Perform Preliminary Checks

After successfully logging into the console, you must perform some preliminary checks to verify the default setup. If any setup issue is detected, take corrective action before making further configurations.

Note The output of the examples in the procedures is not from the latest software release. The output will change for any explicit references to the current release.

- Verify Status of Hardware Components, on page 1
- Verify Software Version, on page 6
- Verify Firmware Version, on page 7
- Verify Management Interface Status, on page 10
- Verify Alarms, on page 13
- Verify Environmental Parameters, on page 14
- Verify Inventory, on page 18
- Verify Context, on page 24
- Verify Core Files, on page 25

Verify Status of Hardware Components

To verify the status of all the hardware components installed on NCS 1004, perform the following procedure.

Before you begin

Ensure that all the required hardware components are installed on NCS 1004. For installation details, see *Cisco Network Convergence System 1004 Hardware Installation Guide*.

Procedure

Step 1 **show platform**

When you execute this command from the Cisco IOS XR EXEC mode, the status of Cisco IOS XR is displayed.

Example:

```
RP/0/RP0/CPU0:ios# show platform
Wed Mar  4 06:21:26.929 UTC
Node              Type                        State             Config state
--------------------------------------------------------------------------------
0/0               NCS1K4-LC-FILLER            PRESENT           NSHUT
0/1               NCS1K4-1.2T-K9              OPERATIONAL       NSHUT
0/2               NCS1K4-1.2TL-K9             OPERATIONAL       NSHUT
0/3               NCS1K4-LC-FILLER            PRESENT           NSHUT
0/RP0/CPU0        NCS1K4-CNTLR-K9(Active)     IOS XR RUN        NSHUT
0/FT0             NCS1K4-FAN                  OPERATIONAL       NSHUT
0/FT1             NCS1K4-FAN                  OPERATIONAL       NSHUT
0/FT2             NCS1K4-FAN                  OPERATIONAL       NSHUT
0/PM0             NCS1K4-AC-PSU               OPERATIONAL       NSHUT
0/PM1             NCS1K4-AC-PSU               OPERATIONAL       NSHUT
0/SC0             NCS1004                     OPERATIONAL       NSHUT
```

```
RP/0/RP0/CPU0:ios# show platform
Thu May  7 10:03:03.394 UTC
Node              Type                        State             Config state
--------------------------------------------------------------------------------
0/0               NCS1K4-1.2T-K9              OPERATIONAL       NSHUT
0/1               NCS1K4-OTN-XP               OPERATIONAL       NSHUT
0/2               NCS1K4-OTN-XP               OPERATIONAL       NSHUT
0/3               NCS1K4-OTN-XP               OPERATIONAL       NSHUT
0/RP0/CPU0        NCS1K4-CNTLR-K9(Active)     IOS XR RUN        NSHUT
0/FT0             NCS1K4-FAN                  OPERATIONAL       NSHUT
0/FT1             NCS1K4-FAN                  OPERATIONAL       NSHUT
0/FT2             NCS1K4-FAN                  OPERATIONAL       NSHUT
0/PM0             NCS1K4-DC-PSU               OPERATIONAL       NSHUT
0/PM1             NCS1K4-DC-PSU               OPERATIONAL       NSHUT
0/SC0             NCS1004                     OPERATIONAL       NSHUT
```

a) If Cisco IOS XR is not operational, no output is shown in the result. In this case, verify the state of service domain router (SDR) on the node using the **show sdr** command in Cisco IOS XR mode.

   The following example shows sample output of the **show sdr** command in Cisco IOS XR mode.

```
RP/0/RP0/CPU0:ios# show sdr
Wed Mar  4 06:23:16.143 UTC
Type                 NodeName       NodeState      RedState       PartnerName
--------------------------------------------------------------------------------
NCS1K4-LC-FILLER     0/0            PRESENT                       N/A
NCS1K4-1.2T-K9       0/1            OPERATIONAL                   N/A
NCS1K4-1.2TL-K9      0/2            OPERATIONAL                   N/A
NCS1K4-LC-FILLER     0/3            PRESENT                       N/A
RP                   0/RP0/CPU0     IOS XR RUN     ACTIVE         NONE
NCS1K4-CNTLR-K9      0/RP0          OPERATIONAL                   N/A
NCS1K4-FAN           0/FT0          OPERATIONAL                   N/A
NCS1K4-FAN           0/FT1          OPERATIONAL                   N/A
NCS1K4-FAN           0/FT2          OPERATIONAL                   N/A
NCS1K4-AC-PSU        0/PM0          OPERATIONAL                   N/A
NCS1K4-AC-PSU        0/PM1          OPERATIONAL                   N/A
NCS1004              0/SC0          OPERATIONAL                   N/A
```

```
RP/0/RP0/CPU0:ios# show sdr
Thu May  7 10:50:08.651 UTC
Type                 NodeName       NodeState      RedState       PartnerName
--------------------------------------------------------------------------------
NCS1K4-1.2T-K9       0/0            OPERATIONAL                   N/A
NCS1K4-OTN-XP        0/1            OPERATIONAL                   N/A
NCS1K4-OTN-XP        0/2            OPERATIONAL                   N/A
NCS1K4-OTN-XP        0/3            OPERATIONAL                   N/A
RP                   0/RP0/CPU0     IOS XR RUN     ACTIVE         NONE
NCS1K4-CNTLR-K9      0/RP0          OPERATIONAL                   N/A
NCS1K4-FAN           0/FT0          OPERATIONAL                   N/A
```

```
NCS1K4-FAN            0/FT1          OPERATIONAL                N/A
NCS1K4-FAN            0/FT2          OPERATIONAL                N/A
NCS1K4-DC-PSU         0/PM0          OPERATIONAL                N/A
NCS1K4-DC-PSU         0/PM1          OPERATIONAL                N/A
NCS1004               0/SC0          OPERATIONAL                N/A
```

Step 2 **admin**

Enters System Admin EXEC mode.

Example:

```
RP/0/RP0/CPU0:ios# admin
```

Step 3 **show platform**

Displays information and status of each node in the system.

Example:

```
sysadmin-vm:0_RP0# show platform
Wed Mar  4  06:24:46.700 UTC+00:00
Location  Card Type               HW State      SW State      Config State
--------------------------------------------------------------------------------
0/0       NCS1K4-LC-FILLER        PRESENT       N/A           NSHUT
0/1       NCS1K4-1.2T-K9          OPERATIONAL   N/A           NSHUT
0/2       NCS1K4-1.2TL-K9         OPERATIONAL   N/A           NSHUT
0/3       NCS1K4-LC-FILLER        PRESENT       N/A           NSHUT
0/RP0     NCS1K4-CNTLR-K9         OPERATIONAL   OPERATIONAL   NSHUT
0/FT0     NCS1K4-FAN              OPERATIONAL   N/A           NSHUT
0/FT1     NCS1K4-FAN              OPERATIONAL   N/A           NSHUT
0/FT2     NCS1K4-FAN              OPERATIONAL   N/A           NSHUT
0/PM0     NCS1K4-AC-PSU           OPERATIONAL   N/A           NSHUT
0/PM1     NCS1K4-AC-PSU           OPERATIONAL   N/A           NSHUT
0/SC0     NCS1004                 OPERATIONAL   N/A           NSHUT

sysadmin-vm:0_RP0# show platform
Thu May  7  10:58:09.331 UTC+00:00
Location  Card Type               HW State      SW State      Config State
--------------------------------------------------------------------------------
0/0       NCS1K4-1.2T-K9          OPERATIONAL   N/A           NSHUT
0/1       NCS1K4-OTN-XP           OPERATIONAL   N/A           NSHUT
0/2       NCS1K4-OTN-XP           OPERATIONAL   N/A           NSHUT
0/3       NCS1K4-OTN-XP           OPERATIONAL   N/A           NSHUT
0/RP0     NCS1K4-CNTLR-K9         OPERATIONAL   OPERATIONAL   NSHUT
0/FT0     NCS1K4-FAN              OPERATIONAL   N/A           NSHUT
0/FT1     NCS1K4-FAN              OPERATIONAL   N/A           NSHUT
0/FT2     NCS1K4-FAN              OPERATIONAL   N/A           NSHUT
0/PM0     NCS1K4-DC-PSU           OPERATIONAL   N/A           NSHUT
0/PM1     NCS1K4-DC-PSU           OPERATIONAL   N/A           NSHUT
0/SC0     NCS1004                 OPERATIONAL   N/A           NSHUT
```

Verify that all the components of NCS 1004 are displayed in output. The software state and the hardware state must be in the OPERATIONAL state. The various hardware and software states are:

Hardware states:

- OPERATIONAL—Node is operating normally and is fully functional.
- POWERED_ON—Power is on and the node is booting up.
- FAILED—Node is powered on but has encountered an internal failure.
- PRESENT—Node is in intermediate state in the boot sequence.

- POWERED_OFF—Power is off and the node cannot be accessed.

Software states:

- OPERATIONAL—Software is operating normally and is fully functional.
- SW_INACTIVE—Software is not completely operational.

Step 4 **show inventory**

Displays details of the physical entities of NCS 1004 along with the details of QSFPs when you execute this command in Cisco IOS XR EXEC mode.

