

Activating or Deactivating Interface Module

This chapter provides information about activating or deactivating interface module (IM) on the Cisco ASR-920-24SZ-IM and Cisco ASR-920-12SZ-IM Routers. For more information about the commands used in this chapter, see the *Cisco IOS XE 3S Command References*.

Note The router does not support swapping of the TDM interface modules to Gigabit Ethernet modules on the Cisco ASR 920 Router and vice-versa. If the TDM interface module is swapped with the Gigabit Ethernet module in the same slot or vice-versa, the router must be reloaded.

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Overview

Cisco ASR-920-24SZ-IM Router supports the following IMs in Cisco IOS XE Release 3.16:

- 8-port 10/100/1000 Ethernet Interface Module (A900-IMA8T)
- 1-port 10GE XFP Interface Module (A900-IMA1X)
- 2-port 10GE SFP+/XFP Interface Module (A900-IMA2Z)
- 8-port RJ48C T1/E1 Interface Module (A900-IMA8D)
- 16-port T1/E1 Interface Module (A900-IMA16D)
- 32-port T1/E1 Interface Module (A900-IMA32D)
- 4-port OC3/STM1 or 1 port OC12/STM4 Interface Module (A900-IMA4OS)
- Combo 8-port 10/100/1000 and 1 port 10GE Interface Module (A900-IMA8T1Z)

Cisco ASR-920-12SZ-IM Router supports the following IMs in Cisco IOS XE Release 3.14S:

- 8-port 10/100/1000 Ethernet Interface Module (A900-IMA8T)
- 8-port SFP Gigabit Ethernet Interface Module (A900-IMA8S)
- 8-port RJ48C T1/E1 Interface Module (A900-IMA8D)
- 16-port T1/E1 Interface Module (A900-IMA16D)
- 32-port T1/E1 Interface Module (A900-IMA32D)
- 1-port 10GE XFP Interface Module (A900-IMA1X)
- 2-port 10GE SFP+/XFP Interface Module (A900-IMA2Z)
- Combo 8-port 10/100/1000 and 1 port 10GE Interface Module (A900-IMA8T1Z)
- Combo 8 SFP GE and 1-port 10GE IM (A900-IMA8S1Z)
- 4-port OC3/STM1 or 1-port OC12/STM4 Interface Module (A900-IMA4OS)

For information on installing and removing the IMs, see the *Cisco ASR-920-24SZ-IM, ASR-920-24SZ-M, ASR-920-24TZ-M Aggregation Services Router Hardware Installation Guide*.

The router does not support swapping of the TDM interface modules to Gigabit Ethernet modules. If the TDM interface module is swapped with the Gigabit Ethernet module in the same slot or vice-versa, the router must be reloaded.

Prerequisites for Activating an IM

- IM must be installed in the router
- IM must not be in admin down mode
- To activate 8x1G Cu IM or 8xT1/E1 IM, you must give up the following ports on the router front panel:
  - 16 to 23 for Cu IM
  - 20 to 23 for T1/E1 IM
- To activate a TDM IM you must reload the router. Without reloading the router, the IM or associated front panel ports can not be used. If reload is aborted, the ports 20 to 23 remain disabled and IM remains in Out-of-Service (OOS) state until the next reload.

Restrictions for Activating an IM

- You cannot activate an IM when activate or deactivate commands are running in the background. The activate process usually completes in two minutes.
- Activating an incorrect IM type results in the IM OOS state.
- **write erase** does not disable activated IM. To disable the IM, you must use the **hw-module subslot** command.

Activating an IM

Note This section is not applicable to Cisco ASR-920-12SZ-IM Router for TDM IMs.

Note This section is applicable only to the 8x1G Cu IM or 8xT1/E1 IMs. There is no impact to the front panel ports to bring up or bring down the 1x10G and 2x10G IMs.

Before using the IM, you must activate the IM.

