Port Licensing for the Cisco ASR 920 Series Routers Cisco IOS XE Everest 16.5.1

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Licensing 1G and 10G ports on Cisco ASR 920 Series Router

The Cisco Software License Activation feature is a set of processes and components to activate Cisco IOS-XE software feature sets by obtaining and validating fee-based Cisco software licenses.

For information on software license activation and concepts, see the Cisco IOS Software Activation Conceptual Overview.

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.

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

Prerequisites for Port Upgrade Licensing and Bulk Port Licensing

Before activating the Port Upgrade and Bulk Port license, you must obtain and install the license. For information on obtaining and installing licenses, see Configuring the Cisco IOS Software Activation Feature.

Restrictions for Port Upgrade Licensing and Bulk Port Licensing

Note   Port Upgrade Licensing is applicable for both, 1G and 10G ports.

- If 10G license is installed and activated for a dual rate port and an SFP is inserted in that port, the interface will come up in 1G mode.
- If 10G license is installed and activated for a dual rate port and an SFP+ is inserted in that port, the interface will come up in 10G mode.
- If 10G license is **not** installed for particular port and SFP is inserted, the interface will come up in 1G mode.
- On the Cisco ASR-920-12SZ-IM router, if there is no license and a 1G SFP is inserted in the chassis, ports Gi0/0/12–Gi0/0/15 will be administratively down.

   If there is a license and a 1G SFP is inserted in the chassis, ports Gi0/0/12–Gi0/0/15 will come up in 10G mode only.
- If sufficient 10G licenses or Bulk Licenses are not available or not activated for a port and an SFP+ is inserted, the 10G mode is not enabled. The interface will be in 'link down state' and the following system warning message will be generated. `Warning: SFP+ inserted at port X tengig license not in use`
- If an activated 10G license is uninstalled or deactivated for a particular port with SFP+, the interface is initialized to 1G mode and 10G interfaces will be in administratively down state.

Information about Port Upgrade and Bulk Port Licensing

Bulk licenses have the highest priority in all Cisco ASR 920 router models, followed by the 12x1G licenses (applicable only on the Cisco ASR-920-24SZ-*xx* models), and then the 1G licenses.

When a 6x1G license is enabled, activating the 12x1G releases the 6x1G license. However, if the 12x1G license is activated, enabling 6x1G license causes no change, that is, the 6x1G license is rejected.

Similarly, when any type of license is in use and a bulk license is activated, all licenses are released and only the bulk license is activated. On the other hand, if a bulk license is in use, all other license configurations are rejected.

Port Upgrade License

Port upgrade license is available in pay-as-you-grow model. Few ports in the router are enabled by default. However, you must purchase the licenses to enable other ports.

- 1 GigabitEthernet Upgrade License (**L-ASR920-1G-6**)—1G ports are bundled as a group of six ports. You must purchase one license bundle to enable six 1G ports.

- 10 GigabitEthernet Upgrade License (**L-ASR920-10G-2**)—10G ports are bundled as a group of two ports. You must purchase one license bundle to enable two 10G ports.

The Cisco ASR 920 Series routers support dual rate 10G ports. Initially all the 10G ports operate in 1G mode. You must purchase 10G Upgrade license to operate in 10G mode.

Table 1: Cisco ASR 920 Series models licensed and non-licensed ports

Cisco ASR 920 Series models	1G ports	10G ports

ASR-920-12CZ-A
ASR-920-12CZ-D
	There are 12*1G ports. The 12*1G ports are grouped as (4 SFP + 8 AMS port)
	
	The first six ports (4 SFP + 2 AMS Port) are non-licensed ports that are enabled by default. The last 6 ports (6 AMS Ports) are licensed ports.
	
	  • Ports enabled by default: **Gi0/0/0 - Gi0/0/5**
	
	  • Licensed ports: **Gi0/0/6 - Gi0/0/11**
		There are 2*10G ports that operate in 1G mode by default. To operate in 10G mode, you have to activate 10 Gigabit Ethernet Upgrade license with single bundle.
		
