Release Notes for Cisco NCS 540 Series Routers, Cisco IOS XR Release 7.6.2

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What's New in Cisco IOS XR Release 7.6.2

Hardware	Description

Optics	**Note** Optics support varies across devices such as routers, line cards, and RPs. To know if an optics is compatible with a specific Cisco device, refer to the Transceiver Module Group (TMG) Compatibility Matrix.
	
	This release introduces the optics for the following routers:
	  • N540-28Z4C-SYS-A/D
	  • N540X-16Z4G8Q2C-A/D
	  • N540-12Z20G-SYS-A/D
	  • N540X-12Z16G-SYS-A/D
	  • N540X-6Z18G-SYS-A/D
	  • N540X-8Z16G-SYS-A/D
	  • N540X-4Z14G2Q-A/D
	  • N540-FH-CSR-SYS
	  • N540-FH-AGG-SYS
	
	This release introduces the following optics:
	  • Third Party Pluggables
	    • SPG-DR-LX-IDFC
	    • SPG-DR-FX-IDFC
	
	  • Cisco SFP Modules for Gigabit Ethernet Applications
	    • GLC-TE
	    • GLC-T-RGD
	
	Note This feature is not supported on N540-24Z8Q2C-SYS and N540-ACC-SYS variants.

The following feature is supported on all the NCS 540 variants.

Feature	Description
MPLS	
Configure Autoroute Tunnel as Designated Path	Simplify the path selection for a traffic class and split traffic among multiple TE tunnels to achieve many benefits such as security and service-level agreements. You can now exclusively specify an autoroute tunnel to forward traffic to a particular tunnel destination address without considering the IS-IS metric for traffic path selection.
	Earlier, MPLS-TE considered either the Forwarding Adjacency (FA) or Autoroute (AA) tunnel to forward traffic based only on IS-IS metric.
	The feature introduces the **mpls traffic-eng tunnel restricted** command.

Restrictions and Limitations on the Cisco NCS 540 Series Router

- Fabric multicast queue stats are not supported in N540X-8Z16G-SYS-A/D, N540X-6Z18G-SYS-A/D, and N540X-4Z14G2Q-A/D variants.

- Unlabeled BGP PIC EDGE for global prefixes is not supported.

- The **show inventory** and the **show diagnostic** commands do not display the fan serial number for N540-28Z4C-SYS-A/D, N540-12Z20G-SYS-A/D, and N540X-12Z16G-SYS-A/D variants.

- The interface ports 0/0/0/24 to 0/0/0/31 do not support 1G Copper SFPs on N540-24Z8Q2C-SYS, N540-ACC-SYS, and N540X-ACC-SYS variants. Also, these ports do not support Auto-Negotiation with 1GE optical SFPs and they cannot act as 1GE Synchronous Ethernet sources.

- The interface ports 0/0/0/20 to 0/0/0/27 do not support 1G Copper SFPs on N540X-16Z4G8Q2C-A and N540X-16Z4G8Q2C-D variants. Also, these ports do not support Auto-Negotiation with 1GE optical SFPs and they cannot act as 1GE Synchronous Ethernet sources.

- 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.

Cisco IOS XR Caveats Release 7.6.2

Bug ID	Headline
CSCwc58448	IP-in-IP: ipv4 ping got full drop after enable tunnel-ip interface on device

IOS XR Base Images and Optional Packages

For more information on system setup and software installation process, see System Setup and Software Installation Guide for Cisco NCS 540 Series Routers.

For general and ordering information see:

- Cisco Network Convergence System 540 Fronthaul Routers Data Sheet

- Cisco Network Convergence System 540 Large Density Router Data Sheet

- Cisco Network Convergence System 540 Medium Density Routers Data Sheet

- 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 7.6.2 Software

The following tables list the supported base images and optional packages and their corresponding file names.

- The first table lists the supported software for N540-24Z8Q2C-SYS, N540-ACC-SYS, and N540X-ACC-SYS variants.

- The second table lists the supported software for N540-24Q8L2DD-SYS, N540X-16Z4G8Q2C-A/D, N540-28Z4C-SYS-A/D, N540X-12Z16G-SYS-A/D, N540-12Z20G-SYS-A/D, N540-FH-CSR-SYS, and N540-FH-AGG-SYS variants.

- The third table lists the supported software for N540X-4Z14G2Q-A/D, N540X-8Z16G-SYS-A/D and N540X-6Z18G-SYS-A/D variants.

Table 1: Release 7.6.2 Software for N540-24Z8Q2C-SYS, N540-ACC-SYS, and N540X-ACC-SYS

Base Image	Filename	Description
IOS XR Base Image	ncs540-mini-x-7.6.2.iso	IOS XR man
USB Boot Package	ncs540-usb_boot-7.6.2.zip	Package requi Includes the s
Optional Packages not included in the base image		
Package	Filename	Description
IOS XR Manageability	ncs540-mgbl-1.0.0.0-r762.x86_64.rpm	Supports Exte gRPC and HT
IOS XR MPLS	ncs540-mpls-1.0.0.0-r762.x86_64.rpm ncs540-mpls-te-rsvp-1.0.0.0-r762.x86_64.rpm	Supports MP
IOS XR Security	ncs540-k9sec-1.0.0.0-r762.x86_64.rpm	Supports MA
IOS XR ISIS	ncs540-isis-1.0.0.0-r762.x86_64.rpm	Supports ISIS
IOS XR OSPF	ncs540-ospf-1.0.0.0-r762.x86_64.rpm	Supports OSP
IOS XR Lawful Intercept	ncs540-li-1.0.0.0-r762.x86_64.rpm	Supports Law
IOS XR Multicast	ncs540-mcast-1.0.0.0-r762.x86_64.rpm	Supports Mul

IOS XR EIGRP	ncs540-eigrp-1.0.0.0-r762.x86_64.rpm	Supports EIGRP
IOS XR LI-CTRL	ncs540-lictrl-1.0.0.0-r762.x86_64.rpm	Supports LI-CTR

Table 2: Release 7.6.2 Software for N540-24Q8L2DD-SYS, N540X-16Z4G8Q2C-A/D, N540-28Z4C-SYS-A/D, N540X-12Z16G-SYS-A/D, N540-12Z20G-SYS-A/D, N540-FH-CSR-SYS, and N540-FH-AGG-SYS

Base Image	Filename	Description
IOS XR Base Image	ncs540l-x64-7.6.2.iso	IOS XR base ima The base ISO ima • xr-bgp • xr-ipsla • xr-is-is • xr-lldp • xr-mcast • xr-mpls-oam • xr-ncs540l-n • xr-ncs540l-n • xr-netflow • xr-ospf • xr-perfmgmt • xr-track These optional pa
USB Boot Package	ncs540l-usb_boot-7.6.2.zip	Package required Includes the same
Optional Packages not included in the base image		
Package	**Filename**	**Description**
IOS XR Telnet (xr-telnet)	NCS540l-iosxr-7.6.2.tar	Supports Telnet
IOS XR EIGRP (xr-eigrp)	NCS540l-iosxr-7.6.2.tar	Supports EIGRP
IOS XR CDP (xr-cdp)	NCS540l-iosxr-7.6.2.tar	Supports CDP
IOS XR k9sec (xr-k9sec)	NCS540l-k9sec-rpms.7.6.2.tar	Supports 802.1X
IOS XR RIP (xr-rip)	NCS540l-iosxr-7.6.2.tar	Supports RIP
IOS XR LI-CTRL	xr-lictrl-7.6.2v1.0.0-1.x86_64.rpm	Supports LI-CTR

Table 3: Release 7.6.2 Software for N540X-4Z14G2Q-A/D, N540X-8Z16G-SYS-A/D and N540X-6Z18G-SYS-A/D

Base Image	Filename	Description
IOS XR Base Image	ncs540l-aarch64-7.6.2.iso	IOS XR base
		The ISO imag
		• xr-bgp
		• xr-ipsla
		• xr-is-is
		• xr-lldp
		• xr-mcast
		• xr-mpls-(
		• xr-ncs54(
		• xr-ncs54(
		• xr-netflo\
		• xr-ospf
		• xr-perfm
		• xr-track
		These optiona
		NCS540l-aarc
USB Boot Package	ncs540l-aarch64-usb_boot-7.6.2.zip	Package requi
		Includes the s

Optional Packages not included in the base image		
Package	**Filename**	**Description**
IOS XR Telnet (xr-telnet)	NCS540l-aarch64-iosxr-optional-rpms-7.6.2.tar	Supports Teln
IOS XR EIGRP (xr-eigrp)	NCS540l-aarch64-iosxr-optional-rpms-7.6.2.tar	Supports EIC
IOS XR CDP (xr-cdp)	NCS540l-aarch64-iosxr-optional-rpms-7.6.2.tar	Supports CDF
IOS XR k9sec (xr-k9sec)	NCS540l-aarch64-k9sec-rpms.7.6.2.tar	Supports 802.
IOS XR RIP (xr-rip)	NCS540l-aarch64-iosxr-optional-rpms-7.6.2.tar	Supports RIP
IOS XR LI-CTRL	xr-lictrl-7.6.2v1.0.0-1.aarch64.rpm	Supports LI-C

