



# Release Notes for Cisco NCS 1001, IOS XR Release 7.3.2

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## What's New in Cisco NCS 1001, IOS XR Release 7.3.2

Cisco is continuously enhancing the product with every release and this section covers a brief description of key features and enhancements. It also includes links to detailed documentation, where available.

Feature	Description
<b>Hardware</b>	
<a href="#">ONS-SE-155-1510 Support</a>	A new SFP pluggable optics module with PID ONS-SE-155-1510 SFP is supported.
<b>Configuration</b>	
<a href="#">OTDR ML (Machine Learning) Model</a>	The OTDR ML (Machine Learning) model is updated for this release to Version 4. This new model improves performance on events recognition.
<a href="#">OC support for AAA User</a>	This feature allows all authorized users on XR VM to access administration data on the router through NETCONF or gRPC interface, similar to accessing the CLI. This functionality works by internally mapping the task group of the user on XR VM to a predefined group on System Admin VM. Therefore, the NETCONF and gRPC users can access the administrative information on the router even if their user profiles do not exist on System Admin VM.  Command added: <ul style="list-style-type: none"><li>• <b>aaa authorization (System Admin-VM)</b></li></ul>

## Release 7.3.2 Packages

Table 1: Release 7.3.2 Packages

Feature Set	Filename	Description
<b>Composite Package</b>		

Cisco IOS XR Core Bundle + Manageability Package	ncs1001-iosxr-px-k9-7.3.2.tar	Contains required core packages, including operating system, Admin, Base, Forwarding, SNMP Agent, FPD, and Alarm Correlation and Netconf-yang, Telemetry, Extensible Markup Language (XML) Parser, HTTP server packages.
<b>Individually Installable Optional Packages</b>		
Cisco IOS XR Security Package	ncs1001-k9sec-1.1.0.0r732_x86_64.rpm (part of ncs1k-iosxr-px-k9-7.3.2.tar)	Support for Encryption, Decryption, IP Security (IPsec), Secure Socket Layer (SSL), and Public-key infrastructure (PKI).

See [Install Packages](#).

### System Requirements

#### Memory Configuration

At least 16 GB RAM

## Caveats

### Open Caveats

The following table lists the open caveats:

Caveat ID Number	Description
<a href="#">CSCvz03295</a>	EDM Timeouts on show controller OTS CLI and telemetry.
<a href="#">CSCvy13197</a>	Telemetry Syslog events are not received by telemetry client

## Determine Software Version

Log in to NCS 1001 and enter the **show version** command:

```
RP/0/RP0/CPU0:ios#show version
Mon Feb 28 15:52:01.424 UTC
Cisco IOS XR Software, Version 7.3.2
Copyright (c) 2013-2021 by Cisco Systems, Inc.

Build Information:
Built By      : deenayak
Built On     : Mon Jul 28 01:19:52 PST 2020
Built Host   : iox-lnx-071
Workspace    : /auto/srcarchive15/prod/7.3.2/ncs1001/ws
```

```

Version      : 7.3.2
Location     : /opt/cisco/XR/packages/
Label       : 7.3.2
cisco NCS-1001 () processor

```



**Note** The output that is obtained by the **show version** command may be different from the preceding example.

## Determine Firmware Support

Log in to NCS 1001 and enter the **show hw-module fpd** command:

Use the **show hw-module fpd** command in EXEC mode to view the hardware components with their current FPD version and status. The status of the hardware must be CURRENT; Running and Programed version must be the same.

The following shows the output of **show hw-module fpd** command for NCS 1001 with EDFA (slot 1 and 3) and PSM (slot 2) of vendor 1.

```

RP/0/RP0/CPU0:ios#show hw-module fpd
Thu Jan 16 15:28:28.146 CEST
FPD Versions
=====

```

Location	Card type	HWver	FPD device	ATR	Status	Running	Programd
0/0	NCS1001-K9	0.1	Control_BKP	B	CURRENT		1.10
0/0	NCS1001-K9	0.1	Control_FPGA		CURRENT	1.10	1.10
0/1	NCS1K-EDFA	0.0	FW_EDFAv1		CURRENT	1.60	1.60
0/2	NCS1K-PSM	0.0	FW_PSMv1		CURRENT	1.51	1.51
0/3	NCS1K-EDFA	0.0	FW_EDFAv1		CURRENT	1.60	1.60
0/RP0	NCS1K-CNTLR2	0.1	BIOS_Backup	BS	CURRENT	15.10	15.10
0/RP0	NCS1K-CNTLR2	0.1	BIOS_Primary	S	CURRENT	15.10	15.10
0/RP0	NCS1K-CNTLR2	0.1	Daisy_Duke_BKP	BS	CURRENT		0.20
0/RP0	NCS1K-CNTLR2	0.1	Daisy_Duke_FPGA	S	CURRENT	0.20	0.20