		  • Ports enabled by default: **Te0/0/12 - Te0/0/13** (operating in 1G mode)
		
		  • Licensed ports: **Te0/0/12 - Te0/0/13** (license needed for 10G mode)

Cisco ASR 920 Series models	1G ports	10G ports
ASR-920-4SZ-A ASR-920-4SZ-D	The two ports operate in 1G mode by default and no license is required to activate these ports. • Ports enabled by default: **Gi0/0/0 - Gi0/0/1** • Licensed ports: **None**	There are 4*10G ports that operate in 1G mode by default. To operate in 10G mode, you have to activate 10 GigabitEthernet Upgrade license with single bundle or two bundles. When you install and activate with the single bundle (bundle count 1), then the first two ports are enabled in 10G mode (Interfaces Te0/0/2 and Te0/0/3 only). If you install the second bundle (bundle count 2), all the 10G ports (Te0/0/2 - Te0/0/5) are enabled in 10G mode. • Ports enabled by default: **Te0/0/2 - Te0/0/5** (operating in 1G mode) • Licensed ports: **Te0/0/2 - Te0/0/5** (license needed for 10G mode available in bundles of 2 ports)
ASR-920-10SZ-PD	There are 10*1G ports. These 10*1G ports are grouped as: • Two copper ports • Eight SFP ports The first four ports (Gi0/0/0 -Gi0/0/3) are non-licensed ports, that is, these ports are enabled by default. The last six ports (Gi0/0/4 - Gi0/0/9) are licensed ports, that is, you need a license to enable them.	There are 2*10G ports that operate in 1G mode by default. For the ports to operate in 10G mode, you must to activate the 10 Gigabit Ethernet Upgrade License with a single bundle. • Ports enabled by default—Te0/0/10 – Te0/0/11 (operate in 1G mode) • Licensed ports—Te0/0/10 – Te0/0/11 (license needed to operate in 10G mode)

Cisco ASR 920 Series models	1G ports	10G ports
ASR-920-24SZ-IM ASR-920-24SZ-M ASR-920-24TZ-M	There are 24*1G ports. The first 12 ports (Gi0/0/0 – Gi 0/0/11) are active by default and no license is required for these ports. The last 12 ports (Gi 0/0/12 – Gi 0/0/23) are licensed ports, that is, you need a license to enable them. 1G licenses are available in bundles of 6 ports or 12 ports. When a 6-port bundle license is used ports Gi 0/0/12 – Gi 0/0/17 are activated. To activate the remaining 1G ports (Gi 0/0/18 – Gi 0/0/23) a second bundle of 6 ports is required. Alternately, you can use a 12*1G bundle license to activate all the licensed 1G ports at once. **Note** In case of the ASR-920-24SZ-IM model, if the pluggable IM (8*1G Copper) is activated, ports 16-23 are disabled and removed from the interface list. Even when all the license bundles are activated before the IM activation, once IM is activated, the ports16-23 will be disabled. License will remain activated for these ports; however, you must explicitly deactivate/release the port license by executing the **(no) license feature port onegig** *bundle_count* command. In case of the ASR-920-24SZ-IM model, when activating the 8T1/E1 IM, ports Gi 0/0/20 – Gi 0/0/23 are disabled and the interfaces are removed from the list.	There are 4*10G ports and they are disabled by default. Since dual rate ports are not supported, these ports cannot be used in 1G mode. To activate the 10G ports, upgrade license with single or two bundles is required. When you install and activate a single bundle (bundle count=1), the first two TenGigabitEthernet ports are enabled —Te0/0/24 – Te0/0/25. If you install the second bundle (bundle count=2), all 10G ports (Te0/0/23 – Te0/0/27) are activated.

ASR-920-12SZ-IM	There are 12*1G ports(Gi0/0/0 - Gi0/0/11). Ports 12–15 are dual rate ports. These ports work in 1G mode by default.
	
	    • Ports enabled by default: **Tei0/0/12 - Te0/0/15**
	
	    • Licensed ports: **Gi0/0/0 - Gi0/0/11**
		There are 4*10G ports (Te0/0/12 - Te0/0/15) that operate in 1G mode by default. To operate in 10G mode, you must activate 10 Gigabit Ethernet Upgrade license with bundle count 2, or bulk license.
		
		    • Ports enabled by default: **Te0/0/12 - Te0/0/15** (operates in 1G mode)
		
		    • Licensed ports: **Te0/0/12 - Te0/0/15** (10G/Bulk license and SFP+ needed to operate in 10G mode)

