



## **On-Demand Port Activation Licensing**

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This chapter describes how to use the on-demand port activation licensing feature on the Cisco MDS 9124 Fabric Switch, the Cisco MDS 9134 Fabric Switch, the Cisco Fabric Switch for HP c-Class BladeSystem, and the Cisco Fabric Switch for IBM BladeCenter. This chapter contains the following sections:

- [About On-Demand Port Activation Licensing, page 11-1](#)
- [Configuring Port Activation Licenses, page 11-10](#)
- [On-Demand Port Activation License Example, page 11-13](#)

## **About On-Demand Port Activation Licensing**

As of Cisco MDS SAN-OS Release 3.1(1), you can expand your SAN connectivity as needed by enabling users to purchase and install additional port licenses. By default, all ports are eligible for license activation. On the Cisco MDS 9124 Fabric Switch, licenses are allocated sequentially. However, you can move or reassign licenses to any eligible port on the switch.

On the Cisco MDS 9134 Fabric Switch, the first 32 ports operate at 1 Gbps, 2 Gbps, or 4 Gbps. The switch has two ports that operate at 10 Gbps. Licenses are allocated sequentially.

On the Cisco Fabric Switch for HP c-Class BladeSystem and the Cisco Fabric Switch for IBM BladeCenter, licenses for internal ports are allocated as the ports come up. Licenses for external ports are allocated sequentially.

## About On-Demand Port Activation Licensing

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## Port-Naming Conventions

Table 11-1 describes the port-naming conventions for the four Cisco Fabric switches.

**Table 11-1 Port-Naming Conventions for Cisco Fabric Switches**

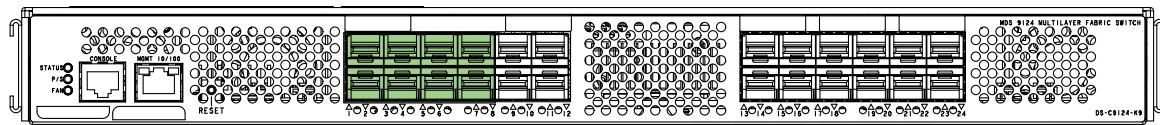
Cisco MDS 9124 Switch	Cisco MDS 9134 Switch	Cisco Fabric Switch for HP c-Class BladeSystem	Cisco Fabric Switch for IBM BladeCenter
fc1/1 through fc1/24	fc1/1 through fc1/34	Internal ports: bay1 through bay16	Internal ports: bay1 through bay14
		External ports: ext1 through ext8	External ports: ext0 and ext15 through ext19

## Port Licensing

On the Cisco MDS 9124 Switch, the first eight ports are licensed by default. You are not required to perform any tasks beyond the default configuration unless you prefer to immediately activate additional ports, make ports ineligible, or move port licenses.

Figure 11-1 shows the ports that are licensed by default for the Cisco MDS 9124 Switch.

**Figure 11-1 Cisco MDS 9124 Switch Default Port Licenses (fc1/1 - fc1/8)**



If you need additional connectivity, you can activate additional ports in 8-port increments with each on-demand port activation license, up to a total of 24 ports.

On the Cisco MDS 9134 Switch, the first 24 ports that can operate at 1 Gbps, 2 Gbps, or 4 Gbps are licensed by default. If you need additional connectivity, you can activate the remaining eight ports with one on-demand port activation license. A separate 10G license file is required to activate the remaining two 10-Gbps ports.

Figure 11-2 shows the ports that are licensed by default for the Cisco MDS 9134 Switch.

