



# Cisco Nexus 7000 Series NX-OS 8.4, Release Notes

**Modified Date:** October 06, 2020  
**Current Release:** 8.4(3)

This document describes the features, caveats, and limitations for Cisco NX-OS software for use on the Cisco Nexus 7000 Series Switches. Use this document in combination with documents listed in [Related Documentation, page 86](#).



## Note

Release notes are sometimes updated with new information about restrictions and caveats. See the following website for the most recent version of the Cisco Nexus 7000 Series NX-OS Release Notes: <http://www.cisco.com/c/en/us/support/switches/nexus-7000-series-switches/products-release-notes-list.html>

[Table 1](#) shows the online change history for this document.

**Table 1** *Change History*

Date	Description
October 06, 2020	Added N77-F312CK-26 to the “ <a href="#">Cisco Nexus 7000 Series Switches and Cisco Nexus 7700 Switches Hardware Support</a> ” table.
September 23, 2020	Created release notes for Cisco NX-OS Release 8.4(3).
July 24, 2020	Added Cisco NX-OS Release 8.2(6) to the <a href="#">Upgrade and Downgrade Paths and Caveats</a> section.
April 17, 2020	Added Cisco NX-OS Release 7.3(6)D1(1) to the <a href="#">Upgrade and Downgrade Paths and Caveats</a> section.
March 26, 2020	Created release notes for Cisco NX-OS Release 8.4(2).
July 10, 2019	Created release notes for Cisco NX-OS Release 8.4(1).



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## Introduction

The Cisco NX-OS software for the Cisco Nexus 7000 Series fulfills the routing, switching, and storage networking requirements of data centers and provides an Extensible Markup Language (XML) interface and a command-line interface (CLI) similar to Cisco IOS software.

## System Requirements

This section includes the following topic:

- [Supported Device Hardware, page 2](#)

## Supported Device Hardware

The Cisco NX-OS software supports the Cisco Nexus 7000 Series that includes Cisco Nexus 7000 switches and Cisco Nexus 7700 switches. You can find detailed information about supported hardware in the [Cisco Nexus 7000 Series Hardware Installation and Reference Guide](#).

**Note**

Cisco Nexus 7000 Supervisor 1 modules, M1 series modules (XL and non-XL modes), FAB-1 modules, F2 series modules are not supported in Cisco NX-OS Release 8.x.

**Note**

There are no new hardware features introduced in Cisco NX-OS Release 8.4(1) and in Cisco NX-OS Release 8.4(2).

[Table 2](#) shows the Cisco Nexus 7000 Series Switch and Cisco Nexus 7700 Switch hardware support details.

[Table 3](#) shows the Fabric Extender (FEX) modules supported by the Cisco Nexus 7000 and Cisco Nexus 7700 I/O modules.

[Table 4](#) shows the transceiver devices supported in each release of Cisco Nexus 7000 Series.

For a list of minimum recommended Cisco NX-OS software releases for use with Cisco Nexus 7000 Series switches, see the document titled [Minimum Recommended Cisco NX-OS Releases for Cisco Nexus 7000 Series Switches](#).

**Table 2** Cisco Nexus 7000 Series Switches and Cisco Nexus 7700 Switches Hardware Support

Product ID	Hardware	Minimum Software Release
<b>Cisco Nexus 7000 Series Hardware</b>		
N7K-AC-3KW	3.0-kW AC power supply unit	6.1(2)
N7K-AC-6.0KW	6.0-kW AC power supply unit	4.0(1)
N7K-AC-7.5KW-INT N7K-AC-7.5KW-US	7.5-kW AC power supply unit	4.1(2) 4.1(2)
N7K-C7004	Cisco Nexus 7004 chassis	6.1(2)
N7K-C7004-FAN	Replacement fan for the Cisco Nexus 7004 chassis	6.1(2)
N7K-C7009	Cisco Nexus 7009 chassis	5.2(1)
N7K-C7009-FAB-2	Fabric module, Cisco Nexus 7000 Series 9-slot	5.2(1)
N7K-C7009-FAN	Replacement fan for the Cisco Nexus 7009 chassis	5.2(1)
N7K-C7010	Cisco Nexus 7010 chassis	4.0(1)
N7K-C7010-FAB-2	Fabric module, Cisco Nexus 7000 Series 10-slot	6.0(1)
N7K-C7010-FAN-F	Fabric fan tray for the Cisco Nexus 7010 chassis	4.0(1)
N7K-C7010-FAN-S	System fan tray for the Cisco Nexus 7010 chassis	4.0(1)
N7K-C7018	Cisco Nexus 7018 chassis	4.1(2)
N7K-C7018-FAB-2	Fabric module, Cisco Nexus 7000 Series 18-slot	6.0(1)
N7K-C7018-FAN	Fan tray for the Cisco Nexus 7018 chassis	4.1(2)
N7K-DC-3KW	3.0-kW DC power supply unit	6.1(2)
N7K-DC-6.0KW	6.0-kW DC power supply unit	5.0(2)
N7K-DC-PIU	(cable included)	5.0(2)
N7K-DC-CAB=	DC power interface unit DC 48 V, -48 V cable (spare)	5.0(2)
N7K-F248XP-25E	Enhanced 48-port 1/10 Gigabit Ethernet SFP+ I/O module (F2E Series)	6.1(2)

**Table 2** *Cisco Nexus 7000 Series Switches and Cisco Nexus 7700 Switches Hardware Support*

Product ID	Hardware	Minimum Software Release
N7K-F248XT-25E	Enhanced 48-port 1/10 GBASE-T RJ45 module (F2E Series)	6.1(2)
N7K-F306CK-25	Cisco Nexus 7000 6-port 100-Gigabit Ethernet CPAK I/O module (F3 Series)	6.2(10)
N7k-F312FQ-25	Cisco Nexus 7000 12-port 40-Gigabit Ethernet QSFP+ I/O module (F3 Series)	6.2(6)
N7K-F348XP-25	Cisco Nexus 7000 48-port 1/10-Gigabit Ethernet SFP+ I/O module (F3 Series)	6.2(12)
N7K-HV-3.5KW	3.5KW High Voltage Power Supply Unit	7.3(0)D1(1)
N7K-M202CF-22L	2-port 100-Gigabit Ethernet I/O module XL (M2 Series)	6.1(1)
N7K-M206FQ-23L	6-port 40-Gigabit Ethernet I/O module XL (M2 Series)	6.1(1)
N7K-M224XP-23L	24-port 10-Gigabit Ethernet I/O module XL (M2 Series)	6.1(1)
N7K-M324FQ-25L	Cisco Nexus 7000 M3 Series 24-Port 40-Gigabit Ethernet I/O Module	8.0(1)
N7K-M348XP-25L	Cisco Nexus 7000 M3 Series 48-Port 1/10-Gigabit Ethernet I/O Module	8.0(1)
N7K-SUP2	Supervisor 2 module	6.1(1)
N7K-SUP2E	Supervisor 2 Enhanced module	6.1(1)
<b>Cisco Nexus 7700 Series Hardware</b>		
N77-AC-3KW	Cisco Nexus 7700 AC power supply	6.2(2)
N77-C7702	Cisco Nexus 7702 chassis	7.2(0)D1(1)
N77-C7702-FAN	Fan, Cisco Nexus 7702 chassis	7.2(0)D1(1)
N77-C7706	Cisco Nexus 7706 chassis	6.2(6)
N77-C7706-FAB-2	Fabric Module, Cisco Nexus 7706 chassis	6.2(6)
N77-C7706-FAB-3	Fabric Module, Cisco Nexus 7706 chassis	8.3(1)
N77-C7706-FAN	Fan, Cisco Nexus 7706 chassis	6.2(6)
N77-C7706-FAN-2	Generation 2 Fan Tray, Cisco Nexus 7706 Chassis	8.1(1)

**Table 2** *Cisco Nexus 7000 Series Switches and Cisco Nexus 7700 Switches Hardware Support*

Product ID	Hardware	Minimum Software Release
N77-C7710	Cisco Nexus 7710 chassis	6.2(2)
N77-C7710-FAB-2	Fabric Module, Cisco Nexus 7710 chassis	6.2(2)
N77-C7710-FAB-3	Fabric Module, Cisco Nexus 7710 chassis	8.3(1)
N77-C7710-FAN	Fan, Cisco Nexus 7710 chassis	6.2(2)
N77-C7710-FAN-2	Fan, Cisco Nexus 7710 chassis	8.1(1)
N77-C7718	Cisco Nexus 7718 chassis	6.2(2)
N77-C7718-FAB-2	Fabric Module, Cisco Nexus 7718 chassis	6.2(2)
N77-C7718-FAN	Fan, Cisco Nexus 7718 chassis	6.2(2)
N77-C7718-FAN-2	Fan, Cisco Nexus 7718 chassis	8.1(1)
N77-DC-3KW	Cisco Nexus 7700 DC power supply	6.2(2)
N77-F248XP-23E	Cisco Nexus 7700 Enhanced 48-port 1/10 Gigabit Ethernet SFP+ I/O module (F2E Series)	6.2(2)
N77-F312CK-26	Cisco Nexus 7700 12-port 100-Gigabit Ethernet CPAK I/O module (F3 Series)	7.3(2)D1(1)
N77-F324FQ-25	Cisco Nexus 7700 24-port 40-Gigabit Ethernet QSFP+ I/O module (F3 Series)	6.2(6)
N77-F348XP-23	Cisco Nexus 7700 48-port 1/10-Gigabit Ethernet SFP+ I/O module (F3 Series)	6.2(6)
N77-F430CQ-36	Cisco Nexus 7700 F4-Series 30-port 100-Gigabit Ethernet I/O module	8.3(1)
N77-HV-3.5KW	3.5KW High Voltage Power Supply Unit	7.3(0)D1(1)
N77-M312CQ-26L	12-Port 100-Gigabit Ethernet (M3 Series)	8.0(1)
N77-M348XP-23L	48-port 1/10-Gigabit Ethernet SFP+ I/O module (M3 series)	7.3(0)DX(1)
N77-M324FQ-25L	24-port 40-Gigabit Ethernet QSFP+ I/O module (M3 series)	7.3(0)DX(1)
N77-SUP2E	Cisco Nexus 7700 Supervisor 2 Enhanced module	6.2(2)
N77-SUP3E	Cisco Nexus 7700 Supervisor 3 Enhanced module	8.3(1)

**Table 3** *FEX Modules Supported by Cisco Nexus 7000 and 7700 Series Modules*

Cisco Nexus 7000 Series Module	FEX Module	Minimum Software Release
<b>FEX Modules Supported by Cisco Nexus 7000 Series Modules</b>		
48-port 1-/10-Gigabit Ethernet SFP+ I/O M3 Series module (N7K-M348XP-25L)  24-port 40-Gigabit Ethernet QSFP+ I/O M3 Series module (N7K-M324FQ-25L)	N2K-C2232PP	8.1(1)
	N2K-C2224TP	
	N2K-C2248TP-E	
	N2K-C2248PQ	
	N2K-C2348UPQ	
	N2K-C2348TQ	
	N2K-C2332TQ	8.2(1)
	N2k-C2348TQ-E	
12-port 40-Gigabit Ethernet QSFP I/O F3 Series module (N7k-F312FQ-25)	N2K-B22DELL-P	6.2(12)
	N2K-C2224TP-1GE	
	N2K-C2248TP-1GE	
	N2K-C2232PP-10GE	
	N2K-C2232TM	
	N2K-C2248TP-E	
	N2K-C2232TM-E	
	N2K-C2248PQ	
	N2K-B22HP <sup>1</sup>	
	N2K-C2348UPQ	7.2(0)D1(1)
	N2K-C2348TQ	
	N2K-B22IBM	
6-port 40-Gigabit Ethernet I/O M2 Series module XL (N7K-M206FQ-23L)	N2K-C2332TQ	8.1(1)
	N2k-C2348TQ-E	8.2(1)
	N2K-B22DELL-P	7.2(0)D1(1)
	N2k-2348UPQ	
	N2k-2348TQ	
Breakout (4*10G) mode 40-Gigabit Ethernet I/O M2 Series module XL (N7K-M206FQ-23L)	N2k-2224TP	7.2(0)D1(1)
	N2k-2232PP	
	N2k-2232TM	
	N2k-2232TM-E	
	N2k-2248PQ	
	N2k-2248TP	
	N2k-2248TP-E	

**Table 3** *FEX Modules Supported by Cisco Nexus 7000 and 7700 Series Modules (continued)*

<b>Cisco Nexus 7000 Series Module</b>	<b>FEX Module</b>	<b>Minimum Software Release</b>
24-port 10-Gigabit Ethernet I/O M2 Series module XL (N7K-M224XP-23L)	N2K-C2224TP-1GE	6.1(1)
	N2K-C2248TP-1GE	
	N2K-C2232PP-10GE	
	N2K-C2232TM	
	N2K-C2248TP-E	
	N2K-C2232TM-E	6.2(2)
	N2K-C2248PQ	
	N2K-B22HP	
	N2K-C2348UPQ	7.2(0)D1(1)
	N2K-C2348TQ	
	N2K-B22IBM	
48-port 1/10 Gigabit Ethernet SFP+ I/O F3 Series module (N7K-F348XP-25)	N2K-C2224TP-1GE	6.2(12)
	N2K-C2248TP-1GE	
	N2K-C2232PP-10GE	
	N2K-C2232TM	
	N2K-C2248TP-E	
	N2K-2232TM-E	
	N2K-2248PQ	
	N2K-B22HP	
	N2K-C2348UPQ	7.2(0)D1(1)
	N2K-C2348TQ	
	N2K-B22IBM	
	N2K-C2332TQ	8.1(1)
	N2k-C2348TQ-E	8.2(1)
	N2K-B22DELL-P	

**Table 3** *FEX Modules Supported by Cisco Nexus 7000 and 7700 Series Modules (continued)*

<b>Cisco Nexus 7000 Series Module</b>	<b>FEX Module</b>	<b>Minimum Software Release</b>
Enhanced 48-port 1/10 Gigabit Ethernet SFP+ I/O module (F2E Series) (N7K-F248XP-25E)	N2K-C2224TP-1GE	6.1(2)
	N2K-C2248TP-1GE	
	N2K-C2232PP-10GE	
	N2K-C2232TM	
	N2K-C2248TP-E	
	N2K-2232TM-E	6.2(2)
	N2K-C2248PQ	
	N2K-B22HP	
	N2K-C2348UPQ	7.2(0)D1(1)
	N2K-C2348TQ	
	N2K-B22IBM	
	N2K-C2332TQ	8.1(1)
<b>FEX Modules Supported by Cisco Nexus 7700 Series Modules</b>		
48-port 1/10 Gigabit Ethernet SFP+ I/O module (F2E Series) (N77-F248XP-23E)	N2K-C2224TP-1GE	6.2(2)
	N2K-C2248TP-1GE	
	N2K-C2232PP-10GE	
	N2K-C2232TM	
	N2K-C2232TM-E	
	N2K-C2248PQ	
	N2K-C2248TP-E	
	N2K-B22HP	
	N2K-C2348UPQ	7.2(0)D1(1)
	N2K-C2348TQ	
	N2K-B22IBM	
	N2K-C2332TQ	8.1(1)



**Table 3** *FEX Modules Supported by Cisco Nexus 7000 and 7700 Series Modules (continued)*

<b>Cisco Nexus 7000 Series Module</b>	<b>FEX Module</b>	<b>Minimum Software Release</b>
24-port Cisco Nexus 7700 F3 Series 40-Gigabit Ethernet QSFP I/O module (N77-F324FQ-25)	N2K-C2224TP-1GE	6.2(8)
	N2K-C2248TP-1GE	
	N2K-C2232PP-10GE	
	N2K-C2232TM	
	N2K-C2248TP-E	
	N2K-C2232TM-E	
	N2K-C2248PQ	
	N2K-B22HP <sup>2</sup>	
	N2K-C2348UPQ	7.2(0)D1(1)
	N2K-C2348TQ	
	N2K-B22IBM	
	N2K-C2332TQ	8.1(1)
	N2k-C2348TQ-E	8.2(1)
	N2K-B22DELL-P	
48-port Cisco Nexus 7700 F3 Series 1/10-Gigabit Ethernet SFP+ I/O module (N77-F348XP-23)	N2K-C2224TP-1GE	6.2(6)
	N2K-C2248TP-1GE	
	N2K-C2232PP-10GE	
	N2K-C2232TM	
	N2K-C2248TP-E	
	N2K-C2232TM-E	
	N2K-C2248PQ	
	N2K-B22HP	
	N2K-C2348UPQ	7.2(0)D1(1)
	N2K-C2348TQ	
	N2K-B22IBM	
	N2K-C2332TQ	8.1(1)
	N2k-C2348TQ-E	8.2(1)
	N2K-B22DELL-P	

**Table 3** *FEX Modules Supported by Cisco Nexus 7000 and 7700 Series Modules (continued)*

Cisco Nexus 7000 Series Module	FEX Module	Minimum Software Release
48-Port 1/10 Gigabit Ethernet SFP+ I/O M3 Series module (N77-M348XP-23L)	N2K-C2232PP	8.1(1)
	N2K-C2224TP	
24-Port 40 Gigabit Ethernet QSFP+ I/O M3 Series module (N77-M324FQ-25L)	N2K-C2248TP-E	
	N2K-C2248PQ	
	N2K-C2348UPQ	
	N2K-C2348TQ	
	N2K-C2332TQ	
	N2k-C2348TQ-E	
	N2K-B22DELL-P	8.2(1)

1. FEX server-facing interfaces should be configured in autonegotiate mode. Do not force a specific data rate.

**Note**

The Cisco Nexus 7000 Enhanced F2 Series 48-port 1/10 GBASE-T RJ-45 Module (N7K-F248XT-25E) does not support Cisco Nexus 2000 FEXs.

**Note**

FEX modules does not support M3 series modules in Cisco NX-OS Release 7.3(0)DX(1), Cisco NX-OS Release 7.3(1)D1, and in Cisco NX-OS Release 8.0(1).

**Table 4** *Transceivers Supported by Cisco NX-OS Software Releases*

I/O Module	Product ID	Transceiver Type	Minimum Software Version
N77-F248XP-23E	FET-10G	Cisco Fabric Extender Transceiver (FET)	6.2(2)
	SFP-10G-AOCxM	10GBASE-AOC (Active Optical Cable) SFP+ Cable (1 m, 2 m, 3 m, 5 m, 7 m, 10 m)	6.2(2)
	SFP-10G-BXD-I	10GBASE-BX Bidirectional (single fiber) SFP+, 10km reach, downstream	7.2(0)D1(1)
	SFP-10G-BXU-I	10GBASE-BX Bidirectional (single fiber) SFP+, 10km reach, upstream	7.2(0)D1(1)
	SFP-10G-SR SFP-10G-SR-S	10GBASE-SR SFP+	6.2(2)
	SFP-10G-LR SFP-10G-LR-S	10GBASE-LR SFP+	6.2(2)

**Table 4 Transceivers Supported by Cisco NX-OS Software Releases (continued)**

<b>I/O Module</b>	<b>Product ID</b>	<b>Transceiver Type</b>	<b>Minimum Software Version</b>
	SFP-10G-ER SFP-10G-ER-S	10GBASE-ER SFP+	6.2(2)
	SFP-10G-LRM	10GBASE-LRM SFP+	6.2(2)
	SFP-10G-ZR <sup>1</sup> SFP-10G-ZR-S	10GBASE-ZR SFP+	6.2(2)
	SFP-H10GB-CUxM	SFP-H10GB-CUxM Twinax Cable Passive (1 m, 3 m, 5 m)	6.2(2)
	SFP-H10GB-CUxM	SFP-H10GC-CUxM Twinax Cable Passive (1.5 m, 2 m, 2.5 m)	6.2(2)
	SFP-H10GB-ACUxM	SFP-H10GB-ACUxM Twinax Cable Active (7 m, 10 m)	6.2(2)
	SFP-GE-T	1000BASE-T SFP	6.2(2)
	SFP-GE-S	1000BASE-SX SFP (DOM)	6.2(2)
	SFP-GE-L	1000BASE-LX/LH SFP (DOM)	6.2(2)
	SFP-GE-Z	1000BASE-ZX SFP (DOM)	6.2(2)
	GLC-LH-SM	1000BASE-LX/LH SFP	6.2(2)
	GLC-LH-SMD	1000BASE-LX/LH SFP	6.2(2)
	GLC-SX-MM	1000BASE-SX SFP	6.2(2)
	GLC-SX-MMD	1000BASE-SX SFP	6.2(2)
	GLC-ZX-SM	1000BASE-ZX SFP	6.2(2)
	GLC-ZX-SMD	1000BASE-ZX SFP	6.2(2)
	GLC-T	1000BASE-T SFP	6.2(2)
	GLC-TE	1000BASE-T SFP	6.2(10)
	GLC-BX-D	1000BASE-BX10-D	6.2(2)
	GLC-BX-U	1000BASE-BX10-U	6.2(2)
	GLC-EX-SMD	1000BASE-EX SFP	6.2(2)
	CWDM-SFP-xxxx <sup>2</sup>	1000BASE-CWDM	6.2(2)
	DWDM-SFP10G-xx.xx <sup>3</sup>	10GBASE-DWDM SFP+	6.2(2)
	DWDM-SFP-xxxx <sup>3</sup>	1000BASE-DWDM	6.2(2)
N77-F312CK-26	CPAK-100G-SR4 <sup>4</sup>	Multi-mode fiber (MMF)	7.3(2)D1(1)
	CPAK-100G-ER4L	Cisco 100GBASE-ER4L CPAK	7.2(1)D1(1)
	CPAK-100G-LR4 <sup>#</sup>	Cisco 100GBASE-LR4 CPAK	6.2(6)
	CPAK-100G-SR10 <sup>#</sup>	Cisco 100GBASE-SR10 CPAK	6.2(6)