Determine Software Version

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

```
RP/0/RP0/CPU0:Router#show version
Cisco IOS XR Software, Version 7.6.2
Copyright (c) 2013-2022 by Cisco Systems, Inc.

Build Information:
 Built By     : ingunawa
 Built On     : Day Month  0 00:00:00 PDT Year
 Built Host   : iox-ucs-050
 Workspace    : /auto/srcarchive14/prod/7.6.2/ncs540/ws
 Version      : 7.6.2
 Location     : /opt/cisco/XR/packages/
 Label        : 7.6.2

cisco NCS-540 () processor
System uptime is 2 days 3 hours 4 minutes
```

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

```
RP/0/RP0/CPU0:Router#show version
Cisco IOS XR Software, Version 7.6.2 LNT
Copyright (c) 2013-2022 by Cisco Systems, Inc.

Build Information:
 Built By     : ingunawa
 Built On     : Day Month  0 00:00:00 PDT Year
 Build Host   : iox-ucs-045
 Workspace    : /auto/srcarchive14/prod/7.6.2/ncs540l/ws
 Version      : 7.6.2
 Label        : 7.6.2

cisco NCS540L (C3708 @ 1.70GHz)
cisco N540X-16Z4G8Q2C-A (C3708 @ 1.70GHz) processor with 8GB of memory
R4-EG-PE4 uptime is 1 day, 22 hours, 53 minutes
Cisco NCS 540 System with 16x10G+4x1GCu+8x25G+2x100G DC
```

Log in to the router and enter the **show version** command on the N540-24Q8L2DD-SYS variant:

```
RP/0/RP0/CPU0:Router#show version
Cisco IOS XR Software, Version 7.6.2 LNT
Copyright (c) 2013-2022 by Cisco Systems, Inc.

Build Information:
 Built By     : ingunawa
 Built On     : Day Month  0 00:00:00 PDT Year
 Build Host   : iox-ucs-045
 Workspace    : /auto/srcarchive14/prod/7.6.2/ncs540l/ws
 Version      : 7.6.2
 Label        : 7.6.2-iso

cisco NCS540L (D1519 @ 1.50GHz)
cisco N540-24Q8L2DD-SYS (D1519 @ 1.50GHz) processor with 16GB of memory
R18_PE9_Arches uptime is 1 day, 23 hours, 5 minutes
Cisco NCS540 Series, Fixed Router 2x400G, 8x50G, 24x25G Chassis
```

Log in to the router and enter the **show version** command on the N540X-4Z14G2Q-A/D variants:

```
RP/0/RP0/CPU0:Router#show version
Cisco IOS XR Software, Version 7.6.2 LNT
Copyright (c) 2013-2022 by Cisco Systems, Inc.

Build Information:
 Built By     : ingunawa
 Built On     : Day Month  0 00:00:00 PDT Year
 Build Host   : iox-ucs-048
 Workspace    : /auto/srcarchive14/prod/7.6.2/ncs540l-aarch64/ws
```

```
Version      : 7.6.2
Label        : 7.6.2

cisco NCS540L
cisco N540X-4Z14G2Q-A processor with 8GB of memory
Darwin-PE6 uptime is 2 days, 21 hours, 36 minutes
Cisco NCS 540 Series Fixed Router 12x1G, 4xCu, 2x10G, 2x25G, AC
```

Log in to the router and enter the **show version** command on the N540-FH-CSR-SYS variant:

```
RP/0/RP0/CPU0:Router#show version
Cisco IOS XR Software, Version 7.6.2 LNT
Copyright (c) 2013-2022 by Cisco Systems, Inc.

Build Information:
Built By     : ingunawa
Built On     : Day Month  0 00:00:00 PDT Year
Build Host   : iox-ucs-045
Workspace    : /auto/srcarchive14/prod/7.6.2/ncs540l/ws
Version      : 7.6.2
Label        : 7.6.2

cisco NCS540L (C3708 @ 1.70GHz)
cisco N540-FH-CSR-SYS (C3708 @ 1.70GHz) processor with 8GB of memory
Felidae-PE7 uptime is 2 days, 21 hours, 32 minutes
Cisco NCS 540 FH with 8xCPRI+4xCPRI/10G+8x10G+6x25G+2x100G
```

Determine Firmware Support

Usethe 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. The Golden FPDs with "NEED UPGD" can be ignored, the Golden FPDs are not upgradable.

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 fpd package

=============================== ===================================================
                                 Field Programmable Device Package
                                =====================================================
                                 Req    SW      Min Req   Min Req
Card Type          FPD Description         Reload Ver     SW Ver  Board Ver
================== ========================= ====== ======= ======== =========
--------------------------------------------------------------------------------
N540-24Z8Q2C-M     Bootloader(A)            YES    1.16    1.16      0.0
                   CPU-IOFPGA(A)            YES    0.10    0.10      0.0
                   MB-IOFPGA(A)             YES    0.23    0.23      0.0
                   MB-MIFPGA                YES    0.05    0.05      0.0
                   SATA-INTEL_240G(A)       NO     1132.00 1132.00   0.0
                   SATA-INTEL_480G(A)       NO     1132.00 1132.00   0.0
                   SATA-M500IT-MC(A)        NO     3.00    3.00      0.0
                   SATA-M500IT-MU-A(A)      NO     5.00    5.00      0.0
                   SATA-M500IT-MU-B(A)      NO     4.00    4.00      0.0
                   SATA-M5100(A)            NO     75.00   75.00     0.0
                   SATA-M600-MCT(A)         NO     5.00    5.00      0.0
                   SATA-M600-MU(A)          NO     6.00    6.00      0.0
                   SATA-Micron(A)           NO     1.00    1.00      0.0
                   SATA-SMART-128G(A)       NO     1241.00 1241.00   0.0
                   SSFP_E1F_0               NO     13.01   13.01     0.0
                   SSFP_E1F_1               NO     13.01   13.01     0.0
                   SSFP_E1F_10              NO     13.01   13.01     0.0
                   SSFP_E1F_11              NO     13.01   13.01     0.0
```

```
                              SSFP_E1F_12                NO    13.01    13.01    0.0
                              SSFP_E1F_13                NO    13.01    13.01    0.0
                              SSFP_E1F_14                NO    13.01    13.01    0.0
                              SSFP_E1F_15                NO    13.01    13.01    0.0
                              SSFP_E1F_16                NO    13.01    13.01    0.0
                              SSFP_E1F_17                NO    13.01    13.01    0.0
                              SSFP_E1F_18                NO    13.01    13.01    0.0
                              SSFP_E1F_19                NO    13.01    13.01    0.0
                              SSFP_E1F_2                 NO    13.01    13.01    0.0
                              SSFP_E1F_20                NO    13.01    13.01    0.0
                              SSFP_E1F_21                NO    13.01    13.01    0.0
                              SSFP_E1F_22                NO    13.01    13.01    0.0
                              SSFP_E1F_23                NO    13.01    13.01    0.0
                              SSFP_E1F_24                NO    13.01    13.01    0.0
                              SSFP_E1F_25                NO    13.01    13.01    0.0
                              SSFP_E1F_26                NO    13.01    13.01    0.0
                              SSFP_E1F_27                NO    13.01    13.01    0.0
                              SSFP_E1F_28                NO    13.01    13.01    0.0
                              SSFP_E1F_29                NO    13.01    13.01    0.0
                              SSFP_E1F_3                 NO    13.01    13.01    0.0
                              SSFP_E1F_30                NO    13.01    13.01    0.0
                              SSFP_E1F_31                NO    13.01    13.01    0.0
                              SSFP_E1F_4                 NO    13.01    13.01    0.0
                              SSFP_E1F_5                 NO    13.01    13.01    0.0
                              SSFP_E1F_6                 NO    13.01    13.01    0.0
                              SSFP_E1F_7                 NO    13.01    13.01    0.0
                              SSFP_E1F_8                 NO    13.01    13.01    0.0
                              SSFP_E1F_9                 NO    13.01    13.01    0.0
                              SSFP_OC3_STM1_0            NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_1            NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_10           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_11           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_12           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_13           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_14           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_15           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_16           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_17           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_18           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_19           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_2            NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_20           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_21           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_22           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_23           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_24           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_25           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_26           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_27           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_28           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_29           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_3            NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_30           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_31           NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_4            NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_5            NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_6            NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_7            NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_8            NO    12.01    12.01    0.0
                              SSFP_OC3_STM1_9            NO    12.01    12.01    0.0
--------------------------------------------------------------------------------
N540-ACC-SYS       Bootloader(A)             YES    1.16     1.16     0.0
                   CPU-IOFPGA(A)             YES    0.10     0.10     0.0
                   MB-IOFPGA(A)              YES    0.23     0.23     0.0
```

