



# NVIDIA Onyx Release Notes

Ver 3.10.4206

# Document History

Version	Date	Description of Change
01	March 9, 2023	Initial release of this software version

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# Chapter 1. Introduction

This document is the NVIDIA Onyx™ Release Notes for Ethernet.

Onyx is a comprehensive management software solution that provides optimal performance for cluster computing, enterprise data centers, and cloud computing over NVIDIA Spectrum™ IC family. The fabric management capabilities ensure the highest fabric performance while the chassis management ensures the longest switch up time.

The Onyx documentation package includes the following documents:

- ▶ **User Manual** provides general information about the scope, organization, and command line interface of Onyx as well as basic configuration examples.
- ▶ **Release Notes** provide information on the supported platforms, changes and new features, and reports on software known issues as well as bug fixes.

The NVIDIA Community also offers useful end-to-end and special How To guides at:

<https://enterprise-support.nvidia.com/s/>.



**Note:** In October 2022, NVIDIA announced the long-term support (LTS) releases of NVIDIA Networking products. Long-term support (LTS) is the practice of maintaining a product for an extended period, typically three years, to help increase products' stability. LTS releases include updates that address bugs fixes and security patches.

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# Chapter 2. Supported Platforms, Firmware, and Cables

## 2.1 Supported Switch Systems

Table 2-1. Supported Platforms

System Model	NVIDIA SKU	Description NVIDIA SKU
SN4700	920-9N301-00FB-0X0 920-9N301-00RB-0X0	NVIDIA Spectrum-3 based 10GbE to 400GbE, 1U Open Ethernet switch, 32xQSFP-DD ports, P2C/C2P airflow
SN4600C	920-9N302-00F7-0X0 920-9N302-00R7-0X0	NVIDIA Spectrum-3 64-port QSFP28 100GbE 2U Ethernet Switch, P2C/C2P airflow
SN3700C	920-9N201-00F7-0X0 920-9N201-00R7-0X0	NVIDIA Spectrum-2 32-Port QSFP28 100GbE Ethernet switch, P2C/C2P airflow
SN3700	920-9N201-00FA-0X0 920-9N201-00RA-0X0	NVIDIA Spectrum-2 32-Port QSFP56 200GbE Ethernet switch, P2C/C2P airflow
SN3420	920-9N213-00F7-0X0 920-9N213-00R7-0X0	NVIDIA Spectrum-2 based 25GbE/100GbE 1U Open Ethernet switch, 48 SFP28 ports and 12 QSFP28 ports, P2C/C2P airflow
SN2700B	920-9N101-00F4-0X0 920-9N101-00R4-0X0	NVIDIA Spectrum 32-port QSFP28 40GbE 1U Ethernet switch, P2C/C2P airflow
SN2700	920-9N101-00F7-0X4 920-9N101-00R7-0X2 920-9N101-00R7-0X0	NVIDIA Spectrum 32-port QSFP28 100GbE 1U Ethernet switch, P2C/C2P/Reverse airflow
SN2410	920-9N112-00F7-0X2 920-9N112-00R7-0X1	NVIDIA Spectrum 8-Port QSFP28 100GbE 48-port SFP28 25GbE 1U Ethernet dual core switch
SN2410B	920-9N112-00F7-0X0 920-9N112-00R7-0X2	NVIDIA Spectrum 8-port QSFP28 100GbE 48-Port SFP28 10GbE 1U Ethernet dual core switch, P2C/C2P airflow
SN2010	920-9N110-00F7-0X2 920-9N110-00R7-0X2	NVIDIA Spectrum 18-SFP port and 4-QSFP28 port 100GbE 1U Ethernet switch P2C/C2P airflow
SN2100	920-9N100-00F7-0X0 920-9N100-00R7-0X0	NVIDIA Spectrum 16-port QSFP28 100GbE 1U Ethernet switch

SN2100B	920-9N100-00F4-0X0 920-9N100-00R4-0X0	NVIDIA Spectrum 16-port QSFP28 40GbE 1U Ethernet switch
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**Note: The last Onyx release to provide support for SwitchX®-based platforms is 3.6.8012.**

## 2.2 Tested and Supported Firmware

- ▶ Spectrum firmware version 13.2010.4208
- ▶ Spectrum-2 firmware version 29.2010.4208
- ▶ Spectrum-3 firmware version 30.2010.4208

## 2.3 Software/Firmware Interoperability

- ▶ ConnectX-4 Lx firmware version 14.32.1010
- ▶ ConnectX-5 firmware 16.35.2000
- ▶ ConnectX-6 firmware 20.35.2000
- ▶ ConnectX-7 firmware 28.35.2000
- ▶ BlueField®-2 firmware version 24.35.2000
- ▶ NVIDIA NEO™ version 2.7.1
- ▶ ONIE version 5.3.0008

## 2.4 Supported BIOS Version

- ▶ X86 Celeron 4.6.5 – 0ABZS017\_02.02.x04
- ▶ x86 ATOM 5.6.5 – 0ACIF007\_02.02.x02
- ▶ x86 Broadwell 5.6.5 – 0ACLH004\_02.02.x10

## 2.5 Supported Software Licenses

For the software licenses supported with MLNX-OS software, please refer to the “Licenses” section of the “Getting Started” chapter of the *NVIDIA MLNX-OS User Manual*.

## 2.6 Upgrade from Previous Releases

Older versions of Onyx may require upgrading to one or more intermediate versions prior to upgrading to the latest. Missing an intermediate step may lead to errors. Please refer to the table below to identify the correct upgrade order.

Table 2-2. Supported Software Upgrades

Target Version	Verified Versions from Which to Upgrade
3.10.4xxx	3.10.3xxx, 3.10.2xxx
3.10.3xxx	3.10.2xxx, 3.10.1xxx
3.10.2xxx	3.10.1xxx, 3.10.0xxx, 3.9.3xxx
3.10.1xxx	3.10.0xxx, 3.9.3xxx, 3.9.2xxx
3.9.3xxx	3.9.2xxx, 3.9.1xxx
3.9.2xxx	3.9.1xxx, 3.9.0xxx
3.9.1xxx	3.9.0xxx, 3.8.2xxx
3.9.0xxx	3.8.2xxx, 3.8.1xxx
3.8.2xxx	3.8.1xxx, 3.7.1xxx
3.8.1xxx	3.8.1xxx, 3.7.1xxx
3.7.1xxx	3.7.0xxx, 3.6.8xxx, 3.6.6xxx
3.6.8xxx	3.6.6xxx, 3.6.5xxx
3.6.6xxx	3.6.5xxx, 3.6.4xxx
3.6.5xxx	3.6.4xxx, 3.6.3xxx
3.6.4xxx	3.6.3xxx, 3.6.2xxx
3.6.3xxx	3.6.2xxx, 3.6.1xxx
3.6.2xxx	3.6.1xxx, 3.5.1xxx
3.6.1xxx	3.5.1xxx, 3.5.0xxx, 3.4.3xxx
3.5.1xxx	3.5.0xxx, 3.4.3xxx
3.5.0xxx	3.4.3xxx, 3.4.2xxx
3.4.3xxx	3.4.2xxx, 3.4.1xxx
3.4.2xxx	3.4.1xxx, 3.4.0xxx

3.4.1xxx	3.4.0xxx, 3.3.5006
3.4.0xxx	3.3.5006

For upgrade instructions, refer to the section “Upgrading Operating System Software” in the NVIDIA Onyx User Manual.

## 2.7 Supported Cables

For a list of the NVIDIA-supported cables please visit the LinkX™ Cables and Transceivers page of the NVIDIA Website at the following link:

<http://www.mellanox.com/products/interconnect/cables-configurator.php>.

## 2.8 Supported Port Speeds

### 2.8.1 Spectrum Supported Port Speeds

Table 2-3. Spectrum Supported Port Speeds

Speed [GbE]	AutoNeg	Force			Cable	Cable Length [m]
		RS FEC	FC FEC	No FEC		
100	✓	✓	✗	✓	Optic	Up to 100
					Active Optic Module	Up to 80km
					Copper	Up to 5
25/50	✓	✓	✓	✓	Optic	Up to 100
					Active Optic Module	Up to 10km
					Copper	Up to 5
10/40	✓	✗	✓	✓	Optic	Up to 100
					Active Optic Module	Up to 80km
					Copper	Up to 5
1	✓	✗	✗	✓	Optic	Up to 100
					Copper	Up to 5



## 2.8.2 Spectrum-2 Supported Port Speeds

Table 2-4. SN3700/SN3700C/SN3420 Supported Port Speeds

Speed [GbE]	AutoNeg	Force			Cable	Cable Length [m]
		RS FEC	FC FEC	No FEC		
50G PAM4*: 200 (split to 4) 100 (split to 2) 50 (no split)	✓	✓	✗	✗	Optic	Up to 30
					Active Optic Module	Up to 100
					Copper	Up to 2.5
100 (NRZ)	✓	✓	✗	✓	Optic	Up to 100
					Active Optic Module	Up to 80km
					Copper	Up to 5**
25/50 (NRZ)	✓	✓	✓	✓	Optic	Up to 100
					Active Optic Module	Up to 10km
					Copper	Up to 5**
10/40	✓	✗	✗	✓	Optic	Up to 100
					Active Optic Module	Up to 10km
					Copper	Up to 5**
1	✓	✗	✗	✓	Optic	Up to 100
					Copper	Up to 5**
*PAM4 is only supported on SN3700 system and is the system's default						
** On SN3420 system, copper cables are supported up to 3m						
When Connecting NVIDIA-to-NVIDIA in PAM4 using DAC, Auto-Neg should always be enabled						

## 2.8.3 Spectrum-3 Supported Port Speeds

Table 2-5. SN4600C Supported Port Speeds

Speed [GbE]	AutoNeg	Force			Cable	Cable Length [m]
		RS FEC	FC FEC	No FEC		
50G PAM4*: 200 (split to 4) 100 (split to 2) 50 (no split)	✓	✓	✗	✗	Optic	Up to 100
					Copper	Up to 2.5
100 (NRZ)	✓	✓	✗	✓	Optic	Up to 100
					Copper	Up to 3
25/50 (NRZ)	✓	✓	✓	✓	Optic	Up to 100
					Copper	Up to 5
10/40	✓	✗	✗	✓	Optic	Up to 100
					Copper	Up to 5

1	✓	✗	✗	✓	Optic	Up to 5
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Table 2-6. SN4700 Supported Port Speeds

Speed [GbE]	AutoNeg	Force			Cable	Cable Length [m]
		RS FEC	FC FEC	No FEC		
50G PAM4*: 400 (split to 8) 200 (split to 4) 100 (split to 2) 50 (no split)	✓	✓	✗	✗	Optic	Up to 50
					Copper	Up to 2.5
50G PAM4*: 200 (split to 4) 100 (split to 2) 50 (no split)	✓	✓	✗	✗	Optic	Up to 100
					Copper	Up to 2.5
100 (NRZ)	✓	✓	✗	✓	Optic	Up to 100
					Copper	Up to 5
25/50 (NRZ)	✓	✓	✓	✓	Optic	Up to 100
					Copper	Up to 5
10/40	✓	✗	✗	✓	Optic	Up to 100
					Copper	Up to 5
1	✓	✗	✗	✓	Optic	Up to 5

\*PAM4 is the system's default

When Connecting NVIDIA-to-NVIDIA in PAM4 using DAC, Auto-Neg should always be enabled

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# Chapter 3. Changes and New Features

Table 3-1. Changes and New Features

Release #	Category	Description
3.10.4206	General	<a href="#">Bug fixes</a>
3.10.4100	General	Bug fixes
3.10.4006	10GBASE-T Transceiver	Added support for 10GBASE-T SFP copper transceiver (Methode DM7053).
3.10.4006	SN3700, Module	On SN3700 system, added support for 200GbE AOC VPI module MFS1S00-HxxxV.
3.10.4006	SN4600C, DR1 Transceiver	On SN4600C system, added support for DR1 transceiver.
3.10.4006	SN4700, Transceiver	On SN4700 system, added support for 400GbE LR4 optical transceiver.
3.10.4006	General	Bug fixes
3.10.3100	Cables, QSFP-DD	Added support for split to 8 on QSFP-DD for PAM4 rates on Spectrum-3 systems.
3.10.3100	General	Bug fixes
3.10.3004	System management	Enabled IP Filter feature by default and applied default firewall rules. If any of the rules is changed (delete/modify/moved), the full rule list for this chain will appear in the "show running-config" command. To review the default firewall rules refer to section the "Control Plane Policing (CoPP)" in the user manual.
3.10.3004	TX Timestamp	Added support for the following parameters to be saved after reset: -pi_proportional_const, pi_integral_const