**Table 4**      **Transceivers Supported by Cisco NX-OS Software Releases (continued)**

<b>I/O Module</b>	<b>Product ID</b>	<b>Transceiver Type</b>	<b>Minimum Software Version</b>
N77-F324FQ-25	CVR-QSFP-SFP10G (Only version V02 of the CVR-QSFP-SFP10G module is supported.)	QSFP 40G to SFP+ 10G Adapter Module	8.2(1)
	CVR-QSFP-SFP10G (This is supported only on F3 40G I/O modules with SFP-10G-SR or SFP-10G-SR-S optics. If the F3 I/O module is reloaded, the ports containing the CVR-QSFP-SFP10G adapter may remain down even after the F3 I/O module comes back up. If so, the CVR-QSFP-SFP10G adapter must be reseated.) (Only version V02 of the CVR-QSFP-SFP10G module is supported.)	Cisco 40G QSFP	6.2(14)
	QSFP-40G-SR-BD	Cisco 40G BiDi QSFP+	6.2(6)
	QSFP-40G-SR4 QSFP-40G-SR4-S	40GBASE-SR4 QSFP+	6.2(6)
	QSFP-40G-CSR4	40GBASE-CSR4 QSFP+	6.2(6)
	QSFP-40GE-LR4 QSFP-40G-LR4-S	40GBASE-LR4 QSFP+	6.2(6)
	FET-40G	Cisco 40G Fabric Extender Transceiver (FET)	6.2(8)
	QSFP-H40G-ACUxM	40GBASE-CR4 QSFP+ Direct Attach Copper Cable Active (7 m, 10 m)	6.2(8)
	QSFP-4X10G-ACxM	40GBASE-CR4 QSFP+ to 4x SFP+ Twinax Direct Attach Copper Breakout Cable Active (7 m, 10 m)	6.2(8)
	QSFP-4X10G-LR-S	Single-mode fiber (SMF)	7.3(1)D1(1)
	QSFP-H40G-AOCxM	40GBASE-AOC (Active Optical Cable) QSFP Cable (1 m, 2 m, 3 m, 5 m, 7 m, 10 m)	6.2(8)
	QSFP-H40G-AOC15M	40GBASE-AOC (Active Optical Cable) QSFP Cable (15m)	7.2(0)D1(1)
	QSFP-4X10G-AOCxM	40GBASE-AOC (Active Optical Cable) QSFP to 4x10G SFP+ Breakout Cable (1 m, 2 m, 3 m, 5 m, 7 m, 10 m)	6.2(8)
	WSP-Q40GLR4L	40GBASE-LR4 lite (2km SMF) QSFP+	6.2(10)

**Table 4 Transceivers Supported by Cisco NX-OS Software Releases (continued)**

<b>I/O Module</b>	<b>Product ID</b>	<b>Transceiver Type</b>	<b>Minimum Software Version</b>
	QSFP-40G-LR4	40GBASE-LR4 QSFP+ (Ethernet and OTU3 capable)	6.2(12)
	QSFP-40G-ER4	40GBASE-ER4 QSFP+ (40km)	6.2(12)
N77-F348XP-23	CWDM-SFP-xxxx <sup>2</sup>	1000BASE-CWDM	6.2(8)
	DWDM-SFP-xxxx <sup>2</sup>	1000BASE-DWDM	6.2(8)
	GLC-TE	1000BASE-T SFP	6.2(10)
	FET-10G	Cisco Fabric Extender Transceiver (FET)	6.2(6)
	SFP-10G-AOCxM	110GBASE-AOC (Active Optical Cable) SFP+ Cable (1 m, 2 m, 3 m, 5 m, 7 m, 10 m)	6.2(10)
	SFP-10G-BXD-I	10GBASE-BX Bidirectional (single fiber) SFP+, 10km reach, downstream	7.2(0)D1(1)
	SFP-10G-BXU-I	10GBASE-BX Bidirectional (single fiber) SFP+, 10km reach, upstream	7.2(0)D1(1)
	SFP-10G-SR SFP-10G-SR-S	10GBASE-SR SFP+	6.2(6)
	SFP-10G-LR SFP-10G-LR-S	10GBASE-LR SFP+	6.2(6)
	SFP-10G-ER SFP-10G-ER-S	10GBASE-ER SFP+	6.2(6)
	SFP-10G-ZR SFP-10G-ZR-S	10GBASE-ZR SFP+	6.2(6)
	DWDM-SFP10G-xx.xx	10GBASE-DWDM SFP+	6.2(6)
	SFP-10G-LRM <sup>1</sup>	10GBASE-LRM SFP+	6.2(8)
	SFP-H10GB-CUxM	SFP-H10GB-CUxM Twinax Cable Passive (1 m, 3 m, 5 m)	6.2(8)
	SFP-H10GB-CUxM	SFP-H10GC-CUxM Twinax Cable Passive (1.5 m, 2 m, 2.5 m)	6.2(8)
	SFP-H10GB-ACUxM	SFP-H10GB-ACUxM Twinax Cable Active (7 m, 10 m)	6.2(8)
	SFP-GE-T	1000BASE-T SFP	6.2(8)
	SFP-GE-S	1000BASE-SX SFP (DOM)	6.2(8)
	SFP-GE-L	1000BASE-LX/LH SFP (DOM)	6.2(8)
	SFP-GE-Z	1000BASE-ZX SFP (DOM)	6.2(8)
	GLC-LH-SM	1000BASE-LX/LH SFP	6.2(8)

**Table 4**      **Transceivers Supported by Cisco NX-OS Software Releases (continued)**

<b>I/O Module</b>	<b>Product ID</b>	<b>Transceiver Type</b>	<b>Minimum Software Version</b>
	GLC-LH-SMD	1000BASE-LX/LH SFP	6.2(8)
	GLC-SX-MM	1000BASE-SX SFP	6.2(8)
	GLC-SX-MMD	1000BASE-SX SFP	6.2(8)
	GLC-ZX-SM	1000BASE-ZX SFP	6.2(8)
	GLC-ZX-SMD	1000BASE-ZX SFP	6.2(8)
	GLC-T	1000BASE-T SFP	6.2(8)
	GLC-BX-D	1000BASE-BX10-D	6.2(8)
	GLC-BX-U	1000BASE-BX10-U	6.2(8)
	GLC-EX-SMD	1000BASE-EX SFP	6.2(8)
	FET-10G	Cisco Fabric Extender Transceiver (FET)	6.2(8)
N77-F430CQ-36	QSFP-100G-SR4-S	Multi-mode fiber (MMF)	8.3(1)
	QSFP-40G-CSR4	Multi-mode fiber (MMF)	8.3(2)
	QSFP-40G-SR4		
	QSFP-40G-SR4-S		
	QSFP-40G-SR-BD		
	QSFP-40G-BD-RX		
	QSFP-40/100-SRBD		
	QSFP-100G-CWDM4-S	Single-mode fiber (SMF)	8.3(1)
	QSFP-100G-PSM4-S		
	QSFP-100G-LR4-S		
	QSFP-40G-ER4	Single-mode fiber (SMF)	8.3(2)
	QSFP-40G-LR4		
	QSFP-100G-AOC1M	Active optical cable assembly	8.3(1)
	QSFP-100G-AOC2M		
	QSFP-100G-AOC3M		
	QSFP-100G-AOC5M		
	QSFP-100G-AOC7M		
	QSFP-100G-AOC10M		
	QSFP-100G-AOC15M		
	QSFP-100G-AOC20M		
	QSFP-100G-AOC25M		
	QSFP-100G-AOC30M		

**Table 4 Transceivers Supported by Cisco NX-OS Software Releases (continued)**

<b>I/O Module</b>	<b>Product ID</b>	<b>Transceiver Type</b>	<b>Minimum Software Version</b>
	QSFP-H40G-AOC1M QSFP-H40G-AOC2M QSFP-H40G-AOC3M QSFP-H40G-AOC5M QSFP-H40G-AOC7M QSFP-H40G-AOC10M QSFP-H40G-AOC15M	Active optical cable assembly	8.3(2)
	QSFP-100G-ER4L-S	Single-mode fiber (SMF) (40km)	8.3(1)
N7K-F306CK-25	CPAK-100G-SR4 <sup>4</sup>	Multi-mode fiber (MMF)	7.3(2)D1(1)
	CPAK-100G-ER4L	Cisco 100GBASE-ER4L CPAK	7.2(1)D1(1)
	CPAK-100G-LR4 <sup>#</sup>	Cisco 100GBASE-LR4 CPAK	6.2(10)
	CPAK-100G-SR10 <sup>#</sup>	Cisco 100GBASE-SR10 CPAK	6.2(10)
N7K-F312FQ-25	CVR-QSFP-SFP10G (Only version V02 of the CVR-QSFP-SFP10G module is supported.)	QSFP 40G to SFP+ 10G Adapter Module	8.2(1)
	CVR-QSFP-SFP10G (This is supported only on F3 40G I/O modules with SFP-10G-SR or SFP-10G-SR-S optics. If the F3 I/O module is reloaded, the ports containing the CVR-QSFP-SFP10G adapter may remain down even after the F3 I/O module comes back up. If so, the CVR-QSFP-SFP10G adapter must be reseated.) (Only version V02 of the CVR-QSFP-SFP10G module is supported.)	Cisco 40G QSFP	6.2(14)
	QSFP-40G-SR-BD	Cisco 40G BiDi QSFP+	6.2(6)
	QSFP-40G-SR4 QSFP-40G-SR4-S	40GBASE-SR4 QSFP+	6.2(6)
	QSFP-40G-CSR4	40GBASE-CSR4 QSFP+	6.2(6)
	QSFP-40GE-LR4 QSFP-40G-LR4-S	40GBASE-LR4 QSFP+	6.2(6)
	FET-40G	Cisco 40G Fabric Extender Transceiver (FET)	6.2(6)
	QSFP-H40G-ACUxM	40GBASE-CR4 QSFP+ Direct Attach Copper Cable Active (7 m, 10 m)	6.2(8)

**Table 4 Transceivers Supported by Cisco NX-OS Software Releases (continued)**

<b>I/O Module</b>	<b>Product ID</b>	<b>Transceiver Type</b>	<b>Minimum Software Version</b>
	QSFP-4X10G-ACxM	40GBASE-CR4 QSFP+ to 4x SFP+ Twinax Direct Attach Copper Breakout Cable Active (7 m, 10 m)	6.2(8)
	QSFP-4X10G-LR-S	Single-mode fiber (SMF)	7.3(1)D1(1)
	QSFP-H40G-AOCxM	40GBASE-AOC (Active Optical Cable) QSFP Cable (1 m, 2 m, 3 m, 5 m, 7 m, 10 m)	6.2(8)
	QSFP-H40G-AOC15M	40GBASE-AOC (Active Optical Cable) QSFP Cable (15m)	7.2(0)D1(1)
	QSFP-4X10G-AOCxM	40GBASE-AOC (Active Optical Cable) QSFP to 4x10G SFP+ Breakout Cable (1 m, 2 m, 3 m, 5 m, 7 m, 10 m)	6.2(8)
	WSP-Q40GLR4L	40GBASE-LR4 lite (2km SMF) QSFP+	6.2(10)
	QSFP-40G-LR4	40GBASE-LR4 QSFP+ (Ethernet and OTU3 capable)	6.2(12)
	QSFP-40G-ER4	40GBASE-ER4 QSFP+ (40km)	6.2(12)
N7K-F348XP-25	CWDM-SFP-xxxx <sup>2</sup>	1000BASE-CWDM	6.2(12)
	DWDM-SFP-xxxx <sup>2</sup>	1000BASE-DWDM	6.2(12)
	GLC-TE	1000BASE-T SFP	6.2(12)
	FET-10G	Cisco Fabric Extender Transceiver (FET)	6.2(12)
	SFP-10G-AOCxM	10GBASE-AOC (Active Optical Cable) SFP+ Cable (1 m, 2 m, 3 m, 5 m, 7 m, 10 m)	6.2(12)
	SFP-10G-BXD-I	10GBASE-BX Bidirectional (single fiber) SFP+, 10km reach, downstream	7.2(0)D1(1)
	SFP-10G-BXU-I	10GBASE-BX Bidirectional (single fiber) SFP+, 10km reach, upstream	7.2(0)D1(1)
	SFP-10G-SR SFP-10G-SR-S	10GBASE-SR SFP+	6.2(12)
	SFP-10G-LR SFP-10G-LR-S	10GBASE-LR SFP+	6.2(12)
	SFP-10G-ER SFP-10G-ER-S	10GBASE-ER SFP+	6.2(12)



**Table 4 Transceivers Supported by Cisco NX-OS Software Releases (continued)**

<b>I/O Module</b>	<b>Product ID</b>	<b>Transceiver Type</b>	<b>Minimum Software Version</b>
	SFP-10G-ZR SFP-10G-ZR-S	10GBASE-ZR SFP+	6.2(12)
	DWDM-SFP10G-xx.xx	10GBASE-DWDM SFP+	6.2(12)
	SFP-10G-LRM <sup>1</sup>	10GBASE-LRM SFP+	6.2(12)
	SFP-H10GB-CUxM	SFP-H10GB-CUxM Twinax Cable Passive (1 m, 3 m, 5 m)	6.2(12)
	SFP-H10GB-CUxM	SFP-H10GC-CUxM Twinax Cable Passive (1.5 m, 2 m, 2.5 m)	6.2(12)
	SFP-H10GB-ACUxM	SFP-H10GB-ACUxM Twinax Cable Active (7 m, 10 m)	6.2(12)
	SFP-GE-T	1000BASE-T SFP	6.2(12)
	SFP-GE-S	1000BASE-SX SFP (DOM)	6.2(12)
	SFP-GE-L	1000BASE-LX/LH SFP (DOM)	6.2(12)
	SFP-GE-Z	1000BASE-ZX SFP (DOM)	6.2(12)
	GLC-LH-SM	1000BASE-LX/LH SFP	6.2(12)
	GLC-LH-SMD	1000BASE-LX/LH SFP	6.2(12)
	GLC-SX-MM	1000BASE-SX SFP	6.2(12)
	GLC-SX-MMD	1000BASE-SX SFP	6.2(12)
	GLC-ZX-SM	1000BASE-ZX SFP	6.2(12)
	GLC-ZX-SMD	1000BASE-ZX SFP	6.2(12)
	GLC-T	1000BASE-T SFP	6.2(12)
	GLC-BX-D	1000BASE-BX10-D	6.2(12)
	GLC-BX-U	1000BASE-BX10-U	6.2(12)
	GLC-EX-SMD	1000BASE-EX SFP	6.2(12)
	FET-10G	Cisco Fabric Extender Transceiver (FET)	6.2(12)
N7K-F248XP-25	FET-10G	Cisco Fabric Extender Transceiver (FET)	6.0(1)
	SFP-10G-BXD-I	10GBASE-BX Bidirectional (single fiber) SFP+, 10km reach, downstream	7.2(0)D1(1)
	SFP-10G-BXU-I	10GBASE-BX Bidirectional (single fiber) SFP+, 10km reach, upstream	7.2(0)D1(1)
	SFP-10G-SR SFP-10G-SR-S	10GBASE-SR SFP+	6.0(1)

**Table 4** *Transceivers Supported by Cisco NX-OS Software Releases (continued)*

<b>I/O Module</b>	<b>Product ID</b>	<b>Transceiver Type</b>	<b>Minimum Software Version</b>
	SFP-10G-LR SFP-10G-LR-S	10GBASE-LR SFP+	6.0(1)
	SFP-10G-ER SFP-10G-ER-S	10GBASE-ER SFP+	6.0(1)
	SFP-10G-LRM	10GBASE-LRM SFP+	6.0(1)
	SFP-10G-ZR <sup>2</sup> SFP-10G-ZR-S	10GBASE-ZR SFP+	6.1(1)
	SFP-10G-AOCxM	10GBASE-AOC (Active Optical Cable) SFP+ Cable (1 m, 2 m, 3 m, 5 m, 7 m, 10 m)	6.2(2)
	SFP-H10GB-CUxM	SFP-H10GB-CUxM Twinax Cable Passive (1 m, 3 m, 5 m)	6.0(1)
	SFP-H10GB-CUxM	SFP-H10GC-CUxM Twinax Cable Passive (1.5 m, 2 m, 2.5 m)	6.2(2)
	SFP-H10GB-ACUxM	SFP-H10GB-ACUxM Twinax Cable Active (7 m, 10 m)	6.0(1)
	SFP-GE-T	1000BASE-T SFP	6.0(1)
	SFP-GE-S	1000BASE-SX SFP (DOM)	6.0(1)
	SFP-GE-L	1000BASE-LX/LH SFP (DOM)	6.0(1)
	SFP-GE-Z	1000BASE-ZX SFP (DOM)	6.0(1)
	GLC-TE	1000BASE-T SFP	6.2(10)
	GLC-LH-SM	1000BASE-LX/LH SFP	6.0(1)
	GLC-LH-SMD	1000BASE-LX/LH SFP	6.0(1)
	GLC-SX-MM	1000BASE-SX SFP	6.0(1)
	GLC-SX-MMD	1000BASE-SX SFP	6.0(1)
	GLC-ZX-SM	1000BASE-ZX SFP	6.0(1)
	GLC-ZX-SMD	1000BASE-ZX SFP	6.2(2)
	GLC-T	1000BASE-T SFP	6.0(1)
	GLC-BX-D	1000BASE-BX10-D	6.0(1)
	GLC-BX-U	1000BASE-BX10-U	6.0(1)
	GLC-EX-SMD	1000BASE-EX SFP	6.1(1)
	CWDM-SFP-xxxx <sup>2</sup>	1000BASE-CWDM	6.0(1)
	DWDM-SFP10G-xx.xx <sup>3</sup>	10GBASE-DWDM SFP+	6.1(1)
	DWDM-SFP-xxxx <sup>3</sup>	1000BASE-DWDM	6.0(1)
N7K-F248XP-25E	FET-10G	Cisco Fabric Extender Transceiver (FET)	6.1(2)

**Table 4 Transceivers Supported by Cisco NX-OS Software Releases (continued)**

<b>I/O Module</b>	<b>Product ID</b>	<b>Transceiver Type</b>	<b>Minimum Software Version</b>
	SFP-10G-BXD-I	10GBASE-BX Bidirectional (single fiber) SFP+, 10km reach, downstream	7.2(0)D1(1)
	SFP-10G-BXU-I	10GBASE-BX Bidirectional (single fiber) SFP+, 10km reach, upstream	7.2(0)D1(1)
	SFP-10G-SR SFP-10G-SR-S	10GBASE-SR SFP+	6.1(2)
	SFP-10G-LR SFP-10G-LR-S	10GBASE-LR SFP+	6.1(2)
	SFP-10G-ER SFP-10G-ER-S	10GBASE-ER SFP+	6.1(2)
	SFP-10G-LRM	10GBASE-LRM SFP+	6.1(2)
	SFP-10G-ZR <sup>1</sup> SFP-10G-ZR-S	10GBASE-ZR SFP+	6.1(2)
	SFP-10G-AOCxM	10GBASE-AOC (Active Optical Cable) SFP+ Cable (1 m, 2 m, 3 m, 5 m, 7 m, 10 m)	6.2(2)
	SFP-H10GB-CUxM	SFP-H10GB-CUxM Twinax Cable Passive (1 m, 3 m, 5 m)	6.1(2)
	SFP-H10GB-CUxM	SFP-H10GC-CUxM Twinax Cable Passive (1.5 m, 2 m, 2.5 m)	6.2(2)
	SFP-H10GB-ACUxM	SFP-H10GB-ACUxM Twinax Cable Active (7 m, 10 m)	6.1(2)
	SFP-GE-T	1000BASE-T SFP	6.1(2)
	SFP-GE-S	1000BASE-SX SFP (DOM)	6.1(2)
	SFP-GE-L	1000BASE-LX/LH SFP (DOM)	6.1(2)
	SFP-GE-Z	1000BASE-ZX SFP (DOM)	6.1(2)
	GLC-LH-SM	1000BASE-LX/LH SFP	6.1(2)
	GLC-LH-SMD	1000BASE-LX/LH SFP	6.1(2)
	GLC-SX-MM	1000BASE-SX SFP	6.1(2)
	GLC-SX-MMD	1000BASE-SX SFP	6.1(2)
	GLC-ZX-SM	1000BASE-ZX SFP	6.1(2)
	GLC-ZX-SMD	1000BASE-ZX SFP	6.1(2)
	GLC-T	1000BASE-T SFP	6.1(2)
	GLC-TE	1000BASE-T SFP	6.2(10)
	GLC-BX-D	1000BASE-BX10-D	6.1(2)

**Table 4**      **Transceivers Supported by Cisco NX-OS Software Releases (continued)**

I/O Module	Product ID	Transceiver Type	Minimum Software Version
	GLC-BX-U	1000BASE-BX10-U	6.1(2)
	GLC-EX-SMD	1000BASE-EX SFP	6.1(2)
	CWDM-SFP-xxx <sup>2</sup>	1000BASE-CWDM	6.1(2)
	DWDM-SFP10G-xx.xx <sup>3</sup>	10GBASE-DWDM SFP+	6.1(2)
	DWDM-SFP-xxx <sup>3</sup>	1000BASE-DWDM	6.1(2)
N7K-M108X2-12L	SFP-10G-SR <sup>1</sup>	10GBASE-SR SFP+	5.2(3a)
	SFP-10G-SR-S		
	SFP-10G-LR <sup>1</sup>	10GBASE-LR SFP+	5.2(3a)
	SFP-10G-LR-S		
	SFP-10G-LRM <sup>1</sup>	10GBASE-LRM SFP+	5.2(1)
	SFP-H10GB-CUxM <sup>1</sup>	SFP-H10GB-CUxM Twinax Cable Passive (1 m, 3 m, 5 m)	5.2(1)
	CVR-X2-SFP10G	OneX Converter Module - X2 to SFP+ Adapter	5.2(1)
	X2-10GB-CX4	10GBASE-CX4 X2	5.1(1)
	X2-10GB-ZR	10GBASE-ZR X2	5.1(1)
	X2-10GB-LX4	10GBASE-LX4 X2	5.1(1)
	X2-10GB-SR	10GBASE-SR X2	5.0(2a)
	X2-10GB-LR	10GBASE-LRX2	5.0(2a)
	X2-10GB-LRM	10GBASE-LRM X2	5.0(2a)
	X2-10GB-ER	10GBASE-ERX2	5.0(2a)
	DWDM-X2-xx.xx= <sup>3</sup>	10GBASE-DWDM X2	5.0(2a)
N7K-M148GS-11L	SFP-GE-S	1000BASE-SX	5.0(2a)
	GLC-SX-MM		5.0(2a)
	SFP-GE-L	1000BASE-LX	5.0(2a)
	GLC-LH-SM		5.0(2a)
	SFP-GE-Z	1000BASE-ZX	5.0(2a)
	GLC-ZX-SM		5.0(2a)
	GLC-EX-SMD	1000BASE-EX SFP	6.2(2)
	GLC-ZX-SMD	1000BASE-ZX SFP	6.2(2)
	GLC-T	1000BASE-T	5.0(2a)
	SFP-GE-T		5.0(2a)
	GLC-BX-D	1000BASE-BX10-D	5.2(1)
	GLC-BX-U	1000BASE-BX10-U	5.2(1)
	GLC-SX-MMD	1000BASE-SX	5.2(1)

