# Configuring Right-To-Use Licenses


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## Finding Feature Information

Your software release may not support all the features documented in this module. For the latest caveats and feature information, see Bug Search Tool and 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 table at the end of this module.

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

## Restrictions for Configuring RTU Licenses

The following are the restrictions for configuring and using RTU licenses.

- AP count licenses can be ordered and pre-activated on your switch.
- Imaged based licenses can be upgraded. AP count licenses can be deactivated and moved between switches and controllers.
- To activate a permanent license, you must reboot your switch after configuring the new image level. The AP-count license does not require a reboot to activate.
- An expired image based evaluation license can not be reactivated after reboot.
- Stack members of a switch stack must run the same license level.
- Your switch is pre-installed with the image that you ordered. If an image was not pre-ordered, then the switch is booted with a LAN base image by default.
- Adder AP-count licenses are installed in the factory.

**Related Topics**

Activating an Imaged Based License, on page 4
Examples: Activating RTU Image Based Licenses, on page 7

# Information About Configuring RTU Licenses

## Right-To-Use Licensing

Right-to-use (RTU) licensing allows you to order and activate a specific license type and level, and then to manage license usage on your switch. The types of licenses available to order are:

- Permanent licenses—Purchased with a specific feature set with no expiration date.
- Evaluation licenses—Pre-installed on the switch and is valid for only a 90 day in-use period.

To activate a permanent or evaluation license, you are required to accept the End-User License Agreement (EULA).

A permanent license can be moved from one device to another. To activate a license, you must reboot your switch.

If you activate the evaluation license, it will expire in 90 days. An evaluation license is a manufacturing image on your switch and is not transferable to another switch. Once activated, this type of license cannot be deactivated until it expires. After your evaluation period expires, at the next reload your switch image will return to its default license.

**Related Topics**

Activating an Imaged Based License, on page 4
Examples: Activating RTU Image Based Licenses, on page 7

## Right-To-Use Image-Based Licenses

Right-to-use image licenses support a set of features based on a specific image-based license:

- LAN Base—Layer 2 features.
- IP Base—Layer 2 and Layer 3 features.
- IP Services—Layer 2, Layer 3, and IPv6 features. (Applicable only to switches and not controllers.)

The default image license for the switches is as follows:

- Catalyst 2960-CX switches: LAN Base
- Catalyst 3560-CX switches: IP Base

## Right-To-Use License States

After you configure a specific license type and level, you can manage your licenses by monitoring the license state.

*Table 1: RTU License States*

| License State | Description |
|---|---|
| Active, In Use | EULA was accepted and the license is in use after device reboot. |
| Active, Not In Use | EULA was accepted and the switch is ready to use when the license is enabled. |
| Not Activated | EULA was not accepted. |

Guidelines to follow when monitoring your image based license state:

- A purchased permanent license is set to *Active, In Use* state only after a switch reboot.
- If more than one license was purchased, a reboot will activate the license with the highest feature set. For instance, the IP Services license is activated and not the LAN Base license.
- Remaining licenses purchased after switch reboot, stay in **Active, Not In Use** state.

**Note** For the AP count license, to change the state to Active, In Use, you must first make sure that the evaluation AP count license is deactivated.

# Mobility Controller Mode

AP-count licenses are used only when the switch is in Mobility Controller mode. The MC is the gatekeeper for tracking the AP-count licenses and allows an access point to join or not.

Management of AP-count licenses is performed by the switch in mobility controller mode configurable through the CLI.

# Right-To-Use Adder AP-Count Rehosting Licenses

Revoking a license from one device and installing it on another is called rehosting. You might want to rehost a license to change the purpose of a device.

To rehost a license, you must deactivate the adder ap-count license from one device and activate the same license on another device.

Evaluation licenses cannot be rehosted.

