# Cisco Nexus 9000 Series NX-OS Release Notes, Release 9.3(7a)

This document describes the features, issues, and exceptions of Cisco NX-OS Release 9.3(7a) software for use on Cisco Nexus 9000 Series switches.

**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.

**Table 1.** Changes to this Document

| Date | Description |
|---|---|
| June 18, 2021 | Cisco NX-OS Release 9.3(7a) became available. |
| October 5, 2021 | Added details about 'Thousand Eyes (TE) Integration' feature in the 'New and Enhanced Software Features' section. |
| April 25, 2024 | Added CSCwh50989 and CSCwe53655 to Open Issues. |

# New and Enhanced Software Features

| New Features | |
| --- | --- |
| **Feature** | **Description** |
| **Thousand Eyes (TE) Integration** | Introduced Thousand eyes integration support with Cisco Nexus 9000 Series switches. For product overview look at: https://www.cisco.com/c/en/us/products/collateral/switches/nexus-9000-series-switches/at-a-glance-c45-2431016.html<br><br>It is a must to install the following general SMU when TE integration is performed:<br><br>nxos.CSCvz52812-n9k_ALL-1.0.0-9.3.7a.lib32_n9000.tar<br><br>For SMU installation please refer to the following guide:<br><br>https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus9000/sw/93x/system-management/b-cisco-nexus-9000-series-nx-os-system-management-configuration-guide-93x/b-cisco-nexus-9000-series-nx-os-system-management-configuration-guide-93x_chapter_010111.html |

# New Hardware Features

Cisco NX-OS Release 9.3(7a) does not support any new hardware.

# Open Issues

| Bug ID | Description |
| --- | --- |
| CSCvx53013 | Headline: Unsupported TCAM region config added when ISSU from 9.2.4 to 9.3.4<br><br>Symptoms: Following lines exist in running-config and cannot be removed:<br>hardware access-list tcam region ing-racl-lite 534756472 double-widehardware access-list tcam region ing-short 189402400 double-widehardware access-list tcam region ing-ifacl-ipv4-lite 1hardware access-list tcam region ing-ifacl-ipv6-lite 32784hardware access-list tcam region ing-cntacl 1hardware access-list tcam region ing-mvpn 370590546 double-widehardware access-list tcam region ing-l2-l3-qos 28hardware access-list tcam region hw-telemetry 1<br><br>Workaround: Perform write-erase followed by reload. |
| CSCvx60047 | Headline: "no negotiate auto" is removed from RJ-45 member interface and not from PO<br><br>Symptoms: If a RJ-45 port is member of a port-channel, with "no negotiate auto" configuration on the port-channel and member interfaces, that configuration gets removed from the member interface, but not from the port-channel after ISSU from a pre-9.3(4) or pre-7.0(3)I7(8) image to later images.<br><br>"show running interface e<x/y>" would not have "no negotiate auto" config<br>"show running interface po<>" would have "no negotiate auto" config<br>"no channel-group <>" config on the member interface will not take effect<br><br>Workaround:<br>Workaround for Pre-ISSU:<br><br>  - Remove "no negotiate auto" config from port-channel interface with RJ45 ports<br><br> Workaround for Post-ISSU (if the pre-ISSU workaround is not applied):<br><br>  - Remove "no negotiate auto" config from port-channel interface with RJ45 ports<br>  - Run "channel-group " config on all members again |
| CSCvx56768 | Headline: 1G GLC-TE port was not coming up on N9K-C93360YC-FX2 after unplug and replug the SFP<br><br>Symptoms: Connect C2960X to Nexus 9000 with GLC-TE. Keep the connection up first and then unplug and replug the SFP on Nexus 9000  side. The port will not come up untill you shut /no shut the port on Nexus 9000 side. |

| Bug ID | Description |
|---|---|
| | Workaround: Shut /no shut the port on Nexus 9000 side. |
| CSCvx58626 | Headline: SNMP Crash in Nexus 9000 after ISSU Upgrade<br><br>Symptoms: Nexus9000 C9504, supervisor "N9K-SUP-A" crashed in during no disruptive upgrade from 7.0(3)I4(7) to 7.0(3)I7(9) aborting the ISSU.<br><br>Workaround: None |
| CSCvx60909 | Headline: Installing multiple SMUs do not remain committed after reload.<br><br>Symptoms: When installing multiple SMUs they do not remain committed after reload.<br><br>Workaround: Upgrade to a version that contains the fixes natively. |
| CSCvx61330 | Headline: Nexus 9000 aclqos cores - ERSPAN w/source VLAN mapped to VNI on certain ports<br><br>Symptoms: Gen1 Nexus 9000 models may see a core file from the aclqos process when trying to do an ERSPAN on a VLAN mapped to a VNI, using ports from speicifc ASICs.<br><br>Workaround: None |
| CSCvx39125 | Headline: Module ejector interrupt storm causing plfm mgr crash<br><br>Symptoms: Marginal seating of IO module can lead to ejector button driven interrupt storm which causes platform manager to crash.<br><br>Workaround: Reseat module to verify good connection, verify chassis grounding, etc. |
| CSCvx41778 | Headline: BGP flaps (with holdtimer expired) every time a new leaf is added or reloaded<br><br>Symptoms: VXLAN spine and leaf mode on infrastructure of Nexus 93180YC works fine without any problem. The issue arises when reloading leaf X or introducing a new leaf, this will make that a random leaf of the network connected to same spines loses BGP connection. This happens randomly, affecting different leafs.The evpn architecture implemented is based on a bgp ipv4 underlay, making it possible to announce the loopbacks of the Nexus serving as termination for the VTEPs.<br><br>Workaround: None |
| CSCvx59644 | Headline: HW Multipath table is not programming some links.<br><br>Symptoms: Available paths seen on show ip route for equal cost paths are not being fully utilized.<br><br>Workaround: Bundle uplinks in L3 port-channel |
| CSCvx60023 | Headline: MAC Mobility Seq is not updated correctly upon MAC moves<br><br>Symptoms: MAC Mobility sequence number is not correctly updated on EVPN routes when a host moves from one site to another.Missing the correct Sequence number might lead BGP to select non-optimum paths.<br><br>Workaround: None |
| CSCvx60758 | Headline: Bringing up SPAN session silently fails when sFlow data sources are configured<br><br>Symptom: A Nexus 9000 series switch configured with sFlow data sources is not able to administratively bring SPAN sessions online. This is expected behavior and is a documented limitation. If at least one sFlow data source is configured, the SPAN sessions cannot be brought up. However, no error message or feedback is presented if one attempts to bring a SPAN session up while an sFlow data source is configured.<br><br>Workaround: There is no known workaround for this issue. This defect introduces an error message to the CLI of the switch when one attempts to bring a SPAN session up while sFlow data sources are configured on the switch. |
| CSCvx60778 | Headline: SPAN session administrative status becomes stuck when brought up alongside sFlow data sources<br><br>Symptom: A Nexus 9000 series switch configured with sFlow data sources is not able to administratively bring SPAN sessions online. This is expected behavior and is a documented limitation. If at least one sFlow data source is configured, the SPAN sessions cannot be brought up. However, if one removes all sFlow data sources from the switch's configuration and attempts to administratively bring the SPAN session up, the SPAN session will remain in a down state.<br><br>Workaround: Administratively shutting down the SPAN session (even though it's technically already administratively shut down), then attempt to bring it back up. |
| CSCvx61244 | Headline: `udld disable` on breakout interfaces is removed from running configuration after upgrade<br><br>Symptom: UDLD operational on a 4x10G interface that was previously configured to have udld disabled. |