		-fault_reset_interval -tx_timestamp_timeout
3.10.3004	General	Bug fixes
3.10.2202	General	Bug fixes
3.10.2002	LDAP Nested Groups	Added support for authenticating from LDAP Nested Group. For more information, see LDAP. For more information, see "User Management and Security Commands" section in the user manual.
3.10.2002	PTP Global Counters	Added support for new PTP global counters. For more information, see "PTP Commands" section in the user manual.
3.10.2002	Cables	Added support for KS-100GAOC-DQ-10 (Hisense and WTD) 100G DQ AOC cable on Spectrum-3 systems when connecting to ConnectX-6 systems.
3.10.2002	Modules	Added support for ColorZ modules on SN4700 and SN4600C systems.
3.10.2002	Modules, DR4	Added support for Finisar DR4 (FTCD4523E2PCM) on Spectrum-2 and Spectrum-3 systems.
3.10.2002	Systems SN4600C	Added support for SN4600C A1 Spectrum-2 systems.
3.10.2002	General	Bug fixes
3.9.3302	WebUI	Rebranding WebUI to NVIDIA design.
3.9.3302	General	Bug fixes
3.9.3202	System Dump	System dump (related CLI command is "debug generate dump") was extended with interface link. diagnostic information.
3.9.3202	ACL	Added support for new mirroring action in ACL. For more information see "monitor session" command and the "ACL" section in the user manual.
3.9.3202	Gratuitous ARP (GARP)	Added GA-level support for gratuitous ARP in EVPN on IPv4, also when ARP Suppression is enabled. The feature allows generating GARP packets on the egress VTEP only when neighbor-

		<p>suppression is enabled on both VTEPs in the chain (ingress and egress).</p> <p>Added GA-level support for Unsolicited Neighbor Advertisement in EVPN on IPv6, also when Neighbor Suppression is enabled.</p> <p>The feature allows forwarding the Unsolicited NA packets through the tunnel despite the Neighbor Suppression.</p> <p>The suppression should be enabled on interface NVE or on a particular VLAN of the VTEP.</p>
3.9.3202	Learning Unsolicited Neighbors	Added support for learning unsolicited neighbors per interface. For more information see "Management Interface Commands" in the user manual.
3.9.3202	PTP	Added beta-level support for PTP on Spectrum-3 systems.
3.9.3202	SN3700, Module	Added support for new module MMS1W50-HM (2km transceiver FR4) for 200GbE.
3.9.3202	SN4600C, Fastboot	Added beta-level support for Fastboot in NRZ on SN4600C system.
3.9.3202	Systems, SN4700	Added support for Spectrum-3-based SN4700 system.
3.9.3202	OSS Compliance	Added support for uploading the Open Source Licenses files. For more information see "file open-source-licenses upload" command in the "Configuration Management Commands" section of the user manual.
3.9.3202	Security, IPsec	Updated IPsec to improve security and added support for IKEv2 and new ciphers. For more information, see "crypto ipsec peer local" command in Cryptographic (X.509, IPsec) and Encryption section of the user manual.
3.9.3124	General	Bug Fixes
3.9.2500	Gratuitous ARP (GARP)	<p>The feature allows forwarding the Unsolicited NA packets through the tunnel despite the Neighbour Suppression.</p> <p>Added GA-level support for gratuitous ARP in EVPN on IPv4, also when ARP Suppression is enabled.</p> <p>The feature allows generating GARP packets on the egress VTEP only when neighbor-</p>

		<p>suppression is enabled on both VTEPs in the chain (ingress and egress).</p> <p>Added GA-level support for Unsolicited Neighbor Advertisement in EVPN on IPv6, also when Neighbour Suppression is enabled.</p> <p>The suppression should be enabled on interface NVE or on a particular VLAN of the VTEP.</p>
3.9.2500	General	Bug Fixes
3.9.2400	Gratuitous ARP (GARP)	<p>Added beta-level support for gratuitous ARP in EVPN on IPv4, also when ARP Suppression is enabled.</p> <p>The feature allows generating GARP packets on the egress VTEP only when neighbor-suppression is enabled on both VTEPs in the chain (ingress and egress). The suppression should be enabled on interface NVE or on a particular VLAN of the VTEP.</p>
3.9.2400	MLAG	Added support for MLAG interface in OpenFlow. For more information, see "Support of MLAG Interface in OpenFlow" section and "openflow mode hybrid" command in the user manual.
3.9.2400	Cables	Added support for cable MMS1W50-HM 2km NVIDIA transceiver, IB HDR, up to 200Gb/s, QSFP56, MPO, 1310nm, FR4 on MQM8700-HS2R.
3.9.2300	Cables	<p>Added GA-level support for Active Optical Cables P28169-B2x and splitter cables P26659-B2x.</p> <p>*Note that the cables above are HDR-only and are supported up to 30 meters.</p>
3.9.2300	Docker	<p>Added support for the following docker extensions:</p> <ol style="list-style-type: none"> <li>1. Added possibility to pass environment variables to container on start.</li> <li>2. Added possibility to configure logging levels for docker (logging-severity) and for each started docker container (logging-facility).</li> </ol> <p>For more information, see "Virtualization" section in the user manual.</p>
3.9.2302	PTP	Added possibility to ignore the management messages on the port in a forced master mode in order to improve the security and

		avoid storm which can cause the management messages
3.9.2302	SN3420, Cables and Modules	Added support for Finisar 1G 10km module (FTLF1318P3BTL) on SN3420 system.
3.9.2302	SN3420, Cables and Modules	Added support for Finisar 1GBase-T 1G 100m module (FCLF8522P2BTL) on SN3420 system.
3.9.2302	SN3700, Cables and Modules	Added support for 200GBASE-SR4 QSFP56 module (R5Z83A) in SN3700 system.
3.9.2302	SN3700, SN4700, Cables and Modules	Added support for the following HDR OPNs on SN3700, SN4700 systems at rates of 200GbE: MCP1650-HxxxEyy (copper cable up to 2m) MCP7H50-HxxxRyy (copper splitter cable up to 2m) MMA1T00-HS (transceiver) MFS1S00-HxxxE (AOC) MFS1S50-HxxxE (AOC splitter cable)
3.9.2302	SN4600C, Ports	Added support for up to 5W on ports 49 to 64 on SN4600C system.
3.9.2302	General	Bug fixes
3.9.2110	Systems	Added GA-level support for SN4700 A0 system.
3.9.2110	IGMP Snooping	Added support for IGMP snooping report profile filtering and max-group limit. For more information, see "IGMP Snooping Commands" and "Debugging" sections in the user manual.
3.9.2110	General	Bug fixes
3.9.2002	BER Monitor	Added support for signal degradation on Quantum-based modular system CS8500.
3.9.2002	Cables	Added support for the following Active Fiber HDR Cables on Quantum systems: MFS1S00-H130E (130m), MFS1S00-H150E (150m), and MFS1S00-H200E (200m).
3.9.2006	CRC	Added beta-level support for replacing CRC field with PTP timestamp on Spectrum-2 and Spectrum-3 systems. For more information see "System Synchronization" section in the user manual.
3.9.2006	Deprecation	In the next GA release, version 3.9.3114, the commands "ip l3", "no ip l3" and "no ip l3

		force" will be deprecated. Upon system upgrade, "ip l3" mode will be enabled automatically.
3.9.2006	Management VRF	Added support for Management VRF. For more information, see "Management Interfaces" section in the user manual.
3.9.2006	Modules	Added support for 40GbE SWDM4 modules on SN2700 system.
3.9.2006	Modules	Added support for 100GbE CWDM4 transceiver MMA1L30-CM.
3.9.2006	OpenFlow	Added ability to add router ports into OpenFlow bridge.
3.9.2006	Password	Added support for password hardening. For more information see "Getting Started" section in the user manual.
3.9.2006	PBR	Added support for Policy Based Routing (PBR). For more information, see "IP Routing Overview" and "General IP Routing Commands" section in the user manual.
3.9.2006	PIM BiDir	Added GA-level support for Bidirectional PIM. For more information, see "IGMP and PIM" section in the user manual.
3.9.2006	PTP	Added GA-level support for PTP on Spectrum-2 systems.
3.9.2006	PTP	Added beta-level support for PTP on Spectrum-3 systems.
3.9.2006	PTP TTL	Added ability to set the TTL value of the PTP messages. For more information, see "PTP Commands" section in the user manual.
3.9.2002	Systems	Added support for SwitchIB-2 SB7880 system as an IB Router.
3.9.2006	WJH	Added support for WHAT JUST HAPPENED event suppression by the severity for each drop group. For more information, see "Configure What Just Happened (WJH) Using CLI" in the user manual.
3.9.2006	WJH SNMP	Added support for WHAT JUST HAPPENED SNMP. For more information, see "Configure



		What Just Happened (WJH) Using CLI" section in the user manual.
3.9.2006	WJH, Buffer	Added Buffer Occupancy filed in WJH buffer event. For more information, see "Configure What Just Happened (WJH) Using CLI" section in the user manual.
3.9.1900	Bidirectional PIM	Added beta-level support for Bidirectional PIM. For more information see "Multicast" section in the user manual.
3.9.1900	General	Bug fixes
3.9.1900	PTP	Added beta-level support for PTP on Spectrum-2 systems.
3.9.1604	Docker Login	Added ability to securely login and logout through the CLI to various server repositories and pull docker images from these servers. See the commands "docker login", "docker logout", and "show docker login" in the Virtualization section of the user manual.
3.9.1604	General	Bug fixes
3.9.1604	OpenFlow	Added support for using a maximum number of ports per ASIC in an OpenFlow group.
3.9.1304	EVPN	Added GA-level EVPN centralized gateway functionality.
3.9.1302	Scalable Hierarchical Aggregation and Reduction Protocol (SHARP)™	Added support for MAD security policy for NVIDIA SHARP.
3.9.1014	10GBASE-T modules	Added support for 10GBASE-T modules on SN3700 and SN3700C systems.
3.9.1014	Counters	Added the ability to use a range of ports in "show interfaces ethernet counters" commands. For more information see the following sections in the user manual: "Ethernet Interfaces Commands," "QoS Commands," "Link Aggregation Group (LAG)," and "MLAG Commands."
3.9.1014	CRC	Added support for replacing CRC field with timestamp on Spectrum-2 and Spectrum-3

		systems. For more information see "System Synchronozation" section in the user manual.
3.9.1014	Ethernet Interfaces	Improved the performance of "show running config" & "show configuration running" commands. When running the above commands for the first time after configuring the switch, the configuration is saved in internal cache and the execution time of these commands will be as in previous releases. Each following execution of these commands will retrieve the running configuration from internal cache and will display the output immediately. In case configuration on switch is changed again, the internal cache will be re-build and the output of these commands will be as in previous releases.
3.9.1014	Link, Auto-Negotiation, SN4600C	Added GA-level support for link auto-negotiation on SN4600C systems.
3.9.1014	Link, Auto-Negotiation, SN4700	Added beta-level support for link auto-negotiation on SN4700 systems.
3.9.1014	PAM4, SN4700	Extended interface speed configuration with additional speeds for PAM4.
3.9.1014	Ports, Reset Port	Added support for resetting an interface to its default settings. For information see "default interface ethernet" command under "Ethernet Interface Commands" section in the user manual.
3.9.1014	Systems	Added beta-level support for SN4700 system.
3.9.1014	Systems	Added GA-level support for SN3700 system.
3.9.1014	Systems	Added GA-support for SN3420.
3.9.1014	Telemetry, Spectrum-3	Added beta-level support for Telemetry Threshold Spectrum-3 systems.
3.9.1014	VRRP	Added support for IPv6 in VRRP and MAGP.
3.9.1014	VXLAN, IPv6	Added support for IPv6 Neighbor Suppression. For more information see "nve neigh-suppression" in the VXLAN Commands section of the user manual.
3.9.1014	Web UI	Added support for BGP feature in the Web UI.