# How to Configure RTU Licenses

## Activating an Imaged Based License

### SUMMARY STEPS

1. **license right-to-use activate** {**ipbase** | **ipservices** | **lanbase**} {**all** | **evaluation all** } [**slot** *slot-number*] [ **acceptEULA**]
2. **reload** [ *LINE* | **at** | **cancel** | **in** | **slot** *stack-member-number* | **standby-cpu** ]
3. **show license right-to-use usage** [ **slot** *slot-number* ]

### DETAILED STEPS

| | Command or Action | Purpose |
|---|---|---|
| **Step 1** | **license right-to-use activate** {**ipbase** | **ipservices** | **lanbase**} {**all** | **evaluation all** } [**slot** *slot-number*] [ **acceptEULA**]<br>**Example:**<br>`Switch# license right-to-use activate ipservices all acceptEULA` | Activates a type of image based license. Activation can happen on all switches and also include the EULA acceptance.<br>**Note** If you do not accept EULA, the modified configuration will not take effect after reload. The default license (or a license that was not deactivated) becomes active after reload. |
| **Step 2** | **reload** [ *LINE* | **at** | **cancel** | **in** | **slot** *stack-member-number* | **standby-cpu** ]<br>**Example:**<br>`Switch# reload slot 1`<br>`Proceed with reload? [confirm] y` | Reloads a specific stack member to complete the activation process for the RTU adder AP-count license.<br>**Note** The reminder to accept a EULA is displayed after reload if it was not accepted earlier. |
| **Step 3** | **show license right-to-use usage** [ **slot** *slot-number* ]<br>**Example:**<br>`Switch# show license right-to-use usage`<br>`Slot# License Name Type usage-duration(y:m:d) In-Use EULA`<br>`1 ipservices permanent 0 :10 :0 yes yes`<br>`1 ipbase permanent 0 :0 :0 no no`<br>`1 ipbase evaluation 0 :0 :0 no no`<br>`1 lanbase permanent 0 :0 :7 no yes`<br>`1 apcount evaluation 0 :0 :0 no no`<br>`1 apcount base 0 :0 :0` | Displays detailed usage information. |

| | Command or Action | Purpose |
|---|---|---|
| | no no<br>1 apcount adder 0 :0 :0<br>no no<br><br>Switch# | |

**Related Topics**

Restrictions for Configuring RTU Licenses, on page 1
Right-To-Use Licensing, on page 2
Monitoring and Maintaining RTU Licenses, on page 7
Examples: Activating RTU Image Based Licenses, on page 7

# Activating an AP-Count License

## SUMMARY STEPS

1. **license right-to-use activate**{**apcount** *ap-number* **slot** *slot-num*} | **evaluation**} [ **acceptEULA**]
2. **show license right-to-use usage** [ **slot** *slot-number* ]

## DETAILED STEPS

| | Command or Action | Purpose |
|---|---|---|
| **Step 1** | **license right-to-use activate**{**apcount** *ap-number* **slot** *slot-num*} | **evaluation**} [ **acceptEULA**]<br>**Example:**<br>`Switch# license right to use activate apcount 5 slot 1 acceptEULA` | Activates one or more adder AP-count licenses and immediately accepts the EULA. |
| **Step 2** | **show license right-to-use usage** [ **slot** *slot-number* ]<br>**Example:**<br>`Switch# show license right-to-use usage`<br>`Slot# License Name Type usage-duration(y:m:d) In-Use EULA`<br>`1 ipservices permanent 0 :3 :29 yes yes`<br>`1 ipservices evaluation 0 :0 :0 no no`<br>`1 ipbase permanent 0 :0 :0 no no`<br>`1 ipbase evaluation 0 :0 :0 no no`<br>`1 lanbase permanent 0 :0 :0 no no`<br>`1 apcount evaluation 0 :3 :11` | Displays detailed usage information. |

| | Command or Action | Purpose |
|---|---|---|
| | no no<br>1 apcount base 0 :0 :0<br>no yes<br>1 apcount adder 0 :0 :17<br>yes yes<br><br>Switch# | |

**Related Topics**

Monitoring and Maintaining RTU Licenses, on page 7

# Obtaining an Upgrade or Capacity Adder License

You can use the capacity adder licenses to increase the number of access points supported by the switch.

