



Cisco Nexus 9000 Series NX-OS Release Notes, Release 9.3(4)

This document describes the features, issues, and exceptions of Cisco NX-OS Release 9.3(4) software for use on Cisco Nexus 9000 Series switches.

For more information, see [Related Content](#).

Date	Description
June 30, 2020	Added CSCvu20429 to Open Issues .
May 14, 2020	Added CSCvs50843 to Resolved Issues .
May 2, 2020	Added CSCvt68363 to Resolved Issues .
April 29, 2020	Cisco NX-OS Release 9.3(4) became available.

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New Software Features

Feature	Description
IGMP Host Proxy	<p>The IGMP host proxy support is provided for underlay multicast on Cisco Nexus 9232C, 9332C and 9364C switches with port-channel (L3) uplink.</p> <p>For more information, see the Cisco Nexus 9000 Series NX-OS Multicast Routing Configuration Guide, Release 9.3(x).</p>

New Hardware Features

Feature	Description
N2200-PDC-350W-B	<p>The Cisco Nexus 92348GC-X NX-OS Mode Switch (N9K-C92348GC-X) now supports the 350-W DC power supply with port-side intake airflow (N2200-PDC-350W-B).</p> <p>For more information, see the Cisco Nexus 92348GC-X NX-OS Mode Switch Hardware Installation Guide.</p>
N2200-PDC-400W	<p>The Cisco Nexus 92348GC-X NX-OS Mode Switch (N9K-C92348GC-X) now supports the 400-W DC power supply with port-side exhaust airflow (N2200-PDC-400W).</p> <p>For more information, see the Cisco Nexus 92348GC-X NX-OS Mode Switch Hardware Installation Guide.</p>

Release Versioning Strategy

Cisco Nexus 9000 Series switches and the Cisco Nexus 3000 Series switches, use same NX-OS binary image also called the **"unified" image**. The binary image covers the Cisco Nexus 9300 and 9500 and Cisco Nexus 3100, 3200, 3400-S, 3500, and 3600 platform switches. Cisco NX-OS Release 9.2(1) was the first release that adopted unified version numbering. With unified version numbering, the platform designator is obsolete.

Moving forward for the previously identified platforms, we will be adopting the simplified 3-letter versioning scheme. For example, a release with X.Y(Z) would mean:

X - Unified release major

Y - Major / Minor release

Z - Maintenance release (MR)

Where the Z = 1 is always the first FCS release of a Major/Minor release.

An example of a previous release number is: 7.0(3)I7(4). In this format, **the 'I'** is the platform designator.

Note: In order to accommodate upgrade compatibility from an older software version that is expecting a platform designator, when the install all command is entered or the show install all impact command is entered, the version string appears as 9.3(4)I9(1). The **"I9(1)" portion of the string** can be safely ignored. It will later appear as 9.3(4).

Note: The Cisco Nexus 34180YC and 3464C platform switches are not supported in Cisco NX-OS Release 9.3(4).

Open Issues

Bug ID	Description
CSCvj63603	<p>Headline: OC ACL: delete ipv4 ace with hop-limit configs fails</p> <p>Symptoms: When we have an ACE with hop-limit configs that were configured through the CLI and you try to delete it through NETCONF, it returns 'List delete failed' error, instead of deleting that entry from the configs.</p> <p>Workarounds: Create ACE through netconf (or) Delete ACE through CLI</p>
CSCvm11554	<p>Headline: PTP High correction on slave when master have SVI which have IGMP Connected Group Membership</p> <p>Symptoms: When SVI on a PTP master switch receives an IGMP membership report and creates IGMP entries, PTP High correction issues occur.</p> <p>%PTP-2-PTP_HIGH_CORR: Slave port Eth1/X High correction -125750482(nsec)</p> <p>This issue is applicable only to Cisco Nexus 9500-R platforms.</p> <p>Workarounds: A or B</p> <p>A. - Remove PIM config from PTP VLAN SVI</p> <p>B. - Use other VLAN to PTP instead of VLAN used for multicast</p>
CSCvn07656	<p>Headline: ACL Stats - Packet hitting an ACE entry with log option will be counted twice</p> <p>Symptoms: With ACL logging enabled on the ingress ACL, each packet hit is counted twice in TCAM stats. Once for the original packet and once for the SUP copy.</p> <p>Workarounds: None</p>
CSCvp02447	<p>Headline: Snmpbulkwalk/getnext periodic slowness seen in PFC-EXT-mibs.</p> <p>Symptoms: None</p> <p>Workarounds: None</p>
CSCvp20546	<p>Headline: Multiste EVPN Scale-after multiple flaps of NVE mac address is out of sync between BGP and L2RIB</p> <p>Symptoms: MAC table is pointing to incorrect NH after multiple NVE flaps</p> <p>Workarounds: Clear ip arp force-delete or clear ipv6 nd force-delete (if v6 host) and clear MAC address table</p>

Open Issues

Bug ID	Description
CSCvp75031	<p>Headline: Nexus 9300 - Block CLI to configure sub-interface with 40G uplink ports</p> <p>Symptoms: Sub-interfaces are not supported for 40G uplinks ports with 1st generation Cisco Nexus 9300 platform switches.</p> <p>BUM (broadcast, multicast, unknown unicast) traffic might not egress local ports after VXLAN decapsulation of such traffic.</p> <p>Not all traffic is impacted depending on internal load-balancing of traffic between internal ASICs.</p> <p>Workarounds: Do not use sub-interfaces for 40G uplinks ports. You can have sub-interfaces on 10G downstream ports.</p>
CSCvq15147	<p>Headline: Interface BW not accounting unicast BW after SSO switchover</p> <p>Symptoms: After a switchover, the unicast fabric bandwidth does not get reserved on fabric links.</p> <p>Workarounds: Flapping the fabric interface should fix it.</p>
CSCvq33024	<p>Headline: TRM Multisite: traffic drop on BGW after restarting ngmvpn</p> <p>Symptoms: TRM traffic loss for 1-2 seconds.</p> <p>Workarounds: None</p>
CSCvq44103	<p>Headline: 25g AOC/LR/SR Cable type is shown as unknown</p> <p>Symptoms: Cable type is shown as "unknown" for 25G SFP- LR, SR, and AOC cables. However, for copper 25G cables 'cable type' is displayed as CA-L, CA-N and CA-S accordingly.</p> <p>Workarounds: There is no workaround for this problem.</p>
CSCvr75903	<p>Headline: Sequence timeout seen at reload with VXLAN PBR -- SVI flap optimizations needed.</p> <p>Symptoms: The system might experience a sequence timeout that might cause the L2alredirect loopback test to fail, rpm verification to fail, or a DHCP snoop hardware programming failure. When hit on the vPC secondary, this situation might result in vPC VLANs getting suspended on primary.</p> <p>Workarounds: Once the issue is hit, you can shut/no-shut the MCT link in vPC primary or operational primary to bring up the suspended VLANS.</p> <p>Also, to avoid getting into this situation, you may use GIR (graceful insertion and removal) to isolate the 9500, upgrade the chassis, and after all modules are up, insert the switch in to the network.</p>
CSCvr76803	<p>Headline: Netstack core seen in non-destructive ISSU using FQDN for NTP</p> <p>Symptoms: FQDN for NTP server and ND ISSU on T2 ToR</p> <p>Workarounds: Do not use FQDN for NTP Servers. Use IP Address.</p>
CSCvs15713	<p>Headline: FC 48 ports entitlement tag is consumed even with 16 or less ports are configured</p> <p>Symptoms: FC 48 ports entitlement tag is consumed irrespective of the number of FC ports acquired.</p> <p>Workarounds: None. This will not impact the functionality of ports.</p>

Open Issues

Bug ID	Description
CSCvs28295	<p>Headline: MPLS entries present after no feature-set mpls command</p> <p>Symptoms: After entering the "no feature-set mpls" command, the output of the "show for adjacency mpls stats" command is not empty.</p> <p>Workarounds: Reload the box.</p>
CSCvs41360	<p>Headline: N9K-C93600CD-GX: Extra Flaps seen after Multiple reloads/flaps on different Optics on Gearbox Ports</p> <p>Symptoms: One Extra Flap seen after Multiple reloads/flaps on different Optics on ports 1-24 of N9K-C93600CD-GX. Similar extra flap seen after Multiple reloads/flaps on QSFP-100G-PSM4 and QSFP-100G-FR of N9K-9364C-GX.</p> <p>Workarounds: None</p>
CSCvs49263	<p>Headline: Traffic outage when switching 4x25G --> 2x50G --> 4x25G soft-breakout, control plane is fine</p> <p>Symptoms: PIXMC-SDB would be wrong</p> <p>Breakout third port LTL will be assigned 2nd port ifidx</p> <p>Workarounds: Reload module.</p>
CSCvs50407	<p>Headline: Multicast traffic drop due to NF flag set.</p> <p>Symptoms: On T2-EoR that is part of a vPC pair, ND-ISSU (modular) is done from 7.0.(3)I4(0) to 9.3(3) and there is a loss of multicast traffic towards receivers on L3 interfaces. That is, non vPC-SVI OIF.</p> <p>Workarounds: Use an intermediate ISSU from 7.0(3)I4(0) to 9.3(2) on both vPC peers, and then an ISSU from 9.3(2) to 9.3(3).</p>
CSCvt06466	<p>Headline: N9K-C9364C-GX: 100G CRC (1/50,53, AOC 1M/5M) after 61st/16th reload</p> <p>Symptoms: During reload loop we observed that one of the lanes on a couple of ports on a particular board (port 53) that one of the lanes of the port shows low SNR compared to other lanes of that same port.</p> <p>Due to this low SNR, CRC is seen on that lane.</p> <p>Issue is seen only with one board and only when AOC cable is connected.</p> <p>Workarounds: Flap the port to recover.</p>
CSCvt18150	<p>Headline: BootupPortLoopback is not running consistently for 4x10G Breakout on Native 400G Ports</p> <p>Symptoms: The Gold bootup port loopback test remains untested if the port is in 4x10 breakout mode.</p> <p>Workarounds: To get the bootup test working on a port, un-breakout the port and reload the card.</p>

Open Issues

Bug ID	Description
CSCvt28463	<p>Headline: N9K-93XX-GX: Delayed link up between Gearbox Ports to bear valley on Peer for 40G AOC ports</p> <p>Symptoms: 40G AOC connection from N9K-C9364C-GX to N9K-C9364C (port 49 to 64) or N9K-C9336C-FX2 (port 1 to 6, 33 to 36) might see a longer link up time.</p> <p>Workarounds: Use port 1 to 48 on N9K-C9364C or port 7 to 32 on N9K-C9336C-FX2, or use other 40G optics than AOC.</p>
CSCvt43179	<p>Headline: IPv6 BGP neighborship fails to come up (Idle state) on N9K-C93180YC-FX</p> <p>Symptoms: Below syslogs are seen on the device:</p> <pre>%BGP-3-SOCKBIND: bgp- [1592] Cannot bind local socket for peer 2000:x:x:x Cannot assign requested address</pre> <p>Workarounds: Shut/Unshut L3 IPv6 interface</p>
CSCvt49337	<p>Headline: N9K-C9364C-GX: 100G (1/50 AOC1M, 1/56 PSM4) steady state flap after 61st/multiple reload</p> <p>Symptoms: When tested with a reload loop, on one of the reloads the link flaps in steady state.</p> <p>Workarounds: Flap the port to recover.</p>
CSCvt56182	<p>Headline: Cisco NX-OS 9.3(3) to 9.3(4): ND ISSU on LXC TOR causing transient traffic drop</p> <p>Symptoms: Cisco NX-OS 9.3(3) to 9.3(4): ND ISSU on LXC TOR causing transient traffic drop when we have the BFD enabled as the BFD is going down and coming up during the ND ISSU</p> <p>Workaround: Remove the BFD and re-add.</p>
CSCvt78096	<p>Headline: BGW reload can cause 200+ sec packet loss</p> <p>Symptoms: Reloading BGW can cause 200+sec packet loss</p> <p>Workarounds: None</p>
CSCvt78821	<p>Headline: Global Nexus 9k 7.0(3)I7(5a) L2 Multicast traffic delivery issues</p> <p>Symptoms: After NXOS upgrade in a C9508 from 7.0(3)I5(2) code to 7.0(3)I7(5a) code, Layer 2 Multicast traffic is not being forwarded to Layer 2 access ports belonging to igmp snooping groups in a specific VLAN, this occurs when there is an SVI configured in shutdown state in that specific VLAN with ip pim sparse-mode in the switch.</p> <p>Workarounds: Delete ip pim sparse-mode in SVI.</p>