3.9.1014	Web UI	Added support for VRF feature in the Web UI.
3.9.0952	TQ8xxx	Added support for 10km cables.
3.9.0920	General	Bug fixes
3.9.0914	Cables	Enabled KP4RS FEC on Active Fiber cable up to 30m (OPN: MFS1S00-V0xxE).
3.9.0914	General	Bug fixes
3.9.0914	IP Address	Added command "switchmode exceptions sip-equals-dip" to disable the packet drops for packets with a source IP address that equals to the destination IP address. For more information, see "Configure What Just Happened (WJH) Using CLI" section in the user manual.
3.9.0914	Link, Auto-Negotiation	Added GA-level support for link auto-negotiation on Spectrum-2 systems.
3.9.0914	Link, Auto-Negotiation	Added ES-level support for link auto-negotiation on Spectrum-3 systems.
3.9.0914	MAC	Added support for MAC masking in log messages. For more information, see "Logging" section in the user manual.
3.9.0914	SHARP	Added support for legacy SHARP port and performance counters.
3.9.0914	SN4700, QSFP-DD	Added split capabilities to QSFP-DD cables on SN4700 system. For more information, see "Ethernet Interfaces" section in the user manual.
3.9.0914	UFM	Added support for IPv6 in UFM Agent.
3.9.0914	WJH	Added support for WJH auto-export file generation. For more information, see "Logging" section in the user manual.
3.9.0914	WJH	Extended WHAT JUST HAPPENED ACL display to show the user ACL rule information of dropped packets. For more information, see "show WHAT JUST HAPPENED" command in the user manual. *Not including ACL rules added using OpenFlow. This will be supported in future releases.
3.9.0612	General	Bug fixes

3.9.0608	BGP Unnumbered	Added GA-level support for BGP unnumbered interfaces.
3.9.0608	Configuration Management	Added support for automated configuration file backup.
3.9.0608	EVPN	Added beta-level EVPN centralized gateway functionality.
3.9.0608	General	Bug fixes
3.9.0608	QSFP-DD, Cables	Added support for QSFP-DD Ethernet cables.
3.9.0608	Recirculation Port	Added GA-level support for port recirculation feature for Spectrum-based systems, which supports display of buffer dropped packets by circulating them into the CPU using a reserved port. For more information see "Ethernet Interfaces" section in the user manual.
3.9.0608	SN3420	Added ES-level support for SN3420 system.
3.9.0608	SN3700	Added GA-level support for 200GbE NVIDIA↔NVIDIA in Force mode.
3.9.0608	SN4600C	Added ES-level support for SN4600C system.
3.9.0608	SN4700	Added ES-level support for breakout cables on Spectrum-3 systems.
3.9.0608	SN4700	Added ES-level support for 200GbE NVIDIA↔NVIDIA in Force mode.
3.9.0608	SN4700	Added ES-level support for 200GbE and 400GbE speeds on SN4700 system with optic and copper cables.
3.9.0608	Spectrum-2	Added software GA-level support for DC power supply SN3700 system.
3.9.0608	Telemetry, Spectrum-2	Added beta-level support for Telemetry Threshold on Spectrum-2-based systems.
3.9.0608	Telemetry, Spectrum-2	Added support for Telemetry Sampling on Spectrum-2-based systems.
3.9.0608	WJH	Added support for WJH concurrent operation of raw and aggregated channels on the same level.

3.9.0608	WJH	Added support for Forwarding and ACL drop groups in WJH aggregation.
3.9.0608	WJH	Added support for WJH Layer-1 raw and aggregation data.
3.9.0450	Configuration Management	Added support for automated configuration file backup.
3.9.0300	Cables	Added support for the following OPNs: MMA1L30-CM MMA1T00-HS MCA1J00-H003E/4E MCA7J50-H00XX
3.9.0300	DCQCN	Added support for DCQCN Congestion Control.
3.9.0300	General	Bug fixes
3.9.0300	SHARP	SHARP (SAT) is at GA level. *SAT: Streaming Aggregation Tree
3.9.0300	Ports; Speed	Added beta-level support for 200Gb/s NVIDIA↔NVIDIA Force.
3.9.0300	Recirculation Port	Added beta-level support for port recirculation feature for Spectrum-based systems, which supports display of buffer dropped packets by circulating them into the CPU using a reserved port. For more information see "Ethernet Interfaces" section in the user manual.
3.9.0300	RoCE	Enhanced the "show roce" command to display a list of exceptions from the default profile on RoCE.
3.9.0300	Security	SSH Login Notification now displays the following information after authentication: -Last successful and unsuccessful login date/time -Number of unsuccessful logins since last successful login -Changes to user's account since last login (password, capability) -Location of last successful and unsuccessful login (terminal or IP) -Number of total successful logins since last X days

3.9.0300	Security	Upgraded OpenSSH version to 8.0p1.
3.9.0300	Split	Added ability to CS8500 systems to configure split-ready profile and split ports using CLI.
3.9.0300	WJH	Added support for Layer-1 aggregation data.
3.8.2306	General	Bug fixes
3.8.2204	BGP	Added new show commands to display received/advertised BGP routes for a specific address-family per neighbor. See "show ip bgp neighbors received/advertised address-family" command in the user manual.
3.8.2204	BGP	Added display of enhanced route-refresh capability to the existing "show ip bgp neighbor *" command.
3.8.2204	Cables	HDR Active Copper Cables are now supported between two switches.
3.8.2204	EVPN	Added MAC mobility sequence number information to the "show ip bgp evpn detail" command.
3.8.2204	EVPN	Added a new show command to display current VXLAN tunnels when running in NVE BGP controller mode.
3.8.2204	EVPN	Replaced auto-completion of "show ip bgp evpn route-type *" command with string keywords instead on numbers.
3.8.2204	EVPN	Added VLAN to VNI auto-mapping capabilities. For more information, see "interface nve auto-vlan-map" command in the user manual.
3.8.2110	General	Bug fixes
3.8.2102	BGP	Added support for BGP IP prefix-list filtering and updated prefix-list in context mode. See "BGP Commands" section in user manual, for new CLI commands. Note: "export" direction is at GA-level while "import" direction in "route-table prefix-list" command is at alpha-level testing.
3.8.2102	BPDU Guard	Added reflection of BPDU guard errors in the interface status show command. When an interface receives a BPDU packet while BPDU

		guard is enabled, the status will show "down (suspended)." Added log the BPDU Guard event occurred. See "BPDU Guard" section in user manual.
3.8.2102	EVPN	Added EVPN MAC mobility warnings messages to assist in network and administration management. See EVPN Logging example in the user manual.
3.8.2102	General	Bug fixes
3.8.2102	NTP Server	Added new CLI commands that allow the user the block the switch's ability to function as an NTP server. For more information, see NTP commands in "NTP and Clock" section in the user manual.
3.8.2102	PFC	Added the ability to disable global PFC mode regardless of the default.
3.8.2102	PTP	The feature allows for tracking of state changes of the PTP stack. The new show command allows the following: -Displays the last 100 entries for Offset from Master and Mean Path Delay. -Enables logging of the mean path delay value if it exceeds the specified threshold. -Displays PTP time-property parameters (time source, current utc offset etc). -Displays all PTP foreign masters per each PTP port. -Enables logging of the offset from master value if it exceeds the specified threshold For more info see "PTP Commands" section in the user manual for new CLI commands.
3.8.2102	Subnet Manager	Added additional options for IB partition's member configuration (all-cas, all-routers, all-switches, all-vcas) to better align with keywords that are supported by opensm when configuring IB partitions. For more information see "SM Commands" section in the user manual.
3.8.2102	Syslog UDP/TCP	The "crypto certificate system-self-signed regenerate" command was added with the option to specify the certificate CA basic constraints flag. For more information see "

		Cryptographic (X.509, IPSec) and Encryption" section in the user manual.
3.8.2102	WJH	Added the following WHAT JUST HAPPENED CLI enhancements and changes: -Changed display of dropped packets captured by WJH into a single table. -Removed "Size" columns and added "Severity" and "Proposed Action" columns. -Added support for LAG/MLAG port.
3.8.2008	General	Bug fixes
3.8.2004	General	Removed "StoreFabric" wording from the HPE switch software in both the CLI and the web UI. Note: In case of an upgrade from versions 3.8.1000 or older to 3.8.2000 or newer, clear configuration with reset-factory to completely remove "StoreFabric" wording.
3.8.2004	General	Added support to prevent disk from running out of space due to sysdump files.
3.8.2004	General	Bug fixes
3.8.2004	InfiniBand Interfaces	Added FDR support in NVIDIA Quantum switch systems when using optical cables of up to 30m.
3.8.2004	Link Down Reasoning	Added support for Link Down Reasoning.
3.8.2004	Link Speed	Added engineering sample support for 200GbE link speed for SN3700 Spectrum-2 switch systems (currently works only between NVIDIA switches with optic cables up to 5m and copper cables up to 2m only).
3.8.2004	OneView	Added a new requirement: NF197 Support for Backup/Restore.
3.8.2004	PTP	Added PTP support for IPv6.
3.8.2004	RoCE	Added the ability to clear all counters that are shown under "show interface ethernet counters roce" including max-usage counters. For more information see "RoCE Commands" section in the user manual.
3.8.2004	RoCE Automation	Added autoconfiguration of shared buffers, ETS, trust mode, and ECN in RoCE scenario.



		For more information, see “RoCE” section in the user manual.
3.8.2004	Switch System	Added software-level support for SN3700cM Spectrum-2 switch systems.
3.8.1892	PLR	Added support to the Physical Layer Retransmission (PLR) functionality for HDR speed.
3.8.1888	Link Up Speed	Link up time improvements. For SN3700/SN3700C at 100 GbE, the link up speed now takes up to 36 seconds (see section “Supported Port Speeds”).
3.8.1888	Switch System	Added software GA-level support for SN3700 and SN3700C Spectrum-2 switch systems.
3.8.1888	Switch System	Added GA-level support for EVPN on Spectrum-2 SN3700/3700C systems.
3.8.1302	Configuration Management	Added the ability to delete shared storage for the docker during “reset factory.” See “reset factory” command in the user manual.
3.8.1302	General	Bug fixes
3.8.1302	Global Flow Control	Added support for Global Flow Control Watchdog. For further information, see section “PFC Watchdog” in the user manual.
3.8.1302	QoS	Enabled PCP and/or DSCP fields rewrite on a port configuration, with any port trust mode configured (L2/L3/both).
3.8.1206	Switch Systems	Added GA level support for HDR (200Gb/s) capable 800-port InfiniBand switch system (CS8500).
3.8.1000	Breakout Cables	Added ability for QTM8700 system to configure split-ready mode and breakout cable configuration using MADs.
3.8.1000	Cables	Added support for HDR Y splitter copper cable MCP7H50-H001R30.
3.8.1000	Cables	Added Spectrum Finisar SFP 10GbE-ZR module PN: FTLX1871D3BxL up to 80km.

3.8.1000	CLI	Added Ctrl-w key shortcut support to the CLI. See section “CLI Shortcuts” in the user manual.
3.8.1000	CLI	Enhanced “show running-config” command to display information for a specific interface. Example: “show running-config interface ethernet 1/1”
3.8.1000	CLI	Enhanced “show running-config” command to show differences between saved configurations. Example: “show running-config diff”
3.8.1000	Docker	Added the option to mount USB to a docker container.
3.8.1000	Docker	Enhanced dockers performance with Overlay2 driver.
3.8.1000	ECMP	Added GA level support for consistent hashing function.
3.8.1000	EVPN	Added support for EVPN (L2). Supported scale: Up to 512VNIs and 10K MAC addresses
3.8.1000	IP Routing	Added the option to configure IPv4 Link Local Range on an IP interface.
3.8.1000	IPv6	Added IPv6 support for RADIUS and Syslog.
3.8.1000	JSON	Added support for running a single HTTP request for both authentication and JSON request.
3.8.1000	LAG	Added support for configuring symmetric LAG hash.
3.8.1000	PIM	Added support for PIM with MLAG configuration.
3.8.1000	Security	Added support for EAP/PEAP cipher on RADIUS client.
3.8.1000	Shared Buffers	Added command to clear multicast shared buffers counters. See the command “clear buffers pool mc-buffers max-usage” in the user manual.
3.8.1000	System Management	Added support for “Management Source IP” for SNMP protocols.

		See section “Management Source IP Address” in the user manual.
3.8.1000	System Management	Added support for “Management Source IP” for IPv6 interfaces for RADIUS and Syslog protocols.
3.8.1000	Telemetry	Added drop reason group granularity for displaying and clearing dropped packets in WHAT JUST HAPPENED (WJH) capability.
3.8.1000	Telemetry	Improved WHAT JUST HAPPENED (WJH) response time.
3.8.1000	Telemetry	Added support for deleting telemetry statistics files.
3.8.1000	Telemetry	Added ability to create PCAP files from dropped packets when using the WHAT JUST HAPPENED (WJH) capability at GA level.
3.8.1000	Telemetry	Added a Wireshark dissector in order to analyze WJH PCAP files. The analyzed file displays the packets’ added metadata at GA level.
3.8.1000	Telemetry	Upon packet loss, or a critical system failure, the system will auto-generate a .pcap file when using the WHAT JUST HAPPENED capability at GA level.
3.8.1000	Telemetry	Added support for Router packet discards in WHAT JUST HAPPENED.
3.8.1000	WebUI	Removed a few insecure parameters of the HTTP header.