| Bug ID | Description |
|---|---|
| | Workaround:None |
| CSCvx61532 | Headline: CFS HAP reset and core file during system switchover<br><br>Symptom: A Nexus 9500 switch on 7.0(3)I7(x) version may undergo a HAP reset and generate a core file on performing a system switchover.<br><br>Workaround: None |
| CSCvw67472 | Headline: Nexus9300 unexpect options ( port 1 216 ) are set on show run all<br><br>Symptom: When configuring "hardware rate-limiter access-list-log XXX" the port 1 216 are set on show run all like below.<br><br>---hardware rate-limiter layer-3 glean 100 module 1 port 1 216hardware rate-limiter layer-3 multicast local-groups 3000 module 1 port 1 216hardware rate-limiter access-list-log 100 module 1 port 1 216hardware rate-limiter bfd 10000 module 1 port 1 216hardware rate-limiter fex 12000 module 1 port 1 216hardware rate-limiter span 50 module 1 port 1 216hardware rate-limiter sflow 40000 module 1 port 1 216hardware rate-limiter vxlan-oam 1000 module 1 port 1 216hardware rate-limiter 100M-Ethports 10000 module 1 port 1 216hardware rate-limiter DOT1X 3000 module 1 port 1 216hardware rate-limiter mpls-oam 300 module 1 port 1 216hardware rate-limiter netflow 120000 module 1 port 1 216---But it is not possible to even configure "... port 1 216" on the device.---switch# conf tEnter configuration commands, one per line. End with CNTL/Z.switch(config)# hardware rate-limiter layer-3 glean 100 module 1 port 1 216<br>^% Invalid number, range is (1:48) at '^' marker.switch(config)# ---<br><br>Workaround: Write erase and then reload the device. |
| CSCvx57409 | Headline: BGP remote-as route-map will be delete after default afi<br><br>Symptom: The BGP neighbor remote-as route-map will be deleted after the default afi show running config neighbor 10.1.1.0/24 remote-as route-map CLI is run.<br><br>Workaround: This is not an issue. The route-map is actually in effect. |
| CSCvx60094 | Headline: Random link flaps on N9K-C93108TC-EX with QSFP-4x10G-AOC<br><br>Symptom: Random L1 link flaps on N9K-C93108TC-EX with QSFP-4x10G-AOC<br><br>Workaround:Disable/blacklist/admin-down all not-connected/unused breakout ports to reduce the frequency of link flap. |
| CSCvx61314 | Headline: N9k VXLAN - Non-Zero ESI value can result in blackholing.<br><br>Symptom: Example output:<br><br>N9K-VTEP# show mac address-table vlan 2431 \| i beefC 2431    dead.beef.aaaa  dynamic 0    F    F    nve1(192.168.50.10 192.168.50.11) <- - - MAC is associated with two NVE peers.<br>N9K-VTEP# show l2route evpn mac evi 2431 mac dead.beef.aaaa  detailFlags -(Rmac):Router MAC (Stt):Static (L):Local (R):Remote (V):vPC link(Dup):Duplicate (Spl):Split (Rcv):Recv (AD):Auto-Delete (D):Del Pending(S):Stale (C):Clear, (Ps):Peer Sync (O):Re-Originated (Nho):NH-Override(Pf):Permanently-Frozen, (Orp): OrphanTopology   Mac Address   Prod  Flags   Seq No    Next-Hops---------- -------------- ------ ------------- ---------- ----------------2431    dead.beef.aaaa BGP   Rcv     0    192.168.50.10      Route Resolution Type: ESI      Forwarding State: Resolved (PL)     Resultant PL: 192.168.50.10, 192.168.50.11 <- - - Two Resultant PL entries.     Sent To: L2FM     ESI : 03aa.aaaa.aaaa.aa00.0001 <- - - ESI is present.<br>N9K-VTEP# show hardware mac address-table 1 vlan 2431 address dead.beef.aaaaFE \| VLAN \|    MAC   \| Dynamic \| Port \|Location Index\| \|    \|     \|    \|    \|     \|---+------+--------------+--------+---------+--------------+0   2431   dead.beef.aaaa  dynamic      <- - - Egress port does not exist.Remove one of the remote VTEP and it works:<br>N9K-VTEP# show l2route evpn mac evi 2431 mac dead.beef.aaaa detailFlags -(Rmac):Router MAC (Stt):Static (L):Local (R):Remote (V):vPC link(Dup):Duplicate (Spl):Split (Rcv):Recv (AD):Auto-Delete (D):Del Pending(S):Stale (C):Clear, (Ps):Peer Sync (O):Re-Originated (Nho):NH-Override(Pf):Permanently-Frozen, (Orp): OrphanTopology   Mac Address   Prod  Flags   Seq No    Next-Hops---------- -------------- ------ ------------- ---------- ----------------2431    dead.beef.aaaa BGP   Rcv     0    192.168.50.10      Route Resolution Type: ESI      Forwarding State: Resolved (PL)     Resultant PL: 192.168.50.10 <-- - One Resultant PL entries.     Sent To: L2FM     ESI : 03aa.aaaa.aaaa.aa00.0001   <- - - ESI is present.<br>N9K-VTEP# show hardware mac address-table 1 vlan 2431 address dead.beef.aaaaFE \| VLAN \|    MAC   \| Dynamic \| Port \|Location Index\| \|    \|     \|    \|    \|     \|---+------+--------------+--------+---------+--------------+0   2431   dead.beef.aaaa  dynamic  nve1   <- - - Egress port is now populated.<br><br>Workaround: Do not use ESI. ESI is not currently supported on Cloudscale platforms. For Nexus 9000 switches vPC can be used instead of ESI for dual homing and redundancy. |
| CSCvx50717 | Headline: Nexus 9500 EX/FX SVI unicast counters do not work<br><br>Symptom: Unicast SVI counters remain 0 in `show interface` and `show interface` and the `show vlan id X counters`. |