Table 2: Cisco ASR 920 Series models ports behavior

Cisco ASR 920 Series models	1G ports	10G ports
ASR-920-12CZ-A ASR-920-12CZ-D	Without license: You will have all the non-licensed ports Gi0/0/0 - Gi0/0/5. The licensed ports Gi0/0/6 - Gi0/0/11 are "admin-down", that is the licensed ports are in Shutdown state. You cannot activate the interface using the **no shutdown** command on the licensed ports unless you have the valid 1 GigabitEthernet Upgrade license installed and activated. With License: After you install and activate the license, then the licensed ports Gi0/0/6 - Gi0/0/11 come out of "admin-down" state, and will be **Up** or **Down** state based on the connection.	Without License: The licensed ports Te0/0/12 - Te0/0/13 operate in 1G mode. With License: After you install and activate the license, the licensed ports Te0/0/12- Te0/0/13 operate in 1G or 10G mode.
ASR-920-4SZ-A ASR-920-4SZ-D	Without License: The ports Gi0/0/0 - Gi0/0/1 operate in 1G mode.	Without License: The licensed ports Te0/0/2- Te0/0/5 operate in 1G mode. With License: If you install and activate the license with single bundle (bundle count 1), then the ports Te0/0/2 - Te0/0/3 will be activated in 10G mode and the remaining ports will be in 1G mode. If you install and activate the license with second bundle (bundle count 2), then all the licensed ports Te0/0/2 - Te0/0/5 will operate in 1G or 10G mode.
ASR-920-10SZ-PD	Without license: The ports Gi0/0/0 – Gi0/0/3 are non-licensed. The licensed ports Gi0/0/4 - Gi0/0/9 are in "admin-down" state, that is, licensed ports are in shutdown state. You cannot activate the interface using the **no shutdown** command on the licensed ports unless you have a valid 1 Gigabit Ethernet upgrade license installed and activated. With License: After you install and activate the license, the licensed ports Gi0/0/4 – Gi0/0/9 are no longer in "admin-down" state. These ports are in **UP** or **DOWN** state based on the connection.	Without License: The ports Te0/0/10 – Te0/0/11 operate in 1G mode. With License: After you install and activate the license, the ports Te0/0/10 – Te0/0/11 operate in 1G or 10G mode.

Cisco ASR 920 Series models	1G ports	10G ports
ASR-920-24SZ-IM ASR-920-24SZ-M , ASR-920-24TZ-M	Without License: The ports Gi0/0/0 – Gi0/0/11 are non-licensed. The licensed ports Gi0/0/12 – Gi0/0/23 are in "admin-down" state, that is, the ports are in shutdown state. You cannot activate the interface using the **no shutdown** command. With License: After you install and activate the license with single bundle of six 1G ports, the ports Gi0/0/12 – Gi0/0/17 are activated. If you install the license with second bundle of six 1G ports, all ports Gi0/0/12 – Gi0/0/23 are activated.	Without license: With no 10G licensed installed, the ports Te0/0/24 – Te0/0/27 cannot be used. They remain in "admin-down" state and cannot be activated using the **no shutdown** command. With license: After you install and activate the license with single bundle count, ports Te0/0/24 – Te0/0/25 are activated. The remaining ports will be in "admin-down" state. When you install the second bundle license (bundle count=2), all TenGig ports (Te0/0/24 – Te0/0/27) are activated.
ASR-920-12SZ-IM	Without license: The licensed ports Gi0/0/0 - Gi0/0/11 are "admin-down", that is, licensed ports are in Shutdown state. You cannot activate the interface using the **no shutdown** command on the licensed ports unless you have the valid 1 GigabitEthernet Upgrade license/Bulk license installed and activated. With License: After you install and activate the license, then the licensed ports Gi0/0/0 - Gi0/0/11 come out of "admin-down" state, and will be **Up** or **Down** state based on the connection.	Without License: The licensed ports Te0/0/12 - Te0/0/15 operate in 1G mode. With License: After you install and activate the 10G license with single bundle count, ports Te0/0/12 – Te0/0/13 are activated and will work in 1G or 10 G mode based on SFP type. The remaining ports will operate in 1G mode if you have a valid 1G license. When you install the second bundle license (bundle count=2), all TenGiabotEthernet ports (Te0/0/12 – Te0/0/15) are activated and work in 1G or 10G mode based on the SFP type.

Bulk Port License

Bulk port licensing allows you to enable all the ports with a single license. When Bulk port license is activated, even while the 1 GigabitEthernet or 10 GigabitEthernet Upgrade Licenses are in use, there is no impact on the corresponding interfaces. The existing 1 GigabitEthernet or 10 GigabitEthernet Upgrade Licenses are released.

- Bulk port license for enabling all licensed ports on ASR-920-12CZ models

    ◦ **ASR920-12G-2-10G**—Enables six 1G combo ports and upgrades two 10G SFP+ ports to operate in 10G mode.