**Table 4 Transceivers Supported by Cisco NX-OS Software Releases (continued)**

<b>I/O Module</b>	<b>Product ID</b>	<b>Transceiver Type</b>	<b>Minimum Software Version</b>
	GLC-LH-SMD	1000BASE-LX	5.2(1)
	GLC-TE	1000BASE-T SFP	6.2(10)
	DWDM-SFP-xxxx <sup>3</sup>	1000BASE-DWDM	5.0(2a)
	CWDM-SFP-xxxx <sup>2</sup>	1000BASE-CWDM	5.0(2a)
N7K-M132XP-12L	FET-10G	Cisco Fabric Extender Transceiver (FET)	5.1(1)
	SFP-10G-BXD-I	10GBASE-BX Bidirectional (single fiber) SFP+, 10km reach, downstream	7.2(0)D1(1)
	SFP-10G-BXU-I	10GBASE-BX Bidirectional (single fiber) SFP+, 10km reach, upstream	7.2(0)D1(1)
	SFP-10G-SR SFP-10G-SR-S	10GBASE-SR SFP+	5.1(1)
	SFP-10G-LR SFP-10G-LR-S	10GBASE-LR SFP+	5.1(1)
	SFP-10G-ER SFP-10G-ER-S	10GBASE-ER SFP+	5.1(1)
	SFP-10G-LRM	10GBASE-LRM SFP+	5.1(1)
	SFP-10G-ZR <sup>1</sup> SFP-10G-ZR-S	10GBASE-ZR SFP+	6.1(1)
	SFP-10G-AOCxM	10GBASE-AOC (Active Optical Cable) SFP+ Cable (1 m, 2 m, 3 m, 5 m, 7 m, 10 m)	6.2(2)
	SFP-H10GB-ACUxM	SFP-H10GB-ACUxM Twinax Cable Active (7 m, 10 m)	5.1(1)
	SFP-H10GB-CUxM <sup>1</sup>	SFP-H10GB-CUxM Twinax Cable Passive (1 m, 3 m, 5 m)	5.1(2)
	SFP-H10GB-CUxM	SFP-H10GC-CUxM Twinax Cable Passive (1.5 m, 2 m, 2.5 m)	6.2(2)
	DWDM-SFP10G-xx.xx <sup>3</sup>	10GBASE-DWDM SFP+	6.1(1)
N7K-M224XP-23L	SFP-10G-BXD-I	10GBASE-BX Bidirectional (single fiber) SFP+, 10km reach, downstream	7.2(0)D1(1)
	SFP-10G-BXU-I	10GBASE-BX Bidirectional (single fiber) SFP+, 10km reach, upstream	7.2(0)D1(1)
	FET-10G	Cisco Fabric Extender Transceiver (FET)	6.1(1)

**Table 4**      **Transceivers Supported by Cisco NX-OS Software Releases (continued)**

<b>I/O Module</b>	<b>Product ID</b>	<b>Transceiver Type</b>	<b>Minimum Software Version</b>
	SFP-10G-SR SFP-10G-SR-S	10GBASE-SR SFP+	6.1(1)
	SFP-10G-LR SFP-10G-LR-S	10GBASE-LR SFP+	6.1(1)
	SFP-10G-ER SFP-10G-ER-S	10GBASE-ER SFP+	6.1(1)
	SFP-10G-ZR <sup>3</sup> SFP-10G-ZR-S	10GBASE-ZR SFP+	6.1(1)
	SFP-10G-LRM	10GBASE-LRM SFP+	6.1(1)
	SFP-10G-AOCxM	10GBASE-AOC (Active Optical Cable) SFP+ Cable (1 m, 2 m, 3 m, 5 m, 7 m, 10 m)	6.2(2)
	SFP-H10GB-ACUxM	SFP-H10GB-ACUxM Twinax Cable Active (7 m, 10 m)	6.1(1)
	SFP-H10GB-CUxM <sup>1</sup>	SFP-H10GB-CUxM Twinax Cable Passive (1m, 3m, 5m)	6.1(1)
	SFP-H10GB-CUxM	SFP-H10GC-CUxM Twinax Cable Passive (1.5 m, 2 m, 2.5 m)	6.2(2)
	DWDM-SFP10G-xx.xx <sup>3</sup>	10GBASE-DWDM SFP+	6.1(1)
N77-M312CQ-26L	CPAK-100G-SR4	Multi-mode fiber (MMF)	8.1(1)
	QSFP-100G-CSR4-S	100G extended short reach 300m OM3 400m OM4	8.2(1)
	QSFP-100G-ER4L-S	100G-ER4 lite SMF (40km)	8.2(1)
	QSFP-100G-SM-SR	100G Short Reach over dual SMF (2km)	8.2(1)
	QSFP-100G-SR4-S QSFP-40G-CSR4 QSFP-40G-SR4 QSFP-40G-SR4-S QSFP-40G-SR-BD	Multi-mode fiber (MMF)	8.0(1)
	QSFP-100G-CWDM4-S QSFP-100G-PSM4-S QSFP-100G-LR4-S QSFP-40G-LR4-S QSFP-40G-ER4 QSFP-40G-LR4	Single-mode fiber (SMF)	8.0(1)

**Table 4**      **Transceivers Supported by Cisco NX-OS Software Releases (continued)**

<b>I/O Module</b>	<b>Product ID</b>	<b>Transceiver Type</b>	<b>Minimum Software Version</b>
	QSFP-H40G-ACU7M QSFP-H40G-ACU10M	Direct attach copper, active	8.0(1)
	QSFP-100G-AOC1M QSFP-100G-AOC2M QSFP-100G-AOC3M QSFP-100G-AOC5M QSFP-100G-AOC7M QSFP-100G-AOC10M QSFP-100G-AOC15M QSFP-100G-AOC20M QSFP-100G-AOC25M QSFP-100G-AOC30M QSFP-H40G-AOC1M QSFP-H40G-AOC2M QSFP-H40G-AOC3M QSFP-H40G-AOC5M QSFP-H40G-AOC7M QSFP-H40G-AOC10M QSFP-H40G-AOC15M	Active optical cable assembly	8.0(1)
	WSP-Q40G-LR4L	40GBASE-LR4 QSFP40G (for Single-mode Fiber (SMF))	8.0(1)

**Table 4**      **Transceivers Supported by Cisco NX-OS Software Releases (continued)**

<b>I/O Module</b>	<b>Product ID</b>	<b>Transceiver Type</b>	<b>Minimum Software Version</b>
N77-M324FQ-25L	CVR-QSFP-SFP10G	QSFP 40G to SFP+ 10G Adapter Module	8.2(1)
	FET-10G		
	SFP-10G-SR		
	SFP-10G-SR-S		
	DWDM-SFP10G-xx.xx <sup>3</sup>		
	SFP-10G-BXD-I		
	SFP-10G-BXU-I		
	SFP-10G-LRM		
	SFP-10G-ER		
	SFP-10G-ER-S		
	SFP-10G-LR		
	SFP-10G-LR-S		
	SFP-10G-ZR		
	SFP-10G-ZR-S		
	SFP-H10GB-CU1M		
	SFP-H10GB-CU1-5M		
	SFP-H10GB-CU2M		
	SFP-H10GB-CU2-5M		
	SFP-H10GB-CU3M		
	SFP-H10GB-CU5M		
	SFP-H10GB-ACU7M		
	SFP-H10GB-ACU10M		
	SFP-10G-AOC1M		
	SFP-10G-AOC2M		
	SFP-10G-AOC3M		
	SFP-10G-AOC5M		
	SFP-10G-AOC7M		
	SFP-10G-AOC10M		
	FET-40G	Cisco Fabric Extender Transceiver (FET)	8.1(1)
	QSFP-40G-CSR4	Multi-mode fiber (MMF)	7.3(0)DX(1)
	QSFP-40G-SR4		
	QSFP-40G-SR4-S		
	QSFP-40G-SR-BD		



**Table 4 Transceivers Supported by Cisco NX-OS Software Releases (continued)**

<b>I/O Module</b>	<b>Product ID</b>	<b>Transceiver Type</b>	<b>Minimum Software Version</b>
	QSFP-40G-ER4 QSFP-40G-LR4 QSFP-40G-LR4-S QSFP-4X10G-LR-S WSP-Q40G-LR4L	Single-mode fiber (SMF)	7.3(0)DX(1)
	QSFP-H40G-ACU7M QSFP-H40G-ACU10M	Direct attach copper, active	7.3(0)DX(1)
	QSFP-4X10G-AC7M QSFP-4X10G-AC10M	Direct attach breakout copper, active	8.0(1)
	QSFP-H40G-AOC1M QSFP-H40G-AOC2M QSFP-H40G-AOC3M QSFP-H40G-AOC5M QSFP-H40G-AOC7M QSFP-H40G-AOC10M QSFP-H40G-AOC15M	Active optical cable assembly	7.3(0)DX(1)
	QSFP-4X10G-AOC1M QSFP-4X10G-AOC2M QSFP-4X10G-AOC3M QSFP-4X10G-AOC5M QSFP-4X10G-AOC7M QSFP-4X10G-AOC10M	Active optical breakout cable assembly	8.0(1)
N77-M348XP-23L	FET-10G	Cisco Fabric Extender Transceiver (FET)	8.1(1)
	GLC-TE	Category 5	7.3(0)DX(1)
	GLC-LH-SMD GLC-SX-MMD	Multi-mode fiber (MMF)	7.3(0)DX(1)
	CWDM-SFP-xxxx <sup>2</sup> DWDM-SFP-xxxx GLC-BX-U GLC-BX-D GLC-EX-SMD GLC-LH-SMD GLC-ZX-SMD	Single-mode fiber (SMF)	7.3(0)DX(1)

**Table 4**      **Transceivers Supported by Cisco NX-OS Software Releases (continued)**

<b>I/O Module</b>	<b>Product ID</b>	<b>Transceiver Type</b>	<b>Minimum Software Version</b>
	SFP-10G-SR	Multi-mode fiber (MMF)	7.3(0)DX(1)
	SFP-10G-SR-S	10G BASE-SR SFP+ transceiver module for Multi-mode fiber (MMF)	8.0(1)
	DWDM-SFP10G-xx.xx <sup>3</sup> SFP-10G-BXD-I SFP-10G-BXU-I SFP-10G-LRM	Single-mode fiber (SMF)	7.3(0)DX(1)
	SFP-10G-ER	10G BASE-LR SFP+ transceiver module for Single-mode fiber (SMF)	7.3(0)DX(1)
	SFP-10G-ER-S	10G BASE-LR SFP+ transceiver module for Single-mode fiber (SMF)	8.0(1)
	SFP-10G-LR	10G BASE-LR SFP+ transceiver module for Single-mode fiber (SMF)	7.3(0)DX(1)
	SFP-10G-LR-S	10G BASE-LR SFP+ transceiver module for Single-mode fiber (SMF)	8.0(1)
	SFP-10G-ZR	10G BASE-LR SFP+ transceiver module for Single-mode fiber (SMF)	7.3(0)DX(1)
	SFP-10G-ZR-S	10G BASE-LR SFP+ transceiver module for Single-mode fiber (SMF)	8.0(1)
	SFP-H10GB-CU1M SFP-H10GB-CU1-5M SFP-H10GB-CU2M SFP-H10GB-CU2-5M SFP-H10GB-CU3M SFP-H10GB-CU5M	Twinax cable assembly, passive	7.3(0)DX(1)
	SFP-H10GB-ACU7M SFP-H10GB-ACU10M	Twinax cable assembly, active	7.3(0)DX(1)

**Table 4 Transceivers Supported by Cisco NX-OS Software Releases (continued)**

<b>I/O Module</b>	<b>Product ID</b>	<b>Transceiver Type</b>	<b>Minimum Software Version</b>
	SFP-10G-AOC1M SFP-10G-AOC2M SFP-10G-AOC3M SFP-10G-AOC5M SFP-10G-AOC7M SFP-10G-AOC10M	Active optical cable assembly	7.3(0)DX(1)
N7K-M202CF-22L	CFP-40G-SR4	40GBASE-SR4 CFP	6.1(2)
	CFP-40G-LR4	40GBASE-LR4 CFP	6.1(2)
	CFP-100G-SR10	100GBASE-SR10 CFP	6.1(3)
	CFP-100G-LR4	100GBASE-LR4 CFP	6.1(1)
	CFP-100G-ER4	100GBASE-ER4 CFP	6.2(10)
N7K-M206FQ-23L	FET-40G	Cisco 40G Fabric Extender Transceiver (FET)	6.2(6)
	QSFP-40G-SR-BD	Cisco 40G BiDi QSFP+	6.2(6)
	QSFP-40G-SR4 QSFP-40G-SR4-S	40GBASE-SR4 QSFP+	6.1(1)
	QSFP-40G-CSR4	40GBASE-CSR4 QSFP+	6.2(2)
	QSFP-40GE-LR4 QSFP-40G-LR4-S	40GBASE-LR4 QSFP+	6.1(4)
	QSFP-H40G-ACUxM	40GBASE-CR4 QSFP+ Direct Attach Copper Cable Active (7 m, 10 m)	6.2(2)
	QSFP-4X10G-ACxM	40GBASE-CR4 QSFP+ to 4x SFP+ Twinax Direct Attach Copper Breakout Cable Active (7 m, 10 m)	6.2(8)
	QSFP-H40G-AOCxM	40GBASE-AOC (Active Optical Cable) QSFP Cable (1 m, 2 m, 3 m, 5 m, 7 m, 10 m)	6.2(8)
	QSFP-H40G-AOC15M	40GBASE-AOC (Active Optical Cable) QSFP Cable (15m)	7.2(0)D1(1)
	QSFP-4X10G-AOCxM	40GBASE-AOC (Active Optical Cable) QSFP to 4x10G SFP+ Breakout Cable (1 m, 2 m, 3 m, 5 m, 7 m, 10 m)	6.2(8)
	WSP-Q40GLR4L	40GBASE-LR4 lite (2km SMF) QSFP+	6.2(10)

**Table 4**      **Transceivers Supported by Cisco NX-OS Software Releases (continued)**

<b>I/O Module</b>	<b>Product ID</b>	<b>Transceiver Type</b>	<b>Minimum Software Version</b>
	QSFP-40G-LR4	40GBASE-LR4 QSFP+ (Ethernet and OTU3 capable)	6.2(12)
	QSFP-40G-ER4	40GBASE-ER4 QSFP+ (40km)	6.2(12)
N7K-M324FQ-25L	CVR-QSFP-SFP10G	QSFP 40G to SFP+ 10G Adapter Module	8.2(1)
	FET-10G		
	SFP-10G-SR		
	SFP-10G-SR-S		
	DWDM-SFP10G-xx.xx <sup>3</sup>		
	SFP-10G-BXD-I		
	SFP-10G-BXU-I		
	SFP-10G-LRM		
	SFP-10G-ER		
	SFP-10G-ER-S		
	SFP-10G-LR		
	SFP-10G-LR-S		
	SFP-10G-ZR		
	SFP-10G-ZR-S		
	SFP-H10GB-CU1M		
	SFP-H10GB-CU1-5M		
	SFP-H10GB-CU2M		
	SFP-H10GB-CU2-5M		
	SFP-H10GB-CU3M		
	SFP-H10GB-CU5M		
	SFP-H10GB-ACU7M		
	SFP-H10GB-ACU10M		
	SFP-10G-AOC1M		
	SFP-10G-AOC2M		
	SFP-10G-AOC3M		
	SFP-10G-AOC5M		
	SFP-10G-AOC7M		
	SFP-10G-AOC10M		
	FET-40G	Cisco Fabric Extender Transceiver (FET)	8.1(1)
	QSFP-H40G-ACUxM	Direct attach copper, active	8.0(1)

**Table 4 Transceivers Supported by Cisco NX-OS Software Releases (continued)**

<b>I/O Module</b>	<b>Product ID</b>	<b>Transceiver Type</b>	<b>Minimum Software Version</b>
	QSFP-H40G-AOCxM	Active optical cable assembly	8.0(1)
	QSFP-4X10G-AC7M	Direct attach breakout copper, active	8.0(1)
	QSFP-4X10G-AC10M	Direct attach breakout copper, active	8.0(1)
	QSFP-4X10G-ACUxM	Direct attach breakout copper, active	8.0(1)
	QSFP-4X10G-AOC1M	Active optical breakout cable assembly	8.0(1)
	QSFP-4X10G-AOC2M	Active optical breakout cable assembly	8.0(1)
	QSFP-4X10G-AOC3M	Active optical breakout cable assembly	8.0(1)
	QSFP-4X10G-AOC5M	Active optical breakout cable assembly	8.0(1)
	QSFP-4X10G-AOC7M	Active optical breakout cable assembly	8.0(1)
	QSFP-4X10G-AOC10M	Active optical breakout cable assembly	8.0(1)
	QSFP-40G-CSR4	Multi-mode fiber (MMF)	8.0(1)
	QSFP-40G-ER4	Single-mode fiber (SMF)	8.0(1)
	QSFP-4x10G-LR-S	Single-mode fiber (SMF)	8.0(1)
	QSFP-40G-LR4	Single-mode fiber (SMF)	8.0(1)
	QSFP-40G-LR4-S	Single-mode fiber (SMF)	8.0(1)
	QSFP-40G-SR4	Multi-mode fiber (MMF)	8.0(1)
	QSFP-40G-SR4-S	Multi-mode fiber (MMF)	8.0(1)
	QSFP-40G-SR-BD	Multi-mode fiber (MMF)	8.0(1)
N7K-M348XP-25L	CWDM-SFP-xxxx <sup>2</sup>	Single-mode fiber (SMF)	7.3(0)DX(1)
	CWDM-SFP 10G-1xxx	Single-mode fiber (SMF)	8.0(1)
	DWDM-SFP-xxxx	Single-mode fiber (SMF)	7.3(0)DX(1)
	DWDM-SFP 10G-xx.xx	Single-mode fiber (SMF)	8.0(1)
	FET-10G	Cisco Fabric Extender Transceiver (FET)	8.1(1)

**Table 4**      **Transceivers Supported by Cisco NX-OS Software Releases (continued)**

I/O Module	Product ID	Transceiver Type	Minimum Software Version
	GLC-BX-U	Single-mode fiber (SMF)	7.3(0)DX(1)
	GLC-BX-D		
	GLC-EX-SMD		
	GLC-LH-SMD		
	GLC-ZX-SMD		
	GLC-LH-SMD	Multi-mode fiber (MMF)	7.3(0)DX(1)
	GLC-SX-MMD		
	GLC-TE	Category 5	7.3(0)DX(1)
	SFP-10G-AOCxM	Active optical cable assembly	8.0(1)
	SFP-10G-BXU-I	Single-mode fiber (SMF)	8.0(1)
	SFP-10G-BXD-I	Single-mode fiber (SMF)	8.0(1)
	SFP-10G-ER	Single-mode fiber (SMF)	8.0(1)
	SFP-10G-LR	Single-mode fiber (SMF)	8.0(1)
	SFP-10G-LRM	Single-mode fiber (SMF)	8.0(1)
	SFP-10G-SR	Multi-mode fiber (MMF)	8.0(1)
	SFP-10G-ZR	Single-mode fiber (SMF)	8.0(1)
	SFP-H10GB-ACU7M	Twinax cable assembly, active	8.0(1)
	SFP-H10GB-ACU10M	Twinax cable assembly, active	8.0(1)
	SFP-H10GB-CU1M	Twinax cable passive	8.0(1)
	SFP-H10GB-CU1-5M	Twinax cable passive	8.0(1)
	SFP-H10GB-CU2M	Twinax cable passive	8.0(1)
	SFP-H10GB-CU2-5M	Twinax cable passive	8.0(1)
	SFP-H10GB-CU3M	Twinax cable passive	8.0(1)
	SFP-H10GB-CU5M	Twinax cable passive	8.0(1)

<sup>1</sup>Minimum version supported is -02.

<sup>2</sup>CWDM-SFP-xxxx is supported only with 1-Gigabit Ethernet I/O modules.

<sup>3</sup>DWDM-SFP10G-C is not supported.

<sup>4</sup>For Cisco NX-OS 8.x releases, CPAK-100G-SR4 is supported from Cisco NX-OS Release 8.1(1).

<sup>#</sup>If you remove and reinsert a CPAK, reinsertion must be delayed by at least 30 seconds. This enables the device to discharge completely and power up properly upon reinsertion.

**Note**

For a complete list of supported optical transceivers, see the [Cisco Transceiver Module Compatibility Information](#) page.

## Guidelines and Limitations

This section includes the following topics:

- [Guidelines and Limitations—Cisco NX-OS Release 8.4\(3\), page 31](#)
- [Guidelines and Limitations—Cisco NX-OS Release 8.4\(2\), page 31](#)
- [Guidelines and Limitations—Cisco NX-OS Release 8.4\(1\), page 31](#)
- [Guidelines and Limitations Common for Cisco NX-OS Release 8.x, page 32](#)

### Guidelines and Limitations—Cisco NX-OS Release 8.4(3)

There are no specific guidelines and limitations applicable to Cisco NX-OS Release 8.4(3). The guidelines listed for Cisco NX-OS Release 8.4(1) and Cisco NX-OS Release 8.4(2) are also applicable to Cisco NX-OS Release 8.4(3).

