Cisco Nexus 9000 Series NX-OS Release Notes, Release 7.0(3)I7(10)

This document describes the features, caveats, and limitations of Cisco NX-OS Release 7.0(3)I7(10) software for use on Cisco Nexus 9000 Series switches.

For more information, see Related Content.

Note: The documentation set for this product strives to use bias-free language. For the purposes of this documentation set, bias-free is defined as language that does not imply discrimination based on age, disability, gender, racial identity, ethnic identity, sexual orientation, socioeconomic status, and intersectionality. Exceptions may be present in the documentation due to language that is hardcoded in the user interfaces of the product software, language used based on RFP documentation, or language that is used by a referenced third-party product.

The following table lists the changes to this document.

Date	Description
April 09, 2023	Added caveat CSCwe67205 in Open Issues table.
August 23, 2021	Cisco NX-OS Release 7.0(3)I7(10) became available.

Contents

New Software Features

There are no new software features in this release.

New Hardware Features

There are no new hardware features in this release.

Open Issues

Bug ID	Description
CSCwe67205	Headline: Credit Loss Recovery is not triggered for FC interface with no transmit credits. Symptom: A Fibre Channel interface that stays at 0 transmit credits is not recovered by the Credit Loss Recovery agent. Workaround: If the interface has switchport ignore bit-errors configured, then remove it with the no switchport ignore bit-errors interface configuration command.

Resolved Issues

Bug ID	Description
CSCvx39125	Headline: Module ejector interrupt storm causing plfm mgr crash Symptoms: Marginal seating of IO module can lead to ejector button driven interrupt storm which causes platform manager to crash. Workarounds: Reseat module to verify good connection, verify chassis grounding etc.
CSCvu41880	Headline: N9K CDP Process Crashes When Freeing Neighborship Entry With Null Device ID Symptoms: A Nexus 9k switch may experience a crash in the CDP process due to a signal 11 segmentation fault when attempting to free a neighborship entry that contains a null "device id". Eg:%SYSMGR-2-SERVICE_CRASHED: Service "cdp" (PID XXXXX) hasn't caught signal 11 (core will be saved) Workarounds: None known.
CSCvv35496	Headline: N9508 MacSec - interface stuck in Authorization pending state due to one way traffic Symptoms: The N9508 with N9K-X9732C-EXM doesn't establish macsec session on random ports with port status in Authorization pending. The interface on the switch shows TX counters but no RX counters increment because of which the session is stuck in Authorization pending.N9508# show int eth1/14Ethernet1/14 is down (Authorization pending) Workarounds: Reload of the affected card may help to bring up the stuck sessions. If the ports again go back into Authorization pending state, replacing the line card may help to bring up affected macsec sessions.
CSCvx21260	Headline: Nexus 9000/3000 NXOS : M500IT Bootflash in readonly mode Symptoms: Nexus 9000/3000 switch bootflash goes into read-only mode with M500IT SSD drive after 28,224 power-on-hours (POH) for the first time.The bootflash will stop responding causing failure of operations such as config changes/save, read/write operations etc.syslogs will also indicate bootflash