- Bulk port license for enabling all licensed ports on ASR-920-4SZ models

    ◦ **ASR920-2G-4-10G**—Enables all four SFP+ ports to operate in 10G mode.

- Bulk port license for enabling all licensed ports on ASR-920-10SZ-PD models

    ◦ **ASR920-10G-2-10G**—Enables six 1G ports and upgrades the two 10G SFP+ ports to operate in 10Gmode.

- Bulk port license for enabling all licensed ports on ASR-920-24SZ-IM, ASR-920-24SZ-M, and ASR-920-24TZ-M models

    ◦ **ASR920-24G-4-10G**—Enables all SFP (12-23) and SFP+ (24-27) ports

> **Note** In case of the ASR-920-24SZ-IM model, if the pluggable IM (8x1G Copper) is activated, ports 16-23 are disabled and removed from the interface list.

- Bulk port license for enabling all licensed ports on ASR-920-12SZ-IM models

  ◦ **ASR920-12G-4-10G**—Enables twelve 1G ports and upgrades four 10G SFP+ ports to operate in 10G mode.

  > **Note** If there is no license and a 1G SFP is inserted in the chassis ports Gi0/0/12–Gi0/0/15 will be administratively down
  >
  > If there is a license and 1G SFP is inserted in the chassis, ports Gi0/0/12–Gi0/0/15 will work in 10G mode only.

Configuring Ports Using Port Upgrade License on Cisco ASR 920 Series Router

Procedure

	Command or Action	**Purpose**
Step 1	**enable** **Example:** Router> **enable**	Enables privileged EXEC mode. - Enter your password if prompted.
Step 2	**configure terminal** **Example:** Router# **configure terminal**	Enters global configuration mode.

Step 3	**license feature port** {**onegig** | **6xonegig** | **tengig**} *bundle_count* | **12xonegig**
	
	Example:
	Router(config)# **license feature port 6xonegig 2**
	ASR-920-24SZ(config)# license feature port 12xonegig
		Note For all Cisco ASR 920 router models except Cisco ASR-920-24SZ-*xx*, use **license feature port** {**onegig** | **tengig**} *bundle_count* command.
		
		For the Cisco ASR-920-24SZ-*xx*, use **license feature port** {**6xonegig** *bundle_count* | **tengig** *bundle_count* | **12xonengig**} command.
		
		Activates the Port Upgrade license and enables the associated ports.
		
		- **onegig**—Specifies 1G port.
		
		- **12xonegig**—Specifies 1G port for all twelve ports.
		  Note This option is applicable only to the Cisco ASR-920-24SZ-*xx* models.
		
		- **tengig**—Specifies 10G port.
		
		- *bundle_count*—Specifies the bundle count 1 or 2.
		  Note The *bundle_count* option is not applicable when used with **12xonegig**.

Command or Action	Purpose

	Note In case of Cisco ASR-920-24SZ-*xx* models, when for onegig upgrade license and bundle count 1 is specified, the lower ports (12-17) are enabled. If bundle count 2 is specified, all ports (12-23) are enabled.
	
	Note In case of ASR-920-24SZ-*xx* models, when for tengig upgrade license and bundle count 1 is specified, the lower ports (24-25) are enabled. If bundle count 2 is specified, all ports (24-27) are enabled.
	
	To deactivate the license and disable the associated ports, use the **no license feature port** command.
	
	• Use bundle count 1 to disable the ports Te0/0/4 and Te0/0/5.
	
	• Use bundle count 2 to directly disable all the four 10G ports.
	
	For ASR-920-12SZ-IM, to disable ports Gi0/0/0 to Gi0/0/11:
	
	• For 1G ports: bundle count 2 will disable/enable all ports (Gi0/0/0–Gi0/0/11)
	
	• For 10G ports:
	
	    • bundle count=1, disables Gi0/0/12–Gi0/0/13
	
	    • bundle count =2, disables Gi0/0/12–Gi0/0/15

Configuring Ports Using Bulk Port License on Cisco ASR 920 Series Router

Procedure

	Command or Action	Purpose
Step 1	**enable** **Example:** `Router> `**`enable`**	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Router# `**`configure terminal`**	Enters global configuration mode.
Step 3	**license feature port bulk** **Example:** `Router(config)# `**`license feature port bulk`**	Activates the Bulk Port license and enables all the associated ports. To deactivate the license and disable all the associated ports, use the **no license feature port bulk** command.

