



Perform Preliminary Checks

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Preliminary checks for Cisco NCS 1014

A preliminary check for Cisco NCS 1014 is a post-login verification process that

- involves running a set of commands to confirm the system has come up correctly,
- checks the hardware inventory, the operational state of each card, and software image and firmware versions, and
- verifies environmental parameters, management connectivity, active alarms, core dumps, and core files.

Sample output and references



Note The sample output in these procedures is not from the latest software release. The output changes for any explicit reference to the current release.



Note • For details about proactive system monitoring that you can use to prevent potential issues, see [System Health Check](#).

Inventory support in Cisco NCS 1014

The Cisco NCS 1014 inventory model is the set of hardware components that the system reports when you query its inventory. It consists of:

- one Cisco NCS 1014 controller card,
- one Cisco NCS 1014 chassis,
- two AC or DC power supply units (PSU) of 2 KW and 2.5 KW,
- three FAN trays, and

- four line cards.

Table 1: Feature History

Feature Name	Release Information	Description
Inventory support	Cisco IOS XR Release 26.1.1	The NCS 1014 system enables inventory support for these new line cards. <ul style="list-style-type: none"> • NCS1K14-2.4T-A-K9 • NCS1K14-2.4TAL-K9
Inventory support	Cisco IOS XR Release 25.1.1	Inventory support and pluggable optics support are enabled in NCS 1014 system. <ul style="list-style-type: none"> • NCS1K-MD-32O-CE and NCS1K-MD-32E-CE • ONS-QSFP-OTDR • DP01QSDD-ZT5-A1 • ONS-SC-PTP-1510
Inventory support	Cisco IOS XR Release 7.11.1	Inventory support and pluggable optics support for QSFP28, QSFP-DD and Coherent Interface Module (CIM 8) are enabled in NCS 1014 system.

Card name mapping

The short names used in this guide map to the following Cisco line card product IDs (PIDs):

- CCMD-16-C: refers to the NCS1K14-CCMD-16-C card.
- CCMD-16-L: refers to the NCS1K14-CCMD-16-L card.
- 1.2T: refers to the NCS1K4-1.2T-K9 C-band card.
- 2.4T: refers to the NCS1K4-2.4T-K9 DWDM transponder and muxponder card.
- 2.4TA: refers to the NCS1K14-2.4T-A-K9 DWDM transponder and muxponder card.
- EDFA2: refers to the NCS1K4-EDFA2 C-band card.
- NCS1K-MD-32O-CE: refers to the NCS 1000 32-channel Odd Mux/Demux 150 GHz C-band Enhanced card.
- NCS1K-MD-32E-CE: refers to the NCS 1000 32-channel Even Mux/Demux 150 GHz C-band Enhanced card.

Unique device identifier (UDI) reported by show inventory

The **show inventory** command retrieves and displays inventory information for each Cisco product in the form of a unique device identifier (UDI). The UDI is a combination of three data elements:

- Product identifier (PID): The name by which the product is ordered. The PID is also known as the product name or part number.
- Version identifier (VID): The version of the product. The VID is incremented whenever an upgrade changes the product.
- Serial number (SN): The vendor-assigned unique serial number that identifies a specific product instance.

Verify the hardware inventory on Cisco NCS 1014 device

Use this task to confirm that the physical entities and modules installed in your Cisco NCS 1014 system are correctly identified, so that you can use the inventory data for operational and troubleshooting needs.

The **show inventory** command displays the inventory details of all the physical entities that are installed on Cisco NCS 1014. You can use specific keywords with the command to filter the inventory information you want to retrieve, such as all, details, fan, power, vendor-type, raw, chassis, and location.

Procedure

-
- Step 1** Run the **show inventory** command with the keyword that matches the inventory information that you want to retrieve. For sample outputs of each keyword variant, see [Sample outputs of the show inventory command](#).
- Step 2** (Optional) Restrict the output to a specific node by appending the **location** *location* keyword to the command.

Example:

```
RP/0/RP0/CPU0:ios#show inventory location 0/1/NXR0
```

Cisco NCS 1014 displays the inventory information that corresponds to the **show inventory** keyword that you ran.

Sample outputs of the show inventory command

The following sections show representative outputs for each keyword variant of the **show inventory** command. Use these samples together with the [Verify the hardware inventory of Cisco NCS 1014](#) task.

show inventory

The following sample output shows the inventory summary of the chassis, controller, FAN modules, PSUs, and line cards.

```
RP/0/RP0/CPU0:ios#show inventory
```

```
NAME: "Rack 0", DESCR: "Network Convergence System 1014 chassis with timing support"  
PID: NCS1014 , VID: V00, SN: FCB2652B1XA
```

```
NAME: "0/RP0/CPU0", DESCR: "Network Convergence System 1014 Controller"  
PID: NCS1K14-CNTRLR-K9 , VID: V00, SN: FCB2717B1GB
```

Sample outputs of the show inventory command

```

NAME: "0/FT0", DESCR: "Network Convergence System 1014 FAN Module"
PID: NCS1K14-FAN      , VID: V00, SN: FCB2704B0P7

NAME: "0/FT1", DESCR: "Network Convergence System 1014 FAN Module"
PID: NCS1K14-FAN      , VID: V00, SN: FCB2720B18D

NAME: "0/FT2", DESCR: "Network Convergence System 1014 FAN Module"
PID: NCS1K14-FAN      , VID: V00, SN: FCB2704B0PA

NAME: "0/PM0", DESCR: "Network Convergence System 1004 AC Power Supply Unit 2.5KW"
PID: NCS1K4-AC-PSU-2  , VID: V00, SN: POG26300N0V

NAME: "0/PM1", DESCR: "Network Convergence System 1004 AC Power Supply Unit 2.5KW"
PID: NCS1K4-AC-PSU-2  , VID: V00, SN: POG26300N1H

NAME: "0/0/NXR0", DESCR: "NCS 1014 2.4T Line Card Ver 2"
PID: NCS1K14-2.4T-A-K9 , VID: V00, SN: FCB2921B2BM

NAME: "0/1/NXR0", DESCR: "NCS 1014 2.4T Licensed card-Ver2"
PID: NCS1K14-2.4TAL-K9 , VID: V00, SN: FCB2942B0JC

NAME: "0/2/NXR0", DESCR: "NCS 1014 2.4T licensed Card- crossconnect modes"
PID: NCS1K14-2.4TXL-K9 , VID: V01, SN: FCB2921B2WC

NAME: "0/3/NXR0", DESCR: "NCS 1014 2.4T Line Card Ver 2"
PID: NCS1K14-2.4T-A-K9 , VID: V00, SN: FCB2942B0J3
RP/0/RP0/CPU0:ios#