| Bug ID | Description |
|---|---|
| | Workaround: None |
| CSCwe53655 | Headline: Revert reserved MAC blocking behavior for VRRP macs on SVIs<br><br>Symptoms: User is not able to configure VRRP VMAC on SVI interfaces.<br><br>Workarounds: None. |
| CSCwh50989 | Headline: Custom COPP causing transit traffic to be punted to the CPU on Nexus 9300-GX2<br><br>Symptoms: When custom-COPP policy contains ACL rules which match on Layer 4 destination or source port, transit traffic also hits the COPP and the packets are copied to CPU. This causes duplication of traffic as CPU also routes the copied packets to the destination.<br><br>Workarounds: Custom COPP policy using src/dst match mitigates punt for transit traffic. |

## Resolved Issues

| Bug ID | Description |
|---|---|
| CSCvy19448 | Headline: SSH connection rejected with FIPS enabled using any SSH key [N9K/N3K 9.3(7)]<br><br>Symptoms: SSH connections will be rejected if the FIPS feature is enabled on release 9.3(7). This issue is similar to CSCvu10721, but SSH is also rejected for ECDSA key.<br><br>Workarounds: Downgrade to release 9.3(6) or earlier, or upgrade to release 10.1(1) or later.<br><br>There is a general available SMU to address this issue on release 9.3(7):<br><br>https://software.cisco.com/download/home/286314783/type/286278856/release/9.3(7)<br><br>SMU installion instructions:<br><br>Cisco Nexus 9000 Series NX-OS System Management Configuration Guide, Release 9.3(x) |
| CSCvy24198 | Headline: L2FM process crash after l2fm_mcec_get_mac_handler<br><br>Symptoms: The L2FM process crashes after the vPC comes online.<br><br>Workarounds: Disconnect the vPC peer link and upgrade both peers separately. After they are both upgraded and the vPC is connected back, they should remain stable. |

## Known Issues

| Bug ID | Description |
|---|---|
| CSCvw60588 | 10G QSA link in PCS mode is not working even without Macsec configuration. |
| CSCwi99525 | On Cisco Nexus N2K-C2348TQ HIFs fail to utilize redundant Port-Channel links, to NIF, during link failover events. |

## Device Hardware

The following tables list the Cisco Nexus 9000 Series hardware that Cisco NX-OS Release 9.3(7a) supports. For additional information about the supported hardware, see the Hardware Installation Guide for your Cisco Nexus 9000 Series device.

**Table 1.** Cisco Nexus 9500 Switches

| Bug ID | Description |
|---|---|
| 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 2.** Cisco Nexus 9500 Cloud Scale Line Cards

| Product ID | Description | Maximum Quantity | | |
|---|---|---|---|---|
| | | Cisco Nexus 9504 | Cisco Nexus 9508 | Cisco Nexus 9516 |
| N9K-X97160YC-EX | Cisco Nexus 9500 48-port 10/25-Gigabit Ethernet SFP28 and 4-port 40/100 Gigabit Ethernet QSFP28 line card | 4 | 8 | 16 |
| N9K-X9732C-EX | Cisco Nexus 9500 32-port 40/100 Gigabit Ethernet QSFP28 line card | 4 | 8 | 16 |
| N9K-X9732C-FX | Cisco Nexus 9500 32-port 40/100 Gigabit Ethernet QSFP28 line card | 4 | 8 | 16 |
| N9K-X9736C-EX | Cisco Nexus 9500 36-port 40/100 Gigabit Ethernet QSFP28 line card | 4 | 8 | 16 |
| N9K-X9736C-FX | Cisco Nexus 9500 36-port 40/100 Gigabit Ethernet QSFP28 line card | 4 | 8 | 16 |
| N9K-X9788TC-FX | Cisco Nexus 9500 48-port 1/10-G BASE-T Ethernet and 4-port 40/100 Gigabit Ethernet QSFP28 line card | 4 | 8 | 16 |