Bug ID	Description
	diagnostic test failure%$ VDC-1 %$ %DIAGCLIENT-2-EEM_ACTION_HM_SHUTDOWN: Test <BootFlash> has been disabled as a part of default EEM action%$ VDC-1 %$ %DEVICE_TEST-2-COMPACT_FLASH_FAIL: Module 1 has failed test BootFlash 5 times on device BootFlash due to error Failure Workarounds: Reload the switch. However, this failure will reappear after 1008 hours of operation.Upgrade the SSD Firmware using following options: Option 1 - Upgrade NXOS VersionThe new Firmware with the fix for this issue will be packaged in 9.3(7), 10.1(2) and later NXOS versions. Option 2 - Upgrade SSD FW using SMU This option will be available under NX-OS Software Maintenance Upgrades (SMU) for 7.0(3)I7(x), 9.2(x), 9.3(x) and 10.1(1) on affected PIDs?7.0(3)I7(9) SMU nxos.CSCvx21260-n9k_ALL-1.0.0-7.0.3.I7.9.lib32_n9000.rpm is applicable to NX-OS Software Release 7.0(3)I7(1) to 7.0(3)I7(9)?9.3(6) SMU nxos.CSCvx21260-n9k_ALL-1.0.0-9.3.6.lib32_n9000.rpm is applicable to NX-OS Software Release 9.2(1) - 9.2(4) and 9.3(1) - 9.3(6)?10.1(1) SMU nxos.CSCvx21260-n9k_ALL-1.0.0-10.1.1.lib32_n9000.rpm is applicable to NX-OS Software Release 10.1(1) Option 3 - Upgrade SSD FW using scriptScript upgrade_m500_firmware.tar.gz will be available under NX-OS Firmware section for the affected PIDs. This same script can be used for any version from 7.0(3)I7(x), 9.2(x), 9.3(x), 10.1(1) 1.Copy upgrade_m500_firmware.tar.gz to switch bootflash. For 9500 Series Switches with Dual Supervisor, copy upgrade_m500_firmware.tar.gz to active as well as standby supervisor bootflash. Perform the upgrade first on standby supervisor and then active supervisor 2.Verify that upgrade_m500_firmware.tar.gz is in bootflashswitch# dir bootflash: | grep upgrade 2151467 Mar 08 19:17:00 2021 upgrade_m500_firmware.tar.gzIn case of Nexus 9500, verify upgrade_m500_firmware.tar.gz is also in Standby Supervisor bootflashswitch# dir bootflash://sup-standby/ | grep upgrade 2151467 Mar 08 19:18:00 2021 upgrade_m500_firmware.tar.gz 3. Configure bash if not enabled and run bashswitch# feature bashswitch# run bash sudo subash-4.2# In case of Nexus 9500, login to standby supervisor for Nexus 9500 use rlogin command from active supervisorIf slot 28 is Standby supervisor, thenbash-4.2# rlogin sup28root@switch#If slot 27 is Standby supervisor, thenbash-4.2# rlogin sup27root@switch# 4.Copy the script from bootflash to /tmpbash-4.2# cp /bootflash/upgrade_m500_firmware.tar.gz /tmp 5.Uncompress the file in /tmp folderbash-4.2# cd /tmpbash-4.2# tar -xvzf upgrade_m500_firmware.tar.gzupgrade_m500_firmwareM500_MC03.binM500_MU05.bin 6.IMPORTANT - Execute the script upgrade_m500_firmware with no parametersbash-4.2# ./upgrade_m500_firmwareChecking SSD firmware ... Model Number: Micron_M500IT_MTFDDAT064SBD Serial Number: MSA2226001B Firmware Revision: MU01.00SSD Model: Micron_M500IT_MTCurrent SSD Firmware Version: 1Your SSD firmware needs update and will be upgradedUpdating the SSD firmware ... /dev/sda:fwdownload: xfer_mode=3 min=1 max=255 size=512..... Done. Model Number: Micron_M500IT_MTFDDAT064SBD Serial Number: MSA2226001B Firmware Revision: MU05.00Current SSD Firmware is 5SSD Firmware has been updated successfully Please Note: After Upgrade SSD Firmware will either be MU05.00 or MC03.00.
CSCvz16442	Headline: N9k - Reduce syslog severity for new PFC syslogs Symptoms: For Microsoft, below syslog are introduced recently which are severity 2 and fill up the nvram logs very quickly. Due to these repeated syslogs, other important syslog roll over pretty quickly and nvram logs are becomes less useful.Reduce the severity to S3 so that they're logged into normal logging and not into nvram logs.Message 1:2021 Jun 15 20:08:37.620 Nexus-switch %$ VDC-1 %$ %-SLOT1-2-

Bug ID	Description
	BCM_UNEXPECTED_PFC_FRAMES: Ethernet1/7 received 20 unexpected PFC frames for COS 5Message 2:2021 May 24 11:10:48.541 Nexus-switch %$ VDC-1 %$ %-SLOT1-2-BCM_SYSLOG_LLFC_PAUSE_FRAME: 2 LLFC pause frames received on Ethernet1/28 Workarounds: None
CSCvy45479	Headline: Batch ACL config fail with duplicate ACE Symptoms: ACL configuration is not as expected Workarounds: 1. Remove duplicate ACE entries within each ACL in the custom startup configuration fileand/or2. Apply unique sequence number to each ACE within every ACL in custom startup configuration.
CSCvx15383	Headline: Need syslog to be generated for uncorrectable parity error Symptoms: uncorrectable parity errors detected in bcm-usd Workarounds: NA. This is an enhancement bug
CSCvy14110	Headline: N3k switch crash due to "monitor" hap failure during ERSPAN config push Symptoms: N3k switch running 7.0(3)I7(7a) crashes while pushing ERSPAN config when source interfaces include 12-16 port-channels interfaces.2011 Mar 15 12:51:05.808 F340.24.11-N3K-C3064TQ-2 %$ VDC-1 %$ %SYSMGR-2-HAP_FAILURE_SUP_RESET: Service "monitor" in vdc 1 has had a hap failureF340.24.11-N3K-C3064TQ-2# show coreVDC Module Instance Process-name PID Date(Year-Month-Day Time)--- ------ -------- --------------- -------- ----------------------1 1 1 monitor 22920 2011-03-15 12:53:171 1 1 monitor 28160 2011-03-15 12:53:17F340.24.11-N3K-C3064TQ-2# Workarounds: Do not configure ERSPAN session with scale of 12 or more port-channels as source interfaces with ACL filter.
CSCvy49875	Headline: Nexus 3500 | "show openflow switch 1 flows" shows "Packets: 0, Bytes: 0" for a "Flow" entry Symptoms: "show openflow switch 1 flows" shows Packets: 0, Bytes: 0"for a "Flow"entry Workarounds: Disruptive recovery mechanisms include: Option-1: Execute 'clear openflow switch 1 controller all' from the switch. This will clear all the openflow rules from the switch and will reprogram it from the controller. Options-2: Reload
CSCvw76327	Headline: Nexus 9500 Platform Line Cards crashing and causing bcm-crash core Symptoms: Nexus N9K-X9536PQ line card crashing and causing bcm-crash core. The following may be reported in the log: 2020 Nov 21 09:44:20 %SYSMGR-SLOT3-2-SERVICE_CRASHED: Service "bcm_usd" (PID 8338) hasn't caught signal 6 (core will be saved). 2020 Nov 21 09:44:23 %SYSMGR-SLOT3-3-BASIC_TRACE: generate_kernel_traces_file: PID 6553 with message failed to write kernel trace to /var/sysmgr/tmp_logs/0x302_bcm_usd_kernel-trace.8338. return value -1 . 2020 Nov 21 09:44:23 %SYSMGR-SLOT3-2-HAP_FAILURE_SUP_RESET: Service "bcm_usd" in vdc 1 has