```

show inventory details

The following sample output shows the detailed inventory information, including the manufacturer name, SNMP index, hardware version, and part number for each physical entity.

```

RP/0/RP0/CPU0:ios#show inventory details

NAME: "Rack 0", DESCR: "Network Convergence System 1014 chassis with timing support"
PID: NCS1014      , VID: V00, SN: FCB2652B1XA
MFG_NAME: Cisco Systems, Inc., SNMP_IDX: 8384513  , Type: Rack
PN: 800-111211-01, HW Ver: 0.1

NAME: "0/RP0/CPU0", DESCR: "Network Convergence System 1014 Controller"
PID: NCS1K14-CNTRLR-K9 , VID: V00, SN: FCB2717B1GB
MFG_NAME: Cisco Systems, Inc., SNMP_IDX: 16385    , Type: Module
PN: 800-111209-01, HW Ver: 0.2

NAME: "0/FT0", DESCR: "Network Convergence System 1014 FAN Module"
PID: NCS1K14-FAN      , VID: V00, SN: FCB2704B0P7
MFG_NAME: Cisco Systems, Inc., SNMP_IDX: 28673    , Type: Fantray
PN: 800-111210-01, HW Ver: 0.1

NAME: "0/PM0", DESCR: "Network Convergence System 1004 AC Power Supply Unit 2.5KW"
PID: NCS1K4-AC-PSU-2  , VID: V00, SN: POG26300N0V
MFG_NAME: Cisco Systems, Inc., SNMP_IDX: 20481    , Type: Power Supply
PN: 341-101364-01, HW Ver: 0.1

NAME: "0/0/NXR0", DESCR: "NCS 1014 2.4T Licensed card-Ver2"
PID: NCS1K14-2.4T-A-K9 , VID: V00, SN: FCB2921B2BM
MFG_NAME: Cisco Systems, Inc., SNMP_IDX: 1        , Type: Module
PN: 800-52136-01, HW Ver: 0.1
RP/0/RP0/CPU0:ios#

```

show inventory all

The following sample output shows the inventory information for all the physical entities in the chassis, including line cards and pluggable optics modules.

show inventory location

The following sample output shows the inventory information for a specific line card location, including all pluggable optics modules installed on that line card.

show inventory chassis

The following sample output shows the chassis-only inventory information.

show inventory fan

The following sample output shows the inventory information for all the FAN modules installed on the chassis.

show inventory power

The following sample output shows the inventory information for the power supply units (PSU) installed on the chassis.

Verify hardware components status

Use this task to confirm that every hardware component that is installed on Cisco NCS 1014 is operational, including the controller, the power supply units (PSU), the FAN modules, the line cards, and the pluggable optics.

The **show platform** command displays the operational state of each node, and the **show inventory** command displays the product identifier (PID), version identifier (VID), and serial number (SN) of each physical entity along with the details of the QSFP pluggables.

Before you begin

Ensure that all the required hardware components are installed on Cisco NCS 1014. For installation details, see the *Cisco Network Convergence System 1014 Hardware Installation Guide*.

Procedure**Step 1**

Run the **show platform** command in Cisco IOS XR EXEC mode, to display the operational state of each node and the configuration state of each node.

Example:

```
RP/0/RP0/CPU0:ios#show platform
Node                               Type                               State                               Config state
-----
0/RP0/CPU0                          NCS1K14-CNTRLR-K9 (Active)        IOS XR RUN                          NSHUT, NMON
0/PM0                               NCS1K4-AC-PSU                     OPERATIONAL                          NSHUT, NMON
0/PM1                               NCS1K4-AC-PSU                     OPERATIONAL                          NSHUT, NMON
0/FT0                               NCS1K14-FAN                       OPERATIONAL                          NSHUT, NMON
0/FT1                               NCS1K14-FAN                       OPERATIONAL                          NSHUT, NMON
0/FT2                               NCS1K14-FAN                       OPERATIONAL                          NSHUT, NMON
0/0/NXR0                            NCS1K4-1.2T-K9                   OPERATIONAL                          NSHUT, NMON
```

Verify hardware components status

```

0/1/NXR0      NCS1K14-2.4T-K9      OPERATIONAL      NSHUT,NMON
0/2/NXR0      NCS1K4-1.2T-K9      OPERATIONAL      NSHUT,NMON
0/3/NXR0      NCS1K4-1.2T-K9      OPERATIONAL      NSHUT,NMON

```

```

RP/0/RP0/CPU0:RINode1#show platform
Mon Feb 24 14:13:59.742 IST

```

Node	Type	State	Config state
0/RP0/CPU0	NCS1K14-CNTRLR-K9 (Active)	IOS XR RUN	NSHUT,NMON
0/PM0	NCS1K4-AC-PSU-2	OPERATIONAL	NSHUT,NMON
0/FT0	NCS1K14-FAN	OPERATIONAL	NSHUT,NMON
0/FT1	NCS1K14-FAN	OPERATIONAL	NSHUT,NMON
0/FT2	NCS1K14-FAN	OPERATIONAL	NSHUT,NMON
0/0/NXR0	NCS1K14-EDFA2	OPERATIONAL	NSHUT,NMON
0/1/NXR0	NCS1K14-BLANK	PRESENT	NSHUT,NMON
0/2/NXR0	NCS1K14-BLANK	PRESENT	NSHUT,NMON
0/3/NXR0	NCS1K4-1.2T-K9	OPERATIONAL	NSHUT,NMON
0/4	NCS1K-MD-320-CE	OPERATIONAL	NSHUT,NMON
0/5	NCS1K-MD-32E-CE	OPERATIONAL	NSHUT,NMON

Step 2 Run the **show inventory** command to display the details of each physical entity along with the details of the QSFP pluggables.

Example:

```
RP/0/RP0/CPU0:ios#show inventory
```

```

NAME: "Rack 0", DESCR: "Network Convergence System 1014 chassis with timing support"
PID: NCS1014      , VID: V00, SN: FCB2726B0AR

```

```

NAME: "0/RP0/CPU0", DESCR: "Network Convergence System 1014 Controller"
PID: NCS1K14-CNTRLR-K9  , VID: V00, SN: FCB2726B0LR

```

```

NAME: "0/0/NXR0", DESCR: "NCS1K4 12x QSFP28 2 Trunk C-Band DWDM card"
PID: NCS1K4-1.2T-K9    , VID: V00, SN: CAT2250B0C4

```

```

NAME: "Optics0/0/0/9", DESCR: "Cisco 100G QSFP28 FR-S Pluggable Optics Module"
PID: QSFP-100G-FR-S    , VID: V02 , SN: FBN2638A153

```

```

NAME: "Optics0/0/0/10", DESCR: "Cisco 100G QSFP28 FR-S Pluggable Optics Module"
PID: QSFP-100G-FR-S    , VID: V02 , SN: FBN2638A6J0

```

```

NAME: "Optics0/0/0/11", DESCR: "Cisco 100G QSFP28 FR-S Pluggable Optics Module"
PID: QSFP-100G-FR-S    , VID: V02 , SN: FBN2638A73V

```

```

NAME: "Optics0/0/0/12", DESCR: "Cisco 100G QSFP28 FR-S Pluggable Optics Module"
PID: QSFP-100G-FR-S    , VID: V02 , SN: FBN2544A687

```

```

NAME: "Optics0/0/0/13", DESCR: "Cisco 100G QSFP28 FR-S Pluggable Optics Module"
PID: QSFP-100G-FR-S    , VID: V02 , SN: FBN2638A2D4

```

```

NAME: "Optics0/0/0/2", DESCR: "Cisco 100G QSFP28 LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01 , SN: FNS2333080H

```

```

NAME: "Optics0/0/0/3", DESCR: "Cisco 100G QSFP28 FR-S Pluggable Optics Module"
PID: QSFP-100G-FR-S    , VID: V02 , SN: FBN2638A6J2

```

```

NAME: "Optics0/0/0/4", DESCR: "Cisco 100G QSFP28 FR-S Pluggable Optics Module"
PID: QSFP-100G-FR-S    , VID: V01 , SN: INL23243050