### Guidelines and Limitations—Cisco NX-OS Release 8.4(2)

There are no specific guidelines and limitations applicable to Cisco NX-OS Release 8.4(2). The guidelines listed for Cisco NX-OS Release 8.4(1) are also applicable to Cisco NX-OS Release 8.4(2).

### Guidelines and Limitations—Cisco NX-OS Release 8.4(1)

The following guidelines and limitations are applicable to Cisco NX-OS Release 8.4(1):

- Support for the RISE feature has been deprecated in Cisco NX-OS Release 8.4(1).
- In a system with large routing table of approximately 250K routes and over, a M3 module upon reload may go online before the full routing table is populated in its TCAM. This issue is fixed in [CSCvn25428](#). However, even with the fix in [CSCvn25428](#), if multiple M3 modules reload in tandem, some of the modules may go online without the full routing table in TCAM. There is no fix for this case. This is a known limitation.
- Beginning with Cisco NX-OS Release 8.4(1), it is recommended to use agent-less configuration management systems such as Puppet or Ansible with the Cisco Nexus 7000 Series switches; as the Open Agent Container (OAC) support will be deprecated in the future releases. This OAC feature was added in the Cisco NX-OS Release 7.3(0)D1(1) with the purpose of providing and execution space for configuration management. For more details see [Cisco Nexus 7000 Series NX-OS Programmability Guide](#).
- Cisco NX-OS Release 8.4(1) addresses a vulnerability, CVE-2019-1649 in N77-SUP3E platform. After upgrading or booting to Cisco NX-OS Release 8.4(1), an explicit EPLD upgrade needs to be done to address this vulnerability effectively. EPLD upgrade can be initiated using the **install module sup\_module\_no epld system path\_of\_system\_image** command. This step is not needed if the setup has **auto epld upgrade** option enabled.
- When you upgrade Supervisor 2, Supervisor 2E, and Supervisor 3E to Cisco NX-OS Release 8.4(1) with dual supervisors, the management interface of the of HA-Standby supervisor flaps every 30 minutes. The flap is detected on the peer switch interface, which is connected to the mgmt 0 interface of HA-Standby as link down event.  
The flap occurs because of the new feature introduced in Cisco NX-OS Release 8.4(1) where the management loopback test is run periodically on the HA-Standby supervisor. This is an expected

behaviour.

In order stop the link flap on peer switch this loopback test has to be disabled. To disable the loopback test for standby supervisor run the **no diagnostic monitor module** *<standby sup module number>* **test 15** command on the active supervisor.

- With the new BIOS, the image name length for Supervisor 2, Supervisor 2E, and Supervisor 3E modules is changed to a maximum of 256 characters. Meanwhile, the image name length is still restricted to 128 characters for kick start and system images. Hence make sure that you do not use more than 128 characters in image names.
- During the supervisor 2 to supervisor 3 module migration do not disturb the testbed, i.e., do not plug in or plug out, power down, reload, and reset the modules and ports. If you do any of these tasks the migration might fail or might give undesirable results. You can use only the show commands during the migration.
- The default max-bundle value has been enhanced to 32 for Cisco Nexus 7000 Series switch from Cisco NX-OS Release 8.4(1). The previous max-bundle value of 16 is now considered as non-default and this value is displayed in the show running configuration and show running all configuration output after the upgrade to Cisco NX-OS Release 8.4(1). You can configure no lacp max-bundle 16 on previously configured port-channel to reflect system default to 32.

For information on features related to Cisco NX-OS Release 8.4(1) see [New and Enhanced Software Features - Cisco NX-OS Release 8.4\(1\)](#), page 65.

## Guidelines and Limitations Common for Cisco NX-OS Release 8.x

The following guidelines and limitations are applicable to Cisco NX-OS Release 8.0(1) and later releases.

Beginning with Cisco NX-OS Release 8.0(1), the following M1-Series I/O modules are not supported:

- Cisco Nexus 7000 M1-Series 48-port Gigabit Ethernet Module with XL Option (SFP optics) (N7K-M148GS-11L)
- Cisco Nexus 7000 M1-Series 48-port 10/100/1000 Ethernet Module with XL Option (RJ45) (N7K-M148GT-11L)
- Cisco Nexus 7000 M1-Series 32 Port 10GbE with XL Option, 80G Fabric (requires SFP+) (N7K-M132XP-12L)
- Cisco Nexus 7000 M1-Series 8-Port 10 Gigabit Ethernet Module with XL Option (requires X2) (N7K-M108X2-12L)

Beginning with Cisco NX-OS Release 8.0(1), the following F2-Series I/O modules are not supported:

- Nexus 7000 F2-Series 48 Port 1G/10G Ethernet Module, SFP/SFP+ (and spare) (N7K-F248XP-25, N7K-F248XP-25=)

### VXLAN BGP EVPN in VDCs having M3 modules

The following features are not supported for VXLAN BGP EVPN in VDCs having M3 modules:

- EVPN VXLAN leaf functionality (except Border Leaf functionality) is not supported.
- LISP hand off is not supported.
- Hosts connected behind FEX is not supported.



### EVPN Border Leaf Hand Off Limitation in M3 Module

This limitation is on the EVPN to VRF lite hand off.

If EVPN fabric connected interface is on a M3 module and VRF lite interface is on F3 module, south to north traffic will be dropped on the border leaf.

### Smart Licensing Show Commands are Missing on Non-Default VDC Context

Smart Licensing show commands are missing on the non-default VDC context. The work around is to use the default VDC to verify license related show outputs.

### OTV Traffic Fails on VXLAN EVPN Border Leaf Due To ARP Resolution Failure

OTV traffic fails on VXLAN EVPN border leaf due to ARP resolution failure. This issue occurs on the following conditions:

- Dual switch VPC Border Leaf
- M3 only VDC setup
- vPC legs connected to OTV VDC
- Reloading the switch
- Using **shutdown** and **no shutdown** commands on the port-channel logical interface

The workaround to this issue is to do a 'shutdown' and 'no shutdown' of vPC port-channel member interfaces from both the vPC switches and then re-send the ARP for the flows.



**Note**

Port-channel interface shut and no shut may not work,

### Native VLAN Change Causes Link Flap

Changing the native VLAN on an access port or trunk port will flap the interface. This behavior is expected.

### Passive Copper Optic Cables are not Supported on the Non EDC Ports

Passive copper optic cables are not supported on the non-EDC ports.

The delay in link up event in SFP+ implementation is due to a factor called Electronic Dispersion Compensation (EDC). EDC ports mitigate power penalties associated with optical link budgets. Receivers without EDC (for example - SFP, where there is no delay in bringing the port up) can recover an optical signal only if the dispersion is less than approximately one-half Unit Interval (UI) over the length of fiber.

QSFP passive copper (QSFP-H40G-CU1M, QSFP-H40G-CU3M, QSFP-H40G-CU5M), and copper breakout cables (QSFP-4SFP10G-CU1M, QSFP-4SFP10G-CU3M, QSFP-4SFP10G-CU5M) are not supported on the following modules:

- N7K-M206FQ-23L
- N7K-F312FQ-25
- N77-F324FQ-25

The workaround to this limitation is to use active optical cables (QSFP-H40G-AOC1M, QSFP-H40G-AOC3M, QSFP-H40G-AOC5M) and active optical breakout cables (QSFP-4X10G-AOC1M, QSFP-4X10G-AOC3M, QSFP-4X10G-AOC5M).

The passive optics (N7K M3 40G, N77 M3 40G, and N77 M3 100G) are not supported on the following modules:

- N7K-M324FQ-25L
- N77-M324FQ-25L
- N77-M312CQ-26L

## MPLS over GRE

MPLS over GRE is not supported on F3 modules.

## VLAN Translation on Fabric Extender Is Not Supported

VLAN translation on fabric extender is not supported. If you need to map a VLAN, you must move the interface to the parent switch and then configure the VLAN translation on the switches directly. The VLAN translation configuration is applicable for trunk ports connecting two data centers.

## The no hardware ejector enable Command is Not Recommended for Long-Term Use

The **no hardware ejector enable** command cannot be configured and persistently saved in the startup configuration. This command is intended for temporary usage.

To work around this limitation, do not physically remove an active supervisor. Instead, use the **system switchover** command to switch to the standby supervisor.

This applies only to the Cisco Nexus 7700 Series switches.

## Saving VLAN Configuration Information

Because a VLAN configuration can be learned from the network while the VLAN Trunking Protocol (VTP) is in a server/client mode, the VLAN configuration is not stored in the running configuration. If you copy the running configuration to a file and apply this configuration at a later point, including after a switch reload, the VLANs will not be restored. However, the VLAN configuration will be erased if the switch is the only server in the VTP domain.

To work around this limitation, perform one of the following tasks:

- Configure one of the clients as the server.
- Complete these steps:
  1. Copy the VTP data file to the bootflash: data file by executing the **copy vtp-datafile bootflash:vtp-datafile** command.
  2. Copy the ASCII configuration to the startup configuration by executing the **copy ascii-cfg-file startup-config** command.
  3. Reload the switch.

This limitation does not apply to a binary configuration, which is the recommended approach, only for an ASCII configuration.

## Behavior of Control Plane Packets in an F2e Series Module

To support the coexistence of an F2e Series module with an M Series module in the same VDC, the F2e Series module operates in a proxy mode so that all the Layer 3 traffic is sent to an M Series module in the same VDC. For F2e proxy mode, having routing adjacencies connected through F2e interfaces with an M1 Series module is not supported. However, routing adjacencies connected through F2e interfaces with an M2 Series module is supported.

## Error Appears When Copying a File to the Running Configuration

Copying a file to the running configuration can trigger an error and the following message is displayed:

```
"WARNING! there is unsaved configuration"
```

This issue might occur if the configuration contains SNMP-related configurations to send traps or notifications, and if the file that is to be copied to the running configuration contains only EXEC **show** commands.

When the following message is displayed, enter **y**.

```
"This command will reboot the system. (y/n)? [n] y."
```

Note that there is no operational impact and no configuration loss when the switch reloads.

## PONG in a vPC Environment

PONG is not supported in a vPC environment in the following scenarios:

- In a vPC environment, a PONG to an access switch or from an access switch might fail. To work around this issue, use the interface option while executing a PONG from an access switch to a vPC peer. The interface can be one that does not have to go over the peer link, such as an interface that is directly connected to the primary switch.
- When FabricPath is enabled and there are two parallel links on an F2 Series module, PONG might fail. To work around this issue, form a port channel with the two links as members.

For more details on PONG, refer to the [Cisco Nexus 7000 Series NX-OS Troubleshooting Guide](#).

## LISP Traffic

A Layer 3 link is required between aggregation switches when deploying LISP host mobility on redundant LISP Tunnel Routers (xTRs) that are a part of a vPC. In rare (but possible) scenarios, failure to deploy this Layer 3 link might result in traffic being moved to the CPU and potentially dropped by the Control Plane Policing (CoPP) rate limiters.

## Standby Supervisor Might Reset with a Feature-Set Operation

The standby supervisor might reload when a feature-set operation (install, uninstall, enable, or disable) is performed if the high availability (HA) state of the standby supervisor is not "HA standby" at the time of the feature-set operation. To prevent the reload, ensure that the state of the standby supervisor is "HA standby." To check the HA state for the specific virtual device context (VDC) where the feature-set operation is performed, enter the **show system redundancy ha status** command on the active supervisor.

A reload of the standby supervisor has no operational impact because the active supervisor is not affected.

In addition, if you perform a feature-set operation while modules are in the process of coming up, then those modules are power cycled. Modules that are up and in the OK state are not power cycled when you perform a feature-set operation.

### Unfair Traffic Distribution for Flood Traffic

Uneven load balancing of flood traffic occurs when you have a seven-member port channel. This behavior is expected, and occurs on all M Series and F Series modules. In addition, M Series modules do not support Result Bundle Hash (RBH) distribution for multicast traffic.

### BFD Not Supported on the MTI Interface

If bidirectional forwarding detection (BFD) on Protocol Independent Multicast (PIM) is configured together with MPLS multicast VPN (MVPN), the following error might appear:

```
2012 Jan 3 15:16:35 dc3_sw2-dc3_sw2-2 %PIM-3-BFD_REMOVE_FAIL: pim [22512] Session remove
request for neighbor 11.0.3.1 on interface Ethernet2/17 failed (not enough memory)
```

This error is benign. To avoid the error, disable BFD on the multicast tunnel interface (MTI) interface.

For every multicast domain of which an multicast VRF is a part, the PE router creates a MTI. MTI is an interface the multicast VRF uses to access the multicast domain.

### Role-Based Access Control

You can configure role-based access control (RBAC) in the Cisco Nexus 7000 storage VDC using Cisco NX-OS CLI commands. You cannot configure RBAC in the Cisco Nexus 7000 storage VDC using Cisco Data Center Network Manager (DCNM). Note that RBAC in the storage VDC and in the Cisco Nexus 7000 Series switches is the same, which is different from that for the Cisco MDS 9500 Series Multilayer Directors.

RBAC CLI scripts used in Cisco MDS 9500 Series Multilayer Directors cannot be applied to the storage VDC configured for a Cisco Nexus 7000 Series switch.

You cannot distribute the RBAC configuration between a Cisco MDS 9500 Series switch and the storage VDC configured for a Cisco Nexus 7000 Series switch. To prevent this distribution, assign RBAC in Cisco MDS and the Cisco Nexus 7000 storage VDC to different Cisco Fabric Services (CFS) regions.

### Limitation on the Level 4 Protocol Entries on the M Series Modules

The M Series modules support only 7 entries for Layer-4 protocols (L4Ops).

### Network Analysis Module (NAM-NX1)

Cisco Nexus 7000 Series Network Analysis Module (NAM-NX1) is not supported.

### SVI Statistics on an F2 Series Module

F2 Series I/O modules do not support per-VLAN statistics. Therefore, the **show interface** command will not display per-VLAN Rx or Tx counters or statistics for switch virtual interfaces (SVIs).

## TrustSec SGT on the F3 Series Modules

F3 Series I/O modules require a dot1q header to be present for proper processing and transport of SGT-tagged packets. For Layer 2 switch ports use trunked interfaces instead of an access VLAN. Layer 3 interfaces should be configured as an L3 subinterface to force the dot1q over the L3 interconnection.

## Fabric Module Removal on the Cisco Nexus 7700 Switches

When a fabric module is power cycled or removed momentarily during an online insertion and removal (OIR) from slot 5 or slot 6 on a Fabric 2 module in a Cisco Nexus 7700 switch, packet drops can occur. This limitation is not applicable to Cisco Nexus 7702 Switches.

## Fabric Utilization on the Cisco Nexus 7700 Switches

When traffic ingresses from a module on the Cisco Nexus 7700 switch at a rate much below the line rate, uniform fabric utilization does not occur across the fabric modules. This behavior is expected and reflects normal operation based on the fabric autospreading technology used in the Cisco Nexus 7700 switch.

## MTU Changes do not Take Effect on FEX Queues

When you change the interface MTU on a fabric port, the configured MTU on the FEX ports are not configured to the same value. This issue occurs when the interface MTU changes on a fabric port.

The configured MTU for the FEX ports is controlled by the network QoS policy. To change the MTU that is configured on the FEX ports, modify the network QoS policy to also change when the fabric port MTU is changed.

## Multicast Traffic is Forwarded to FEX Ports

Multicast traffic that is sent to Optimized Multicast Flooding (OMF) Local Targeting Logic (LTL) is forwarded to FEX ports that are not a part of the bridge domain (BD). This issue occurs when multicast traffic is sent to OMF LTL, which occurs if an unknown unicast flooding occurs when OMF is enabled.

FEX interfaces can support multicast routers, but OMF must be disabled on those VLANs. If there is a multicast MAC address mismatch on the VLAN, traffic will be flooded in the VLAN and will eventually reach the router behind the FEX port.

## F2 Connectivity Restrictions on Connecting Ports to an FEX

If an ASCII configuration has incompatible ports, such as when the configuration is created with ports that are added to an FEX from different modules or VDC types, the ports might be added without warnings.

When connecting F2 Series ports to the same FEX, make sure the VDC type is the same as in the source configuration that is being replicated.

## DHCP Snooping and vPC+ FEX

DHCP snooping is not supported when the vPC+ FEX feature is enabled.

# Upgrade and Downgrade Paths and Caveats

This section includes information about upgrading and downgrading Cisco NX-OS software on Cisco Nexus 7000 Series switches. It includes the following sections:

- [Supported Upgrade and Downgrade Paths](#)
- [ISSU Upgrade](#)
- [In-Service Software Upgrade \(ISSU\) Caveats](#)
- [Non-ISSU Upgrade/Cold Boot Upgrade](#)
- [Non-In-Service Software Upgrade \(Non-ISSU\)/Cold Boot Upgrade Caveats](#)
- [Non-ISSU/Cold Boot Downgrade](#)

## Supported Upgrade and Downgrade Paths

Before you upgrade or downgrade your Cisco NX-OS software, we recommend that you read the complete list of caveats in this section to understand how an upgrade or downgrade might affect your network, depending on the features that you have configured.



### Note

Do not change any configuration settings or network settings during a software upgrade. Changes to the network settings might cause a disruptive upgrade.

Releases that are not listed for a particular release train do not support a direct ISSU.

Non-disruptive in-service software downgrades (ISSD) are not supported in the Cisco NX-OS 8.x releases.



### Note

For a nondisruptive upgrade dual supervisor modules are required.

## ISSU Paths for Cisco NX-OS Release 8.4(3)

See [Table 5](#) for the In-Service Software Upgrade (ISSU) paths for Cisco NX-OS Release 8.4(3).



### Note

Only the ISSU paths/combinations in [Table 5](#) have been tested and are supported.

**Table 5**      **Supported ISSU Paths for Cisco Nexus 7000 Series Switches and Cisco Nexus 7700 Switch (Cisco NX-OS Release 8.4(3))**

Target Release	Current Release Supporting Direct ISSU Upgrade to Target Release
Cisco NX-OS Release 8.4(3)	8.4(2)
	8.4(1)
	8.3(2)
	8.3(1)
	8.2(6)
	8.2(5)
	8.2(4)
	8.2(3)
	8.2(2)
	8.2(1)
	8.1(2a)
	8.1(2)
	7.3(6)D1(1)
	7.3(5)D1(1)
	7.3(4)D1(1)
	7.3(3)D1(1)
	7.3(2)D1(3a)
	7.3(2)D1(3)
	7.3(2)D1(2)

Multi hop ISSU is not supported. If you are upgrading from a release other than the nondisruptive upgrade releases listed in [Table 5](#), a reload is required.

## ISSU Paths for Cisco NX-OS Release 8.4(2)

See [Table 6](#) for the In-Service Software Upgrade (ISSU) paths for Cisco NX-OS Release 8.4(2).



### Note

Only the ISSU paths/combinations in [Table 6](#) have been tested and are supported.

**Table 6**      *Supported ISSU Paths for Cisco Nexus 7000 Series Switches and Cisco Nexus 7700 Switch (Cisco NX-OS Release 8.4(2))*

Target Release	Current Release Supporting Direct ISSU Upgrade to Target Release
Cisco NX-OS Release 8.4(2)	8.4(1)
	8.3(2)
	8.3(1)
	8.2(6)
	8.2(5)
	8.2(4)
	8.2(3)
	8.2(2)
	8.2(1)
	8.1(2a)
	8.1(2)
	7.3(6)D1(1)
	7.3(5)D1(1)
	7.3(4)D1(1)
	7.3(3)D1(1)
	7.3(2)D1(3a)
	7.3(2)D1(3)
	7.3(2)D1(2)

Multi hop ISSU is not supported. If you are upgrading from a release other than the nondisruptive upgrade releases listed in [Table 6](#), a reload is required.

## ISSU Paths for Cisco NX-OS Release 8.4(1)

See [Table 7](#) for the In-Service Software Upgrade (ISSU) paths for Cisco NX-OS Release 8.4(1).



### Note

Only the ISSU paths/combinations in [Table 7](#) have been tested and are supported.



**Table 7**      **Supported ISSU Paths for Cisco Nexus 7000 Series Switches and Cisco Nexus 7700 Switch (Cisco NX-OS Release 8.4(1))**

Target Release	Current Release Supporting Direct ISSU Upgrade to Target Release
Cisco NX-OS Release 8.4(1)	8.3(2)
	8.3(1)
	8.2(6)
	8.2(5)
	8.2(4)
	8.2(3)
	8.2(2)
	8.2(1)
	8.1(2a)
	8.1(2)
	7.3(6)D1(1)
	7.3(5)D1(1)
	7.3(4)D1(1)
	7.3(3)D1(1)
	7.3(2)D1(3a)
	7.3(2)D1(3)
	7.3(2)D1(2)

Multi hop ISSU is not supported. If you are upgrading from a release other than the nondisruptive upgrade releases listed in [Table 7](#), a reload is required.

## ISSU Upgrade

To perform an ISSU to Cisco NX-OS Release 8.0(1) and later releases, follow these steps:

1. Enter the **show running-config aclmgr inactive-if-config** command for all VDCs.
2. Enter the **clear inactive-config acl** command for all VDCs.
3. If the configuration has any mac packet-classify configurations on any interfaces, remove all of the configurations by entering the **no mac packet-classify** command.
4. Start the ISSU procedure.

## In-Service Software Upgrade (ISSU) Caveats

- ISSU upgrade from Cisco NX-OS 7.3.x releases to Cisco NX-OS Release 8.0(1) and later releases with RISE configuration:

- RISE configuration must be removed prior to starting your upgrade to Cisco NX-OS Release 8.0(1) and later releases. ISSU performs compatibility check and blocks the upgrade if RISE is configured.
  - If the RISE feature is not configured, there is no impact on the ISSU.
  - If the RISE feature is configured you will be prompted to remove this feature in order to proceed with the ISSU. You can proceed with the upgrade only after you disable this feature.
- Sample CLI output:

```
"Running-config contains configuration that is incompatible with the new
image (strict incompatibility).
Please run 'show incompatibility-all system <image>' command to find out
which feature needs to be disabled.".
Pre-upgrade check failed. Return code 0x40930029 (Current running-config is
not supported by new image).
switch# show incompatibility-all system n7000-s2-dk9.8.0.1.bin

Checking incompatible configuration(s) for vdc 'switch':
-----
No incompatible configurations

Checking dynamic incompatibilities for vdc 'switch':
-----
Service : iscm , UUID: 1144
Description : Rise ISSU script
Compatibility requirement: STRICT
Workaround:
ISSU from version < 8.0(1) not supported when Rise feature is enabled.
```

- **ISSU upgrade from Cisco NX-OS 7.3.x releases to Cisco NX-OS Release 8.0(1) and later releases with VXLAN configuration in a vPC setup:**

ISSU upgrade from Cisco NX-OS 7.3.x releases to Cisco NX-OS Release 8.0(1) and later releases with VXLAN configuration in a vPC setup can result in a traffic loss when the second vPC peer is upgraded.