Bug ID	Description
	had a hap failure 2020 Nov 21 09:45:37 %MODULE-2-MOD_DIAG_FAIL: Module 3 (Serial number: SAL2034ULTR) reported failure due to Service on linecard had a hap-reset in device DEV_SYSMGR (device error 0x30b) Workarounds: None

Device Hardware

The following tables list the Cisco Nexus 9000 Series hardware that Cisco NX-OS Release 7.0(3)I7(10) supports. For additional information about the supported hardware, see the *Hardware Installation Guide* for your Cisco Nexus 9000 Series device.

Table 1 Cisco Nexus 9000 Series Fabric Modules

Product ID	Hardware	Quantity for Maximum Bandwidth
N9K-C9504-FM	Cisco Nexus 9504 40-Gigabit fabric module	3 to 6 depending on line cards
N9K-C9504-FM-E	100-Gigabit -E fabric module (for the Cisco Nexus 9504 chassis) that supports the 100-Gigabit (-EX) line cards. When used, there must be 4 of these fabric modules installed in fabric slots 22, 23, 24, and 26.	4 5 when using the N9K-X9736C-FX line card.
N9K-C9504-FM-S	100-Gb -S fabric module (for the Cisco Nexus 9504 chassis) that supports the 100-Gigabit (-S) line cards. When used, there must be 4 of these fabric modules installed in fabric slots 22, 23, 24, and 26.	4

N9K-C9508-FM	Cisco Nexus 9508 Series 40-Gigabit fabric module	3-6 depending on the line cards
N9K-C9508-FM-E	100-Gigabit -E fabric module (for the Cisco Nexus 9508 chassis) that supports the 100-Gigabit (-EX) line cards. When used, there must be 4 of these fabric modules installed in fabric slots 22, 23, 24, and 26.	4 5 when using the N9K-X9736C-FX line card.
N9K-C9508-FM-S	100-Gigabit -S fabric module (for the Cisco Nexus 9508 chassis) that supports the 100-Gigabit (-S) line cards. When used, there must be 4 of these fabric modules installed in fabric slots 22, 23, 24, and 26.	4
N9K-C9508-FM-Z	Fabric blank with Fan Tray Power Connector module used in place of a fabric module that has been removed from fabric slots 22, 24, or 26 during lab verification test.	1
N9K-C9516-FM	Cisco Nexus 9500 Series 40-Gigabit fabric module	3-6 depending on the line cards
N9K-C9516-FM-E	100-Gb -E fabric module (for the Cisco Nexus 9516 chassis that supports the 100-Gb (-EX) line cards. When used, there must be four of these fabric modules installed in fabric slots 22, 23, 24, and 26.	4 5 when using the N9K-X9736C-FX line card.
N9K-C9516-FM-E2	16-slot fabric module for -E line cards.	4 - N9K-X97160YC-EX 4 - N9K-X9732C-EX 4 - (plus 1 for redundancy) - N9K-X9732C-FX 4 - N9K-X9736C-EX 5 - N9K-X9736C-FX 5 - N9K-X9736Q-FX 4 - N9K-X9788TC-FX
N9K-C9516-FM-Z	Fabric blank with Fan Tray Power Connector module used in place of a fabric module that has been removed from fabric slots 22, 24, or 26 during lab verification test.	1

