License

After you get a software license file from the Cisco Product License Registration Portal, this example shows how to use TFTP to install the license on a switch:

```

Switch# copy tftp flash:
Address or name of remote host [ ]? 10.0.0.1
Source filename [ ]? license_name-ips
Destination filename [license_name-ips]?
Accessing tftp://172.20.244.138/r1fs-ips...
Loading license_name-ips from 172.20.244.138 (via GigabitEthernet1/0/1): !
[OK - 1161 bytes]
1161 bytes copied in 0.059 secs (19678 bytes/sec)

```

If you enter the **show flash:** privileged EXEC command, the command output shows that the software license file is in the flash memory but that the feature set is not enabled.

```
Switch# license install flash: license_name-ips
Installing licenses from "flash: license_name-ips "
Installing...Feature:ipservices...Successful:Supported
1/1 licenses were successfully installed
0/1 licenses were existing licenses
0/1 licenses were failed to install

Switch#
19:46:56: %IOS_LICENSE_IMAGE_APPLICATION-6-LICENSE_LEVEL: Next reboot level = ipservices
and License = ipservices
```

After installing the license for the IP services feature set on the switch, you can enter the **show version** privileged EXEC command to display the software license information. In this example, the switch is currently running the IP base feature set.

```
Switch# show version
<output truncated>
License Level: ipbase   Type: Permanent
Next reboot license Level: ipservices

<output truncated>
```

Restart the switch to enable the IP services feature set.

Use the **show version** command to display the software license information after restarting the switch:

```
Switch# show version
<output truncated>
License Level: ipservices
License Type: Permanent
Next reboot license Level: ipservices

<output truncated>
```

Using Cisco License Call Home to Rehost a Software License

This example shows how to revoke a software license from a source switch, Switch 2, and transfer it to a destination switch, Switch 3. Switch 2 and Switch 3 are members of a switch stack.

Before revoking the license from Switch 2, enter the **show license udi** privileged EXEC command to get the PID and UDI of Switch 3.

```
Switch# show license udi
Device#  PID                               SN                               UDI
-----
*1      WS-CBS3130X-S FHH1128P00F  WS-CBS3130X-S:FHH1128P00F
2       WS-CBS3130X-S FSJC0712722  WS-CBS3130X-S:FSJC0712722
2       WS-CBS3130X-S FSKC124P01D  WS-CBS3130X-S:FSKC124P01D
```

Enter the **license call-home revoke udi** *destination-udi file-sys:file-sys//lic-save-location* [switch *switch-num*] privileged EXEC command to revoke the software license on Switch 2:

```
Switch# license call-home revoke udi WS-CBS3130X-S:FSKC124P01D flash2:rt switch 2
CCO User name : johndoe
CCO password :
```

```
Retrieving the sku from swift .....
!.....
```

1. SKU Name : CBS3130X-AISK9LCBQTY
 SKU Type : Feature
 Description : For Internal purposes only
 Ordered Qty : 1
 Available Qty : 1
 Feature List :
 Feature name: advipservices Count: Uncounted
 Platform Supported : CBS3130X-S
2. SKU Name : CBS3130X-IPSLCB-QTY
 SKU Type : Feature
 Description : For Internal purposes only
 Ordered Qty : 1
 Available Qty : 1
 Feature List :
 Feature name: ipservices Count: Uncounted
 Platform Supported : WS-CBS3130X-S

3. All of the above

```
Please select the sku number you want to revoke : 2
Retrieving the permission ticket from swift .....!.....
Output file saved ..... to flash2:rt
```

```
Retrieving the rehost ticket from the device .....Following Permanent licen
se(s) will be revoked from this device
```

```
    Feature Name: ipservices :Uncounted
```

```
Following Extension license(s) will be installed in this device
```

```
    Feature Name: ipservices :Uncounted
```

```
PLEASE READ THE FOLLOWING TERMS CAREFULLY. INSTALLING THE LICENSE OR
LICENSE KEY PROVIDED FOR ANY CISCO PRODUCT FEATURE OR USING SUCH
PRODUCT FEATURE CONSTITUTES YOUR FULL ACCEPTANCE OF THE FOLLOWING
TERMS. YOU MUST NOT PROCEED FURTHER IF YOU ARE NOT WILLING TO BE BOUND
BY ALL THE TERMS SET FORTH HEREIN.
```

```
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
```

```
6d21h: %LICENSE-6-EULA_ACCEPTED: EULA for feature ipservices 1.0 has been accept
ed. UDI=WS-CBS3130X-S:FSJC0712722; StoreIndex=-1:UNKNOWN License Store (t11-3
750e-2)
6d21h: %IOS_LICENSE_IMAGE_APPLICATION-6-LICENSE_LEVEL: Module name = CBS3130X Next
reboot level = ipbase and License = ipbase (t11-CBS3130X-2)
6d21h: %LICENSE-6-REVOKED: License for feature ipservices 1.0 has been revoked.
UDI=WWS-CBS3130X-S:FSJC0712722; StoreIndex=1:Primary License Storage (t11-CBS3130X-2)
(t11-CBS3130X-2)Output file saved ..... to flash2:rt
```

Retrieving the revoked license line from the swift

Please enter the user's detail:

```
First Name : john
Last Name : doe
Title : sweng
Company Name : cisco
Address1 : 170 w tasman drive
Address2 [Optional]:
City : san jose
State : ca
Province [Optional]:
Zipcode : 95134
Country : usa
Phone : 4081234567
Fax [Optional]:
Email : johndoe@cisco.com
!.....
Output file saved ..... to flash2:rt
```

Switch#

After the software license is revoked from Switch 2, the software license file for Switch 3, the destination switch, is e-mailed to you. After you install the software license file on Switch 3, restart it to enable the IP services software license.