- Verify that the correct IM is inserted in the IM slot.
- Shut down all active interfaces to be removed in IM activation (8x1G Cu IM or 8xT1/E1 IM). See Prerequisites for Activating an IM, on page 2, for active interfaces to be shut down.
- Wait for a minute.
- Default all interfaces to be removed from the router.
- Execute the following command to activate the IM present in the IM slot.

  hw-module subslot slot-number/subslot-number activate

  - slot-number—Specifies the chassis slot number where the IM is installed.
  - subslot-number—Specifies the chassis subslot number where IM is installed.

Note The activate CLI operations run in the background.

Note The following ports on the router are relinquished when activating 8x1G Cu IM or 8xT1/E1 IM:

- 16 to 23 for Cu IM
- 20 to 23 for T1/E1 IM

Prerequisites for Deactivating an IM

- IM must be installed in the router
- IM must not be in admin down mode

Restrictions for Deactivating an IM

- You cannot deactivate an IM when activate or deactivate commands are running in the background. The deactivation process usually completes in two minutes.
- You cannot use write erase to disable activated IM. To disable the activated IM, you must use CLI.
- Deactivating an IM by specifying an incorrect IM type or without an IM installed in the router can cause hardware or software resource issues. In this case, you must reload the router to reclaim the front panel ports and other ASIC related resources.
- You must reload the router to complete the activate/deactivate process.



Note Activation or deactivation of 8x1G Cu IM does not require a router reload.

- The **hw-module subslot default** command is not supported on TDM and OC-3 interface module.

Deactivating an IM



Note This section is applicable only to the 8-port 1G Cu IM or 8-port T1/E1 IMs. There is no impact to the front panel ports to bring up or bring down the 1-port 10G and 2-port 10G IMs.

Before removing the IM from the router, you must deactivate the IM.

- Verify that the correct IM is in OK state in the router.
- Remove all virtual interfaces (using the **no interface** *interface-name* command) that are associated with the IM. These interfaces include MPLS TP tunnels, TE tunnels, BDI interface, and Port-Channel interface.
- Shut down all pluggable IM interfaces in the router.
- Wait for a minute.
- Default all pluggable IM interfaces in the router.
- Execute the following command to deactivate the IM present in the IM slot:

  hw-module subslot slot-number/subslot-number deactivate

  - slot-number—Specifies the chassis slot number where the IM is installed.
  - subslot-number—Specifies the chassis subslot number where IM is installed.



Note The deactivate CLI operations run in the background.

Note The following ports on the router are recovered when deactivating 8-port 1G Cu IM or 8-port T1/E1 IM:

- 16 to 23 for Cu IM
- 20 to 23 for T1/E1 IM

Sample Configuration and Verification Examples for Activation or Deactivation of IMs

The following sections provide sample configuration and verification example for activating or deactivating the following IMs:

Sample Configuration and Verification of Activating an 8-port 1G Cu IM (A900-IMA8T)

The following example displays platform information for the Cisco ASR-920-24SZ-IM Router:

```
*Nov 20 09:31:44.532: %LINK-5-CHANGED: Interface GigabitEthernet0/0/19, changed state to
administratively down
*Nov 20 09:31:44.536: %LINK-5-CHANGED: Interface GigabitEthernet0/0/20, changed state to
administratively down
*Nov 20 09:31:44.541: %LINK-5-CHANGED: Interface GigabitEthernet0/0/21, changed state to
administratively down
*Nov 20 09:31:44.542: %LINK-5-CHANGED: Interface GigabitEthernet0/0/22, changed state to
administratively down
*Nov 20 09:31:44.547: %LINK-5-CHANGED: Interface GigabitEthernet0/0/23, changed state to
administratively down
Router(config-if-range)# exit
Router(config)# exit
```