**Figure 11-2 Cisco MDS 9134 Switch Default Port Licenses (fc1/1 - fc1/24)**

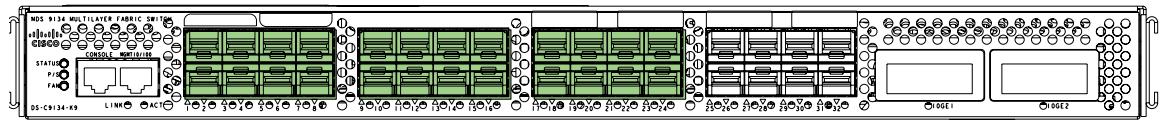
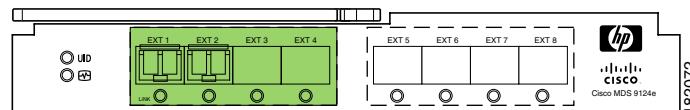


Figure 11-3 shows the external ports that are licensed by default for the Cisco Fabric Switch for HP c-Class BladeSystem.

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**Figure 11-3 Cisco Fabric Switch for HP c-Class BladeSystem Default Port Licenses (ext1 - ext4)**

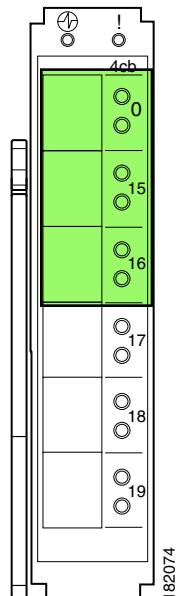


On the Cisco Fabric Switch for HP c-Class BladeSystem, any eight internal ports and the external ports (ext1 through ext4) are licensed by default. A single on-demand port activation license is required to use the remaining eight internal and four external ports.

On the Cisco Fabric Switch for IBM BladeCenter, any seven internal ports and the external ports (ext0, ext15 and ext16) are licensed by default. A single on-demand port activation license is required to use the remaining seven internal and three external ports.

Figure 11-4 shows the external ports that are licensed by default for the Cisco Fabric Switch for IBM BladeCenter.

**Figure 11-4 Cisco Fabric Switch for IBM BladeCenter Default Port Licenses (ext0, ext15 - ext16)**



If you do not prefer to accept the default behavior and would rather assign a license to a specific port, make the port ineligible to receive a license, or move licenses among ports, refer to the “[Configuring Port Activation Licenses](#)” section on page 11-10.

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## Default Configuration

Example 11-1 shows the default port license configuration for the Cisco MDS 9124 Switch.

**Example 11-1 Cisco MDS 9124 Switch Default Port License Configuration**

```
switch# show port-license
Available port activation licenses are 0
-----
Interface      Cookie      Port Activation License
-----
fc1/1          16777216    acquired
fc1/2          16781312    acquired
fc1/3          16785408    acquired
fc1/4          16789504    acquired
fc1/5          16793600    acquired
fc1/6          16797696    acquired
fc1/7          16801792    acquired
fc1/8          16805888    acquired
fc1/9          16809984    eligible
fc1/10         16814080    eligible
fc1/11         16818176    eligible
fc1/12         16822272    eligible
fc1/13         16826368    eligible
fc1/14         16830464    eligible
fc1/15         16834560    eligible
fc1/16         16838656    eligible
fc1/17         16842752    eligible
fc1/18         16846848    eligible
fc1/19         16850944    eligible
fc1/20         16855040    eligible
fc1/21         16859136    eligible
fc1/22         16863232    eligible
fc1/23         16867328    eligible
fc1/24         16871424    eligible
```



**Note** The cookie is used to acquire a license. Use the **show license usage PORT\_ACTIVATION\_PKG** command to show the cookies for acquired licenses.

```
switch# show license usage PORT_ACTIVATION_PKG
Application
-----
16777216
16797696
16781312
16793600
16785408
16805888
16789504
16801792
-----
```

Example 11-2 shows the default port license configuration for the Cisco MDS 9134 Switch.

