



Release Notes for Cisco NCS 540 Series Routers, Cisco IOS XR Release 7.0.2

Network Convergence System 540 Series Routers 2

Supported Software Features for N540-24Z8Q2C-SYS, N540X-ACC-SYS, and N540-ACC-SYS 2

Supported Hardware Features 3

Restrictions and Limitations on the Cisco NCS 540 Series Router 3

Caveats 3

Supported Packages and System Requirements 3

Other Important Information 7

Supported MIBs 7

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Network Convergence System 540 Series Routers



Note This software release has reached end-of-life status. For more information, see the [End-of-Life and End-of-Sale Notices](#).



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Note Cisco IOS XR Release 7.0.2 is an Extended Maintenance Release of [Cisco IOS XR Release 7.0.1](#) for Cisco NCS 540 Series routers. For more details on the Cisco IOS XR release model and associated support, see [Guidelines for Cisco IOS XR Software](#).

Supported Software Features for N540-24Z8Q2C-SYS, N540X-ACC-SYS, and N540-ACC-SYS

Following feature is supported on Cisco N540-24Z8Q2C-SYS, N540X-ACC-SYS, and N540-ACC-SYS variants.

SPAN over Pseudo-Wire

Pseudo-wire traffic mirroring (known as PW-SPAN) is an extra functionality on the existing SPAN solutions. The existing SPAN solutions are monitored on a destination interface or through a GRE tunnel or RSPAN. In PW-SPAN, the traffic mirroring destination port is configured to be a pseudo-wire rather than a physical port. Here, the designated traffic on the source port is mirrored over the pseudo-wire to a central location. Mirroring the designated traffic on the source port over the pseudo-wire to a central location allows the centralization of expensive network traffic analysis tools.

For more information about this feature, see the *Configuring Traffic Mirroring* chapter in the *Interface and Hardware Component Configuration Guide for Cisco NCS 540 Series Routers*.

See [SPAN over Pseudo-Wire](#).

Supported Hardware Features

There are no new hardware features supported in this release.

Restrictions and Limitations on the Cisco NCS 540 Series Router

The following restrictions are applicable only to Cisco N540-24Z8Q2C-SYS, N540X-ACC-SYS, and N540-ACC-SYS variants.

- In the Cisco IOS XR Release 7.0.2, the Packet IO feature is not supported on bundle interfaces.
- The **show inventory** and the **show diagnostic** commands do not display the fan serial number.
- The interface ports 0/0/0/24 to 0/0/0/31 do not support 1G Copper SFPs.
- Remove the speed settings on the 1G Copper optics when 10M/100M is configured and replaced with 1G SFP optics.
- The **hw-module profile mfib statistics** command is not supported.

Caveats

This section describes open and resolved severity 1 and 2 caveats and select severity 3 caveats:

- The “Open Caveats” sections list open caveats that apply to the current release and may apply to previous releases. A caveat that is open for a prior release and is still unresolved applies to all future releases until it is resolved.
- The “Resolved Caveats” sections list caveats resolved in a specific release, but open in previous releases.

The bug IDs are sorted alphanumerically.



Note The Caveats section includes the bug ID and a short description of the bug. For details on the symptoms, conditions, and workaround for a specific caveat you must use the Bug Search Tool.

Cisco IOS XR Caveats Release 7.0.2

There are no caveats for this release.

Supported Packages and System Requirements

For more information on system upgrade and package installation process, see [Perform System Upgrade and Install Feature Packages](#).

For a complete list of supported optics, hardware and ordering information see [Cisco Network Convergence System 540 Medium Density Routers Data Sheet](#) and [Cisco Network Convergence System 540 Small Density Router Data Sheet](#).

To install the Cisco NCS 540 Series Routers, see [Cisco NCS 540 Router Hardware Installation Guide](#).

Release 7.0.2 Packages for Cisco N540-24Z8Q2C-SYS, N540X-ACC-SYS, and N540-ACC-SYS Variants

This table lists the Cisco IOS XR Software feature set matrix (packages) with associated filenames.