Example:

```
RP/0/RP0/CPU0:ios# show inventory
Wed Mar  4 05:10:17.107 UTC
NAME: "0/0", DESCR: "Network Convergence System 1004 Filler"
PID: NCS1K4-LC-FILLER, VID: V01, SN: N/A

NAME: "0/1", DESCR: "NCS1K4 12x QSFP28 2 Trunk C-Band DWDM card"
PID: NCS1K4-1.2T-K9, VID: V00, SN: CAT2250B0AE

NAME: "0/1-Optics0/1/0/2", DESCR: "Cisco 100G QSFP28 AOC Pluggable Optics Module"
PID: QSFP-100G-AOC3M   , VID: V03, SN: INL22262339-A

NAME: "0/1-Optics0/1/0/4", DESCR: "Cisco 100GE QSFP28 SR4 Pluggable Optics Module"
PID: QSFP-100G-SR4-S, VID: V03, SN: AVF2219S16U

NAME: "0/1-Optics0/1/0/5", DESCR: "Cisco 100G QSFP28 LR4-S Pluggable Optics Module"
PID: QSFP-100G-LR4-S, VID: V02, SN: JFQ2145701U

NAME: "0/1-Optics0/1/0/6", DESCR: "Cisco 100GE QSFP28 SR4 Pluggable Optics Module"
PID: QSFP-100G-SR4-S, VID: ES1, SN: AVF1925G012

NAME: "0/1-Optics0/1/0/7", DESCR: "Cisco 100G QSFP28 LR4-S Pluggable Optics Module"
PID: QSFP-100G-LR4-S, VID: V02, SN: JFQ2145706N

NAME: "0/1-Optics0/1/0/8", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4, VID: V01, SN: JFQ19026014

NAME: "0/1-Optics0/1/0/9", DESCR: "Cisco 100G QSFP28 LR4-S Pluggable Optics Module"
PID: QSFP-100G-LR4-S, VID: V02, SN: OPM220518HS

NAME: "0/1-Optics0/1/0/10", DESCR: "Cisco 100G QSFP28 SM-SR Pluggable Optics Module"
PID: QSFP-100G-SM-SR, VID: V02, SN: INL21490043

NAME: "0/1-Optics0/1/0/11", DESCR: "Cisco 100G QSFP28 CWDM4 Pluggable Optics Module"
PID: QSFP-100G-CWDM4-S , VID: V01, SN: JFQ211930JL

NAME: "0/1-Optics0/1/0/12", DESCR: "Cisco 100G QSFP28 CWDM4 Pluggable Optics Module"
PID: QSFP-100G-CWDM4-S, VID: V02, SN: JFQ2210801H

NAME: "0/2", DESCR: "NCS1K4 12x QSFP28 2 Trunk L-Band DWDM card"
PID: NCS1K4-1.2TL-K9   , VID: V00, SN: CAT2337B0S4

NAME: "0/2-Optics0/2/0/2", DESCR: "Cisco 100G QSFP28 AOC Pluggable Optics Module"
PID: QSFP-100G-AOC3M, VID: V03, SN: INL22262332-A

NAME: "0/2-Optics0/2/0/4", DESCR: "Cisco 100G QSFP28 SM-SR Pluggable Optics Module"
PID: QSFP-100G-SM-SR, VID: V02, SN: FNS22070HWF

NAME: "0/2-Optics0/2/0/5", DESCR: "Cisco 100G QSFP28 SM-SR Pluggable Optics Module"
```

```
PID: QSFP-100G-SM-SR, VID: V02, SN: SPT2225302D

NAME: "0/2-Optics0/2/0/6", DESCR: "Cisco 100G QSFP28 LR4-S Pluggable Optics Module"
PID: QSFP-100G-LR4-S, VID: V02, SN: FNS22310Z1X

NAME: "0/2-Optics0/2/0/8", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4, VID: V01, SN: FNS20520R8Z

NAME: "0/2-Optics0/2/0/9", DESCR: "Cisco 100G QSFP28 AOC Pluggable Optics Module"
PID: QSFP-100G-AOC3M, VID: V03, SN: INL23312282-A

NAME: "0/2-Optics0/2/0/10", DESCR: "Cisco 100G QSFP28 AOC Pluggable Optics Module"
PID: QSFP-100G-AOC3M, VID: V03, SN: INL23312282-B

NAME: "0/2-Optics0/2/0/11", DESCR: "Cisco 100G QSFP28 LR4-S Pluggable Optics Module"
PID: QSFP-100G-LR4-S, VID: V02, SN: FNS23080LKF

NAME: "0/3", DESCR: "Network Convergence System 1004 Filler"
PID: NCS1K4-LC-FILLER, VID: V01, SN: N/A

:
:
:

RP/0/RP0/CPU0:ios# show inventory
Thu May  7 11:05:13.211 UTC
NAME: "0/0", DESCR: "NCS1K4 12x QSFP28 2 Trunk C-Band DWDM card"
PID: NCS1K4-1.2T-K9    , VID: V00, SN: CAT2237B25A

NAME: "0/0-Optics0/0/0/2", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01, SN: FNS2333080E

NAME: "0/0-Optics0/0/0/3", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01, SN: FNS23330801

NAME: "0/0-Optics0/0/0/4", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01, SN: FNS21140GZK

NAME: "0/0-Optics0/0/0/6", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01, SN: FNS233209CN

NAME: "0/0-Optics0/0/0/10", DESCR: "Cisco 40GE QSFP+ LR4 Pluggable Optics Module"
PID: QSFP-40G-LR4      , VID: V02, SN: FNS23110TYD

NAME: "0/1", DESCR: "NCS1K4 4xDD,8xQSFP28,2xCFP2 DCO OTNXponder"
PID: NCS1K4-OTN-XP     , VID: V00, SN: CAT2352B007

NAME: "0/1-Optics0/1/0/0", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01, SN: FNS2333080J

NAME: "0/1-Optics0/1/0/1", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01, SN: FNS23330806

NAME: "0/1-Optics0/1/0/2", DESCR: "Cisco 4x10GE QSFP+ MLR Pluggable Optics Module"
PID: ONS-QSFP-4X10-MLR , VID: V01, SN: INL21010391

NAME: "0/1-Optics0/1/0/4", DESCR: "Cisco 40GE QSFP+ SR4 Pluggable Optics Module"
PID: QSFP-40G-SR4      , VID: V03, SN: JFQ20332007

NAME: "0/1-Optics0/1/0/5", DESCR: "Cisco 40GE QSFP+ SR4 Pluggable Optics Module"
PID: QSFP-40G-SR4      , VID: V03, SN: JFQ20332088

NAME: "0/1-Optics0/1/0/6", DESCR: "Cisco 4x10GE QSFP+ MLR Pluggable Optics Module"
PID: ONS-QSFP-4X10-MLR , VID: V01, SN: INL21010471
```

```
NAME: "0/1-Optics0/1/0/7", DESCR: "Cisco 4x10GE QSFP+ MLR Pluggable Optics Module"
PID: ONS-QSFP-4X10-MLR , VID: V01, SN: INL21010376

NAME: "0/2", DESCR: "NCS1K4 4xDD,8xQSFP28,2xCFP2 DCO OTNXponder"
PID: NCS1K4-OTN-XP     , VID: V00, SN: CAT2352B015

NAME: "0/2-Optics0/2/0/0", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01, SN: FNS20360V1R

NAME: "0/2-Optics0/2/0/4", DESCR: "Cisco 40GE QSFP+ SR4 Pluggable Optics Module"
PID: QSFP-40G-SR4      , VID: V03, SN: JFQ21502017

NAME: "0/2-Optics0/2/0/5", DESCR: "Cisco 40GE QSFP+ SR4 Pluggable Optics Module"
PID: QSFP-40G-SR4      , VID: V03, SN: JFQ202120DY

NAME: "0/3", DESCR: "NCS1K4 4xDD,8xQSFP28,2xCFP2 DCO OTNXponder"
PID: NCS1K4-OTN-XP     , VID: V00, SN: CAT2352B00A

NAME: "0/3-Optics0/3/0/0", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01, SN: FNS23320BS3

NAME: "0/3-Optics0/3/0/4", DESCR: "Cisco 40GE QSFP+ SR4 Pluggable Optics Module"
PID: QSFP-40G-SR4      , VID: V03, SN: AVP2217S09L

NAME: "0/3-Optics0/3/0/5", DESCR: "Cisco 40GE QSFP+ SR4 Pluggable Optics Module"
PID: QSFP-40G-SR4      , VID: V03, SN: AVP2107S0RZ

NAME: "0/RP0", DESCR: "Network Convergence System 1004 Controller"
PID: NCS1K4-CNTLR-K9   , VID: V01, SN: CAT2323B0SG
:
:
:
:
NAME: "0/PM1", DESCR: "Network Convergence System 1004 DC Power Supply Unit"
PID: NCS1K4-DC-PSU     , VID: V01, SN: POG2308CT4W
```

Verify Software Version

NCS 1004 is shipped with the Cisco IOS XR Software preinstalled. Verify that the latest version of the software is installed. If a newer version is available, perform a system upgrade. This system upgrade installs the newer version of the software and provide the latest feature set on NCS 1004.

To verify the version of Cisco IOS XR Software running on NCS 1004, perform the following procedure.

Procedure

show version

Displays the software version and details such as system uptime.