Resolved Issues

Bug ID	Description
CSCvu20429	<p>Headline: Storm control commands broadcast/multicast added to interface configs after non disruptive ISSU</p> <p>Symptoms: After multiple non disruptive ISSUs, the following commands were added to the interface configuration causing complete connectivity issues.</p> <p>For instance, non-disruptive ISSU was performed as below versions and all L2/L3 interfaces were added with below commands.</p> <p>17.0(3)I4(1) > 7.0(3)I7(7)> 7.0(3)I7(8)</p> <pre>interface Ethernet1/17 link transmit reset-skip no link dfe adaptive-tuning storm-control broadcast level pps 0 <- added after the upgrade storm-control multicast level pps 0 <- added storm-control unicast level pps 0 <- added switchport virtual-ethernet-bridge <- added</pre> <p>Workarounds: Reconfigure the same commands on effected ports and then remove it as indicated below.</p> <pre>configure terminal interface e1/17 storm-control broadcast level pps 0 storm-control multicast level pps 0 storm-control unicast level pps 0 switchport virtual-ethernet-bridge</pre> <pre>config t int eth 1/17 no storm-control broadcast level pps 0 no storm-control multicast level pps 0 no storm-control unicast level pps 0 no switchport virtual-ethernet-bridge</pre> <p>Or</p> <p>Write erase and reapply the original configurations.</p>

Resolved Issues

Bug ID	Description
CSCva76080	<p>Headline: mmode crash when modifying maintenance profile</p> <p>Symptoms: Cisco Nexus switch configured with a custom maintenance profile (GIR / mmode) might crash when deleting the maintenance profile in the CLI.</p> <p>Workarounds: none</p>

Resolved Issues

Bug ID	Description
CSCve04754	<p>Headline: 9200/9300/9700-EX: Need fix to avoid mcast flood on NDR & allow FEX to receive mcast traffic on NDR</p> <p>Symptoms: Multicast traffic is flooded on non DR, in a VLAN with or without receivers, on 9200/9300-EX as well as 97xx line cards, even though IGMP snooping is enabled. FEX HIF receivers present in the NDR VLAN are not able to receive multicast traffic.</p> <p>Workarounds: 1. NonDR multicast flooding on Cloud Scale based switches issue has been resolved in 7.0(3)I7A. Switch reload is needed while upgrading to 7.0(3)I7 for fix to be applied.</p> <p>2. Configure the two switches (DR and nonDR for that VLAN) as vPC peers.</p>
CSCvh12873	<p>Headline: OIF is stuck in the mroute table after removing IGMP join-group</p> <p>Symptoms: After configuring and removing the 'ip igmp static-join [group] [source]' command on an interface, the IGMP-created outgoing interface entry remains stuck for the mroute entry. This results in traffic for the group being punted to the supervisor module.</p> <p>Workaround: Clear the affected IGMP route with the 'clear ip igmp route [group] [vrf {name}]' command.</p>
CSCvh14397	<p>Headline: Cisco Nexus 9000 PIM triggered register not enabled by default</p> <p>Symptoms: PIM triggered-register is tied to 'ip pim register-until-stop' command which is not enabled by default. This bug is filed to de-couple that from the CLI and make it enabled by default.</p> <p>Workarounds: Configure the 'ip pim register-until-stop' command in case performance implication is not an issue.</p>
CSCvh64876	<p>Headline: "sh ip mroute summary" displays bogus values for pps and bit-rate</p> <p>Symptoms: " sh ip mroute sum" shows bogus counter values for PPS and bit-rate</p> <pre> 9300-2(config-if)# show ip mroute summary IP Multicast Routing Table for VRF " default" Route Statistics unavailable - only liveness detected Total number of routes: 198392 Total number of (*,G) routes: 101387 Total number of (S,G) routes: 97004 Total number of (*,G-prefix) routes: 1 Group count: 101625, rough average sources per group: 0.9 Group: 225.1.1.4/32, Source count: 1 Source packets bytes aps pps bit-rate oifs (*,G) 0 0 0 1145324612 307445734.562 gbps 1 <----- 50.1.1.2 563 28713 51 1145324612 307445734.562 gbps 1 <----- </pre> <p>Workarounds: na</p>

Resolved Issues

Bug ID	Description
CSCvi07047	<p>Headline: Traffic duplication might be seen with ECMP to external source/RP</p> <p>Symptoms: Duplicate traffic received at the receiver.</p> <p>Workarounds: Tweak the Underlay IGP metric to make one of the border leafs as preferable from the TOR leaf switches.</p>
CSCvi23870	<p>Headline: N9000 does not set VLAN routable flag when IGMP snooping is enabled on VLAN SVI</p> <p>Symptoms: Multicast traffic will not be forwarded even though we have proper mroute information</p> <p>Workaround: Flap the SVI</p>
CSCvi89557	<p>Headline: 9300-EX with AA FEX: few v3 mcast groups blackhole shut/no shut of MCT</p> <p>Symptoms: 9300-EX with Active/Active FEX see multicast traffic loss for hosts</p> <p>Workaround: none</p>
CSCvj52362	<p>Headline: 9300-EX FX FX2 Pkt from host on subnet get drop by URPF failure when ARP/ND for host is not resolved</p> <p>Symptoms: When urpf strict mode is enabled on an interface, any packet received from a host in subnet for which ARP/ND is not resolved, it gets dropped due to URPF failure. Even ping/ping6 from peer does not work.</p> <p>Workarounds: No workaround.</p>
CSCvj94409	<p>Headline: When POAP is done, maintenance mode profile config lost if switch reload</p> <p>Symptoms: If the configuration is not saved after the switch first bootup via POAP, "Maintenance mode profile" configuration is lost after reload or power cycle.</p> <p>Workarounds: Enter the 'copy running-config startup-config' command after the POAP config has been applied and the switch is back to normal mode..</p>
CSCvm50912	<p>Headline: Egress policy is getting pushed to other interfaces where it is not applied.</p> <p>Symptoms: Cisco Nexus 9000 receives DSCP EF packet but it rewrites that packet and sends it out with DSCP 0. There is an egress policy applied on a different interface which is setting dscp to 0.</p> <p>Workaround: None</p>
CSCvm90522	<p>Headline: Cisco Nexus 9000 prefers mBGP route over directly connected one causing mcast traffic black holing</p> <p>Symptoms: Mcast traffic black holing due to RPF failure.</p> <p>Workarounds: N/A</p>

Resolved Issues

Bug ID	Description
CSCvp16978	<p>Headline: IGMP v2/v3 mix: shutdown igmpv2 receivers and igmpv3 receivers are also removed from mrrib oifl</p> <p>Symptoms: S,G OIL is deleted when unrelated *,G OIL is removed.</p> <p>Workaround: NA</p>
CSCvp40959	<p>Headline: N9k does not age out snooping entry against vPC Peer link port after receipt of GSO</p> <p>Symptoms: Snooping table points to peer link on both the switches for multicast</p> <p>Workaround: None</p>
CSCvp92657	<p>Headline: MRIB crashed with watchdog due to loop in txlist</p> <p>Symptoms: Cisco Nexus 9000 switch might crash with MRIB in a txlist loop and possible corrupted address in txlist.</p> <p>Workarounds: Do not use unicast vrf leaking and multicast vrf leaking together for overlapping Sources and Groups</p>
CSCvq21473	<p>Headline: N9K: peer port flapping and new IGMP join coming causes port oversubscription</p> <p>Symptoms: This port will be congested because the multicast traffic is over the BW of this port.</p> <p>Workaround: Shut and no shut the port from Cisco Nexus 9000</p>
CSCvq45166	<p>Headline: Control-plane traffic might be affected by high rate of NetFlow record packets on inband</p> <p>Symptoms: Control-plane traffic, like LACP might be affected (dropped) due to a high rate of new short-lived flows learned on NetFlow enabled interface</p> <p>Workarounds: HW rate-limiter for NetFlow might need to be configured to drop NFM traffic more aggressively, like 60000 instead of default 120k:</p> <p>* hardware rate-limiter netflow 60000</p> <p>Validate configuration with:</p> <p>* show hardware rate-limiter netflow</p>

Resolved Issues

Bug ID	Description
CSCvo95342	<p>Headline: Intermittent VNI in DOWN state due to vni-add-await-buffer</p> <p>Symptoms: VNI in down state due to vni-add-await-buffer</p> <p>Non working:</p> <pre> 07-29 17:39:15.012963 22524 113 nve1 vni-add-await vni-add-await-buffer 07-29 17:39:15.011930 22524 113 nve1 vlan-vni-add vni-init 07-29 17:39:15.011843 22524 0 nve1 cfg-mem-vni-mcast-cmd vni-init 07-29 17:39:15.308433 22584 114 nve1 vni-add-await vni-add-await-buffer 07-29 17:39:15.307472 22584 114 nve1 vlan-vni-add vni-init 07-29 17:39:15.307380 22584 0 nve1 cfg-mem-vni-mcast-cmd vni-init 07-29 17:26:52.314255 51089 115 nve1 vni-add-await vni-add-await-buffer 07-29 17:26:52.313145 51089 115 nve1 vlan-vni-add vni-init 07-29 17:26:52.313063 51089 0 nve1 cfg-mem-vni-mcast-cmd vni-init 07-29 17:26:53.014215 51110 102 nve1 vni-add-await vni-add-await-buffer 07-29 17:26:52.621671 51110 0 nve1 cfg-mem-vni-mcast-cmd vni-init 07-29 17:26:53.022930 51112 103 nve1 vni-add-await vni-add-await-buffer 07-29 17:26:52.932304 51112 0 nve1 cfg-mem-vni-mcast-cmd vni-init 07-29 17:26:53.641801 51113 105 nve1 vni-add-await vni-add-await-buffer 07-29 17:26:53.354901 51113 0 nve1 cfg-mem-vni-mcast-cmd vni-init </pre> <p>Expected:</p> <pre> 06-13 19:04:35.705995 51024 108 nve1 vni-add-comp vni-add-complete 06-13 19:04:35.705947 51024 108 nve1 l2rib-add-complete vni-add-complete 06-13 19:04:35.703578 51024 108 nve1 vni-add-pend vni-add-pending 06-13 19:04:35.703571 51024 108 nve1 vni-add-await vni-add-await-buffer 06-13 19:04:35.702581 51024 108 nve1 vlan-vni-add vni-init 06-13 19:04:35.702454 51024 0 nve1 cfg-mem-vni-mcast-cmd vni-init 06-13 19:04:36.440637 51026 109 nve1 vni-add-comp vni-add-complete 06-13 19:04:36.440581 51026 109 nve1 l2rib-add-complete vni-add-complete 06-13 19:04:36.437700 51026 109 nve1 vni-add-pend vni-add-pending 06-13 19:04:36.437691 51026 109 nve1 vni-add-await vni-add-await-buffer 06-13 19:04:36.039712 51026 0 nve1 cfg-mem-vni-mcast-cmd vni-init </pre> <p>Workarounds: Remove entry and recreate resolves the issue.</p>
CSCvr08446	<p>Headline: FT flow records in Cisco Nexus 9300-EX ToR switches do not have the correct STEP field set</p> <p>Symptoms: The flow telemetry record exported from Cisco Nexus 9300-EX switches the source interface (STEP) field not set.</p> <p>Workarounds:</p>