```

```

NAME: "Optics0/0/0/5", DESCR: "Cisco 100G QSFP28 LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01 , SN: FNS23320DZF

```

```

NAME: "Optics0/0/0/6", DESCR: "Cisco 100G QSFP28 LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01 , SN: FNS26140JRK

```

```
NAME: "Optics0/0/0/7", DESCR: "Cisco 100G QSFP28 LR4-S Pluggable Optics Module"
PID: QSFP-100G-LR4-S , VID: V02 , SN: FNS263509QL

NAME: "Optics0/0/0/8", DESCR: "Cisco 100G QSFP28 FR-S Pluggable Optics Module"
PID: QSFP-100G-FR-S , VID: V02 , SN: FBN2638A5G5

NAME: "0/1/NXR0", DESCR: "Network Convergence System 1014 2.4T Line Card"
PID: NCS1K14-2.4T-K9 , VID: V00, SN: FCB2726B072
```

Verify the software version

Use this task to confirm the version of the Cisco IOS XR software that is preinstalled on Cisco NCS 1014. Cisco NCS 1014 is shipped with the Cisco IOS XR software preinstalled. Verifying the software version helps confirm that your device is running the latest and most stable software.

Procedure

Run the **show version** command to display the software version, the build information, and details such as the system uptime.

Example:

```
RP/0/RP0/CPU0:ios#show version
Cisco IOS XR Software, Version 7.11.1.49I LNT
Copyright (c) 2013-2023 by Cisco Systems, Inc.

Build Information:
  Built By      : sajshah
  Built On     : Sun Nov 19 20:31:06 UTC 2023
  Build Host   : iox-ucs-077
  Workspace    : /auto/ioxdepot6/GISO/giso_build_lindt/giso_eng_create/yshivapp_2023-11-20_04-28-49_UTC

  Version      : 7.11.1.49I
  Label       : 7.11.1.49I-Weekly

cisco NCS1010 (C3758R @ 2.40GHz)
cisco NCS1014 (C3758R @ 2.40GHz) processor with 32GB of memory
KEPLER_PF6 uptime is 1 hour, 40 minutes
NCS 1014 - Chassis

RP/0/RP0/CPU0:sanity_176#show version
Cisco IOS XR Software, Version 25.1.1.34I LNT
Copyright (c) 2013-2024 by Cisco Systems, Inc.
Build Information:
  Built By : cisco
  Built On : Sun Jan 26 23:09:31 UTC 2025
  Build Host : iox-ucs-037
  Workspace : /auto/iox-ucs-037-san2/prod/25.1.1.34I.SIT_IMAGE/ncs1010/ws/
  Version : 25.1.1.34I
  Label : 25.1.1.34I
cisco NCS1010 (C3758R @ 2.40GHz)
cisco NCS1014 (C3758R @ 2.40GHz) processor with 32GB of memory
```

```
sanity_176 uptime is 3 days, 23 hours, 59 minutes
NCS 1014 - Chassis
```

Verify environmental parameters

Use this task to ensure the Cisco NCS 1014 operates within safe environmental limits by checking real-time metrics.

Monitoring environmental parameters helps you proactively detect potential issues with power, cooling, or component health.

show environment [**all** | **altitude** | **fan** | **power** | **voltage** | **current** | **temperature**] [**location** *location*]

The following keywords are available with the **show environment** command:

Before you begin

Log in to the Cisco NCS 1014 console in Cisco IOS XR EXEC mode.

Procedure

Step 1 Run the **show environment** command with the keyword that matches the environmental parameter that you want to retrieve.

To view specific parameters, append the relevant keyword, such as *fan*, *power*, *voltage*, *current*, or *temperature*

- **all**: Displays all environmental parameters in a single output.
- **altitude**: Displays the altitude information of the chassis.
- **fan**: Displays the fan speed of the FAN modules and the power supply units (PSU).
- **power**: Displays the power consumption details of the chassis and its modules.
- **voltage**: Displays the voltage values of the voltage sensors.
- **current**: Displays the current values of the current sensors.
- **temperature**: Displays the temperature values of the temperature sensors.
- **location** *location*: Restricts the output to the specified node location.

Note

From Release 25.4.1, the **show environment** [**all** | **temperature** | **location** *lc-location*] command displays the **TEMP_MODULE** sensor to indicate the temperature of the pluggable modules. **!TEMP_MODULE** indicates that the temperature has crossed its threshold limit and that an alarm is raised for this sensor.

For sample command outputs, refer to the [Sample outputs of the show environment command](#).

Step 2 (Optional) Restrict the output to a specific node by appending the **location** *location* keyword to the command.

Example:

```
RP/0/RP0/CPU0:ios#show environment temperature location 0/RP0/CPU0
```

You have verified the environmental parameters for the Cisco NCS 1014, confirming that the device is operating within safe limits.

Sample outputs of the show environment command

The following sections show representative outputs for each keyword variant of the **show environment** command. Use these samples together with the [Verify environmental parameters](#) task.

show environment fan

The following sample output shows the fan speed, in revolutions per minute (RPM), of each FAN module and PSU.

```
RP/0/RP0/CPU0:RINode1#show environment fan
Mon Feb 24 14:15:40.158 IST
=====
Location          FRU Type                Fan speed (rpm)
                   FAN_0      FAN_1
-----
0/PM0             NCS1K4-AC-PSU-2        5696      5696
0/FT0             NCS1K14-FAN            7560      6780
0/FT1             NCS1K14-FAN            7560      6720
0/FT2             NCS1K14-FAN            7560      6780
```

show environment power

The following sample output shows the power allocated and used for a specific line card.

```
RP/0/RP0/CPU0:ios#show environment power location 0/1/NXR0
Mon Jan 12 12:08:20.031 UTC
=====
Location          Card Type                Power          Power          Status
                   Power          Used
                   Allocated     Watts
                   Watts
-----
0/1/NXR0          NCS1K14-2.4T-A-K9        460            31              ON
RP/0/RP0/CPU0:235#
```

The following sample output shows the chassis-level power summary for all groups, modules, and cards.

```
RP/0/RP0/CPU0:ios#show environment power
Mon Feb 24 14:16:12.970 IST
=====
CHASSIS LEVEL POWER INFO: 0
=====
Total output power capacity (Group 0 + Group 1) : 2500W + 0W
Total output power required                    : 1136W
Total power input                              : 368W
Total power output                             : 304W

Power Group 0:
=====
Power          Supply          -----Input-----  -----Output-----  Status
Module         Type              Volts    Amps    Volts    Amps
=====
0/PM0          NCS1K4-AC-PSU-2  230.5    1.6    12.1    25.2    OK
```




Note From Release 25.4.1, the **show environment [all | temperature | location *lc-location*]** command displays the **TEMP_MODULE** sensor to indicate the temperature of the pluggable modules. **!TEMP_MODULE** indicates that the temperature has crossed its threshold limit and that an alarm is raised for this sensor.

```
RP/0/RP0/CPU0:ios#show environment temperature location 0/2
Wed Dec 17 10:09:48.417 UTC
```

Location	TEMPERATURE	Value	Crit	Major	Minor	Minor
Major	Crit					
(Hi)	Sensor	(deg C)	(Lo)	(Lo)	(Lo)	(Hi)
(Hi)	(Hi)					