Example:

```
RP/0/RP0/CPU0:ios# show version
Wed Feb 10 19:35:38.274 IST
Cisco IOS XR Software, Version 7.3.2
Copyright (c) 2013-2021 by Cisco Systems, Inc.
```

```
Build Information:
 Built By     : ingunawa
 Built On     : Tue Feb  9 11:45:12 PST 2021
 Built Host   : iox-lnx-068
 Workspace    : /auto/iox-lnx-068-san1/prod/7.3.2/ncs1k/ws
 Version      : 7.3.2
 Location     : /opt/cisco/XR/packages/
 Label        : 7.3.2

cisco NCS-1002 () processor
System uptime is 3 hours 37 minutes
```

What to do next

Verify the software version to determine whether system upgrade is required. If the upgrade is required, see the Perform System Upgrade and Install Feature Packages chapter.

Verify Firmware Version

The firmware on various hardware components of NCS 1004 must be compatible with the installed Cisco IOS XR image. Incompatibility may cause the NCS 1004 to malfunction.

To verify the firmware version, perform the following procedure.

Procedure

Step 1 **show hw-module fpd**

```
RP/0/RP0/CPU0:ios# show hw-module fpd
Fri Nov 26 14:53:27.188 UTC

Auto-upgrade:Disabled
                                                                          FPD Versions
                                                                          ==============
Location   Card type              HWver FPD device       ATR Status     Running   Programd
-------------------------------------------------------------------------------------------
0/0        NCS1K4-OTN-XPL         3.0   LC_CPU_MOD_FW        CURRENT     75.10     75.10
0/0        NCS1K4-OTN-XPL         7.0   LC_DP_MOD_FW         CURRENT      3.10      3.10
0/0        NCS1K4-OTN-XPL         2.0   LC_QSFPDD_PORT_11    CURRENT     61.2013   61.2013
0/0        NCS1K4-OTN-XPL         2.0   LC_QSFPDD_PORT_9     CURRENT     61.2013   61.2013
0/1        NCS1K4-OTN-XP          2.0   LC_CPU_MOD_FW        CURRENT     75.10     75.10
0/1        NCS1K4-OTN-XP          7.0   LC_DP_MOD_FW         CURRENT      3.10      3.10
0/1        NCS1K4-OTN-XP          2.0   LC_QSFPDD_PORT_11    CURRENT     61.2013   61.2013
0/1        NCS1K4-OTN-XP          2.0   LC_QSFPDD_PORT_9     CURRENT     61.2013   61.2013
0/RP0      NCS1K4-CNTLR-K9        5.0   CSB_IMG            S CURRENT      0.200     0.200
0/RP0      NCS1K4-CNTLR-K9        5.0   TAM_FW               CURRENT     36.08     36.08
0/RP0      NCS1K4-CNTLR-K9        1.14  BIOS               S CURRENT      5.30      5.30
0/RP0      NCS1K4-CNTLR-K9        5.0   CPU_FPGA             CURRENT      1.14      1.14
0/PM1      NCS1K4-AC-PSU          0.1   PO-PriMCU            CURRENT      2.70      2.70
0/SC0      NCS1004                2.0   BP_FPGA              CURRENT      1.25      1.25
0/SC0      NCS1004                2.0   XGE_FLASH            CURRENT     18.04     18.04
```

Displays firmware information of various hardware components of NCS 1004 in the Cisco IOS XR EXEC mode.

In the previous output, some of the significant fields are:

- FPD Device—Name of the hardware component such as FPD, CFP, and so on.
- ATR—Attribute of the hardware component. Some of the attributes are:
  - B—Backup Image
  - S—Secure Image
  - P—Protected Image
- Status—Upgrade status of the firmware. The different states are:
  - 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. We recommended that upgrade be performed.
  - UPGD PREP—The firmware of the FPD is preparing for upgrade.
  - RLOAD REQ—The upgrade is completed, 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—Current version of the firmware running on the FPD.

Step 2 **show fpd package**

Use the **show fpd package** command to display the FPD image version available with this software release for each hardware component.

```
RP/0/RP0/CPU0:ios# show fpd package
Fri May  8 05:11:47.819 UTC

================================ ================================================
                                         Field Programmable Device Package
                                 ================================================
                                                Req     SW      Min Req   Min Req
Card Type            FPD Description            Reload  Ver     SW Ver  Board Ver
=================== ========================== ====== ======= ======== =========
--------------------------------------------------------------------------------
NCS1004-K9           BP_FPGA(A)                 NO      1.25    1.25    0.0
                     XGE_FLASH(A)               YES    18.04   18.04    0.0
--------------------------------------------------------------------------------
NCS1K4-1.2T-K9       LC_CPU_MOD_FW(A)           YES    75.10   75.10    0.0
                     LC_OPT_MOD_FW(A)           YES     1.25    1.25    0.0
--------------------------------------------------------------------------------
NCS1K4-1.2T-L-K9     LC_CPU_MOD_FW(A)           YES    75.10   75.10    0.0
                     LC_OPT_MOD_FW(A)           YES     1.25    1.25    0.0
--------------------------------------------------------------------------------
NCS1K4-1.2TL-K9      LC_CPU_MOD_FW(A)           YES    75.10   75.10    0.0
```

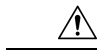
```
                     LC_OPT_MOD_FW(A)           YES     1.25    1.25    0.0
-------------------------------------------------------------------------------
NCS1K4-2-QDD-C-K9    LC_CPU_MOD_FW(A)           YES    75.10   75.10    0.0
                     LC_OPT_MOD_FW(A)           YES     1.26    1.26    0.0
-------------------------------------------------------------------------------
NCS1K4-2KW-AC        PO-PriMCU(A)               NO      2.70    2.70    0.0
                     PO-PriMCU(A)               NO      2.70    2.70    0.1
-------------------------------------------------------------------------------
NCS1K4-AC-PSU        PO-PriMCU(A)               NO      2.70    2.70    0.0
                     PO-PriMCU(A)               NO      2.70    2.70    0.1
-------------------------------------------------------------------------------
NCS1K4-CNTLR         BIOS(A)                    YES     5.30    5.30    1.5
                     CSB_IMG                    YES     0.200   0.200   0.0
-------------------------------------------------------------------------------
NCS1K4-CNTLR-B-K9    BIOS(A)                    YES     5.30    5.30    1.0
                     CSB_IMG                    YES     0.200   0.200   0.0
-------------------------------------------------------------------------------
NCS1K4-DC-PSU        PO-PriMCU(A)               NO      1.12    1.12    0.0
                     PO-PriMCU(A)               NO      1.12    1.12    0.1
-------------------------------------------------------------------------------
NCS1K4-OTN-XP       LC_CFP2_PORT_0(A)           NO      0.00    0.00    0.0
   LC_CFP2_PORT_0(A)           NO      1.00    1.00    1.0
                     LC_CFP2_PORT_0(A)          NO      1.52    1.52    2.0
                     LC_CFP2_PORT_1(A)          NO      0.00    0.00    0.0
                     LC_CFP2_PORT_1(A)          NO      1.00    1.00    1.0
                     LC_CFP2_PORT_1(A)          NO      1.52    1.52    2.0
                     LC_CPU_MOD_FW(A)           YES    75.10   75.10    0.0
                     LC_DP_MOD_FW(A)            YES     3.10    3.10    1.0
                     LC_DP_MOD_FW(A)            YES    11.10   11.10    2.0
                     LC_DP_MOD_FW(A)            YES    11.10   11.10    3.0
                     LC_DP_MOD_FW(A)            YES     1.10    1.10    4.0
                     LC_DP_MOD_FW(A)            YES     3.10    3.10    7.0
                     LC_DP_MOD_FW(A)            YES     1.10    1.10    8.0
                     LC_QSFPDD_PORT_11(A)        NO     0.00    0.00    0.0
                     LC_QSFPDD_PORT_11(A)        NO    61.2013 61.2013  1.0
                     LC_QSFPDD_PORT_11(A)        NO    61.2013 61.2013  2.0
                     LC_QSFPDD_PORT_9(A)         NO    0.00     0.00    0.0
                     LC_QSFPDD_PORT_9(A)         NO    61.2013 61.2013  1.0
                     LC_QSFPDD_PORT_9(A)         NO    61.2013 61.2013  2.0
-------------------------------------------------------------------------------
NCS1K4-OTN-XPL      LC_CFP2_PORT_0(A)           NO      0.00    0.00    0.0
   LC_CFP2_PORT_0(A)           NO      1.00    1.00    1.0
                     LC_CFP2_PORT_0(A)          NO      1.52    1.52    2.0
                     LC_CFP2_PORT_1(A)          NO      0.00    0.00    0.0
                     LC_CFP2_PORT_1(A)          NO      1.00    1.00    1.0
                     LC_CFP2_PORT_1(A)          NO      1.52    1.52    2.0
                     LC_CPU_MOD_FW(A)           YES    75.10   75.10    0.0
                     LC_DP_MOD_FW(A)            YES     3.10    3.10    1.0
                     LC_DP_MOD_FW(A)            YES    11.10   11.10    2.0
                     LC_DP_MOD_FW(A)            YES    11.10   11.10    3.0
                     LC_DP_MOD_FW(A)            YES     1.10    1.10    4.0
                     LC_DP_MOD_FW(A)            YES     3.10    3.10    7.0
                     LC_DP_MOD_FW(A)            YES     1.10    1.10    8.0
                     LC_QSFPDD_PORT_11(A)        NO     0.00    0.00    0.0
                     LC_QSFPDD_PORT_11(A)        NO    61.2013 61.2013  1.0
                     LC_QSFPDD_PORT_11(A)        NO    61.2013 61.2013  2.0
                     LC_QSFPDD_PORT_9(A)         NO    0.00     0.00    0.0
                     LC_QSFPDD_PORT_9(A)         NO    61.2013 61.2013  1.0
                     LC_QSFPDD_PORT_9(A)         NO    61.2013 61.2013  2.0
-------------------------------------------------------------------------------
NCS1K4-TESTUNIT      LC_CPU_MOD_FW(A)           YES     0.01    0.01    0.0
```

What to do next

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

If Reload is required

If the FPGA location is 0/RP0, use 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, use the **admin hw-module location all reload** command. This command reboots the chassis. As a result, traffic is impacted. After the reload is completed, the new FPGA runs the current version.