Verifying Port Upgrade and Bulk Port Licensing

Verifying the installed license

This example shows only license installed but not activated.

```
Router# show license all

License Store: Primary License Storage
StoreIndex: 0   Feature: 1GEupgradelicense              Version: 1.0
        License Type: Permanent
        License State: Active, Not in Use
        License Count: 1/0/0  (Active/In-use/Violation)
        License Priority: Medium
```

Activating the 1GigabitEthernet Port Upgrade License

```
Router(config)# license feature port onegig 1

*Apr  2 11:03:58.894 IST:  1G Upgrade License with bundle count 1 for ports 6 to 11 Enabled
```

> ✎
>
> **Note**   For all Cisco ASR 920 router models, use **license feature port** {**onegig** | **tengig**} *bundle_count* command.
>
> For the Cisco ASR-920-24SZ-*xx*, you can also use the **license feature port** {**6xonegig** *bundle_count* | **12xonengig**} command.

Activating the 10GigabitEthernet Port Upgrade License for ASR-920-12CZ-A/ ASR-920-12CZ-D model

```
Router(config)# license feature port tengig 1
Router# show interface description

Interface                    Status          Protocol Description
Gi0/0/0                      up              up
Gi0/0/1                      up              up
Gi0/0/2                      up              up
Gi0/0/3                      up              up
Gi0/0/4                      up              up
Gi0/0/5                      down            down
Gi0/0/6                      up              up
Gi0/0/7                      up              up
Gi0/0/8                      up              up
Gi0/0/9                      up              up
Gi0/0/10                     up              up
Gi0/0/11                     up              up
Te0/0/12                     up              up
Te0/0/13                     up              up
Gi0                          up              up
```

Activating the 10GigabitEthernet Port Upgrade License for ASR-920-4SZ-A/ ASR-920-4SZ-D model with bundle count 1

```
Router(config)# license feature port tengig 1
Router# show interface description

Gi0/0/0                      up              up
Gi0/0/1                      up              up
Te0/0/2                      up              up
Te0/0/3                      up              up
Te0/0/4                      down            down
Te0/0/5                      down            down
Gi0                          up              up
```

Activating the 10GigabitEthernet Port Upgrade License for ASR-920-4SZ-A/ ASR-920-4SZ-D model with bundle count 2

```
Router(config)# license feature port tengig 2
Router# show interface description

Interface                Status        Protocol Description
Gi0/0/0                  up            up
Gi0/0/1                  up            up
Te0/0/2                  up            up
Te0/0/3                  up            up
Te0/0/4                  up            up
Te0/0/5                  up            up
Gi0                      up            up
```

Verifying the Port Upgrade Licenses Installed and Activated (bundle count 2)

```
Router# show license all

License Store: Primary License Storage
StoreIndex: 0   Feature: 1GEupgradelicense            Version: 1.0
        License Type: Permanent
        License State: Active, In Use
        License Count: 1/2/0  (Active/In-use/Violation)
        License Priority: Medium

StoreIndex: 2   Feature: 10GEupgradelicense           Version: 1.0
        License Type: Permanent
        License State: Active, In Use
        License Count: 1/2/0  (Active/In-use/Violation)
        License Priority: Medium
License Store: Built-In License Storage
```

Deactivating the 1GigabitEthernet Port Upgrade License

```
Router(config)# no license feature port onegig 1
Router# show interface description

Interface                Status        Protocol Description
Gi0/0/0                  up            up
Gi0/0/1                  up            up
Gi0/0/2                  up            up
Gi0/0/3                  up            up
Gi0/0/4                  up            up
Gi0/0/5                  down          down
Gi0/0/6                  admin down    down
Gi0/0/7                  admin down    down
Gi0/0/8                  admin down    down
Gi0/0/9                  admin down    down
Gi0/0/10                 admin down    down
Gi0/0/11                 admin down    down
Te0/0/12                 up            up
Te0/0/13                 up            up
Gi0                      up            up
```

Uninstalling the 1GigabitEthernet Port Upgrade License

```
Router# license clear 1GEupgradelicense

Feature: 1GEupgradelicense
    1   License Type: Permanent
        License State: Active, Not in Use
        License Addition: Exclusive
        License Count: 3
        Comment:
        Store Index: 0
        Store Name: Primary License Storage
Are you sure you want to clear? (yes/[no]): yes
```

```
Router#
*Apr  2 11:00:16.097 IST: %LICENSE-6-REMOVE: Feature 1GEupgradelicense 1.0 was removed from this device.
UDI=ASR-920:CAT1748U1B6; StoreIndex=0:Primary License Storage
```