**Example 11-2 Cisco MDS 9134 Switch Default Port License Configuration**

```
switch# show port-license
Available port activation licenses are 0
Available 10G port activation licenses are 0
```

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Interface	Cookie	Port Activation License
fc1/1	16777216	acquired
fc1/2	16781312	acquired
fc1/3	16785408	acquired
fc1/4	16789504	acquired
fc1/5	16793600	acquired
fc1/6	16797696	acquired
fc1/7	16801792	acquired
fc1/8	16805888	acquired
fc1/9	16809984	acquired
fc1/10	16814080	acquired
fc1/11	16818176	acquired
fc1/12	16822272	acquired
fc1/13	16826368	acquired
fc1/14	16830464	acquired
fc1/15	16834560	acquired
fc1/16	16838656	acquired
fc1/17	16842752	acquired
fc1/18	16846848	acquired
fc1/19	16850944	acquired
fc1/20	16855040	acquired
fc1/21	16859136	acquired
fc1/22	16863232	acquired
fc1/23	16867328	acquired
fc1/24	16871424	acquired
fc1/25	16875520	eligible
fc1/26	16879616	eligible
fc1/27	16883712	eligible
fc1/28	16887808	eligible
fc1/29	16891904	eligible
fc1/30	16896000	eligible
fc1/31	16900096	eligible
fc1/32	16904192	eligible
fc1/33	16908288	eligible
fc1/34	16912384	eligible



**Note**

The cookie is used to acquire a license. Use the **show license usage PORT\_ACTIVATION\_PKG** command to show the cookies for acquired licenses.

```
switch# show license usage PORT_ACTIVATION_PKG
Application
-----
16777216
16797696
16781312
16793600
16785408
16805888
16789504
16801792
16809984
16859136
16814080
16826368
16838656
16834560
16842752
16818176
16822272
```

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```
16830464
16855040
16850944
16846848
16867328
16871424
16863232
-----
```

**Example 11-3** shows the default port license configuration for the Cisco Fabric Switch for HP c-Class BladeSystem.



**Note** The first eight internal ports that come up acquire a license.

**Example 11-3 Cisco Fabric Switch for HP c-Class BladeSystem Default Port License Configuration**

```
switch# show port-license
Available ext port activation licenses are 0
Available bay port activation licenses are 0
-----
Interface      Cookie      Port Activation License
-----
bay1          16838656    acquired
bay2          16834560    eligible
bay3          16818176    acquired
bay4          16809984    eligible
bay5          16789504    acquired
bay6          16781312    eligible
bay7          16805888    eligible
bay8          16863232    acquired
bay9          16850944    acquired
bay10         16842752    acquired
bay11         16822272    acquired
bay12         16826368    eligible
bay13         16785408    acquired
bay14         16797696    eligible
bay15         16801792    eligible
bay16         16859136    eligible
ext1          16814080    acquired
ext2          16830464    acquired
ext3          16846848    acquired
ext4          16855040    acquired
ext5          16871424    eligible
ext6          16867328    eligible
ext7          16793600    eligible
ext8          16777216    eligible
```



**Note** The cookie is used to acquire a license. Use the **show license usage PORT\_ACTIVATION\_PKG** command to show the cookies for acquired licenses.

```
switch# show license usage PORT_ACTIVATION_PKG
Application
-----
16785408
16789504
16793600
16814080
16818176
```

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```
16822272
16838656
16842752
16850944
16863232
16867328
16855040
-----
```

**Example 11-4** shows the default port license configuration for the Cisco Fabric Switch for IBM BladeCenter.



**Note** The first seven internal ports that come up acquire a license.

**Example 11-4 Cisco Fabric Switch for IBM BladeCenter Default Port License Configuration**

```
switch# show port-license
Available ext port activation licenses are 0
Available bay port activation licenses are 0
-----
Interface      Cookie      Port Activation License
-----
bay1          16850944    eligible
bay2          16838656    eligible
bay3          16842752    acquired
bay4          16834560    eligible
bay5          16822272    acquired
bay6          16818176    eligible
bay7          16826368    acquired
bay8          16809984    eligible
bay9          16797696    acquired
bay10         16781312    eligible
bay11         16785408    acquired
bay12         16789504    eligible
bay13         16801792    acquired
bay14         16805888    acquired
ext0          16846848    acquired
ext15         16855040    acquired
ext16         16830464    acquired
ext17         16814080    eligible
ext18         16793600    eligible
ext19         16777216    eligible
```



**Note** The cookie is used to acquire a license. Use the **show license usage PORT\_ACTIVATION\_PKG** command to show the cookies for acquired licenses.

```
switch# show license usage PORT_ACTIVATION_PKG
Application
-----
16830464
16826368
16818176
16822272
16834560
16838656
16846848
16850944
16855040
```

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## License Status Definitions

Table 11-2 defines the port activation license status terms.