0/2/NXR0	TEMP_DX_PCB_0	28	-10	-5	0	80
85	95					
.						
.						
.	output snipped					
.						
.						
85	TEMP_DX_PCB_3	24	-10	-5	0	80
	95					
100	TEMP_DX_META2_DIE	26	-10	-5	0	95
	105					
Optics0/2/0/0	TEMP_MODULE	26	-10	0	5	95
100	105					
Optics0/2/0/7	TEMP_MODULE	24	-10	0	5	95
100	105					
Optics0/2/0/1	TEMP_MODULE	25	-5	0	5	65
70	75					
Optics0/2/0/2	TEMP_MODULE	23	-5	0	5	65
70	75					
Optics0/2/0/3	TEMP_MODULE	21	-5	0	5	65
70	75					
Optics0/2/0/4	TEMP_MODULE	23	-5	0	5	65
70	75					

show environment voltage

The following sample output shows the voltage sensor readings for a specific line card.

```
RP/0/RP0/CPU0:ios#show environment voltage location 0/1/NXR0
Mon Jan 12 11:52:56.416 UTC
```

Location	VOLTAGE	Value	Crit	Minor	Minor	Crit
	Sensor	(mV)	(Lo)	(Lo)	(Hi)	(Hi)

0/1/NXR0	VMON_3_3V	3303	3135	3201	3399	3465
	VMON_1_8V_PS_MGT	1801	1710	1746	1854	1890
	VMON_1_8V	1793	1710	1746	1854	1890
	VMON_1_2V_PS_MGT	1202	1140	1164	1236	1260

Sample outputs of the show environment command

VMON_1_2V	1202	1140	1164	1236	1260
VMON_2_5V	2503	2375	2425	2575	2625
VMON_0_85V_PS_MGT	852	808	825	876	893
VMON_0_90V_PS_MGT	901	855	873	927	945
VMON_0_85V_PS	845	808	825	876	893
META0_PGOOD	3003	2400	2700	3300	3600
META1_PGOOD	3003	2400	2700	3300	3600
VMON_1_05V_PEX	1054	998	1019	1082	1103
META_1_8V	1803	1710	1746	1854	1890
VIN_7_0V_ST	7029	6650	6790	7210	7350
VAUX_3_3V_ST	3304	3135	3201	3399	3465
AVD_1_2V_META0	1210	1140	1164	1236	1260
AVD_1_2V_META1	1211	1140	1164	1236	1260
VIN_0_META0_12V	12062	9600	10800	12600	12840
VOUT_0_META0_CORE	760	724	739	785	800
VOUT_1_META0_CORE	760	724	739	785	800
VIN_2_META0_12V	12062	9600	10800	12600	12840
VOUT_2_META0_CORE	761	724	739	785	800
VOUT_AVD_META0	754	713	728	773	788
VIN_0_META1_12V	12078	9600	10800	12600	12840
VOUT_0_META1_CORE	761	724	739	785	800
VOUT_1_META1_CORE	761	724	739	785	800
VIN_2_META1_12V	12046	9600	10800	12600	12840
VOUT_2_META1_CORE	761	724	739	785	800
VOUT_AVD_META1	753	713	728	773	788

The following sample output shows the voltage sensor readings for the route processor (RP).

show environment current

The following sample output shows the current sensor readings for a specific line card.

```
RP/0/RP0/CPU0:ios#show environment current location 0/1/NXR0
Mon Jan 12 11:54:56.298 UTC
```

```
=====
```

Location	CURRENT Sensor	Value (mA)

0/1/NXR0		
	IMON_CTLPL	1042
	IMON_CLI	0
	IMON_META0_IN0	255
	IMON_META0_CORE_IOUT0	2421
	IMON_META0_CORE_IOUT1	975
	IMON_META0_IN2	354
	IMON_META0_CORE_IOUT2	2335
	IMON_META0_AVD_IOUT	2718
	IMON_META1_IN0	101
	IMON_META1_CORE_IOUT0	1080
	IMON_META1_CORE_IOUT1	267
	IMON_META1_IN2	155
	IMON_META1_CORE_IOUT2	681
	IMON_META1_AVD_IOUT	1300

The following sample output shows the chassis-wide current sensor readings.

show environment all

The following sample output shows the consolidated environmental information that includes temperature, voltage, current, and power readings for the chassis, route processor, line cards, FAN modules, and PSUs.

```
RP/0/RP0/CPU0:sanity_176#sh environment all
```

Location	TEMPERATURE	Value	Crit	Major	Minor	Minor
----------	-------------	-------	------	-------	-------	-------

Major (Hi)	Crit Sensor (Hi)	(deg C)	(Lo)	(Lo)	(Lo)	(Hi)
0/RP0/CPU0						
85	RP_TEMP_PCB 90	31	-10	-5	0	80
85	RP_TEMP_HOT_SPOT 90	32	-10	-5	0	80
90	RP_TEMP_LTM4638_0 95	32	-10	-5	0	85
90	RP_TEMP_LTM4644_0 95	30	-10	-5	0	85
90	RP_TEMP_LTM4644_1 95	32	-10	-5	0	85
90	RP_TEMP_LTM4638_1 95	31	-10	-5	0	80
90	RP_TEMP_LTM4644_2 95	30	-10	-5	0	85
90	RP_TEMP_LTM4638_2 95	31	-10	-5	0	80
85	TEMP_CPU_DIE 90	36	-10	-5	0	80
85	TEMP_DDR_DIMM 90	33	-10	-5	0	80
75	TEMP_CPU_SSD 80	44	-10	-5	0	70
75	TEMP_CHASSIS_SSD 80	31	-10	-5	0	70
0/PM0						
67	Air Inlet Temperature 72	30	-10	-5	0	62
87	Air Outlet Temperature 92	32	-10	-5	0	82
82	Oring MOSFET 87	35	-10	-5	0	77
0/PM1						
67	Air Inlet Temperature 72	31	-10	-5	0	62
87	Air Outlet Temperature 92	32	-10	-5	0	82
82	Oring MOSFET 87	34	-10	-5	0	77
0/1/NXR0						
100	TEMP_DX_PCB 105	-	-10	-5	0	95
100	TEMP_DX_ZYNQ 105	-	-10	-5	0	95
85	SA_TEMP_OUTLET_LC 90	-	-10	-5	0	75
0/3/NXR0						
90	TEMP_DX_PCB 95	24	-10	-8	-5	85
98	TEMP_DX_ZYNQ 100	27	-10	-8	-5	95
85	SA_TEMP_OUTLET_LC 90	25	-10	-5	0	75
0/Rack						
55	SA_TEMP_CHASSIS_INLET0 60	21	-10	-5	0	45
55	SA_TEMP_CHASSIS_INLET1 60	21	-10	-5	0	45
105	SA_TEMP_LTM4647_HOTSPOT 110	32	-10	-5	0	95

Verify management interface status

85	SA_TEMP_ALDRIN_HOTSPOT 90	26	-10	-5	0	80
85	SA_TEMP_INLET_PSU0 90	30	-10	-5	0	80
85	SA_TEMP_INLET_PSU1 90	30	-10	-5	0	80
85	SA_TEMP_INLET_FAN0 90	25	-10	-5	0	80
85	SA_TEMP_INLET_FAN1 90	20	-10	-5	0	80

Location	VOLTAGE Sensor	Value (mV)	Crit (Lo)	Minor (Lo)	Minor (Hi)	Crit (Hi)
0/RP0/CPU0						
	RP_ADM1266_12V0	12050	10800	11280	12720	13200
	RP_ADM1266_3V3_STAND_BY	3304	3070	3200	3400	3530
	RP_ADM1266_5V0	5056	4650	4850	5150	5350
	RP_ADM1266_3V3	3334	3070	3200	3400	3530
	RP_ADM1266_2V5_PLL	2515	2330	2430	2580	2680
	RP_ADM1266_2V5_FPGA	2511	2330	2430	2580	2680
	RP_ADM1266_1V2_FPGA	1202	1120	1160	1240	1280
	RP_ADM1266_3V3_CPU	3332	307			

Verify management interface status

Use this task to confirm that the management Ethernet interface of Cisco NCS 1014 is up and to view its configuration and traffic counters.