Resolved Issues

Bug ID	Description
CSCvr21052	<p>Headline: Changes for QinQ, Selective QinQ and Multiple Provider VLAN</p> <p>Symptoms: QinQ , Selective QinQ changes in Cisco NX-OS 9.3 release</p> <p>Workarounds:</p> <p>Set the provider_bd flag for the provider_vlan in rwx_rwbdstatetable</p> <p>Example:</p> <pre>switch(config)# slot 1 qu " debug hardware internal hom mod asic 0 slice 0 table tah_hom_rwx_rwbdstatetable 99 1 provider_bd=0x0000001" asic instance is 0 asic slice is 0 tbl name is tah_hom_rwx_rwbdstatetable start entry is 99 entry count is 1 field value is provider_bd=0x0000001 Block base address: 0x01800000 1st table entry address: 0x01e20318 switch(config)#</pre>
CSCvr30525	<p>Headline: IGMPv3/MLD Snoop - Mcast Traffic Loss To All Receivers After One Receiver Sends Multiple Leafs</p> <p>Symptoms: Multicast traffic loss to remaining receivers after one receiver sends multiple leafs in quick succession.</p> <p>Workaround: Disable explicit host tracking under VLAN configuration:</p> <pre># configure terminal # vlan configuration 10 # no ip igmp snooping explicit-tracking</pre>
CSCvr33353	<p>Headline: Kernel panic - Memory leak on slab</p> <p>Symptoms: Kernel panic crash with no core files generated.</p> <p>Workarounds: None. To prevent the unexpected crash due to out of memory, reloading the switch once in a while will help in reclaiming the leaked memory and avoid the switch crashing due to out of memory.</p>

Resolved Issues

Bug ID	Description
CSCvr39030	<p>Headline: VXLAN encap packets sent with destination mac 00:00:00:00:00:00 when there is no ARP in Underlay</p> <p>Symptoms: On BGW, the overlay default route is pointing correctly to the shared border NVE (loopback 1):</p> <pre>N9k-test# sh ip route 0.0.0.0 vrf VRF IP Route Table for VRF ?VRF? '*' denotes best ucast next-hop '***' denotes best mcast next-hop '[x/y]' denotes [preference/metric] '%<string>' in via output denotes VRF <string></pre> <p>0.0.0.0/0, ubest/mbest: 1/0 *via 10.10.1.5%default, [20/0], 01:06:09, bgp-1.1, external, tag 65530 (evpn) segid: 50000 tunnelid: Oxada0104 encap: VXLAN</p> <p>The underlay next-hop 10.10.1.5 (shared border) is reachable over Eth1/5:</p> <pre>N9k-test# sh ip route 10.10.1.5 IP Route Table for VRF "default" '*' denotes best ucast next-hop '***' denotes best mcast next-hop '[x/y]' denotes [preference/metric] '%<string>' in via output denotes VRF <string></pre> <p>10.218.1.4/32, ubest/mbest: 1/0 *via 10.10.0.4, Eth1/5, [110/4], 01:07:18, ospf-UNDERLAY, intra</p> <p>The problem is that no ARP request is triggered on Eth1/5 by the switch connected to the shared border even if it is receiving VXLAN traffic from the client that needs to be forwarded. As a result, that VXLAN traffic towards the shared-border is sent to destination mac 0000.0000.0000 over Eth1/5, and then dropped on the shared border.</p> <p>Workarounds: Issue a ping on the BGW to the underlay next hop to trigger an ARP request. (Static ARP does not work as a workaround.)</p>
CSCvr49688	<p>Headline: Multiple sysinfo crashes on N3K-C3408-S after 16hours from ISSU 9.2.2t_CCO to 9.2.2v_CCO</p> <p>Symptoms: The sysinfo process might experience a crash</p> <p>Workarounds: NA</p>

Resolved Issues

Bug ID	Description
CSCvr56864	<p>Headline: Cisco Nexus 9000 sysmgr crash while rotating log</p> <p>Symptoms: A Cisco Nexus 9000 running 7.0(3)I7(6) might experience a crash in the System Manager (sysmgr) process. The 'show logging onboard internal reset-reason' command displays a crash in "sysmgr stateful recovery":</p> <p>Reset Reason for this card: Image Version : 7.0(3)I7(6) Reset Reason (LCM): Unknown (0) at time Sun Aug 18 10:49:45 2019 Reset Reason (SW): Reset triggered due to HA policy of Reset (16) at time Sun Aug 18 10:44:40 2019 Service (Additional Info): sysmgr stateful recovery</p> <p>Workarounds: None</p>
CSCvr57551	<p>Headline: Cisco Nexus 9000 reloads with Kernel panic - unable to handle kernel paging request</p> <p>Symptoms: N9000/N3164 reloads with kernel panic with below logs in "show logging nvram" 2019 Dec 13 13:18:12.348 N3164-Switch %\$ VDC-1 %\$ %KERN-1-SYSTEM_MSG: [6665558.814641] [1576243092] BUG: unable to handle kernel paging request at 00000000d7626824 - kernel 2019 Dec 13 13:18:12.348 N3164-Switch %\$ VDC-1 %\$ %KERN-1-SYSTEM_MSG: [6665558.913324] [1576243092] IP: [<fffffffa126d3da>] mts_fast_sys_send+0x98a/0xd80 [klm_mts] - kernel 2019 Dec 13 13:18:17.371 N3164-Switch %\$ VDC-1 %\$ %KERN-1-SYSTEM_MSG: [6665563.510253] [1576243096] RIP [<fffffffa126d3da>] mts_fast_sys_send+0x98a/0xd80 [klm_mts] - kernel</p> <p>Workarounds: None</p>
CSCvr70914	<p>Headline: Kernel Panic generates Kernel Trace instead of Stack Trace</p> <p>Symptoms: A Cisco Nexus 9000 or 3164 switch running 7.0(3)I7(6) might crash due to a kernel panic. Usually the kernel panic generates a stack trace which is reviewed using the 'show logging onboard stack-trace' command. But in this case, the show command generated a kernel trace instead of a stack trace. Due to the missing stack trace, we can't determine the reason for the kernel panic.</p> <p>Workarounds: Most of the kernel panics happen due to a Machine Check Exception (MCE) event. In this case, we can't determine the reason for the kernel panic due to the missing stack trace. The recommendation is to monitor on first occurrence and replace the hardware on repeated kernel panics.</p>
CSCvs16450	<p>Headline: VNI gets stuck vni-add-pending.</p> <p>Symptoms: When changing vn-segment in a VXLAN setup, configure VNI first under NVE and then configure vn-segment under the VLAN.</p> <p>Workarounds: Remove and add member VNI solves this problem.</p>
CSCvs19118	<p>Headline: Multicast traffic forwarded with TTL 0</p> <p>Symptoms: Multicast traffic forwarded with TTL 0</p> <p>Workarounds: none</p>

Resolved Issues

Bug ID	Description																				
CSCvs19744	<p>Headline: N9K: LLFC returns 'Ingress buffer allocation fail' error after ASCII reload on 52nd port</p> <p>Symptoms: Customer will see LLFC buffer allocation error like below:</p> <p>2019 Nov 22 17:47:59 Sug-3-chart2 %\$ VDC-1 %\$ %IPOOSMGR-2-QOSMGR_LLFC_APPLY_FAILURE: Unable to apply flow-control configuration on interface: Ethernet1/52 due to 'Ingress buffer allocation fail'.</p> <p>Workarounds: None.</p>																				
CSCvs20278	<p>Headline: SVI is down while VLAN has active port after port flapping</p> <p>Symptoms: SVI is down while VLAN has active port</p> <p>Workarounds: Workaround #1 Remove the affected SVI VLAN and add it back</p> <p>Workaround #2 Reload can solve this issue.</p>																				
CSCvs21823	<p>Headline: Negotiation issue with Intel X10SDV - port flapping multiple times</p> <p>Symptoms: Negotiation issue with Intel X10SDV - port flapping multiple times before staying up</p> <p>Workarounds: None</p>																				
CSCvs23022	<p>Headline: Cisco Nexus 9500 SC EOBC Reloads on 7.0(3)I7(7)</p> <p>Symptoms: SC reloads are experienced while running in steady state on 7.0(3)I7(7)</p> <p>Workarounds: Disable emon reload behavior with debug system internal emon no-reload</p>																				
CSCvs28473	<p>Headline: vPC Consistency Allowed VLANs not matching with Active VLANs under show vpc brief</p> <p>Symptoms: N9K1# show vpc consistency-parameters vpc 103</p> <p>Legend: Type 1 : vPC will be suspended in case of mismatch</p> <table border="1" data-bbox="310 1472 1203 1566"> <thead> <tr> <th>Name</th> <th>Type</th> <th>Local Value</th> <th>Peer Value</th> </tr> </thead> <tbody> <tr> <td>Allowed VLANs</td> <td>-</td> <td>1-4094</td> <td>1,600,640,902,951-954</td> </tr> </tbody> </table> <p>N9K1#show vpc brief vPC status</p> <table border="1" data-bbox="310 1692 1203 1787"> <thead> <tr> <th>Id</th> <th>Port</th> <th>Status</th> <th>Consistency</th> <th>Reason</th> <th>Active vlans</th> </tr> </thead> <tbody> <tr> <td>103</td> <td>Po103</td> <td>up</td> <td>success</td> <td>success</td> <td>1,600,640,902</td> </tr> </tbody> </table> <p>Workarounds:</p>	Name	Type	Local Value	Peer Value	Allowed VLANs	-	1-4094	1,600,640,902,951-954	Id	Port	Status	Consistency	Reason	Active vlans	103	Po103	up	success	success	1,600,640,902
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Resolved Issues

Bug ID	Description
CSCvs29433	<p>Headline: EIGRP learned routes flapping when associated prefix-list is modified</p> <p>Symptoms: TopologyN9K-1-----EIGRP-----N9K2</p> <p>Prefix-list configured on N9K-1 matching static routes That prefix-list is configured under route-map This route-map is used redistribute static routes into EIGRP</p> <p>When new entry is added to a prefix-list on N9K1, EIGRP learned routes on N9K-2 flaps</p> <p>If we use OSPF as routing protocol, we don't see route flap.</p> <p>Workarounds: None</p>
CSCvs30139	<p>Headline: Power supply flapping randomly</p> <p>Symptoms: Power flapping randomly without actual power interruption. This is cosmetic issue due to I2C busy</p> <p>Power supply flapping randomly</p> <p>Workarounds:</p>
CSCvs31908	<p>Headline: N9K-9364C-GX : CRCs with 100G-CU1M on Ports 17,40 connected to Cisco Nexus 9232C Port 8 and Port 12.</p> <p>Symptoms: CRC seen on 100G 1M CU xcvr connected to peer with multiple reload</p> <p>Workarounds: Flap the links to recover the port from low SNR.</p>
CSCvs31374	<p>Headline: BUM dropped on spine/BGG if same mcast-grp use for 2 VNI and only one VNI is configured in spine/BGW</p> <p>Symptoms: BUM traffic drop on spine for VLAN not configured for BGW on spine. You will only see issue for the VLAN using same mcast group.</p> <p>Workarounds:</p> <ol style="list-style-type: none"> 1. Configuring all I2VNIs on border spine. 2. Configure a different mcast group for the affected VLAN.
CSCvs32093	<p>Headline: QinQ in VNI local flooding doesn't work</p> <p>Symptoms: The local multiple VLAN tags flooding doesn't work properly if the ingress and egress fp-ports are in the same srcID.</p> <p>Workarounds: Avoid physical connections to hosts with same srcID. Check for srcID with the 'show interface hardware-mappings' command.</p>