The following upgrade steps are recommended as the workaround for this issue:

- Shutdown vPC on the vPC secondary and reload with 8.0(1).
- Perform no shut vpc after the system is operational,
- Perform a vPC role change so that vPC secondary becomes a vPC primary.
- Shutdown vPC on the other peer that is still running 7.3 release and reload with 8.0(1).
- Perform no shut vpc after the system is operational,
- Optionally, a vPC role change can be performed to get the latest peer back to vPC primary.
- If ISSU fails during a FEX module upgrade, you need to clear the flash as per the following steps and then proceed with the upgrade:
  - rlogin to the failing FEX—rlogin 192.0.2.<FEX-ID> -l root
  - umount /mnt/cfg
  - flash\_eraseall /dev/mtd5
  - mount -t jffs2 -rw /dev/mtdblock5 /mnt/cfg

The **mount** command enables you to mount a file from a source folder to a destination folder.

- FCoE FEX

- After ISSU upgrade, you must change the port-channel load balance for FEX, that is, from default VDC, in order to apply load balancing for SAN traffic:

Device(config)# **port-channel load-balance src-dst mac fex 101**

- You can revert back to the default load balance after changing the load balance for FEX.
- For details on ISSU for other earlier releases refer to the following:  
[http://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/7\\_x/nx-os/release/notes/7x\\_nx-os\\_release\\_note.html](http://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/7_x/nx-os/release/notes/7x_nx-os_release_note.html)
- For multihop ISSU scenario for releases earlier than Cisco NX-OS Release 7.2(0) refer to the following:  
[http://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/6\\_x/nx-os/release/notes/62\\_nx-os\\_release\\_note.html#pgfId-812362](http://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/6_x/nx-os/release/notes/62_nx-os_release_note.html#pgfId-812362).

## Non-ISSU Upgrade/Cold Boot Upgrade

Cisco NX-OS Release 8.4(3) supports the following cold boot support matrix:

**Table 8**      ***Supported Cold Boot Matrix in Cisco NX-OS Release 8.4(3)***



Target Release	Current Release Supporting Cold-Boot Upgrade to Target Release
8.4(3)	8.4(2)
	8.4(1)
	8.3(2)
	8.3(1)
	8.2(6)
	8.2(5)
	8.2(4)
	8.2(3)
	8.2(2)
	8.2(1)
	8.1(2a)
	8.1(2)
	8.1(1)
	8.0(1)
	7.3(6)D1(1)
	7.3(5)D1(1)
	7.3(4)D1(1)
	7.3(3)D1(1)
	7.3(2)D1(3a)
	7.3(2)D1(3)
	7.3(2)D1(2)
	7.3(2)D1(1)
	7.3(1)D1(1)
	7.3(0)DX(1)
	7.3(0)D1(1)
	7.2(2)D1(2)
	7.2(2)D1(1)
	7.2(1)D1(1)
	7.2(0)D1(1)
	6.2(24a)
	6.2(24)
	6.2(22)
	6.2(20a)
	6.2(20)
	6.2(18)
	6.2(16)
	6.2(14)
	6.2(12)
	6.2(10)

Cisco NX-OS Release 8.4(2) supports the following cold boot support matrix:

**Table 9**      ***Supported Cold Boot Matrix in Cisco NX-OS Release 8.4(2)***





Target Release	Current Release Supporting Cold-Boot Upgrade to Target Release
8.4(2)	8.4(1)
	8.3(2)
	8.3(1)
	8.2(6)
	8.2(5)
	8.2(4)
	8.2(3)
	8.2(2)
	8.2(1)
	8.1(2a)
	8.1(2)
	8.1(1)
	8.0(1)
	7.3(6)D1(1)
	7.3(5)D1(1)
	7.3(4)D1(1)
	7.3(3)D1(1)
	7.3(2)D1(3a)
	7.3(2)D1(3)
	7.3(2)D1(2)
	7.3(2)D1(1)
	7.3(1)D1(1)
	7.3(0)DX(1)
	7.3(0)D1(1)
	7.2(2)D1(2)
	7.2(2)D1(1)
	7.2(1)D1(1)
	7.2(0)D1(1)
	6.2(24a)
	6.2(24)
	6.2(22)
	6.2(20a)
	6.2(20)
	6.2(18)
	6.2(16)
	6.2(14)
	6.2(12)
	6.2(10)

Cisco NX-OS Release 8.4(1) supports the following cold boot support matrix:

***Table 10 Supported Cold Boot Matrix in Cisco NX-OS Release 8.4(1)***

Target Release	Current Release Supporting Cold-Boot Upgrade to Target Release
8.4(1)	8.3(2)
	8.3(1)
	8.2(6)
	8.2(5)
	8.2(4)
	8.2(3)
	8.2(2)
	8.2(1)
	8.1(2a)
	8.1(2)
	8.1(1)
	8.0(1)
	7.3(6)D1(1)
	7.3(5)D1(1)
	7.3(4)D1(1)
	7.3(3)D1(1)
	7.3(2)D1(3a)
	7.3(2)D1(3)
	7.3(2)D1(2)
	7.3(2)D1(1)
	7.3(1)D1(1)
	7.3(0)DX(1)
	7.3(0)D1(1)
	7.2(2)D1(2)
	7.2(2)D1(1)
	7.2(1)D1(1)
	7.2(0)D1(1)
	6.2(24a)
	6.2(24)
	6.2(22)
	6.2(20a)
	6.2(20)
	6.2(18)
	6.2(16)
	6.2(14)
	6.2(12)
	6.2(10)
	6.2(8b)
	6.2(8a)
	6.1(5a)

**Note**

Non-ISSU upgrades are also referred to as cold boot upgrade.

To perform a non-ISSU upgrade (cold boot upgrade) to Cisco NX-OS Release 8.0(1) and later releases from any prior supported releases in [Table 10](#) and [Table 8](#) follow these steps:

1. Change the boot variable, as shown here:

Example for Cisco NX-OS Release 8.4(1)

```
boot kickstart bootflash:/n7000-s2-kickstart.8.4.1.bin sup-2
boot system bootflash:/n7000-s2-dk9.8.4.1.bin sup-2
boot kickstart bootflash:/n7000-s2-kickstart.8.4.1.bin sup-2e
boot system bootflash:/n7000-s2-dk9.8.4.1.bin sup-2e
```

2. Enter the **copy running-config startup-config vdc-all** command.
3. Enter the **reload** command to reload the switch.

**Note**

Allow some time after the reload for the configuration to be applied.

Reload based NXOS downgrades involve rebuilding the internal binary configuration from the text-based startup configuration. This is done to ensure compatibility between the binary configuration and the downgraded software version. As a result, certain specific configuration may be missing from the configuration, after downgrade, due to ASCII replay process. This would include FEX HIF port configuration and VTP database configuration. Furthermore, NX-OS configurations that require VDC or switch reload to take effect may require additional reload when applied during the downgrade process. Examples of this include URIB/MRIB shared memory tuning, custom reserved VLAN range and Fabricpath Transit Mode feature. In order to mitigate this during downgrade, you should copy your full configuration to bootflash/tftpserver.

Feature Support:

Any features introduced in a release must be disabled before downgrading to a release that does not support those features.

Unsupported Modules:

When manually downgrading from a Cisco NX-OS Release to an earlier release, first power down all modules that are unsupported in the downgrade image. Then, purge the configuration of the unsupported modules using the **purge module module\_number running-config** command.

For complete instructions on upgrading your software, see the [Cisco Nexus 7000 Series NX-OS Upgrade Downgrade Guide](#).

## Non-In-Service Software Upgrade (Non-ISSU)/Cold Boot Upgrade Caveats

Cold boot/Reload upgrades from Cisco NX-OS 7.3.x releases to Cisco NX-OS Release 8.0(1) and later releases with RISE Configuration:

- RISE configuration must be removed prior to starting your upgrade to Cisco NX-OS Release 8.0(1)/Cisco NX-OS Release 8.1(1) and later releases. ISSU performs compatibility check and blocks the upgrade if RISE is configured. There is no warning displayed or prevention for the reload upgrade. Therefore make sure to remove RISE configuration before the reload upgrade.
  - There is no system check to block this upgrade path.
  - Ensure that the RISE feature is disabled before attempting to upgrade to Cisco NX-OS Release 8.0(1) or later releases. After upgrading to Cisco NX-OS Release 8.0(1)/later releases, configure RISE services as required. The RISE feature configuration can be verified by using the **show rise** and **show run services sc\_engine** commands.
  - If you upgrade to Cisco NX-OS Release 8.0(1)/later releases with the RISE configuration, RISE services will become unstable and unmanageable.
    - Steps to identify the error condition:  
Even if the **show feature** command output shows RISE as enabled, no output will be displayed if you run the **show rise** and **show run services sc\_engine** commands.
    - Steps to recover:  
The only way to recover from this condition is to do a **reload ascii** on the switch.

## ASCII Configuration Replay

### Saving VLAN Configuration Information:

Because a VLAN configuration can be learned from the network while the VLAN Trunking Protocol (VTP) is in a server/client mode, the VLAN configuration is not stored in the running configuration. If you copy the running configuration to a file and apply this configuration at a later point, including after a switch reload, the VLANs will not be restored. However, the VLAN configuration will be erased if the switch is the only server in the VTP domain.

The following steps list the workaround for this limitation:

- Configure one of the clients as the server.
- Complete the following steps:
  - Copy the VTP data file to the bootflash: data file by entering the **copy vtp-datafile bootflash: vtp-datafile** command.
  - Copy the ASCII configuration to the startup configuration by entering the **copy ascii-cfg-file startup-config** command.
  - Reload the switch with Cisco NX-OS Release 6.2(2) or a later release.

This limitation does not apply to a binary configuration, which is the recommended approach, but only to an ASCII configuration. In addition, this limitation applies to all Cisco NX-OS software releases for the Cisco Nexus 7000 series.

### Rebind Interfaces command is not automatically executed when Replaying ASCII configuration in Cisco NX-OS Release 6.2(x):

The **rebind interfaces** command introduced in Cisco NX-OS Release 6.2(2) is needed to ensure the proper functionality of interfaces in certain circumstances. The command might be required when you change the module type of a VDC. However, because of the disruptive nature of the **rebind interfaces** command, for Cisco NX-OS Release 6.2(x) prior to Cisco NX-OS Release 6.2(8), this limitation applies only when all of the following conditions are met:

- The ASCII configuration file is replayed in the context of the default VDC or the admin VDC, and at least one VDC has an F2e Series or an F3 Series module listed as supported module types either before or after the replay.
- The **limit-resource module-type** commands listed in the ASCII configuration file requires that **rebind interfaces** command be executed.

The following steps list the workaround for this limitation:

- Manually enter the **rebind interfaces** command wherever needed to the ASCII configuration file for replay.
- Enter the **rebind interfaces** command immediately after you enter the **limit-resource module-type** command.
- Ensure that the ASCII replay properly applies all interface configurations for all interfaces in the relevant VDCs.



#### Note

If you boot up the switch without any startup configuration, this limitation might apply to an ASCII replay. The reason is that without a startup configuration, the default VDC might still have certain interfaces automatically allocated. Because of this possibility, follow the approaches to work around the limitation.

## Non-ISSU/Cold Boot Downgrade

Instructions provided below list the steps for the cold boot (non-ISSU) downgrade. The example provided below is for a cold boot downgrade for the following:

- A switch that is running Cisco NX-OS Release 8.3(1), Cisco NX-OS Release 8.2(1), and Cisco NX-OS Release 8.1(1) and needs to reload with Cisco NX-OS Release 6.2(8a).
- A switch that is running Cisco NX-OS Release 8.0(1) and needs to reload with Cisco NX-OS Release 6.2(12).

Refer to the [ASCII Configuration Replay](#) caveats section for specific configuration caveats.

- Save the switch configuration.
  - Enter **copy running-config bootflash:<config.txt> vdc-all** command.
- Change the boot variable to boot the target release.
- Enter **copy running-config startup-config vdc-all** command to save the boot variable.
- Enter **write erase** command to erase running configuration on the switch.
- Enter **reload** command.

Once the switch and all the modules are up with the target image, do the following:

- Enter the **copy bootflash:<config.txt> running-config** command.
- Verify that the switch is configured correctly.
- Replay the configuration copy to check if fex interfaces exist.
  - Enter the **copy bootflash:<config.txt> running-config** command.

# Erasable Programmable Logic Device Images

Cisco NX-OS Release 8.4(3) includes the following Erasable Programmable Logic Device (EPLD) images:

- n7000-s2-epld.8.4.3.img
- n7700-s2-epld.8.4.3.img
- n7700-s3-epld.8.4.3.img

[Table 12](#) shows the modules that are supported in Cisco NX-OS Release 8.4(3):

**Table 11 Supported Modules with the FPGA in Cisco NX-OS Releases 8.4(3)**

Module	FPGA Type	Version
Cisco Nexus 7000 Supervisor 2	PMFPGA	38.000
	IOFPGA	1.013
Cisco Nexus 7700 Supervisor 2E	PMFPGA	22.000
Cisco Nexus 7700 Switch Supervisor 3 Enhanced Module	PMFPGA	22.000
Fan-10 slot chassis (Cisco Nexus 7000 Series)	FAN	0.007
Fan-18 slot chassis (Cisco Nexus 7000 Series)	FAN	0.002
Fan-9 slot chassis (Cisco Nexus 7000 Series)	FAN	0.009
Fan-4 slot chassis (Cisco Nexus 7000 Series)	FAN	0.005
Fan-18 slot chassis (Cisco Nexus 7700 Series)	FAN	0.006
Fan-10 slot chassis (Cisco Nexus 7700 Series)	FAN	0.006
Fan-6 slot chassis (Cisco Nexus 7700 Series)	FAN	0.006
Fan-2 slot chassis (Cisco Nexus 7700 Series)	FAN	0.016
9 slot chassis (N7K:FAB2-7009)	PMFPGA	1.003
10 slot chassis (N7K:FAB2-7010)	PMFPGA	0.007
18 slot chassis (N7K:FAB2-7018)	PMFPGA	0.007
6 slot chassis (N77:FAB2-7706)	PMFPGA	1.002
10 slot chassis (N77:FAB2-7710)	PMFPGA	1.003



Module	FPGA Type	Version
18 slot chassis (N77:FAB2-7718)	PMFPGA	1.002
6 slot chassis (N77:FAB3-7706)	PMFPGA	0.010
10 slot chassis (N77:FAB3-7710)	PMFPGA	0.008
N7K:M2-10	PMFPGA	1.006
	IOFPGA	1.003
	SFPFPGA	1.003
	EARL (Forwarding Engine)	2.012
N7K:M2-40	PMFPGA	1.006
	IOFPGA	0.012
	SFPFPGA	2.008
	EARL (Forwarding Engine)	2.012
N7K:M2-100	PMFPGA	1.007
	IOFPGA	0.009
	SFPFPGA	0.004
	EARL (Forwarding Engine)	2.012
N7K:F2E-10	PMFPGA	1.009
	IOFPGA	0.016
N77:F2E-10	PMFPGA	0.006
	IOFPGA	0.005
N7K:F3-10	PMFPGA	1.000
	IOFPGA	1.005
	SFPFPGA	1.002
N7K:F3-40	PMFPGA	2.003
	IOFPGA	1.005
N7K:F3-100	PMFPGA	2.003
	IOFPGA	1.004
N77:F3-10	PMFPGA	1.007
	IOFPGA	0.035
	SFPFPGA	1.003
N77:F3-40	PMFPGA	1.005
	IOFPGA	0.031
N77:F3-100	PMFPGA	1.008
	IOFPGA	0.021

Module	FPGA Type	Version
N77:F4-100	PMFPGA	0.012
	IOFPGA	2.000
	SFPFPGA	0.009
N7K:M3-10	PMFPGA	1.001
	IOFPGA	2.001
	SFPFPGA	1.000
N7K:M3-40	PMFPGA	1.001
	IOFPGA	2.001
	SFPFPGA	1.000
N77:M3-10	PMFPGA	1.002
	IOFPGA	2.000
	SFPFPGA	1.000
N77:M3-40	PMFPGA	1.002
	IOFPGA	2.000
	DBFPGA	1.000
N77:M3-100	PMFPGA	1.000
	IOFPGA	2.000
	DBFPGA	1.001

Cisco NX-OS Release 8.4(2) includes the following Erasable Programmable Logic Device (EPLD) images:

- n7000-s2-epld.8.4.2.img
- n7700-s2-epld.8.4.2.img
- n7700-s3-epld.8.4.2.img

Table 12 shows the modules that are supported in Cisco NX-OS Release 8.4(2):

**Table 12 Supported Modules with the FPGA in Cisco NX-OS Releases 8.4(2)**

Module	FPGA Type	Version
Cisco Nexus 7000 Supervisor 2	PMFPGA	38.000
	IOFPGA	1.013
Cisco Nexus 7700 Supervisor 2E	PMFPGA	22.000
Cisco Nexus 7700 Switch Supervisor 3 Enhanced Module	PMFPGA	22.000
Fan-10 slot chassis (Cisco Nexus 7000 Series)	FAN	0.007

Module	FPGA Type	Version
Fan-18 slot chassis (Cisco Nexus 7000 Series)	FAN	0.002
Fan-9 slot chassis (Cisco Nexus 7000 Series)	FAN	0.009
Fan-4 slot chassis (Cisco Nexus 7000 Series)	FAN	0.005
Fan-18 slot chassis (Cisco Nexus 7700 Series)	FAN	0.006
Fan-10 slot chassis (Cisco Nexus 7700 Series)	FAN	0.006
Fan-6 slot chassis (Cisco Nexus 7700 Series)	FAN	0.006
Fan-2 slot chassis (Cisco Nexus 7700 Series)	FAN	0.016
9 slot chassis (N7K:FAB2-7009)	PMFPGA	1.003
10 slot chassis (N7K:FAB2-7010)	PMFPGA	0.007
18 slot chassis (N7K:FAB2-7018)	PMFPGA	0.007
6 slot chassis (N77:FAB2-7706)	PMFPGA	1.002
10 slot chassis (N77:FAB2-7710)	PMFPGA	1.003
18 slot chassis (N77:FAB2-7718)	PMFPGA	1.002
6 slot chassis (N77:FAB3-7706)	PMFPGA	0.010
10 slot chassis (N77:FAB3-7710)	PMFPGA	0.008
N7K:M2-10	PMFPGA	1.006
	IOFPGA	1.003
	SFPFPGA	1.003
	EARL (Forwarding Engine)	2.012
N7K:M2-40	PMFPGA	1.006
	IOFPGA	0.012
	SFPFPGA	2.008
	EARL (Forwarding Engine)	2.012

Module	FPGA Type	Version
N7K:M2-100	PMFPGA	1.007
	IOFPGA	0.009
	SFPFPGA	0.004
	EARL (Forwarding Engine)	2.012
N7K:F2E-10	PMFPGA	1.009
	IOFPGA	0.016
N77:F2E-10	PMFPGA	0.006
	IOFPGA	0.005
N7K:F3-10	PMFPGA	1.000
	IOFPGA	1.005
	SFPFPGA	1.002
N7K:F3-40	PMFPGA	2.003
	IOFPGA	1.005
N7K:F3-100	PMFPGA	2.003
	IOFPGA	1.004
N77:F3-10	PMFPGA	1.007
	IOFPGA	0.035
	SFPFPGA	1.003
N77:F3-40	PMFPGA	1.005
	IOFPGA	0.031
N77:F3-100	PMFPGA	1.008
	IOFPGA	0.021
N77:F4-100	PMFPGA	0.012
	IOFPGA	2.000
	SFPFPGA	0.009
N7K:M3-10	PMFPGA	1.001
	IOFPGA	2.000
	SFPFPGA	1.000
N7K:M3-40	PMFPGA	1.001
	IOFPGA	1.002
	SFPFPGA	1.000
N77:M3-10	PMFPGA	1.002
	IOFPGA	2.000
	SFPFPGA	1.000
N77:M3-40	PMFPGA	1.002
	IOFPGA	2.000
	DBFPGA	1.000

Module	FPGA Type	Version
N77:M3-100	PMFPGA	1.000
	IOFPGA	2.000
	DBFPGA	1.001

Cisco NX-OS Release 8.4(1) includes the following Erasable Programmable Logic Device (EPLD) images:

- n7000-s2-epld.8.4.1.img
- n7700-s2-epld.8.4.1.img
- n7700-s3-epld.8.4.1.img

Table 13 shows the modules that are supported in Cisco NX-OS Release 8.4(1):

**Table 13 Supported Modules with the FPGA in Cisco NX-OS Releases 8.4(1)**

Module	FPGA Type	Version
Cisco Nexus 7000 Supervisor 2	PMFPGA	38.000
	IOFPGA	1.013
Cisco Nexus 7700 Supervisor 2E	PMFPGA	22.000
Cisco Nexus 7700 Switch Supervisor 3 Enhanced Module	PMFPGA	20.000
Fan-10 slot chassis (Cisco Nexus 7000 Series)	FAN	0.007
Fan-18 slot chassis (Cisco Nexus 7000 Series)	FAN	0.002
Fan-9 slot chassis (Cisco Nexus 7000 Series)	FAN	0.009
Fan-4 slot chassis (Cisco Nexus 7000 Series)	FAN	0.005
Fan-18 slot chassis (Cisco Nexus 7700 Series)	FAN	0.006
Fan-10 slot chassis (Cisco Nexus 7700 Series)	FAN	0.006
Fan-6 slot chassis (Cisco Nexus 7700 Series)	FAN	0.006
Fan-2 slot chassis (Cisco Nexus 7700 Series)	FAN	0.016
9 slot chassis (N7K:FAB2-7009)	PMFPGA	1.003
10 slot chassis (N7K:FAB2-7010)	PMFPGA	0.007

Module	FPGA Type	Version
18 slot chassis (N7K:FAB2-7018)	PMFPGA	0.007
6 slot chassis (N77:FAB2-7706)	PMFPGA	1.002
10 slot chassis (N77:FAB2-7710)	PMFPGA	1.003
18 slot chassis (N77:FAB2-7718)	PMFPGA	1.002
6 slot chassis (N77:FAB3-7706)	PMFPGA	0.008
10 slot chassis (N77:FAB3-7710)	PMFPGA	0.007
N7K:M2-10	PMFPGA	1.006
	IOFPGA	1.003
	SFPFPGA	1.003
	EARL (Forwarding Engine)	2.012
N7K:M2-40	PMFPGA	1.006
	IOFPGA	0.012
	SFPFPGA	2.008
	EARL (Forwarding Engine)	2.012
N7K:M2-100	PMFPGA	1.007
	IOFPGA	0.009
	SFPFPGA	0.004
	EARL (Forwarding Engine)	2.012
N7K:F2E-10	PMFPGA	1.009
	IOFPGA	0.016
N77:F2E-10	PMFPGA	0.006
	IOFPGA	0.005
N7K:F3-10	PMFPGA	1.000
	IOFPGA	1.003
	SFPFPGA	1.002
N7K:F3-40	PMFPGA	2.003
	IOFPGA	1.005
N7K:F3-100	PMFPGA	2.003
	IOFPGA	1.004

Module	FPGA Type	Version
N77:F3-10	PMFPGA	1.007
	IOFPGA	0.031
	SFPFPGA	1.003
N77:F3-40	PMFPGA	1.005
	IOFPGA	0.031
N77:F3-100	PMFPGA	1.008
	IOFPGA	0.021
N77:F4-100	PMFPGA	0.012
	IOFPGA	1.003
	SFPFPGA	0.009
N7K:M3-10	PMFPGA	1.001
	IOFPGA	1.003
	SFPFPGA	1.000
N7K:M3-40	PMFPGA	1.001
	IOFPGA	1.002
	SFPFPGA	1.000
N77:M3-10	PMFPGA	1.002
	IOFPGA	1.003
	SFPFPGA	1.000
N77:M3-40	PMFPGA	1.002
	IOFPGA	1.002
	DBFPGA	1.000
N77:M3-100	PMFPGA	1.000
	IOFPGA	1.002
	DBFPGA	1.001

For more information about upgrading to a new EPLD image, see the [Cisco Nexus 7000 Series FPGA/EPLD Upgrade Release Notes, Release 8.x](#).