Checking the management Ethernet interface status helps ensure the device is reachable for management and operating as expected. You can also view detailed configuration and traffic counters during troubleshooting.

Procedure

Step 1 Run the `show interfaces mgmtEth instance` command to display the configuration of the management Ethernet interface, including the IP address, the MTU, the bandwidth, the duplex mode, and the traffic counters.

Example:

```
RP/0/RP0/CPU0:ios#show interfaces MgmtEth 0/RP0/CPU0/0
MgmtEth0/RP0/CPU0/0 is up, line protocol is up
  Interface state transitions: 3
  Hardware is Management Ethernet, address is 4014.82ba.d26e (bia 4014.82ba.d26e)
  Internet address is 10.105.57.37/25
  MTU 1514 bytes, BW 1000000 Kbit (Max: 1000000 Kbit)
    reliability 255/255, txload 0/255, rxload 0/255
  Encapsulation ARPA,
  Full-duplex, 1000Mb/s, CX, link type is autonegotiation
  loopback not set,
  Last link flapped 00:09:12
  ARP type ARPA, ARP timeout 04:00:00
  Last input 00:00:00, output 00:00:00
  Last clearing of "show interface" counters never
  5 minute input rate 1000 bits/sec, 2 packets/sec
  5 minute output rate 5000 bits/sec, 1 packets/sec
    6715 packets input, 640515 bytes, 0 total input drops
    0 drops for unrecognized upper-level protocol
  Received 2213 broadcast packets, 4430 multicast packets
    0 runts, 0 giants, 0 throttles, 0 parity
```

```

0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
944 packets output, 355004 bytes, 0 total output drops
Output 94 broadcast packets, 114 multicast packets
0 output errors, 0 underruns, 0 applique, 0 resets
0 output buffer failures, 0 output buffers swapped out
3 carrier transitions

RP/0/RP0/CPU0:ios#show interfaces MgmtEth 0/RP0/CPU0/0
Mon Feb 24 14:25:17.125 IST
MgmtEth0/RP0/CPU0/0 is up, line protocol is up
  Interface state transitions: 1
  Hardware is Management Ethernet, address is 9c38.1888.a418 (bia 9c38.1888.a418)
  Description: mgmt0
  Internet address is 10.127.126.174/27
  MTU 1514 bytes, BW 1000000 Kbit (Max: 1000000 Kbit)
    reliability 255/255, txload 0/255, rxload 0/255
  Encapsulation ARPA,
  Full-duplex, 1000Mb/s, 1000BASE-T, link type is autonegotiation
  loopback not set,
  Last link flapped 2d23h
  ARP type ARPA, ARP timeout 04:00:00
  Last input 00:00:00, output 00:04:50
  Last clearing of "show interface" counters never
  5 minute input rate 0 bits/sec, 1 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    202558 packets input, 14206120 bytes, 0 total input drops
    0 drops for unrecognized upper-level protocol
    Received 64032 broadcast packets, 137089 multicast packets
      0 runts, 0 giants, 0 throttles, 0 parity
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
    330 packets output, 14428 bytes, 0 total output drops
    Output 0 broadcast packets, 4 multicast packets
    0 output errors, 0 underruns, 0 applique, 0 resets
    0 output buffer failures, 0 output buffers swapped out
    1 carrier transitions

```

In the previous output, the management interface is administratively up.

You can also run the **show interfaces summary** and **show interfaces brief** commands in Cisco IOS XR EXEC mode to verify the management interface status.

Step 2

Optionally, run the **show interfaces summary** and **show interfaces brief** commands in Cisco IOS XR EXEC mode to verify the management interface status.

The following example shows sample output from the **show interfaces summary** command:

```

RP/0/RP0/CPU0:ios#show interfaces summary
Interface Type          Total    UP      Down    Admin Down
-----
ALL TYPES                5        2       0       3
-----
IFT_ETHERNET            2        1       0       1
IFT_NULL                1        1       0       0
IFT_PTP_ETHERNET       2        0       0       2

RP/0/RP0/CPU0:ios#show interfaces summary
Mon Feb 24 14:26:00.615 IST
Interface Type          Total    UP      Down    Admin Down
-----
ALL TYPES                6        5       0       1
-----
IFT_GETHERNET           1        1       0       0
IFT_LOOPBACK            1        1       0       0
IFT_ETHERNET            2        2       0       0

```

Verify firmware version

```
IFT_NULL          1      1      0      0
IFT_PTP_ETHERNET 1      0      0      1
```

The following example shows sample output from the **show interfaces brief** command:

```
RP/0/RP0/CPU0:ios#show interfaces brief
```

Intf Name	Intf State	LineP State	Encap Type	MTU (byte)	BW (Kbps)
Nu0	up	up	Null	1500	0
Mg0/RP0/CPU0/0	up	up	ARPA	1514	1000000
Mg0/RP0/CPU0/1	admin-down	admin-down	ARPA	1514	1000000
PT0/RP0/CPU0/0	admin-down	admin-down	ARPA	1514	1000000
PT0/RP0/CPU0/1	admin-down	admin-down	ARPA	1514	1000000

```
RP/0/RP0/CPU0:ios#show interfaces brief
```

```
Mon Feb 24 14:26:32.302 IST
```

Intf Name	Intf State	LineP State	Encap Type	MTU (byte)	BW (Kbps)
Lo0	up	up	Loopback	1500	0
Nu0	up	up	Null	1500	0
Gi0/0/0/5	up	up	ARPA	1514	1000000
Mg0/RP0/CPU0/0	up	up	ARPA	1514	1000000
Mg0/RP0/CPU0/1	up	up	ARPA	1514	1000000
PT0/RP0/CPU0/1	admin-down	admin-down	ARPA	1514	1000000

You can confirm whether the management Ethernet interface is administratively and operationally up and review its configuration and traffic counters.

What to do next

If the management interface is administratively down, perform the following actions:

- Check the Ethernet cable connection.
- Verify the IP configuration of the management interface. For details about configuring the management interface, see [Configure a management interface](#).
- Verify that the management interface is in the no shut state by running the **show running-config interface mgmtEth** command.

The following example shows sample output from the **show running-config interface mgmtEth** command:

```
RP/0/RP0/CPU0:ios#show running-config interface mgmtEth 0/RP0/CPU0/0
interface MgmtEth0/RP0/CPU0/0
  ipv4 address 10.105.57.37 255.255.255.128
!
```

Verify firmware version

Use this task to confirm that the firmware that is running on each hardware component of Cisco NCS 1014 is compatible with the installed Cisco IOS XR image.