Table 2 Cisco Nexus 9000 Series Fans and Fan Trays

Product ID	Description	Quantity	Cisco Nexus Switches	
N9K-C9300-FAN1	Fan 1 module with port-side intake airflow (burgundy coloring)	3	9396PX (early versions)	
N9K-C9300-FAN1-B	Fan 1 module with port-side exhaust airflow (blue coloring)	3	9396PX (early versions)	
N9K-C9300-FAN2	Fan 2 module with port-side intake airflow (burgundy coloring)	3	93128TX	9396PX 9396TX
N9K-C9300-FAN2-B	Fan 2 module with port-side exhaust airflow	3	93128TX	9396PX

Product ID	Description	Quantity	Cisco Nexus Switches	
	(blue coloring)			9396TX
N9K-C9300-FAN3	Fan 3 module with port-side intake airflow (burgundy coloring)	3	92304QC 9272Q[1]	93120TX
N9K-C9300-FAN3-B	Fan 3 module with port-side exhaust airflow (blue coloring)	3	92304QC 9272Q[1]	93120TX
N9K-C9504-FAN	Fan tray for 4-slot modular chassis	3	9504	
N9K-C9508-FAN	Fan tray for 8-slot modular chassis	3	9508	
N9K-C9516-FAN	Fan tray for 16-slot modular chassis	3	9516	
NXA-FAN-160CFM-PE	Fan module with port-side exhaust airflow (blue coloring)	3	9364C	
NXA-FAN-160CFM-PI	Fan module with port-side intake airflow (burgundy coloring)	3	9364C	
NXA-FAN-30CFM-B	Fan module with port-side intake airflow (burgundy coloring)	3	92160YC-X 9236C[1] 93108TC-EX 93108TC-FX[1] 93180LC-EX[1] 93180YC-EX 93180YC-FX[1]	9332PQ 9348GC-FXP 9372PX 9372PX-E 9372TX 9372TX-E
NXA-FAN-30CFM-F	Fan module with port-side exhaust airflow (blue coloring)	3	92160YC-X 9236C[1] 93108TC-EX 93108TC-FX[1] 93180LC-EX[1] 93180YC-EX 93180YC-FX[1]	9332PQ 9348GC-FXP 9372PX 9372PX-E 9372TX 9372TX-E
NXA-FAN-35CFM-PE	Fan module with port-side exhaust airflow (blue coloring)	4	92300YC[1]	
NXA-FAN-35CFM-PI	Fan module with port-side intake airflow (burgundy coloring)	4	92300YC[1]	
NXA-FAN-65CFM-PE	Fan module with port-side exhaust airflow (blue coloring)	3	93240YC-FX2[1]	9336C-FX2[1]

Product ID	Description	Quantity	Cisco Nexus Switches	
NXA-FAN-65CFM-PI	Fan module with port-side exhaust airflow (burgundy coloring)	3	93240YC-FX2[1]	9336C-FX2[1]

[1] For specific fan speeds, see the Overview section of the Hardware Installation Guide.

Table 3 Cisco Nexus 9500 Platform Switches Line Cards

Product ID	Description	Maximum Quantity			Supporting Fabric Modules
		Cisco Nexus 9504	Cisco Nexus 9508	Cisco Nexus 9516	
N9K-X9408PC-CFP2	Line card with 8 100-Gigabit CFP2 ports	4	8	16	N9K-C9504-FM N9K-C9508-FM N9K-C9516-FM
N9K-X9432C-S	Line card with 32 100-Gigabit QSFP28 ports	4	8	16	N9K-C9504-FM-S N9K-C9508-FM-S --
N9K-X9432PQ	Line card with 32 40-Gigabit QSFP+ ports	4	8	16	N9K-C9504-FM N9K-C9508-FM N9K-C9516-FM
N9K-X9464PX	Line card with 48 1/10-Gigabit SFP+ ports and 4 40-Gigabit QSFP+ uplink ports	4	8	16	N9K-C9504-FM N9K-C9508-FM N9K-C9516-FM
N9K-X9464TX	Line card with 48 10GBASE-T (copper) ports and 4 40-Gigabit QSFP+ ports	4	8	16	N9K-C9504-FM N9K-C9508-FM N9K-C9516-FM
N9K-X9464TX2	Line card with 48 10GBASE-T (copper) ports and 4 40-Gigabit QSFP+ ports	4	8	16	N9K-C9504-FM N9K-C9508-FM N9K-C9516-FM
N9K-X9536PQ	Line card with 36 40-Gigabit ports	4	8	16	N9K-C9504-FM N9K-C9508-FM N9K-C9516-FM
N9K-X9564PX	Line card with 48 1-/10-Gigabit SFP+ ports and 4 40-Gigabit QSFP+ ports	4	8	16	N9K-C9504-FM N9K-C9508-FM N9K-C9516-FM
N9K-X9564TX	Line card with 48 1-/10GBASE-T (copper) ports and 4 40-Gigabit QSFP+ ports	4	8	16	N9K-C9504-FM N9K-C9508-FM N9K-C9516-FM
N9K-X9636PQ	Line card with 36 40-Gigabit QSFP+ ports	4	8	16	N9K-C9504-FM N9K-C9508-FM --
N9K-X9732C-EX	Line card with 32 40-/100-Gigabit QSFP28 ports	4	8	16	N9K-C9504-FM-E N9K-C9508-FM-E N9K-C9516-FM-E