Resolved Issues

Bug ID	Description
CSCvs32425	<p>Headline: The " ip igmp static-oif" command can take effect on the PIM DR and non-DR interfaces (SVI)</p> <p>Symptoms: Multicast stream</p> <pre> L3 link N9K-1 ---- L3 link ---- N9K-2 (no vPC involved) \ / \ VLAN 101 / \ / L2 switch Receiver </pre> <p>Configured " ip igmp static-oif x.x.x.x" on both (SVI 101) of N9Ks.</p> <p>N9K (DR and non-DR interfaces) will have the static OIF for SVI and it causes the duplicate multicast traffic due to two valid OIFs.</p> <p>Workarounds:</p> <ol style="list-style-type: none"> 1/ only configure static-oif in DR interface 2/ use dynamic join (IGMP report) rather than static oif
CSCvs33409	<p>Headline: N9K-9364C-GX: CRCs on Port 24 connected to Port 32 with 40G-AOC</p> <p>Symptoms: When the system is idle and when peer send out chopped packets in FCS error.</p> <p>Workarounds: Reload the switch</p>
CSCvs40316	<p>Headline: Block " feature tunnel" CLI on N3000-R/N9500-R switches</p> <p>Symptoms: GRE and/or IPinIP Tunnels do not work for N3000-R or N9500-R series switches</p> <p>Tunnel100 is down (Hardware prog failed)</p> <p>Workarounds: Do not configure GRE or IPinIP tunnels as they are not supported.</p>

Resolved Issues

Bug ID	Description
CSCvs40645	<p>Headline: CLI alias for " exit" command increases time to save running-configuration and might cause timeout</p> <p>Symptoms: A Nexus device configured with a CLI alias named with a single letter (such as " q") mapped to a command will cause the device to take exponentially longer to save its running-configuration to the startup-configuration, depending upon the number of lines present in the running-configuration. This is only observed when the single case-insensitive letter used for the CLI alias is also used as the delimiting character for the device's MOTD banner.</p> <p>Workarounds:</p> <ol style="list-style-type: none"> 1. Rename the CLI alias to use any case-insensitive single character other than the one used for the MOTD banner delimiting character. For example, the below configuration is not susceptible to this issue: <pre>N9K# show running-config include cli cli alias name quit exit</pre> 2. Modify the delimiting character used in the MOTD banner to use any non-alphanumeric character (such as a special character - !, @, #, \$, etc.) 3. Remove the CLI alias using a case-insensitive single character mapping to a command from the configuration of the device.
CSCvs42206	<p>Headline: Multi-Site EVPN: traffic might be dropped towards Layer3 if only a Layer3 extension is configured</p> <p>Symptoms: If only a Layer 3 extension is configured on the BGW with VRF loopback, traffic towards these destinations might be dropped</p> <p>Workarounds: Configure L2VNI on BGW.</p>
CSCvs43518	<p>Headline: After upgrading to 7.0(3)I7(7), the port-channels got misconfigured and not possible to remove VLANs</p> <p>Symptoms: After upgrade to Cisco NX-OS 7.0(3)I7(7) from any prior releases, when port-profile type ethernet or interface-vlan and their subcommands are entered, many configurations are not applied to DME. The DME database is out of sync with the running configuration. The switch might be functional. However, subsequent configuration on most commands might not work.</p> <p>Workarounds: Reload with ascii replay of the startup configuration. For example, reload ascii.</p> <p>It is not easy for users to remove the use of port-profile type [ethernet interface-vlan] <>, subcommands and the applying the port-profile commands on the interface before upgrade.</p>
CSCvs46710	<p>Headline: Memory leak leads to crash on callhome</p> <p>Symptoms: Memory leak of callhome process will lead to this process to crash: <pre>%SYSMGR-2-SERVICE_CRASHED: Service " callhome server" (PID 27043) hasn't caught signal 6 (core will be saved).</pre></p> <p>Workarounds: Unknown</p>

Resolved Issues

Bug ID	Description
CSCvs48602	<p>Headline: link mac-up timer 50331648 config added while downgrading from 9.3(3) to 7.0(3)I7(7)</p> <p>Symptoms: After downgrading a Cisco Nexus N9000 Series switch from 9.3(3) to 7.0(3)I7(7) the following configuration is stale on Ethernet interfaces:</p> <pre>interface Ethernet1/1 link mac-up timer 50331648 interface Ethernet1/2 link mac-up timer 50331648 interface Ethernet1/3 link mac-up timer 50331648 interface Ethernet1/4 link mac-up timer 50331648</pre> <p>Workarounds:</p> <p>Two Options for Workarounds:</p> <ol style="list-style-type: none"> 1. On all the rogue interfaces, configure "link mac-up timer 15 (or some valid non-zero value)" & then configure "link mac-up timer 0". <p>or</p> <ol style="list-style-type: none"> 2. 'write erase' and 'reload' then reapply the original configuration.
CSCvs50301	<p>Headline: Unicast traffic received on suspended port can be sent back to an active port on the port-channel</p> <p>Symptoms: Unicast traffic received on suspended port can be sent back to an active port on the port-channel</p> <p>Workarounds: Correct LACP/Channel-group configuration</p>

Resolved Issues

Bug ID	Description
CSCvs50700	<p>Headline: N9K-C9508-FM-R getting full of sdk logs in /var/volatile/tmp</p> <p>Symptoms:</p> <ul style="list-style-type: none"> - N9K-C9508-FM-R modules on a Cisco Nexus 9500 platform switch running Cisco NX-OS 9.2(3) - All of these line cards are showing full space errors for /var/volatile/tmp - Looking at the directory, it appears the top offender is fe3200_sdk.log - No reported functional impact so far <p>Workarounds: - Stop running the script or - Access linecard bash prompt and delete the files using the following method:</p> <p>Example:</p> <pre>N9k# run bash sudo su bash-4.3# rlogin lc21 <<< or any FM slot # Last login: Wed Dec 11 23:43:52 UTC 2019 from sup28 on pts/0</pre> <ul style="list-style-type: none"> - Look at the list for this directory and see if there is your file <pre>root@fm21:~# ls -l /var/volatile/tmp/ - Once you found the name of the file, access the directory itself and delete it: root@fm21:~# cd /var/volatile/tmp/ root@fm21:/var/volatile/tmp# rm fe3200_sdk.log.8453</pre> <p>Check if it has been removed:</p> <pre>root@fm21:/var/volatile/tmp# ls -l</pre> <ul style="list-style-type: none"> - Then exit: <pre>root@fm21:/var/volatile/tmp# exit rlogin: Connection to lc21 closed normally. bash-4.3# exit</pre>
CSCvs50843	<p>Headline: IP mobility not updating route on source leaf</p> <p>Symptoms: When a host is moved from a leaf (leaf1) to another leaf (leaf2), the leaf (leaf1) that the host was originally connected to, does not update its route table to point to the new leaf (leaf2) as leaf1 does not remove the old local HMM route on its routing table when leaf1 gets an update from BGP saying that the host is now learned on leaf2.</p> <p>Workarounds: Clear ARP on the original leaf (leaf1), and wait 30 seconds for the ARP entry to timeout.</p>
CSCvs51005	<p>Headline: SRv6: BGP VPNv4 - CNH with null IOD added to URIB upon removal of IPv6 address using intf range cmd</p> <p>Symptoms: Stale SRv6 VPNv4 routes will be seen in BGP and URIB databases after IPv6 address is removed on all of the core/spine facing interfaces using the interface range command.</p> <p>In SRv6-VXLAN Dual-GW environment, adding IPv6 address back to the interfaces might cause a Netstack crash</p> <p>Workarounds: Remove IPv6 address from one interface at a time</p>

Resolved Issues

Bug ID	Description
CSCvs53711	<p>Headline: mce_test generates excessive syslogs after 24-hour error limit surpassed</p> <p>Symptoms: If a system is experiencing memory check errors, a SYSLOG entry is created. This issue results in a new syslog being generated multiple times in the 24-hour period after the threshold has been reached.</p> <p>Workarounds: There is no workaround. This is mainly a cosmetic issue where multiple SYSLOG entries are generated after the 24-hour limit has been exceeded indicating that a failure occurs.</p>
CSCvs53822	<p>Headline: Local Multicast stops forwarding on TRM vPC VTEPs</p> <p>Symptoms: Local multicast connected to vPC VTEPs using TRM stop forwarding multicast after some time.</p> <p>Workarounds: Reload of VTEPs will temporarily resolve this issue.</p>
CSCvs55945	<p>Headline: Packet with source mac 0000.0000.0000 should be dropped for N9K-X96136YC-R</p> <p>Symptoms: Same packet with source mac address 0000.0000.0000 can be forwarded by port 2 and some other ports but cannot forwarded by ports 1, 5, 9.</p> <p>Workarounds:</p>
CSCvs56058	<p>Headline: Cisco Nexus 9000: aclqos crashes and generates core dump</p> <p>Symptoms: Cisco Nexus 9000: aclqos crashes and generates core dump</p> <p>Workarounds: None at this moment.</p>
CSCvs59399	<p>Headline: N9K-C9332C ports can't come up</p> <p>Symptoms: Some N9K-C9332C ports can't come up while using OSA with 10G-LR. Transceiver could receive light, but interface is down.</p> <p>Workarounds: none</p>
CSCvs61974	<p>Headline: VXLAN: VTEP does not generate ICMP packet too big for IPv6 PMTUD on egress MTU fail</p> <p>Symptoms: Cisco Nexus 9000 fails to send ICMPv6 packet too big (type 2) messages back to the source when the packet is larger than the egress interface MTU.</p> <p>Workaround: Adjust the source MTU to match the Cisco Nexus 9000 egress interface MTU or increase the Cisco Nexus 9000 egress interface MTU.</p>
CSCvs64058	<p>Headline: Copy running-config startup-config takes time if banner motd has character "en" in it</p> <p>Symptoms: Copy running-config startup-config takes time if banner motd has character "en" in it</p> <p>Workarounds: Remove character "en"</p>

Resolved Issues

Bug ID	Description
CSCvs67557	<p>Headline: Installed license shows unused when feature has been enabled in honor license NXOS_ESSENTIALS_XF</p> <p>Symptoms: Installed license shows unused when feature has been enabled in honor license NXOS_ESSENTIALS_XF</p> <p>Workarounds: Write erase, then reload.</p>
CSCvs68751	<p>Headline: CBL blocked state on BCM after interface comes up on FEX</p> <p>Symptoms: After bringing up FEX interface by inserting a cable, some switch interfaces can end up in a Blocking state from BCM perspective.</p> <p>STP is forwarding from the software perspective.</p> <p>-STP, PIXM, VLANMGR or SATMGR show no events that trigger reprogramming on BCM.</p> <p>-STP shows forwarding in Software.</p> <p>Workarounds:</p> <ol style="list-style-type: none"> 1. Apply configuration on FEX interface, then attach the cable. 2. Use PVSTP.
CSCvs69425	<p>Headline: Refresh profile CLI fails when updating the old profile with the new profile</p> <p>Symptoms: Refresh profile CLI fails when updating the old profile with the new profile</p> <p>Workarounds: Apply configs manually rather than pushing via profile or from DCNM.</p>
CSCvs72572	<p>Headline: High CPU on Cisco Nexus 9000 running VXLAN due to high IPFIB</p> <p>Symptoms: High CPU on Cisco Nexus 9000 running VXLAN due to high IPFIB</p> <p>Workarounds: Make the VLAN and VNI list contiguous as much as possible. All VTEPs should have less than 1999 bytes VLAN bitmap.</p>
CSCvs72678	<p>Headline: VTEP crash due to sysinfo process when 2K VLANs associate to VNI</p> <p>Symptoms: Unexpected reload caused by sysinfo can be seen while using VXLAN with more than 2000 VLANs associated to VNI.</p> <p>Workarounds: NA</p>