Caution The upgrade of OTNXP LC_DP_MOD_FW and LC_OPT_MOD_FW FPDs affect traffic. Hence, you must perform this upgrade during a maintenance window.

If Firmware Upgrade Fails

If firmware upgrade fails, use the **show logging** command to view the details and upgrade the firmware again using the above commands.

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

Verify Management Interface Status

To verify the management interface status, perform the following procedure.

Procedure

show interfaces mgmtEth *instance*

Displays the management interface configuration.

Example:

```
RP/0/RP0/CPU0:ios# show interfaces MgmtEth 0/RP0/CPU0/0
Wed Mar  4 06:13:12.381 UTC
MgmtEth0/RP0/CPU0/0 is up, line protocol is up
  Interface state transitions: 1
  Hardware is Management Ethernet, address is b026.80ff.d870 (bia b026.80ff.d870)
  Internet address is 10.127.60.184/24
  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 1d23h
  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 1368000 bits/sec, 193 packets/sec
  5 minute output rate 95000 bits/sec, 194 packets/sec
     6447256 packets input, 3947875102 bytes, 0 total input drops
     0 drops for unrecognized upper-level protocol
     Received 661276 broadcast packets, 271649 multicast packets
              0 runts, 0 giants, 0 throttles, 0 parity
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
     7190033 packets output, 3906991430 bytes, 0 total output drops
     Output 0 broadcast packets, 0 multicast packets
     0 output errors, 0 underruns, 0 applique, 0 resets
     0 output buffer failures, 0 output buffers swapped out
     1 carrier transitions

RP/0/RP0/CPU0:ios# show interfaces MgmtEth 0/RP0/CPU0/0
Fri May  8 04:40:41.519 UTC
MgmtEth0/RP0/CPU0/0 is up, line protocol is up
  Interface state transitions: 1
  Hardware is Management Ethernet, address is dc8c.37c3.e1a8 (bia dc8c.37c3.e1a8)
  Internet address is 10.105.57.103/25
  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 1d04h
  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 106000 bits/sec, 140 packets/sec
  5 minute output rate 108000 bits/sec, 139 packets/sec
     7303357 packets input, 696872907 bytes, 0 total input drops
     0 drops for unrecognized upper-level protocol
     Received 40679 broadcast packets, 41523 multicast packets
              0 runts, 0 giants, 0 throttles, 0 parity
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
     7231570 packets output, 740818886 bytes, 0 total output drops
     Output 0 broadcast packets, 0 multicast packets
     0 output errors, 0 underruns, 0 applique, 0 resets
     0 output buffer failures, 0 output buffers swapped out
          MgmtEth0/RP0/CPU0/0 is up, line protocol is up
```

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

You can also use the **show interfaces summary** and **show interfaces brief** commands in the 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
Wed Mar  4 06:14:52.995 UTC
Interface Type          Total    UP       Down     Admin Down
--------------          -----    --       ----     ----------
ALL TYPES               4        2        0        2
--------------
IFT_ETHERNET            3        1        0        2
IFT_NULL                1        1        0        0

RP/0/RP0/CPU0:ios# show interfaces summary
Fri May  8 04:43:57.355 UTC
Interface Type          Total    UP       Down     Admin Down
--------------          -----    --       ----     ----------
ALL TYPES               6        5        0        1
--------------
IFT_LOOPBACK            2        2        0        0
```

```
IFT_ETHERNET            3        2        0        1
IFT_NULL                1        1        0        0
```

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

```
RP/0/RP0/CPU0:ios# show interfaces brief
Wed Mar  4 06:15:51.689 UTC

               Intf       Intf        LineP              Encap  MTU        BW
               Name       State       State               Type (byte)    (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
     Mg0/RP0/CPU0/2  admin-down  admin-down               ARPA  1514     1000000

RP/0/RP0/CPU0:ios# show interfaces brief
Fri May  8 04:44:41.558 UTC

               Intf       Intf        LineP              Encap  MTU        BW
               Name       State       State               Type (byte)    (Kbps)
--------------------------------------------------------------------------------
                Lo0          up          up           Loopback  1500           0
                Lo1          up          up           Loopback  1500           0
                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
     Mg0/RP0/CPU0/2          up          up               ARPA  1514     1000000
```

What to do next

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

- Check the Ethernet cable connection.
- Verify the IP configuration of the management interface. For details on configuring the management interface, see Configure Management Interface.
- Verify whether the management interface is in the no shut state using 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
  Wed Mar  4 06:17:33.833 UTC
  interface MgmtEth0/RP0/CPU0/0
   ipv4 address dhcp
  !

  RP/0/RP0/CPU0:ios#show running-config interface mgmtEth 0/RP0/CPU0/0
  Fri May  8 04:46:29.582 UTC
  interface MgmtEth0/RP0/CPU0/0
   ipv4 address 10.105.57.103 255.255.255.128
  !
  ```

  In the previous output, the management interface is in the no shut state.

Verify Alarms

You can view the alarm information using the **show alarms** command.

Procedure

show alarms [**brief** [**card | rack | system**] [**location** *location*] [**active | history**] | **detail** [**card | rack | system**] [**location** *location*] [**active | clients | history | stats**]]

Displays alarms in brief or detail.

Example:

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

Wed Mar  4 06:10:55.959 UTC

------------------------------------------------------------------------------------------
Active Alarms
------------------------------------------------------------------------------------------
Location        Severity     Group            Set Time                    Description

------------------------------------------------------------------------------------------
0/1             Major        FPD_Infra        03/02/2020 07:09:04 UTC    One Or More FPDs
Need Upgrade Or Not In Current State

0/2             Major        FPD_Infra        03/03/2020 14:27:33 UTC    One Or More FPDs
Need Upgrade Or Not In Current State

0/2             Major        Ethernet         03/03/2020 20:33:33 UTC
HundredGigECtrlr0/2/0/9 - Carrier Loss On The LAN

0/2             Critical     Controller       03/03/2020 20:34:05 UTC    Optics0/2/0/3 -
Improper Removal

0/2             NotAlarmed   OTN              03/03/2020 20:34:08 UTC    ODU40/2/0/0/2 -
OPUK Client Signal Failure

0/2             NotAlarmed   OTN              03/03/2020 20:34:05 UTC    ODU40/2/0/1/2 -
OPUK Client Signal Failure
```

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

Fri May  8 04:46:29.582 UTC

------------------------------------------------------------------------------------------
Active Alarms
------------------------------------------------------------------------------------------
Location        Severity     Group            Set Time                    Description

------------------------------------------------------------------------------------------
0/2             NotReported  OTN              05/07/2020 14:25:05 UTC    ODU20/2/0/0/2/3 -
 Path Monitoring Alarm Indication Signal

0/2             NotReported  OTN              05/07/2020 14:25:05 UTC    ODU2E0/2/0/0/2/4
- Path Monitoring Alarm Indication Signal

0/1             NotReported  OTN              05/07/2020 14:24:41 UTC    ODU20/1/0/0/2/3 -
 Path Monitoring Alarm Indication Signal
```

```
0/1             NotReported  OTN              05/07/2020 14:25:03 UTC    ODU20/1/0/1/11/3
- Path Monitoring Alarm Indication Signal

0/1             NotReported  OTN              05/07/2020 14:25:03 UTC    ODU2E0/1/0/1/11/4
 - Path Monitoring Alarm Indication Signal

0/3             NotReported  OTN              05/07/2020 14:24:41 UTC    ODU20/3/0/0/2/3 -
 Path Monitoring Alarm Indication Signal

0/3             NotReported  OTN              05/07/2020 14:24:41 UTC    ODU2E0/3/0/0/2/4
- Path Monitoring Alarm Indication Signal

0/1           Major       Ethernet        05/07/2020 14:24:41 UTC    TenGigECtrlr0/1/0/4/1
 - Remote Fault
```

Note
In the maintenance mode, all the alarms are suppressed and the **show alarms** command will not show the alarms details. Use the **show controllers** *controllertype R/S/I/P* command to view the client and trunk alarms.

Verify Environmental Parameters

The **show environment** command displays the environmental parameters of NCS 1004.

To verify that the environmental parameters are as expected, perform the following procedure.

Procedure

Step 1 **admin**

Enters System Admin EXEC mode.