**Table 3.** Cisco Nexus 9500 R-Series Line Cards

| Product ID | Description | Maximum Quantity | |
|---|---|---|---|
| | | Cisco Nexus 9504 | Cisco Nexus9508 |
| N9K-X9636C-R | Cisco Nexus 9500 36-port 40/100 Gigabit Ethernet QSFP28 line card | 4 | 8 |
| N9K-X9636C-RX | Cisco Nexus 9500 36-port 40/100 Gigabit Ethernet QSFP28 line card | 4 | 8 |
| N9K-X9636Q-R | Cisco Nexus 9500 36-port 40 Gigabit Ethernet QSFP line card | 4 | 8 |
| N9K-X96136YC-R | Cisco Nexus 9500 16-port 1/10 Gigabit, 32-port 10/25 Gigabit, and 4-port 40/100 Gigabit Ethernet line card | 4 | 8 |

**Table 4.** Cisco Nexus 9500 Classic Line Cards

| Product ID | Description | Maximum Quantity | | |
|---|---|---|---|---|
| | | Cisco Nexus 9504 | Cisco Nexus 9508 | Cisco Nexus 9516 |
| N9K-X9408C-CFP2 | Line card with 8 100 Gigabit CFP2 ports | 4 | 8 | 16 |
| N9K-X9432C-S | Cisco Nexus 9500 32-port 40/100 Gigabit Ethernet QSFP28 line card | 4 | 8 | N/A |
| N9K-X9432PQ | Cisco Nexus 9500 32-port 40 Gigabit Ethernet | 4 | 8 | 16 |

| Product ID | Description | Maximum Quantity | | |
|---|---|---|---|---|
| | | Cisco Nexus 9504 | Cisco Nexus 9508 | Cisco Nexus 9516 |
| | QSFP+ line card | | | |
| N9K-X9636PQ | Cisco Nexus 9500 36-port 40 Gigabit Ethernet QSFP+ line card | 4 | 8 | N/A |
| N9K-X9464PX | Cisco Nexus 9500 48 1/10-Gigabit SFP+ and 4-port 40-Gigabit Ethernet QSFP+ line card | 4 | 8 | 16 |
| N9K-X9464TX | Cisco Nexus 9500 48 port 1/10-Gigabit BASE-T Ethernet and 4-port 40-Gigabit Ethernet QSFP+ line card | 4 | 8 | 16 |
| N9K-X9464TX2 | Cisco Nexus 9500 48 port 1/10-Gigabit BASE-T Ethernet and 4-port 40-Gigabit Ethernet QSFP+ line card | 4 | 8 | 16 |
| N9K-X9536PQ | Cisco Nexus 9500 36-port 40 Gigabit Ethernet QSFP+ line card | 4 | 8 | 16 |
| N9K-X9564PX | Cisco Nexus 9500 48 1/10-Gigabit SFP+ and 4 port 40-Gigabit Ethernet QSFP+ line card | 4 | 8 | 16 |
| N9K-X9564TX | Cisco Nexus 9500 48 port 1/10-Gigabit BASE-T Ethernet and 4 port 40-Gigabit Ethernet QSFP+ line card | 4 | 8 | 16 |

Table 5.     Cisco Nexus 9500 Cloud Scale Fabric Modules

| Product ID | Description | Minimum | Maximum |
|---|---|---|---|
| N9K-C9504-FM-E | Cisco Nexus 9504 100-Gigabit cloud scale fabric module | 4 | 5 |
| N9K-C9508-FM-E | Cisco Nexus 9508 100-Gigabit cloud scale fabric module | 4 | 5 |
| N9K-C9508-FM-E2 | Cisco Nexus 9508 100-Gigabit cloud scale fabric module | 4 | 5 |
| N9K-C9516-FM-E | Cisco Nexus 9516 50-Gigabit cloud scale fabric module | 4 | 5 |
| N9K-C9516-FM-E2 | Cisco Nexus 9516 100-Gigabit cloud scale fabric module | 4 | 5 |

Table 6.     Cisco Nexus 9500 R-Series Fabric Modules

| Product ID | Description | Minimum | Maximum |
|---|---|---|---|
| N9K-C9504-FM-R | Cisco Nexus 9504 100-Gigabit R-Series fabric module | 4 | 6 |
| N9K-C9508-FM-R | Cisco Nexus 9508 100-Gigabit R-Series fabric module | 4 | 6 |

Table 7.     Cisco Nexus 9500 Fabric Modules

| Product ID | Description | Minimum | Maximum |
|---|---|---|---|
| N9K-C9504-FM | Cisco Nexus 9504 40-Gigabit fabric module | 3 | 6 |
| N9K-C9508-FM | Cisco Nexus 9508 40-Gigabit fabric module | 3 | 6 |
| N9K-C9516-FM | Cisco Nexus 9516 40-Gigabit fabric module | 3 | 6 |
| N9K-C9504-FM-S | Cisco Nexus 9504 100-Gigabit fabric module | 4 | 4 |
| N9K-C9508-FM-S | Cisco Nexus 9508 100-Gigabit fabric module | 4 | 4 |

**Table 8.** Cisco Nexus 9500 Fabric Module Blanks with Power Connector

| Product ID | Description | Minimum | Maximum |
|---|---|---|---|
| N9K–C9508–FM–Z | Cisco Nexus 9508 Fabric blank with Fan Tray Power Connector module | N/A | 2 |
| N9K–C9516–FM–Z | Cisco Nexus 9516 Fabric blank with Fan Tray Power Connector module | N/A | 2 |