Cisco NCS 1014 hardware components require compatible firmware for proper operation. Using the **show hw-module fpd** command displays the current firmware version for each FPD, while show fpd package shows the firmware version bundled with the installed Cisco IOS XR software image.

Procedure

Step 1 Run the **show hw-module fpd** command.

Note

From R26.2.1, the solid-state drive (SSD) FPD name that is displayed in the output of the **show hw-module fpd** command changes from a vendor- or model-specific name to a generic format: **CPU-SSD** for RP locations and **CHASSIS-SSD** for rack locations.

Example:

```
RP/0/RP0/CPU0:ios#show hw-module fpd
Mon Jan 12 11:44:18.438 UTC
```

```
Auto-upgrade:Enabled,PM excluded
Attribute codes: B golden, P protect, S secure, A Anti Theft aware
FPD Versions
```

Location	Card type	HWver	FPD device	ATR Status	Running	Programd
0/1/NXR0	NCS1K14-2.4T-A-K9	0.1	CpuModFw	S CURRENT	261.100	261.100
	Reload Loc					
	NOT REQ					
0/2/NXR0	NCS1K14-2.4T-A-K9	0.1	CpuModFw	S CURRENT	261.100	261.100
	NOT REQ					
0/2/NXR0	NCS1K14-2.4T-A-K9	0.0	OpticsFw_Port_0	S CURRENT	80.14014	80.14014
	NOT REQ					
0/2/NXR0	NCS1K14-2.4T-A-K9	0.0	OpticsFw_Port_7	S CURRENT	80.14014	80.14014
	NOT REQ					

```
RP/0/RP0/CPU0:MOLS SIT1#show hw-module fpd
Tue Mar 25 16:30:45.888 IST
```

```
Auto-upgrade:Enabled,PM included
Attribute codes: B golden, P protect, S secure, A Anti Theft aware
```

Location	Card type	HWver	FPD device	ATR Status	Running	Programd	Reload Loc
0/RP0/CPU0	NCS1K14-CNTLR-K9	1.0	ADM-DB	CURRENT	2.10	2.10	NOT
	REQ						
0/RP0/CPU0	NCS1K14-CNTLR-K9	1.0	ADM-MB	CURRENT	2.30	2.30	NOT
	REQ						
0/RP0/CPU0	NCS1K14-CNTLR-K9	1.0	BIOS	S CURRENT	5.00	5.00	0/RP0
0/RP0/CPU0	NCS1K14-CNTLR-K9	1.0	BIOS-Golden	BS CURRENT		4.70	0/RP0
0/RP0/CPU0	NCS1K14-CNTLR-K9	1.0	CpuFpga	S CURRENT	1.17	1.17	0/RP0
0/RP0/CPU0	NCS1K14-CNTLR-K9	1.0	CpuFpgaGolden	BS CURRENT		1.09	0/RP0
0/RP0/CPU0	NCS1K14-CNTLR-K9	1.0	SsdIntelSCKKBGZ	S CURRENT	1.30	1.30	0/RP0
0/RP0/CPU0	NCS1K14-CNTLR-K9	1.0	TamFw	S CURRENT	9.04	9.04	0/RP0
0/RP0/CPU0	NCS1K14-CNTLR-K9	1.0	TamFwGolden	BS CURRENT		9.04	0/RP0
0/PM0	NCS1K4-AC-PSU-2	1.1	PO-PrimMCU	CURRENT	1.03	1.03	NOT
	REQ						
0/PM0	NCS1K4-AC-PSU-2	1.1	PO-SecMCU	CURRENT	1.05	1.05	NOT
	REQ						
0/PM1	NCS1K4-AC-PSU-2	0.1	PO-PrimMCU	CURRENT	1.03	1.03	NOT
	REQ						
0/PM1	NCS1K4-AC-PSU-2	0.1	PO-SecMCU	CURRENT	1.05	1.05	NOT

Verify firmware version

```

REQ
0/0/NXR0   NCS1K14-EDFA2      0.1  CpuModFw      S   CURRENT      251.100  251.100      NOT
REQ
0/0/NXR0   NCS1K14-EDFA2      0.1  OptModFw      S   CURRENT      2.04     2.04         NOT
REQ
0/1/NXR0   NCS1K14-2.4T-K9    0.1  CpuModFw      S   CURRENT      251.100  251.100      NOT
REQ
0/2/NXR0   NCS1K14-2.4T-X-K9  1.0  CpuModFw      S   CURRENT      251.100  251.100      NOT
REQ
0/3/NXR0   NCS1K4-QXP-K9      0.2  CpuModFw      S   CURRENT      251.100  251.100      NOT
REQ
0/Rack     NCS1014             1.1  ADM-CHASSIS   S   CURRENT      0.21     0.21         NOT
REQ
0/Rack     NCS1014             1.1  IoFpga        S   CURRENT      1.19     1.19         NOT
REQ
0/Rack     NCS1014             1.1  IoFpgaGolden  BS  CURRENT      1.05     1.05         NOT
REQ
0/Rack     NCS1014             1.1  SsdIntelSC2KB S   CURRENT      1.30     1.30         0/Rack
0/4        NCS1K-MD-32E-CE    0.2  MD-32-LUM     S   CURRENT      2.20     2.20         NOT
REQ
0/5        NCS1K-MD-32O-CE    12.1 MD-32-ACC     S   CURRENT      1.12     1.12         NOT
REQ

```

- Status: Upgrade status of the firmware. The status can be one of the following values:
 - CURRENT: The firmware version is the latest version.
 - NOT READY: The firmware of the FPD is not ready for upgrade.
 - NEED UPGD: A newer firmware version is available in the installed image. Cisco recommends that you perform an upgrade.
 - UPGD PREP: The firmware of the FPD is preparing for upgrade.
 - RLOAD REQ: The upgrade is complete, and the card requires a reload.
 - UPGD DONE: The firmware upgrade is successful.
 - UPGD FAIL: The firmware upgrade has failed.
 - UPGD SKIP: The upgrade is skipped because the installed firmware version is higher than the version available in the image.
 - Running: The current version of the firmware that is running on the FPD.

Step 2 Run the **show fpd package** command to display the FPD image version that is available with the installed software release for each hardware component.

Example:

```

RP/0/RP0/CPU0:235#show fpd package
Mon Jan 12 11:48:15.912 UTC

```

```

=====
                          Field Programmable Device Package
=====
Card Type          FPD Description          Req   SW   Min Req  Min Req
=====          =====          Reload Ver   SW Ver  Board Ver
-----          -----          -----
NCS1014            ADM-CHASSIS              NO     0.21  0.21     0.0
                   IoFpga                   NO     1.19  1.19     0.0
                   IoFpgaGolden             NO     1.05  1.05     0.0

```

	SsdIntelSC2KB	YES	1.20	1.20	0.0
	SsdMicron5400	YES	0.02	0.02	0.0

NCS1K14-2.4T-A-K9	CIM8CEK9ACA	NO	80.14014	80.14014	0.0
	CIM8CK9ACA	NO	80.14014	80.14014	0.0
	CIM8LEK9ACA	NO	80.14014	80.14014	0.0
	CIM8LK9ACA	NO	80.14014	80.14014	0.0
	CpuModFw	NO	261.100	261.100	0.0

NCS1K14-2.4TAL-K9	CIM8CEK9ACA	NO	80.14014	80.14014	0.0
	CIM8CK9ACA	NO	80.14014	80.14014	0.0
	CIM8LEK9ACA	NO	80.14014	80.14014	0.0
	CIM8LK9ACA	NO	80.14014	80.14014	0.0
	CpuModFw	NO	261.100	261.100	0.0