### SUMMARY STEPS

1. **license right-to-use** {**activate** | **deactivate**} **apcount** {*ap-number* | **evaluation** } **slot** *slot-num* [ **acceptEULA**]

### DETAILED STEPS

| | Command or Action | Purpose |
|---|---|---|
| **Step 1** | **license right-to-use** {**activate** | **deactivate**} **apcount** {*ap-number* | **evaluation** } **slot** *slot-num* [ **acceptEULA**]<br>**Example:**<br>`Switch# license right to use activate apcount 5 slot 2 acceptEULA` | Activates one or more adder AP-count licenses and immediately accepts the EULA. |

# Rehosting a License

To rehost a license, you have to deactivate the license from one switch and then activate the same license on another switch.

### SUMMARY STEPS

1. **license right-to-use deactivate apcount** *ap-number* **slot** *slot-num* [ **acceptEULA**]
2. **license right-to-use activate apcount** *ap-number* **slot** *slot-num* [ **acceptEULA**]

### DETAILED STEPS

| | Command or Action | Purpose |
|---|---|---|
| **Step 1** | **license right-to-use deactivate apcount** *ap-number* **slot** *slot-num* [ **acceptEULA**]<br>**Example:** | Deactivates the license on one switch. |

| | Command or Action | Purpose |
|---|---|---|
| | `Switch# license right to use deactivate apcount 1 slot 1 acceptEULA` | |
| **Step 2** | **license right-to-use activate apcount** *ap-number* **slot** *slot-num* [ **acceptEULA**]<br>**Example:**<br>`Switch# license right to use activate apcount 2 slot 2 acceptEULA` | Activates the license on another switch. |

# Monitoring and Maintaining RTU Licenses

| Command | Purpose |
|---|---|
| **show license right-to-use default** | Displays the default license information. |
| **show license right-to-use detail** | Displays detailed information of all the licenses in the switch stack. |
| **show license right-to-use eula {adder \| evaluation \| permanent}** | Displays the end user license agreement. |
| **show license right-to-use mismatch** | Displays the license information that does not match. |
| **show license right-to-use slot** *slot-number* | Displays the license information for a specific slot in a switch stack. |
| **show license right-to-use summary** | Displays a summary of the license information on the entire switch stack. |
| **show license right-to-use usage** [ **slot** *slot-number* ] | Displays detailed information about usage for all licenses in the switch stack. |
| **show switch** | Displays detailed information of every member in a switch stack including the state of the license. |

**Related Topics**

Activating an Imaged Based License, on page 4
Examples: Activating RTU Image Based Licenses, on page 7
Activating an AP-Count License, on page 5

# Configuration Examples for RTU Licensing

## Examples: Activating RTU Image Based Licenses

This example shows how to activate an IP Services image license and accept the EULA for a specific slot:

```
Switch# license right-to-use activate ipservices slot 1 acceptEULA
% switch-1:stack-mgr:Reboot the switch to invoke the highest activated License level
```

This example shows how to activate a license for evaluation:

```
Switch# license right-to-use activate ipservices evaluation acceptEULA
% switch-1:stack-mgr:Reboot the switch to invoke the highest activated License level
```

### Related Topics

Activating an Imaged Based License, on page 4
Restrictions for Configuring RTU Licenses, on page 1
Right-To-Use Licensing, on page 2
Monitoring and Maintaining RTU Licenses, on page 7

# Examples: Displaying RTU Licensing Information

# Example: Displaying RTU License Details

This example shows all the detailed information for the RTU licenses on slot 1:

# Example: Displaying RTU License Mismatch

This example shows the license information of the switches in a stack and a mismatch state of a member switch. The member must match the active.

```
Switch# show switch

Switch/Stack Mac Address : 6400.f125.0c80
                                            H/W   Current
Switch#   Role        Mac Address     Priority Version  State
-----------------------------------------------------------------------------
 1       Standby     6400.f125.1b00     1      0        Ready
*2       Active      6400.f125.0c80     1      V01      Ready
 3       Member      6400.f125.1780     1      0        Lic-Mismatch
```

**Note** To resolve the license mismatch, first check the RTU license summary:

```
Switch# show switch right-to-use summary
```

Then change the license level of the mismatched switched so that it is the same license level of the active switch. This example shows that the IP Base license was activated for the member switch to match the active switch.

```
Switch# license right-to-use activate ipbase slot 1 acceptEULA
```

# Example: Displaying RTU Licensing Usage