Deactivating the 10GigabitEthernet Port Upgrade License on ASR-920-12CZ-A/ ASR-920-12CZ-D model

```
Router(config)# no license feature port tengig 1
Router# show interface description

Interface                    Status        Protocol Description
Gi0/0/0                      up            up
Gi0/0/1                      up            up
Gi0/0/2                      up            up
Gi0/0/3                      up            up
Gi0/0/4                      up            up
Gi0/0/5                      down          down
Gi0/0/6                      up            up
Gi0/0/7                      up            up
Gi0/0/8                      up            up
Gi0/0/9                      up            up
Gi0/0/10                     up            up
Gi0/0/11                     up            up
Te0/0/12                     down          down
Te0/0/13                     down          down
Gi0                          up            up
```

Uninstalling the 10GigabitEthernet Port Upgrade License on ASR-920-12CZ-A/ ASR-920-12CZ-D model

```
Router# license clear 10GEupgradelicense

Feature: 10GEupgradelicense
    1   License Type: Permanent
        License State: Active, Not in Use
        License Addition: Exclusive
        License Count: 1
        Comment:
        Store Index: 0
        Store Name: Primary License Storage


Are you sure you want to clear? (yes/[no]): yes
Router#
*Apr  2 11:00:16.097 IST: %LICENSE-6-REMOVE: Feature 10GEupgradelicense 1.0 was removed from this device.
UDI=ASR-920:CAT1748U1B6; StoreIndex=0:Primary License Storage
```

Deactivating the 10GigabitEthernet Port Upgrade License on ASR-920-4SZ-A/ ASR-920-4SZ-D model with bundle count 1

```
Router(config)# no license feature port tengig 1
Router# show interface description

Interface                    Status        Protocol Description
Gi0/0/0                      up            up
Gi0/0/1                      up            up
Te0/0/2                      up            up
Te0/0/3                      up            up
Te0/0/4                      down          down
Te0/0/5                      down          down
Gi0                          up            up
```

Deactivating the 10GigabitEthernet Port Upgrade License on ASR-920-4SZ-A/ ASR-920-4SZ-D model with bundle count 2

```
Router(config)# no license feature port tengig 2
```

```
Router# show interface description

Interface                      Status          Protocol Description
Gi0/0/0                        up              up
Gi0/0/1                        up              up
Te0/0/2                        down            down
Te0/0/3                        down            down
Te0/0/4                        down            down
Te0/0/5                        down            down
Gi0                            up              up
```

Uninstalling the 10GigabitEthernet Port Upgrade License on ASR-920-4SZ-A/ ASR-920-4SZ-D model

```
Router# license clear 10GEupgradelicense

Feature: 10GEupgradelicense
    1   License Type: Permanent
        License State: Active, Not in Use
        License Addition: Exclusive
        License Count: 1
        Comment:
        Store Index: 0
        Store Name: Primary License Storage


Are you sure you want to clear? (yes/[no]): yes
Router#
*Apr  2 11:00:16.097 IST: %LICENSE-6-REMOVE: Feature 10GEupgradelicense 1.0 was removed from this device.
UDI=ASR-920:CAT36821784; StoreIndex=0:Primary License Storage
```

Additional References

Related Documents

Related Topic	Document Title
Cisco IOS commands	https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mcl/allreleasemcl/all-book.html

Standards and RFCs

Standard/RFC	Title
No specific Standards and RFCs are supported by the features in this document.	—

MIBs

MIB	MIBs Link
—	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

Technical Assistance

Description	Link
The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies. To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds. Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.	http://www.cisco.com/cisco/web/support/index.html

Feature Information for Port Upgrade and Bulk Port Licensing

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

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

Table 3: Feature Information for Port Upgrade and Bulk Port Licensing

Feature Name	Releases	Feature Information
Port Upgrade and Bulk Port Licensing	Cisco IOS XE Release 3.13.0S	This feature was introduced on the Cisco ASR 920 Series Aggregation Services Router (ASR-920-12CZ-A, ASR-920-12CZ-D, ASR-920-4SZ-A, ASR-920-4SZ-D).

Feature Name	Releases	Feature Information
Port Upgrade and Bulk Port Licensing	Cisco IOS XE Release 3.14.0S	This feature was introduced on the Cisco ASR 920 Series Aggregation Services Router (ASR-920-10SZ-PD, ASR-920-24SZ-IM, ASR-920-24SZ-M, and ASR-920-24TZ-M).