Resolved Issues

Bug ID	Description
CSCvs73567	<p>Headline: MTS stuck for VSH process post upgrade, from 7.0(3)I7(6) to 9.3(1)</p> <p>Symptoms: The issue has been seen after the NX-OS upgrade from 7.0(3)I7(6) to 9.3(1). (using install all command) Issue is seen on all N9k devices :</p> <p>GPSW9035(config-if)# sh system internal mts buffers details **Fast Sap Buffers are not displayed below**</p> <pre> Node/Sap/queue Age(ms) SrcNode SrcSAP DstNode DstSAP OPC MsgId MsgSize RRToken Offset sup/6713/recv 2841207168 0x101 37 0x101 0 918 0x3ea80 8 0x0 0xfaab104 <<<<<<<<<<<<<<<<<<< sup/6713/recv 2841206669 0x101 37 0x101 0 918 0x3f2dd 8 0x0 0xfaabd04 <<<<<<<<<<<<<<<<<< sup/6713/recv 9170186 0x101 37 0x101 0 918 0x313f1ed4 8 0x0 0xfaab004 sup/6713/recv 8420609 0x101 37 0x101 0 918 0x314284bb 8 0x0 0xfaabc04 sup/284/pers 2238073 0x101 4446 0x101 284 86017 0x315f7e24 4596 0x315f7e24 0xfaae004 sup/284/pers 1499 0x101 5143 0x101 284 86017 0x3169cec3 4596 0x3169cec3 0xfaa8004 sup/284/pers 5 0x101 60969 0x101 284 86017 0x3169cf37 4596 0x3169cf37 0xfaac004 </pre> <p>Post upgrade some of the FEX interfaces become un-configurable. For example, "no shutdown" command not taking effect and interface remains in shut state.</p> <p>Workarounds: N/A</p>
CSCvs75273	<p>Headline: CLI 'show hardware capacity forwarding' fails to produce JSON L2 related output</p> <p>Symptoms: Broken json-pretty output for 'show hardware capacity forwarding' cli.</p> <p>Workarounds: N/A</p>
CSCvs75586	<p>Headline: IP/GRE traffic not matching TapAgg ACL</p> <p>Symptoms: GRE traffic is not being matched by ACE with gre/ip and redirect option.</p> <p>Workarounds: Not available.</p>
CSCvs77955	<p>Headline: N9K-C9348GC link up delay on usd level after reloaded</p> <p>Symptoms: After N9K-C9348GC reloaded, we observed the port of Catalyst was brought up earlier than N9K-C9348GC by about 18 seconds.</p> <p>Workarounds: NA</p>

Resolved Issues

Bug ID	Description
CSCvs88642	<p>Headline: 3 msec packet loss on port-channel member down for flows hashing to non-impacted member port</p> <p>Symptoms: Sub-second packet loss on port-channel member down for flows hashing to non-impacted member port</p> <p>Workarounds: None</p>
CSCvs90075	<p>Headline: Cisco Nexus 9000/VXLAN - Forwarding broken due to inner Dot1Q copied during VXLAN encap</p> <p>Symptoms: Inner dot1q tag retained for regular trunk ports breaking connectivity as destination port receives two dot1q tags. Hosts across different leaf switches in VXLAN EVPN fabric.</p> <p>Workarounds: Do not enter the "system dot1q-tunnel transit" command if there are no variants of QinVNI ports configured on the VTEPs. OR, configure any spare interface (doesn't need to be UP) with the following configuration on each VTEP (both in case of vPC): (Supported with N9300-FX/FXP/FX2 platform switches)</p> <pre>interface Ethernet1/x switchport switchport mode trunk switchport trunk allow-multi-tag switchport trunk allowed vlan <x></pre> <p>x = any VLAN with vn-segment enabled. Example:</p> <pre>VLAN Segment-id ----- 10 1010</pre>
CSCvs94815	<p>Headline: QinVNI/9.3(3) - Inner tag override with internal VXLAN decap tag on peer-link</p> <p>Symptoms: QinVNI traffic forwarding is impacted as egress VTEP might send traffic out of dot1Q tunnel port with an internal VLAN instead of customer VLAN This is seen for new provider VNI's created after last boot-up with 9.3(3) release</p> <p>Workarounds: Toggle command in a maintenance window: # no system dot1q-tunnel transit # system dot1q-tunnel transit</p> <p>OR, create all provider VLAN/VNI's, copy run start + reload</p>

Resolved Issues

Bug ID	Description
CSCvs95580	<p>Headline: IGMP crash after “run ip igmp snooping access-group <route-map-name>”</p> <p>Symptoms: IGMP crashes after entering “vlan configuration <vlan>” command.</p> <pre>ip igmp snooping access-group <route-map-name> ----- reset reason for module 1 (from Supervisor in slot 1) --- 1) At 320604 usecs after Thu Jan 23 18:53:31 2020 Reason: Reset triggered due to HA policy of Reset Service: igmp hap reset Version: 7.0(3)I7(2)</pre> <p>Workarounds: None so far.</p>
CSCvt01676	<p>Headline: Cisco Nexus 9000 crashes when name-based NTP server is configured and switch restart</p> <p>Symptoms: Cisco Nexus 9000 crash with following error message</p> <pre>VDC-1 %\$ %NTP-2-NTP_SYSLOG_INIT_FAIL: : Failed to restart NTPd</pre> <pre>sh system reset-reason Reason: Reset triggered due to HA policy of Reset Service: ntp hap reset Version: 7.0(3)I7(7)</pre> <p>Workarounds: Remove name-based NTP configuration and apply IP-based NTP configuration Or Reload ASCII</p>
CSCvt02227	<p>Headline: Sub-interface counters missing in SNMP</p> <p>Symptoms: The svi-counters are not correctly reflected under the SNMP variables for Cisco Nexus 9000 Series switches.</p> <p>Workarounds:</p>
CSCvt03231	<p>Headline: ACL with HTTP tcp-option-length redirect statement is not matching traffic correctly.</p> <p>Symptoms: Traffic not matched correctly against an ACL containing ACE where HTTP tcp-option-length field is defined.</p> <p>Workarounds: None</p>
CSCvt04520	<p>Headline: PCIE error seen on Cisco Nexus 9364 in syslog</p> <p>Symptoms: PCIE correctable error messages seen in syslog</p> <p>Workarounds: None</p>

Resolved Issues

Bug ID	Description												
CSCvt06406	<p>Headline: bcm_l2_register_callback causes Cisco Nexus 9500 module reload.</p> <p>Symptoms: In certain instances, we see a hap reset generating a core for BCM-USD causing a module to reload.</p> <p>exception information --- exception instance 1 ---- Module Slot Number: 1 Device Id : 134 Device Name : System Manager Device Errorcode : 0x0000030b Device ID : 00 (0x00) Device Instance : 00 (0x00) Dev Type (HW/SW) : 03 (0x03) ErrNum (devInfo) : 11 (0x0b) System Errorcode : 0x401e008a Service on linecard had a hap-reset Error Type : FATAL error PhyPortLayer : 0x0 Port(s) Affected : Error Description : bcm_usd hap reset DSAP : 0 (0x0) UUID : 1 (0x1) Time : Thu Jan 2 16:49:07 2020 (Ticks: 5E0E1F03 jiffies)</p> <p>`show cores`</p> <table border="1"> <thead> <tr> <th>VDC</th> <th>Module</th> <th>Instance</th> <th>Process-name</th> <th>PID</th> <th>Date(Year-Month-Day Time)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1</td> <td>1</td> <td>bcm_usd</td> <td>8252</td> <td>2020-01-02 16:49:07</td> </tr> </tbody> </table> <p>Workarounds: None</p>	VDC	Module	Instance	Process-name	PID	Date(Year-Month-Day Time)	1	1	1	bcm_usd	8252	2020-01-02 16:49:07
VDC	Module	Instance	Process-name	PID	Date(Year-Month-Day Time)								
1	1	1	bcm_usd	8252	2020-01-02 16:49:07								
CSCvt11750	<p>Headline: FM25 reloads when two line cards OIR and come online.</p> <p>Symptoms: FM in slot 25 is powering down upon the boot-up of at least two line cards.</p> <p>Workarounds:</p>												

Resolved Issues

Bug ID	Description
CSCvt13462	<p>Headline: NX-OS: BGP memory leak within 'BGP BF slab' when more than 30 neighbors configured</p> <p>Symptoms: A Cisco Nexus switch might see BGP brought down across multiple neighbors because of memory exhaustion.</p> <p>The progression would look like the following:</p> <p>BGP-5-MEMALERT: bgp- [pid] BGP memory status changed from OK to Severe Alert BGP-5-MEMALERT: bgp- [pid] BGP memory status changed from Severe Alert to Critical BGP-5-MEMALERT: bgp- [pid] BGP memory status changed from OK to Critical Alert BGP-2-PEERSHALTED: bgp- [pid] BGP <neighbor> shutdown due to no memory condition (Critical Alert)</p> <p>The symptoms of this would show growth / large value held (when BGP flapped) in the following library:</p> <pre>show bgp internal mem-stats all detail</pre> <p>Private Mem stats for UUID : Slab Library(529) Max types: 2</p> <pre>----- TYPE NAME ALLOCS BYTES CURR MAX CURR MAX 1 LIBSLAB_MEM_create_slab 35216 35575 2532632952 2566313240 <--- 2.5GB ----- Total bytes: 2532632952 (2473274k) -----</pre> <p>And the following:</p> <pre>SLAB: BGP BF slab (24 x 3000) Slab alloc count : 105352941 Slab max allocs : 105352941 Slab total allocs : 105352941 Slab total frees : 0 <----- No frees are happening Slab total block allocs : 35118 Slab block alloc failures : 0 Slab total block frees : 0 Slab max blocks : 35118</pre> <p>Workarounds: Decrease number of configured BGP neighbors to 30 and restart BGP process</p>
CSCvt14639	<p>Headline: Not able to convert Layer 2 ports to Layer 3 in Cisco NX-OS 9.3(3)</p> <p>Symptoms: N9K-93180YC-EX-104(config)# interface ethernet 1/5</p> <p>N9K-93180YC-EX-104(config-if)# no switchport</p> <p>ERROR: Mac acl is not supported on L3. Please use PortAcl branch</p> <p>Workarounds: Reload ascii, or write erase/reload</p>

Resolved Issues

Bug ID	Description
CSCvt19386	<p>Headline: DHCP packets received on trusted port punted to CPU + DST MAC set to broadcast in case of bcast bit</p> <p>Symptoms: When a DHCP packet arrives on a trusted port (DHCP snooping enabled for the VLAN), the packet gets punted to the CPU. If the broadcast bit is set, the CPU re-writes the destination MAC as the broadcast MAC address.</p> <p>Workarounds: + Disable DHCP snooping for the VLAN.</p> <p>+ Avoid using the broadcast bit in DHCP packets.</p>
CSCvt19710	<p>Headline: Glean ARP not generated for VXLAN encapsulated traffic</p> <p>Symptoms: Glean ARP not generated for VXLAN encaps traffic. Traffic is gleaned and DST mac is matching RMAC however glean ARP not generated. Adding static ARP resolves the issue or if we ping directly from the device SVI, ARP gets populated.</p> <p>Workarounds: Static ARP or ping from local device to create ARP entry for destination (non VXLAN traffic).</p>
CSCvt25419	<p>Headline: NetFlow recorder "packet long" and "bytes long" gives incorrect 64-bit values</p> <p>Symptoms: Configuring "collect counter packets long" or "collect counter bytes long" creates a duplicate field in the configuration without the "long" parameter. Furthermore, in the outbound packet each counter is duplicated, where the first value is correct, but the second one is not. Entering the "no collect counter packets" command removes the config line, but adds "collect counter bytes". Configuring "no collect counter bytes" adds "collect counter packets" to the configuration. Two 64-bit counters cannot co-exist. If one of them is set to 32 bits the other one can be 64 bits.</p> <p>Workarounds: There are no known workarounds.</p>
CSCvt32777	<p>Headline: QinVNI - Customer dot1q tag removed for Unicast traffic when crossing peer-link.</p> <p>Symptoms: Known Unicast traffic forwarding issue over peer-link in a QinVNI VXLAN setup. ARP reply or any form of L2 IP known Unicast is affected.</p> <p>Workarounds: Configure a local port in dot1q tunnel mode mapped to provider VNI/VLAN. Or, copy run start + reload the switch.</p>

