



# Managing Licenses

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## Licenses

Port licenses for each Cisco UCS fabric interconnect are factory installed and shipped with the hardware. At a minimum, each fabric interconnect ships with the following counted licenses pre-installed:

- Cisco UCS 6120XP fabric interconnect—pre-installed licenses for the first eight Ethernet ports enabled in Cisco UCS Manager and any Fibre Channel ports on expansion modules
- Cisco UCS 6140XP fabric interconnect—pre-installed licenses for the first sixteen Ethernet ports enabled in Cisco UCS Manager and any Fibre Channel ports on expansion modules

Port licenses are not bound to physical ports. When you disable a licensed port, that license is then retained for use with the next enabled port.

If you want to use additional fixed ports, you must purchase and install licenses for those ports.

### Grace Period

If you attempt to use a port that does not have an installed license, Cisco UCS initiates a 120 day grace period. The grace period is measured from the first use of the port without a license and is paused when a valid license file is installed. The amount of time used in the grace period is retained by the system.

**Note**

Each physical port has its own grace period. Initiating the grace period on a single port does not initiate the grace period for all ports.

If a licensed port is unconfigured, that license is transferred to a port functioning within a grace period. If multiple ports are acting within grace periods, the license is moved to the port whose grace period is closest to expiring.

**High Availability Configurations**

To avoid inconsistencies during failover, we recommend that both fabric interconnects in the cluster have the same number of ports licensed. If symmetry is not maintained and failover occurs, Cisco UCS enables the missing licenses and initiates the grace period for each port being used on the failover node.

## Obtaining the Host ID for a Fabric Interconnect

The host ID is also known as the serial number.

**Procedure**

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope license</b>	Enters license mode.
<b>Step 2</b>	UCS-A /license # <b>show server-host-id</b>	Obtains the host ID or serial number for the fabric interconnect.  <b>Tip</b> Use the entire host ID that displays after the equal (=) sign.

The following example obtains the host ID for a fabric interconnect:

```
UCS-A# scope license
UCS-A /license # show server-host-id
Server host id:
  Scope Host Id
  -----
  A      VDH=SSI12121212
  B      VDH=SSI13131313
UCS-A /license #
```

**What to Do Next**

Obtain the required licenses from Cisco.

# Obtaining a License



**Note** This process may change after the release of this document. If one or more of these steps no longer applies, contact your Cisco representative for information on how to obtain a license file.

## Before You Begin

Obtain the following:

- Host ID or serial number for the fabric interconnect
- Claim certificate or other proof of purchase document for the fabric interconnect or expansion module

## Procedure

- Step 1** Obtain the product authorization key (PAK) from the claim certificate or other proof of purchase document.
- Step 2** Locate the website URL in the claim certificate or proof of purchase document.
- Step 3** Access the website URL for the fabric interconnect and enter the serial number and the PAK. Cisco sends you the license file by email. The license file is digitally signed to authorize use on only the requested fabric interconnect. The requested features are also enabled once Cisco UCS Manager accesses the license file.

## What to Do Next

Install the license on the fabric interconnect.

# Installing a License



**Note** In a cluster setup, we recommend that you download and install licenses to both fabric interconnects in matching pairs. An individual license is only downloaded to the fabric interconnect that is used to initiate the download.

## Before You Begin

Obtain the required licenses from Cisco.

## Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope license</b>	Enters license mode.

	Command or Action	Purpose
<b>Step 2</b>	UCS-A /license # <b>download license</b> <i>from-filesystem</i>	Downloads the license from its source location. For the <i>from-filesystem:</i> argument, use one of the following syntaxes: <ul style="list-style-type: none"> <li>• <b>ftp:// server-ip-addr</b></li> <li>• <b>scp:// username@server-ip-addr</b></li> <li>• <b>sftp:// username@server-ip-addr</b></li> <li>• <b>tftp:// server-ip-addr : port-num</b></li> </ul>
<b>Step 3</b>	UCS-A /license # <b>install file</b> <i>license_filename</i>	Installs the license.

The following example uses FTP to download and install a license:

```
UCS-A # scope license
UCS-A /license # download license ftp://192.168.10.10/license/port9.lic
UCS-A /license # install file port9.lic
UCS-A /license #
```

## Viewing the Licenses Installed on a Fabric Interconnect

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope license</b>	Enters license mode.
<b>Step 2</b>	UCS-A /license # <b>show file</b> <i>[license_filename   detail]</i>	Displays the licenses installed on the fabric interconnect with the level of detail specified in the command.