```
MB-MIFPGA               YES     0.05      0.05     0.0
SATA-INTEL_240G(A)      NO   1132.00   1132.00     0.0
SATA-INTEL_480G(A)      NO   1132.00   1132.00     0.0
SATA-M500IT-MC(A)       NO      3.00      3.00     0.0
SATA-M500IT-MU-A(A)     NO      5.00      5.00     0.0
SATA-M500IT-MU-B(A)     NO      4.00      4.00     0.0
SATA-M5100(A)           NO     75.00     75.00     0.0
SATA-M600-MCT(A)        NO      5.00      5.00     0.0
SATA-M600-MU(A)         NO      6.00      6.00     0.0
SATA-Micron(A)          NO      1.00      1.00     0.0
SATA-SMART-128G(A)      NO   1241.00   1241.00     0.0
SSFP_E1F_0              NO     13.01     13.01     0.0
SSFP_E1F_1              NO     13.01     13.01     0.0
SSFP_E1F_10             NO     13.01     13.01     0.0
SSFP_E1F_11             NO     13.01     13.01     0.0
SSFP_E1F_12             NO     13.01     13.01     0.0
SSFP_E1F_13             NO     13.01     13.01     0.0
SSFP_E1F_14             NO     13.01     13.01     0.0
SSFP_E1F_15             NO     13.01     13.01     0.0
SSFP_E1F_16             NO     13.01     13.01     0.0
SSFP_E1F_17             NO     13.01     13.01     0.0
SSFP_E1F_18             NO     13.01     13.01     0.0
SSFP_E1F_19             NO     13.01     13.01     0.0
SSFP_E1F_2              NO     13.01     13.01     0.0
SSFP_E1F_20             NO     13.01     13.01     0.0
SSFP_E1F_21             NO     13.01     13.01     0.0
SSFP_E1F_22             NO     13.01     13.01     0.0
SSFP_E1F_23             NO     13.01     13.01     0.0
SSFP_E1F_24             NO     13.01     13.01     0.0
SSFP_E1F_25             NO     13.01     13.01     0.0
SSFP_E1F_26             NO     13.01     13.01     0.0
SSFP_E1F_27             NO     13.01     13.01     0.0
SSFP_E1F_28             NO     13.01     13.01     0.0
SSFP_E1F_29             NO     13.01     13.01     0.0
SSFP_E1F_3              NO     13.01     13.01     0.0
SSFP_E1F_30             NO     13.01     13.01     0.0
SSFP_E1F_31             NO     13.01     13.01     0.0
SSFP_E1F_4              NO     13.01     13.01     0.0
SSFP_E1F_5              NO     13.01     13.01     0.0
SSFP_E1F_6              NO     13.01     13.01     0.0
SSFP_E1F_7              NO     13.01     13.01     0.0
SSFP_E1F_8              NO     13.01     13.01     0.0
SSFP_E1F_9              NO     13.01     13.01     0.0
SSFP_OC3_STM1_0         NO     12.01     12.01     0.0
SSFP_OC3_STM1_1         NO     12.01     12.01     0.0
SSFP_OC3_STM1_10        NO     12.01     12.01     0.0
SSFP_OC3_STM1_11        NO     12.01     12.01     0.0
SSFP_OC3_STM1_12        NO     12.01     12.01     0.0
SSFP_OC3_STM1_13        NO     12.01     12.01     0.0
SSFP_OC3_STM1_14        NO     12.01     12.01     0.0
SSFP_OC3_STM1_15        NO     12.01     12.01     0.0
SSFP_OC3_STM1_16        NO     12.01     12.01     0.0
SSFP_OC3_STM1_17        NO     12.01     12.01     0.0
SSFP_OC3_STM1_18        NO     12.01     12.01     0.0
SSFP_OC3_STM1_19        NO     12.01     12.01     0.0
SSFP_OC3_STM1_2         NO     12.01     12.01     0.0
SSFP_OC3_STM1_20        NO     12.01     12.01     0.0
SSFP_OC3_STM1_21        NO     12.01     12.01     0.0
SSFP_OC3_STM1_22        NO     12.01     12.01     0.0
SSFP_OC3_STM1_23        NO     12.01     12.01     0.0
SSFP_OC3_STM1_24        NO     12.01     12.01     0.0
SSFP_OC3_STM1_25        NO     12.01     12.01     0.0
SSFP_OC3_STM1_26        NO     12.01     12.01     0.0
SSFP_OC3_STM1_27        NO     12.01     12.01     0.0
```

```
                         SSFP_OC3_STM1_28            NO     12.01     12.01      0.0
                         SSFP_OC3_STM1_29            NO     12.01     12.01      0.0
                         SSFP_OC3_STM1_3             NO     12.01     12.01      0.0
                         SSFP_OC3_STM1_30            NO     12.01     12.01      0.0
                         SSFP_OC3_STM1_31            NO     12.01     12.01      0.0
                         SSFP_OC3_STM1_4             NO     12.01     12.01      0.0
                         SSFP_OC3_STM1_5             NO     12.01     12.01      0.0
                         SSFP_OC3_STM1_6             NO     12.01     12.01      0.0
                         SSFP_OC3_STM1_7             NO     12.01     12.01      0.0
                         SSFP_OC3_STM1_8             NO     12.01     12.01      0.0
                         SSFP_OC3_STM1_9             NO     12.01     12.01      0.0
------------------------------------------------------------------------------
N540-PWR400-A            LIT-PriMCU-ACFW(A)          NO      0.04      0.04      0.0
                         LIT-SecMCU-ACFW(A)          NO      0.07      0.07      0.0
------------------------------------------------------------------------------
N540-PWR400-D            LIT-PriMCU-DCFW(A)          NO      0.04      0.04      0.0
                         LIT-SecMCU-DCFW(A)          NO      0.06      0.06      0.0
                         SDG-PriMCU-DCFW(A)          NO      1.03      1.03      0.0
                         SDG-SecMCU-DCFW(A)          NO      1.03      1.03      0.0
------------------------------------------------------------------------------
N540-X-24Z8Q2C-M         Bootloader(A)               YES     1.16      1.16      0.0
                         CPU-IOFPGA(A)               YES     0.10      0.10      0.0
                         MB-IOFPGA(A)                YES     0.23      0.23      0.0
                         MB-MIFPGA                   YES     0.05      0.05      0.0
                         SATA-INTEL_240G(A)          NO   1132.00   1132.00      0.0
                         SATA-INTEL_480G(A)          NO   1132.00   1132.00      0.0
                         SATA-M500IT-MC(A)           NO      3.00      3.00      0.0
                         SATA-M500IT-MU-A(A)         NO      5.00      5.00      0.0
                         SATA-M500IT-MU-B(A)         NO      4.00      4.00      0.0
                         SATA-M5100(A)               NO     75.00     75.00      0.0
                         SATA-M600-MCT(A)            NO      5.00      5.00      0.0
                         SATA-M600-MU(A)             NO      6.00      6.00      0.0
                         SATA-Micron(A)              NO      1.00      1.00      0.0
                         SATA-SMART-128G(A)          NO   1241.00   1241.00      0.0
                         SSFP_E1F_0                  NO     13.01     13.01      0.0
                         SSFP_E1F_1                  NO     13.01     13.01      0.0
                         SSFP_E1F_10                 NO     13.01     13.01      0.0
                         SSFP_E1F_11                 NO     13.01     13.01      0.0
                         SSFP_E1F_12                 NO     13.01     13.01      0.0
                         SSFP_E1F_13                 NO     13.01     13.01      0.0
                         SSFP_E1F_14                 NO     13.01     13.01      0.0
                         SSFP_E1F_15                 NO     13.01     13.01      0.0
                         SSFP_E1F_16                 NO     13.01     13.01      0.0
                         SSFP_E1F_17                 NO     13.01     13.01      0.0
                         SSFP_E1F_18                 NO     13.01     13.01      0.0
                         SSFP_E1F_19                 NO     13.01     13.01      0.0
                         SSFP_E1F_2                  NO     13.01     13.01      0.0
                         SSFP_E1F_20                 NO     13.01     13.01      0.0
                         SSFP_E1F_21                 NO     13.01     13.01      0.0
                         SSFP_E1F_22                 NO     13.01     13.01      0.0
                         SSFP_E1F_23                 NO     13.01     13.01      0.0
                         SSFP_E1F_24                 NO     13.01     13.01      0.0
                         SSFP_E1F_25                 NO     13.01     13.01      0.0
                         SSFP_E1F_26                 NO     13.01     13.01      0.0
                         SSFP_E1F_27                 NO     13.01     13.01      0.0
                         SSFP_E1F_28                 NO     13.01     13.01      0.0
                         SSFP_E1F_29                 NO     13.01     13.01      0.0
                         SSFP_E1F_3                  NO     13.01     13.01      0.0
                         SSFP_E1F_30                 NO     13.01     13.01      0.0
                         SSFP_E1F_31                 NO     13.01     13.01      0.0
                         SSFP_E1F_4                  NO     13.01     13.01      0.0
                         SSFP_E1F_5                  NO     13.01     13.01      0.0
                         SSFP_E1F_6                  NO     13.01     13.01      0.0
                         SSFP_E1F_7                  NO     13.01     13.01      0.0
```

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                         SSFP_E1F_8                    NO     13.01     13.01       0.0
                         SSFP_E1F_9                    NO     13.01     13.01       0.0
                         SSFP_OC3_STM1_0               NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_1               NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_10              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_11              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_12              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_13              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_14              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_15              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_16              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_17              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_18              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_19              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_2               NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_20              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_21              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_22              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_23              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_24              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_25              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_26              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_27              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_28              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_29              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_3               NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_30              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_31              NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_4               NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_5               NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_6               NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_7               NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_8               NO     12.01     12.01       0.0
                         SSFP_OC3_STM1_9               NO     12.01     12.01       0.0
-------------------------------------------------------------------------------
N540X-ACC-SYS            Bootloader(A)                 YES     1.16      1.16       0.0
                         CPU-IOFPGA(A)                 YES     0.10      0.10       0.0
                         MB-IOFPGA(A)                  YES     0.23      0.23       0.0
                         MB-MIFPGA                     YES     0.05      0.05       0.0
                         SATA-INTEL_240G(A)            NO   1132.00   1132.00       0.0
                         SATA-INTEL_480G(A)            NO   1132.00   1132.00       0.0
                         SATA-M500IT-MC(A)             NO      3.00      3.00       0.0
                         SATA-M500IT-MU-A(A)           NO      5.00      5.00       0.0
                         SATA-M500IT-MU-B(A)           NO      4.00      4.00       0.0
                         SATA-M5100(A)                 NO     75.00     75.00       0.0
                         SATA-M600-MCT(A)              NO      5.00      5.00       0.0
                         SATA-M600-MU(A)               NO      6.00      6.00       0.0
                         SATA-Micron(A)                NO      1.00      1.00       0.0
                         SATA-SMART-128G(A)            NO   1241.00   1241.00       0.0
                         SSFP_E1F_0                    NO     13.01     13.01       0.0
                         SSFP_E1F_1                    NO     13.01     13.01       0.0
                         SSFP_E1F_10                   NO     13.01     13.01       0.0
                         SSFP_E1F_11                   NO     13.01     13.01       0.0
                         SSFP_E1F_12                   NO     13.01     13.01       0.0
                         SSFP_E1F_13                   NO     13.01     13.01       0.0
                         SSFP_E1F_14                   NO     13.01     13.01       0.0
                         SSFP_E1F_15                   NO     13.01     13.01       0.0
                         SSFP_E1F_16                   NO     13.01     13.01       0.0
                         SSFP_E1F_17                   NO     13.01     13.01       0.0
                         SSFP_E1F_18                   NO     13.01     13.01       0.0
                         SSFP_E1F_19                   NO     13.01     13.01       0.0
                         SSFP_E1F_2                    NO     13.01     13.01       0.0
                         SSFP_E1F_20                   NO     13.01     13.01       0.0
                         SSFP_E1F_21                   NO     13.01     13.01       0.0
```