Resolved Issues

Bug ID	Description
CSCvt32890	<p>Headline: Cisco Nexus 9000 config session errors out over 24 characters</p> <p>Symptoms: 1 -</p> <pre>N9K-EXT# configure session B234567890123456789012345 << 25 characters Config Session started, Session ID is 1 Enter configuration commands, one per line. End with CNTL/Z. N9K-EXT(config-s)# ip access-list TAC_TEST N9K-EXT(config-s-acl)# deny ip any any N9K-EXT(config-s-acl)# commit Verification successful... Proceeding to apply configuration. This might take a while depending on amount of configuration in buffer. Please avoid other configuration changes during this time. Error: opening file: /tmp/ssnmgr_dme_cmds_B234567890123456789012345.txt Commit Successful</pre> <p>2 -</p> <p>After the commit takes place you will still see that it's in ACLMGR and there running configuration, but you cannot apply it and it also is not in DME.</p> <pre>N9K-EXT# show running-config aclmgr sec TAC ip access-list TAC_TEST 10 deny ip any any</pre> <pre>N9K-EXT(config)# int vlan 200 N9K-EXT(config-if)# ip access-group TAC_TEST out cannot apply non-existing acl policy to interface</pre> <p>Workarounds: Don't use 25 characters, even though the max limit is 64.</p>
CSCvt36854	<p>Headline: VLAN create fails if VLAN name already exists - CLI hangs and MTS is stuck</p> <p>Symptoms: Creating a VLAN for which a VLAN NAME already exists will fail and cause CLI to hang. We also see that VLAN_MGR messages may be stuck in MTS. Example below:</p> <p>The following configuration already exists in the running-config. VLAN 345 with name VLAN0045:</p> <pre>vlan 345 name VLAN0045</pre> <p>Running the following command will cause failure:</p> <pre># conf t # vlan 45 <CLI hang></pre> <pre># show system internal mts buffers summary node sapno rcv_q pers_q npers_q log_q sup 167 0 0 0 1 <<<<<<<< 167 may become stuck</pre> <pre># show system internal mts sup sap 167 description Vlan_mgr SAP</pre> <p>Workarounds: Remove VLAN name from existing VLAN.</p>

Resolved Issues

Bug ID	Description
CSCvt38574	<p>Headline: Changing prefix-list in route-map doesn't change number of prefixes received in BGP summary</p> <p>Symptoms: In BGP whenever you replace an existing prefix-list in the route-map with a new prefix-list, it doesn't change the number of prefixes received from a neighbor until you restart the BGP process itself.</p> <p>Workaround: 1) Graceful BGP restart helps to resolve the issue.</p> <p>2) Choose a different name for new prefix-list.</p>
CSCvt43482	<p>Headline: NX-API: unknown:unknown:0:0 state at operRd in new VNIs configured.</p> <p>Symptoms: Every new VNI configured via NX-API is stored with RD of unknown:unknown:0:0 as seen under Visore/operRd for sys/evpn/bdevi DN</p> <p>Workarounds: Reload the Cisco Nexus switch.</p>
CSCvt45038	<p>Headline: TRM/VXLAN-EVPN setup, BL does not create PIM join towards external RP</p> <p>Symptoms: PIM Join (*,G) is not sent to RP on border leaf for old/existing type-6 routes.</p> <p>Workarounds: + Make sure RP is configured on VTEP's, including BL before receiver sending IGMP membership reports.</p> <p>+ Send a leave or clear ip mroute from VTEP's to withdraw old type-6 route</p>
CSCvt45591	<p>Headline: FX/FX2: 25gcopper links with "negotiate auto 25000", didn't link up after multiple reloads.</p> <p>Symptoms: 25 Gig copper connections might not come up/go down on Cloudscale units when connected to specific link partners.</p> <p>Workarounds: Flap (shut/no shut) peer's interface.</p>
CSCvt46487	<p>Headline: OSPF Multi-area adjacency stuck in EXCHANGE after device reload</p> <p>Symptoms: OSPF Multi-area adjacency stuck in EXCHANGE after device reload</p> <p>Workarounds: 1) Enter the 'ip router ospf multi-area <area>' command on the interface after the MTU is changed.</p> <p>2) Enter the "apply ip ospf mtu-ignore" command.</p>
CSCvt47349	<p>Headline: " no link dfe adaptive-tuning" added post upgrade from 9.3.1 to 9.3.2 to 9.3.3 without config change</p> <p>Symptoms: " no link dfe adaptive-tuning" CLI is added under interfaces post upgrade from Cisco NX-OS 9.3.1 to Cisco NX-OS 9.3.2 to Cisco NX-OS 9.3.3 without any change in config.</p> <p>Workarounds: NA</p>
CSCvt49191	<p>Headline: Cisco Nexus 9000 URIB process crash</p> <p>Symptoms: Cisco Nexus 9000 running Cisco NX-OS 9.2(2) reloading due to service URIB crash</p> <p>Workarounds: None</p>

Resolved Issues

Bug ID	Description
CSCvt55138	<p>Headline: Sup-redt traffic flow drop with TTAG header on top of VXLAN header.</p> <p>Symptoms: Topology: server ==>(encap)TOR2 ==>Spine ==> TOR1(decap)—CPU</p> <p>Server sending ICMP packets to TOR1 loopback address. Packets come to TOR1 with TTAG, getting dropped by TOR1 netstack. and not visible in ethanalyzer.</p> <p>Workarounds: Remove TTAG configuration from downlink.</p>
CSCvt55555	<p>Headline: 100mb interface in not_connected state after upgrade to 9.3.3</p> <p>Symptoms: Cisco Nexus 9348GC-FXP has been upgraded from Cisco NX-OS 9.2(2) to 9.3(3). After device upgrade some interfaces remained in not_connected state. When attempting to downgrade to Cisco NX-OS 9.3(1), interfaces remained down. When device downgraded back to original version Cisco NX-OS 9.2(2), the interfaces went back to connected state.</p> <p>Interfaces are 100 Mb full duplex.</p> <p>Workarounds: Downgrade to Cisco NX-OS 9.2(x).</p>
CSCvt56303	<p>Headline: Enhancement bug to support TTAG header on top of VXLAN header in ethanalyzer.</p> <p>Symptoms: Ethanalyzer will not show ICMP reply packet in ps inband dump.</p> <pre> 2020-04-01 18:07:24.371191 1.1.1.2 -> 1.1.2.3 ICMP Echo (ping) request 2020-04-01 18:07:24.371560 84:3d:c6:9f:ea:05 -> 0c:75:bd:07:b4:33 0x8905 Ethernet II >>>>>> TTAG+ reply 2020-04-01 18:07:24.372937 1.1.1.2 -> 1.1.2.3 ICMP Echo (ping) request 2020-04-01 18:07:24.373147 84:3d:c6:9f:ea:05 -> 0c:75:bd:07:b4:33 0x8905 Ethernet II >>>>>> TTAG+ reply </pre> <p>Workaround: Remove TTAG on encap side.</p>
CSCvt58204	<p>Headline: BGP crashed when configured default-information originate under template</p> <p>Symptoms: BGP keeps crashing</p> <p>Cisco Nexus 90000 keeps crashing due to HAP reset of multiple BGP crashes.</p> <pre> N9K# show system reset-reason ----- reset reason for module 1 (from Supervisor in slot 1) --- 1) At 64219 usecs after Fri Mar 27 05:26:45 2020 Reason: Reset triggered due to HA policy of Reset Service: bgp hap reset Version: 7.0(3)I7(7) </pre> <p>Workarounds: Do not configure the “default-information originate” command for “address-family l2vpn evpn” template.</p>

Resolved Issues

Bug ID	Description
CSCvt64618	<p>Headline: Cisco Nexus 9000 transit GRE traffic on a VTEP is not VXLAN encapsulated</p> <p>Symptoms: Transit GRE traffic is not VXLAN encapsulated</p> <p>Workarounds: If the Layer 3 sub-interface is not part of a port-channel, encapsulation works.</p>
CSCvt65115	<p>Headline: LIBOSC-2-OSC_ERR: DATACORRUPTION-DATAINCONSISTENCY: v3.0.1 Copy error Traceback with LLDP</p> <p>Symptoms: LLDP Traceback reported in the log by OSC</p> <p>Workarounds: Disable the LLDP receive on the interface facing the device.</p>
CSCvt67766	<p>Headline: Peer-link STP inconsistency due to corrupt BPDU.</p> <p>Symptoms: VLANs are down due to PVID mismatch and VPC peer link is inconsistent after receiving corrupt BPDU.</p> <p>error: "%STP-2-RECV_BAD_TLV: Received SSTP BPDU with bad TLV on port-channel<Po_NUM> VLA<NUM>"</p> <p>Workarounds: Reload device.</p>
CSCvt68363	<p>Headline: N9K: Cannot change the username + snmp-server user password when using config replace</p> <p>Symptoms: User cannot change username / snmp-server user password via the config replace feature.</p> <p>Workarounds: Delete user and try to reconfigure.</p>
CSCvt68919	<p>Headline: EX_TOR : netflow and ACL commands not working after ISSU from 9.2.x to 9.3.x</p> <p>Symptoms: After ISSU upgrade from 9.2.4 to 9.3.3, netflow and Access-list commands fail</p> <p>F241.01.21-N9K-C93180YC-EX-1(config)# # Create new access-list F241.01.21-N9K-C93180YC-EX-1(config)# ip access-list TAC F241.01.21-N9K-C93180YC-EX-1(config-acl)# permit ip 10.10.10.0/24 20.20.20.0/24 Error: Exceeds maximum number of v4/v6 ACEs for RTP F241.01.21-N9K-C93180YC-EX-1(config-acl)# permit ip any any Error: Exceeds maximum number of v4/v6 ACEs for RTP F241.01.21-N9K-C93180YC-EX-1(config-acl)#</p> <p>Workarounds: Reload the switch by entering the "reload ascii" command. Plain reload does not fix the problem.</p>

Known Issues

Bug ID	Description
CSCvt74046	<p>Headline: N9K "show tech details" missing most of the IPv6 event-histories</p> <p>Symptoms: Most of the ipv6 event-histories are missing when "show tech details" is collected from device</p> <p>Workarounds: Manually collect the IPv6 event-history.</p> <p>For example:</p> <pre>show ipv6 internal event-history errors show ipv6 internal event-history ha show ipv6 internal event-history ipc show ipv6 internal event-history log show ipv6 internal event-history msgs show ipv6 internal event-history snmp</pre>
CSCvt91055	<p>Headline: PTP unicast packets sent out with wrong destination MAC on Master ports after reloading</p> <p>Symptoms: PTP unicast packets might be seen to be sent out with wrong destination MAC on Master ports after reloading of the Cisco Nexus 9000 switch. Reentering the "slave ipv4" command on the affected PTP Master interfaces restores the PTP unicast operation on the corresponding links.</p> <p>Workarounds: Use physical IP addresses of the L3 interfaces for PTP unicast operation instead of loopbacks.</p>

Known Issues

Behavior Changes for Cisco Nexus 9504 and 9508 Switches with -R Line Cards

Bug ID	Description
N/A	Interface: The output format for the exec command CLI show vpc orphan-ports has changed from the 7.0(3)F3(4) release to the 9.3(4) release.
N/A	FEX: MTU 9216 is the default value for FEX fabric ports-channels.
N/A	FEX: MTU 9216 is the only allowed value to be configured on FEX fabric port-channels. Configuring any other value will throw an error.
CSCvp87914	FEX: If the MTU value on a FEX fabric port-channel was set to 9216 before upgrading to Cisco NX-OS Release 9.3(4), the show running config command will not display the MTU config as it is the new default in Cisco NX-OS Release 9.3(4). Due to this, the show running-config diff command displays the difference which is expected.
N/A	Programmability: Release 9.3(4) brings in a new kernel and new processes.
N/A	Programmability: Interface counter statistics are grouped together in the XML/JSON output. The output for the show interface-counters command in JSON format has changed.
N/A	Programmability: NX-API does not support insecure HTTP by default.
N/A	Programmability: NX-API does not support weak TLSv1 protocol by default.
N/A	Security: Stronger ciphers are used in this release.