N9K-X9732C-FX	Line card with 32 100 Gigabit Ethernet. Each QSFP28 supports 1x100-, 2x50-, 1x40-, 4x25-, 4x10-, and 1x1/10-Gigabit Ethernet. .	4	8	16	N9K-C9504-FM-E N9K-C9508-FM-E N9K-C9516-FM-E N9K-C9516-FM-E2
N9K-X9736C-EX	Line card with 36 40-/100-Gigabit QSFP28 ports	4	8	16	N9K-C9504-FM-E N9K-C9508-FM-E N9K-C9516-FM-E
N9K-X9736C-FX	Line card with 36 1-/10-/40-/50-/100-Gigabit QSFP28 ports	4	8	16	N9K-C9504-FM-E N9K-C9508-FM-E N9K-C9516-FM-E
N9K-X9736Q-FX	Line card with 36 1-/10-/40-Gigabit QSFP28 ports	4	8	16	N9K-C9504-FM-E N9K-C9508-FM-E N9K-C9516-FM-E
N9K-X9788TC-FX	Line card with 48 1-/10-G BASE-T (copper) and 4 100-Gigabit QSFP28 ports	4	8	16	N9K-C9504-FM-E N9K-C9508-FM-E N9K-C9516-FM-E
N9K-X97160YC-EX	Line card with 48 10-/25-Gigabit SFP28 ports and 4 40-/100-Gigabit QSFP28 ports	4	8	16	N9K-C9504-FM-E N9K-C9508-FM-E N9K-C9516-FM-E

Table 4 Cisco Nexus 9000 Series Power Supplies

Product ID	Description	Quantity	Cisco Nexus Switches	
N9K-PAC-650W	650-W AC power supply with port-side intake (burgundy coloring)	2	9332PQ 9372PX 9372PX-E 9372TX	9372TX-E 9396PX 9396TX
N9K-PAC-650W-B	650-W AC power supply with port-side exhaust (blue coloring)	2	9332PQ 9372PX 9372PX-E 9372TX	9372TX-E 9396PX 9396TX
N9K-PAC-1200W	1200-W AC power supply with port-side intake airflow (burgundy coloring)	2	93120TX	
N9K-PAC-1200W-B	1200-W AC power supply with port-side exhaust airflow (blue coloring)	2	93120TX	
N9K-PAC-3000W-B	3000-W AC power supply	Up to 4 Up to 8 Up to 10	9504 9508 9516	
N9K-PDC-3000W-B	3000-W DC power supply	Up to 4 Up to 8 Up to 10	9504 9508 9516	

Product ID	Description	Quantity	Cisco Nexus Switches	
N9K-PUV-1200W	3000-W Universal AC/DC power supply with bidirectional airflow (white coloring)	2	92160YC-X 9236C 92300YC 92304QC 9272Q 93108TC-EX 93108TC-FX	93120TX 93128TX 93180LC-EX 93180YC-EX 93180YC-FX 9364C
N9K-PUV-3000W-B	3000-W Universal AC/DC power supply	Up to 4 Up to 8 Up to 10	9504 9508 9516	
NXA-PAC-350W-PE	350-W AC power supply with port-side exhaust airflow (blue coloring)	2	9348GC-FXP	
NXA-PAC-350W-PI	350-W AC power supply with port-side intake airflow (burgundy coloring)	2	9348GC-FXP	
NXA-PAC-500W-PE	500-W AC power supply with port-side exhaust airflow (blue coloring)	2	93108TC-EX 93180LC-EX	93180YC-EX
NXA-PAC-500W-PI	500-W AC power supply with port-side intake airflow (burgundy coloring)	2	93108TC-EX 93180LC-EX	93180YC-EX
NXA-PAC-650W-PE	650-W power supply with port-side exhaust (blue coloring)	2	92160YC-X 9236C 92300YC	92304QC 93108TC-EX 93180YC-EX
NXA-PAC-650W-PI	650-W power supply with port-side intake (burgundy coloring)	2	92160YC-X 9236C 92300YC	92304QC 93108TC-EX 93180YC-EX
NXA-PAC-1100W-PE	1100-W AC power supply with port-side exhaust airflow (blue coloring)	2	9348GC-FXP	
NXA-PAC-1100W-PI	1100-W AC power supply with port-side intake airflow (burgundy coloring)	2	9348GC-FXP	
NXA-PAC-1100W-PE2	1100-W AC power supply with port-side exhaust airflow (blue coloring)	2	93240YC-FX2	9336C-FX2
NXA-PAC-1100W-PI2	1100-W AC power supply with port-side intake airflow (burgundy coloring)	2	93240YC-FX2	9336C-FX2
NXA-PHV-1100W-PE	1100-W AC power supply with port-side exhaust airflow (blue coloring)	2	93240YC-FX2	9336C-FX2
NXA-PHV-1100W-PI	1100-W AC power supply with port-side intake airflow (burgundy coloring)	2	93240YC-FX2	9336C-FX2