**Table 9.** Cisco Nexus 9500 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 |

**NOTE**: N9K-SUP-A and N9K-SUP-A+ are not supported on Cisco Nexus 9504 and 9508 switches with –R line cards.

**Table 10.** Cisco Nexus 9500 System Controller

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

**Table 11.** Cisco Nexus 9500 Fans and Fan Trays

| Product ID | Description | Quantity |
|---|---|---|
| N9K–C9504–FAN | Fan tray for 4-slot modular chassis | 3 |
| N9K–C9508–FAN | Fan tray for 8-slot modular chassis | 3 |
| N9K–C9516–FAN | Fan tray for 16-slot modular chassis | 3 |

**Table 12.** Cisco Nexus 9500 Power Supplies

| Product ID | Description | Quantity | Cisco Nexus Switches |
|---|---|---|---|
| N9K-PAC-3000W-B | 3 KW AC power supply | Up to 4<br>Up to 8<br>Up to 10 | Cisco Nexus 9504<br>Cisco Nexus 9508<br>Cisco Nexus 9516 |
| N9K-PDC-3000W-B | 3 KW DC power supply | Up to 4<br>Up to 8<br>Up to 10 | Cisco Nexus 9504<br>Cisco Nexus 9508<br>Cisco Nexus 9516 |
| N9K-PUV-3000W-B | 3 KW Universal AC/DC power supply | Up to 4<br>Up to 8<br>Up to 10 | Cisco Nexus 9504<br>Cisco Nexus 9508<br>Cisco Nexus 9516 |
| N9K-PUV2-3000W-B | 3.15-KW Dual Input Universal AC/DC Power Supply | Up to 4<br>Up to 8<br>Up to 10 | Cisco Nexus 9504<br>Cisco Nexus 9508<br>Cisco Nexus 9516 |

**Table 13.** Cisco Nexus 9200 and 9300 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 | 3 | 9396PX (early versions) |

| Product ID | Description | Quantity | Cisco Nexus Switches |
|---|---|---|---|
| | coloring) | | |
| N9K-C9300-FAN2 | Fan 2 module with port-side intake airflow (burgundy coloring) | 3 | 93128TX<br>9396PX<br>9396TX |
| N9K-C9300-FAN2-B | Fan 2 module with port-side exhaust airflow (blue coloring) | 3 | 93128TX<br>9396PX<br>9396TX |
| N9K-C9300-FAN3 | Fan 3 module with port-side intake airflow (burgundy coloring) | 3 | 92304QC<br>9272Q[a]<br>93120TX |
| N9K-C9300-FAN3-B | Fan 3 module with port-side exhaust airflow (blue coloring) | 3 | 92304QC<br>9272Q[a]<br>93120TX |
| NXA-FAN-160CFM-PE | Fan module with port-side exhaust airflow (blue coloring) | 3 | 9364C[a]<br>93360YC-FX2 |
| NXA-FAN-160CFM-PI | Fan module with port-side intake airflow (burgundy coloring) | 3 | 9364C[a]<br>93360YC-FX2 |
| NXA-FAN-160CFM2-PE | Fan module with port-side exhaust airflow (blue coloring) | 4 | 9364C-GX |
| NXA-FAN-160CFM2-PI | Fan module with port-side intake airflow (burgundy coloring) | 4 | 9364C-GX |
| NXA-FAN-30CFM-B | Fan module with port-side intake airflow (burgundy coloring) | 3 | 92160YC-X<br>9236C[a]<br>93108TC-EX<br>93108TC-FX[a]<br>93180LC-EX[a]<br>93180YC-EX<br>93180YC-FX[a]<br>9332PQ<br>9372PX<br>9372PX-E<br>9372TX<br>9372TX-E<br>9348GC-FXP[a] |
| NXA-FAN-30CFM-F | Fan module with port-side exhaust airflow (blue coloring) | 3 | 92160YC-X<br>9236C[a]<br>93108TC-EX<br>93108TC-FX[a]<br>93180LC-EX[a]<br>93180YC-EX<br>93180YC-FX[a]<br>9332PQ<br>9372PX<br>9372PX-E<br>9372TX<br>9372TX-E<br>9348GC-FXP |
| NXA-FAN-35CFM-PE | Fan module with port-side exhaust airflow (blue coloring) | 4 | 92300YC[a]<br>9332C[a]<br>93108TC-FX3P<br>93180YC-FX3S[b] |
| | | 6 | 9316D-GX<br>93600CD-GX |
| NXA-FAN-35CFM-PI | Fan module with port-side intake airflow (burgundy coloring) | 4 | 92300YC[a]<br>9332C[a]<br>93108TC-FX3P<br>93180YC-FX3S[b] |
| | | 6 | 9316D-GX<br>93600CD-GX |
| NXA-FAN-65CFM-PE | Fan module with port-side exhaust airflow (blue | 3 | 93240YC-FX2[a] |

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

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

[b] This switch runs with +1 redundancy mode so that if one fan fails, the switch can sustain operation. But if a second fan fails, this switch is not designed to sustain operation. Hence before waiting for the major threshold temperature to be hit, the switch will power down due to entering the **fan policy trigger** command.