Known Issues

Bug ID	Description
N/A	Security: A new command, no service password-recovery is supported.
N/A	Security: Only one version out of v4 and v6 versions of the uRPF command can be configured on an interface. If one version is configured, all the mode changes must be done by the same version. The other version is blocked on that interface. Cisco Nexus 9300-EX, 9300-FX, and 9300-FX2 platform switches do not have this limitation and you can configure v4 and v6 version of urpf cmd individually.

General Known Issues

Bug ID	Description
CSCvu02712	<p>Intermittent CRC errors are seen on Cisco Nexus N9K-C9236C retimer ports (1-8 and 29-36), when connected to Cisco Nexus N9K-C93600CD-GX 100G native ports (25-28) and broken out to 4x25G. The issue is not seen in non-breakout 100G mode.</p> <p>Workaround: Avoid these connections. Ports 9-28 on the Cisco Nexus N9K-C9236C can be used instead.</p>
CSCvt41915	<p>ISIS route is deleted from kernel when ip unnumbered config is deleted and added back in quick succession (within say 30 seconds)</p> <p>Recovery: ip unnumbered config deletion and addition should be done within the 60-second window to be safe.</p> <p>If issue is hit, recovery is to flap the interface with the shut command followed by the no shut command.</p>

Bug ID	Description
CSCvr20128	<p>The issue happens for pinned static routes only. These routes don't get installed in the kernel. So, BGP sessions over these routes might not work. A ping from Bash will not work.</p> <p>Recovery:</p> <p>If the issue is seen, pinned static routes can be deleted and added back.</p> <p>Also, entering the clear ip route vrf <vrf-name> command can be done to recover from the issue.</p> <p>Further Problem Description:</p> <ol style="list-style-type: none"> 1. The issue happens for pinned static routes only. Pinned static routes is a feature borrowed from Catalyst 6000 IOS platforms and not many customers use it on Cisco Nexus 9000. 2. There are 3 flavors of the issue <ol style="list-style-type: none"> a. Pinned static route could have a next hop which is not in the subnet of the IP address configured on the interface. <p>In this case, kernel can't install the route irrespective of when Netstack sends the route programming request because, the next hop is not in the same subnet of the interface IP address.</p> b. Pinned static route could have some next hops. But on the interface, there is no global IPv6 address configured. It has only a link-local address configured. <p>In this case also, kernel can't install the route irrespective of when Netstack sends the route programming request because the next hop is not in the same subnet of the interface IP address.</p> c. Pinned static route could have a next hop which is in the same subnet of the IP address configured on the interface. <p>In this case, the kernel can install the route only if Netstack sends a route programming request after it programs the IP address to the kernel. While programming the route, the kernel determines that the next hop is already programmed. This is a very specific case of pinned static routes.</p>
CSCvc95008	<p>On Cisco Nexus 9300-EX, 9348GC-FXP, 93108TC-FX, 93180YC-FX, 9336C-FX2, 93216TC-FX2, 93360YC-FX2, 93240YC-FX2, 92348GC-X, C93108TC-EX-24, C93108TC-FX-24, C93180YC-EX-24, C93180YC-FX-24, 9316D-GX, 9364C-GX, and 93600CD-GX switches, when 802.1q EtherType has changed on an interface, the EtherType of all interfaces on the same slice will be changed to the configured value. This change is not persistent after a reload of the switch and will revert to the EtherType value of the last port on the slice.</p>
CSCvr92708	<p>CoPP violations can be seen under class-map copp-system-p-class-l2-default and access-group copp-system-p-acl-mac-undesirable in an MVPN setup on a PE device. This can cause an impact to MVPN control plane functionality for packets such as MSDP and PIM register messages, in case of a large number of MVPN PE devices and MDT groups. You can create a custom CoPP policy with an increased "cir" value until no CoPP violation is seen for that class.</p>

Known Issues

Bug ID	Description
CSCvr95514	Per-VRF Configuration of MDT MTU size is not supported on MVPN PE devices on N9K-X9636C-R/RX, N3K-C36180YC-R, N3K-C3636C-R platforms. While, Tunnel MTU size is not configurable interface MTU for the core facing interface can be configured to control port-level MTU. MDT tunnel is capable of carrying up to jumbo MTU size of 9192 (excluding tunnel header), provided interface MTU for the core-facing interface also supports jumbo MTU.
CSCvr92710	CMIS standards prescribe delays at each state as mentioned by the QSFP-DD firmware on those optics. If you are using those optics with delays, you will see a higher link-up time.
CSCvr14625	CMIS standards prescribe delays at each state as mentioned by the QSFP-DD firmware on those optics. If you are using those optics with delays, you will see a higher link-up time.
CSCvr13930	The Cisco Nexus 9300-GX ASIC does not support FC-FEC on the second lane of 50x2 breakout port. This is due to an ASIC limitation. The second link cannot come up when 50x2 breakout is done. Workarounds: You must configure RS-FEC with 50x2 breakout.
CSCvr11900	Multicast routes used by Data MDT are not deleted immediately on MVPN PE (where Encapsulation takes place) after all the customer (VRF) traffic stops which use the same Data MDT. They may stay up for 15 minutes and then get deleted.
N/A	<p>When large files, for example NX-OS, images are copied to USB, the following message is printed:</p> <pre> 2019 Jul 2 15:49:47 Molti_A %\$ VDC-1 %\$ Jul 2 15:49:46 %KERN-3-SYSTEM_MSG: [8032.291555] INFO: task vsh.bin:9418 blocked for more than 120 seconds. - kernel 2019 Jul 2 15:49:47 Molti_A %\$ VDC-1 %\$ Jul 2 15:49:46 %KERN-3-SYSTEM_MSG: [8032.291560] Tainted: P O 4.1.21-WR8.0.0.28-standard #1 - kernel 2019 Jul 2 15:49:47 Molti_A %\$ VDC-1 %\$ Jul 2 15:49:46 %KERN-3-SYSTEM_MSG: [8032.291561] "echo 0 > /proc/sys/kernel/hung_task_timeout_secs" disables this message. - kernel </pre> <p>As long as these messages correspond to a copy operation to USB, this message can be ignored.</p>
N/A	<p>In the NX-API sandbox, whenever XML or JSON output is generated for the show run command or the show startup command, the output contains additional characters.</p> <p>For example,</p> <pre> </nf:source> <=====nf: is extra <namespace> : extra characters are seen with XML and JSON from NX-API. </pre>
N/A	When you upgrade a Cisco Nexus 9000 device to Cisco NX-OS Release 9.3(4), if a QSFP port is configured with the manual breakout command and is using a QSA, the configuration of the interface Ethernet 1/50/1 is no longer supported and will need to be removed. To restore the configuration, you must manually configure the interface Ethernet 1/50 on the device.
N/A	Due to the design of airflow, back-to-front fans requires fan speed to be run at full speed all the time. You might also see fan speeds increase from 40% to 70% post-upgrade. This applies to the following PIDs: N9K-C9272Q, N9K-C9236C, N9K-C93180YC-FX, N9K-C93180TC-FX, N9K-C9364C, N3K-C36180YC-R, N9K-C9336C-FX2, N9K-C9332C. This change is made as of cisco NX-OS Release 7.0(3)I7(3). If your PID is not listed, please contact Cisco TAC for additional verification.

Known Issues

Bug ID	Description
N/A	PTP is not supported on the 96136YC-R line card or for line cards on the Cisco Nexus 9504 switch.
N/A	The following features are not supported on the Cisco Nexus 3464C and 9364C switches. <ul style="list-style-type: none"> ■ 100 G port cannot support breakout (HW limitation) ■ FEX ■ ISSU ■ Segment routing ■ Tetration (HW limitation)
N/A	<ul style="list-style-type: none"> ■ The following feature is not supported on the Cisco Nexus 9332C: <ul style="list-style-type: none"> ○ uRPF
N/A	Only the following switches support QSFP+ with the QSFP to SFP/SFP+ adapter (40 Gb to 10 Gb): <ul style="list-style-type: none"> ■ N9K-C93120TX ■ N9K-C93128TX ■ N9K-C9332PQ ■ N9K-C9372PX ■ N9K-C9372PX-E ■ N9K-C9372TX ■ N9K-C9396PX ■ N9K-C93108TC-EX ■ N9K-C93108TC-FX ■ N9K-C93180YC-EX ■ N9K-C93180YC-FX
N/A	The Cisco Nexus 9300 platforms support for the QSFP+ breakout has the following limitations: <ul style="list-style-type: none"> ■ 1 Gb and 10 Gb can be supported using the QSFP-to-SFP Adapter on 40-Gb uplink ports on Cisco Nexus 9300 platform switches in NX-OS. ■ For the Cisco Nexus 9332PQ switch, all ports except 13-14 and 27-32 can support breakout.

Bug ID	Description
N/A	<p>The following switches support the breakout cable (40 Gb ports to 4x10-Gb ports):</p> <ul style="list-style-type: none"> ■ N9K-C9332PQ ■ N9K-X9436PQ ■ N9K-X9536PQ ■ N9K-C93180LC-EX—last four ports are breakout capable (10x4, 24x4, 50x2) ■ N9K-C93180YC-EX ■ N9K-C93108TC-EX ■ N9K-X9732C-EX line card ■ N9K-X9732C-FX line card ■ N9K-X97160YC-EX ■ N9K-C93180YC-EX ■ N9K-C93108TC-EX ■ N9K-C93180YC-FX ■ N9K-C93108TC-FX ■ N9K-C9348GC-FXP
N/A	<p>Limitations for ALE (Application Link Engine) uplink ports are listed at the following location:</p> <p>Limitations for ALE 40G Uplink Ports on Cisco Nexus 9000 Series Switches</p>
N/A	<p>Nested VXLAN is not supported on a Layer 3 interface or on a Layer 3 port-channel interface in Cisco NX-OS Release 9.3(4) and prior releases.</p>

Device Hardware

The following tables list the Cisco Nexus 9000 Series hardware that Cisco NX-OS Release 9.3(4) supports. For additional information about the supported hardware, see the *Hardware Installation Guide* for your Cisco Nexus 9000 Series device.