Cisco Nexus 7700 switches have an EPLD image that is programmed on the switches. This EPLD image is different than the EPLD image for the Cisco Nexus 7000 switches.

## New and Enhanced Software Features

This section includes the following topics:

- [New and Enhanced Software Features - Cisco NX-OS Release 8.4\(3\), page 64](#)
- [New and Enhanced Software Features - Cisco NX-OS Release 8.4\(2\), page 64](#)
- [New and Enhanced Software Features - Cisco NX-OS Release 8.4\(1\), page 65](#)

## New and Enhanced Software Features - Cisco NX-OS Release 8.4(3)

### CLI to Disable Selective VRF Download in F3 Modules

To completely disable selective VRF download in F3 modules in all VDCs, use the **no hardware forwarding selective-vrf** command in global configuration mode. You must reload the device after applying this command. For more details, see [Cisco Nexus 7000 Series NX-OS Unicast Routing Configuration Guide](#).

### ITD Enhancements

From Cisco NX-OS Release 8.4(3) statistics for an ITD service that has include ACL is supported. For more details, see [Cisco Nexus 7000 Series NX-OS Intelligent Traffic Director Configuration Guide](#).

## New and Enhanced Software Features - Cisco NX-OS Release 8.4(2)

### Scale ACL

Scale ACL is introduced in Cisco NX-OS Release 8.4(2) and it is supported on M3 modules. This feature support is added only for RACL policies with object-group. This feature helps you to implement large scale configuration of ACL with support of object-group configuration. Both IPv4 and IPv6 RACL is supported.

### MPLSoGRE

From Cisco NX-OS Release 8.4(2), the MPLS over GRE interwork support is applicable to M3 series modules.

### ITD

From Cisco NX-OS Release 8.4(2), the ACLs created by ITD are not displayed in the show ip/ipv6 access-list command output. You need to use show ip/ipv6 access-list dynamic command to get the ITD ACL list. Upto 2000 ACEs are supported for multiple Include ACLs.

### QSA with M3/F4

To bring up the link with CVR-QSFP-SFP10G adapter in a M3/F4 100G module, you need to perform the 10x4g breakout configuration on the interface. In older release versions with CVR-QSFP-SFP10G, the adapter link remains down. After ISSU to Cisco NX-OS Release 8.4(2) the link will still remain down. Perform OIR to bring up the link.



## Smart Licensing with Satellite

Smart Software Manager satellite is a component of Smart Software Licensing and works in conjunction with the Smart Software Manager to manage software licenses. You can intelligently manage product licenses and get near real-time visibility and reports pertaining to the Cisco licenses you purchased and consumed.

## ACL Name

From Cisco NX-OS Release 8.4(2), the ACL time range name has a maximum length of 256 characters.

## Bloom Filter for Glean Adjacency

Bloom Filter Support for Glean Adjacencies is introduced in Cisco NX-OS Release 8.4(2). This feature is supported on M3 and F4 modules. To avoid this punting of the supervisor module, the L3 engine hashes a flow to set a bit in a leak table to indicate that the packet has been punted to the supervisor module. Subsequent frames are dropped until the software clears the leak table bit. This helps to forward the packets without any further delay.

## 64-way ECMP for F4

Starting from Cisco NX-OS Release 8.4(2), the BGP feature supports up to 64 paths to a destination on F4-Series I/O modules.

## PIM Allow RP IPv6

IPv6 PIM Allow RP is supported from Cisco NX-OS Release 8.4(2).

## New and Enhanced Software Features - Cisco NX-OS Release 8.4(1)

### Dell FEX support on F4

B22 Dell FEX is supported on F3-Series and M3-Series I/O modules. Starting from Cisco NX-OS 8.4(1), B22 Dell FEX is also supported on F4-Series I/O modules. For more information refer the [Cisco Nexus 2000 Series Fabric Extender Software Configuration Guide for Cisco Nexus 7000 Series Switches](#).

### Dynamic Routing over vPC

The dynamic routing over vPC is supported on M3 modules. Starting from Cisco NX-OS 8.4(1), this feature is supported on F4 Series modules for IPv4 and IPv6 unicast traffic. For more information refer the [Cisco Nexus 7000 Series NX-OS Interfaces Configuration Guide](#).

### Fabric Diagnostics

Starting with the Cisco NX-OS Release 8.4(1), the Internal Cyclic Redundancy Check (CRC) error detection and isolation feature is supported on the Cisco Nexus 7000 Series switches. For more information, refer [Cisco Nexus 7000 Series NX-OS High Availability and Redundancy Guide](#).

## FEX Support on Breakout (40 - 4X10) (F4)

Starting from Cisco NX-OS Release 8.4(1), FEX is supported on F4-Series breakout (40G -> 4x10G) interfaces. For more information, refer [Cisco Nexus 7000 Series NX-OS Interfaces Configuration Guide](#).

## F4-100 40G Mode Breakout Support (4X10G) and F4-100 100G Mode Breakout Support (4X25G) (F4)

Starting from Cisco NX-OS Release 8.4(1), the breakout feature that enables splitting of both 40 Gigabit and 100 Gigabit ethernet ports, based on the transceiver at the interface, is supported on the Cisco Nexus 7700 F4-Series 30-port 100-Gigabit Ethernet I/O module. The 40-Gigabit Ethernet port can be split into four independent and logical 10 Gigabit Ethernet ports. The 100 Gigabit Ethernet port can be split into four independent and logical 25 Gigabit Ethernet ports. For more information, refer [Cisco Nexus 7000 Series NX-OS Interfaces Configuration Guide](#).

## Generic FEX Support (F4 in 40G mode)

Starting from Cisco NX-OS Release 8.4(1), FEXs are supported with Cisco Nexus F4-Series 30-port 100-Gigabit Ethernet I/O modules (N77-F430CQ-36) in 40G mode. For more information, refer the [Cisco Nexus 7700 Series Hardware Installation Guides](#) and the [Cisco Nexus 2000 Series Fabric Extender Software Configuration Guide for Cisco Nexus 7000 Series Switches](#).

## GOLD Enhancements

The aggressive mode of corrective action configuration is introduced in Cisco NX-OS Release 8.4(1). The aggressive mode reduces the reaction time by lowering the consecutive failure count. When the consecutive failure count of a test matches the configured consecutive failure count, actions are taken based on the fault type and mode.

The conservative and aggressive actions are added for PCIe bus, spine control bus, and the status bus from Cisco NX-OS Release 8.4(1). For more details, refer the [Cisco Nexus 7000 Series NX-OS System Management Configuration Guide](#).

## GOLF: VRFLITE- ACI

GOLF VRF Lite ACI is supported on M3 modules. Starting from Cisco NX-OS 8.4(1), it is also supported on F4 Series modules. For more information refer the [Cisco Nexus 7000 Series NX-OS VXLAN Configuration Guide](#).

## GOLF: MPLS-VPN-ACI

GOLF MPLS VPN ACI is supported on M3 modules. Starting from Cisco NX-OS 8.4(1), it is also supported on F4 Series modules. For more information refer the [Cisco Nexus 7000 Series NX-OS VXLAN Configuration Guide](#).

## Honor Mode Licensing

Honor-based licensing is supported on Cisco Nexus 7000 Series switches for Cisco NX-OS Release 8.4(1). For more information, refer [Cisco NX-OS Licensing Guide](#).

## Inner MAC Address-based Classification

Starting from Cisco NX-OS Release 8.4(1), you can classify packets coming from a FabricPath interface using the inner MAC address. This feature is supported on M3-, F3- and F4-Series I/O modules. For more information, refer [Cisco Nexus 7000 Series NX-OS FabricPath Configuration Guide](#).

## IPv6 Static Routes with Next-Hop Support

IPv6 static routes with next-hop support is supported in Cisco NX-OS Release 8.4(1). IPv6 static routes with next-hops that are learnt over a VXLAN tunnel can be added to the Unicast Routing Information Base (URIB). For more information, refer [Cisco Nexus 7000 Series NX-OS Unicast Routing Configuration Guide](#).

## ITD on F4 (Bucket reassignment and distribution time delay)

From Cisco NX-OS Release 8.4(1), the ITD failaction feature is enhanced to optimally pre-fetch the failaction node per bucket. For more information refer the [Cisco Nexus 7000 Series NX-OS Intelligent Traffic Director Configuration Guide](#).

## ITD on F4 (Include ACL + Multidevice group)

This feature enables the user to configure multiple ACLs under an ITD service. This feature also provides an option to associate each ACL with its own device-group. For more information refer the [Cisco Nexus 7000 Series NX-OS Intelligent Traffic Director Configuration Guide](#).

## MoFRR

MoFRR is supported on F3 and M3 modules. Starting from Cisco NX-OS 8.4(1), it is also supported on F4 Series modules. For more information refer the [Cisco Nexus 7000 Series NX-OS Multicast Routing Configuration Guide](#).

## Multicast VRF

The multicast VRF is supported on M3 modules. Starting from Cisco NX-OS 8.4(1), it is also supported on F4 Series modules. For more information refer the [Cisco Nexus 7000 Series NX-OS Multicast Routing Configuration Guide](#).

## Multihop BFD IPv6

Starting from Cisco NX-OS Release 8.4(1), the BFD multihop feature is supported over IPv6. For more information, refer [Cisco Nexus 7000 Series NX-OS Interfaces Configuration Guide](#).

## Non-Disruptive Migration from Supervisor 2E Modules (N77-SUP2E) to Supervisor 3E Modules (N77-SUP3E)

Starting from Cisco NX-OS Release 8.4(1), Non-Disruptive Migration from Supervisor 2E Modules (N77-SUP2E) to Supervisor 3E Modules (N77-SUP3E) is supported. For more information, refer the [Cisco Nexus 7706, 7710 and 7718 Hardware Installation Guides](#).

## PIM Allow RP

PIM Allow RP enables the receiving device to use its own RP to create state and build shared trees when an incoming (\*, G) Join is processed and a different RP is identified. This allows the receiving device to accept the (\*, G) Join from the different RP. For more information refer the [Cisco Nexus 7000 Series NX-OS Multicast Routing Configuration Guide](#).

## Pong Support on M3

Starting from Cisco NX-OS 8.4(1), Pong is supported on M3 Series modules. For more information refer the [Cisco Nexus 7000 Series NX-OS System Management Configuration Guide](#).

## Proportional Multipath for VNF

Starting from Cisco NX-OS Release 8.4(1), a common loopback address can be configured for the BGP connection between the ToR switches and the VNF instance. For more information refer the [Cisco Nexus 7000 Series NX-OS VXLAN Configuration Guide](#).

## PTP with F4

PTP is supported on F2, F2e, F3, M2, and M3 modules. Starting from Cisco NX-OS 8.4(1), PTP is also supported on F4 Series modules. For more information refer the [Cisco Nexus 7000 Series NX-OS System Management Configuration Guide](#).

## PVLAN over OTV

The PVLAN over OTV feature is supported on F3 and M3 modules. Starting from Cisco NX-OS 8.4(1), this feature is supported on F4 Series modules. For more information refer the [Cisco Nexus 7000 Series NX-OS OTV Configuration Guide](#).

## Route Leaking with ACI GOLF

The Giant Overlay Fabric (GOLF) Virtual Routing and Forwarding (VRF) Leak feature enables the VRFs in the EVPN fabric to access shared services in a specific VRF. For more information, refer [Cisco Nexus 7000 Series NX-OS Unicast Routing Configuration Guide](#).

## Router ACL

Starting from Cisco NX-OS Release 8.4(1), Router ACL is supported on Bridge domain interfaces. For more information, refer [Cisco Nexus 7000 Series NX-OS Security Configuration Guide](#).

## Supervisor-to-Supervisor EOBC Link Redundancy

Starting from Cisco NX-OS Release 8.4(1), the Supervisor-to-Supervisor EOBC Link Redundancy feature is introduced. This feature provides redundancy for EOBC communication between the active and standby supervisors by enabling the secondary redundant EOBC link in case the primary EOBC link fails and vice-versa. For more information, refer [Cisco Nexus 7000 Series NX-OS High Availability and Redundancy Guide](#).

## Support for 4096 RSA Keys on Nexus

Starting from Cisco NX-OS Release 8.4(1), support has added for 4096 RSA key bits. For more information, refer [Cisco Nexus 7000 Series NX-OS Security Configuration Guide](#).

## VPLS and EoMPLS

The VPLS and EoMPLS features are supported on M3 modules. Starting from Cisco NX-OS 8.4(1), these features are supported on F4 Series modules. For more information refer the [Cisco Nexus 7000 Series NX-OS MPLS Configuration Guide](#).

## Configure Replace

This feature is supported on Supervisor 3 and Fabric Module 3. Starting from Cisco NX-OS 8.4(1), Configure Replace is also supported on F4 Series modules. For more information refer the [Cisco Nexus 7000 Series NX-OS Fundamentals Configuration Guide](#).

## MPLS Deaggregate Labels Reserve

For information on the MPLS deaggregate labels reserve enhancement, refer the [Cisco Nexus 7000 Series NX-OS MPLS Configuration Guide](#).

## Scale Enhancements

Cisco NX-OS Release 8.4(1) has the following scale enhancements:

### 32-port LAG Support

Starting from Cisco NX-OS Release 8.4(1), you can bundle up to 32 active links into a port channel on the M3-Series and F4-Series modules. For more information, refer [Cisco Nexus 7000 Series NX-OS Interfaces Configuration Guide](#).

### 64-way ECMP

Starting from Cisco NX-OS Release 8.4(1), the BGP feature supports up to 64 paths to a destination on M3- and F3-Series I/O modules. For more information, refer [Cisco Nexus 7000 Series NX-OS Unicast Routing Configuration Guide](#).

### PBR Scale

- Number of configured sequences per policy is enhanced to 100.
- Number of configured sequences per policy when the **hardware access-list allow deny ace** is configured) is 23.

### SDA - Scale increase of EID for IPv4 and IPv6

Number of EID prefixes on xTR map cache is enhanced to 150,000.

## iCAM Scale Monitoring

The following components are monitored by iCAM in Cisco NX-OS Release 8.4(1):

- FEX
- FabricPath
- Port Channel Interfaces
- vPC
- BFD
- GRE,
- Sub-interfaces
- Layer 2 Switching
- Spanning Tree Protocol
- OTV
- PVLAN
- QoS
- Security
- ACL
- DHCP
- UDP Relay
- SPAN and ERSPAN
- PTP
- NetFlow
- Unicast Routing
- ARP
- ISIS
- BGP
- VXLAN EVPN

Refer to [Cisco Nexus 7000 Series NX-OS Verified Scalability Guide](#) for other Cisco NX-OS Release scale numbers.

## MIBs

No new MIBs are added for Cisco NX-OS Release 8.4(1) and for Cisco NX-OS Release 8.4(2).

## Licensing

Honor-based licensing is supported on Cisco Nexus 7000 Series switches from Cisco NX-OS Release 8.4(1).

Smart Licensing with Satellite is supported on Cisco Nexus 7000 Series switches from Cisco NX-OS Release 8.4(2).

Smart Software Manager satellite is a component of Smart Software Licensing and works in conjunction with the Smart Software Manager to manage software licenses. You can intelligently manage product licenses and get near real-time visibility and reports pertaining to the Cisco licenses you purchased and consumed.

For details on licensing information, see the “Licensing Cisco NX-OS Software Features” chapter in the *Cisco NX-OS Licensing Guide*.

## Caveats

The following topics provide a list of open and resolved caveats:

- [Open Caveats—Cisco NX-OS Release 8.4\(2\)](#)
- [Open Caveats—Cisco NX-OS Release 8.4\(1\)](#)
- [Resolved Caveats—Cisco NX-OS Release 8.4\(3\)](#)
- [Resolved Caveats—Cisco NX-OS Release 8.4\(2\)](#)
- [Resolved Caveats—Cisco NX-OS Release 8.4\(1\)](#)



### Note

Release note information is sometimes updated after the product Release Notes document is published. Use the [Cisco Bug Toolkit](#) to see the most up-to-date release note information for any caveat listed in this document.

## Open Caveats—Cisco NX-OS Release 8.4(2)

**Table 14** *Cisco NX-OS Release 8.4(2) Open Caveats*

Identifier	Description
<a href="#">CSCvs19141</a>	IPv4/IPv6 FIB does not install properly
<a href="#">CSCvs99135</a>	VPC peer link is getting down after flapping VPC peer-link from secondary in 8.4.2(222) build
<a href="#">CSCvs93006</a>	After SSO compress stats of SACL will not show up counters
<a href="#">CSCvs63830</a>	ACL: NTP access-group accepting more than 64 char ACLs. But, truncating to 64 ACL in “show run”.
<a href="#">CSCvr66312</a>	Port-channels remain down with Micro BFD after LC reload and Switchover
<a href="#">CSCvt38687</a>	Few fields missing in 'show lacp counters detail' CLI output when Fex is attached to N7K
<a href="#">CSCvv17360</a>	ISSU support for MPLSoGRE with explicit Null feature with M3 LC

## Open Caveats—Cisco NX-OS Release 8.4(1)

**Table 15** *Cisco NX-OS Release 8.4(1) Open Caveats*

Identifier	Description
<a href="#">CSCvr83684</a>	MAC throttling values are corrupted post upgrade to 8.4.1
<a href="#">CSCvn00010</a>	8.4.1 : VXLAN-BDI: F4: ACL on BDI in ingress dir programmed on multiple instances in VDC
<a href="#">CSCvn47068</a>	8.4.1 :Not able to enable ACL Capture on VXLAN Setups
<a href="#">CSCvo48548</a>	F4 4x25G PO mem ints are jumbled after un-allocate and re-allocate ints to VDC
<a href="#">CSCvo50116</a>	8.4.1 : HSRP IPv4 vMAC being toggled between the OTV L2 join interface and Anycast HSPR GW switch-id
<a href="#">CSCvo81147</a>	8.4.1-BFD session over FP interfaces flap when netflow feature is negated
<a href="#">CSCvo90099</a>	NX-SNMP: snmp-server hosts getting modified after configuration(DNSv6 case)
<a href="#">CSCvp10070</a>	vxlan is up when bdi is down after reload
<a href="#">CSCvp35566</a>	8.4.1: consistency-checker l2mcast for single mCast group takes ~ 20mins to complete
<a href="#">CSCvp78880</a>	Standby reload after config 1000 Vlan Translation at physical interface
<a href="#">CSCvp88371</a>	8.4.1 : Consistency-checker fail on CTS enable l2 interface
<a href="#">CSCvp91503</a>	Sometimes Fangio linecard remains in power down state if card is reloaded multiple times.
<a href="#">CSCvq03504</a>	8.4.1: erbdg table programming issue when fex is online before the FP core ports are UP
<a href="#">CSCvq17207</a>	ISSU from 8.2.X to 8.4.X : nve is failing to read svi-ifdb
<a href="#">CSCvq42066</a>	After Leaf reload, ipv4 VNF prefix RNH update with rnh_best flag FALSE by URIB in N7K BL.
<a href="#">CSCvq44936</a>	Seeing issue with "Logflash firmware upgrade failed: 5"
<a href="#">CSCvq32976</a>	PTP not functioning at 32LAG PO after config lacp max/min link CLI at PO