Product ID	Description	Quantity	Cisco Nexus Switches	
NXA-PAC-1200W-PE	1200-W AC power supply with port-side intake airflow (burgundy coloring)	2	9272Q	9364C
NXA-PAC-1200W-PI	1200-W AC power supply with port-side exhaust airflow (blue coloring)	2	9272Q	9364C
NXA-PDC-930W-PE	930-W DC power supply with port-side exhaust airflow (blue coloring)	2	93108TC-FX 93180LC-EX	93180YC-FX 9364C
NXA-PDC-930W-PI	930-W DC power supply with port-side intake airflow (burgundy coloring)	2	93108TC-FX 93180LC-EX	93180YC-FX 9364C
UCS-PSU-6332-DC	930-W DC power supply with port-side exhaust (gray coloring)	2	92160YC-X 9236C 92304QC 9272Q 93108TC-EX 93120TX 93128TX 93180YC-EX	9332PQ 9372PX 9372PX-E 9372TX 9372TX-E 9396PX 9396TX
UCSC-PSU-930WDC	930-W DC power supply with port-side intake (green coloring)	2	92160YC-X 9236C 92304QC 9272Q 93108TC-EX 93120TX 93128TX 93180YC-EX	9332PQ 9372PX 9372PX-E 9372TX 9372TX-E 9396PX 9396TX

Table 5 Cisco Nexus 9500 Platform Switches Supervisor Modules

Supervisor	Description	Quantity
N9K-SUP-A	1.8-GHz supervisor module with 4 cores, 4 threads, and 16 GB of memory	2
N9K-SUP-A+	1.8-GHz supervisor module with 4 cores, 8 threads, and 16 GB of memory	2
N9K-SUP-B	2.2-GHz supervisor module with 6 cores, 12 threads, and 24 GB of memory	2
N9K-SUP-B+	1.9-GHz supervisor module with 6 cores, 12 threads, and 32 GB of memory	2

Table 6 Cisco Nexus 9000 Series Switches

Cisco Nexus Switch	Description
N9K-C92160YC-X	1-RU Top-of-Rack switch with 48 10-/25-Gigabit SFP+ ports and 6 40-Gigabit QSFP+ ports (4 of these ports support 100-Gigabit QSFP28 optics).
N9K-C92300YC	1.5-RU Top-of-Rack switch with 48 10-/25-Gigabit SFP28 ports and 18 fixed 40-/100-Gigabit QSFP28 ports.
N9K-C92304QC	2-RU Top-of-Rack switch with 56 40-Gigabit Ethernet QSFP+ ports (16 of

Cisco Nexus Switch	Description
	these ports support 4x10 breakout cables) and 8 100-Gigabit QSFP28 ports.
N9K-C9236C	1-RU Top-of-Rack switch with 36 40-/100-Gigabit QSFP28 ports (144 10-/25-Gigabit ports when using breakout cables)
N9K-C9272Q	2-RU Top-of-Rack switch with 72 40-Gigabit Ethernet QSFP+ ports (35 of these ports also support 4x10 breakout cables for 140 10-Gigabit ports)
N9K-C9336C-FX2	1-RU switch with 36 40-/100-Gb Ethernet QSFP28 ports.
N9K-C9364C	2-RU Top-of-Rack switch with 64 40-/100-Gigabit QSFP28 ports and 2 1-/10-Gigabit SFP+ ports.
N9K-C93108TC-EX	1-RU Top-of-Rack switch with 48 10GBASE-T (copper) ports and 6 40-/100-Gigabit QSFP28 ports
N9K-C93108TC-FX	1-RU Top-of-Rack switch with 48 100M/1/10GBASE-T (copper) ports and 6 40-/100-Gigabit QSFP28 ports
N9K-C93120TX	2-RU Top-of-Rack switch with 96 1/10GBASE-T (copper) ports and 6 40-Gigabit QSFP+ ports
N9K-C93128TX	3-RU Top-of-Rack switch with 96 1/10GBASE-T (copper) ports and an uplink module up to 8 40-Gigabit QSFP+ ports
N9K-C93180LC-EX	1-RU Top-of-Rack switch with 24 40-/50-Gigabit QSFP+ downlink ports and 6 40/100-Gigabit uplink ports. You can configure 18 downlink ports as 100-Gigabit QSFP28 ports or as 10-Gigabit SFP+ ports (using breakout cables)
N9K-C93180YC-EX	1-RU Top-of-Rack switch with 48 10-/25-Gigabit SFP28 fiber ports and 6 40-/100-Gigabit QSFP28 ports
N9K-C93180YC-FX	1-RU Top-of-Rack switch with 10-/25-/32-Gigabit Ethernet/FC ports and 6 40-/100-Gigabit QSFP28 ports. You can configure the 48 ports as 1/10/25-Gigabit Ethernet ports or as FCoE ports or as 8-/16-/32-Gigabit Fibre Channel ports.
N9K-C93240YC-FX2	1.2-RU Top-of-Rack switch with 48 10-/25-Gigabit SFP28 fiber ports and 12 40-/100-Gigabit Ethernet QSFP28 ports.
N9K-C9332PQ	1-RU switch with 32 40-Gigabit Ethernet QSFP+ ports (26 ports support 4x10 breakout cables and 6 ports support QSFP-to-SFP adapters)
N9K-C9348GC-FXP	Nexus 9300 with 48p 100M/1 G, 4p 10/25 G SFP+ and 2p 100 G QSFP
N9K-C9372PX	1-RU Top-of-Rack switch with 48 1-/10-Gigabit SFP+ ports and 6 40-Gigabit QSFP+ ports
N9K-C9372PX-E	An enhanced version of the Cisco Nexus 9372PX-E switch.
N9K-C9372TX	1-RU Top-of-Rack switch with 48 1-/10GBASE-T (copper) ports and 6 40-Gigabit QSFP+ ports
N9K-C9372TX-E	An enhanced version of the Cisco Nexus 9372TX-E switch.
N9K-C9396PX	2-RU Top-of-Rack switch with 48 1-/10-Gigabit Ethernet SFP+ ports and an uplink module with up to 12 40-Gigabit QSFP+ ports