RP/0/RP0/CPU0:MOLS_SIT1#show fpd package
Thu Mar 27 17:55:13.582 IST

```

=====
                                Field Programmable Device Package
=====

```

Card Type	FPD Description	Req Reload	SW Ver	Min Req SW Ver	Min Req Board Ver

NCS1014	ADM-CHASSIS	NO	0.21	0.21	0.0
	IoFpga	NO	1.19	1.19	0.0
	IoFpgaGolden	NO	1.05	0.01	0.0
	SsdIntelSC2KB	YES	1.30	1.30	0.0
	SsdMicron5400	YES	0.02	0.02	0.0
	SsdSolidigmSC2KB	YES	1.30	1.30	0.0

NCS1K-MD-32E-C	MD-32-ACC	NO	2.18	2.18	0.0
	MD-32-NEO	NO	2.02	2.02	0.0

NCS1K-MD-32E-CE	MD-32-ACC	NO	1.10	1.10	0.0
	MD-32-LUM	NO	2.20	2.20	0.0

NCS1K-MD-32O-C	MD-32-ACC	NO	2.18	2.18	0.0
	MD-32-NEO	NO	2.02	2.02	0.0

NCS1K-MD-32O-CE	MD-32-ACC	NO	1.10	1.10	0.0
	MD-32-LUM	NO	2.20	2.20	0.0

NCS1K14-2.4T-K9	CIMFw	NO	80.13021	80.13021	0.0
	CpuModFw	NO	251.100	251.100	0.0

NCS1K14-2.4T-L-K9	CIMFw	NO	80.13021	80.13021	0.0
	CpuModFw	NO	251.100	251.100	0.0

NCS1K14-2.4T-X-K9	CIMFw	NO	80.13021	80.13021	0.0
	CpuModFw	NO	251.100	251.100	0.0

NCS1K14-2.4TXL-K9	CIMFw	NO	80.13021	80.13021	0.0
	CpuModFw	NO	251.100	251.100	0.0

NCS1K14-CCMD-16-C	CpuModFw	NO	251.100	251.100	0.0
	OptModFw	NO	20.02	20.02	0.0

NCS1K14-CCMD-16-L	CpuModFw	NO	251.100	251.100	0.0
	OptModFw	NO	20.02	20.02	0.0

NCS1K14-CNTLR-K9	ADM-DB	NO	2.10	2.10	0.2

	ADM-MB	NO	2.30	2.30	0.2
	BIOS	YES	5.00	5.00	0.0
	BIOS-Golden	YES	4.70	0.01	0.0
	CpuFpga	YES	1.17	1.17	0.0
	CpuFpgaGolden	YES	1.09	0.01	0.0
	SsdIntelS4510	YES	11.51	11.51	0.0
	SsdIntelSC2KB	YES	1.30	1.30	0.0
	SsdIntelSCKKBGZ	YES	1.30	1.30	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	SsdMicron5400	YES	0.02	0.02	0.0
	SsdSolidigmSC2KB	YES	1.30	1.30	0.0
	SsdSolidigmSCKKB	YES	1.30	1.30	0.0
	SsdSRM28480GF1	YES	14.03	14.03	0.0
	TamFw	YES	9.04	9.04	0.0
	TamFwGolden	YES	9.04	0.01	0.0

NCS1K14-CTLR-B-K9	ADM-DB	NO	2.10	2.10	0.2
	ADM-MB	NO	2.30	2.30	0.2
	BIOS	YES	5.00	5.00	0.0
	BIOS-Golden	YES	4.70	0.01	0.0
	CpuFpga	YES	1.17	1.17	0.0
	CpuFpgaGolden	YES	1.09	0.01	0.0
	SsdIntelS4510	YES	11.51	11.51	0.0
	SsdIntelSC2KB	YES	1.30	1.30	0.0
	SsdIntelSCKKBGZ	YES	1.30	1.30	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	SsdMicron5400	YES	0.02	0.02	0.0
	SsdSolidigmSC2KB	YES	1.30	1.30	0.0
	SsdSolidigmSCKKB	YES	1.30	1.30	0.0
	SsdSRM28480GF1	YES	14.03	14.03	0.0
	TamFw	YES	9.04	9.04	0.0
	TamFwGolden	YES	9.04	0.01	0.0

NCS1K14-EDFA2	CohProbFw	NO	70.13021	70.13021	0.0
	CpuModFw	NO	251.100	251.100	0.0
	OptModFw	NO	2.04	2.04	0.0

NCS1K4-1.2T-K9	CpuModFw	NO	251.100	251.100	0.0
	OptModFw	NO	1.38	1.38	0.0

NCS1K4-1.2T-L-K9	CpuModFw	NO	251.100	251.100	0.0
	OptModFw	NO	1.38	1.38	0.0

NCS1K4-AC-PSU	PO-PrimCU	NO	2.04	2.04	0.1
	PO-SecMCU	NO	2.06	2.06	0.1

NCS1K4-AC-PSU-2	PO-PrimCU	NO	1.03	1.03	0.1
	PO-SecMCU	NO	1.05	1.05	0.1

NCS1K4-QXP-K9	CpuModFw	NO	251.100	251.100	0.0

NCS1K4-QXP-L-K9	CpuModFw	NO	251.100	251.100	0.0
RP/0/RP0/CPU0:MOLS_SIT1#					

What to do next

Upgrade all the FPDs by running the **upgrade hw-module location all fpd all** command in Cisco IOS XR EXEC mode. After the upgrade is complete, the Status column shows **RLOAD REQ** if the software requires a reload.

If a reload is required:

If the FPGA location is 0/RP0, run the **admin hw-module location 0/RP0 reload** command. This command reboots only the CPU. As a result, traffic is not impacted. If the FPGA location is 0/0, run the **admin hw-module location all reload** command. This command reboots the chassis. As a result, traffic is impacted. After the reload is complete, the new FPGA runs the current version.

If the firmware upgrade fails:

If the firmware upgrade fails, run the **show logging** command to view the details and upgrade the firmware again by using the preceding commands.



Note You can upgrade the firmware version of the power modules only when both the power modules are present and powered on.

Display alarms on Cisco NCS 1014

Use this task to review and check active alarms on Cisco NCS 1014 to monitor system health and diagnose issues.

The **show alarms** command displays current and historical alarm details on Cisco NCS 1014, allowing you to assess the system status in either brief or detailed formats.

The **show alarms** command supports the following syntax:

Procedure

Run the **show alarms brief card location *location* active** command to display the active alarms for the card at the specified location in brief format.