## Resolved Caveats—Cisco NX-OS Release 8.4(3)

**Table 16** *Cisco NX-OS Release 8.4(3) Resolved Caveats*

Identifier	Description
<a href="#">CSCvg19850</a>	Npacl leaks 152 bytes of memory with ntp/snmp acl add removal
<a href="#">CSCvj50674</a>	N77-M348XP-23L card may reboot due SLF inband link issue(LINK_GOOD_TO_FAULT_12)
<a href="#">CSCvm26068</a>	N7K - Service "pim" crash
<a href="#">CSCvn30912</a>	Mem leak snmpd during longevity with F4 LC reload usm_malloc_usmStateReference and snmpv3_pss



**Table 16** *Cisco NX-OS Release 8.4(3) Resolved Caveats*

Identifier	Description
<a href="#">CSCvn78885</a>	tacacs_crypt_service or radius_crypt_service filling up nxos/tmp
<a href="#">CSCvq34690</a>	Change how ports are displayed during CTS logging
<a href="#">CSCvr27377</a>	ITD /RPM service timeout during bring up with ADJ /ARP changes
<a href="#">CSCvr40843</a>	port-channel switching time was longer than expected with N7K-M348XP-25L
<a href="#">CSCvr58649</a>	BGP service crash at rpm_acquire_bgp_shmem_lock
<a href="#">CSCvs21686</a>	Need to log arbiter interrupts to OBFL
<a href="#">CSCvs37194</a>	Need "match exception ip/ipv6 unicast rpf-failure" added to default copp policy
<a href="#">CSCvs54611</a>	need to add a syslog or any form of notification when the interface chip failure
<a href="#">CSCvs62687</a>	F3 - MAC hardware entry point to wrong interface instead of peer-link
<a href="#">CSCvs67823</a>	[Trustsec] Nexus 7700 Downloading SGACLs for dgts not on the database when doing CoA push from ISE.
<a href="#">CSCvs84593</a>	eem_syslog_regex_ev_spec_handler is output when eem is created
<a href="#">CSCvs88208</a>	"copy run start" fails with port-profile signal 11 crash
<a href="#">CSCvs93402</a>	BGP hellos seen after peer admin shut
<a href="#">CSCvt13462</a>	NX-OS: BGP memory leak within 'BGP BF slab' when more than 30 neighbors configured
<a href="#">CSCvt17690</a>	AS number isn't displayed in BGP-5-ADJCHANGE up/down log
<a href="#">CSCvt19467</a>	BFD ACL programming issue after downgrading from 8.3(1) to 8.2(4) using boot variables method.
<a href="#">CSCvt19773</a>	VDC failed to come up post VDC reload
<a href="#">CSCvt33067</a>	Traffic Black-holing with VPC SFC failure(L2LU Drops, VSL Check)
<a href="#">CSCvt38574</a>	Changing prefix-list in route-map doesn't change number of prefixes received in BGP summary
<a href="#">CSCvt44562</a>	rttMonCtrlAdminTag = (null) notification is generated along with the sla notification.
<a href="#">CSCvt46409</a>	N7k OSPF area range not advertising cost
<a href="#">CSCvt49191</a>	Cisco Nexus 9000 URIB process crash
<a href="#">CSCvt60639</a>	client link-layer address option only showing 32-bit from the client RFC6939
<a href="#">CSCvt64262</a>	VPC+ VPC-BPDU redirection/tunneling not working
<a href="#">CSCvt64493</a>	N7K-SUP2/E: Unable to Save Configuration system not ready
<a href="#">CSCvt66012</a>	STP process crashes while writing updates to PSS/SDB
<a href="#">CSCvt68098</a>	BFD discriminator change for an active session is not acknowledged
<a href="#">CSCvt70010</a>	IP-SGTs not installed in RBM DB for one VRF: "CTS fails to add prefix to PT since it already exists"
<a href="#">CSCvt74784</a>	(S,G) not expiring when ip pim sg-expiry-timer infinity sg-list is configured
<a href="#">CSCvt77249</a>	fc4-types:fc4_features missing from fcns database and fcoe traffic interrupted

**Table 16** *Cisco NX-OS Release 8.4(3) Resolved Caveats*

Identifier	Description
<a href="#">CSCvt83262</a>	Switch reload due to sys-mgr process.
<a href="#">CSCvt84013</a>	N7K: interface-vlan process crash or stale ifindex entries in queue when SNMP used to shut down SVIs
<a href="#">CSCvt87450</a>	snmpwalk GETNEXT for mpls sub-layer ifIndex returns object from the IfDescr section
<a href="#">CSCvt88871</a>	N7K/F3: CLI to Disable Selective VRF in FIB on Flanker linecard
<a href="#">CSCvt93544</a>	Match exception ip unicast rpf-fail on M3 matches all traffic in CoPP
<a href="#">CSCvt93631</a>	entPhysicalMfgName always defaults to Cisco Systems for transceivers
<a href="#">CSCvt94979</a>	M3: HIF-vPc ports going Internal-Fail errDisable when trying bring them up
<a href="#">CSCvt97613</a>	undebg all does not stop debug snmp req-latency-time x
<a href="#">CSCvt97628</a>	Deleting the snmp_log file from log: when you do debug snmp req-latency-time does not free the space
<a href="#">CSCvu00553</a>	With Route summarization OSPF Sets FA on the route Type-5 LSA
<a href="#">CSCvu00825</a>	N7K - M2 - LACP PDUs classified in default queue when received on L3 port-channel
<a href="#">CSCvu01732</a>	N7K HSRP Secondary with mismatched physical/virtual subnets uses physical IP when sourcing ARP
<a href="#">CSCvu05247</a>	StandbyFabricLoopback Diag Test on Nexus7k-Sup2E   Unexpected Behavior
<a href="#">CSCvu12601</a>	N7K proxy-routing multicast Num_replicators >16, Mcast OIL missing in MFDM but present in Mrib.
<a href="#">CSCvu18593</a>	CTS and IPv6 ACL applied to an egress interface may impact traffic
<a href="#">CSCvu20245</a>	PIM crash when freeing memory
<a href="#">CSCvu23201</a>	NX-OS BGP: rare BGP updates corruption
<a href="#">CSCvu30191</a>	Glean traffic from HSRP standby generates syslog %ARP-4-OWN_SRCMAC: on HSRP active
<a href="#">CSCvu39195</a>	Heartbeat failure on process VNTAGC may cause a linecard crash
<a href="#">CSCvu44271</a>	"show tech aclqos" encapsulates show commands in single-quotes, not grave accents.
<a href="#">CSCvu47702</a>	ISSU failed while M3 LC upgrade in progress
<a href="#">CSCvu51632</a>	eobc logging enhancement on M2 LC for HB Loss debugging
<a href="#">CSCvu53710</a>	M3/F4 HAP reset seen in SLF_BRIDGE process.
<a href="#">CSCvu55134</a>	"SFP security check: MD5 failed" error message output when insert SFP to N77-F430CQ-36
<a href="#">CSCvu60044</a>	Pings to SVI HSRP VIP might see intermittent loss when LISP is enabled
<a href="#">CSCvu61173</a>	MDS 9396T show interface [ interface-range] txwait-history not working
<a href="#">CSCvu66701</a>	N7K: OSPF will not generate type 3 summary LSA
<a href="#">CSCvu77230</a>	service ipp will crash when 'no opflex-peer' is entered
<a href="#">CSCvu79185</a>	cts role-based policy not updated when deploying policy matrix from ISE

**Table 16**      **Cisco NX-OS Release 8.4(3) Resolved Caveats**

Identifier	Description
<a href="#">CSCvu85408</a>	Supervisor xbar sync failed exceptionlogs and syslogs do not identify the failing serial link
<a href="#">CSCvu87085</a>	OSPF is querying BGP AS number with incorrect VRF ID
<a href="#">CSCvu92822</a>	N77-M3: Traffic to breakout ports drops when breakout command is set to same LC's other port
<a href="#">CSCvu93555</a>	Nexus7700 N77-SUP2E running 7.3(2)D1(1) experiences aclmgr crash causing vdc restart and failvoer
<a href="#">CSCvu94685</a>	2 receivers deleted from igmp snooping table when only one wants to leave a group
<a href="#">CSCvu98502</a>	Post LDP crash due to Abort/HB timeout LDP might be unable to bind to the socket and fails recover
<a href="#">CSCvu99685</a>	"ip pim passive" causes loss of interface DF status after reload
<a href="#">CSCvv01546</a>	GIR stuck in unplanned maintenance mode
<a href="#">CSCvv04761</a>	FEX 2248 dropping multicast during IGMP update from client on a different FEX
<a href="#">CSCvv06752</a>	Route-Map applied through Peer-Policy under VPNv4 neighbor NOT performing actions specified
<a href="#">CSCvv08021</a>	N7k netflow output interface is not updated when traffic is rerouted on new interface
<a href="#">CSCvv10509</a>	Forwarding not correctly programmed for host network when we stop advertising prefix and SGT exists
<a href="#">CSCvv12387</a>	Improve VNTAG_MGR IFTMC programming failure syslog and documentation
<a href="#">CSCvv17360</a>	ISSU support for MPLSoGRE with explicit Null feature with M3 LC
<a href="#">CSCvv18307</a>	N7K wrong LIF value got displayed for the route - after config play around
<a href="#">CSCvv22452</a>	Cisco NX-OS HSRP stuck in "Initial" state after reload with static HSRP MAC configured
<a href="#">CSCvv27689</a>	Default route metric changes after SUP switchover
<a href="#">CSCvv38244</a>	Netflow Manager (nfm) unresponsive, manual process restart doesn't recover
<a href="#">CSCvv44858</a>	N7K large number of vlan ranges configured, show run vlan shows only subset of the overall number
<a href="#">CSCvv48130</a>	F3 interfaces goes to "faulty" state because of few new fatal interrupts
<a href="#">CSCvv51221</a>	aclqos crash while modifying ACL
<a href="#">CSCvv52514</a>	EIGRP subnet goes SIA if link failover occurs with mix of wide/narrow metric and offset-list
<a href="#">CSCvv69592</a>	M3 LC fatal error in device DEV_SLF_BRI (device error 0xce400600)
<a href="#">CSCvu42699</a>	Writing log to linecard bootflash until file system is full
<a href="#">CSCvq69766</a>	eobc logging enhancement on F3 LC for HB Loss debugging
<a href="#">CSCvu99115</a>	circuit-id in the packet with 'dhcp-relay information option 82' not carrying the vlan information

**Table 16** *Cisco NX-OS Release 8.4(3) Resolved Caveats*

Identifier	Description
<a href="#">CSCvv49316</a>	IPv6 floating (static) route is chosen while routes with lesser AD value are still available
<a href="#">CSCvu88985</a>	PBR Convergence Improvement: V6 Nexthops are not programmed properly in HW
<a href="#">CSCvv23045</a>	aclmgr passing wrong size while fetching priv data
<a href="#">CSCvv63531</a>	F4 remains down in slot 5 due to module purge failure
<a href="#">CSCvm61055</a>	Packets drop at vxlan encap due to LIF prog failure after LC reload
<a href="#">CSCvv49120</a>	PIM: auto-rp config without auto-rp listen keyword may loop packet indefinitely

## Resolved Caveats—Cisco NX-OS Release 8.4(2)

**Table 17** *Cisco NX-OS Release 8.4(2) Resolved Caveats*

Identifier	Description
<a href="#">CSCuy44133</a>	N77-M312CQ-26L: crash due to fatal error [SLF_PUM2_INT_LINK_GOOD_TO_FAULT_12]
<a href="#">CSCur85599</a>	Output Discards on F3 "show int"
<a href="#">CSCuw82759</a>	Nexus 5600/6000: No LAN_BASE should disable FHRP CLI or throw error
<a href="#">CSCux36018</a>	NX-OS Flexera Arbitrary Remote Code Execution Vulnerability
<a href="#">CSCuz30263</a>	After upgrade, eigrp failed to come up due to K value mismatch
<a href="#">CSCvj06473</a>	System hap reset with sla_sender process crash
<a href="#">CSCvj50674</a>	N77-M348XP-23L card may reboot due SLF inband link issue(LINK_GOOD_TO_FAULT_12)
<a href="#">CSCvk05550</a>	N7k - SPAN Destination traffic leaves untagged in setup with bridge-domain
<a href="#">CSCvn34448</a>	ITD stops responding after servers are shutdown
<a href="#">CSCvn58682</a>	IP SLA tcp connect probe is not taking the configured source-ip address
<a href="#">CSCvn77141</a>	Cisco Secure Boot Hardware Tampering Vulnerability
<a href="#">CSCvo15674</a>	crash because of memory leak in bfd process
<a href="#">CSCvo72473</a>	show tech forwarding takes too much time to run on large scale MPLS deployments with M2/M3
<a href="#">CSCvo80677</a>	Linecard CPU utilization is displayed incorrectly for some processes
<a href="#">CSCvo90099</a>	NX-SNMP: snmp-server hosts getting modified after configuration(DNSv6 case)
<a href="#">CSCvp32585</a>	CTS repeatedly crashed on cts_sxp_axn & cts_sgt_map
<a href="#">CSCvp35682</a>	Target Address on IP SLA (udp) probes is getting changed to a new IP other than the configured one

**Table 17**      **Cisco NX-OS Release 8.4(2) Resolved Caveats**

Identifier	Description
<a href="#">CSCvp36080</a>	Nexus doesn't send Register-Stop when Register is denied by PIM Register Policy
<a href="#">CSCvp57934</a>	Optimization of internal NXOS parameters
<a href="#">CSCvp58845</a>	After remove/add VRF, remote host routes not installed to URIB and report 'remote nh not installed'
<a href="#">CSCvp75032</a>	VRF missing after upgrade to 7.3(5)N1(1)
<a href="#">CSCvq04585</a>	Mcast traffic loss seen sometimes with module reload and other triggers
<a href="#">CSCvq05743</a>	MPLS LDP over GRE Tunnel is flapping when "mpls ldp explicit-null" is configured in N7K.
<a href="#">CSCvq09112</a>	Incorrect parsing when using " " in loopback configuration
<a href="#">CSCvq14721</a>	Error of 'system bridge-domain add' CLI due to existing vlan deletes all existing bridge-domains
<a href="#">CSCvq16130</a>	Ignore comma and later for ip sla group schedule add
<a href="#">CSCvq17890</a>	The port-channel cannot be controlled by this input policy after removed the port-channel members.
<a href="#">CSCvq18379</a>	Netflow Start Time Drift Issue
<a href="#">CSCvq18837</a>	Python Security Regression Unicode Encoding Vulnerability
<a href="#">CSCvq21920</a>	Nexus 56K console loop on username/password prompt
<a href="#">CSCvq24098</a>	N7K: show run diff breaks after enabling CTS
<a href="#">CSCvq26431</a>	N7K 8.2(3) PIM process crashed
<a href="#">CSCvq26767</a>	Supervisor hang and redundancy switchover failure
<a href="#">CSCvq32044</a>	BGP process crash with aggregate-address config without summary-only option under VRF
<a href="#">CSCvq40508</a>	n7k/FP - LPOE index reused for 2 different GPC on same SOC
<a href="#">CSCvq42668</a>	nexus7k heartbeat failure IGMP crash
<a href="#">CSCvq42730</a>	Standby SUP reset due to Service "adjmgr" hasn't caught signal 11
<a href="#">CSCvq48220</a>	Cisco NX-OS Software Anycast Gateway Invalid ARP Vulnerability
<a href="#">CSCvq51543</a>	MPLS-TE tunnel not forwarding traffic as "IP is disabled"
<a href="#">CSCvq53154</a>	mrrib crash when collecting mcast show tech with N7K in SDA border role.
<a href="#">CSCvq56953</a>	Need standby Sup to detect a hung active Sup and reload it to trigger a switchover.
<a href="#">CSCvq57865</a>	Memory leak is seen in DHCP process when show run is executed on a VLAN
<a href="#">CSCvq60859</a>	Traffic loss on F3 linecard after module reload due to delay in VPN_INST_BITMAP
<a href="#">CSCvq65248</a>	Traffic across GRE Tunnel configured with MPLS fails in N7K
<a href="#">CSCvq65959</a>	80% packets loss in route leaking environment after changing SVI IP address
<a href="#">CSCvq70392</a>	Reverted breakout interface on N77-M324FQ-25L fails to come up.
<a href="#">CSCvq71294</a>	LR transceiver stops transmitting laser when port unshut after a long shut

**Table 17** *Cisco NX-OS Release 8.4(2) Resolved Caveats*

Identifier	Description
<a href="#">CSCVq95046</a>	Nexus 7000 EIGRP does not advertise routes to peer after several resyncs and neighbor flap
<a href="#">CSCvr01927</a>	End to End Vrf ping with MPLSoGRE + MPLS stitching doesn't work with explicit Null.
<a href="#">CSCvr02232</a>	"show logging onboard internal kernel" logging many EOBCM: HB_RX_INVALID_FRAME_NUMBER errors on 8.4(1)
<a href="#">CSCvr04377</a>	ISIS Default route advertised to N7K won't be installed to RIB.
<a href="#">CSCvr05966</a>	Race in Flanker/MTM/L2FM can lead to learning gateway mac out local interface while SVI Up
<a href="#">CSCvr06297</a>	[ MultiHop ] Upgrade 7.3(2)D1(3a) to 8.2.2 on N7K, show tech/show tech det is not getting complete.
<a href="#">CSCvr08197</a>	N7k PIXM/PIXMc should attempt to recover if they get out of sync
<a href="#">CSCvr09812</a>	F3 can learn its own GMAC from IPv6 ingress SMAC if v6 not configured
<a href="#">CSCvr10766</a>	N7k netflow input and output interface does not map to IOD database for M3 LC for Version 5 template
<a href="#">CSCvr12510</a>	%MTM-SLOT2-2-INVALID_SLOT: Received invalid slot value 9999 in mts message from vdc
<a href="#">CSCvr19809</a>	cosmetic: native 40G port (non-breakout) report incorrect Quesize for F3. breakout 4x10G unaffected.
<a href="#">CSCvr31356</a>	GARP not updating ARP table on remote VTEPs
<a href="#">CSCvr31478</a>	DATA CORRUPTION Tracebacks when adding N7K to SNMP Management
<a href="#">CSCvr34577</a>	OSPF is not Generating type 3 summary LSA 0.0.0.0
<a href="#">CSCvr35592</a>	N77/F3 8.2(1) & (2) // Slow drain EB egress_timeout drops
<a href="#">CSCvr37274</a>	DHCP Relay in VXLAN BGP EVPN- missing suboptions
<a href="#">CSCvr39538</a>	N7K may report false memory utilization values
<a href="#">CSCvr62671</a>	SSH quietly fails - aaa reports failed to remove the access list configured : sl_def_acl
<a href="#">CSCvr63916</a>	Module id incorrectly formatted in CPUHOG messages
<a href="#">CSCvr73481</a>	"show ip pim vrf <> internal" status:down evpn PIM&VRF are up status
<a href="#">CSCvr74305</a>	Nexus pim hap reset
<a href="#">CSCvr83684</a>	MAC throttling values are corrupted post upgrade to 8.4.1
<a href="#">CSCvr85588</a>	VTP crashed after multiple trunking interfaces flapped
<a href="#">CSCvs15237</a>	BGP memory leak when 'soft-reconfiguration inbound always' configured
<a href="#">CSCvs20377</a>	RPF nbr pointing to Assert Loser on RP in MVPN environment
<a href="#">CSCvs43451</a>	fcoe n7k with 2232pp fex after sup switchover hif ports change from pfc to link level pause
<a href="#">CSCvs49787</a>	MAC Address learning failed due to unexpected "port-security" function remaining enabled
<a href="#">CSCvs50843</a>	IP mobility not updating route on source leaf

**Table 17** *Cisco NX-OS Release 8.4(2) Resolved Caveats*

Identifier	Description
<a href="#">CSCvs54854</a>	Crash while executing - show logging onboard error-stats - in show tech
<a href="#">CSCvs57779</a>	N7K: Port-Profiles disappear after shut fex-fabric ports & no feature-set fex
<a href="#">CSCvs58870</a>	Collect dmesg during SLF inband failure on M3
<a href="#">CSCvs59985</a>	Netflow StartTime and EndTime being reported in the future by almost 2 minutes.
<a href="#">CSCvs61482</a>	Incorrect annotations of XBAR internal errors in show hardware internal errors
<a href="#">CSCvs69194</a>	N7K only listens one ip for tcp 64999 when cts sxp source ip is configured
<a href="#">CSCvs76901</a>	cli function returns cmd_exec_error when collecting show tech-support via python
<a href="#">CSCvs97090</a>	ITD reverse policies are not programmed properly.
<a href="#">CSCvt00423</a>	N7K linecard "fwd_stats_client" process crash
<a href="#">CSCvs90047</a>	ipv4 routes with ipv6 NH BGP routes redistributed into OSPF as Type-5 expires in 30 min
<a href="#">CSCvr18425</a>	8.2.4.47:: vsh core on obfl_cli_show_log
<a href="#">CSCvr21201</a>	N7K: cryptographic-algorithm HMAC-SHA-xxx keys show up as unknown
<a href="#">CSCvk63501</a>	N7K Hw rate-limiter statistics per fwding engine required
<a href="#">CSCvs71659</a>	RIT changes to support Local, GLEAN punt path for MPLS ADJACENCIES
<a href="#">CSCvg71883</a>	Speed auto negotiate can not be disabled on FEX 1G SFP port.
<a href="#">CSCvs26756</a>	Wrong VPC limit error "ERROR: Operation failed: [Reached the max vPC limit]"
<a href="#">CSCvr42578</a>	N7K M2 mac address missing on vpc peer when port-channel member port flap
<a href="#">CSCvs83567</a>	NX-OS 8.x IP redirect source check not working
<a href="#">CSCvc46006</a>	vrrp ipv4 is incorrect state after multiple reload

## Resolved Caveats—Cisco NX-OS Release 8.4(1)

**Table 18** *Cisco NX-OS Release 8.4(1) Resolved Caveats*

Identifier	Description
<a href="#">CSCue83764</a>	NXOS/VQI:counter per CCOS/class needed in show hardware queueing drops
<a href="#">CSCuh31678</a>	Allow L4 port number with span filter (F3 Only)
<a href="#">CSCut67978</a>	Multiple Vulnerabilities in libxml2
<a href="#">CSCux36018</a>	NX-OS Flexera Arbitrary Remote Code Execution Vulnerability
<a href="#">CSCuy77045</a>	configuring "mpls ldp sync" removes "mpls traffic-eng router-id" command
<a href="#">CSCuz67595</a>	Incorrect IGP metric calculation for ISIS