The following example shows how to activate an 8-port 1G Cu IM (A900-IMA8T) on the Cisco ASR-920-24SZ-IM Router:

```
Router# hw-module
*Nov 20 09:31:53.361: %SYS-5-CONFIG_I: Configured from console by consolesu

Router# hw-module subslot 0/1 activate A900-IMA8T

Command will disable & default configs in module 0 (16-23). Proceed ? [confirm]
Changed ACTIVATED IM: ASR900_IMA8T
Router#
*Nov 20 09:32:11.112: %IOSXE-1-PLATFORM:kernel: Board info b500002
*Nov 20 09:32:11.359: %TRANSCEIVER-6-REMOVED:iomd:  Transceiver module removed from
GigabitEthernet0/0/23
*Nov 20 09:32:11.369: %IOSXE_RP_ALARM-6-INFO: ASSERT None GigabitEthernet0/0/23
*Nov 20 09:32:21.743: %SPA_OIR-6-ONLINECARD: SPA (A900-IMA8T) online in subslot 0/1
*Nov 20 09:32:23.639: %LINK-3-UPDOWN: Interface GigabitEthernet0/1/0, changed state to down
*Nov 20 09:32:23.652: %LINK-3-UPDOWN: Interface GigabitEthernet0/1/1, changed state to down
*Nov 20 09:32:23.692: %LINK-3-UPDOWN: Interface GigabitEthernet0/1/2, changed state to down
*Nov 20 09:32:23.697: %LINK-3-UPDOWN: Interface GigabitEthernet0/1/3, changed state to down
*Nov 20 09:32:23.702: %LINK-3-UPDOWN: Interface GigabitEthernet0/1/4, changed state to down
```

```
*Nov 20 09:32:23.706: %LINK-3-UPDOWN: Interface GigabitEthernet0/1/5, changed state to down
*Nov 20 09:32:23.711: %LINK-3-UPDOWN: Interface GigabitEthernet0/1/6, changed state to down
*Nov 20 09:32:23.711: %LINK-3-UPDOWN: Interface GigabitEthernet0/1/7, changed state to down
```

The following example displays platform information for the Cisco ASR-920-24SZ-IM Router:

```
Router# show platform
Chassis type: ASR-920-24SZ-IM
Slot      Type                State                 Insert time (ago)
--------- ------------------- --------------------- -----------------
 0/0      24xGE-4x10GE-FIXED  ok                    05:31:32
 0/1      A900-IMA8T          ok                    00:00:39
R0        ASR-920-24SZ-IM     ok, active            05:33:14
F0                            ok, active            05:33:14
P0        ASR920-PSU0         ok                    05:31:56
P1        ASR920-PSU1         N/A                   never
P2        ASR920-FAN          ok                    05:31:55
Slot      CPLD Version        Firmware Version
--------- ------------------- ---------------------------------------
R0        01491802            15.4(3r)S4
F0        01491802            15.4(3r)S4
```

The following example displays sample output for interfaces on the Cisco ASR-920-24SZ-IM Router:

```
Router# show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0/0   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/1   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/2   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/3   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/4   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/5   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/6   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/7   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/8   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/9   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/10  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/11  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/12  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/13  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/14  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/15  unassigned      YES NVRAM  down                  down
Te0/0/24               unassigned      YES NVRAM  administratively down down
Te0/0/25               unassigned      YES NVRAM  administratively down down
Te0/0/26               unassigned      YES NVRAM  administratively down down
Te0/0/27               unassigned      YES NVRAM  administratively down down
GigabitEthernet0/1/0   unassigned      YES unset  down                  down
GigabitEthernet0/1/1   unassigned      YES unset  down                  down
GigabitEthernet0/1/2   unassigned      YES unset  down                  down
GigabitEthernet0/1/3   unassigned      YES unset  down                  down
GigabitEthernet0/1/4   unassigned      YES unset  down                  down
GigabitEthernet0/1/5   unassigned      YES unset  down                  down
GigabitEthernet0/1/6   unassigned      YES unset  down                  down
GigabitEthernet0/1/7   unassigned      YES unset  down                  down
GigabitEthernet0       7.23.21.156     YES NVRAM  up                    up
BDI243                 unassigned      YES NVRAM  down                  down
Router#
```

Sample Configuration and Verification for Deactivating an 8-port 1G Cu IM (A900-IMA8T)