**Table 11-2 Port Activation License Status Definitions**

Port Activation License Status	Definition
acquired	The port is licensed and active.
eligible	The port is eligible to receive a license but does not yet have one. See Chapter 3, “Obtaining and Installing Licenses,” for information about how to obtain and install the PORT_ACTIVATION_PKG and license key file.
ineligible	The port is not allowed to receive a license.

By default, when you install additional port license activation packages, the activation status of ports changes from “eligible” to “acquired.” If you prefer to accept the default behavior, no further action is required.



**Note** You can uninstall licenses for ports not in use; however, you cannot uninstall default licenses.

Table 11-3 describes the port license assignments for the Cisco MDS 9124 Switch.

**Table 11-3 Default Port License Assignments for Cisco MDS 9124 Switch**

License Package (PORT_ACTIVATION_PKG)	Assigned to Ports on the Cisco MDS 9124 Switch
Default	1-8
First PORT_ACTIVATION_PKG	9-16
Second PORT_ACTIVATION_PKG	17-24

You can use the **show license usage** command to view any licenses assigned to a switch. If a license is in use, the status displayed is “In use.” If a license is installed but no ports have acquired a license, then the status displayed is “Unused.”

The default license package for the Cisco MDS 9124 Switch is as follows:

```
switch# show license usage

Feature           Ins    Lic    Status      Expiry Date  Comments
Count

-----  

FM_SERVER_PKG     Yes    -     Unused      never     -  

ENTERPRISE_PKG    Yes    -     In use      never     -  

PORT_ACTIVATION_PKG No    8     In use      never     -
```

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10G_PORT_ACTIVATION_PKG	No	0	Unused	-
-------------------------	----	---	--------	---

**Note**

The PORT\_ACTIVATION\_PKG does not appear as installed if you have only the default license installed.

Table 11-4 describes the port license assignments for the Cisco MDS 9134 Switch.

**Table 11-4 Default Port License Assignments for Cisco MDS 9134 Switch**

License Package (PORT_ACTIVATION_PKG)	Assigned to Ports on the Cisco MDS 9134 Switch
Default	1-24
PORT_ACTIVATION_PKG	25-32
10G_PORT_ACTIVATION_PKG	33-34

You can use the **show license usage** command to view any licenses assigned to a switch. If a license is in use, the status displayed is “In use.” If a license is installed but no ports have acquired a license, then the status displayed is “Unused.”

The default license package for the Cisco MDS 9134 Switch is as follows:

```
switch# show license usage

Feature           Ins   Lic   Status      Expiry Date  Comments
Count

-----
```

FM_SERVER_PKG	Yes	-	Unused	never	-
ENTERPRISE_PKG	Yes	-	In use	never	-
PORT_ACTIVATION_PKG	No	24	In use	never	-
10G_PORT_ACTIVATION_PKG	yes	2	Unused	never	-

**Note**

The PORT\_ACTIVATION\_PKG does not appear as installed if you have only the default license installed.

Table 11-5 describes the port license assignments for the Cisco Fabric Switch for HP c-Class BladeSystem.

**Table 11-5 Default Port License Assignments for Cisco Fabric Switch for HP c-Class BladeSystem**

License Package (PORT_ACTIVATION_PKG)	Assigned to Ports on the Cisco Fabric Switch for HP c-Class BladeSystem
Default	Any eight internal ports and the four external ports ext1 through ext4.
PORT_ACTIVATION_PKG	A single license required for the remaining eight internal and four external ports.