**Table 18** *Cisco NX-OS Release 8.4(1) Resolved Caveats*

Identifier	Description
<a href="#">CSCVa83447</a>	BGP stuck at 90% after redistributing OSPF routes to BGP with EVPN VXLAN
<a href="#">CSCVa92054</a>	Route-leak (inter-vrf) - hmm route not flushed on host vMotion
<a href="#">CSCVc73543</a>	N7K adding ip address into object group stuck
<a href="#">CSCVc91280</a>	incomplete error output during duplicate IP address entry
<a href="#">CSCVc92277</a>	NFP crash after associating netflow-original flow record to active flow monitor
<a href="#">CSCVe21405</a>	Inconsistent formatting for 'show interface' outputs collected through NXAPI using JSON
<a href="#">CSCVf24911</a>	ARP memory leak @ LIBBL_MEM_bitfield_malloc_t & LIBSLAB_MEM_create_slab
<a href="#">CSCVi05048</a>	Netflow sends packet with Invalid payload size causing fln_l3 core
<a href="#">CSCVi15800</a>	N7k - OTV Fast Convergence is delayed during AED switchover
<a href="#">CSCVi45642</a>	MDS 97xx: Incorrect state and no data for reason code/return code for svi enabled snmpd error logs
<a href="#">CSCVi78416</a>	N7K Consistency Checker: URIB/AM to UFIB CC
<a href="#">CSCVj09711</a>	N7K - Service "acllog" crash with PBR
<a href="#">CSCVj12608</a>	provide drop counter when packets are dropped due to incorrect ltl to vdc mapping in KLM vdc
<a href="#">CSCVj23813</a>	Remove stale LTL entries from IM as a part of CSCVj10306
<a href="#">CSCVj33348</a>	N77-M348XP-23L/N77-SUP2E Linecard crash for IPFIB process followed by IFTMC crash
<a href="#">CSCVj36340</a>	FCoE pause drop threshold reached when VL is paused/resumed quickly
<a href="#">CSCVj55192</a>	Kernel memory commands not working
<a href="#">CSCVj58687</a>	Intermittent 51 second frame timeout drops without congestion
<a href="#">CSCVj61790</a>	MSDP CORE on N9k due to RPM
<a href="#">CSCVj63798</a>	Cisco FXOS and NX-OS Software CLI Command Injection Vulnerability (CVE-2019-1611)
<a href="#">CSCVj70748</a>	Output of "show mpls ldp igp sync" inconsistent with configuration
<a href="#">CSCVj77201</a>	user logged out from ssh session in user VDC when admin VDC is configured with exec-timeout
<a href="#">CSCVj84775</a>	PIM6 Anycast-RP failling to send Register-Stop
<a href="#">CSCvk01435</a>	M3- PTP Multicast-224.0.1.129 packet drop
<a href="#">CSCvk03597</a>	PTP GM clock sync loss after system reload, process restart
<a href="#">CSCvk10690</a>	Additional debugability for SLF LINK_GOOD_TO_FAULT_12 on N77-M348XP-23L
<a href="#">CSCvk10930</a>	N7K Interface stuck in LACP suspend after link flap with ethernet oam
<a href="#">CSCvk16641</a>	ipv6 static route with next-hop as ipv6 address across the vxlan fabric does not get into URIB
<a href="#">CSCvk22288</a>	n7k/GOLD: conservative mode improvements



**Table 18 Cisco NX-OS Release 8.4(1) Resolved Caveats**

Identifier	Description
<a href="#">CSCvk24064</a>	Flanker (F3) diag failures on multiple modules in 8.2(x)
<a href="#">CSCvk28290</a>	Fabricpath DCE mode of port-channel member inconsistent
<a href="#">CSCvk28894</a>	Nexus 8.x - MPLS can blackhole traffic if you have multiple VDCs on the same instance of M2 linecard
<a href="#">CSCvk31556</a>	invalid source ip for inter vrf ping for /32 destination
<a href="#">CSCvk35035</a>	logging server vrf name in startup-config changed after reload
<a href="#">CSCvk35999</a>	Nexus 7000 Series EPLD upgrade fails on 8.3(1)
<a href="#">CSCvk38405</a>	N7k M3/F3/F4:Fragmented PIM BSR packets are CPU punted and dropped
<a href="#">CSCvk38474</a>	Suppress the bcast check on /31 VIP or pass mask from VIP to API if mask < 31
<a href="#">CSCvk44309</a>	N7K iftmc crashed when tried to bring up gre tunnel
<a href="#">CSCvk45949</a>	When a private-vlan is the first extended vlan more than 64 ranges can be configured in OTV
<a href="#">CSCvk51138</a>	N7K Fabricpath :: MAC address not re-learned on broadcast ARP
<a href="#">CSCvk51388</a>	Cisco NX-OS Software CLI Command Injection Vulnerability (CVE-2019-1609)
<a href="#">CSCvk51420</a>	Cisco NX-OS Software NX-API Command Injection Vulnerability
<a href="#">CSCvk53943</a>	HSRP active replies arp request with physical mac address after preempt
<a href="#">CSCvk54735</a>	FCoE "uSecs VL3 is in internal pause rx state" increments when eth port is not currently paused
<a href="#">CSCvk55799</a>	STP BPDUS for pruned VLANs are reaching the cpu.
<a href="#">CSCvk56857</a>	MPLS BGP to OSPF redistribution DN bit not set
<a href="#">CSCvk58123</a>	In maintenance mode profile, a route-map in BGP is only applied on either inbound or outbound.
<a href="#">CSCvk58529</a>	N7k - Various NTP features not working on 8.3(1)
<a href="#">CSCvk60178</a>	M3 CB100: Remove 40G and insert of 100g in one port impact the traffic in adj port
<a href="#">CSCvk68623</a>	IPv6 recursive nexthop is not working in VRF leaking setup
<a href="#">CSCvk68792</a>	NXOS: Netstack crash observed with active timer library in heap_extract_min
<a href="#">CSCvk74490</a>	LDP flushes static label bindings after graceful restart completes
<a href="#">CSCvk75372</a>	N7K - self-originated LSAs subjected to MinLSArrival check
<a href="#">CSCvm01077</a>	LISP - SVI responds and allows ssh for non-existing hosts in the subnet
<a href="#">CSCvm02470</a>	POAP acl config is added to running-config after system bootup
<a href="#">CSCvm05636</a>	IP redirects disabled in configuration but enabled in ELTM
<a href="#">CSCvm09089</a>	Command 'show hardware flow' results into a crash when it creates a temporary file
<a href="#">CSCvm09452</a>	N77-F348XP-23 kernel panic
<a href="#">CSCvm11792</a>	ISIS IPv6 multi-topology - fixing MT attached bit

**Table 18** *Cisco NX-OS Release 8.4(1) Resolved Caveats*

Identifier	Description
<a href="#">CSCvm14482</a>	Switch reload due to kernel panic
<a href="#">CSCvm16677</a>	PSS memory leak in igmp_snoop for key type 0x04 and 0x0d
<a href="#">CSCvm19090</a>	DDB sanity check and client notification changes
<a href="#">CSCvm21746</a>	ospfIfIpAddress not working for specific index
<a href="#">CSCvm28899</a>	GARP/ARP does not trigger EID detection
<a href="#">CSCvm29785</a>	N7k BGP L2VPN VPLS Auto Discovery route not imported after route flaps
<a href="#">CSCvm32486</a>	PSS memory leak Type-0x0d on large burst of join/leave
<a href="#">CSCvm35215</a>	Cisco NX-OS Software Privilege Escalation Vulnerability
<a href="#">CSCvm43644</a>	NXOS BGP is not advertising some of the BGP prefixes to the Neighbors
<a href="#">CSCvm46017</a>	Netflow active timeout is not working as expected
<a href="#">CSCvm50765</a>	Default route (track added) not getting advertised after box reload
<a href="#">CSCvm52059</a>	CPU Traffic Not Sent out on L3 VRF Interface
<a href="#">CSCvm55640</a>	FEX not process NIF down when parent's ports shutdown or power off
<a href="#">CSCvm56314</a>	OTV VDC ignores dst IP in port-channel hash
<a href="#">CSCvm63999</a>	Issue with the BGP "pre-bestpath" point of insertion (POI) on Nexus7k
<a href="#">CSCvm65141</a>	cannot rewrite vlan at dual-active exclude interface-vlan-bridge-domain
<a href="#">CSCvm67806</a>	FabricPath - use PURGE instead of DELETE when LSA expire
<a href="#">CSCvm69204</a>	N77 who is HSRP active can not reply ARP if NIF is down
<a href="#">CSCvm74036</a>	N7k MPLS LDP Advertise Label Prefix-List not properly applied
<a href="#">CSCvm74044</a>	PBR feature disabled after cold-boot upgrade to 8.3(1)
<a href="#">CSCvm84486</a>	Tracked IPv4 local HMM stays UP while route is learned as remote
<a href="#">CSCvm93582</a>	N7K/NTP: ensure monolithic time sync between active and standby
<a href="#">CSCvm99009</a>	Port Info missing in level 2 L2FM log message when MAC moves continuously at a high rate
<a href="#">CSCvm99288</a>	pktmgr process memory leak @ libnve.so
<a href="#">CSCvn01886</a>	Nexus SW - Route missing in RIB while track object is up upon reload
<a href="#">CSCvn03958</a>	Drop OAM packets in KLM VDC
<a href="#">CSCvn08550</a>	N7K - 'ip routing multicast holddown' not working as expected
<a href="#">CSCvn09912</a>	N7k/F2E: 'Disabling PFC on port x since macsec is disabled' logs filling syslog
<a href="#">CSCvn13028</a>	"nfp" crash on module when configuring netflow
<a href="#">CSCvn14579</a>	F3 Egress buffer lockup handling
<a href="#">CSCvn20899</a>	BGP next-hop-self behavior changed back for reflected routes
<a href="#">CSCvn22059</a>	N7K - aclqos crash
<a href="#">CSCvn24277</a>	M3: EOBC heartbeat failure in device DEV_EOBC_MAC
<a href="#">CSCvn25428</a>	Line card on Nexus7K will start forwarding traffic before routes are programmed

**Table 18 Cisco NX-OS Release 8.4(1) Resolved Caveats**

Identifier	Description
<a href="#">CSCvn25706</a>	bfd is down before it times out, which causes bgp down.
<a href="#">CSCvn27072</a>	N77:status in "show pc cli status" output shows "Commit in progress"
<a href="#">CSCvn28540</a>	Multicast packets with TTL=1 are routed and forwarded when OIF is not null
<a href="#">CSCvn28629</a>	MAC move/add/delete not detected on fabricpath after l2fm process restart
<a href="#">CSCvn32302</a>	M3 reload with SLF_VOQ_CPM_MSTR_INT_ADDRNE_ERR need more info
<a href="#">CSCvn36425</a>	N9K - aclmgr crash @ddb functions
<a href="#">CSCvn39414</a>	NXOS: Local VRF leaking failed after ip clear of specific route in dest VRF
<a href="#">CSCvn40407</a>	Port-channel running configuration does not show FEC mode when port-channel has no members
<a href="#">CSCvn40533</a>	BGP specific routes not advertized to labeled-unicast neighbor after aggregate removal
<a href="#">CSCvn42389</a>	ACLQOS Core with FEX on N77K
<a href="#">CSCvn44369</a>	NXOS advertises the pseudonode inconsistently in multitopology mode
<a href="#">CSCvn45757</a>	Incorrect credit programmed for N7K-F306CK-25 after cold boot 6.x/7.x to 8.x
<a href="#">CSCvn49527</a>	URIB missing Type-2 host route after host (mac-ip) move from local to remote VTEP
<a href="#">CSCvn50809</a>	sac_usd hap reset when standby supervisor becomes active on N7K 6.2(18)
<a href="#">CSCvn51301</a>	ARP crashed on BL while other BL comes online // ARP mbuf leak
<a href="#">CSCvn57717</a>	Improve EOBC resiliency
<a href="#">CSCvn59162</a>	GOLF VxLAN Type5 next-hop unchanged
<a href="#">CSCvn59937</a>	ISCM crash/core due to NAT enable under ITD configuration
<a href="#">CSCvn61247</a>	N7K M3 Span destination port accepts by default incoming traffic.
<a href="#">CSCvn61562</a>	SUP3: observing QCR4 & QCR6 ECC bit errors on loading 8.3.2.S20
<a href="#">CSCvn63538</a>	N7K: Entries in new created SVI mismatch between UFIB and URIB and communication fail using those
<a href="#">CSCvn65211</a>	Timeout on "add vlan" for large port-profile
<a href="#">CSCvn67179</a>	IPFIB process crash after NXOS upgrade.
<a href="#">CSCvn69198</a>	N7K Netflow need First_switched and Last_switched timestamps be exported in Big endian format
<a href="#">CSCvn70922</a>	Static-oif functionality doesn't work on Nexus when group-range option is used
<a href="#">CSCvn79001</a>	BGP: md5 is missing on listening TCP socket after quick interface delete / re-add
<a href="#">CSCvn80406</a>	N7k setting VDC routing resource limits to max causes VDC to go in failed state
<a href="#">CSCvn82773</a>	N7K - ILM index for existing port allocated incorrectly to a different port after ISSU

**Table 18** *Cisco NX-OS Release 8.4(1) Resolved Caveats*

Identifier	Description
<a href="#">CSCvn95608</a>	bgp nxos: RR status not cleared after neighbor is un-configured via "no neighbor X.X.X.X"
<a href="#">CSCvn97534</a>	Interrupt "FLN_QUE_INTR_EB_P2_ERR_U_PLEN_MP_ZRO_N_EOS" should be added for Egress buffer recovery.
<a href="#">CSCvn99156</a>	Incorrect number of prefixes sent if Candidate-RP list packet length greater than configured PIM MTU
<a href="#">CSCvn99435</a>	API snmp_get_mgmt_conf_last_change_time return ERROR
<a href="#">CSCvn99680</a>	PTP - GM OFFSET 37 Seconds and Nexus 7K SR 685369201
<a href="#">CSCvo07343</a>	VXLAN IPv6 packets loop due to NVE invalid source-intf state while peerlink is down or unconfigured.
<a href="#">CSCvo08309</a>	LISP: Away entries take 90 seconds to be downloaded to uRIB in when RIB based mobility is enabled
<a href="#">CSCvo09373</a>	N7700- N77-M348XP-23L- Vlan tagging uncorrect in local span
<a href="#">CSCvo09511</a>	CLI hangs for several minutes when applying certain interface-level commands
<a href="#">CSCvo10122</a>	N7k: eem config cannot be removed when standby sup is powered down
<a href="#">CSCvo13456</a>	ISIS LSP flooding broken
<a href="#">CSCvo14963</a>	N7K-PPM: Issues seen under interface when port-profile is inherited.
<a href="#">CSCvo18971</a>	Instance bit map getting mis-programmed causing fib miss.
<a href="#">CSCvo22236</a>	Nexus 7k netstack crash
<a href="#">CSCvo23988</a>	'show system internal iftmc info global' command include invalid character.
<a href="#">CSCvo28782</a>	Crash during Free of Filter Links
<a href="#">CSCvo29766</a>	Nexus / NX-OS / Multicast PIM Join not sent when IPv4 unicast route has IPv6 next-hop (RFC 5549)
<a href="#">CSCvo29957</a>	Output of "show mpls ldp igp sync" inconsistent with configuration
<a href="#">CSCvo34762</a>	IPv6 static routes may get missed in RIB on PKL/PL shut/unshut
<a href="#">CSCvo44343</a>	N7K: Supervisor DIMM failure does not trigger Sup Failover.
<a href="#">CSCvo49272</a>	Only one static route is installed in RIB if ECMP paths are learnt via same next-hop
<a href="#">CSCvo51463</a>	N7K: VSH crash
<a href="#">CSCvo56362</a>	Nexus 5k crashed due to fabric_mcast hap reset
<a href="#">CSCvo68452</a>	Pending mroute entries persists after VRF is deleted
<a href="#">CSCvo70466</a>	L2MCAST crash due to null pointer dereference when searching AVL tree
<a href="#">CSCvo70810</a>	N9k bgp outbound route-map not working properly in L3VPN implementation
<a href="#">CSCvo73682</a>	sac_usd hap reset when standby supervisor becomes active
<a href="#">CSCvo78276</a>	LIF programmed to 0x0 for L3 VPN prefixes, after ECMP ports/port-channels are flapped
<a href="#">CSCvo90639</a>	N7K/N77 // TOS bits from IP header not being copied to MPLS EXP Bits in MPLS Header

**Table 18** *Cisco NX-OS Release 8.4(1) Resolved Caveats*

Identifier	Description
<a href="#">CSCvo93018</a>	Malformed ISIS Hello packet due to extra GRE header
<a href="#">CSCvo98267</a>	N77-SUP3E:link LED of mgmt port behaves in reverse way
<a href="#">CSCvp02900</a>	VPC: Type2 EVPN route advertised with primary IP of Loopback as next-hop
<a href="#">CSCvp08694</a>	Stale arp entry/route after VM move from one VPC domain to other due to HMM update failure
<a href="#">CSCvp14470</a>	OSPF crash due to invalid entry in interfaces array.
<a href="#">CSCvp19180</a>	N7K BFD - netstack crash
<a href="#">CSCvp25704</a>	Cli show top command does not have an exit option
<a href="#">CSCvp25875</a>	F3 card: show hardware flow ip command may cause process NFP to crash.
<a href="#">CSCvp30746</a>	MAC deleted from other PO member port where MAC has aged out, when non-aged port goes down.
<a href="#">CSCvp33458</a>	LISP: Forward-native cache persists after refreshed with more specific route.
<a href="#">CSCvp35682</a>	Target Address on IP SLA (udp) probes is getting changed to a new IP other than the configured one
<a href="#">CSCvp37275</a>	Nexus 7000 Automated tech-support on hap reset Supervisor Switchover not Functioning
<a href="#">CSCvp37629</a>	N7K-F3 module reload due to FLN_QUE_INTR_EB_P6_HL_ERR interrupt and EB lockup.
<a href="#">CSCvp37970</a>	N7k MPLS LDP label allocate prefix-list needs to be re-applied when changes are made to prefix-list
<a href="#">CSCvp38452</a>	MDS 32G module XBAR SYNC exceptionlog entries are missing meaningful information
<a href="#">CSCvp41187</a>	N7K replaces the default mpls-vpn route with the type-7 default route
<a href="#">CSCvp45874</a>	N7K M3 PBR load-share does not redirect traffic as expected
<a href="#">CSCvp45929</a>	N7K Supervisor Switchover due to TACACS+ hap reset - bad file descriptor
<a href="#">CSCvp47670</a>	"no ip redirects" configurable on L3 port-channel member port
<a href="#">CSCvp50779</a>	N77-C7710-FAB-3 EPLD upgrade fail from 0.007 to 0.008
<a href="#">CSCvp51579</a>	Nexus 7000 / M3 / not accepting filter acces-group command in erspan config
<a href="#">CSCvp57692</a>	BFD session goes down upon changing IP address of unrelated interface
<a href="#">CSCvp58845</a>	After remove/add VRF, remote host routes not installed to URIB and report 'remote nh not installed'
<a href="#">CSCvp70746</a>	n7k/F2: EEM to ignore interrupt during EG recovery (CSCux90737/CSCug39011/CSCux08154/CSCud43503)
<a href="#">CSCvp83475</a>	SDA: Invalid src ip address in VXLAN header on n7k border
<a href="#">CSCvp98039</a>	N7K MPLS FIB programming issues after reload w/ M3 module
<a href="#">CSCvq09112</a>	Incorrect parsing when using " " in loopback configuration
<a href="#">CSCvq32044</a>	BGP process crash with aggregate-address config without summary-only option under VRF
<a href="#">CSCvn73615</a>	vsh core on F4 40G/Fex

**Table 18** *Cisco NX-OS Release 8.4(1) Resolved Caveats*

Identifier	Description
<a href="#">CSCvq07837</a>	VXLAN decap fails SLF_L3RI_CP_SW_ERR_CTR on M3 if UDP src port is 2268 AMT Tunnel is mis-identified
<a href="#">CSCvo44103</a>	MDS: Handling ISSD gracefully when sup2sup eobc ha backup link in use
<a href="#">CSCvp57934</a>	Optimization of internal NXOS parameters
<a href="#">CSCvi89033</a>	N7K Consistency Checker: L3 Mcast MRIB to MFIB CC
<a href="#">CSCvn60645</a>	N7K Consistency Checker: URIB/AM to UFIB CC
<a href="#">CSCvk33710</a>	sending admin dce mode in MTS_OPC_IM_PORT_LAYER_PARAM_CHANGE while port default is done
<a href="#">CSCvk72654</a>	ISIS missing support for route tags
<a href="#">CSCvo04672</a>	Improve convergence performance of VTEP ECMP
<a href="#">CSCvq20196</a>	leak-route doesn't happen leading to leak-route installation failure
<a href="#">CSCud04830</a>	hsrp ip subnet mismatch when vrf is not present

## Related Documentation

Cisco Nexus 7000 documentation is available at the following URL:

<http://www.cisco.com/c/en/us/support/switches/nexus-7000-series-switches/tsd-products-support-series-home.html>

The Release Notes for upgrading the FPGA/EPLD is available at the following URL:

[https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus7000/sw/epld/cisco\\_nexus7000\\_epld\\_rn\\_8x.html](https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus7000/sw/epld/cisco_nexus7000_epld_rn_8x.html)

Cisco NX-OS documents include the following:

### Cisco NX-OS Configuration Guides

Cisco Nexus 7000 series configuration guides are available at the following URL:

<http://www.cisco.com/c/en/us/support/switches/nexus-7000-series-switches/products-installation-and-configuration-guides-list.html>

### Cisco NX-OS Command References

Cisco Nexus 7000 series command references are available at the following URL:

<http://www.cisco.com/c/en/us/support/switches/nexus-7000-series-switches/products-command-reference-list.html>

# Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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