Example:

```
RP/0/RP0/CPU0:ios# admin
```

Step 2 **show environment** [**all** | **altitude** | **fan** | **power** | **voltages** | **current** | **temperatures**] [**location** | *location*]

Displays the environmental parameters of NCS 1004.

Example:

The following example shows sample output of the **show environment** command with the **fan** keyword.

```
sysadmin-vm:0_RP0# show environment fan
Wed Mar  4  05:36:33.678 UTC+00:00
=============================================
                        Fan speed (rpm)
Location     FRU Type           FAN_0   FAN_1
---------------------------------------------
0/FT0        NCS1K4-FAN          7020    6930
0/FT1        NCS1K4-FAN          6780    6690
0/FT2        NCS1K4-FAN          6810    6720

0/PM0        NCS1K4-AC-PSU      25376   24352
```

```
0/PM1        NCS1K4-AC-PSU      11200   11232

sysadmin-vm:0_RP0# show environment fan
Thu May  7  11:47:11.490 UTC+00:00
=============================================
                       Fan speed (rpm)
Location     FRU Type           FAN_0   FAN_1
---------------------------------------------
0/FT0        NCS1K4-FAN         11070   11070
0/FT1        NCS1K4-FAN         11220   11040
0/FT2        NCS1K4-FAN         11250   11070

0/PM0        NCS1K4-DC-PSU      12624   12576

0/PM1        NCS1K4-DC-PSU      24704   25312
```

The following example shows sample output of the **show environment** command with the **temperatures** keyword.

```
sysadmin-vm:0_RP0# show environment temperatures location 0/RP0
Wed Mar  4  05:44:51.221 UTC+00:00
=================================================================================
Location  TEMPERATURE                Value   Crit Major Minor Minor Major  Crit
          Sensor                   (deg C)   (Lo) (Lo)  (Lo)  (Hi)  (Hi)   (Hi)
---------------------------------------------------------------------------------
0/RP0
          TEMP_LOCAL                  32    -10    -5     0    55    65    70
          TEMP_REMOTE1                32    -10    -5     0    55    65    70
          TEMP_CPU_DIE                31    -10    -5     0    75    80    90

sysadmin-vm:0_RP0# show environment temperatures location 0/RP0
Thu May  7  11:50:23.172 UTC+00:00
=================================================================================
Location  TEMPERATURE                Value   Crit Major Minor Minor Major  Crit
          Sensor                   (deg C)   (Lo) (Lo)  (Lo)  (Hi)  (Hi)   (Hi)
---------------------------------------------------------------------------------
0/RP0
          TEMP_LOCAL                  36    -10    -5     0    55    65    70
          TEMP_REMOTE1                36    -10    -5     0    55    65    70
          TEMP_CPU_DIE                37    -10    -5     0    75    80    90
```

The following example shows sample output of the **show environment** command with the **power** keyword.

```
sysadmin-vm:0_RP0# show environment power
Wed Mar  4  05:45:35.640 UTC+00:00
=================================================================================
CHASSIS LEVEL POWER INFO: 0
=================================================================================
   Total output power capacity (N + 1)             :    2000W +       0W
   Total output power required                     :     910W
   Total power input                               :     456W
   Total power output                              :     407W

Power Group 0:
=================================================================================
   Power       Supply     ------Input----   ------Output---      Status
   Module      Type        Volts     Amps    Volts     Amps
=================================================================================
   0/PM0       2kW-AC        0.0      0.0      0.0      0.0    FAILED or NO PWR

Total of Power Group 0:          0W/  0.0A         0W/  0.0A

Power Group 1:
=================================================================================
   Power       Supply     ------Input----   ------Output---      Status
```

```
   Module      Type        Volts     Amps    Volts     Amps
================================================================================
   0/PM1       2kW-AC      227.8      2.0     12.0     33.9    OK

Total of Power Group 1:        456W/  2.0A       407W/ 33.9A

================================================================================
   Location     Card Type            Power       Power       Status
                                     Allocated   Used
                                     Watts       Watts
================================================================================
   0/0          NCS1K4-LC-FILLER       0           -       RESERVED
   0/1          NCS1K4-1.2T-K9       260         101       ON
   0/2          NCS1K4-1.2TL-K9      260         168       ON
   0/3          NCS1K4-LC-FILLER       0           -       RESERVED
   0/RP0        NCS1K4-CNTLR-K9       55           -       ON
   0/FT0        NCS1K4-FAN           100           -       ON
   0/FT1        NCS1K4-FAN           100           -       ON
   0/FT2        NCS1K4-FAN           100           -       ON
   0/SC0        NCS1004               35           -       ON

sysadmin-vm:0_RP0# show environment power
Thu May  7  11:55:13.388 UTC+00:00
================================================================================
CHASSIS LEVEL POWER INFO: 0
================================================================================
   Total output power capacity (N + 1)             :    2000W +       0W
   Total output power required                     :    1670W
   Total power input                               :    1007W
   Total power output                              :     956W

Power Group 0:
================================================================================
   Power       Supply     ------Input----   ------Output---      Status
   Module      Type        Volts     Amps    Volts     Amps
================================================================================
   0/PM0       2kW-DC       50.3     20.0     12.1     79.0    OK

Total of Power Group 0:       1006W/ 20.0A       956W/ 79.0A

Power Group 1:
================================================================================
   Power       Supply     ------Input----   ------Output---      Status
   Module      Type        Volts     Amps    Volts     Amps
================================================================================
   0/PM1       2kW-DC        1.3      0.6      0.0      0.0    FAILED or NO PWR

Total of Power Group 1:          1W/  0.6A         0W/  0.0A

================================================================================
   Location     Card Type            Power       Power       Status
                                     Allocated   Used
                                     Watts       Watts
================================================================================
   0/0          NCS1K4-1.2T-K9       260         194       ON
   0/1          NCS1K4-OTN-XP        340         182       ON
   0/2          NCS1K4-OTN-XP        340         153       ON
   0/3          NCS1K4-OTN-XP        340         160       ON
   0/RP0        NCS1K4-CNTLR-K9       55           -       ON
   0/FT0        NCS1K4-FAN           100           -       ON
   0/FT1        NCS1K4-FAN           100           -       ON
   0/FT2        NCS1K4-FAN           100           -       ON
   0/SC0        NCS1004               35           -       ON
```

The following example shows sample output of the **show environment** command with the **voltages** keyword.

```
sysadmin-vm:0_RP0# show environment voltages location 0/RP0
Wed Mar  4  05:47:24.668 UTC+00:00
================================================================================
Location  VOLTAGE                      Value   Crit Minor Minor  Crit
          Sensor                       (mV)    (Lo) (Lo)  (Hi)   (Hi)
--------------------------------------------------------------------------------
0/RP0
          ADM1266_VH1_12V             12028  10800 11040 12960 13200
          ADM1266_VH3_3V3              3306   3036  3135  3465  3564
          ADM1266_VH4_2V5              2492   2300  2375  2625  2700
          ADM1266_VP1_1V8              1801   1656  1710  1890  1944
          ADM1266_VP2_1V2              1201   1104  1140  1260  1296
          ADM1266_3V3_STAND_BY         3293   3036  3135  3465  3564
          ADM1266_VP4_3V3_CPU          3301   3036  3135  3465  3564
          ADM1266_VP5_2V5_CPU          2494   2300  2375  2625  2700
          ADM1266_VP6_1V8_CPU          1797   1656  1710  1890  1944
          ADM1266_VP7_1V24_VCCREF      1236   1140  1178  1302  1339
          ADM1266_VP8_1V05_CPU         1045    966   997  1102  1134
          ADM1266_VP9_1V2_DDR_VDDQ     1196   1104  1140  1260  1296
          ADM1266_VP10_1V0_VCCRAM      1074    500   650  1300  1400
          ADM1266_VP11_VNN              882    400   550  1300  1400
          ADM1266_VP12_VCCP            1068    300   450  1300  1400
          ADM1266_VP13_0V6_VTT          599    552   570   630   648
          ADM1293_DB_5V0               5007   4600  4750  5250  5400
          ADM1293_DB_3V3               3305   3036  3135  3465  3564
          ADM1293_DB_5V0_USB_0         5007   4000  4500  5500  6000
          ADM1293_DB_5V0_USB_1         5017   4000  4500  5500  6000
          ADM1293_MB_5V0_PMOD0         5062   4600  4750  5250  5400
          ADM1293_MB_5V0_PMOD1         5032   4600  4750  5250  5400
          ADM1293_MB_2V5_PLL           2483   2300  2375  2625  2700

sysadmin-vm:0_RP0# show environment voltages location 0/RP0
Thu May  7  11:57:18.650 UTC+00:00
================================================================================
Location  VOLTAGE                      Value   Crit Minor Minor  Crit
          Sensor                       (mV)    (Lo) (Lo)  (Hi)   (Hi)
--------------------------------------------------------------------------------
0/RP0
          ADM1266_VH1_12V             11961  10800 11040 12960 13200
          ADM1266_VH3_3V3              3306   3036  3135  3465  3564
          ADM1266_VH4_2V5              2487   2300  2375  2625  2700
          ADM1266_VP1_1V8              1795   1656  1710  1890  1944
          ADM1266_VP2_1V2              1198   1104  1140  1260  1296
          ADM1266_3V3_STAND_BY         3301   3036  3135  3465  3564
          ADM1266_VP4_3V3_CPU          3299   3036  3135  3465  3564
          ADM1266_VP5_2V5_CPU          2489   2300  2375  2625  2700
          ADM1266_VP6_1V8_CPU          1788   1656  1710  1890  1944
          ADM1266_VP7_1V24_VCCREF      1233   1140  1178  1302  1339
          ADM1266_VP8_1V05_CPU         1046    966   997  1102  1134
          ADM1266_VP9_1V2_DDR_VDDQ     1200   1104  1140  1260  1296
          ADM1266_VP10_1V0_VCCRAM      1039    500   650  1300  1400
          ADM1266_VP11_VNN              850    400   550  1300  1400
          ADM1266_VP12_VCCP            1056    300   450  1300  1400
          ADM1266_VP13_0V6_VTT          600    552   570   630   648
          ADM1293_DB_5V0               4998   4600  4750  5250  5400
          ADM1293_DB_3V3               3315   3036  3135  3465  3564
          ADM1293_DB_5V0_USB_0         4998   4000  4500  5500  6000
          ADM1293_DB_5V0_USB_1         5047   4000  4500  5500  6000
          ADM1293_MB_5V0_PMOD0         5044   4600  4750  5250  5400
          ADM1293_MB_5V0_PMOD1         5026   4600  4750  5250  5400
          ADM1293_MB_2V5_PLL           2515   2300  2375  2625  2700
```