The following example displays the full details for the licenses installed on a fabric interconnect:

```
UCS-A# scope license
UCS-A /license # show file detail

License file: UCSFEAT20100928112305377.lic
  Id: 121212121212121212
  Version: 1.0
  Scope: A
  State: Installed
  Features
  Feature Name: ETH_PORT_ACTIVATION_PKG
  Vendor: cisco
  Version: 1.0
  Quantity: 24
  Lines
    Line Id: 1
```

```

Type: Increment
Expiry Date: Never
Pak:
Quantity: 24
Signature: B10101010101

License file: UCSFEAT20100928112332175.lic
Id: 1313131313131313
Version: 1.0
Scope: B
State: Installed
Features
Feature Name: ETH_PORT_ACTIVATION_PKG
Vendor: cisco
Version: 1.0
Quantity: 24
Lines
  Line Id: 1
  Type: Increment
  Expiry Date: Never
  Pak:
  Quantity: 24
  Signature: F302020202020
    
```

UCS-A /license #

# Viewing License Usage for a Fabric Interconnect

## Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope license</b>	Enters license mode.
<b>Step 2</b>	UCS-A /license # <b>show usage</b>	<p>Displays the license usage table for all license files installed on the fabric interconnect.</p> <p>This following are included:</p> <ul style="list-style-type: none"> <li>• <b>Feat Name</b> Package name corresponding to the licensed feature.</li> <li>• <b>Scope</b> Fabric interconnect on which the feature is present.</li> <li>• <b>Default</b> Number of default licenses for the fabric interconnect-- 8 or 16.</li> <li>• <b>Total Quant</b> Total quantity of licenses.</li> </ul>

	Command or Action	Purpose
		<ul style="list-style-type: none"> <li>• <b>Used Quant</b> Number of licenses in use.</li> <li>• <b>State</b> Denotes whether the license is valid.</li> <li>• <b>Peer Status</b> Identifies whether matching licenses are installed on both fabrics.</li> <li>• <b>Grace Used</b> Amount of time (in seconds) used in the grace period.</li> </ul>

The following example displays full details of the licenses installed on a fabric interconnect:

```
UCS-A# scope license
UCS-A /license # show usage
Feat Name      Status      Grace      Scope Default Total Quant Used Quant State
Peer
-----
ETH_PORT_ACTIVATION_PKG      A      16      40      11 License
Ok      Matching      0
ETH_PORT_ACTIVATION_PKG      B      16      40      11 License
Ok      Matching      0
UCS-A /license #
```

## Uninstalling a License



### Note

Permanent licenses cannot be uninstalled if they are in use. You can only uninstall a permanent license that is not in use. If you try to delete a permanent license that is being used, Cisco UCS Manager rejects the request with an error message.

### Before You Begin

- Back up the Cisco UCS Manager configuration.
- Disable the feature or port associated with the license you want to uninstall.

**Procedure**

	<b>Command or Action</b>	<b>Purpose</b>
<b>Step 1</b>	UCS-A# <b>scope license</b>	Enters license mode.
<b>Step 2</b>	UCS-A /license # <b>clear file <i>license-filename</i></b>	Uninstalls the specified license.

Cisco UCS Manager deactivates the license, removes the license from the list of licenses, and deletes the license from the fabric interconnect. In a cluster setup, you must uninstall the license from the other fabric interconnect.

The following example shows the uninstallation of port9.lic:

```
UCS-A # scope license
UCS-A /license # clear file port9.lic
Clearing license port9.lic:
SERVER this_host ANY
VENDOR cisco
INCREMENT ETH_PORT_ACTIVATION_PKG cisco 1.0 permanent 1 \
  VENDOR_STRING=<LIC_SOURCE>UCS_SWIFT</LIC_SOURCE><SKU>N10-L001=</SKU> \
  HOSTID=VDH=FLC12360025 \
  NOTICE="<LicFileID>20090519200954833</LicFileID><LicLineID>1</LicLineID> \
  <PAK></PAK>" SIGN=C01FAE4E87FA

Clearing license .....done
UCS-A /license #
```