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                        SSFP_E1F_22                  NO    13.01   13.01     0.0
                        SSFP_E1F_23                  NO    13.01   13.01     0.0
                        SSFP_E1F_24                  NO    13.01   13.01     0.0
                        SSFP_E1F_25                  NO    13.01   13.01     0.0
                        SSFP_E1F_26                  NO    13.01   13.01     0.0
                        SSFP_E1F_27                  NO    13.01   13.01     0.0
                        SSFP_E1F_28                  NO    13.01   13.01     0.0
                        SSFP_E1F_29                  NO    13.01   13.01     0.0
                        SSFP_E1F_3                   NO    13.01   13.01     0.0
                        SSFP_E1F_30                  NO    13.01   13.01     0.0
                        SSFP_E1F_31                  NO    13.01   13.01     0.0
                        SSFP_E1F_4                   NO    13.01   13.01     0.0
                        SSFP_E1F_5                   NO    13.01   13.01     0.0
                        SSFP_E1F_6                   NO    13.01   13.01     0.0
                        SSFP_E1F_7                   NO    13.01   13.01     0.0
                        SSFP_E1F_8                   NO    13.01   13.01     0.0
                        SSFP_E1F_9                   NO    13.01   13.01     0.0
                        SSFP_OC3_STM1_0              NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_1              NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_10             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_11             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_12             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_13             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_14             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_15             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_16             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_17             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_18             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_19             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_2              NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_20             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_21             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_22             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_23             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_24             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_25             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_26             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_27             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_28             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_29             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_3              NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_30             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_31             NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_4              NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_5              NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_6              NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_7              NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_8              NO    12.01   12.01     0.0
                        SSFP_OC3_STM1_9              NO    12.01   12.01     0.0

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

Auto-upgrade:Enabled

                                                                 FPD Versions
                                                                 ==============
Location    Card type            HWver FPD device      ATR Status    Running   Programd
--------------------------------------------------------------------------------------
0/RP0       N540-ACC-SYS         1.0   MB-MIFPGA           CURRENT    0.05      0.05
0/RP0       N540-ACC-SYS         1.0   Bootloader          CURRENT    1.16      1.16
0/RP0       N540-ACC-SYS         1.0   CPU-IOFPGA          CURRENT    0.10      0.10
0/RP0       N540-ACC-SYS         1.0   MB-IOFPGA           CURRENT    0.23      0.23
0/RP0       N540-ACC-SYS         1.0   SATA-M500IT-MU-B    CURRENT    4.00      4.00
0/PM0       N540-PWR400-A        1.256 LIT-PriMCU-ACFW     CURRENT    0.04      0.04
0/PM0       N540-PWR400-A        1.256 LIT-SecMCU-ACFW     CURRENT    0.07      0.07
```