The following example displays system environment information for system components for the Cisco ASR-920-24SZ-IM Router:

```
Router# show environment
Number of Critical alarms:  0
Number of Major alarms:     0
Number of Minor alarms:     0
Slot    Sensor       Current State       Reading
----    ------       -------------       -------
 P0    PEM Iout         Normal           7 A
 P0    PEM Vout         Normal           12 V DC
 P0    PEM Vin          Normal           230 V AC
 P0    Temp: Temp 1     Normal           51 Celsius
 P2    Temp: FC PWM     Fan Speed 65%    38 Celsius
 R0    VADM1: VX1       Normal           997 mV
 R0    VADM1: VX2       Normal           1046 mV
 R0    VADM1: VX3       Normal           997 mV
 R0    VADM1: VP1       Normal           3283 mV
 R0    VADM1: VP2       Normal           1796 mV
 R0    VADM1: VP3       Normal           1197 mV
 R0    VADM1: VP4       Normal           1768 mV
 R0    VADM1: VH        Normal           12317 mV
 R0    VADM1: AUX1      Normal           3840 mV
 R0    VADM1: AUX2      Normal           6958 mV
 R0    Temp: CYLON      Normal           60 Celsius
 R0    Temp: FPGA       Normal           49 Celsius
 R0    Temp: Outlet     Normal           47 Celsius
 R0    VADM2: VX1       Normal           995 mV
 R0    VADM2: VX2       Normal           973 mV
 R0    VADM2: VX3       Normal           754 mV
 R0    VADM2: VP1       Normal           2495 mV
 R0    VADM2: VP2       Normal           1495 mV
 R0    VADM2: VP3       Normal           1497 mV
 R0    VADM2: VH        Normal           12296 mV
```

The following example displays platform information for the Cisco ASR-920-24SZ-IM Router:

```
Router# show platform
Chassis type: ASR-920-24SZ-IM
Slot      Type                State                 Insert time (ago)
--------- ------------------- --------------------- -----------------
 0/0      24xGE-4x10GE-FIXED  ok                    05:37:55
 0/1      A900-IMA8T          ok                    00:07:02
R0        ASR-920-24SZ-IM     ok, active            05:39:37
F0                            ok, active            05:39:37
P0        ASR920-PSU0         ok                    05:38:19
P1        ASR920-PSU1         N/A                   never
P2        ASR920-FAN          ok                    05:38:18
Slot      CPLD Version        Firmware Version
--------- ------------------- ---------------------------------------
R0        01491802            15.4(3r)S4
F0        01491802            15.4(3r)S4
```

The following example displays sample output for interfaces on the Cisco ASR-920-24SZ-IM Router:

```
Router# show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
```

```
GigabitEthernet0/0/0   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/1   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/2   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/3   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/4   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/5   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/6   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/7   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/8   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/9   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/10  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/11  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/12  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/13  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/14  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/15  unassigned      YES NVRAM  down                  down
Te0/0/24               unassigned      YES NVRAM  administratively down down
Te0/0/25               unassigned      YES NVRAM  administratively down down
Te0/0/26               unassigned      YES NVRAM  administratively down down
Te0/0/27               unassigned      YES NVRAM  administratively down down
GigabitEthernet0/1/0   unassigned      YES unset  down                  down
GigabitEthernet0/1/1   unassigned      YES unset  down                  down
GigabitEthernet0/1/2   unassigned      YES unset  down                  down
GigabitEthernet0/1/3   unassigned      YES unset  down                  down
GigabitEthernet0/1/4   unassigned      YES unset  down                  down
GigabitEthernet0/1/5   unassigned      YES unset  down                  down
GigabitEthernet0/1/6   unassigned      YES unset  down                  down
GigabitEthernet0/1/7   unassigned      YES unset  down                  down
GigabitEthernet0       7.23.21.156     YES NVRAM  up                    up
BDI243                 unassigned      YES NVRAM  down                  down
Router#
```

