



Smart Licensing

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Smart Licensing Client

Smart Licensing Client feature is a standardized licensing platform that simplifies the Cisco software experience and helps you to understand how Cisco software is used across your network. Smart Licensing is the next generation licensing platform for all Cisco software products.

Prerequisites for Cisco Smart Licensing Client

- Ensure that Call Home is not disabled before using the Smart Licensing Client feature.

Restrictions for Cisco Smart Licensing Client

- You require a virtual account in the Smart Licensing server for registration.

Information About Cisco Smart Licensing Client

Cisco Smart Licensing - An Overview

Cisco Smart Licensing is a flexible licensing model that provides you with an easier, faster, and more consistent way to purchase and manage software across the Cisco portfolio and across your organization. And it's secure – you control what users can access. With Smart Licensing you get:

- **Easy Activation:** Smart Licensing establishes a pool of software licenses that can be used across the entire organization—no more PAKs (Product Activation Keys).
- **Unified Management:** My Cisco Entitlements (MCE) provides a complete view into all of your Cisco products and services in an easy-to-use portal, so you always know what you have and what you are using.
- **License Flexibility:** Your software is not node-locked to your hardware, so you can easily use and transfer licenses as needed.

To use Smart Licensing, you must first set up a Smart Account on Cisco Software Central (<http://software.cisco.com/>).

For a more detailed overview on Cisco Licensing, go to <https://cisco.com/go/licensingguide>.

HSECK9

The **HSECK9** license is required for a feature to have full crypto functionality. Without the **HSECK9** license, only 225 secure tunnels and 85 Mbps of crypto bandwidth would be available. The **HSECK9** license allows features in the **securityk9** technology package to use the maximum number of secure tunnels and crypto bandwidth. To enable the **HSECK9** license, purchase the **FL-44-HSEC-K9** license from Cisco.com and install it using the **license install license-files** command. For further information on obtaining and installing feature licenses, see configuring the Cisco IOS software activation.



Note The **HSECK9** feature does not have an evaluation license that converts to an RTU license after 60 days; a feature license must be obtained.

To enable the license for the **HSECK9** feature, use the **securityk9** technology package.

For more information on how to enable license boot level securityk9 or license feature hseck9, refer to [Smart Licensing using Policy](#).

HSECK9 Feature License Removal

To remove the HSECK9 feature license from your device, you need to follow an order of steps to successfully remove the license. User can reinstate this license at a later date, if required. If these steps are not followed, the feature license comes back up as authorized after the reload.

To remove the HSECK9 feature license, perform these steps:

Procedure

- Step 1** Deregister the device.
 - Step 2** Unconfigure the HSEC license using the **no license featurehseck9** command.
 - Step 3** Save the running configuration using the **write memory** command.
 - Step 4** (optional) If the device still shows up after deregistering, remove the device from the licensing portal.
 - Step 5** Reload the device.
 - Step 6** Verify that the license has been removed using the **show license detail** command.
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Transitioning from CSL to Smart Licensing

In the Smart Licensing Model, customers can activate licensed objects without the use of a special software key or upgrade license file. The customers simply activate the new functionality using the appropriate product commands and configurations and the functionality is activated. A software reboot may or may not be required depending on the product capabilities and requirements.

Similarly, downgrading or removing an advanced feature, performance, or functionality would require a removal of the configuration or command.

Once either of these actions has been taken, the change in license state is noted by the Smart Software Manager upon next synchronization and an appropriate action is then taken.

Cisco One Suites

Cisco ONE Suites is a new way for customers to purchase infrastructure software. Cisco ONE offers a simplified purchasing model, centered on common customer scenarios in the data center, wide area network, and local access networks.

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How to Activate Cisco Smart Licensing Client

Enable Smart Licensing

Procedure

	Command or Action	Purpose
Step 1	enable Example: Device> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	configure terminal Example: Device# configure terminal	Enters global configuration mode.
Step 3	license smart enable Example: Device# license smart enable	Activates Smart Licensing on the device. <p>Note When you enable Smart Licensing, the Cisco Software License (CSL) and all licensing calls pass through the Smart Agent.</p> <p>For the 'no' case, if Smart Licensing is already registered, the Smart Agent performs the "license smart deregister" operation that deactivates Smart Licensing.</p>
Step 4	exit Example: Device# exit	Exits the global configuration mode.

	Command or Action	Purpose
Step 5	write memory Example: Device# write memory	Saves the running configuration to NVRAM.
Step 6	show license all Example: Device# show license all	(Optional) Displays summary information about all licenses.

Device Registration

Procedure

	Command or Action	Purpose
Step 1	enable Example: Device> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	license smart register idtoken <i>idtoken</i> [force] Example: Device# license smart register idtoken 123	Registers the device with the back-end server. Token id can be obtained from your virtual a/c in the Smart Licensing server. <ul style="list-style-type: none"> • force: To forcefully register your device irrespective of either the device is registered or not. <p>Note The device supplies the token ID to the Cisco server, which sends back a “Device Certificate” that is valid for 365 days.</p>
Step 3	license smart deregister Example: Device# license smart deregister	Deregisters the device from the backend server.
Step 4	license smart renew [ID auth] Example: Device# license smart renew ID	(Optional) Manually renews the ID certification or authorization.

Install and Upgrade Licenses Using Software Activation Commands

Before you begin

To install or upgrade a license by using the **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 **license save** command).

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>.



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

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



Note A standby device reboots twice when there is a mismatch of licenses.

Procedure

	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	enable Example: Device> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> Enter your password if prompted.
Step 3	show license udi Example: Device# 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:

	Command or Action	Purpose
		<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. <p>or</p> <ul style="list-style-type: none"> Click the Install button on the web page.
Step 5	license install <i>stored-location-url</i> Example: <pre>Device# license install tftp://infra-sun/<user>/license/5400/38a.lic</pre>	Installs the license. <ul style="list-style-type: none"> Accept the end-user license agreement if prompted.
Step 6	configure terminal Example: <pre>Device# configure terminal</pre>	Enters the global configuration mode.
Step 7	license boot level {metroaggrservices} Example: <pre>Device(config)# license boot level metroaggrservices</pre>	Activates the metroaggrservices license on the device upon the next reload.
Step 8	write memory Example: <pre>Device# write memory</pre>	Saves the running configuration to NVRAM.
Step 9	reload Example: <pre>Device# reload</pre>	(Optional) Restarts the device to enable the new feature set. Note A reload is not required when moving from an evaluation license to a permanent license of the same license level on the devices.

Troubleshooting for Cisco Smart Licensing Client

You can troubleshoot Smart Licensing enabling issues using the following commands on the device:

- **show version**
- **show running-config**
- **show license summary**
- **show license all**

- `show license tech support`
- `show license status`
- `debug smart_lic error`
- `debug smart_lic trace`

Configuration Examples for Cisco Smart Licensing Client

Example: Displays summary information about all licenses

Example: Enabling Smart Licensing

Use the `license smart enable` command to confirm if Smart Licensing is enabled.