Table 1: Release 7.0.2 Packages for Cisco N540-24Z8Q2C-SYS, N540X-ACC-SYS, and N540-ACC-SYS Variants

Composite Package		
Feature Set	Filename	Description
Cisco IOS XR IP Unicast Routing Core Bundle	ncs540-mini-x-7.0.2.iso	Contains the following base image content: <ul style="list-style-type: none"> • Host operating system • System Admin boot image • IOS XR boot image • BGP packages
Individually-Installable Optional Packages		
Feature Set	Filename	Description
Cisco IOS XR Manageability Package	ncs540-mgbl-1.0.0.0-r702.x86_64.rpm	Extensible Markup Language (XML) Parser, Telemetry, Netconf, gRPC and HTTP server packages.
Cisco IOS XR MPLS Package	ncs540-mpls-1.0.0.0-r702.x86_64.rpm ncs540-mpls-te-rsvp-1.0.0.0-r702.x86_64.rpm	MPLS and MPLS Traffic Engineering (MPLS-TE) RPM.
Cisco IOS XR Security Package	ncs540-k9sec-1.0.0.0-r702.x86_64.rpm	Support for Encryption, Decryption, Secure Shell (SSH), Secure Socket Layer (SSL), and Public-key infrastructure (PKI)
Cisco IOS XR ISIS package	ncs540-isis-1.0.0.0-r702.x86_64.rpm	Support ISIS
Cisco IOS XR OSPF package	ncs540-ospf-1.0.0.0-r702.x86_64.rpm	Support OSPF
Lawful Intercept (LI) Package	ncs540-li-1.0.0.0-r702.x86_64.rpm	Includes LI software images
Multicast Package	ncs540-mcast-1.0.0.0-r702.x86_64.rpm	Support Multicast
USB Boot Package	ncs540-usb_boot-7.0.2.zip	Supports USB

Release 7.0.2 Packages for Cisco N540-28Z4C-SYS-A/D, N540-12Z20G-SYS-A/D, N540X-12Z16G-SYS-A/D, and N540X-16Z4G8Q2C-A/D Variants

This table lists the Cisco IOS XR Software feature set matrix (packages) with associated filenames.

Table 2: Release 7.0.2 Packages for Cisco N540-28Z4C-SYS-A/D, N540-12Z20G-SYS-A/D, N540X-12Z16G-SYS-A/D, and N540X-16Z4G8Q2C-A/D Variants

Composite Package

Feature Set	Filename	Description
Cisco IOS XR Bundle	ncs540l-x64-7.0.2.iso	<p>Contains the following base image content:</p> <ul style="list-style-type: none"> • Host operating system • System Admin boot image • IOS XR boot image <p>The ISO image also includes the following optional packages:</p> <ul style="list-style-type: none"> • BGP • Ipsla • IS-IS • Lldp • Mcast • Mpls-oam • ncs540l-mcast • ncs540l-netflow • Netflow • OSPF • Perfmgmt • Track
Individually Installable Optional Packages		
Feature Set	Filename	Description
USB Boot Package	ncs540l-usb_boot-7.0.2.zip	Supports USB
Optional Packages		
Optional packages may be installed for CDP and Telnet.		

Determine Software Version

Log in to the router and enter the **show version** command on the Cisco N540-24Z8Q2C-SYS, N540X-ACC-SYS, and N540-ACC-SYS variants:

```
RP/0/RP0/CPU0:ROUTER#show version
Cisco IOS XR Software, Version 7.0.2
Copyright (c) 2013-2020 by Cisco Systems, Inc.
```

Build Information:

```
Built By      : ahoang
Built On     : Fri Mar 13 22:20:58 PDT 2020
```

```

Built Host      : iox-ucs-026
Workspace      : /auto/srcarchive15/prod/7.0.2/ncs540/ws
Version        : 7.0.2
Location       : /opt/cisco/XR/packages/
Label          : 7.0.2

```

```

cisco NCS-540 () processor
System uptime is 10 hours 42 minutes

```

Log in to the router and enter the show version command on the Cisco N540-28Z4C-SYS-A/D, N540-12Z20G-SYS-A/D, N540X-12Z16G-SYS-A/D and N540X-16Z4G8Q2C-A/D variants:

```

RP/0/RP0/CPU0:R3-CL-PE1#show version
Sun Mar 15 20:44:36.224 IST
Cisco IOS XR Software, Version 7.0.2 LNT
Copyright (c) 2013-2020 by Cisco Systems, Inc.