The following example shows how to deactivate 8x1G Cu IM (A900-IMA8T)) on the Cisco ASR-920-24SZ-IM Router:

```
Router# hw-module subslot 0/1 deactivate
Command will default configs in module 1. Proceed ? [confirm]
Changed ACTIVATED IM: 24xGE-4x10GE-FIXED
Router#
*Nov 20 09:40:16.844: %SPA_OIR-6-OFFLINECARD: SPA (A900-IMA8T) offline in subslot 0/1
*Nov 20 09:40:16.844: %IOSXE_OIR-6-SOFT_STOPSPA: SPA(A900-IMA8T) stopped in subslot 0/1,
interfaces disabled
*Nov 20 09:40:17.457: %TRANSCEIVER-6-INSERTED:iomd:  transceiver module inserted in
GigabitEthernet0/0/23
*Nov 20 09:41:32.364: %IOSXE_RP_ALARM-6-INFO: CLEAR None GigabitEthernet0/0/23
Router#
```

The following example displays platform information for the Cisco ASR-920-24SZ-IM Router:

```
Router# show platform
Chassis type: ASR-920-24SZ-IM
Slot      Type                State                 Insert time (ago)
--------- ------------------- --------------------- -----------------
 0/0      24xGE-4x10GE-FIXED  ok                    05:40:54
 0/1      A900-IMA8T          stopped               00:01:55
R0        ASR-920-24SZ-IM     ok, active            05:42:36
F0                            ok, active            05:42:36
P0        ASR920-PSU0         ok                    05:41:19
P1        ASR920-PSU1         N/A                   never
P2        ASR920-FAN          ok                    05:41:18
Slot      CPLD Version        Firmware Version
--------- ------------------- ----------------------------------------
R0        01491802            15.4(3r)S4
```

```
F0        01491802            15.4(3r)S4
Router#
```

The following example displays sample output for interfaces on the Cisco ASR-920-24SZ-IM Router:

```
Router# show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0/0   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/1   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/2   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/3   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/4   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/5   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/6   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/7   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/8   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/9   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/10  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/11  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/12  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/13  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/14  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/15  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/16  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/17  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/18  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/19  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/20  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/21  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/22  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/23  unassigned      YES NVRAM  down                  down
Te0/0/24               unassigned      YES NVRAM  administratively down down
Te0/0/25               unassigned      YES NVRAM  administratively down down
Te0/0/26               unassigned      YES NVRAM  administratively down down
Te0/0/27               unassigned      YES NVRAM  administratively down down
GigabitEthernet0       7.23.21.156     YES NVRAM  up                    up
BDI243                 unassigned      YES NVRAM  down                  down
```

Sample Configuration and Verification of Activating 8-port T1/E1 IM (A900-IMA8D)

The following example shows how to activate 8-port T1/E1 IM (A900-IMA8D) on the Cisco ASR-920-24SZ-IM Router:

```
Router# hw-module subslot 0/1 activate A900-IMA8D
Command will disable &amp;amp; default configs in module 0 (20-23). Proceed ? [confirm]
System reload is required for act/deact of TDM IMs. Proceed with reload ?[confirm]

Changed ACTIVATED IM: ASR900_IMA16D

*Nov 20 09:47:08.155: %TRANSCEIVER-6-REMOVED:iomd:  Transceiver module removed from
GigabitEthernet0/0/23
*Nov 20 09:47:08.875: %IOSXE_RP_ALARM-6-INFO: ASSERT None GigabitEthernet0/0/23  [OK]
Proceed with reload? [confirm]

*Nov 20 09:47:22.275: %SYS-5-RELOAD: Reload requested by console. Reload Reason: Reload
Command.Nov 20 09:47:56.304 R0/0:
System Bootstrap, Version 15.4(3r)S4, RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport

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```

```
Compiled Fri 20-Jun-14 17:24 by alnguyen

PEX up stream Vendor ID[0x860610b5]
PEX down stream vendor ID [0x860610b5]
Boot ROM1
Last reset cause: RSP-Board
UEA platform with 2097152 Kbytes of main memory
Located asr920.bin
Image size 266457720 inode num 23, bks cnt 65054 blk size 8*512

################################################################

Boot image size = 266457720 (0xfe1d278) bytes
Package header rev 0 structure detected
Calculating SHA-1 hash...done
validate_package: SHA-1 hash:
        calculated 872ac9f3:08808feb:9690e7e4:d68c5dc0:18191823
        expected   872ac9f3:08808feb:9690e7e4:d68c5dc0:18191823
Image validated
Passing control to the main image..