## 3.1 Customer Affecting Changes

Table 4-2. Customer Affecting Changes

Release #	Category	Description
3.10.4100	Deprecation, SNMPv3 Privacy Mode	SNMPv3 privacy mode 3des is no longer supported in secure mode. If secure mode is enabled during image install, SNMPv3 privacy mode 3des will be changed to aes-128 by default.
3.10.4100	SSH, RSA/DSA Keys	When generating new SSH host keys in secure mode, only RSA keys will be generated. The generation of DSA keys is no longer supported in secure mode (still available in non-secure mode).
3.10.4006	Deprecation, Virtual Machine	Virtual Machine is no longer supported. As of this release, the following CLI commands are deprecated and will not be available: -virtual-machine enable -virtual-machine host -virtual-machine vnet -virtual-machine volume -show virtual-machine configured -show virtual-machine host
3.10.4006	Authentication	OpenSSL version was upgraded to version 1.1.1g. It is compatible for clients with OpenSSL 1.1.1 and above.
3.10.4006	Authentication	Due to OpenSSL upgrade in the latest version, some ciphers have become deprecated and therefore not supported by default. Due to this upgrade, configuring the LDAP to use ssl ciphers may not work. To bypass this, add the following string on customer LDAP server "ldaps:///" to the SLAPD_SERVICES in the LDAP config file.
3.10.4006	Deprecation, SSLv3 Ciphers	From version 3.10.4000, the SSLv3 ciphers are deprecated, and will not be supported for any web connection.
3.10.4006	Deprecation, Puppet Agent	All Puppet tools are no longer supported. As of this release, the following commands are deprecated and will not be available: -puppet-agent -puppet-agent [vrf <vrf-name>] enable [force] -(config puppet-agent) # master-hostname

		<hostname> -(config puppet-agent) # enable -(config puppet-agent) # run-interval <time> -(config puppet-agent) # restart -show puppet-agent -show puppet-agent log [[not] [matching   continuous] <string>   files [[not] matching] <string>]
3.10.4006	Chassis Management	SN4600C, SN3700C, SN2700, SN2410 systems, AC/DC voltage sensors were removed and are no longer displayed in the UI.
3.10.4006	Authentication	OpenSSL version was upgraded to version 1.1.1g. It is compatible for clients with OpenSSL 1.1.1 and above.
3.10.3004	Deprecation	As of this software version, the command "show interfaces ethernet transceiver counters details" is deprecated. Use the command "show interfaces ethernet transceiver counters" instead.
3.10.3004	Deprecation	All Puppet tools will be deprecated in the next release. For more information, see "Puppet Agent" section in the user manual.
3.10.3004	Security	As of 3.10.3004, the IP Filter feature is now enabled by default with a set of given rules. When this configuration is disabled, the "no ip filter enable" command will appear in the running config after the upgrade. After upgrade: In case the feature is enabled, but has different rules than the default, the running config will display the relevant rules that are different than the new default. For more information, see "Control Plane Policing (CoPP)" section in the user manual.
3.10.1000	Event Logging	The log output of port state change event has changed. Old output: Oct 14 07:51:53 (switch) portd[11477]: Interface IB 1/19 changed state to UP  New output: Oct 14 07:51:53 (switch) portd[11477]: [portd.NOTICE]: Interface IB 1/19 changed state to UP

3.10.1000	show cpld	Changed output of "show cpld" command. For more information, see "Chassis Management Commands" section in the user manual.
3.9.3206	Virtual Machine	<p>From the next release, 3.10.20xx, Virtual Machine will not be supported.</p> <p>The following CLI commands will not be available:</p> <ul style="list-style-type: none"> <li>-virtual-machine enable</li> <li>-virtual-machine host</li> <li>-virtual-machine vnet</li> <li>-virtual-machine volume</li> <li>-show virtual-machine configured</li> <li>-show virtual-machine host</li> </ul> <p>For more details, see the "Virtual Machine" chapter in the User Manual.</p>
3.9.3202	Deprecation	<p>As of 3.9.3200 SSH cipher diffie-hellman-group14-sha1 is deprecated and was removed from strict SSH ciphers to non-strict ciphers.</p>
3.9.3124	Deprecation	<p>As of 3.9.3124, the commands "ip l3", "no ip l3", and "no ip l3 force" are deprecated. Upon system upgrade, "ip l3" mode will be enabled automatically.</p>
3.9.3124	MAC	Changed the show command outputs to be lowercase MAC address.
3.9.3124	Security, IPsec	<ul style="list-style-type: none"> <li>• crypto ipsec peer &lt;ip&gt; local &lt;ip&gt; keying ike negotiation ikev1/ikev2 Configure if ikev1 or ikev2 will be used.</li> <li>• crypto ipsec peer &lt;ip&gt; local &lt;ip&gt; keying ike auth *</li> </ul> <p>Null and hmac-md5 are no longer supported.</p> <ul style="list-style-type: none"> <li>• crypto ipsec peer &lt;ip&gt; local &lt;ip&gt; keying ike encrypt *</li> </ul> <p>null is no longer supported. aes-gcm will be supported with ikev2 only.</p> <ul style="list-style-type: none"> <li>• crypto ipsec peer &lt;ip&gt; local &lt;ip&gt; keying ike dh-group *</li> </ul> <p>1, 2, 5, 22, 23, 24 are no longer supported. 19, 20, 21 will be supported with ikev2 only.</p> <ul style="list-style-type: none"> <li>• crypto ipsec peer &lt;ip&gt; local &lt;ip&gt; keying ike pfs-group *</li> </ul> <p>1, 2, 5, 22, 23, 24 are no longer supported. 19, 20, 21 will be supported with ikev2 only.</p> <ul style="list-style-type: none"> <li>• crypto ipsec peer &lt;ip&gt; local &lt;ip&gt; keying ike transform-set</li> </ul>

		<p>ah-and-esp-ah are no longer supported.</p> <p>If deprecated options are used, the filed will be moved to its default value.</p> <p>For more information, see "crypto ipsec peer local" command in Cryptographic (X.509, IPSec) and Encryption section of the user manual.</p>
3.9.3124	Terminal sysrq	<p>As of 3.9.3124, the SysRq over the serial connection (RS232 or Console port) is disabled by default. When this configuration is enabled, "terminal sysrq enable" will appear in the running config after upgrade. See "UI Commands" section in the user manual.</p>
3.9.2302	VXLAN, EVPN, ECMP Containers	<p>In Spectrum-2 and Spectrum-3 systems, additional 256 KVD entries are reserved for ECMP NVE containers.</p>
3.9.2302	VXLAN, EVPN, ECMP Containers	<p>In Spectrum-2 and Spectrum-3 systems, the limitation of 32K VXLAN multicast and flood destinations is removed.</p> <p>Now the number of VXLAN multicast and flood destinations is limited by KVD occupation.</p>
3.9.2110	Spectrum-3, SN4700, Speed	<p>The default speed for the SN4700 has been changed to 400GbE.</p>
3.9.2006	MTU	<p>MTU default value of L2 and L3 interfaces was changed from 1500 to 9216.</p> <p>The new behavior depends on how the versions are installed.</p> <ol style="list-style-type: none"> <li>Switches that perform an upgrade to the new version will experience the following: <ul style="list-style-type: none"> <li>-MTU value of interfaces included in MLAG IPL will get the default value (9216).</li> <li>-MTU value of all existing interfaces will not be changed (will be 1500 or any other value configured by user).</li> <li>-Show running config will now show the configuration.</li> <li>-For newly created L2/L3 interfaces, MTU value will be 9216.</li> </ul> </li> <li>Switches that will perform a manufacture restart to the new version will experience the following: <ul style="list-style-type: none"> <li>-All L2 interfaces will be created with MTU value of 9216.</li> <li>-Newly created L2/L3 interfaces will have MTU value of 9216.</li> </ul> </li> </ol>

3.9.2006	Spectrum-2, Spectrum-3, SNMP	On Spectrum-2 and Spectrum-3 systems, entPhysicalIndex calculation for port module and port module sensor will change and a new value will be displayed in the following SNMP tables: Entity MIB—entPhysicalTable and Entity Sensor MIB—entPhySensorTable.
3.9.2006	SSH	SSH connections will no longer support the diffie-hellman-group14-sha1 cipher under key exchange algorithms and will be moved to non-secure ciphers.
3.9.1900	Static IP	In cases where a management interface has both static IP and DHCP configured, DHCP will not tun and static IP will be the assigned IP.
3.9.1304	JSON	Changed the JSON output of command "show ip bgp neighbors".
3.9.1304	Logging Monitor Event	The behavior of "logging monitor event" was changed and the prompt line will now be printed for each event that arrives. As a result, multiple events can no longer be seen printed as a group; each event is treated separately.
3.9.1304	WJH	The following changes have been made when another application takes control of WJH. show what-just-happened status:Before change: WJH groups appeared with "Operational status" as Enabled. After change: If another application (e.g. NEO) takes control of WJH, the "Operational status" will be Disabled. show what-just-happened <drop-reason-group> will no longer try to take control of WJH. Running the show command while another application controls WJH will now provide no output.If the OS needs to take control of WJH, the command must be disabled the flow must be enabled again.
3.9.1014	Certificate Configuration	If a certificate is provided without the CA flag, the switch will parse this certificate as though the flag was set to false. All CA certificates should have the CA flag set to true.
3.9.1014	Default Port Speed, Spectrum-2, SN3700	The default port speed for SN3700 system has been changed from 100GbE to 200GbE. As such, while splitting to 2, the default speed is now 100GbE and, which splitting to 4, the default speed is 50GbE. The speeds that have been configured, will



		<p>remain unchanged.</p> <p>Note: This change does not relate to the SN3700C system.</p>
3.9.1014	Ethernet Interfaces, Counters	Due to new counter display enhancement, the JSON output has been modified.
3.9.1014	QoS, Congestion-Control	show interface congestion-control output was modified to increase readability and fix JSON form.
3.9.1014	RoCE	<p>The behavior in the following scenario has been changed: The system starts in non-RoCE mode. Parameter 'v1' has value 'x' which is the default in non-RoCE mode. The user manually configures parameter 'v1' to 'y'. The user switches to RoCE mode. Parameter 'v1' still has the value 'y'. 'y' also happens to be the default in RoCE mode. The user switches back to non-RoCE mode. We now check the value of parameter 'v1'. The old behavior: Parameter 'v1' now has value 'y'. The new behavior: Parameter 'v1' now has value 'x'.</p>
3.9.1014	VRRP	The ping response to VIP is now with the interface VLAN MAC of the Master and not with the VMAC.
3.9.1014	Deprecation	<p>The following previously-unsupported commands are officially deprecated as of 3.9.1000:</p> <pre> ipv6 multicast-routing ipv6 multicast-routing vrf * no ipv6 multicast-routing no ipv6 multicast-routing vrf * show ipv6 mld interface show ipv6 mld interface * brief show ipv6 mld * groups interface * show ipv6 mld * groups interface * detail clear ipv6 mld * groups interface * protocol mld no protocol mld [no] interface &lt;type&gt; &lt;id&gt; { ipv6 mld   ipv6 mld immediate-leave                                   ipv6 mld robustness-variable                                   ipv6 mld robustness-variable *                                   ipv6 mld query-max-response- time                                   ipv6 mld query-max-response- time *                                   ipv6 mld query-interval   </pre>

		ipv6 mld query-interval *   ipv6 mld last-member-query-response-time   ipv6 mld last-member-query-response-time *   ipv6 mld version   ipv6 mld version *   ipv6 mld join-group   ipv6 mld static-oif   ipv6 mld static-oif *   ipv6 mld static-oif * source-ip   ipv6 mld static-oif * source-ip *   ipv6 mld last-member-query-count   ipv6 mld last-member-query-count *   ipv6 mld startup-query-interval }
3.9.0914	MAC	From this release on, the first two bytes of the MAC address in the log will be marked with asterisks for security purposes. This may be disabled using the no form of the "logging mac masking" command. See "Logging" section in the user manual for more information.
3.9.0914	PAM4 Link Speeds when Using 400GbE/200GbE	The following are the minimal software/firmware versions that support PAM4 link speeds when connected using NVIDIA-to-NVIDIA and NVIDIA-to-3rd party devices: Spectrum-3: 30.2007.1142 Spectrum-2: 29.2007.1142 NVIDIA Onyx: 3.9.0830 SONiC/SAI: 201911-fffee7e33a1e9ccf564407966003ac45305fe64e ConnectX-6/ConnectX-6 Dx: 20/22.27.2008* *Note: NICs with this firmware version, and above, support NVIDIA-to-NVIDIA connectivity with PAM4 link speeds
3.9.0914	Split	For split commands, the syntax "module-type qsfp" was replaced with "no module-type". For more information, see "Ethernet Interfaces" section in the user manual.
3.9.0914	WJH, Logging	For the logging commands, the "interfaces" option/syntax was replaced with "what-just-happened-packets". For more information, see "Logging" section in the user manual.