What to do next

Environment parameter anomalies are logged in the syslog. As a result, if an environment parameter displayed in the **show environment** command output is not as expected, check the syslog using the **show logging** command. The syslog provides details on any logged problems.

Verify Inventory

The **show inventory** command displays details of the hardware inventory of NCS 1004.

To verify the inventory information for all the physical entities, perform the following procedure.

Procedure

Step 1 **show inventory**

Displays the details of NCS 1004 when you execute this command in the Cisco IOS XR EXEC mode.

Example:

```
RP/0/RP0/CPU0:ios# show inventory
Wed Mar  4 05:10:17.107 UTC
NAME: "0/0", DESCR: "Network Convergence System 1004 Filler"
PID: NCS1K4-LC-FILLER, VID: V01, SN: N/A

NAME: "0/1", DESCR: "NCS1K4 12x QSFP28 2 Trunk C-Band DWDM card"
PID: NCS1K4-1.2T-K9, VID: V00, SN: CAT2250B0AE

NAME: "0/1-Optics0/1/0/2", DESCR: "Cisco 100G QSFP28 AOC Pluggable Optics Module"
PID: QSFP-100G-AOC3M   , VID: V03, SN: INL22262339-A

NAME: "0/1-Optics0/1/0/4", DESCR: "Cisco 100GE QSFP28 SR4 Pluggable Optics Module"
PID: QSFP-100G-SR4-S, VID: V03, SN: AVF2219S16U

NAME: "0/1-Optics0/1/0/5", DESCR: "Cisco 100G QSFP28 LR4-S Pluggable Optics Module"
PID: QSFP-100G-LR4-S, VID: V02, SN: JFQ2145701U

NAME: "0/1-Optics0/1/0/6", DESCR: "Cisco 100GE QSFP28 SR4 Pluggable Optics Module"
PID: QSFP-100G-SR4-S, VID: ES1, SN: AVF1925G012

NAME: "0/1-Optics0/1/0/7", DESCR: "Cisco 100G QSFP28 LR4-S Pluggable Optics Module"
PID: QSFP-100G-LR4-S, VID: V02, SN: JFQ2145706N

NAME: "0/1-Optics0/1/0/8", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4, VID: V01, SN: JFQ19026014

NAME: "0/1-Optics0/1/0/9", DESCR: "Cisco 100G QSFP28 LR4-S Pluggable Optics Module"
PID: QSFP-100G-LR4-S, VID: V02, SN: OPM220518HS

NAME: "0/1-Optics0/1/0/10", DESCR: "Cisco 100G QSFP28 SM-SR Pluggable Optics Module"
PID: QSFP-100G-SM-SR, VID: V02, SN: INL21490043

NAME: "0/1-Optics0/1/0/11", DESCR: "Cisco 100G QSFP28 CWDM4 Pluggable Optics Module"
PID: QSFP-100G-CWDM4-S , VID: V01, SN: JFQ211930JL

NAME: "0/1-Optics0/1/0/12", DESCR: "Cisco 100G QSFP28 CWDM4 Pluggable Optics Module"
PID: QSFP-100G-CWDM4-S, VID: V02, SN: JFQ2210801H
```

```
NAME: "0/2", DESCR: "NCS1K4 12x QSFP28 2 Trunk L-Band DWDM card"
PID: NCS1K4-1.2TL-K9   , VID: V00, SN: CAT2337B0S4

NAME: "0/2-Optics0/2/0/2", DESCR: "Cisco 100G QSFP28 AOC Pluggable Optics Module"
PID: QSFP-100G-AOC3M, VID: V03, SN: INL22262332-A

NAME: "0/2-Optics0/2/0/4", DESCR: "Cisco 100G QSFP28 SM-SR Pluggable Optics Module"
PID: QSFP-100G-SM-SR, VID: V02, SN: FNS22070HWF

NAME: "0/2-Optics0/2/0/5", DESCR: "Cisco 100G QSFP28 SM-SR Pluggable Optics Module"
PID: QSFP-100G-SM-SR, VID: V02, SN: SPT2225302D

NAME: "0/2-Optics0/2/0/6", DESCR: "Cisco 100G QSFP28 LR4-S Pluggable Optics Module"
PID: QSFP-100G-LR4-S, VID: V02, SN: FNS22310Z1X

NAME: "0/2-Optics0/2/0/8", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4, VID: V01, SN: FNS20520R8Z

NAME: "0/2-Optics0/2/0/9", DESCR: "Cisco 100G QSFP28 AOC Pluggable Optics Module"
PID: QSFP-100G-AOC3M, VID: V03, SN: INL23312282-A

NAME: "0/2-Optics0/2/0/10", DESCR: "Cisco 100G QSFP28 AOC Pluggable Optics Module"
PID: QSFP-100G-AOC3M, VID: V03, SN: INL23312282-B

NAME: "0/2-Optics0/2/0/11", DESCR: "Cisco 100G QSFP28 LR4-S Pluggable Optics Module"
PID: QSFP-100G-LR4-S, VID: V02, SN: FNS23080LKF

NAME: "0/3", DESCR: "Network Convergence System 1004 Filler"
PID: NCS1K4-LC-FILLER, VID: V01, SN: N/A

NAME: "0/RP0", DESCR: "Network Convergence System 1004 Controller"
PID: NCS1K4-CNTLR-K9, VID: V00, SN: CAT2231B069

NAME: "0/SC0", DESCR: "Network Convergence System 1004 Chassis"
PID: NCS1004, VID: V00, SN: CAT2231B192

NAME: "Rack 0", DESCR: "Network Convergence System 1004 Chassis"
PID: NCS1004, VID: V00, SN: CAT2231B192

NAME: "0/FT0", DESCR: "Network Convergence System 1004 Fan"
PID: NCS1K4-FAN, VID: V00, SN: CAT2231B2GL

NAME: "0/FT1", DESCR: "Network Convergence System 1004 Fan"
PID: NCS1K4-FAN, VID: V00, SN: CAT2231B2H4

NAME: "0/FT2", DESCR: "Network Convergence System 1004 Fan"
PID: NCS1K4-FAN, VID: V00, SN: CAT2231B2GW

NAME: "0/PM0", DESCR: "Network Convergence System 1004 AC Power Supply Unit"
PID: NCS1K4-AC-PSU, VID: V00, SN: POG2221CL1V

NAME: "0/PM1", DESCR: "Network Convergence System 1004 AC Power Supply Unit"
PID: NCS1K4-AC-PSU, VID: V00, SN: POG2221CL04

RP/0/RP0/CPU0:ios# show inventory
Thu May  7 11:37:33.960 UTC
NAME: "0/0", DESCR: "NCS1K4 12x QSFP28 2 Trunk C-Band DWDM card"
PID: NCS1K4-1.2T-K9    , VID: V00, SN: CAT2237B25A

NAME: "0/0-Optics0/0/0/2", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01, SN: FNS2333080E

NAME: "0/0-Optics0/0/0/3", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01, SN: FNS23330801
```

```
NAME: "0/0-Optics0/0/0/4", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01, SN: FNS21140GZK

NAME: "0/0-Optics0/0/0/6", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01, SN: FNS233209CN

NAME: "0/0-Optics0/0/0/10", DESCR: "Cisco 40GE QSFP+ LR4 Pluggable Optics Module"
PID: QSFP-40G-LR4      , VID: V02, SN: FNS23110TYD

NAME: "0/1", DESCR: "NCS1K4 4xDD,8xQSFP28,2xCFP2 DCO OTNXponder"
PID: NCS1K4-OTN-XP     , VID: V00, SN: CAT2352B007

NAME: "0/1-Optics0/1/0/0", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01, SN: FNS2333080J

NAME: "0/1-Optics0/1/0/1", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01, SN: FNS23330806

NAME: "0/1-Optics0/1/0/2", DESCR: "Cisco 4x10GE QSFP+ MLR Pluggable Optics Module"
PID: ONS-QSFP-4X10-MLR , VID: V01, SN: INL21010391

NAME: "0/1-Optics0/1/0/4", DESCR: "Cisco 40GE QSFP+ SR4 Pluggable Optics Module"
PID: QSFP-40G-SR4      , VID: V03, SN: JFQ20332007

NAME: "0/1-Optics0/1/0/5", DESCR: "Cisco 40GE QSFP+ SR4 Pluggable Optics Module"
PID: QSFP-40G-SR4      , VID: V03, SN: JFQ20332088

NAME: "0/1-Optics0/1/0/6", DESCR: "Cisco 4x10GE QSFP+ MLR Pluggable Optics Module"
PID: ONS-QSFP-4X10-MLR , VID: V01, SN: INL21010471

NAME: "0/1-Optics0/1/0/7", DESCR: "Cisco 4x10GE QSFP+ MLR Pluggable Optics Module"
PID: ONS-QSFP-4X10-MLR , VID: V01, SN: INL21010376

NAME: "0/2", DESCR: "NCS1K4 4xDD,8xQSFP28,2xCFP2 DCO OTNXponder"
PID: NCS1K4-OTN-XP     , VID: V00, SN: CAT2352B015

NAME: "0/2-Optics0/2/0/0", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01, SN: FNS20360V1R

NAME: "0/2-Optics0/2/0/4", DESCR: "Cisco 40GE QSFP+ SR4 Pluggable Optics Module"
PID: QSFP-40G-SR4      , VID: V03, SN: JFQ21502017

NAME: "0/2-Optics0/2/0/5", DESCR: "Cisco 40GE QSFP+ SR4 Pluggable Optics Module"
PID: QSFP-40G-SR4      , VID: V03, SN: JFQ202120DY

NAME: "0/3", DESCR: "NCS1K4 4xDD,8xQSFP28,2xCFP2 DCO OTNXponder"
PID: NCS1K4-OTN-XP     , VID: V00, SN: CAT2352B00A

NAME: "0/3-Optics0/3/0/0", DESCR: "Cisco QSFP-100G-LR4 Pluggable Optics Module"
PID: ONS-QSFP28-LR4    , VID: V01, SN: FNS23320BS3

NAME: "0/3-Optics0/3/0/4", DESCR: "Cisco 40GE QSFP+ SR4 Pluggable Optics Module"
PID: QSFP-40G-SR4      , VID: V03, SN: AVP2217S09L

NAME: "0/3-Optics0/3/0/5", DESCR: "Cisco 40GE QSFP+ SR4 Pluggable Optics Module"
PID: QSFP-40G-SR4      , VID: V03, SN: AVP2107S0RZ

NAME: "0/RP0", DESCR: "Network Convergence System 1004 Controller"
PID: NCS1K4-CNTLR-K9   , VID: V01, SN: CAT2323B0SG

NAME: "0/RP0-SFP-Port", DESCR: "Cisco SFP Pluggable Optics Module"
PID: SFP-GE-S          , VID: V01, SN: FNS15512KVG

NAME: "0/SC0", DESCR: "Network Convergence System 1004 4 line card slots"
```

```
PID: NCS1004           , VID: V01, SN: CAT2323B0DC

NAME: "Rack 0", DESCR: "Network Convergence System 1004 4 line card slots"
PID: NCS1004           , VID: V01, SN: CAT2323B0DC

NAME: "0/FT0", DESCR: "Network Convergence System 1004 Fan"
PID: NCS1K4-FAN        , VID: V01, SN: CAT2325B1NW

NAME: "0/FT1", DESCR: "Network Convergence System 1004 Fan"
PID: NCS1K4-FAN        , VID: V01, SN: CAT2324B0Z6

NAME: "0/FT2", DESCR: "Network Convergence System 1004 Fan"
PID: NCS1K4-FAN        , VID: V01, SN: CAT2324B0Z8

NAME: "0/PM0", DESCR: "Network Convergence System 1004 DC Power Supply Unit"
PID: NCS1K4-DC-PSU     , VID: V01, SN: POG2310CT00

NAME: "0/PM1", DESCR: "Network Convergence System 1004 DC Power Supply Unit"
PID: NCS1K4-DC-PSU     , VID: V01, SN: POG2308CT4W
```