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or the applicable URL provided on the flyer accompanying the IOS-XE
software.
Tmpdisk creation successful, status = 0
flashfs[16]: 0 files, 1 directories
flashfs[16]: 0 orphaned files, 0 orphaned directories
flashfs[16]: Total bytes: 1935360
flashfs[16]: Bytes used: 1024
flashfs[16]: Bytes available: 1934336
Changed ACTIVATED IM: ASR900_IMA16D
This product contains cryptographic features and is subject to United
States and local country laws governing import, export, transfer and
use. Delivery of Cisco cryptographic products does not imply
```

```
third-party authority to import, export, distribute or use encryption.
Importers, exporters, distributors and users are responsible for
compliance with U.S. and local country laws. By using this product you
agree to comply with applicable laws and regulations. If you are unable
to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:
http://www.cisco.com/wwl/export/crypto/tool/stqrg.html


If you require further assistance please contact us by sending email to
export@cisco.com.

cisco ASR-920-24SZ-IM (Freescale P2020) processor (revision 1.2 GHz) with 687112K/6147K
bytes of memory.
Processor board ID CAT1707V01N
20 Gigabit Ethernet interfaces
4 Ten Gigabit Ethernet interfaces
32768K bytes of non-volatile configuration memory.
2097152K bytes of physical memory.
1328927K bytes of SD flash at bootflash:.

Press RETURN to get started!

Authentication passed
PLATFORM:kernel: Board info b500002
*Nov 20 09:53:23.315: %SPA_OIR-6-ONLINECARD: SPA (A900-IMA8D) online in subslot 0/1[OK]
```

The following example displays sample output for interfaces on the Cisco ASR-920-24SZ-IM Router:

```
Router# show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0/0   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/1   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/2   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/3   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/4   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/5   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/6   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/7   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/8   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/9   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/10  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/11  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/12  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/13  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/14  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/15  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/16  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/17  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/18  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/19  unassigned      YES NVRAM  down                  down
Te0/0/24               unassigned      YES NVRAM  administratively down down
Te0/0/25               unassigned      YES NVRAM  administratively down down
Te0/0/26               unassigned      YES NVRAM  administratively down down
Te0/0/27               unassigned      YES NVRAM  administratively down down
GigabitEthernet0       7.23.21.156     YES NVRAM  up                    up
BDI243                 unassigned      YES NVRAM  down                  down
```

The following example displays platform information for the Cisco ASR-920-24SZ-IM Router:

```
Router# show platform
Chassis type: ASR-920-24SZ-IM

Slot      Type                State                 Insert time (ago)
```

```
--------- ------------------- --------------------- -----------------
 0/0      24xGE-4x10GE-FIXED  ok                    00:15:26
 0/1      A900-IMA8D         ok                    00:15:26
R0        ASR-920-24SZ-IM     ok, active            00:17:14
F0                            ok, active            00:17:14
P0        ASR920-PSU0         ok                    00:15:52
P1        ASR920-PSU1         N/A                   never
P2        ASR920-FAN          ok                    00:15:51

Slot      CPLD Version        Firmware Version
--------- ------------------- ---------------------------------------
R0        01491802            15.4(3r)S4
F0        01491802            15.4(3r)S4
Router#
```

Sample Configuration and Verification of Deactivating 8-port T1/E1 IM (A900-IMA8D)

The following example displays platform information for the Cisco ASR-920-24SZ-IM Router:

```
Router# show platform
Chassis type: ASR-920-24SZ-IM
Slot      Type                State                 Insert time (ago)
--------- ------------------- --------------------- -----------------
 0/0      24xGE-4x10GE-FIXED  ok                    05:37:55
 0/1      A900-IMA8T          ok                    00:07:02
R0        ASR-920-24SZ-IM     ok, active            05:39:37
F0                            ok, active            05:39:37
P0        ASR920-PSU0         ok                    05:38:19
P1        ASR920-PSU1         N/A                   never
P2        ASR920-FAN          ok                    05:38:18
Slot      CPLD Version        Firmware Version
--------- ------------------- ---------------------------------------
R0        01491802            15.4(3r)S4
F0        01491802            15.4(3r)S4
```

The following example displays sample output for interfaces on the Cisco ASR-920-24SZ-IM Router:

```
Router# show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0/0   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/1   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/2   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/3   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/4   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/5   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/6   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/7   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/8   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/9   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/10  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/11  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/12  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/13  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/14  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/15  unassigned      YES NVRAM  down                  down
Te0/0/24               unassigned      YES NVRAM  administratively down down
Te0/0/25               unassigned      YES NVRAM  administratively down down
Te0/0/26               unassigned      YES NVRAM  administratively down down
Te0/0/27               unassigned      YES NVRAM  administratively down down
```

```
GigabitEthernet0/1/0   unassigned      YES unset  down                  down
GigabitEthernet0/1/1   unassigned      YES unset  down                  down
GigabitEthernet0/1/2   unassigned      YES unset  down                  down
GigabitEthernet0/1/3   unassigned      YES unset  down                  down
GigabitEthernet0/1/4   unassigned      YES unset  down                  down
GigabitEthernet0/1/5   unassigned      YES unset  down                  down
GigabitEthernet0/1/6   unassigned      YES unset  down                  down
GigabitEthernet0/1/7   unassigned      YES unset  down                  down
GigabitEthernet0       7.23.21.156     YES NVRAM  up                    up
BDI243                 unassigned      YES NVRAM  down                  down
Router#
```

The following example shows how to deactivate 8-port T1/E1 IM (A900-IMA8D) on the Cisco ASR-920-24SZ-IM Router:

```
Router# hw-module subslot 0/1 deactivate

Command will default configs in module 1. Proceed ? [confirm]
System reload is required for act/deact of TDM IMs. Proceed with reload ?[confirm]
Changed ACTIVATED IM: 24xGE-4x10GE-FIXED[OK]
Proceed with reload? [confirm]
*Nov 20 10:17:16.968: %SYS-5-RELOAD: Reload requested by console. Reload Reason: Reload
Command.Nov 20 10:17:49.956 R0/0: %PMAN-5-EXITACTION: Process manager
System Bootstrap, Version 15.4(3r)S4, RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 2014 by cisco Systems, Inc.
Compiled Fri 20-Jun-14 17:24 by alnguyen
PEX up stream Vendor ID[0x860610b5]
PEX down stream vendor ID [0x860610b5]
Boot ROM1
Last reset cause: RSP-Board
UEA platform with 2097152 Kbytes of main memory
Located asr920.bin
Image size 266457720 inode num 23, bks cnt 65054 blk size 8*512

################################################

Boot image size = 266457720 (0xfe1d278) bytes
Package header rev 0 structure detected
Calculating SHA-1 hash...done
validate_package: SHA-1 hash:
calculated 872ac9f3:08808feb:9690e7e4:d68c5dc0:18191823
expected 872ac9f3:08808feb:9690e7e4:d68c5dc0:18191823
Image validated
Passing control to the main image..
Restricted Rights Legend
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Rights clause at FAR sec. 52.227-19 and subparagraph
(c) (1) (ii) of the Rights in Technical Data and Computer
Software clause at DFARS sec. 252.227-7013.
cisco Systems, Inc.
170 West Tasman Drive
San Jose, California 95134-1706
Cisco IOS Software, ASR920 Software (PPC_LINUX_IOSD-UNIVERSALK9_NPE-M), Experimental Version
 15.5(20141114:175558) [v155_1_s_xe314_throttle-hargurra-psu 104]
Copyright (c) 1986-2014 by Cisco Systems, Inc.
Compiled Sat 15-Nov-14 00:09 by hargurra
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```
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documentation or "License Notice" file accompanying the IOS-XE software,
or the applicable URL provided on the flyer accompanying the IOS-XE
software.