**Table 14.**   Cisco Nexus 9200 and 9300 Power Supplies

| Product ID | Description | Quantity | Cisco Nexus Switches |
|---|---|---|---|
| NXA-PAC-500W-PE | 500-W AC power supply with port-side exhaust airflow (blue coloring) | 2 | 93108TC-EX 93180LC-EX 93180YC-EX 93180YC-FX |
| NXA-PAC-500W-PI | 500-W AC power supply with port-side intake airflow (burgundy coloring) | 2 | 93108TC-EX 93180LC-EX 93180YC-EX 93180YC-FX |
| 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 |
| NXA-PAC-650W-PE | 650-W power supply with port-side exhaust (blue coloring) | 2 | 92160YC-X 9236C 92300YC 93180YC-FX3S 92304QC 93108TC-EX 93180YC-EX |
| NXA-PAC-650W-PI | 650-W power supply with port-side intake (burgundy coloring) | 2 | 92160YC-X 9236C 92300YC 93180YC-FX3S 92304QC 93108TC-EX 93180YC-EX |
| NXA-PAC-750W-PE | 750-W AC power supply with port-side exhaust airflow (blue coloring) [1] | 2 | 9336C-FX2 93240YC-FX2 9332C 9336C-FX2 |
| NXA-PAC-750W-PI | 750-W AC power supply with port-side exhaust airflow (burgundy coloring) [1] | 2 | 9336C-FX2 93240YC-FX2 9332C 9336C-FX2 |
| NXA-PAC-1100W-PE2 | 1100-W AC power supply with port-side exhaust airflow (blue coloring) | 2 | 93240YC-FX2 9332C 9316D-GX 9336C-FX2 93600CD-GX |

| Product ID | Description | Quantity | Cisco Nexus Switches |
|---|---|---|---|
| NXA-PAC-1100W-PI2 | 1100-W AC power supply with port-side intake airflow (burgundy coloring) | 2 | 93240YC-FX2<br>9332C<br>9316D-GX<br>9336C-FX2<br>93600CD-GX |
| NXA-PAC-1100W-PI | Cisco Nexus 9000 PoE 1100W AC PS, port-side intake | 2 | 93108TC-FX3P |
| NXA-PAC-1100W-PE | Cisco Nexus 9000 PoE 1100W AC PS, port-side exhaust | 2 | 93108TC-FX3P |
| NXA-PAC-1900W-PI | Cisco Nexus 9000 PoE 1900W AC PS, port-side intake | 2 | 93108TC-FX3P |
| 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 |
| NXA-PAC-1200W-PE | 1200-W AC power supply with port-side exhaust airflow (blue coloring) | 2 | 9272Q<br>93360YC-FX2<br>9364C |
| NXA-PAC-1200W-PI | 1200-W AC power supply with port-side intake airflow (burgundy coloring) | 2 | 9272Q<br>93360YC-FX2<br>9364C |
| N9K-PUV-1200W | 1200-W Universal AC/DC power supply with bidirectional airflow (white coloring) | 2 | 92160YC-X<br>9236C<br>92300YC<br>92304QC<br>9272Q[1]<br>93108TC-EX<br>93108TC-FX<br>93360YC-FX2<br>93180YC-FX3S<br>93120TX<br>93128TX<br>93180LC-EX<br>93180YC-EX<br>93180YC-FX<br>9364C |
| NXA-PDC-930W-PE | 930-W DC power supply with port-side exhaust airflow (blue coloring) | 2 | 9272Q<br>93108TC-EX<br>93180YC-EX<br>93360YC-FX2<br>93180YC-FX3S<br>93120TX<br>93180YC-FX<br>9364C<br>92160YC-X |
| NXA-PDC-930W-PI | 930-W DC power supply with port-side intake airflow (burgundy coloring) | 2 | 9272Q<br>93108TC-EX<br>93180YC-EX<br>93360YC-FX2<br>93180YC-FX3S<br>93120TX<br>93180YC-FX<br>9364C<br>92160YC-X |
| NXA-PDC-1100W-PE | 1100-W DC power supply with port-side exhaust airflow (blue coloring) | 2 | 93240YC-FX2<br>93600CD-GX<br>9316D-GX<br>9332C<br>9336C-FX2 |
| NXA-PDC-1100W-PI | 1100-W DC power supply with port-side intake airflow (burgundy coloring) | 2 | 93240YC-FX2<br>93600CD-GX<br>9316D-GX<br>9332C<br>9336C-FX2 |
| UCSC-PSU-930WDC | 930-W DC power supply with port-side intake (green coloring) | 2 | 92160YC-X<br>9236C<br>92304QC |

| Product ID | Description | Quantity | Cisco Nexus Switches |
|---|---|---|---|
| | | | 9272Q<br>93108TC-EX<br>93120TX<br>93128TX<br>93180YC-EX<br>9332PQ<br>9372PX<br>9372PX-E<br>9372TX<br>9372TX-E<br>9396PX<br>9396TX |
| UCS-PSU-6332-DC | 930-W DC power supply with port-side exhaust (gray coloring) | 2 | 92160YC-X<br>9236C<br>92304QC<br>9272Q<br>93108TC-EX<br>93120TX<br>93128TX<br>93180YC-EX<br>9332PQ<br>9372PX<br>9372PX-E<br>9372TX<br>9372TX-E<br>9396PX<br>9396TX |
| NXA-PHV-1100W-PE | 1100-W AC power supply with port-side exhaust airflow (blue coloring) | 2 | 93240YC-FX2<br>9336C-FX2 |
| NXA-PHV-1100W-PI | 1100-W AC power supply with port-side intake airflow (burgundy coloring) | 2 | 93240YC-FX2<br>9336C-FX2 |
| NXA-PAC-2KW-PE | 2000-W AC power supply with port-side exhaust airflow (blue coloring) | 2 | 9364C-GX |
| NXA-PAC-2KW-PI | 2000-W AC power supply with port-side intake airflow (burgundy coloring) | 2 | 9364C-GX |
| NXA-PDC-2KW-PE | 2000-W DC power supply with port-side exhaust airflow (blue coloring | 2 | 9364C-GX |
| NXA-PDC-2KW-PI | 2000-W DC power supply with port-side intake airflow (burgundy coloring) | 2 | 9364C-GX |
| N2200-PAC-400W | 400-W AC power supply with port-side exhaust airflow (blue coloring) | 2 | 92348GC-X |
| N2200-PAC-400W-B | 400-W AC power supply with port-side intake airflow (burgundy coloring) | 2 | 92348GC-X |
| N2200-PDC-350W-B | 350-W DC power supply with port-side intake airflow | 2 | 92348GC-X |
| N2200-PDC-400W | 400-W DC power supply with port-side exhaust airflow (blue coloring) | 2 | 92348GC-X |