**Configuring Port Activation Licenses**

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You can use the **show license usage** command to view any licenses assigned to a switch. The default license package for the Cisco Fabric Switch for HP c-Class BladeSystem is as follows:

```
switch# show license usage
```

Feature	Ins Count	Lic	Status	Expiry Date	Comments
FM_SERVER_PKG	No	-	Unused		-
ENTERPRISE_PKG	No	-	Unused		-
PORT_ACTIVATION_PKG	No	12	In use	never	-
10G_PORT_ACTIVATION_PKG	No	0	Unused		-



**Note** The PORT\_ACTIVATION\_PKG does not appear as installed if you have only the default license installed.

Table 11-6 describes the port license assignments for the Cisco Fabric Switch for IBM BladeCenter.

**Table 11-6 Default Port License Assignments for Cisco Fabric Switch for IBM BladeCenter**

License Package (PORT_ACTIVATION_PKG)	Assigned to Ports on the Cisco Fabric Switch for IBM BladeCenter
Default	Any seven internal ports and the three external ports ext0, ext15 and ext16.
PORT_ACTIVATION_PKG	A single license required for the remaining seven internal and three external ports.

You can use the **show license usage** command to view any licenses assigned to a switch. The default license package for the Cisco Fabric Switch for IBM BladeCenter is as follows:

```
switch# show license usage
```

Feature	Ins Count	Lic	Status	Expiry Date	Comments
FM_SERVER_PKG	No	-	Unused		-
ENTERPRISE_PKG	No	-	Unused		-
PORT_ACTIVATION_PKG	No	10	In use	never	-
10G_PORT_ACTIVATION_PKG	No	0	Unused		-



**Note** The PORT\_ACTIVATION\_PKG does not appear as installed if you have only the default license installed.

## Configuring Port Activation Licenses

This section contains the following topics:

- [Making a Port Eligible for a License, page 11-11](#)
- [Acquiring a License for a Port, page 11-11](#)

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- Moving Licenses Among Ports, page 11-12

## Making a Port Eligible for a License

By default, all ports are eligible to receive a license. However, if a port has already been made ineligible and you prefer to activate it, then you must make that port eligible by using the **port-license** command.

To make a port eligible to acquire a license, follow these steps:

	<b>Command</b>	<b>Purpose</b>
<b>Step 1</b>	switch# <b>config t</b> switch(config)#	Enters configuration mode.
<b>Step 2</b>	switch(config)# <b>interface fc1/1</b> switch(config-if)#	Specifies the port interface that you want to make eligible for a license.  <b>Note</b> The name of the port depends on the switch you are using. See “Port-Naming Conventions” section on page 11-2 for information on port names.
<b>Step 3</b>	switch(config-if)# <b>port-license</b>  switch(config-if)# <b>no port-license</b>	Makes the port eligible to acquire a license.  Removes a license from a port if it already has been assigned, and also makes the port ineligible to acquire a license.  <b>Note</b> You can remove licenses only from ports that are not in an administrative shutdown state.

## Acquiring a License for a Port

If you do not prefer to accept the default on-demand port license assignments, you will need to first acquire licenses for ports to which you want to move the license.

To acquire a license for a port, follow these steps:

	<b>Command</b>	<b>Purpose</b>
<b>Step 1</b>	switch# <b>config t</b> switch(config)#	Enters configuration mode.
<b>Step 2</b>	switch(config)# <b>interface fc1/1</b> switch(config-if)#	Specifies the port interface for which you want to acquire a license.  <b>Note</b> The name of the port depends on the switch you are using. See “Port-Naming Conventions” section on page 11-2 for information on port names.
<b>Step 3</b>	switch(config-if)# <b>port-license acquire</b>  switch(config-if)# <b>no port-license</b>	Grants a license to a port or range of ports.  Removes a license from a port or range of ports.

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## Moving Licenses Among Ports



**Note** On the Cisco Fabric Switch for HP c-Class BladeSystem and the Cisco Fabric Switch for IBM BladeCenter, you can only move the license for internal ports among internal ports. Licenses from an internal port cannot be moved to an external port and vice versa. Licenses for external ports can only be moved among external ports.