Tmpdisk creation successful, status = 0
flashfs[16]: 0 files, 1 directories
flashfs[16]: 0 orphaned files, 0 orphaned directories
flashfs[16]: Total bytes: 1935360
flashfs[16]: Bytes used: 1024
flashfs[16]: Bytes available: 1934336
Changed ACTIVATED IM: 24xGE-4x10GE-FIXED
This product contains cryptographic features and is subject to United
States and local country laws governing import, export, transfer and
use. Delivery of Cisco cryptographic products does not imply
third-party authority to import, export, distribute or use encryption.
Importers, exporters, distributors and users are responsible for
compliance with U.S. and local country laws. By using this product you
agree to comply with applicable laws and regulations. If you are unable
to comply with U.S. and local laws, return this product immediately.
A summary of U.S. laws governing Cisco cryptographic products may be found at:
http://www.cisco.com/wwl/export/crypto/tool/stqrg.html

If you require further assistance please contact us by sending email to
export@cisco.com.
cisco ASR-920-24SZ-IM (Freescale P2020) processor (revision 1.2 GHz) with 687112K/6147K
bytes of memory.

Processor board ID CAT1707V01N
24 Gigabit Ethernet interfaces
4 Ten Gigabit Ethernet interfaces
32768K bytes of non-volatile configuration memory.
2097152K bytes of physical memory.
1328927K bytes of SD flash at bootflash:.
SETUP: new interface GigabitEthernet0/0/20 placed in "shutdown" state
SETUP: new interface GigabitEthernet0/0/21 placed in "shutdown" state
SETUP: new interface GigabitEthernet0/0/22 placed in "shutdown" state
SETUP: new interface GigabitEthernet0/0/23 placed in "shutdown" state
Press RETURN to get started!

Authentication passed
*Nov 20 10:23:14.107: %PKI-6-CONFIGAUTOSAVE: Running configuration saved to NVRAM[OK]
*Nov 20 10:23:29.665: %CALL_HOME-6-CALL_HOME_ENABLED: Call-home is enabled by Smart Agent
for Licensing.
*Nov 20 10:23:29.666: %SMART_LIC-5-COMM_RESTORED: Communications with Cisco licensing cloud
 restored
*Nov 20 10:24:14.037: %SPA_OIR-6-ONLINECARD: SPA (24xGE-4x10GE-FIXED) online in subslot 0/0
```

The following example displays platform information for the Cisco ASR-920-24SZ-IM Router:

```
Router# show platform
Chassis type: ASR-920-24SZ-IM
Slot      Type                State                 Insert time (ago)
--------- ------------------- --------------------- -----------------
 0/0      24xGE-4x10GE-FIXED  ok                    05:40:54
 0/1      A900-IMA8T          stopped               00:01:55
R0        ASR-920-24SZ-IM     ok, active            05:42:36
F0                            ok, active            05:42:36
P0        ASR920-PSU0         ok                    05:41:19
P1        ASR920-PSU1         N/A                   never
P2        ASR920-FAN          ok                    05:41:18
Slot      CPLD Version        Firmware Version
--------- ------------------- ---------------------------------------
R0        01491802            15.4(3r)S4
```

```
F0        01491802            15.4(3r)S4
Router#
```

The following example displays sample output for interfaces on the Cisco ASR-920-24SZ-IM Router:

```
Router# show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0/0   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/1   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/2   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/3   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/4   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/5   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/6   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/7   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/8   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/9   unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/10  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/11  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/12  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/13  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/14  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/15  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/16  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/17  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/18  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/19  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/20  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/21  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/22  unassigned      YES NVRAM  down                  down
GigabitEthernet0/0/23  unassigned      YES NVRAM  down                  down
Te0/0/24               unassigned      YES NVRAM  administratively down down
Te0/0/25               unassigned      YES NVRAM  administratively down down
Te0/0/26               unassigned      YES NVRAM  administratively down down
Te0/0/27               unassigned      YES NVRAM  administratively down down
GigabitEthernet0       7.23.21.156     YES NVRAM  up                    up
BDI243                 unassigned      YES NVRAM  down                  down
```