3.9.0608	Autonegotiation	The "no auto-neg" command is no longer available. Autonegotiation configuration can be achieved by the 'auto' option.
3.9.0608	WJH	no-pcap' attribute will be removed, and no pcap file will be generated with execution of the basic flavor of the command. To create pcap files on command execution, use the following form: switch (config) # show what-just-happened * [export [<file-name>]] [no-metadata]
3.9.0300	WJH	WJH pcap file names beginning with a dot are now prohibited, since such files cannot be uploaded or deleted.
3.9.0300	WJH	Modified "show what-just-happened" table output.
3.9.0300	BGP [deprecation]	BGP command "no-route-map" is deprecated and been replaced with the disable form of the BGP route-map command. For more information see "BGP Commands" section in the User Manual.
3.9.0300	Counters [deprecation]	Currently, not all discarded packets are counted in "show interface counters" command 'discard packets' counter. The name of the counter will be changed to 'no buffer discards' in upcoming releases.
3.9.0300	VRF [deprecation]	"show interfaces <IP Interface>" (for example, router-port or VLAN interface) will be deprecated in a future release. Use "show ip interface . . ." command that has VRF support, for example "show ip interface vrf all brief".
3.8.2204	EVPN	Existing configuration CLI was changed from "router bgp 100 address-family l2vpn-evpn auto-create" to "router bgp 100 address-family l2vpn-evpn vni auto-create" When enabling address-family l2vpn-evpn vni auto-create mode then RT value will be generated as following: (a) In case of 2bytes AS, AN is VNI (b) In case of 4bytes AS, AN is VLAN. There is no interoperability with old EVPN releases when running VNI auto-create VS. VNI auto-create mode. A workaround to interoperate with old EVPN VNI auto-create is to switch to manual VNI mode by using the following commands: (1) Disable VNI auto-create mode:

		(config) # no router bgp * address-family l2vpn-evpn vni auto-create (2) Configure manual VNI: (config) # router bgp * address-family l2vpn-evpn vni * (3) Configure VNI RD: (config) # router bgp * address-family l2vpn-evpn vni * rd * (4) Configure manual VNI RT: (config) # router bgp * address-family l2vpn-evpn vni * route-target both *
3.8.2102	RoCE, Port Channel, LAG	The default value of port-channel load-balance has been changed from "source-destination-mac" to "source-destination-mac, source-destination-ip, source-destination-port, l3-protocol, l2-protocol, flow-label". This occurs only upon fresh installations or after "reset factory". Upgrading users will retain the old load balancing value and show running-config will indicate this.
3.8.2008	Security Enhancements	As of version 3.8.20xx, California law SB-327 will be enforced so that Admin and Monitor passwords must be typed upon initial configuration. Default passwords will no longer be created automatically. Nevertheless, the user will be allowed to manually write in the default user name and password (admin/admin or monitor/monitor). The changes are implemented in a manner that minimizes the impact on the automation processes so that Zero Touch Provisioning (ZTP) will continue to work as usual and will not be affected by the new regulation.
3.8.2008	XPL API Deprecation	As of the September release of software version 3.8.2000, the XML user accounts will no longer be supported and the XML gateway will be closed. Access through XML will no longer be available. Interfaces will only be available through SNMP and JSON.
3.8.2008	Web UI	Re-designed interface to enhance user experience.
3.8.2008	IGMP	The default IGMP version was changed from v2 to v3. This occurs only upon fresh installations or after "reset factory". Upgrading users that are running with IGMP v2 will not be affected and show running configure will indicate this.
3.8.2008	LLDP	LLDP is now enabled by default. This occurs only upon fresh installations or after "reset factory". Upgrading users that have LLDP disabled will

		leave LLDP disabled and show running configure will indication this.
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## Chapter 4. Known Issues

### 4.1 General Known Issues

Table 5-1. General Known Issues

Internal Ref.	Category	Description	W/A
366005	CLI	Command output filtering does not support the commands "show log", "show ib sm log", and "show configuration text files <file>".	N/A
806900	Cables	40GbE passive copper cable of 5m length might experience link rise issues when connected to some 3rd party 40GbE interfaces.	Replace copper cable with fiber cable.
806878	Chassis Management	Duplicate notification is sent upon high temperature alerts, both specific module alerts and general "too high" alerts.	N/A
2137269	Configuration Management	Merging two binary configuration files using the command "configuration merge" is not supported.	Use "configuration text file apply" instead.
806802	Configuration Management	Binary configuration files saved from releases older than 3.6.1000 cannot be fetched to the switch and fail with a decryption error. It is recommended to create a new copy of the bin configuration file after upgrade in case	Save configurations as text files before upgrading to this version.

		configuration backup is needed.	
806791	Configuration Management	Applying a configuration file of one system profile to another is not supported from one system type to another.	N/A
1298137	Docker	If two docker images are installed, both from same distribution and both chosen as "latest", the command "show docker images" may display image name and image version as "none".	Delete older latest image or download while specifying a version.
806743	Ethernet Interfaces	The "no" negation prefix is not supported prefix in the CLI commands "interface ethernet <s/p> ipv4 port access-group nodhcprelay".	Use the "no" keyword as an infix (e.g., "interface port-channel <num> no switchport").
2137387	Ethernet Interfaces, Speed, Auto-Negotiation	Auto-negotiation is not supported for 3rd party vendors which do not support auto-negotiation for 40GbE and 100GbE speeds.	N/A
3115850	Force Mode, FEC, Speed	When configuring force mode, configure the same speed and FEC on both sides.	
1966186	JSON	Sending JSON commands that exceed 50K lines, the JSON job gets stuck in the background or gets timed out.	Divide the 50K lines into multiple JSON requests.
1796691	JSON	The command "show whoami" is not supported through JSON HTTP request.	Run the command through the CLI.
1085293	Linux Dockers, Configuration Management	When running "configuration text apply" (with "docker no shutdown"), a container that is configured as init, may run immediately (instead of waiting for next boot).	Run the init configuration from the CLI session.
777720	Logging	The warning "[pm.WARNING]: snapshots and sysdumps are	N/A

		on separate partitions; space constraints not thoroughly enforced on sysdumps” may appear if operating with an encrypted file system. This warning can be safely ignored.	
2615903	Management Interface, Docker	It is not possible to call a container name “ns” and it is not possible to create a username called “ns”.	Call the container and/or username by a name other than “ns”.
806744	Management Interfaces	Switch systems may have an expired HTTPS certification.	Generate a new certificate by changing the hostname.
807310	Modules	When using 5m splitter cable (P/N MC2609125-005), wrong data is displayed under transceiver information.	N/A
806875	SNMP	Request timeout should be set to at least 20 seconds since initial table calculation requires time.	N/A
806874	SNMP	The tables dot1dTpFdbTable and dot1qTpFdbTable support up to 10,000 entries.	N/A
806899	System Management	If a faulty cable is used, rise time of other interfaces in the system may be delayed.	N/A
957353	Telemetry	Splitting a port with telemetry configuration makes telemetry non-functional and may cause errors in log.	Telemetry histograms may be applied after a port is split (unsplitting may only be done if no telemetry configuration is present).
2066713	Upgrade/Downgrade	Downgrading back to 3.8.2204 after upgrading to 3.8.2306 will save configuration modifications from 3.8.2306.	N/A



3064354	Username	A new username cannot be called "*".	Set username as something other than "*".
1434387	WebUI	Interactive CLI commands cannot be executed via WebUI.	N/A
806834	WebUI	<p>The following commands cannot be executed from "Execute CLI commands" section on WebUI.</p> <ul style="list-style-type: none"> <li>- interface ethernet &lt;interface&gt; module-type</li> <li>- dcb priority-flow-control enable</li> </ul>	Run these commands through the CLI instead.
806832	WebUI	Enabling/disabling HTTPS while connected via HTTP to the WebUI may result in temporary loss of connection to the webpage.	Refresh the page or navigate back using the browser's back button.
806829	WebUI	Reversing the time clock can result in WebUI graphs' corrupted data.	Clear the graphs data after setting the clock.
461989	WebUI	Importing a configuration text file with commands that only get enabled after running other commands is not possible through the WebUI. For example: the command "mlag-vip" is only available after running "protocol mlag".	Import the configuration text file through the CLI.

## 4.2 Ethernet Known Issues

Table 5-2. Ethernet Known Issues

Internal Ref.	Category	Description	W/A
807348	802.1x	PAE may send unneeded EAP-START messages when authentication starts.	N/A
2173600	ACL	The Maximum supported ACL scale numbers are 5k for mac-acl, 5k for ipv4-acl, and 4k for ipv6-acl. Using existing configurations with a higher scale, will prevent login via SSH.	N/A
2103960	ACL	Configuring 6k ACL role on the switch leads to out-of-memory errors when performing 'reset-factory' action, during which the switch is inaccessible.	N/A
2335472	ACL, CLI	Execution of "show running-config" right after deleting large number of ACLs may cause CLI to become unavailable.	Wait a few minutes between ACL deletion and "show running-config" execution.
1289271	ACLs	A single ACL table is limited to up to 2K rules.	N/A
807307	ACLs	Packets dropped by the switch due to congestion or ACL rules are added to the bad type counter of the matching VLAN interface.	N/A
2298500	BGP	When there are multiple BGP IPv4 or IPv6 sessions in different VRFs running on switches and the sessions have overlapped IPv4 or IPv6 peer addresses, only one password will be taken if different passwords are	If there are multiple BGP sessions in multiple VRFs with overlapped IPv4 or IPv6 peer addresses, use the same password or do not use a

		configured. That is, only one of the sessions will be negotiated with its correct password; the others may not reach the established state.	password for the sessions.
2284442	CRC	Replacing CRC field with timestamp is currently not supported on Spectrum-based systems.	N/A
1933579	Cables	100GbE optical cables may not raise a link against ConnectX-5 devices after many link toggles.	N/A
2873125	Cables, FEC, Force Mode	When connecting a Spectrum-2 or Spectrum-3 systems that is Force mode and in FC FEC and connecting it to a Spectrum system, the link will not rise.	Set auto-negotiation protocol and/or do not override FEC with FC.
807345	DCBX	DCBX auto-select type (IEEE/CEE) is not supported.	DCBX type should be selected manually.
807344	DCBX	When moving from DCBX CEE to DCBX IEEE, TLVs may be sent improperly.	After mode change, the TLVs to be sent must be reset.
807342	DCBX	Enabling LLDP triggers a faulty notation of PFC operation. This status may be ignored.	N/A
807304	ECN	Configuration of minimum-absolute value smaller than 3K might cause constant ECN tagging.	N/A
2300727	EVPN Centralized Gateway	EVPN Centralized Gateway is not supported on Spectrum-based A0 systems. Use "show inventory" command to see ASIC revision.	N/A
2256231	EVPN, IPv6 Neighbor	When Neighbor Suppression (NS) is enabled, all incoming IPv6 NS packets are handled by the switch and are not transmitted via the Tunnel.	N/A

		Even though these packets are not entering the Tunnel, they are still counted as encapsulated on the tunnel and will be shown when using "show interface NVE" or specific vni counters.	
2255178	EVPN, IPv6 Neighbor suppression	When Neighbor Suppression (NS) is enabled, all incoming IPv6 NS packets are handled by the switch and are not transmitted via the Tunnel. Even though these packets are not entering the Tunnel, they are still counted as encapsulated on the tunnel and will be shown when using "show interface NVE" or specific vni counters.	N/A
2284676	Ethernet Interface	Not all discarded packets are visible in "show interface ethernet 1/17 counters" command.	N/A
2722500	Firmware Crash	If the firmware crashes and the NOS continues to send commands, the firmware dump will not take place and there will be no debug information available.	N/A
1167153	HLL	Changing the HLL duration configuration while the port is in stall state takes effect after a few seconds of random delay. The next time stall state is entered, it may take a little less time (next HLL) or up to 60 seconds.	No action is needed because once it exits stall state, expected system behavior resumes.
1602721	Historical Statistics	JSON output for the command "show stats sample interface-port-channel data max-samples" supports up to 800 max-samples.	N/A