Step 2 **admin**

Enters System Admin EXEC mode.

Example:

Step 3 **show inventory**

Displays inventory information for all the physical entities of NCS 1004.

Example:

```
sysadmin-vm:0_RP0# show inventory
Wed Mar  4  05:27:26.231 UTC+00:00

 Name: Rack 0               Descr: Network Convergence System 1004 Chassis
 PID: NCS1004               VID: V00                  SN: CAT2231B192

 Name: 0/0                  Descr: Network Convergence System 1004 Filler
 PID: NCS1K4-LC-FILLER      VID: V01                  SN: N/A

 Name: 0/1-Optics0/1/0/2    Descr: Cisco 100G QSFP28 AOC Pluggable Optics Module
 PID: QSFP-100G-AOC3M       VID: V03                  SN: INL22262339-A

 Name: 0/1-Optics0/1/0/4    Descr: Cisco 100GE QSFP28 SR4 Pluggable Optics Module
 PID: QSFP-100G-SR4-S       VID: V03                  SN: AVF2219S16U

 Name: 0/1-Optics0/1/0/5    Descr: Cisco 100G QSFP28 LR4-S Pluggable Optics Module
 PID: QSFP-100G-LR4-S       VID: V02                  SN: JFQ2145701U

 Name: 0/1-Optics0/1/0/6    Descr: Cisco 100GE QSFP28 SR4 Pluggable Optics Module
 PID: QSFP-100G-SR4-S       VID: ES1                  SN: AVF1925G012

 Name: 0/1-Optics0/1/0/7    Descr: Cisco 100G QSFP28 LR4-S Pluggable Optics Module
 PID: QSFP-100G-LR4-S       VID: V02                  SN: JFQ2145706N

 Name: 0/1-Optics0/1/0/8    Descr: Cisco QSFP-100G-LR4 Pluggable Optics Module
 PID: ONS-QSFP28-LR4        VID: V01                  SN: JFQ19026014

 Name: 0/1-Optics0/1/0/9    Descr: Cisco 100G QSFP28 LR4-S Pluggable Optics Module
 PID: QSFP-100G-LR4-S       VID: V02                  SN: OPM220518HS

 Name: 0/1-Optics0/1/0/10   Descr: Cisco 100G QSFP28 SM-SR Pluggable Optics Module
 PID: QSFP-100G-SM-SR       VID: V02                  SN: INL21490043
```

```
 Name: 0/1-Optics0/1/0/11    Descr: Cisco 100G QSFP28 CWDM4 Pluggable Optics Module
 PID: QSFP-100G-CWDM4-S      VID: V01                   SN: JFQ211930JL

 Name: 0/1-Optics0/1/0/12    Descr: Cisco 100G QSFP28 CWDM4 Pluggable Optics Module
 PID: QSFP-100G-CWDM4-S      VID: V02                   SN: JFQ2210801H

 Name: 0/1                   Descr: NCS1K4 12x QSFP28 2 Trunk C-Band DWDM card
 PID: NCS1K4-1.2T-K9         VID: V00                   SN: CAT2250B0AE

 Name: 0/2-Optics0/2/0/2     Descr: Cisco 100G QSFP28 AOC Pluggable Optics Module
 PID: QSFP-100G-AOC3M        VID: V03                   SN: INL22262332-A

 Name: 0/2-Optics0/2/0/4     Descr: Cisco 100G QSFP28 SM-SR Pluggable Optics Module
 PID: QSFP-100G-SM-SR        VID: V02                   SN: FNS22070HWF

 Name: 0/2-Optics0/2/0/5     Descr: Cisco 100G QSFP28 SM-SR Pluggable Optics Module
 PID: QSFP-100G-SM-SR        VID: V02                   SN: SPT2225302D

 Name: 0/2-Optics0/2/0/6     Descr: Cisco 100G QSFP28 LR4-S Pluggable Optics Module
 PID: QSFP-100G-LR4-S        VID: V02                   SN: FNS22310Z1X

Name: 0/2-Optics0/2/0/8     Descr: Cisco QSFP-100G-LR4 Pluggable Optics Module
 PID: ONS-QSFP28-LR4         VID: V01                   SN: FNS20520R8Z

 Name: 0/2-Optics0/2/0/9     Descr: Cisco 100G QSFP28 AOC Pluggable Optics Module
 PID: QSFP-100G-AOC3M        VID: V03                   SN: INL23312282-A

 Name: 0/2-Optics0/2/0/10    Descr: Cisco 100G QSFP28 AOC Pluggable Optics Module
 PID: QSFP-100G-AOC3M        VID: V03                   SN: INL23312282-B

 Name: 0/2-Optics0/2/0/11    Descr: Cisco 100G QSFP28 LR4-S Pluggable Optics Module
 PID: QSFP-100G-LR4-S        VID: V02                   SN: FNS23080LKF

 Name: 0/2                   Descr: NCS1K4 12x QSFP28 2 Trunk L-Band DWDM card
 PID: NCS1K4-1.2TL-K9        VID: V00                   SN: CAT2337B0S4

 Name: 0/3                   Descr: Network Convergence System 1004 Filler
 PID: NCS1K4-LC-FILLER       VID: V01                   SN: N/A

 Name: 0/RP0                 Descr: Network Convergence System 1004 Controller
 PID: NCS1K4-CNTLR-K9        VID: V00                   SN: CAT2231B069

 Name: 0/FT0                 Descr: Network Convergence System 1004 Fan
 PID: NCS1K4-FAN             VID: V00                   SN: CAT2231B2GL

 Name: 0/FT1                 Descr: Network Convergence System 1004 Fan
 PID: NCS1K4-FAN             VID: V00                   SN: CAT2231B2H4

 Name: 0/FT2                 Descr: Network Convergence System 1004 Fan
 PID: NCS1K4-FAN             VID: V00                   SN: CAT2231B2GW

 Name: 0/PM0                 Descr: Network Convergence System 1004 AC Power Supply Unit
 PID: NCS1K4-AC-PSU          VID: V00                   SN: POG2221CL1V

 Name: 0/PM1                 Descr: Network Convergence System 1004 AC Power Supply Unit
 PID: NCS1K4-AC-PSU          VID: V00                   SN: POG2221CL04

 Name: 0/SC0                 Descr: Network Convergence System 1004 Chassis
 PID: NCS1004                VID: V00                   SN: CAT2231B192

sysadmin-vm:0_RP0# show inventory
Thu May  7  11:40:11.150 UTC+00:00

 Name: Rack 0                Descr: Network Convergence System 1004 4 line card slots
 PID: NCS1004                VID: V01                   SN: CAT2323B0DC
```

```
Name: 0/0-Optics0/0/0/2     Descr: Cisco QSFP-100G-LR4 Pluggable Optics Module
PID: ONS-QSFP28-LR4         VID: V01                   SN: FNS2333080E

Name: 0/0-Optics0/0/0/3     Descr: Cisco QSFP-100G-LR4 Pluggable Optics Module
PID: ONS-QSFP28-LR4         VID: V01                   SN: FNS23330801

Name: 0/0-Optics0/0/0/4     Descr: Cisco QSFP-100G-LR4 Pluggable Optics Module
PID: ONS-QSFP28-LR4         VID: V01                   SN: FNS21140GZK