You can move a license from a port (or range of ports) at any time. If you attempt to move a license to a port and no license is available, then the switch returns the message “port activation license not available.”



**Note** Once internal ports are licensed on the Cisco Fabric Switch for HP c-Class BladeSystem or the Cisco Fabric Switch for IBM BladeCenter, if the user enters the **copy running-config startup-config** command, then on the next reload, these ports will retain the licenses.

To move a license from one port to another (in this example, from fc1/1 to fc1/24), follow these steps:

Step	Command	Purpose
1	switch# <b>config t</b> switch(config)#	Enters configuration mode.
2	switch(config)# <b>interface fc1/1</b> switch(config-if)#	Specifies the port interface from which you want to move a license.  <b>Note</b> The name of the port depends on the switch you are using. See the “Port-Naming Conventions” section on page 11-2 for information on port names.
3	switch(config-if)# <b>no port-license</b>	Removes the license from port fc1/1 and makes the port ineligible to acquire a license.  <b>Note</b> The port needs to be shut down for this command to take effect.
4	switch(config-if)# <b>exit</b> switch(config)#	Exits interface mode for fc1/1.
5	switch(config)# <b>interface fc1/24</b> switch(config-if)#	Specifies the port interface to which you want to move the license.  <b>Note</b> The name of the port depends on the switch you are using. See “Port-Naming Conventions” section on page 11-2 for information on port names.
6	switch(config-if)# <b>port-license acquire</b>	Grants a license to port fc1/24.  <b>Note</b> The port needs to be shut down for this command to take effect.
7	switch(config-if)# <b>end</b>	Returns to EXEC mode.

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## On-Demand Port Activation License Example

The following example shows how to do the following tasks:

- Make a port ineligible
- Install port activation licenses
- Move licenses from one port to another

If you do not want to accept the default behavior, or you need flexibility in terms of which ports acquire a license, you may want to make a port ineligible. For example, if the first eight ports have a license, but you want to move a license from port 7 to port 9, then you would need to make a port ineligible. Or, if you have a port that should never acquire a license, you can make it ineligible and it will not be a candidate for a license when additional licenses are installed.

This example is based on the default configuration for the Cisco MDS 9124 Switch.

---

**Step 1** Display the default port license configuration.

```
switch# show port-license
Available port activation licenses are 0
-----
Interface      Cookie      Port Activation License
-----
fc1/1          16777216    acquired
fc1/2          16781312    acquired
fc1/3          16785408    acquired
fc1/4          16789504    acquired
fc1/5          16793600    acquired
fc1/6          16797696    acquired
fc1/7          16801792    acquired
fc1/8          16805888    acquired
fc1/9          16809984    eligible
fc1/10         16814080    eligible
fc1/11         16818176    eligible
fc1/12         16822272    eligible
fc1/13         16826368    eligible
fc1/14         16830464    eligible
fc1/15         16834560    eligible
fc1/16         16838656    eligible
fc1/17         16842752    eligible
fc1/18         16846848    eligible
fc1/19         16850944    eligible
fc1/20         16855040    eligible
fc1/21         16859136    eligible
fc1/22         16863232    eligible
fc1/23         16867328    eligible
fc1/24         16871424    eligible
```

**Step 2** Install an additional license package. See [Chapter 3, “Obtaining and Installing Licenses,”](#) for information about how to obtain and install the PORT\_ACTIVATION\_PKG and license key file.

```
switch# install license bootflash:license_file.lic
Installing license ..done
```



**Note**

If you provide a target name for the license key file, the file is installed with the specified name. Otherwise, the filename specified in the license key file is used to install the license.

**■ On-Demand Port Activation License Example**

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- Step 3** Make port fc1/8 ineligible to receive a license.