1572264	IGMP Snooping	Fast leave always works on v3 reports even when "fast-leave" is disabled.	N/A
807291	IGMP Snooping	IGMP snooping is limited to a single MC IP per MC MAC.	N/A
807282	IGMP Snooping	If the IP address of the IGMP querier is not specified explicitly and no IP address is configured on the VLAN interface, the default IGMP querier address is 0.0.0.0.	Configure IGMP querier IP address explicitly or setup an IP address on the required VLAN.
807280	IGMP Snooping	There is no possibility to have more than one MRouter port on a single VLAN if IGMP snooping is disabled for that VLAN.	After enabling IGMP snooping on that VLAN, the user needs to re-add the MRouter ports on that VLAN.
2246698	IGMP Snooping, VXLAN	IGMP Snooping over VXLAN is not supported on Spectrum-based A0 systems. Use "show inventory" command to see ASIC revision.	N/A
2176230	IGMP snooping, MSTP, STP	IGMP Snooping does not work on a VLAN which is added to an MSTP instance if STP is disabled and is then changed to MSTP mode.	Run the "spanning-tree" command via the CLI in config mode.
3205792	LACP	SDKdump generation with configured fast-rate LACP may causes IPL link flapping.	N/A
1891323	LAG	Spanning tree configuration performed on a LAG is not retained by ports when they are removed from the LAG. Adding back ports to a LAG that has spanning tree configuration will fail due to mismatch.	Configure the same values on the port before insertion to the LAG.
1239514	LLDP	The command "show lldp statistics" displays incremented "TLVs Unrecognized" inaccurately.	N/A

807303	LLDP	LLDP ifIndexes do not match the ones published in the ifTable in IEEE 802.1.	Use the ifDescr and fields.
2116921	MLAG	During manual reconfiguration MLAG Port-channel (disabling and then enabling ports in the MLAG port-channel), small traffic loss may be observed.	N/A
1838571	MLAG	MLAG does not work when configuring IPL with IPv6 address.	Work with IPv4 source address.
1590944	MLAG	Redundant links between the MLAG peers do not converge properly.	Remove the redundant links between peers (just like a standard configuration of an MLAG cluster) to only enable the IPL between peers.
982276	MLAG	Changing MLAG port configuration on master MLAG switch (higher IP over the IPL) before software upgrade is finished might cause traffic flood (BC and MC).	N/A
806932	MLAG	Changing STP mode affects traffic and may cause MLAG to stop working for an interval of 21 seconds until the new STP topology is built.	User should disable MLAG prior to changing the STP mode.
669345	MLAG	Fast LACP cannot be used on the link partner when working with over 40 MLAG port-channels and over 650 VLANs.	Cannot use fast LACP on the link partner when working with over 40 MLAG port-channels and over 650 VLANs.
1917838	MLAG EVPN	In specific cases, traffic loss occurs on MLAG peers when using MLAG EVPN configuration.	When using MLAG EVPN configuration, enable boot delay of 240 on each on the MPO member ports on both MLAG peers in order to

			eliminate traffic loss upon reload.
2204896	MLAG, EVPN	IPL flapping on MLAG cluster (Which also has EVPN configuration) while traffic is running may lead to a situation where the Slave switch has one or more non-ageable entries in FDB that do not appear on the master switch.	Perform "clear mac-address-table dynamic" to clean out all dynamic entries from FDB table and re-learn.
1969656	MLAG, STP	Spanning tree domains do not converge correctly on the rare occasion that an MLAG peer running MSTP is connected to a different region and needs to act as a border switch for no MPOs ports.	Disable the relevant ports before adding VLANs to MST instances.
2485435	Modules	When using DR4 modules with an old firmware version below 18.0.0, some links get stuck.	When using DR4 modules, use firmware above version 18.0.0.
2244527	Monitor Session	Monitor session commands entered in rapid succession (i.e., pasting a script at once), may cause errors.	Allow one second or more between monitor session commands.
2116433	Monitor Session	Changing the port type from local analyzer to remote analyzer or regular port (not a monitor session destination) deletes some user configuration such as admin state and speed.	Reapply the deleted configuration after the port type change.
2306849	OpenFlow	When setting flows with the same match keys, only the last flow will be considered. If the last flow is deleted, other flows configured with the same match key will also be deleted.	N/A
2287799	OpenFlow	When clearing the maximum number of flows added by the	Reboot the switch.

		controller, the switch may get stuck.	
2256140	OpenFlow	"no protocol openflow" fails if all supported tables are used.	Use no more than 40 tables for OpenFlow.
936880	OpenFlow 1.3	Using "TRAP" in FDB floods the packets to all ports.	N/A
2467778	OpenFlow, MLAG	Forwarding control traffic from one MPO interface to another one is currently not supported. It may lead to the scenario when LACP packets will be delivered on the wrong destination port when the OpenFlow rule which forwards traffic from one MPO interface to another one is installed.	Use a separate OpenFlow rule with a higher priority and destination MAC for the LACP packets in order to forward such packets in the proper direction. Example: openflow add-flows 1 table=0, priority=200, dl_dst=01:80:c2:00:00:02, actions=NORMAL openflow add-flows 1 table=0, priority=100, in_port=Mpo1, actions=output:Mpo2
2455767	OpenFlow, MLAG, Group SELECT	There is no possibility to add LAG (MPO) into group SELECT (FG LAG).	Do not add LAG/MLAG into OpenFlow group SELECT.
2125230	OpenFlow, OVS	Configuring an OVS server port which is already in use, causes errors in the log.	Change OVS server port configuration to an unused port.
2265107	OpenFlow, OVS	The count of rules is based on the key size. Minimum key size is 18 on Spectrum and 9 on Spectrum-2 and Spectrum-3. The algorithm always uses 18 as a minimum key size, therefore on Spectrum-2 and Spectrum-3 systems, the maximum number of rules will not match the real value for a 1 small key.	N/A
2345563	PAM4, Auto-Negotiation	When connecting a NVIDIA-to-NVIDIA in PAM4, auto-	N/A



		negotiation should always be enabled.	
2366241	PTP	On very rare occasion, link down when PTP is enabled may lead to the following error message in the log: "[ptp4l.ERR]: [.....] port 1 []: bad message".  This error can be safely ignored.	N/A
2336394	PTP	On occasion, when disabling protocol PTP the following error message may appear in the log: "[phc2sys.ERR]: [...] poll failed". This error can be safely ignored.	N/A
2829515	PTP, OpenFlow	When PTP is configured on a switchport which is also in OpenFlow hybrid mode, PTP stops working.	Configure a DROP rule for PTP packets intended to be terminated on the switch for all switchports in OpenFlow hybrid mode. PTP will still receive the packet with the even with the DROP rule.
2306061	PTP, Port Channel	Adding L2 interface to port channel after PTP was enabled for this L2 interface will lead to fault on PTP.	Enable PTP on L2 interface only after adding the L2 interface to port channel.
807325	Port Mirroring	When port mirroring congestion is configured to "drop-excessive-frames" (best effort), while using the same analyzer port for more than a single mirroring session, that port could drops packets from all flows not according to their configured priorities.	N/A
838743	QinQ	QinQ is not supported over VXLAN.	N/A

2876506	RIF MTU Configuration	<p>When IP tunnels, VxLAN tunnels, or MPLS RIF is configured to reach optimal end-to-end latency, the RIF MTU sizes of all RIFs should accommodate a max non-encapsulated supported packet size with possible max encapsulation.</p> <p>IP tunnels—48 byte</p> <p>VxLAN tunnel—56 byte</p> <p>MPLS—24 byte</p>	
2691958	Resource Manager	<p>On Spectrum devices, when a minimum reservation is made for the IPv6 UC route resource type, the reservation is made only for short IPv6 prefixes. There is no reservation guarantee for long prefix types.</p> <p>On Spectrum-2 devices and above, the reservation is done assuming that all IPv6 UC routes are long routes.</p>	Do not use a reservation for IPv6 UC routes.
807314	SNMP	LLDP MIB OID lldpRemPortDesc is not supported.	N/A
2133817	SNMP, VTEP Certification	On power cycle, part of the hardware gateway test from the VTEP certification test suit, the system appears up, but does not respond to SNMP uptime requests.	N/A
1511230	Spanning Tree	Setting spanning tree port type to "network" (interfaces ethernet <If> spanning-tree port type network) does not work.	N/A
1509251	Spanning Tree	Moving from one STP mode to another while the system is	N/A

		functional may lead to error in the log which can be ignore.	
807264	Spanning Tree	BPDUs are sent from both the superior and the inferior switches.	N/A
1447052	Spanning Tree, RPVST	RPVST is not interoperable with RPVST+ on Cisco's Nexus system when using TAG VLAN.	N/A
2934873	Spectrum, Cables, Link Up	On a rare occasion, when using 5m copper cables, the link up time may take up to 9 seconds.	N/A
2545727	Spectrum, FDB MAC, CRC	FDB MACs are learned even if packets have CRC Errors and/or are dropped by the CRC.	
2952790	Spectrum, Force Mode, Link Up	When setting link to quick link up with force mode, link up time may take longer than 5 seconds.	N/A
2934867	Spectrum, Optical Cables, Link Up	On rare occasions, when quick link up is required, link up time on optical media can be higher than 5 seconds.	
2848664	Spectrum, SN2700, Optical Modules	When connecting Spectrum systems with FTLX1471D3BCL or MMA2L20-AR Optical modules and performing PMAOS on all ports link might not raise.	Toggle the port.
2403400	Spectrum, Spectrum-2, Loopback	At times, after disabling loopback mode, there is no link-up.	N/A
2750456	Spectrum-2, CRC Timestamp	CRC Timestamp for mirror packets is only FRC (Free Running Counter) and not UTC. When an outgoing packet is a mirror packet (meaning an analyzer port is used), the	There is no workaround, but ACL can be used instead of mirroring.

		hardware does not modify the timestamp from FRC to UTC.	
1834738	Spectrum-2, Cables, Speed	At 200GbE speed, traffic drop occurs between SN3700 and IXIA K400.	N/A
1726900	Spectrum-2, Cables, Speed	Currently, raising the link at 10GbE link speed is not supported when using 200GbE optical cables.	N/A
1778526	Spectrum-2, EVPN	Tunnel encapsulated counters is not increased when ARP packets are forwarded to tunnel.	N/A
2395745	Spectrum-2, Modules, COLORZ	COLORZ module link up time increased to 85 seconds.	N/A
2502625	Spectrum-2, PFC	On Spectrum-3 systems, slow reaction time to Rx pause packets on 40GbE ports may lead to buffer overflow on servers.	N/A
2781548	Spectrum-2, Port Split/Unsplit, Traffic	Due to a hardware limitation in Spectrum-2 switch systems, when splitting/unsplitting the ports, traffic might drop on the other port members on the same 8x group in case of FWS traffic.	N/A
2214897	Spectrum-2, SN3420, Cables	SN3420 system supports copper cables up to 3m in length.	N/A
2284447	Spectrum-2, SN3700, Cables, Speeds, Testing, Ixia	Testing SN3700 200GbE with Ixia AresONE requires additional steps. Contact our technical support for specific settings.	N/A
2235645	Spectrum-2, SN3700, Port Split	On SN3700 and SN3700C systems, when splitting ports, the following error may appear: "[issd.ERR]: getLssindexFromLlindex can't find in port_indexes_ht the	N/A

		entry for ifindex 134238448" This error can be safely ignored.	
2137424	Spectrum-2, SN3700C	On SN3700C systems, the maximum allowed power class for QSFP ports is 4.5W for ports 1-2 and 21-31 and 3.5W for all other ports.	N/A
2053350	Spectrum-2, SN3800, Link	In SN3800 system, when the link goes down on the remote side, the "link down counter" increases by two.	N/A
3129617	Spectrum-2, Spectrum-3, PTP	On SN3700C and SN4600C, using PTP at 100GbE caused inaccuracies. As a result, PTP accuracy is improved by the calibration test.	
2284444	Spectrum-3	The following capabilities are currently not supported on Spectrum-3-based systems:  -MPLS  -Auto-Negotiation Link Training in PAM4	N/A
2137445	Spectrum-3, Boot	In Spectrum-3 devices, boot can take up to 75 seconds.	N/A
2589614	Spectrum-3, Cables	On rare occasion, reading original Cisco cables may produce an information mismatch, causing log of unexpected speed.	
2284449	Spectrum-3, Cables, Speeds, Testing, Ixia, SN4700	Testing SN4700 200GbE and 400GbE with Ixia AresONE requires additional settings. Contact our technical support for specific settings.	N/A
2413409	Spectrum-3, DAC	BER may be experienced when using 5m DAC cables between SN4700 and SN2700 in 100GbE speed.	N/A