```

Build Information:

```

Built By       : ahoang
Built On       : Sat Mar 14 04:54:04 UTC 2020
Build Host     : iox-ucs-029
Workspace      : /auto/srcarchive15/prod/7.0.2/ncs540l/ws
Version        : 7.0.2
Label          : 7.0.2

```

```

cisco NCS540L (C3708 @ 1.70GHz)
System uptime is 10 hours, 50 minutes

```

Determine Firmware Support

Use the show 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.

Log in to the router and enter the **show fpd package** and **show hw-module fpd** commands on the Cisco N540-24Z8Q2C-SYS, N540X-ACC-SYS, and N540-ACC-SYS variants:

```
RP/0/RP0/CPU0:ROUTER#show hw-module fpd
```

Location	Card type	HWver	FPD device	FPD Versions		
				ATR	Status	Running Programd
0/RP0	N540-24Z8Q2C-M	1.0	MB-MIFPGA	CURRENT	0.04	0.04
0/RP0	N540-24Z8Q2C-M	1.0	Bootloader	CURRENT	1.13	1.13
0/RP0	N540-24Z8Q2C-M	1.0	CPU-IOFPGA	CURRENT	0.07	0.07
0/RP0	N540-24Z8Q2C-M	1.0	MB-IOFPGA	CURRENT	0.20	0.20

Log in to the router and enter the **show fpd package** and **show hw-module fpd** commands on the Cisco N540-28Z4C-SYS-A/D, N540-12Z20G-SYS-A/D, N540X-12Z16G-SYS-A/D and N540X-16Z4G8Q2C-A/D variants:

```
RP/0/RP0/CPU0:R3-CL-PE1# show hw-module fpd
```

```
Sun Mar 15 20:44:37.090 IST
```

```
Attribute codes: B golden, P protect, S secure
```

Location	Card type	HWver	FPD device	FPD Versions		
				ATR	Status	Running Programd
0/RP0/CPU0	N540X-16Z4G8Q2C-A	0.2	IoFpga	CURRENT	1.31	1.31
0/RP0/CPU0	N540X-16Z4G8Q2C-A	0.2	IoFpgaGolden	B	NEED UPGD	1.29
0/RP0/CPU0	N540X-16Z4G8Q2C-A	0.2	Primary-BIOS	S	CURRENT	1.14
0/RP0/CPU0	N540X-16Z4G8Q2C-A	0.2	StdbyFpga	S	CURRENT	0.40
0/RP0/CPU0	N540X-16Z4G8Q2C-A	0.2	StdbyFpgaGolden	BS	NEED UPGD	0.00
0/RP0/CPU0	N540X-16Z4G8Q2C-A	0.2	TamFw	S	CURRENT	4.11

Other Important Information

MLDP LFA FRR feature is not supported.

Supported Transceiver Modules

For more information on the supported transceiver modules, see [Transceiver Module Group \(TMG\) Compatibility Matrix](#). In the **Begin your Search** search box, enter the keyword NCS540 and click **Enter**.

Upgrading Cisco IOS XR Software

Cisco IOS XR Software is installed and activated from modular packages, allowing specific features or software patches to be installed, upgraded, or downgraded without affecting unrelated processes.

The upgrade document for Cisco N540-24Z8Q2C-SYS, N540X-ACC-SYS, and N540-ACC-SYS variants (*NCS540-docs-7.0.2.tar*) is available along with the software images.

The upgrade document for Cisco N540-28Z4C-SYS-A/D, N540-12Z20G-SYS-A/D, N540X-12Z16G-SYS-A/D, and N540X-16Z4G8Q2C-A/D variants (*NCS540-docs-7.0.2.tar*) is available along with the software images.

Supported MIBs

The Cisco NCS 5500 MIB support list is also applicable to the Cisco NCS 540 Series Routers. For the list of supported MIBs, see the [Cisco NCS5500 MIB Support List](#).

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