**Table 15.** Cisco Nexus 9200 and 9300 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 these ports support 4x10 breakout cables) and 8 100-Gigabit QSFP28 ports. |
| N9K-C92348GC-X | The Cisco Nexus 92348GC-X switch (N9K-C92348GC-X) is a 1RU switch that supports 696 Gbps of bandwidth and over 250 mpps. The 1GBASE-T downlink ports on the 92348GC-X can be configured to work as 100-Mbps, 1-Gbps ports. The 4 ports of SFP28 can be configured as 1/10/25-Gbps and the 2 ports of QSFP28 can be configured as 40- and 100-Gbps ports. The Cisco Nexus 92348GC-X is ideal for big data customers that require a Gigabit Ethernet ToR switch with local switching. |

| Cisco Nexus Switch | Description |
|---|---|
| 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-C93108TC-EX | 1-RU Top-of-Rack switch with 48 10GBASE-T (copper) ports and 6 40-/100-Gigabit QSFP28 ports |
| N9K-C93108TC-EX-24 | 1-RU 24 1/10GBASE-T (copper) front panel ports and 6 40/100-Gigabit QSFP28 spine facing 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-C93108TC-FX-24 | 1-RU 24 1/10GBASE-T (copper) front panel ports and 6 fixed 40/100-Gigabit Ethernet QSFP28 spine-facing ports. |
| N9K-C93108TC-FX3P | 1-RU fixed-port switch with 48 100M/1/2.5/5/10GBASE-T 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-C9316D-GX | 1-RU switch with 16x400/100/40-Gbps 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-EX-24 | 1-RU 24 1/10/25-Gigabit front panel ports and 6-port 40/100 Gigabit QSFP28 spine-facing 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-C93180YC-FX-24 | 1-RU 24 1/10/25-Gigabit Ethernet SFP28 front panel ports and 6 fixed 40/100-Gigabit Ethernet QSFP28 spine-facing ports. The SFP28 ports support 1-, 10-, and 25-Gigabit Ethernet connections and 8-, 16-, and 32-Gigabit Fibre Channel connections. |
| N9K-C93180YC-FX3 | 48 1/10/25 Gigabit Ethernet SFP28 ports (ports 1-48)<br>6 10/25/40/50/100-Gigabit QSFP28 ports (ports 49-54) |
| N9K-C93180YC-FX3S | 48 1/10/25 Gigabit Ethernet SFP28 ports (ports 1-48)<br>6 10/25/40/50/100-Gigabit QSFP28 ports (ports 49-54) |
| N9K-C93216TC-FX2 | 2-RU switch with 96 100M/1G/10G RJ45 ports, 12 40/100-Gigabit QSFP28 ports, 2 management ports (one RJ-45 and one SFP port), 1 console, port, and 1 USB port. |
| 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-C9332C | 1-RU fixed switch with 32 40/100-Gigabit QSFP28 ports and 2 fixed 1/10-Gigabit SFP+ 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-C93360YC-FX2 | 2-RU switch with 96 10-/25-Gigabit SFP28 ports and 12 40/100-Gigabit QSFP28 ports |
| N9K-C9336C-FX2 | 1-RU switch with 36 40-/100-Gb Ethernet QSFP28 ports. |
| N9K-C9348GC-FXP | Nexus 9300 with 48p 100M/1 G, 4p 10/25 G SFP+ and 2p 100 G QSFP |
| N9K-C93600CD-GX | 1-RU fixed-port switch with 28 10/40/100-Gigabit QSFP28 ports (ports 1-28), 8 10/40/100/400-Gigabit QSFP-DD ports (ports 29-36) |
| N9K-C9364C | 2-RU Top-of-Rack switch with 64 40-/100-Gigabit QSFP28 ports and 2 1-/10-Gigabit SFP+ ports.<br>- Ports 1 to 64 support 40/100-Gigabit speeds.<br>- Ports 49 to 64 support MACsec encryption.<br>Ports 65 and 66 support 1/10 Gigabit speeds. |
| N9K-C9364C-GX | 2-RU fixed-port switch with 64 100-Gigabit SFP28 ports. |
| 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 |

**Table 16.**  Cisco Nexus 9000 Series Uplink Modules

| Cisco Nexus Switch | Description |
|---|---|
| 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. |

## Optics

To determine which transceivers and cables are supported by a switch, see the Transceiver Module (TMG) Compatibility Matrix. To see the transceiver specifications and installation information, see the Install and Upgrade Guides.

## Cisco Network Insights for Data Center

Cisco NX-OS Release 9.3(7a) supports the Cisco Network Insights Advisor (NIA) and Cisco Network Insights for Resources (NIR) on Cisco Nexus 9200, 9300-EX, and 9300-FX platform switches and 9500 platform switches with -EX/FX line cards. For more information, see the Cisco Network Insights documentation.

## 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 9.3(x)*. For information about an In Service Software Upgrade (ISSU), see the Cisco NX-OS ISSU Support Matrix.