2699968	Spectrum-3, DR1, Boot	When connecting a Spectrum-3 device using DR1 (MMS1V70-CM) modules, the boot time can take up to 75 seconds.	N/A
2272238	Spectrum-3, Link	Connecting DR4 to DR1 using 100GbE may cause link flap.	N/A
2175541	Spectrum-3, MTU, 400GbE	When using 400GbE speed in Spectrum-3 systems, xon value should be less than 2 MTUs.	N/A
1469002	Spectrum-3, Port Mirroring	For egress mirroring on a 400GbE port the monitor session congestion mode should be set to "drop-excessive-frames" as the "pause-excessive-frames" mode does not work in this case.	N/A
2231118	Spectrum-3, Port Toggle	On rare occasion, when connecting DR4 to Spectrum-3 systems on both sides, toggling from both sides may cause the link to not rise.	N/A
2316849	Spectrum-3, Reboot	On Spectrum-3 devices, when rebooting the switch manually, on rare occasions, "show reboot cause" displays incorrect reboot reason.	N/A
2752473	Spectrum-3, SN4600C, Cables	When using SN4600C with Base-T cable (OPN MC3208411-T) using 1GbE speed, errors on traffic may be observed.	
2245426	Spectrum-3, SN4600C, Cables	In the SN4600C system, the link does not rise when using LUX42604CO module at 40GbE after toggle.	N/A
2137437	Spectrum-3, SN4700	Active Copper Cable does not raise link on SN4700.	N/A

2329924	Spectrum-3, SN4700, Link, 400GbE	When connecting SN4700 with Cisco 3432C using 400GbE with copper DAC cables, link does not rise in the corner port when using auto-negotiation.	Use force mode on the ports.
2697324	Spectrum-3, SN4700, NRZ, Splitter Copper Cables	When connecting SN4700 to SN4700 back to back in 50GbE NRZ with splitter copper cable, Fast link up is not operational.	N/A
2729276	Spectrum-3, SN4700, PSU	Insertion of power supply to SN4700 or plugging-in power to secondary PSU may cause traffic disruption of few milliseconds.	To avoid interim packet loss, connect PSU in the maintenance window.
2368615	Spectrum-3, Split	On Spectrum-3 systems, links are not stable on split interfaces that were split using qsfpsplit-4 or qsfpsplit-2 command.	N/A
2284453	Speeds, Cables, Testing, Spirent	Default configuration of "Spirent dX3 400G" may result in errors. Contact our technical support if interested in testing with Spirent.	N/A
2284452	Speeds, Cables, Testing, Spirent	Using "Spirent dX3 400G" to test SN3700 systems while using PAM4 may, on some occasions, result in traffic loss.	N/A
2259364	Traffic, Port	While there is traffic to a port, when either running "no shutdown" or reloading a port that has incoming traffic, the counters of the discard packets will be counted for 3 seconds.	N/A
2284445	Unsupported Protocols	The following are currently unsupported:  -SSH server	N/A

		-TCACAS	
2245329	WJH	WJH "t trap_probability" is the probability to extract a packet from the stream of packets that were dropped by HW. If the packet drop rate is low (small number of packets) then WJH events are not triggered.	N/A
2293954	sFlow	There is an invalid agent-ip in first exported sFlow packet. All other packets are sent properly.	N/A
807331	sFlow	Errors are seen when defining sFlow session from two WebUI or CLI sessions simultaneously.	N/A
807329	sFlow	Discard counters are not reported to the collector.	N/A
807328	sFlow	The discarded packets counter in sFlow samples may not be accurate and may expose a skew of one second.	N/A

## 4.3 IP Routing Known Issues

Table 5-3. IP Routing Known Issues

Internal Ref.	Category	Description	W/A
1399010	BFD	User cannot clear BFD counters.	N/A
1114699	BFD	A BFD session is not signaled as removed on a static route which is set to admin down.	N/A
1267569	BGP	If there are multiple IP addresses configured on an IP interface, when update-resource is configured on a peer group, there is no guarantee that the primary IP	Do not use "peer-group", enable "update-source" per individual peer.



		address gets used as the source IP address to establish peer relationship.	
1021951	BGP	IGP metric does not influence route selection where routes are learned from different IGP.	N/A
953776	BGP	A peer does not inherit the update-source parameter from its group configuration.	Run "shutdown" then "no shutdown" on the peer.
807464	BGP	The command "no neighbor <ip-address> local-as" is not functional.	Delete the neighbor with "no neighbor {<ip-address>} remote-as" and restore the neighbor without the command "neighbor local-as".
807461	BGP	When running both BGP and OSPF, changing the configuration of the command "router bgp <AS> <external distance> <internal distance> <local distance>" requires running "clear ip bgp all" afterwards.	N/A
807459	BGP	AS-path request/set are limited to 128. When more are received, TCP FIN is sent and connection to the peer is lost.	N/A
807458	BGP	The command "bgp aggregate-address summary-only" does not silence aggregate-route re-advertisements.	N/A
807457	BGP	Using the command "clear ip bgp <ip> soft in" mandates enabling route-fresh on the peer.	If route-refresh is not supported on the peer device, use the command "clear ip bgp <ip> in" instead.
807456	BGP	Aggregate overlapping is not supported.	N/A
807455	BGP	Route aggregation configuration cannot be modified.	Delete route aggregation and

			create a new configuration.
2089263	BGP Unnumbered	<p>When 1 VRF loopback interface alias is set, it will copy addresses from the target loopback, which is a duplicated address. The following warning log will appear:</p> <p>Jan 8 13:38:46 mtbc-onyx-01-2410 snmpd8543: [snmpd.WARNING]: Duplicate IPv4 address detected, some interfaces may not be visible in IP-MIB</p>	N/A
2065498	BGP Unnumbered	<p>When there are parallel multiple BGP unnumbered sessions running between two Onyx switches, only one password will be taken if different passwords are configured. That is, only one of the sessions will be negotiated with its correct password, the others may not reach the established state. The limitation also applies to sessions belonging to one or more peer groups with passwords.</p>	Use the same password on parallel multiple BGP unnumbered sessions.
2121257	BGP, IPv6 Routing	When enabling or disabling IPv6 routing, BGP sessions of the related VRF will be restarted.	N/A
2262991	Bidirectional PIM	The switch forwards all multicast traffic for a group even though only a particular source is requested via IGMPv3. The "show ip mroute" command will show that only a particular source was requested.	N/A
2337361	Bidirectional PIM, Load Balance	Changing Load Balance mode from LB to Non-LB will not clear the routes that are no longer required. Those routes will remain as long as there is traffic on those routes.	Use "clear ip mroute" command to clear the desired routes or stop traffic before changing load balance mode.
807373	Counters	In IP Routing mode, multicast or broadcast packets (such as ARP) may be counted as "RX discard" in	N/A

		case only one interface is a member of the VLAN. Such packets reach the CPU for processing. The progressing counter can be ignored.	
1070613	DHCP	DHCP-client is not functional.	Use static IP instead.
2170574	EVPN Central Gateway	<ul style="list-style-type: none"> <li>• In Spectrum systems, packets that come from ports (IPL in our example) that are isolated from VXLAN tunnel are discarded and COUNTED as ENCAPSULATED</li> <li>• In Spectrum-2 and up, packets that come from ports (IPL...) that are isolated from VXLAN tunnel are discarded and NOT COUNTED as ENCAPSULATED</li> </ul>	N/A
984275	IGMP Querier	Running the command "show ip igmp groups" does not print "source" and "expires" parameters in its output.	N/A
2166167	IGMP Snooping, CLI	When there is 10k STATIC groups exist, "show ip igmp snooping groups" may take up to 80 seconds.	N/A
2137488	IP Routing	When TFTP source IP is enabled, ICMP redirects are not sent.	N/A
2137483	IP Routing	IPv4 link local addresses (169.254.0.0/16) are not supported. Addresses should be changed before upgrade, if not changed, they will be removed from the interface.	N/A
1472151	IP Routing	It is required for neighbor entries on an IP interface to be fewer than 25K.	N/A
807349	Interfaces	ICMP echo packets are not counted as part of the VLAN interface counters.	ICMP packets are counted in the interface L2 counters.

807366	LLDP	A port connected to a router-port receives from it an LLDP packet containing IPv4 and IPv6 management addresses. However, the IPv6 address is not included in the LLDP MIB as a remote management address. Only the IPv4 remote management address is published.	N/A
2137378	Multicast	Multicast packets sent over VLAN with enabled EVPN/VNI and IGMP snooping at the same time are not sent over VXLAN network and are only sent to local receivers.	Disable either EVPN/VNI or IGMP snooping for that VLAN.
2284454	Multicast, VLAN, IGMP	In Spectrum-based systems, multicast packets sent over VLAN with enabled EVPN/VNI and IGMP snooping are flooded to all VTEPs and flooded to VLAN after VxLAN decap to all VLAN members.	N/A
807393	OSPF	Reverse packet filtering is not supported. When misconfigured, traffic may pass on an unintended subnet.	N/A
807386	OSPF	Removing a static ID using the command "no router-id" requires at list one VLAN interface to be configured.	N/A
2382385	PIM	In the rare cases where more than 100 PIM neighbors are learned, some PIM "show" commands (e.g., "show ip pim neighbors") may take approximately 40 seconds.	N/A
1756541	PIM	PIM-SM MRoute is not created when incoming multicast data traffic is not mapped to RP, or when RP is not reachable.	N/A
1703693	PIM	In PIM-SM, the non-DR router displays interfaces with received IGMP reports under "outgoing interface list". Traffic is forwarded from DR router.	N/A

1512261	PIM	Next-hop multi-path: Multicast traffic continues being forwarded for 2-3 minutes after deleting PIM configuration from an interface which is part of port distribution.	N/A
1266347	PIM	When a static IP route is configured after an IP MRoute (with the same prefix), the static route has higher priority.	Configure static MRoute after configuring static route.
1182847	PIM	MRoute entries learned via PIM remains when the interface is shut down until the timer expires.	N/A
807364	Router Port	A trunk port which is configured as router port does not receive traffic to the host interface.	Configure the port to access mode (CLI command "switchport mode access") before making it a router port.
807361	Router Port	Setting 802.1Q mode on a router port does not function properly.	N/A
807359	Router Port	ICMP redirect is not supported over router port.	N/A
2563357	SNMP, IGMP Snooping	Configuring a large scale of IGMP snooping configuration (i.e., enabling IGMP snooping on a large number of VLANs), leads to SNMP query timeout when querying igmpInterfaceTable.	The default timeout between retries for 'snmpcmd' is 1 second. Increase the SNMP query timeout to fetch igmpInterfaceTable for big-scale configuration.
2321421	SNMP, MIB, IGMP Snooping	SNMP static multicast MIB dot1qStaticMulticastAddress is not supported.	N/A
2635933	Subnet	There is no routing between primary IP subnet to secondary IP subnet on the same RIF.	Send GARP from the host, to enable traffic to pass.
807468	VRF	Any VRF can be monitored with sFlow, but a collector can be on the management VRF only.	N/A

807399	VRRP	Using the same Virtual IP (VIP) as the VLAN interface is not supported.	N/A
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## Chapter 5. Bug Fixes

Table 6-1. Bug Fixes

Internal Ref.	Category	Description	Fixed in Version
3364526	Boot, I2C	On are occasion, a race condition occurred in the platform driver that causes I2C bus initialization failure during system boot.	3.10.4206
3167994	MAGP	In the event of a network loop, traffic with MAGP source vMAC may be forwarded back to the switch port.	3.10.4206
3315167	NTP, Logging	When NTP is configured, the following print may appear to the log every minute:  ntpd5510: bind(23) AF_INET6 ::1#123 flags 0x5 failed: Cannot assign requested address	3.10.4206
3338504	NTP, VRF	When enabling VRF management on NTP, the NTP servers are not displayed.	3.10.4206
3362827	OpenFlow	When OpenFlow flow is modified with a group that contains more than 50 actions, the switch crashes.	3.10.4206
3284730	PTP, Sysdump, Output	Output of show PTP commands was missing in sysdump.	3.10.4206
3236568	Cables, CMIS	The CMIS cables lengths were rounded. Improved accuracy of CMIS cables length to display exact cable length.	3.10.4100
3233054	Debug Dump	When there are both IPv4 and IPv6 routes configured, once the IPv4 and IPv6 SHSPM trees are turned into left-bound trees due to lack of resources, a following SDK debug dump generation may cause SDK process to crash.	3.10.4100

3284414	EULA	On WebUI and CLI, the EULA document did not appear properly.	3.10.4100
3267893	MAC Address	At times a remote route is received for a MAC address for which a local route exists that has been marked as sticky. Once in this state, a second remote route received for this same MAC can lead to an assertion and L3 stack to restart, resulting in switch reboot.	3.10.4100
3283539	Power Supply, Fan	When power supply cable is removed and inserted again, the fan speed sometimes did not set properly on the power supply fan.	3.10.4100
3269345	Spectrum, Optical Cables, Close State	On SN2010 system, when using optical cables, the system may get stuck when the port is in close state.	3.10.4100
3197376	BaseT Modules	When using BaseT modules and running "show interfaces ethernet 1/<port>" or "show interfaces ethernet", an internal error appears. This can be safely ignored.	3.10.4000
3268999	Ethernet Interfaces, Optical Transceiver	Using the command "show interface <interface name> transceiver diagnostics" with a CMIS-based (QSFP-DD/OSFP) optical transceiver might displays wrong power values for per lane.	3.10.4000
3220796	LACP Policer	Configuration for trap-group LACP policer cannot be applied.	3.10.4000
3209606	LLDP, Traffic Class	Remote information about supported traffic class is not displayed.	3.10.4000
3173334	Management Interfaces	On systems that include two management interfaces, when connecting mgmt1, ping may not be available for mgmt0.	3.10.4000
3172492	PTP	PTP module does not log negative mean path delay values.	3.10.4000
3143414	Shared Buffer, On-The-Fly Configuration	When many ports are active (e.g., 70 ports up), and the configuration of shared buffer is applied on the fly, occasionally, the firmware might get stuck.	3.10.4000
3213254	Spectrum-2, SN3420	On SN3420 system, SDK returns error when FEC mode is set on twisted pair.	3.10.4000