Cisco Nexus Switch	Description
N9K-C9396TX	2-RU Top-of-Rack switch with 48 1/10GBASE-T (copper) ports and an uplink module with up to 12 40-Gigabit QSFP+ ports
N9K-C9504	7.1-RU modular switch with slots for up to 4 line cards in addition to two supervisors, 2 system controllers, 3 to 6 fabric modules, 3 fan trays, and up to 4 power supplies.
N9K-C9508	13-RU modular switch with slots for up to 8 line cards in addition to two supervisors, 2 system controllers, 3 to 6 fabric modules, 3 fan trays, and up to 8 power supplies.
N9K-C9516	21-RU modular switch with slots for up to 16 line cards in addition to two supervisors, 2 system controllers, 3 to 6 fabric modules, 3 fan trays, and up to 10 power supplies.

Table 7 Cisco Nexus 9000 Series Uplink Modules

Product ID	Hardware
N9K-M4PC-CFP2	Cisco Nexus 9300 uplink module with 4 100-Gigabit Ethernet CFP2 ports. For the Cisco Nexus 93128TX switch, only two of the ports are active. For the Cisco Nexus 9396PX and 9396TX switches, all four ports are active.
N9K-M6PQ	Cisco Nexus 9300 uplink module with 6 40-Gigabit Ethernet QSFP+ ports for the Cisco Nexus 9396PX, 9396TX, and 93128TX switches.
N9K-M6PQ-E	An enhanced version of the Cisco Nexus N9K-M6PQ uplink module.
N9K-M12PQ	Cisco Nexus 9300 uplink module with 12 40-Gigabit Ethernet QSPF+ ports.

Table 8 Cisco Nexus 9500 Platform Switches System Controller

Product ID	Hardware	Quantity
N9K-SC-A	Cisco Nexus 9500 Platform System Controller Module	2

Table 9 Cisco Nexus 3232C and 3264Q Switch Hardware

Product ID	Hardware	Quantity
N3K-C3232C	Cisco Nexus 3232C, 32 x 40-Gb/100-Gb 2 x 10-Gb SFP+, 1-RU switch	1
N3K-C3264Q	Cisco Nexus 3264Q, 64 x 40-Gb 2 x 10-Gb SFP+, 2-RU switch	1

Table 10 Cisco Nexus 3164Q Switch Hardware

Product ID	Hardware	Quantity
N3K-C3164Q-40GE	Cisco Nexus 3164Q, 64 x 40-Gb SFP+, 2-RU switch	1

Table 11 Cisco Nexus 31128PQ Switch Hardware

Product ID	Hardware	Quantity
N3K-C31128PQ-10GE	Nexus 31128PQ, 96 x 10 Gb-SFP+, 8 x 10-Gb QSFP+, 2-RU switch	1

Upgrade and Downgrade

To perform a software upgrade or downgrade, follow the instructions in the *Cisco Nexus 9000 Series NX-OS Software Upgrade and Downgrade Guide, Release 7.x*.

For information about an In Service Software Upgrade (ISSU), see the Cisco NX-OS ISSU Support application.