Using Cisco License Call Home to Resend a Software License File

This example shows to request that the software license file be remailed from the Cisco Product License Registration Portal to Switch 3.

```
Switch# license call-home resend flash3:resend.lic switch 3
CCO User name : johndoe
CCO password :

Email address : johndoe@cisco.com
!.....
```

The software license file is e-mailed to you.

Use the **dir flash3:** command to verify that the software license file is stored in the flash memory.

```
Switch# dir flash3:
Directory of flash3:/

<output truncated>

22 -rwx          4096 Jun 25 2008 16:11:35 -07:00  resend.lic

57409536 bytes total (9097216 bytes free)
```

Install the software license file on Switch 3, and restart the switch.

Changing the Software License on the Switch

These are valid rehost and upgrade scenarios:

- If your switch is running the IP base feature set, you cannot rehost the IP base license, but you can upgrade to the IP services feature set by getting the IP services software license. After you restart the switch, it runs the IP services feature set.
- If your switch is running the IP services feature set and you rehost the IP services software license to another switch, the switch continues to run the IP services grace-period license. After the grace-period license expires, messages appear about the switch running the IP services feature set without a valid license. After you restart the switch, the switch runs the IP base feature set.
- If your switch is running the IP base feature set, you can enable the IP services evaluation software license to try the IP services feature set. If you decide to buy the IP services software license, get the upgrade PAK, and install it on the switch. The software license automatically replaces the evaluation license, and the switch continues to run the IP services feature set. You do not need to restart the switch.

Related Publications

These documents provide complete information about the switches and are available from this Cisco.com site:

http://www.cisco.com/en/US/products/ps8742/tsd_products_support_series_home.html



Note

Before installing, configuring, or upgrading a switch, see these documents:

- For initial configuration information, see the “Using Express Setup” section in the getting started guide or the “Configuring the Switch with the CLI-Based Setup Program” appendix in the hardware installation guide.
- For device manager requirements, see the “System Requirements” section in the release notes.
- For Network Assistant requirements, see the *Getting Started with Cisco Network Assistant*.
- For cluster requirements, see the *Release Notes for Cisco Network Assistant*.
- For upgrading information, see the “Downloading Software” section in the release notes.

- Cisco License Manager
 - *Getting Started with Cisco License Manager 1.0 on Windows XP*
 - Cisco License Manager online help
 - *API Reference Guide for Cisco License Manager on Windows XP*
- Cisco Catalyst Blade Switch 3130 for Dell
 - *Release Notes for the Cisco Catalyst Blade Switch 3130 for Dell*
 - *Cisco Catalyst Blade Switch 3130 for Dell Software Configuration Guide*
 - *Cisco Catalyst Blade Switch 3130 for Dell Command Reference*
 - *Cisco Catalyst Blade Switch 3130 for Dell System Message Guide*
 - Device manager online help (available on the switch)

- *Cisco Catalyst Blade Switch 3130 for Dell and Cisco Catalyst Blade Switch 3032 for Dell Hardware Installation Guide*
- *Cisco Catalyst Blade Switch 3130 for Dell and Cisco Catalyst Blade Switch 3032 for Dell Getting Started Guide*
- *Regulatory Compliance and Safety Information for the Cisco Catalyst Blade Switch 3000 Series for Dell*
- Device manager online help (available on the switch)
- *Getting Started with Cisco Network Assistant* (not orderable but available on Cisco.com)
- *Release Notes for Cisco Network Assistant* (not orderable but available on Cisco.com)
- Switch documentation
 - *Getting Started with Cisco Network Assistant*
 - *Release Notes for Cisco Network Assistant*
 - *Cisco Small Form-Factor Pluggable Modules Installation Notes*
 - *Cisco CWDM GBIC and CWDM SFP Installation Note*
 - These compatibility matrix documents are available from this Cisco.com site:
http://www.cisco.com/en/US/products/hw/modules/ps5455/products_device_support_tables_list.html
Cisco Gigabit Ethernet Transceiver Modules Compatibility Matrix
Cisco 100-Megabit Ethernet SFP Modules Compatibility Matrix
Cisco Small Form-Factor Pluggable Modules Compatibility Matrix
Compatibility Matrix for 1000BASE-T Small Form-Factor Pluggable Modules
 - For information about the Network Admission Control (NAC) features, see the *Network Admission Control Software Configuration Guide*

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.

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