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Table 1 Cisco Nexus 9500 Switches

Product 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-X9736C-FX	Cisco Nexus 9500 36-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-X9732C-EX	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-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
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

Table 3 Cisco Nexus 9500 R-Series Line Cards

Product ID	Description	Maximum Quantity	
		Cisco Nexus 9504	Cisco Nexus 9508
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	4	8

	QSFP28 line card		
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 QSFP+ line card	4	8	16
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

Device Hardware

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
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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 Up to 8 Up to 10	Cisco Nexus 9504 Cisco Nexus 9508 Cisco Nexus 9516
N9K-PDC-3000W-B	3 KW DC power supply	Up to 4 Up to 8 Up to 10	Cisco Nexus 9504 Cisco Nexus 9508 Cisco Nexus 9516
N9K-PUV-3000W-B	3 KW Universal AC/DC power supply	Up to 4 Up to 8 Up to 10	Cisco Nexus 9504 Cisco Nexus 9508 Cisco Nexus 9516
N9K-PUV2-3000W-B	3.15-KW Dual Input Universal AC/DC Power Supply	Up to 4 Up to 8 Up to 10	Cisco Nexus 9504 Cisco Nexus 9508 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 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 (blue coloring)	3	93128TX	9396PX 9396TX

Device Hardware

Product ID	Description	Quantity	Cisco Nexus Switches	
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
NXA-FAN-160CFM-PE	Fan module with port-side exhaust airflow (blue coloring)	3	9364C ¹	93360YC-FX2
NXA-FAN-160CFM-PI	Fan module with port-side intake airflow (burgundy coloring)	3	9364C ¹	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 9236C ¹ 93108TC-EX 93108TC-FX ¹ 93180LC-EX ¹ 93180YC-EX 93180YC-FX ¹	9332PQ 9372PX 9372PX-E 9372TX 9372TX-E 9348GC-FXP ¹
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 9372PX 9372PX-E 9372TX 9372TX-E 9348GC-FXP
NXA-FAN-35CFM-PE	Fan module with port-side exhaust airflow (blue coloring)	4	92300YC ¹ 9232C ¹	9332C ¹
		6	9316D-GX	93600CD-GX
NXA-FAN-35CFM-PI	Fan module with port-side intake airflow	4	92300YC ¹	9332C ¹

Product ID	Description	Quantity	Cisco Nexus Switches	
	(burgundy coloring)		9232C ¹	
		6	9316D-GX	93600CD-GX
NXA-FAN-65CFM-PE	Fan module with port-side exhaust airflow (blue coloring)	3	93240YC-FX2 ¹	9336C-FX2 ¹
NXA-FAN-65CFM-PI	Fan module with port-side exhaust airflow (burgundy coloring)	3	93240YC-FX2 ¹	9336C-FX2 ¹

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

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	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-750W-PE	750-W AC power supply with port-side	2	9336C-FX2	9332C

Product ID	Description	Quantity	Cisco Nexus Switches	
	exhaust airflow (blue coloring) ¹		93240YC-FX2	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
NXA-PAC-1100W-PI2	1100-W AC power supply with port-side intake airflow (burgundy coloring)	2	93240YC-FX2 9332C 9316D-GX	9336C-FX2 93600CD-GX
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 93360YC-FX2	9364C
NXA-PAC-1200W-PI	1200-W AC power supply with port-side intake airflow (burgundy coloring)	2	9272Q 93360YC-FX2	9364C
N9K-PUV-1200W	3000-W Universal AC/DC power supply with bidirectional airflow (white coloring)	2	92160YC-X 9236C 92300YC 92304QC 9272Q ¹ 93108TC-EX 93108TC-FX 93360YC-FX2	93120TX 93128TX 93180LC-EX 93180YC-EX 93180YC-FX 9364C
NXA-PDC-930W-PE	930-W DC power supply with port-side exhaust airflow (blue coloring)	2	9272Q 93108TC-FX 93180LC-EX 93360YC-FX2	93120TX 93180YC-FX 9364C 92160YC-X
NXA-PDC-930W-PI	930-W DC power supply with port-side	2	9272Q 93108TC-FX	93120TX 93180YC-

Product ID	Description	Quantity	Cisco Nexus Switches	
	intake airflow (burgundy coloring)		93180LC-EX 93360YC- FX2	FX 9364C 92160YC-X
NXA-PDC-1100W-PE	1100-W DC power supply with port-side exhaust airflow (blue coloring)	2	93240YC- FX2 93600CD- GX 9316D-GX	9332C 9336C-FX2
NXA-PDC-1100W-PI	1100-W DC power supply with port-side intake airflow (burgundy coloring)	2	93240YC- FX2 93600CD- GX 9316D-GX	9332C 9336C-FX2
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
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
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
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	

Product ID	Description	Quantity	Cisco Nexus Switches	
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	

¹ Compatible with Cisco NX-OS Release 9.3(3) and later.

Table 15 Cisco Nexus 9200 and 9300 Switches

Cisco Nexus Switch	Description
N9K-C9336C-FX2	1-RU switch with 36 40-/100-Gb Ethernet QSFP28 ports.
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-C93360YC-FX2	2-RU switch with 96 10-/25-Gigabit SFP28 ports and 12 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-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-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-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-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-

Cisco Nexus Switch	Description
	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-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-C9236C	1-RU Top-of-Rack switch with 36 40-/100-Gigabit QSFP28 ports (144 10-/25-Gigabit ports when using breakout cables)
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.
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-C9316D-GX	1-RU switch with 16x400/100/40-Gbps ports.
N9K-C9332C	1-RU fixed switch with 32 40/100-Gigabit QSFP28 ports and 2 fixed 1/10-Gigabit SFP+ ports.
N9K-C9364C	2-RU Top-of-Rack switch with 64 40-/100-Gigabit QSFP28 ports and 2 1-/10-Gigabit SFP+ ports. - Ports 1 to 64 support 40/100-Gigabit speeds. - Ports 49 to 64 support MACsec encryption. Ports 65 and 66 support 1/10 Gigabit speeds.
N9K-C9364C-GX	2-RU fixed-port switch with 64 100-Gigabit SFP28 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-C9332PQ	1-RU switch with 32 40-Gigabit Ethernet QSFP+ ports (26 ports support 4x10

Cisco Nexus Switch	Description
	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
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-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)

Table 16 Cisco Nexus 9000 Series Uplink Modules

Product ID	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 this switch, see the [Transceiver Module \(TMG\) Compatibility Matrix](#).

To see the transceiver specifications and installation information, see [Install and Upgrade Guides](#).

FEX Modules

Straight-through FEX module support has been added for the following switches:

- N9K-C93360YC-FX2

For more information, see the [Cisco Nexus 9000 Series Switch FEX Support](#) page.

Note the following:

- Beginning with Cisco NX-OS Release 9.2(1), dual-homed FEX support is added to Cisco Nexus 93180YC-FX, and 93108TC-FX switches in addition to straight-through FEX support.
- Beginning with Cisco NX-OS Release 9.2(1), straight-through FEX support is added to Cisco Nexus 93240YC-FX2 and 9336C-FX2 switches.
- Beginning with Cisco NX-OS Release 9.3(1), straight-through FEX support is added to Cisco Nexus 93360YC-FX2.
- Active-Active FEX and straight-through FEX are not supported on the Cisco Nexus 92348GC switch.
- For FEX HIF port channels, enable the STP port type edge using the spanning tree port type edge [trunk] command.
- The Cisco Nexus 2248PQ, 2348TQ, 2348TQ-E, and 2348UPO FEXs support connections to the Cisco Nexus 9300 or 9500 platform switches by using supported breakout cables to connect a QSFP+ uplink on the FEX and an SFP+ link on the parent switch (4x10 G links).

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

Cisco Network Insights for Data Center

- Cisco NX-OS Release 9.3(4) supports the Cisco Network Insights Advisor (NIA) and Cisco Network Insights for Resources (NIR) on Cisco Nexus 9500 platform switches with 9700-EX and 9700-FX line cards. Also, Cisco Nexus 9200, 9300-EX and 9300-FX platform switches.

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](#) application.

Exceptions

- [Cisco Nexus 9316D-GX, 9364C-GX and 93600D-GX Switches](#)
- [Cisco Nexus 9200, 9300-EX, and 9300-FX Platform Switches](#)
- [Cisco Nexus 9500 Platform N9K-X9408PC-CFP2 Line Card and 9300 Platform Switches](#)
- [N9K-X96136YC-R Line Card](#)
- [N9K-X9736C-FX Line Card](#)

Exceptions

- [Nexus 9500 Cloud Scale](#)

Cisco Nexus 9316D-GX, 9364C-GX and 93600D-GX Switches

The following features are not supported for the Cisco Nexus 9316D-GX, 9364C-GX, and 93600D-GX switches:

- 50x2 Breakout - Cisco Nexus 9364C-GX
- 802.1x with VXLAN
- Asymmetric PFC
- Autonegotiation on all ports
- DCI Handoff (VXLAN to SR MPLS and MPLS to VXLAN)
- ERSPAN destination on Cisco Nexus 9200 and 9300-EX platform switches
- ERSPAN Termination
- EVPN Multisite
- FC-FEC for Cisco Nexus 9316D-GX and 93600CD-GX is not supported on the second lane of 50x2 breakout port.
- FEX
- Flex Link
- FTE
- IP Load Sharing New Options
- IPv6 FHS
- IPv6 Flow Label Hashing
- IPv6 MLD Snooping
- IPv6 Underlay, TRM + Multi-Site
- IPSG
- ISSU for Cisco Nexus 9316D-GX, 9364C-GX and 93600CD-GX
- ITD
- ITD with NAT
- ITD with VXLAN
- MPLS Strip
- MPLS/SR feature of L2 EVPN
- MTU Truncation
- Multi Auth with COA

Exceptions

- Multicast NLB
- Multicast over GRE
- Multiple VRF support on Tunnel Decap
- Multi-Site Scale (25 sites), 6 Border Gateways per site
- NAT
- PACL Redirect / Multicast (Tap Agg)
- PBR
- PFC WD
- PIM on SVI
- PMN
- PTP/TTAG
- PVLAN
- QinVNI
- RTP Monitoring
- Selective QinQ with multiple provider for VLANs
- Selective QinVNI with multiple provider for VLANs
- SR QoS
- SSX
- SVI Unnumbered
- TRM
- TRM + Multi-Site
- VMCT
- VRF Aware FT
- VXLAN F&L
- VXLAN - PBR
- VXLAN Static Route

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

Exceptions

- Cisco Nexus 9272PO and Cisco Nexus 92160YC platforms do not support the PXE boot of the Cisco NX-OS image from the loader.
- ACL filters to span sub-interface 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, and Cisco Nexus 9300-FX2 platform switches and the Cisco Nexus 9364C switch.
- Maximum Transmission Unit (MTU) checks for packets received with an MPLS header
- NetFlow is not supported on Cisco Nexus 9200 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 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

Exceptions

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-X96136YC-R Line Card

The following features are not supported for the N9K-X96136YC-R line card:

- Breakout is not supported.
- PTP and gPTP are not supported.

N9K-X9736C-FX Line Card

The following feature is not supported for the N9K-X9736C-FX line card:

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

Nexus 9500 Cloud Scale (EX/FX) Line Cards

The following features are not supported for Cisco Nexus 9500 cloud scale (EX/FX) line cards:

- FEXs

Related Content

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

Related Content

See the [Cisco Nexus 9000 Series Switches](#) page for the documentation.

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 Reference](#)

The Cisco NX-OS Supported MIBs URL:

<ftp://ftp.cisco.com/pub/mibs/supportlists/nexus9000/Nexus9000MIBSupportList.html>

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

The Cisco Nexus 9000 Series FPGA/EPLD Upgrade Release Notes, Release 9.3(4) is available at the following location:

[Cisco Nexus 9000 Series FPGA/EPLD Upgrade Release Notes, Release 9.3\(4\)](#)

When you downgrade from Cisco NX-OS Release 9.3(4) to an earlier release, the features that use the ACI+NX-OS Essentials, Advantage, and add-on licenses or the Hardware Streaming Telemetry license continue to work in honor mode in the downgraded version. In addition, the output of the show license usage command continues to include entries for these unsupported licenses.

For more information, see the [Cisco NX-OS Licensing Guide](#).

Documentation Feedback

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