**Note** When you make a port ineligible, the license does not automatically transfer to another port.

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# interface fc1/8
switch(config-if)# no port-license
switch(config-if)# end
switch# show port-license
Available port activation licenses are 1
-----
Interface      Cookie      Port Activation License
-----
fc1/1          16777216    acquired
fc1/2          16781312    acquired
fc1/3          16785408    acquired
fc1/4          16789504    acquired
fc1/5          16793600    acquired
fc1/6          16797696    acquired
fc1/7          16801792    acquired
fc1/8          16805888    ineligible
fc1/9          16809984    eligible
fc1/10         16814080    eligible
```

- Step 4** Display the licensed features to confirm that you have successfully installed PORT\_ACTIVATION\_PKG.

```
switch# show license default
Feature                      Default License Count
-----
FM_SERVER_PKG                -
ENTERPRISE_PKG                -
PORT_ACTIVATION_PKG           8
10G_PORT_ACTIVATION_PKG       0
switch#
```

- Step 5** Display the port license configuration to confirm that additional ports have acquired a license.



**Note** Port fc1/8 remains ineligible and one license remains available. Ports fc1/9 through fc1/16 have acquired an additional license.

```
switch# show port-license
Available port activation licenses are 1
-----
Interface      Cookie      Port Activation License
-----
fc1/1          16777216    acquired
fc1/2          16781312    acquired
fc1/3          16785408    acquired
fc1/4          16789504    acquired
fc1/5          16793600    acquired
fc1/6          16797696    acquired
fc1/7          16801792    acquired
fc1/8          16805888    ineligible
fc1/9          16809984    acquired
fc1/10         16814080    acquired
fc1/11         16818176    acquired
fc1/12         16822272    acquired
```

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fc1/13	16826368	acquired
fc1/14	16830464	acquired
fc1/15	16834560	acquired
fc1/16	16838656	acquired
fc1/17	16842752	eligible
fc1/18	16846848	eligible
fc1/19	16850944	eligible
fc1/20	16855040	eligible
fc1/21	16859136	eligible
fc1/22	16863232	eligible
fc1/23	16867328	eligible
fc1/24	16871424	eligible

- Step 6** Move the remaining license to port fc1/17.

```
switch# config t
switch(config)# interface fc1/17
switch(config-int)# port-license acquire
```

- Step 7** Display the port license configuration to confirm that port fc1/17 has acquired a license.

```
switch# show port-license
Available port activation licenses are 0
-----
Interface      Cookie      Port Activation License
-----
fc1/1          16777216    acquired
fc1/2          16781312    acquired
fc1/3          16785408    acquired
fc1/4          16789504    acquired
fc1/5          16793600    acquired
fc1/6          16797696    acquired
fc1/7          16801792    acquired
fc1/8          16805888    ineligible
fc1/9          16809984    acquired
fc1/10         16814080    acquired
fc1/11         16818176    acquired
fc1/12         16822272    acquired
fc1/13         16826368    acquired
fc1/14         16830464    acquired
fc1/15         16834560    acquired
fc1/16         16838656    acquired
fc1/17         16842752    acquired
fc1/18         16846848    eligible
fc1/19         16850944    eligible
fc1/20         16855040    eligible
fc1/21         16859136    eligible
fc1/22         16863232    eligible
fc1/23         16867328    eligible
fc1/24         16871424    eligible
```

- Step 8** Make this configuration your startup configuration by saving the new port license configuration into nonvolatile storage. Once you complete this step, the running and the startup copies of the configuration are identical.

```
switch# copy running-config startup-config
```

- Step 9** Display and/or confirm the licenses in the running configuration by entering the **show running config** command.

```
switch# show running config
...
interface fc1/1
  switchport trunk mode auto
```

**■ On-Demand Port Activation License Example**

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```

port-license acquire
channel-group 122 force
no shutdown

interface fc1/2
switchport trunk mode auto
port-license acquire
channel-group 122 force
no shutdown

interface fc1/3
switchport trunk mode auto
port-license acquire
no shutdown

interface fc1/4
port-license acquire
no shutdown

interface fc1/5
switchport trunk mode auto
port-license acquire
port-track interface fc1/13
port-track interface fc1/21
port-track interface fc1/24
port-track interface port-channel 122
no shutdown

interface fc1/6
switchport trunk mode off
port-license acquire
fcsp auto-active
no shutdown

```

---