The following shows the output of **show hw-module fpd** command for NCS 1001 with EDFA (slot 1 and 3) and PSM (slot 2) of vendor 2.

```

RP/0/RP0/CPU0:150#show hw-module fpd
Thu Jan 16 15:28:31.146 CEST
FPD Versions
=====

```

Location	Card type	HWver	FPD device	ATR	Status	Running	Programd
0/0	NCS1001-K9	0.1	Control_BKP	B	CURRENT	1.10	
0/0	NCS1001-K9	0.1	Control_FPGA		CURRENT	1.10	1.10
0/1	NCS1K-EDFA	0.0	FW_EDFAv2		CURRENT	0.43	0.43
0/2	NCS1K-PSM	0.0	FW_PSMv2		CURRENT	0.16	0.16
0/3	NCS1K-EDFA	0.0	FW_EDFAv2		CURRENT	0.43	0.43
0/RP0	NCS1K-CNTLR2	0.1	BIOS_Backup	BS	CURRENT	15.10	15.10
0/RP0	NCS1K-CNTLR2	0.1	BIOS_Primary	S	CURRENT	15.10	15.10
0/RP0	NCS1K-CNTLR2	0.1	Daisy_Duke_BKP	BS	CURRENT	0.20	
0/RP0	NCS1K-CNTLR2	0.1	Daisy_Duke_FPGA	S	CURRENT	0.20	0.20

The following shows the output of **show hw-module fpd** command with the OTDR card in slot 1.

```

RP/0/RP0/CPU0:150#show hw-module fpd
Thu Jul 16 15:28:31.146 CEST
.....

```

0/1	NCS1K-OTDR	0.0	FW_OTDR_p		CURRENT	6.03	6.03
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```
0/1          NCS1K-OTDR          0.0  FW_OTDR_s          CURRENT  1.51  1.51
.....
```

The following shows the output of **show hw-module fpd** command entered from admin in case of AC PEM:

```
sysadmin-vm:0_RP0# show hw-module fpd
Fri Feb 5 15:36:47.562 UTC+00:00

                                FPD Versions
                                =====
Location  Card type          HWver FPD device      ATR Status  Run   Programd
-----
.....
0/PM0     NCS1K-2KW-AC2      0.0  PO-PriMCU            CURRENT    4.00   4.00
0/PM1     NCS1K-2KW-AC2      0.0  PO-PriMCU            CURRENT    4.00   4.00
```

Then the following shows the output of **show hw-module fpd** command entered from admin in case of DC PEM :

```
sysadmin-vm:0_RP0# show hw-module fpd
Fri Feb 5 15:33:51.528 UTC+00:00

                                FPD Versions
                                =====
Location  Card type          HWver FPD device      ATR Status  Run   Programd
-----
.....
0/PM0     NCS1K-2KW-DC       0.2  PO-PriMCU            CURRENT    2.01   2.01
0/PM1     NCS1K-2KW-DC       0.2  PO-PriMCU            CURRENT    2.01   2.01
```



**Note** The 3 slots in each NCS 1001 can have a combination of vendor 1 and vendor 2 EDFA and PSM cards (with or without an OTDR card).

## Other Important Information and References

### Supported MIBs

The following MIBs are supported in NCS 1001:

- CISCO-OPTICAL-OTS-MIB
- CISCO-CONFIG-MAN-MIB
- CISCO-FLASH-MIB
- CISCO-ENTITY-REDUNDANCY-MIB
- CISCO-SYSTEM-MIB
- CISCO-ENTITY-ASSET-MIB
- EVENT-MIB
- DISMAN-EXPRESSION-MIB
- CISCO-FTP-CLIENT-MIB

- NOTIFICATION-LOG-MIB
- CISCO-RF-MIB
- CISCO-TCP-MIB
- UDP-MIB
- CISCO-OTN-IF-MIB
- CISCO-ENHANCED-MEMPOOL-MIB
- CISCO-PROCESS-MIB
- CISCO-SYSLOG-MIB
- ENTITY-MIB
- CISCO-ENTITY-FRU-CONTROL-MIB
- CISCO-IF-EXTENSION-MIB
- RMON-MIB
- CISCO-OPTICAL-MIB
- CISCO-ENTITY-SENSOR-MIB