```
0/PM1        N540-PWR400-A        1.0   SDG-PriMCU-ACFW     CURRENT    0.00       0.00
0/PM1        N540-PWR400-A        1.0   SDG-SecMCU-ACFW     CURRENT    0.00       0.00
```

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:Router#show fpd package

============================== ====================================================
                               Field Programmable Device Package
                               ====================================================
                                         Req   SW      Min Req  Min Req
Card Type           FPD Description      Reload Ver    SW Ver   Board Ver
================== ========================= ====== ======= ======== =========
--------------------------------------------------------------------------------
N540-12Z20G-SYS-A   ADMConfig             YES   1.05    1.05     0.0
                    IoFpga                YES   2.07    2.07     0.0
                    IoFpgaGolden          YES   2.07    2.03     0.0
                    Primary-BIOS          YES   1.33    1.33     0.0
                    StdbyFpga             YES   0.40    0.40     0.0
                    StdbyFpgaGolden       YES   0.40    0.40     0.0
                    TamFw                 YES   4.11    4.11     0.0
                    TamFwGolden           YES   4.11    4.11     0.0
--------------------------------------------------------------------------------
N540-12Z20G-SYS-D   ADMConfig             YES   1.05    1.05     0.0
                    IoFpga                YES   2.07    2.07     0.0
                    IoFpgaGolden          YES   2.07    2.03     0.0
                    Primary-BIOS          YES   1.33    1.33     0.0
                    StdbyFpga             YES   0.40    0.40     0.0
                    StdbyFpgaGolden       YES   0.40    0.40     0.0
                    TamFw                 YES   4.11    4.11     0.0
                    TamFwGolden           YES   4.11    4.11     0.0
--------------------------------------------------------------------------------
N540-24Q8L2DD-SYS   ADM-DBConfig          YES   2.03    2.03     0.0
                    ADM-MBConfig          YES   2.01    2.01     0.0
                    IoFpga                YES   2.12    2.12     0.0
                    IoFpgaGolden          YES   2.12    2.12     0.0
                    Primary-BIOS          YES   1.08    1.08     0.0
                    StdbyFpga             YES   2.59    2.59     0.0
                    StdbyFpgaGolden       YES   2.56    2.39     0.0
                    TamFw                 YES   6.05    6.05     0.0
                    TamFwGolden           YES   6.05    6.05     0.0
--------------------------------------------------------------------------------
N540-28Z4C-SYS-A    ADMConfig             YES   1.05    1.05     0.0
                    IoFpga                YES   2.07    2.07     0.0
                    IoFpgaGolden          YES   2.07    2.03     0.0
                    Primary-BIOS          YES   1.33    1.33     0.0
                    StdbyFpga             YES   0.40    0.40     0.0
                    StdbyFpgaGolden       YES   0.40    0.40     0.0
                    TamFw                 YES   4.11    4.11     0.0
                    TamFwGolden           YES   4.11    4.11     0.0
--------------------------------------------------------------------------------
N540-28Z4C-SYS-D    ADMConfig             YES   1.05    1.05     0.0
                    IoFpga                YES   2.07    2.07     0.0
                    IoFpgaGolden          YES   2.07    2.03     0.0
                    Primary-BIOS          YES   1.33    1.33     0.0
                    StdbyFpga             YES   0.40    0.40     0.0
                    StdbyFpgaGolden       YES   0.40    0.40     0.0
                    TamFw                 YES   4.11    4.11     0.0
                    TamFwGolden           YES   4.11    4.11     0.0
--------------------------------------------------------------------------------
N540-FH-AGG-SYS     ADM1_Config           YES   1.02    1.02     1.0
                    ADM2_Config           YES   1.02    1.02     1.0
```

```
                        DpFpgaCpri              YES     0.22    0.22    0.0
                        DpFpgaEth               YES     1.20    1.20    0.0
                        IoFpga                  YES     1.30    1.30    0.0
                        IoFpgaGolden            YES     1.30    1.30    0.0
                        Primary-BIOS            YES     1.33    1.33    0.0
                        StdbyFpga               YES     0.46    0.46    0.0
                        StdbyFpgaGolden         YES     0.46    0.46    0.0
                        TamFw                   YES     6.05    6.05    0.0
                        TamFwGolden             YES     6.05    6.05    0.0
-------------------------------------------------------------------------------
N540-FH-CSR-SYS         ADM1_Config             YES     0.09    0.09    0.0
                        ADM1_Config             YES     1.01    1.01    2.0
                        ADM2_Config             YES     0.09    0.09    0.0
                        ADM2_Config             YES     1.01    1.01    2.0
                        DpFpga                  YES     0.21    0.21    0.0
                        IoFpga                  YES     1.30    1.30    0.0
                        IoFpgaGolden            YES     1.30    1.30    0.0
                        Primary-BIOS            YES     1.33    1.33    0.0
                        StdbyFpga               YES     0.46    0.46    0.0
                        StdbyFpgaGolden         YES     0.46    0.46    0.0
                        TamFw                   YES     6.05    6.05    0.0
                        TamFwGolden             YES     6.05    6.05    0.0
-------------------------------------------------------------------------------
N540-PWR400-A           LI-PrimMCU              NO      0.04    0.04    0.0
                        LI-SecMCU               NO      0.06    0.06    0.0
                        PrimMCU                 NO      1.02    1.02    0.0
                        SecMCU                  NO      1.03    1.03    0.0
-------------------------------------------------------------------------------
N540-PWR400-D           LI-PrimMCU              NO      0.04    0.04    0.0
                        LI-SecMCU               NO      0.06    0.06    0.0
                        PrimMCU                 NO      1.03    1.03    0.0
                        SecMCU                  NO      1.03    1.03    0.0
-------------------------------------------------------------------------------
N540-PWR750-A           EM-PrimMCU              NO      1.02    1.02    0.0
                        EM-SecMCU               NO      1.03    1.03    0.0
-------------------------------------------------------------------------------
N540-PWR750-D           EM-PrimMCU              NO      1.03    1.03    0.0
                        EM-SecMCU               NO      3.01    3.01    0.0
-------------------------------------------------------------------------------
N540X-12Z16G-SYS-A      ADMConfig               YES     1.05    1.05    0.0
                        IoFpga                  YES     2.07    2.07    0.0
                        IoFpgaGolden            YES     2.07    2.03    0.0
                        Primary-BIOS            YES     1.33    1.33    0.0
                        StdbyFpga               YES     0.40    0.40    0.0
                        StdbyFpgaGolden         YES     0.40    0.40    0.0
                        TamFw                   YES     4.11    4.11    0.0
                        TamFwGolden             YES     4.11    4.11    0.0
-------------------------------------------------------------------------------
N540X-12Z16G-SYS-D      ADMConfig               YES     1.05    1.05    0.0
                        IoFpga                  YES     2.07    2.07    0.0
                        IoFpgaGolden            YES     2.07    2.03    0.0
                        Primary-BIOS            YES     1.33    1.33    0.0
                        StdbyFpga               YES     0.40    0.40    0.0
                        StdbyFpgaGolden         YES     0.40    0.40    0.0
                        TamFw                   YES     4.11    4.11    0.0
                        TamFwGolden             YES     4.11    4.11    0.0
-------------------------------------------------------------------------------
N540X-16Z4G8Q2C-A       ADMConfig               YES     1.05    1.05    0.0
                        IoFpga                  YES     2.07    2.07    0.0
                        IoFpgaGolden            YES     2.07    2.03    0.0
                        Primary-BIOS            YES     1.33    1.33    0.0
                        StdbyFpga               YES     0.40    0.40    0.0
                        StdbyFpgaGolden         YES     0.40    0.40    0.0
                        TamFw                   YES     4.11    4.11    0.0
```

```
                          TamFwGolden              YES    4.11     4.11      0.0
---------------------------------------------------------------------------------
N540X-16Z4G8Q2C-D   ADMConfig                      YES    1.05     1.05      0.0
                    IoFpga                          YES    2.07     2.07      0.0
                    IoFpgaGolden                    YES    2.07     2.03      0.0
                    Primary-BIOS                    YES    1.33     1.33      0.0
                    StdbyFpga                       YES    0.40     0.40      0.0
                    StdbyFpgaGolden                 YES    0.40     0.40      0.0
                    TamFw                           YES    4.11     4.11      0.0
                    TamFwGolden                     YES    4.11     4.11      0.0

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

Auto-upgrade:Enabled
Attribute codes: B golden, P protect, S secure
                                                                    FPD Versions
                                                                    ==============
Location  Card type           HWver FPD device     ATR Status   Running Programd
Reload Loc
---------------------------------------------------------------------------------
0/RP0/CPU0 N540X-16Z4G8Q2C-A  0.2   ADMConfig           CURRENT    1.05    1.05
   0/RP0
0/RP0/CPU0 N540X-16Z4G8Q2C-A  0.2   IoFpga              CURRENT    2.07    2.07
   0/RP0
0/RP0/CPU0 N540X-16Z4G8Q2C-A  0.2   IoFpgaGolden    B   CURRENT            2.03
   0/RP0
0/RP0/CPU0 N540X-16Z4G8Q2C-A  0.2   Primary-BIOS    S   CURRENT    1.33    1.33
   0/RP0
0/RP0/CPU0 N540X-16Z4G8Q2C-A  0.2   StdbyFpga       S   CURRENT    0.40    0.40
   0/RP0
0/RP0/CPU0 N540X-16Z4G8Q2C-A  0.2   StdbyFpgaGolden BS  NEED UPGD          0.00
   0/RP0
0/RP0/CPU0 N540X-16Z4G8Q2C-A  0.2   TamFw           S   CURRENT    4.11    4.11
   0/RP0
0/RP0/CPU0 N540X-16Z4G8Q2C-A  0.2   TamFwGolden     BS  NEED UPGD          0.00
   0/RP0
```