Note: Upgrading from Cisco NX-OS 7.0(3)I1(2), 7.0(3)I1(3), or 7.0(3)I1(3a) requires installing a patch for Cisco Nexus 9500 platform switches only. For more information on the upgrade patch, see Upgrade Patch Instructions.

Exceptions

Cisco Nexus 9200, 9300-EX, and 9300-FX Platform Switches

The following features are not supported for the Cisco Nexus 9200 platform switches and the Cisco Nexus 93108TC-EX and 93180YC-EX switches:

- 64-bit ALPM routing mode
- Cisco Nexus 9272PQ and Cisco Nexus 92160YC platforms do not support the PXE boot of the NXOS image from the loader.
- ACL filters to span subinterface traffic on the parent interface
- Egress port ACLs
- Egress QoS policer is supported on the Cisco Nexus 9300-EX and 9300-FX platform switches. It is not supported on the Cisco Nexus 9200 platform switch. The only policer action supported is drop. Remark action is not supported on egress policer.
- FEX (supported for Cisco Nexus 9300-EX platform switches but not for Cisco Nexus 9200 platform switches.)
- GRE v4 payload over v6 tunnels
- IP length-based matches
- IP-in-IP on Cisco Nexus 92160 switch
- ISSU enhanced is not supported on the Cisco Nexus 9300-FX platform switch.
- Layer 2 Q-in-Q is supported only on Cisco Nexus 9300-EX platform switches (93108TC-EX and 93180YC-EX) and Cisco Nexus 9500 platform switches with the X9732C-EX line card.
- MTU (Multi Transmission Unit) checks for packets received with an MPLS header
- NetFlow is not supported on Cisco Nexus 9200 platform switches. It is supported on Cisco Nexus 9300-EX and 9300-FX platform switches.
- Packet-based statistics for traffic storm control (only byte-based statistics are supported)
- PVLANs (supported on Cisco Nexus 9300 and 9300-EX platform switches but not on Cisco Nexus 9200 platform switches)
- Q-in-VNI is not supported on Cisco Nexus 9200 platform switches. Beginning with Cisco NX-OS Release 7.0(3)I5(1), Q-in-VNI is supported on Cisco Nexus 9300-EX platform switches.
- Q-in-Q for VXLAN is not supported on Cisco Nexus 9200 and 9300-EX platform switches

Q-in-VNI is not supported on Cisco Nexus 9200 platform switches (supported on Cisco Nexus 9300-EX platform switches)

- Resilient hashing for ECMP on the Cisco Nexus 9200 platform switches.
- Resilient hashing for port-channel
- Rx SPAN for multicast if the SPAN source and destination are on the same slice and no forwarding interface is on the slice
- SVI uplinks with Q-in-VNI are not supported with Cisco Nexus 9300-EX platform switches
- Traffic storm control for copy-to-CPU packets
- Traffic storm control with unknown multicast traffic
- Tx SPAN for multicast, unknown multicast, and broadcast traffic
- VACL redirects for TAP aggregation

Cisco Nexus 9500 Platform N9K-X9408PC-CFP2 Line Card and 9300 Platform Switches

The following features are not supported for the Cisco Nexus 9500 platform N9K-X9408PC-CFP2 line card and Cisco Nexus 9300 platform switches with generic expansion modules (N9K-M4PC-CFP2):

- 802.3x
- Breakout ports
- FEX (this applies to the N9K-X9408PC-CFP2 and -EX switches, not all Cisco Nexus 9300 platform switches)
- MCT (Multichassis EtherChannel Trunk)
- NetFlow
- Only support 40G flows
- Port-channel (No LACP)
- PFC/LLFC
- PTP (Precision Time Protocol)
- PVLAN (supported on Cisco Nexus 9300 platform switches)
- Shaping support on 100g port is limited
- SPAN destination/ERSPAN destination IP
- Storm Control
- vPC
- VXLAN access port

N9K-X9732C-EX Line Card

The following features are not supported for Cisco Nexus 9508 switches with an N9K-X9732C-EX line card:

- FEX
- IPv6 support for policy-based routing
- LPM dual-host mode
- SPAN port-channel destinations

Related Content

The entire Cisco Nexus 9000 Series NX-OS documentation set is available at the following location: Cisco Nexus 9000 Series Switches

Cisco Nexus 9000 Series Software Upgrade and Downgrade Guide is available at the following location: Cisco Nexus 9000 Series NX-OS Software Upgrade and Downgrade Guide, Release 7.x

The Cisco Nexus 3000 and 9000 Series NX-API REST SDK User Guide and API Reference is available at the following location: Cisco Nexus NX-API References

New Documentation

The *Cisco Nexus 9000 Series FPGA/EPLD Upgrade Release Notes, Release 7.0(3)I7(10)* is available at the following location:
Cisco Nexus 9000 Series FPGA/EPLD Upgrade Release Notes, Release 7.0(3)I7(10)

Documentation Feedback

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