## Exceptions

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

The following features are not supported for the Cisco Nexus 9200, 9300-EX, and 9300-FX platform switches:

- 64-bit ALPM routing mode

- Cisco Nexus 9272PQ and Cisco Nexus 92160YC platforms do not support the PXE boot of the Cisco NX-OS image from the loader.

- ACL filters to span subinterface traffic on the parent interface

- Egress port ACLs

- Egress QoS policer (not supported for Cisco Nexus 9200 platform switches). The only policer action supported is drop. Remark action is not supported on the egress policer.

- FEX (not supported for Cisco Nexus 9200 platform switches)

- GRE v4 payload over v6 tunnels

- IP length-based matches

- IP-in-IP (not supported on the Cisco Nexus 92160 switch)

- Maximum Transmission Unit (MTU) checks for packets received with an MPLS header

- NetFlow (not supported on Cisco Nexus 9200 platform switches)

- Packet-based statistics for Traffic Storm Control (only byte-based statistics are supported)

- PVLANs (not supported on Cisco Nexus 9200 platform switches)

- PXE boot of the Cisco NX-OS image from the loader (not supported for Cisco Nexus 9272PQ and 92160YC switches)

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

- Q-in-Q for VXLAN (not supported on Cisco Nexus 9200 and 9300-EX platform switches)

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

- Resilient hashing for port channels

- 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 (not supported for 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 9300-FX3 Platform Switches**

The following features are not supported for the Cisco Nexus 9300-FX3 Platform switches:

- ACL with DSCP Wildcard Mask

- ARP Suppression with Reflective Relay

- Dynamic ACL - Named ACL support for applying blacklist/limited VLAN access for devices

- ECMP Hashing based on GRE Inner IP Header

- Enhanced ISSU

- Enhanced Policy-Based Routing (ePBR)

- ePBR Multi-Hop

- ePBR with Probes

- ePBR with User-Defined Probes

- IPv6 MIB support (IP-MIB)

- Multicast Service Reflection (Ingress, PIM-border, Egress)

- Multiple LLDP neighbors per physical interface

- Secure VXLAN EVPN Multi-Site using CloudSec

- Selective Q-in-VNI + Advertise PIP on a VTEP

- Selective Q-in-VNI + VXLAN VLAN on the same port

- Standard ISSU

- Symmetric Hashing - ECMP (Inner DA)

- Unidirectional Ethernet (UDE)

- VXLAN EVPN with downstream VNI

- VXLAN over parent interface that also carries sub-interfaces


**Cisco Nexus 9300-GX Platform Switches**

The following features are not supported for the Cisco Nexus 9300-GX platform switches:

- Asymmetric PFC

- Autonegotiation on all ports

- FC-FEC for Cisco Nexus 9316D-GX and 93600CD-GX switches is not supported on the second lane of the 50x2 breakout port.

- FEX

- Multicast over GRE


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

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

- 802.3x

- Breakout ports

- FEX (supported on some Cisco Nexus 9300 platform switches)

- Flows other than 40G

- Multichassis EtherChannel Trunk (MCT)

- NetFlow

- Port-channel (No LACP)

- PFC/LLFC

- Precision Time Protocol (PTP)

- PVLAN (supported on Cisco Nexus 9300 platform switches)

- Shaping support on 100g port is limited

- SPAN destination/ERSPAN destination IP

- Traffic Storm Control

- vPC

- VXLAN access port

**FEX Modules**

The following features are not supported for FEX modules:

- Active-Active FEX and straight-through FEX are not supported on the Cisco Nexus 92348GC switch.

- For Cisco Nexus 9500 platform switches, 4x10-Gb breakout for FEX connectivity is not supported.

**Cisco Nexus N9K-X96136YC-R Line Card**

The following features are not supported for Cisco Nexus 9500 platform switches with the N9K-X96136YC-R line card:

- Breakout

- PTP and gPTP

**Cisco Nexus N9K-X9736C-FX Line Card**

The following feature is not supported for Cisco Nexus 9500 platform switches with the N9K-X9736C-FX line card:

- Ports 29-36 do not support 1 Gbps speed.

**Cisco Nexus 9500 Cloud Scale (EX/FX) Line Cards**

The following features are not supported for Cisco Nexus 9500 platform switches with -EX/FX line cards:

- FEX

- IPv6 support for policy-based routing

- LPM dual-host mode

- SPAN port-channel destinations

## Related Content

Cisco Nexus 9000 Series documentation: Cisco Nexus 9000 Series Switches

Cisco Nexus 9000 and 3000 Series NX-OS Switch License Navigator: Cisco Nexus 9000 and 3000 Series NX-OS Switch License Navigator

Cisco Nexus 9000 Series Software Upgrade and Downgrade Guide: [Cisco Nexus 9000 Series NX-OS Software Upgrade and Downgrade Guide, Release 9.3(x)](#)

Cisco Nexus 9000 Series FPGA/EPLD Upgrade Release Notes: [Cisco Nexus 9000 Series FPGA/EPLD Upgrade Release Notes, Release 9.3(7)](#).

Cisco Nexus 3000 and 9000 Series NX-API REST SDK User Guide and API Reference: [Cisco Nexus NX-API Reference](#)

Cisco NX-OS Supported MIBs: [ftp://ftp.cisco.com/pub/mibs/supportlists/nexus9000/Nexus9000MIBSupportList.html](ftp://ftp.cisco.com/pub/mibs/supportlists/nexus9000/Nexus9000MIBSupportList.html)

Supported FEX modules: [Cisco Nexus 9000 Series Switch FEX Support Matrix](#)

Licensing Information: [Cisco NX-OS Licensing Guide](#)

## Documentation Feedback

To provide technical feedback on this document, or to report an error or omission, please send your comments to [nexus9k-docfeedback@cisco.com](mailto:nexus9k-docfeedback@cisco.com). We appreciate your feedback.

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