Log in to the router and enter the **show fpd package** and **show hw-module fpd** commands on the Cisco N540-24Q8L2DD-SYS variant:

```
RP/0/RP0/CPU0:Router# show fpd package

================================ =====================================================
                                 Field Programmable Device Package
                                 ====================================================
                                         Req    SW      Min Req  Min Req
Card Type            FPD Description     Reload Ver     SW Ver   Board Ver
=================== ========================= ====== ======= ======== =========
-----------------------------------------------------------------------------
N540-12Z20G-SYS-A   ADMConfig                  YES    1.05     1.05      0.0
                    IoFpga                      YES    2.07     2.07      0.0
                    IoFpgaGolden                YES    2.07     2.03      0.0
                    Primary-BIOS                YES    1.33     1.33      0.0
                    StdbyFpga                   YES    0.40     0.40      0.0
                    StdbyFpgaGolden             YES    0.40     0.40      0.0
                    TamFw                       YES    4.11     4.11      0.0
                    TamFwGolden                 YES    4.11     4.11      0.0
-----------------------------------------------------------------------------
N540-12Z20G-SYS-D   ADMConfig                  YES    1.05     1.05      0.0
                    IoFpga                      YES    2.07     2.07      0.0
                    IoFpgaGolden                YES    2.07     2.03      0.0
                    Primary-BIOS                YES    1.33     1.33      0.0
                    StdbyFpga                   YES    0.40     0.40      0.0
                    StdbyFpgaGolden             YES    0.40     0.40      0.0
                    TamFw                       YES    4.11     4.11      0.0
```

```
                            TamFwGolden              YES      4.11     4.11     0.0
        -----------------------------------------------------------------------------
        N540-24Q8L2DD-SYS   ADM-DBConfig             YES      2.03     2.03     0.0
                            ADM-MBConfig             YES      2.01     2.01     0.0
                            IoFpga                   YES      2.12     2.12     0.0
                            IoFpgaGolden             YES      2.12     2.12     0.0
                            Primary-BIOS             YES      1.08     1.08     0.0
                            StdbyFpga                YES      2.59     2.59     0.0
                            StdbyFpgaGolden          YES      2.56     2.39     0.0
                            TamFw                    YES      6.05     6.05     0.0
                            TamFwGolden              YES      6.05     6.05     0.0
        -----------------------------------------------------------------------------
        N540-28Z4C-SYS-A    ADMConfig                YES      1.05     1.05     0.0
                            IoFpga                   YES      2.07     2.07     0.0
                            IoFpgaGolden             YES      2.07     2.03     0.0
                            Primary-BIOS             YES      1.33     1.33     0.0
                            StdbyFpga                YES      0.40     0.40     0.0
                            StdbyFpgaGolden          YES      0.40     0.40     0.0
                            TamFw                    YES      4.11     4.11     0.0
                            TamFwGolden              YES      4.11     4.11     0.0
        -----------------------------------------------------------------------------
        N540-28Z4C-SYS-D    ADMConfig                YES      1.05     1.05     0.0
                            IoFpga                   YES      2.07     2.07     0.0
                            IoFpgaGolden             YES      2.07     2.03     0.0
                            Primary-BIOS             YES      1.33     1.33     0.0
                            StdbyFpga                YES      0.40     0.40     0.0
                            StdbyFpgaGolden          YES      0.40     0.40     0.0
                            TamFw                    YES      4.11     4.11     0.0
                            TamFwGolden              YES      4.11     4.11     0.0
        -----------------------------------------------------------------------------
        N540-FH-AGG-SYS     ADM1_Config              YES      1.02     1.02     1.0
                            ADM2_Config              YES      1.02     1.02     1.0
                            DpFpgaCpri               YES      0.22     0.22     0.0
                            DpFpgaEth                YES      1.20     1.20     0.0
                            IoFpga                   YES      1.30     1.30     0.0
                            IoFpgaGolden             YES      1.30     1.30     0.0
                            Primary-BIOS             YES      1.33     1.33     0.0
                            StdbyFpga                YES      0.46     0.46     0.0
                            StdbyFpgaGolden          YES      0.46     0.46     0.0
                            TamFw                    YES      6.05     6.05     0.0
                            TamFwGolden              YES      6.05     6.05     0.0
        -----------------------------------------------------------------------------
        N540-FH-CSR-SYS     ADM1_Config              YES      0.09     0.09     0.0
                            ADM1_Config              YES      1.01     1.01     2.0
                            ADM2_Config              YES      0.09     0.09     0.0
                            ADM2_Config              YES      1.01     1.01     2.0
                            DpFpga                   YES      0.21     0.21     0.0
                            IoFpga                   YES      1.30     1.30     0.0
                            IoFpgaGolden             YES      1.30     1.30     0.0
                            Primary-BIOS             YES      1.33     1.33     0.0
                            StdbyFpga                YES      0.46     0.46     0.0
                            StdbyFpgaGolden          YES      0.46     0.46     0.0
                            TamFw                    YES      6.05     6.05     0.0
                            TamFwGolden              YES      6.05     6.05     0.0
        -----------------------------------------------------------------------------
        N540-PWR400-A       LI-PrimMCU               NO       0.04     0.04     0.0
                            LI-SecMCU                NO       0.06     0.06     0.0
                            PrimMCU                  NO       1.02     1.02     0.0
                            SecMCU                   NO       1.03     1.03     0.0
        -----------------------------------------------------------------------------
        N540-PWR400-D       LI-PrimMCU               NO       0.04     0.04     0.0
                            LI-SecMCU                NO       0.06     0.06     0.0
                            PrimMCU                  NO       1.03     1.03     0.0
                            SecMCU                   NO       1.03     1.03     0.0
```

```
--------------------------------------------------------------------------------
N540-PWR750-A        EM-PrimMCU                   NO    1.02    1.02    0.0
                     EM-SecMCU                    NO    1.03    1.03    0.0
--------------------------------------------------------------------------------
N540-PWR750-D        EM-PrimMCU                   NO    1.03    1.03    0.0
                     EM-SecMCU                    NO    3.01    3.01    0.0
--------------------------------------------------------------------------------
N540X-12Z16G-SYS-A   ADMConfig                    YES   1.05    1.05    0.0
                     IoFpga                       YES   2.07    2.07    0.0
                     IoFpgaGolden                 YES   2.07    2.03    0.0
                     Primary-BIOS                 YES   1.33    1.33    0.0
                     StdbyFpga                    YES   0.40    0.40    0.0
                     StdbyFpgaGolden              YES   0.40    0.40    0.0
                     TamFw                        YES   4.11    4.11    0.0
                     TamFwGolden                  YES   4.11    4.11    0.0
--------------------------------------------------------------------------------
N540X-12Z16G-SYS-D   ADMConfig                    YES   1.05    1.05    0.0
                     IoFpga                       YES   2.07    2.07    0.0
                     IoFpgaGolden                 YES   2.07    2.03    0.0
                     Primary-BIOS                 YES   1.33    1.33    0.0
                     StdbyFpga                    YES   0.40    0.40    0.0
                     StdbyFpgaGolden              YES   0.40    0.40    0.0
                     TamFw                        YES   4.11    4.11    0.0
                     TamFwGolden                  YES   4.11    4.11    0.0
--------------------------------------------------------------------------------
N540X-16Z4G8Q2C-A    ADMConfig                    YES   1.05    1.05    0.0
                     IoFpga                       YES   2.07    2.07    0.0
                     IoFpgaGolden                 YES   2.07    2.03    0.0
                     Primary-BIOS                 YES   1.33    1.33    0.0
                     StdbyFpga                    YES   0.40    0.40    0.0
                     StdbyFpgaGolden              YES   0.40    0.40    0.0
                     TamFw                        YES   4.11    4.11    0.0
                     TamFwGolden                  YES   4.11    4.11    0.0
--------------------------------------------------------------------------------
N540X-16Z4G8Q2C-D    ADMConfig                    YES   1.05    1.05    0.0
                     IoFpga                       YES   2.07    2.07    0.0
                     IoFpgaGolden                 YES   2.07    2.03    0.0
                     Primary-BIOS                 YES   1.33    1.33    0.0
                     StdbyFpga                    YES   0.40    0.40    0.0
                     StdbyFpgaGolden              YES   0.40    0.40    0.0
                     TamFw                        YES   4.11    4.11    0.0
                     TamFwGolden                  YES   4.11    4.11    0.0

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

Auto-upgrade:Enabled
Attribute codes: B golden, P protect, S secure
                                                                 FPD Versions
                                                                 ==============
Location   Card type           HWver FPD device      ATR Status   Running Programd
Reload Loc
--------------------------------------------------------------------------------
0/RP0/CPU0 N540-24Q8L2DD-SYS   2.0   ADM-DBConfig         NEED UPGD 1.51    1.51
  0/RP0
0/RP0/CPU0 N540-24Q8L2DD-SYS   2.0   ADM-MBConfig         CURRENT   2.01    2.01
  0/RP0
0/RP0/CPU0 N540-24Q8L2DD-SYS   2.0   IoFpga               CURRENT   2.12    2.12
  0/RP0
0/RP0/CPU0 N540-24Q8L2DD-SYS   2.0   IoFpgaGolden     B   NEED UPGD         2.10
  0/RP0
0/RP0/CPU0 N540-24Q8L2DD-SYS   2.0   Primary-BIOS     S   CURRENT   1.08    1.08
  0/RP0
0/RP0/CPU0 N540-24Q8L2DD-SYS   2.0   StdbyFpga        S   CURRENT   2.59    2.59
  0/RP0
0/RP0/CPU0 N540-24Q8L2DD-SYS   2.0   StdbyFpgaGolden  BS  NEED UPGD         0.00
```

```
  0/RP0
0/RP0/CPU0 N540-24Q8L2DD-SYS    2.0    TamFw            S   CURRENT     6.05    6.05
  0/RP0
0/RP0/CPU0 N540-24Q8L2DD-SYS    2.0    TamFwGolden      BS  NEED UPGD           0.00
  0/RP0
0/PM0      N540-PWR400-A         0.0    PrimMCU              CURRENT     1.02    1.02
NOT REQ
0/PM0      N540-PWR400-A         0.0    SecMCU               CURRENT     1.03    1.03
NOT REQ
```