Name: 0/0-Optics0/0/0/6     Descr: Cisco QSFP-100G-LR4 Pluggable Optics Module
PID: ONS-QSFP28-LR4         VID: V01                   SN: FNS233209CN

Name: 0/0-Optics0/0/0/10    Descr: Cisco 40GE QSFP+ LR4 Pluggable Optics Module
PID: QSFP-40G-LR4           VID: V02                   SN: FNS23110TYD

Name: 0/0                   Descr: NCS1K4 12x QSFP28 2 Trunk C-Band DWDM card
PID: NCS1K4-1.2T-K9         VID: V00                   SN: CAT2237B25A

Name: 0/1-Optics0/1/0/0     Descr: Cisco QSFP-100G-LR4 Pluggable Optics Module
PID: ONS-QSFP28-LR4         VID: V01                   SN: FNS2333080J

Name: 0/1-Optics0/1/0/1     Descr: Cisco QSFP-100G-LR4 Pluggable Optics Module
PID: ONS-QSFP28-LR4         VID: V01                   SN: FNS23330806

Name: 0/1-Optics0/1/0/2     Descr: Cisco 4x10GE QSFP+ MLR Pluggable Optics Module
PID: ONS-QSFP-4X10-MLR      VID: V01                   SN: INL21010391

Name: 0/1-Optics0/1/0/4     Descr: Cisco 40GE QSFP+ SR4 Pluggable Optics Module
PID: QSFP-40G-SR4           VID: V03                   SN: JFQ20332007

Name: 0/1-Optics0/1/0/5     Descr: Cisco 40GE QSFP+ SR4 Pluggable Optics Module
PID: QSFP-40G-SR4           VID: V03                   SN: JFQ20332088

Name: 0/1-Optics0/1/0/6     Descr: Cisco 4x10GE QSFP+ MLR Pluggable Optics Module
PID: ONS-QSFP-4X10-MLR      VID: V01                   SN: INL21010471

Name: 0/1-Optics0/1/0/7     Descr: Cisco 4x10GE QSFP+ MLR Pluggable Optics Module
PID: ONS-QSFP-4X10-MLR      VID: V01                   SN: INL21010376

Name: 0/1                   Descr: NCS1K4 4xDD,8xQSFP28,2xCFP2 DCO OTNXponder
PID: NCS1K4-OTN-XP          VID: V00                   SN: CAT2352B007

Name: 0/2-Optics0/2/0/0     Descr: Cisco QSFP-100G-LR4 Pluggable Optics Module
PID: ONS-QSFP28-LR4         VID: V01                   SN: FNS20360V1R

Name: 0/2-Optics0/2/0/4     Descr: Cisco 40GE QSFP+ SR4 Pluggable Optics Module
PID: QSFP-40G-SR4           VID: V03                   SN: JFQ21502017

Name: 0/2-Optics0/2/0/5     Descr: Cisco 40GE QSFP+ SR4 Pluggable Optics Module
PID: QSFP-40G-SR4           VID: V03                   SN: JFQ202120DY

Name: 0/2                   Descr: NCS1K4 4xDD,8xQSFP28,2xCFP2 DCO OTNXponder
PID: NCS1K4-OTN-XP          VID: V00                   SN: CAT2352B015

Name: 0/3-Optics0/3/0/0     Descr: Cisco QSFP-100G-LR4 Pluggable Optics Module
PID: ONS-QSFP28-LR4         VID: V01                   SN: FNS23320BS3

Name: 0/3-Optics0/3/0/4     Descr: Cisco 40GE QSFP+ SR4 Pluggable Optics Module
PID: QSFP-40G-SR4           VID: V03                   SN: AVP2217S09L

Name: 0/3-Optics0/3/0/5     Descr: Cisco 40GE QSFP+ SR4 Pluggable Optics Module
PID: QSFP-40G-SR4           VID: V03                   SN: AVP2107S0RZ
```

```
Name: 0/3                  Descr: NCS1K4 4xDD,8xQSFP28,2xCFP2 DCO OTNXponder
PID: NCS1K4-OTN-XP         VID: V00                  SN: CAT2352B00A

Name: 0/RP0-SFP-Port       Descr: Cisco SFP Pluggable Optics Module
PID: SFP-GE-S              VID: V01                  SN: FNS15512KVG

Name: 0/RP0                Descr: Network Convergence System 1004 Controller
PID: NCS1K4-CNTLR-K9       VID: V01                  SN: CAT2323B0SG

Name: 0/FT0                Descr: Network Convergence System 1004 Fan
PID: NCS1K4-FAN            VID: V01                  SN: CAT2325B1NW

Name: 0/FT1                Descr: Network Convergence System 1004 Fan
PID: NCS1K4-FAN            VID: V01                  SN: CAT2324B0Z6

Name: 0/FT2                Descr: Network Convergence System 1004 Fan
PID: NCS1K4-FAN            VID: V01                  SN: CAT2324B0Z8

Name: 0/PM0                Descr: Network Convergence System 1004 DC Power Supply Unit
PID: NCS1K4-DC-PSU         VID: V01                  SN: POG2310CT00

Name: 0/PM1                Descr: Network Convergence System 1004 DC Power Supply Unit
PID: NCS1K4-DC-PSU         VID: V01                  SN: POG2308CT4W

Name: 0/SC0                Descr: Network Convergence System 1004 4 line card slots
PID: NCS1004               VID: V01                  SN: CAT2323B0DC
```

In the previous output, the significant fields are:

- PID—Physical model name of the chassis or node.
- VID—Physical hardware revision of the chassis or node.
- SN—Physical serial number of the chassis or node.

Verify Context

The **show context** command displays core dump context information of NCS 1004.

Procedure

Step 1 **show context**

Displays the core dump context information of NCS 1004 when you execute this command in the Cisco IOS XR EXEC mode.

Example:

```
RP/0/RP0/CPU0:ios# show context
Mon Sep 27 17:21:59.219 UTC

node: node0_RP0_CPU0
------------------------------------------------------------------
No context
```

The command output is empty during system upgrade.

Step 2 **admin**

Enters System Admin EXEC mode.

Step 3 **show context**

Displays the core dump context information of NCS 1004.

Example:

```
sysadmin-vm:0_RP0# show context
Mon Sep  27 17:22:19.351 UTC+00:00
**********************************************************
Location : 0/RP0
**********************************************************
No context
```

Verify Core Files

The **run** command checks for core files of NCS 1004.

Procedure

Step 1 **run**

Example:

```
RP/0/RP0/CPU0:ios# run
Mon Sep 27 17:29:11.163 UTC
[xr-vm_node0_RP0_CPU0:~]$cd /misc/disk1/
[xr-vm_node0_RP0_CPU0:/misc/disk1]$ls -lrt *.tgz
```

Step 2 **admin**

Enters System Admin EXEC mode.

Step 3 **run**

Example:

```
sysadmin-vm:0_RP0# run
Mon Sep  27 17:31:10.365 UTC+00:00

[sysadmin-vm:0_RP0:~]$cd /misc/disk1/
[sysadmin-vm:0_RP0:~]$ls -lrt *.tgz
```