Example:

```
RP/0/RP0/CPU0:ios#show alarms brief card location 0/RP0/CPU0 active
```

```
-----
Active Alarms
-----
```

Location	Severity	Group	Set Time	Description
0/0	Major	Ethernet	11/21/2023 11:11:35 UTC	HundredGigECtrlr0/0/0/2 -
Carrier Loss On The LAN				
0/3	Major	Ethernet	11/21/2023 11:11:37 UTC	HundredGigECtrlr0/3/0/2 -
Remote Fault				
0/0	Major	Ethernet	11/21/2023 11:11:38 UTC	HundredGigECtrlr0/0/0/4 -
Local Fault				
0/3	Major	Ethernet	11/21/2023 11:11:38 UTC	HundredGigECtrlr0/3/0/3 -
Local Fault				
0/3	Major	Ethernet	11/21/2023 11:11:38 UTC	HundredGigECtrlr0/3/0/4 -
Local Fault				
0/0	Major	Ethernet	11/21/2023 11:11:38 UTC	HundredGigECtrlr0/0/0/5 -
Local Fault				
0/0	Major	Ethernet	11/21/2023 11:11:38 UTC	HundredGigECtrlr0/0/0/6 -
Local Fault				
0/0	Major	Ethernet	11/21/2023 11:11:38 UTC	HundredGigECtrlr0/0/0/7 -
Local Fault				
0/3	Major	Ethernet	11/21/2023 11:11:39 UTC	HundredGigECtrlr0/3/0/5 -
Local Fault				

Display alarms on Cisco NCS 1014

```

0/3          Major      Ethernet    11/21/2023 11:11:39 UTC    HundredGigEctrler0/3/0/6 -
Local Fault
0/3          Major      Ethernet    11/21/2023 11:11:38 UTC    HundredGigEctrler0/3/0/7 -
Local Fault
0/0          Major      Ethernet    11/21/2023 11:11:43 UTC    HundredGigEctrler0/0/0/3 -
Local Fault
0/3          Major      Ethernet    11/21/2023 11:11:57 UTC    HundredGigEctrler0/3/0/8 -
Local Fault
0/3          Major      Ethernet    11/21/2023 11:11:57 UTC    HundredGigEctrler0/3/0/9 -
Local Fault
0/3          Major      Ethernet    11/21/2023 11:11:59 UTC    HundredGigEctrler0/3/0/12 -
Local Fault
0/3          Major      Ethernet    11/21/2023 11:11:59 UTC    HundredGigEctrler0/3/0/13 -
Local Fault
0/0          Major      Ethernet    11/21/2023 11:12:03 UTC    HundredGigEctrler0/0/0/9 -
Local Fault
0/0          Major      Ethernet    11/21/2023 11:12:04 UTC    HundredGigEctrler0/0/0/8 -
Local Fault
0/0          Major      Ethernet    11/21/2023 11:12:04 UTC    HundredGigEctrler0/0/0/10 -
Local Fault
0/0          Major      Ethernet    11/21/2023 11:12:04 UTC    HundredGigEctrler0/0/0/11 -
Local Fault
0/0          Major      Ethernet    11/21/2023 11:12:04 UTC    HundredGigEctrler0/0/0/12 -
Local Fault
0/0          Major      Ethernet    11/21/2023 11:12:04 UTC    HundredGigEctrler0/0/0/13 -
Local Fault
0/3          Major      Ethernet    11/21/2023 11:12:04 UTC    HundredGigEctrler0/3/0/11 -
Local Fault
0/3          Major      Ethernet    11/21/2023 11:12:05 UTC    HundredGigEctrler0/3/0/10 -
Local Fault

```

```

RP/0/RP0/CPU0:RINode1#show alarms brief card location 0/RP0/CPU0 active
Mon Feb 24 14:27:49.802 IST

```

Active Alarms

```

-----
Location          Severity      Group          Set Time          Description
-----
0                  Major        Environ        02/21/2025 14:29:21 IST    Power Group Redundancy lost
0/3                Minor        Environ        02/21/2025 14:29:46 IST    TEMP_DX_PCB: Invalid sensor
read error.
0/3                Minor        Environ        02/21/2025 14:29:46 IST    TEMP_DX_ZYNQ: temperature
alarm
0/0/NXRO          Minor        Software       02/21/2025 14:29:58 IST    Ots0/0/0/0 - Neighbour not
found
0/0                Minor        Controller     02/21/2025 14:29:58 IST    Ots0/0/0/0 - OTDR Reflectance
Exceeded Absolute Threshold - Receive Direction
0/RP0/CPU0        Minor        Software       02/21/2025 14:30:30 IST    SW Upgrade is still allowed
as SIA Grace Period is remaining
0/3                Critical     Environ        02/21/2025 14:31:55 IST    VMON_0_85V: low voltage
alarm
0/3                Critical     Environ        02/21/2025 14:31:55 IST    VMON_1_2V: low voltage alarm
0/3                Critical     Environ        02/21/2025 14:31:55 IST    VMON_1_8V: low voltage alarm
0/3                Critical     Environ        02/21/2025 14:31:55 IST    VMON_2_5V: low voltage alarm
0/3                Critical     Environ        02/21/2025 14:31:55 IST    VMON_3_3V: low voltage alarm
0/3                Critical     Environ        02/21/2025 14:31:55 IST    VMON_0_85V_MGT: low voltage
alarm
0/3                Critical     Environ        02/21/2025 14:31:55 IST    VMON_0_9V_MGT: low voltage
alarm
0/3                Critical     Environ        02/21/2025 14:31:55 IST    VMON_1_2V_MGT: low voltage
alarm
0/3                Critical     Environ        02/21/2025 14:31:55 IST    VMON_1_8V_MGT: low voltage
alarm
0/3                Critical     Environ        02/21/2025 14:31:55 IST    PGOOD_VTT: low voltage alarm

```

0/3 alarm	Critical	Environ	02/21/2025 14:31:55 IST	VIN_7_0V_ST: low voltage
0/3 alarm	Critical	Environ	02/21/2025 14:31:55 IST	VAUX_3_3V_ST: low voltage
0/3 alarm	Critical	Environ	02/21/2025 14:31:55 IST	VIN_12V_MOD: low voltage
0/3 alarm	Critical	Environ	02/21/2025 14:31:55 IST	VMON_1_15V_CDR: low voltage

Note

In the maintenance mode, all the alarms are suppressed and the **show alarms** command does not display the alarm details. Run the **show controllers controller-type R/S/I/P** command to view the client and trunk alarms.

The system displays all active alarms for the specified card location. You can use this information to verify the system's operational status and diagnose issues.

Verify core dump context information

Use this task to check up to ten recent core dump instances for any process on Cisco NCS 1014 for troubleshooting and analysis.

Core dump context information includes details such as core location, build information, process state, register data, and backtrace. This aids in analyzing system crashes or failures on Cisco NCS 1014.

Procedure

Run the **show context** command to display the core dump context information of any process on the system, up to the last ten instances.

Example:

```
RP/0/RP0/CPU0:RINode1#show context
Mon Feb 24 14:28:32.450 IST
```

```
Disclaimer: if exception path is not configured, cores may be found in /misc/disk1/coredumps
```

```
node: node0_RP0_CPU0
```

```
-----
No context
```

Verify core files

Use this task to confirm if the Cisco NCS 1014 device has generated any core dump files by listing compressed core dumps stored on its hard disk.

The **dir harddisk:/*core.gz** command lists the compressed core dump files located at the root of the hard disk on Cisco NCS 1014. This helps you monitor for unexpected process failures.

Procedure

Run the **dir harddisk:/*core.gz** command to display each core dump file that matches the ***core.gz** pattern under the **harddisk:/** directory.

Example:

```
RP/0/RP0/CPU0:ios#dir harddisk:/*core.gz
Wed Dec 6 04:54:16.336 UTC
```

```
Directory of harddisk:/*core.gz
2476 -rw-r--r--. 1 8120038 Oct 30 15:08
cma_server_41264.by.6.20231030-150817.node0_RP0_CPU0.502a7.core.gz
```