Log in to the router and enter the **show fpd package** and **show hw-module fpd** commands on the Cisco N540X-4Z14G2Q-A/D variants:

```
RP/0/RP0/CPU0:Router# show fpd package
```

```
============================== ===================================================
                               Field Programmable Device Package
                               ===================================================
                               Req   SW      Min Req  Min Req
Card Type          FPD Description            Reload  Ver     SW Ver   Board Ver
================== ========================= ====== ======= ======== =========
-----------------------------------------------------------------------------
N540-6Z14G-SYS-D   ADMConfig                  YES    5.03    5.03     0.0
                   BckUp-BootLoader           YES   20.04   20.04     0.0
                   IoFpga                     YES    0.17    0.17     0.0
                   IoFpgaGolden               YES    0.15    0.15     0.0
                   Prim-BootLoader            YES   20.04   20.04     0.0
                   StdbyFpga                  YES    1.09    1.09     0.0
                   StdbyFpgaGolden            YES    0.33    0.33     0.0
                   TamFw                      YES    6.05    6.05     0.0
                   TamFwGolden                YES    6.05    6.05     0.0
-----------------------------------------------------------------------------
N540X-4Z14G2Q-A    ADMConfig                  YES    5.00    5.00     0.0
                   BckUp-BootLoader           YES   20.04   20.04     0.0
                   IoFpga                     YES    0.17    0.17     0.0
                   IoFpgaGolden               YES    0.15    0.15     0.0
                   Prim-BootLoader            YES   20.04   20.04     0.0
                   StdbyFpga                  YES    1.09    1.09     0.0
                   StdbyFpgaGolden            YES    0.33    0.33     0.0
                   TamFw                      YES    6.05    6.05     0.0
                   TamFwGolden                YES    6.05    6.05     0.0
-----------------------------------------------------------------------------
N540X-4Z14G2Q-D    ADMConfig                  YES    5.00    5.00     0.0
                   BckUp-BootLoader           YES   20.04   20.04     0.0
                   IoFpga                     YES    0.17    0.17     0.0
                   IoFpgaGolden               YES    0.15    0.15     0.0
                   Prim-BootLoader            YES   20.04   20.04     0.0
                   StdbyFpga                  YES    1.09    1.09     0.0
                   StdbyFpgaGolden            YES    0.33    0.33     0.0
                   TamFw                      YES    6.05    6.05     0.0
                   TamFwGolden                YES    6.05    6.05     0.0
-----------------------------------------------------------------------------
N540X-6Z18G-SYS-A  ADMConfig                  YES    5.00    5.00     0.0
                   BckUp-BootLoader           YES   20.04   20.04     0.0
                   IoFpga                     YES    0.17    0.17     0.0
                   IoFpgaGolden               YES    0.15    0.15     0.0
                   Prim-BootLoader            YES   20.04   20.04     0.0
                   StdbyFpga                  YES    1.09    1.09     0.0
                   StdbyFpgaGolden            YES    0.33    0.33     0.0
                   TamFw                      YES    6.05    6.05     0.0
                   TamFwGolden                YES    6.05    6.05     0.0
-----------------------------------------------------------------------------
N540X-6Z18G-SYS-D  ADMConfig                  YES    5.00    5.00     0.0
                   BckUp-BootLoader           YES   20.04   20.04     0.0
                   IoFpga                     YES    0.17    0.17     0.0
```

```
                       IoFpgaGolden              YES      0.15     0.15       0.0
                       Prim-BootLoader           YES     20.04    20.04       0.0
                       StdbyFpga                 YES      1.09     1.09       0.0
                       StdbyFpgaGolden           YES      0.33     0.33       0.0
                       TamFw                     YES      6.05     6.05       0.0
                       TamFwGolden               YES      6.05     6.05       0.0
--------------------------------------------------------------------------------
N540X-8Z16G-SYS-A      ADMConfig                 YES      5.00     5.00       0.0
                       BckUp-BootLoader          YES     20.04    20.04       0.0
                       IoFpga                    YES      0.17     0.17       0.0
                       IoFpgaGolden              YES      0.15     0.15       0.0
                       Prim-BootLoader           YES     20.04    20.04       0.0
                       StdbyFpga                 YES      1.09     1.09       0.0
                       StdbyFpgaGolden           YES      0.33     0.33       0.0
                       TamFw                     YES      6.05     6.05       0.0
                       TamFwGolden               YES      6.05     6.05       0.0
--------------------------------------------------------------------------------
N540X-8Z16G-SYS-D      ADMConfig                 YES      5.00     5.00       0.0
                       BckUp-BootLoader          YES     20.04    20.04       0.0
                       IoFpga                    YES      0.17     0.17       0.0
                       IoFpgaGolden              YES      0.15     0.15       0.0
                       Prim-BootLoader           YES     20.04    20.04       0.0
                       StdbyFpga                 YES      1.09     1.09       0.0
                       StdbyFpgaGolden           YES      0.33     0.33       0.0
                       TamFw                     YES      6.05     6.05       0.0
                       TamFwGolden               YES      6.05     6.05       0.0

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


Auto-upgrade:Enabled
Attribute codes: B golden, P protect, S secure
                                                                  FPD Versions
                                                                  ==============
Location     Card type              HWver FPD device      ATR Status   Running Programd
Reload Loc
--------------------------------------------------------------------------------
0/RP0/CPU0 N540X-4Z14G2Q-A    0.3   ADMConfig            CURRENT    5.00    5.00
  0/RP0
0/RP0/CPU0 N540X-4Z14G2Q-A    0.3   IoFpga               CURRENT    0.17    0.17
  0/RP0
0/RP0/CPU0 N540X-4Z14G2Q-A    0.3   IoFpgaGolden     B   CURRENT            0.15
  0/RP0
0/RP0/CPU0 N540X-4Z14G2Q-A    0.3   Prim-BootLoader      CURRENT   20.05   20.05
  0/RP0
0/RP0/CPU0 N540X-4Z14G2Q-A    0.3   StdbyFpga        S   CURRENT    1.09    1.09
  0/RP0
0/RP0/CPU0 N540X-4Z14G2Q-A    0.3   StdbyFpgaGolden  BS  NEED UPGD          0.30
  0/RP0
0/RP0/CPU0 N540X-4Z14G2Q-A    0.3   TamFw            S   CURRENT    6.05    6.05
  0/RP0
0/RP0/CPU0 N540X-4Z14G2Q-A    0.3   TamFwGolden      BS  CURRENT            6.05
  0/RP0
```

Log in to the router and enter the **show fpd package** and **show hw-module fpd** commands on the Cisco N540-FH-CSR-SYS variant:

```
RP/0/RP0/CPU0:Router# show fpd package


=============================== =================================================
                                      Field Programmable Device Package
                                ==================================================
                                    Req    SW      Min Req   Min Req
Card Type               FPD Description    Reload Ver    SW Ver   Board Ver
==================  ========================  ======  =======  ========  =========
--------------------------------------------------------------------------------
```

```
N540-12Z20G-SYS-A    ADMConfig            YES    1.05    1.05    0.0
                     IoFpga               YES    2.07    2.07    0.0
                     IoFpgaGolden         YES    2.07    2.03    0.0
                     Primary-BIOS         YES    1.33    1.33    0.0
                     StdbyFpga            YES    0.40    0.40    0.0
                     StdbyFpgaGolden      YES    0.40    0.40    0.0
                     TamFw                YES    4.11    4.11    0.0
                     TamFwGolden          YES    4.11    4.11    0.0
-------------------------------------------------------------------------------
N540-12Z20G-SYS-D    ADMConfig            YES    1.05    1.05    0.0
                     IoFpga               YES    2.07    2.07    0.0
                     IoFpgaGolden         YES    2.07    2.03    0.0
                     Primary-BIOS         YES    1.33    1.33    0.0
                     StdbyFpga            YES    0.40    0.40    0.0
                     StdbyFpgaGolden      YES    0.40    0.40    0.0
                     TamFw                YES    4.11    4.11    0.0
                     TamFwGolden          YES    4.11    4.11    0.0
-------------------------------------------------------------------------------
N540-24Q8L2DD-SYS    ADM-DBConfig         YES    2.03    2.03    0.0
                     ADM-MBConfig         YES    2.01    2.01    0.0
                     IoFpga               YES    2.12    2.12    0.0
                     IoFpgaGolden         YES    2.12    2.12    0.0
                     Primary-BIOS         YES    1.08    1.08    0.0
                     StdbyFpga            YES    2.59    2.59    0.0
                     StdbyFpgaGolden      YES    2.56    2.39    0.0
                     TamFw                YES    6.05    6.05    0.0
                     TamFwGolden          YES    6.05    6.05    0.0
-------------------------------------------------------------------------------
N540-28Z4C-SYS-A     ADMConfig            YES    1.05    1.05    0.0
                     IoFpga               YES    2.07    2.07    0.0
                     IoFpgaGolden         YES    2.07    2.03    0.0
                     Primary-BIOS         YES    1.33    1.33    0.0
                     StdbyFpga            YES    0.40    0.40    0.0
                     StdbyFpgaGolden      YES    0.40    0.40    0.0
                     TamFw                YES    4.11    4.11    0.0
                     TamFwGolden          YES    4.11    4.11    0.0
-------------------------------------------------------------------------------
N540-28Z4C-SYS-D     ADMConfig            YES    1.05    1.05    0.0
                     IoFpga               YES    2.07    2.07    0.0
                     IoFpgaGolden         YES    2.07    2.03    0.0
                     Primary-BIOS         YES    1.33    1.33    0.0
                     StdbyFpga            YES    0.40    0.40    0.0
                     StdbyFpgaGolden      YES    0.40    0.40    0.0
                     TamFw                YES    4.11    4.11    0.0
                     TamFwGolden          YES    4.11    4.11    0.0
-------------------------------------------------------------------------------
N540-FH-AGG-SYS      ADM1_Config          YES    1.02    1.02    1.0
                     ADM2_Config          YES    1.02    1.02    1.0
                     DpFpgaCpri           YES    0.22    0.22    0.0
                     DpFpgaEth            YES    1.20    1.20    0.0
                     IoFpga               YES    1.30    1.30    0.0
                     IoFpgaGolden         YES    1.30    1.30    0.0
                     Primary-BIOS         YES    1.33    1.33    0.0
                     StdbyFpga            YES    0.46    0.46    0.0
                     StdbyFpgaGolden      YES    0.46    0.46    0.0
                     TamFw                YES    6.05    6.05    0.0
                     TamFwGolden          YES    6.05    6.05    0.0
-------------------------------------------------------------------------------
N540-FH-CSR-SYS      ADM1_Config          YES    0.09    0.09    0.0
                     ADM1_Config          YES    1.01    1.01    2.0
                     ADM2_Config          YES    0.09    0.09    0.0
                     ADM2_Config          YES    1.01    1.01    2.0
                     DpFpga               YES    0.21    0.21    0.0
                     IoFpga               YES    1.30    1.30    0.0
```

```
                          IoFpgaGolden              YES     1.30      1.30      0.0
                          Primary-BIOS              YES     1.33      1.33      0.0
                          StdbyFpga                 YES     0.46      0.46      0.0
                          StdbyFpgaGolden           YES     0.46      0.46      0.0
                          TamFw                     YES     6.05      6.05      0.0
                          TamFwGolden               YES     6.05      6.05      0.0
--------------------------------------------------------------------------------
N540-PWR400-A             LI-PrimMCU                NO      0.04      0.04      0.0
                          LI-SecMCU                 NO      0.06      0.06      0.0
                          PrimMCU                   NO      1.02      1.02      0.0
                          SecMCU                    NO      1.03      1.03      0.0
--------------------------------------------------------------------------------
N540-PWR400-D             LI-PrimMCU                NO      0.04      0.04      0.0
                          LI-SecMCU                 NO      0.06      0.06      0.0
                          PrimMCU                   NO      1.03      1.03      0.0
                          SecMCU                    NO      1.03      1.03      0.0
--------------------------------------------------------------------------------
N540-PWR750-A             EM-PrimMCU                NO      1.02      1.02      0.0
                          EM-SecMCU                 NO      1.03      1.03      0.0
--------------------------------------------------------------------------------
N540-PWR750-D             EM-PrimMCU                NO      1.03      1.03      0.0
                          EM-SecMCU                 NO      3.01      3.01      0.0
--------------------------------------------------------------------------------
N540X-12Z16G-SYS-A        ADMConfig                 YES     1.05      1.05      0.0
                          IoFpga                    YES     2.07      2.07      0.0
                          IoFpgaGolden              YES     2.07      2.03      0.0
                          Primary-BIOS              YES     1.33      1.33      0.0
                          StdbyFpga                 YES     0.40      0.40      0.0
                          StdbyFpgaGolden           YES     0.40      0.40      0.0
                          TamFw                     YES     4.11      4.11      0.0
                          TamFwGolden               YES     4.11      4.11      0.0
--------------------------------------------------------------------------------
N540X-12Z16G-SYS-D        ADMConfig                 YES     1.05      1.05      0.0
                          IoFpga                    YES     2.07      2.07      0.0
                          IoFpgaGolden              YES     2.07      2.03      0.0
                          Primary-BIOS              YES     1.33      1.33      0.0
                          StdbyFpga                 YES     0.40      0.40      0.0
                          StdbyFpgaGolden           YES     0.40      0.40      0.0
                          TamFw                     YES     4.11      4.11      0.0
                          TamFwGolden               YES     4.11      4.11      0.0
--------------------------------------------------------------------------------
N540X-16Z4G8Q2C-A         ADMConfig                 YES     1.05      1.05      0.0
                          IoFpga                    YES     2.07      2.07      0.0
                          IoFpgaGolden              YES     2.07      2.03      0.0
                          Primary-BIOS              YES     1.33      1.33      0.0
                          StdbyFpga                 YES     0.40      0.40      0.0
                          StdbyFpgaGolden           YES     0.40      0.40      0.0
                          TamFw                     YES     4.11      4.11      0.0
                          TamFwGolden               YES     4.11      4.11      0.0
--------------------------------------------------------------------------------
N540X-16Z4G8Q2C-D         ADMConfig                 YES     1.05      1.05      0.0
                          IoFpga                    YES     2.07      2.07      0.0
                          IoFpgaGolden              YES     2.07      2.03      0.0
                          Primary-BIOS              YES     1.33      1.33      0.0
                          StdbyFpga                 YES     0.40      0.40      0.0
                          StdbyFpgaGolden           YES     0.40      0.40      0.0
                          TamFw                     YES     4.11      4.11      0.0
                          TamFwGolden               YES     4.11      4.11      0.0

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

Auto-upgrade:Enabled
Attribute codes: B golden, P protect, S secure
                                                            FPD Versions
                                                            ==============
```

```
Location      Card type            HWver FPD device       ATR Status    Running Programd
Reload Loc
--------------------------------------------------------------------------------------------
0/RP0/CPU0 N540-FH-CSR-SYS         1.0   ADM1_Config           CURRENT    0.09    0.09
   0/RP0
0/RP0/CPU0 N540-FH-CSR-SYS         1.0   ADM2_Config           CURRENT    0.09    0.09
   0/RP0
0/RP0/CPU0 N540-FH-CSR-SYS         1.0   DpFpga                CURRENT    0.21    0.21
   0/RP0
0/RP0/CPU0 N540-FH-CSR-SYS         1.0   IoFpga                CURRENT    1.30    1.30
   0/RP0
0/RP0/CPU0 N540-FH-CSR-SYS         1.0   IoFpgaGolden      B   NEED UPGD          1.23
   0/RP0
0/RP0/CPU0 N540-FH-CSR-SYS         1.0   Primary-BIOS      S   CURRENT    1.33    1.33
   0/RP0
0/RP0/CPU0 N540-FH-CSR-SYS         1.0   StdbyFpga         S   CURRENT    0.46    0.46
   0/RP0
0/RP0/CPU0 N540-FH-CSR-SYS         1.0   StdbyFpgaGolden   BS  NEED UPGD          0.43
   0/RP0
0/RP0/CPU0 N540-FH-CSR-SYS         1.0   TamFw             S   CURRENT    6.05    6.05
   0/RP0
0/RP0/CPU0 N540-FH-CSR-SYS         1.0   TamFwGolden       BS  CURRENT            6.05
   0/RP0
0/PM1      N540-PWR400-A           0.0   PrimMCU               NEED UPGD  0.02    0.02
NOT REQ
0/PM1      N540-PWR400-A           0.0   SecMCU                NEED UPGD  0.02    0.02
NOT REQ
```

Important Notes

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 N540-24Z8Q2C-SYS, N540X-ACC-SYS, and N540-ACC-SYS variants is available along with the software image in *NCS540-docs-7.6.2.tar* file.

The upgrade document for N540-28Z4C-SYS-A/D, N540-12Z20G-SYS-A/D, N540X-12Z16G-SYS-A/D, N540X-16Z4G8Q2C-A/D, N540-24Q8L2DD-SYS, N540-FH-AGG-SYS, and N540-FH-CSR-SYS variants is available along with the software image in *NCS540l-docs-7.6.2.tar* file.

The upgrade document for N540X-4Z14G2Q-A/D, N540X-8Z16G-SYS-A/D, and N540X-6Z18G-SYS-A/D variants is available along with the software image in *NCS540l-aarch64-docs-7.6.2.tar* file.

Note   Quad configurations will be lost when you perform a software downgrade on Cisco NCS 540 Routers that support quad configurations from IOS XR Release 7.5.1 onwards to a release prior to IOS XR Release 7.5.1 due to a non-backward compatibility change. The lost configuration can be applied manually after the downgrade.

Use user-class Option 'xr-config' Instead Of 'exr-config' To Provision ZTP

In Cisco IOS XR Release 7.3.1 and earlier, the system accepts the device sending **user-class = "exr-config"**; however starting Cisco IOS XR Release 7.3.2 and later, you must use only **user-class = "xr-config"**.

In Cisco IOS XR Release 7.3.2 and later, use:

```
host cisco-rp0 {
   hardware ethernet e4:c7:22:be:10:ba;
   fixed-address 172.30.12.54;
   if exists user-class and option user-class = "iPXE" {
      filename = "http://172.30.0.22/boot.ipxe";
   } elsif exists user-class and option user-class = "xr-config" {
      filename = "http://172.30.0.22/scripts/cisco-rp0_ztp.sh";
   }
}
```

Additional References

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.