3149861	Spectrum-2, SN3700C, 1GbE, PTP	PTP Mean Path Delay (MPD) calculation gets improved in 1G Anaconda.	3.10.4000
3172779	ACL, IPv6	The ACLD may crash when ACL with log action captures an IPv6 frame with a very large number of nested headers (total header length larger than 512B). Unexpected system behavior may occur due to the crash.	3.10.3100
3172851	JSON API Authentication	In version 3.10.300x, JSON API authentication fails when posting to /admin/launch?script=rh&template=json-request&action=json-login.	3.10.3100
3123387	Spectrum, PTP	On Spectrum systems, there is a 3 ns deviation in the offset of the standby clock with IPv6 PTP.	3.10.3100
3077667	Spectrum-2, Spectrum-3, ECN Marking, Split	On the Spectrum-2 and Spectrum-3 switch, if you enable ECN marking and the port is in split mode, traffic sent to the port under congestion (for example, when connecting two ports with a total speed of 50GbE to a single 25GbE port) is not marked.	3.10.3100
3158861	Spectrum-2, Spectrum-3, PTP	On Spectrum-2 and Spectrum-3 systems, part of the PTP packets were sent from CPU as 'control' packets, while others were sent as 'data'. They are now all sent as 'data'.	3.10.3100
3205701	Spectrum-3, PCI Calibration	In Spectrum-3 systems SN4700 and SN4600C PCI calibration is modified from a static to a dynamic mechanism. As such the use of software versions older than 3.10.310x in these platforms is not permitted.	3.10.3100
3205700	Spectrum-3, PCI Calibration	In Spectrum-3 systems SN4700 and SN4600C PCI calibration is modified from a static to a dynamic mechanism. As such the use of software versions older than 3.10.310x in these platforms is not permitted.	3.10.3100
3162664	Spectrum-3, PCI Calibration	In Spectrum-3 systems SN4700 and SN4600C PCI calibration is modified from a static to a dynamic mechanism. As such	3.10.3100

		the use of software versions older than 3.10.310x in these platforms is not permitted.	
3123584	Split to 8	In split-to-8 mode, if an even port is split, the lower odd is port gets disabled and if the odd port is split, the upper even port is gets disabled.	3.10.3100
3135787	Sysdump	On rare occasions, during the snapshot creation, sysdump was not automatically generated.	3.10.3100
3090001	ECMP, Resilient	After editing an ECMP, the resilient ECMP next-hop counter may not count correctly.	3.10.3000
3111472	EVPN, VRF	In an MLAG-EVPN setup with ARP suppression, configuring VRRP/MAGP over any VRF other than the default results in the MAC-IP of the VRRP/MAGP interface not showing up on any of the EVPN tables.	3.10.3000
3085287	Password Hardening	On some occasions, after setting a password for new user, an internal error in password hardening may appear.	3.10.3000
3072365	SDK Dump	SLL configuration is missing in SDK dump.	3.10.3000
3055490	SDK Dump	SDK Dump missing column headers in some GC tables may result in difficulty understanding the dump.	3.10.3000
3106297	Spectrum, Counters	SDK debug dump shows "Unknown" Counter in the PPCNT Traffic Class Counter Group.	3.10.3000
3106262	Spectrum, Counters	SDK debug dump shows "Unknown" Counter in RFC3635 Counter Group.	3.10.3000
3066165	Spectrum, IGMP Querier Guard	On Spectrum systems, when IGMP querier guard is enabled on any port of the system (even if it is not participating in the VLAN of the external query and is not on its port), the switch sends the IGMP query from the external device to all ports in the VLAN with a double tag.	3.10.3000
3070681	Spectrum, Link Up	On Spectrum systems, sometimes during link failure, not all previous firmware indications cleared properly, potentially affecting the next link up attempt.	3.10.3000

3066050	Spectrum, PTP	When using Spectrum systems at 100GE, the PTP parameters were not tuned properly resulting in a mean path delay value that is too low.	3.10.3000
3055177	Spectrum-2, LAG, VXLAN	Deleting a port from a LAG that has port isolation configured with a VXLAN tunnel may result in errors.	3.10.3000
3129809	WebUI	The default certificates (rather than customer-loaded certificates) were used upon conducting a reload.	3.10.3000
3021773	CLI	CLI command "show interfaces" may take up to 30 seconds.	3.10.2200
3055594	Cable Burning	100GbE FCI DAC (10137628-4050LF/HPE PN: 845408-B21) was recognized by mistake as supporting "cable burning" which caused the switch firmware to read page 0x9f (which unsupported in the cable) and to report this cable as having "bad eeprom".	3.10.2200
3010092	NEO, Driver	When NEO agent fails, it may, upon reload, attempt to reload the driver resulting in unexpected behavior.	3.10.2200
3044236	Timestamp	Timestamp over CRC is not supported in ONYX v3.10.2002.	3.10.2200
3077375	Upgrade, IP Filter	When upgrading to 3.10.20xx with existing IP filter configuration, the upgrade will fail and there will be a rollback to the older software version.	3.10.2200
3038797	VXLAN, UDP	For the tunnel VXLAN UDP packets source port is always "0".	3.10.2200
3003011	Memory	A memory leak in the master module caused it to stall, causing the standby module to take over and become master.	3.10.2100
3011244	OpenFlow, OVS	When trying to modify the OpenFlow group with the number of actions that is not supported in OpenFlow, the switch crashes.	3.10.2100
2999383	VRF	When VRF mgmt is configured, switching to non VRF mgmt configuration file via Web UI is not possible.	3.10.2100

2901444	Spectrum, Router. FDB, Tunnel	On rare occasions, removing an entry from the KVD on Spectrum systems, may cause the firmware to get stuck upon the next insertion.	3.10.2002
2950888	Certification	When whitespaces appeared in the "flag" certificate, caused certificate parsing failure.	3.10.2000
2818461	ECMP, VLAN, Next Hop	When ECMP has high amount of next-hops based on VLAN interfaces, in some rare cases, packets will get a wrong VLAN tag and will be dropped.	3.10.2000
2947760	EVPN, VRRP	EVPN tunnel drops VRRP packets.	3.10.2000
2963304	Email Notifications	White spaces in the "flag" certificate caused certificate parsing failure.	3.10.2000
2866195	FDB	On rare occasion, when the self-own interface was learned in FDB as dynamic entry, L3 traffic cannot reach L3 VLAN interface, causing a loss of router functionality.	3.10.2000
2723981	IPv6	The command "interface * * ipv6 nd ra suppress" did not set the value.	3.10.2000
2732840	MAC	Under very heavy load of both APIs and capacity that utilizes a very high number of bridges may lead to the disabling of MAC learning.	3.10.2000
2963599	MLAG	On the MLAG setup, saving configuration on the master switch causes the configuration to be saved on the standby switch. On rare occasions, during reboot flow on the standby switch, the saved configuration can be requested from the master switch (e.g., running "configuration write"), causing possible configuration damage.	3.10.2000
2749107	OpenFlow, ARP	When using OpenFlow flow for key=arp with action=normal does not trap ARP to CPU, causing ARP not to work.	3.10.2000
2369065	PTP	PTP over port-channel is not supported on Spectrum-2 and Spectrum-3 systems.	3.10.2000
3004309	SSH	Applying "ssh server listen interface [interface name]" caused improper SSHD	3.10.2000

		configuration, preventing the establishment of a new SSH session. Sessions established before mentioned configuration remained.	
2855928	Spectrum, Firmware	In rare cases, the system got stuck when a peer port went down.	3.10.2000
2902365	Spectrum, PTP	On Spectrum systems, a timing issue causes the firmware to get stuck on port flap while PTP is enabled.	3.10.2000
2868244	Spectrum, Tx	Changing the SerDes Tx parameters on Spectrum devices was not supported.	3.10.2000
2814703	Spectrum-2, Ports, Speeds	On rare occasions, when working with port rates of 1GbE or 10GbE and congestion occurs, packets may get stuck in the chip and may cause switch to hang.	3.10.2000
2884838	Spectrum-2, Spectrum-3, IP Routing	SDK crashed on Spectrum-2 and Spectrum-3 systems when the background process tried to switch both the IPv4 and IPv6 routing trees.	3.10.2000
2669055	Spectrum-2, Spectrum-3, Marvell PHY, Auto-Negotiation	In Spectrum-2 and Spectrum-3 systems, link did not work in auto-negotiation when connected to Marvell PHY. KR mechanism has been enhanced to integrate with Marvell PHY.	3.10.2000
2786687	Spectrum-3, ConnectX-6, Link	On some occasions, connecting Spectrum-3 to ConnectX-6 may cause link to go down.	3.10.2000
2887350	Spectrum-3, Counters, MTU	On Spectrum-3 systems, when sending traffic from 1GbE to higher speeds and packet size it close to ingress port MTU, packets can be dropped on FCS errors.	3.10.2000
2642414	Spectrum-3, SN4600C, Cables	While using SN4600C system with Finisar FTLC1157RGPL 100GbE CWDM4 modules, intermittent link flaps across multiple ports may be observed.	3.10.2000
2610967	Spectrum-3, SN4600C, Cables	Using SN4600C with copper or optics, link may raise in long link up times (up to 70 seconds).	3.10.2000
2664336	Spectrum-3, SN4600C,	In SN4600C system, when the peer is in auto-negotiation, link up time may take up to 8 seconds.	3.10.2000

	Fastboot, Auto Negotiation		
2780348	Spectrum-3, SN4600C, Link Up	When connecting SN4600C, 100GbE port with CWDM4 module (Gen 3.0), link up time is 30 seconds.	3.10.2000
2837462	Stamping	Under various circumstances, in Spectrum systems, Ethernet ports falsely showed that InfiniBand cables were connected.	3.10.2000
2808172	VXLAN, VRF	Non default VRF interfaces do not advertise mac-ip pair.	3.10.2000
2785511	MLAG	When MPO interface on the MLAG-master is down, the MLAG-standby takes ownership of the STP and sends BPDUs from the corresponding MPO interface. Instead of sending BPDUs only with the Master source mac address, the MLAG-standby sends two BPDUs (one with MLAG-master and one with MLAG-standby source MAC address).	3.10.1200
2833052	Password	Changing the user password and then proceeding SSH login with the new password affects configurations. When running "show configuration files", the "unsaved changes" field is reflected as "yes" (instead of "no").	3.10.1200
2803887	Logging	Updated format of port state change event print to log to include severity.	3.10.1000
2695327	Spectrum-3, PTP, L3	On L3 interfaces on Spectrum-3 devices, PTP configuration was applied in all interfaces of a 2x or 4x port.	3.10.1000
2741126	BGP, metad	metad process fails due to assertion after BGP configuration change.	3.10.0400
1913049	Spectrum-2, BER	BER monitor counts raw errors instead of effective errors.	3.9.09600
2735997	Logging	Port up/down notification messages do not show split-port index.	3.9.3300
2738253	SNMP, MSTP	SNMP walk and the traps related to MSTP are not functional.	3.9.3300
2755951	WebUI	In the WebUI, the children of splitter ports get mixed after auto refreshing twice.	3.9.3300

2796324	Spectrum, Firmware	When connecting Spectrum devices with optical transceivers that support RXLOS, remote side port down might cause the switch firmware to get stuck and cause unexpected switch behavior.	3.9.3206
2723850	BGP Unnumbered	If one of the L3 interface with link-local IPv6 address that is configured with BGP unnumbered goes down, the other BGP-unnumbered sessions over L3 interfaces with IPv6-link-local addresses shuts down as well.	3.9.3200
2661150	LLDP, BlueField	When Onyx is connected to BlueField NIC working in Separated Host Mode, LLDP does not work correctly.	3.9.3200
2700834	Memory	A division by zero issue in uC code caused infinite loop to uC database alignment which prevents memory corruption that was a result of illegal access of neighboring lanes.	3.9.3200
2722357	Memory Utilization	In some scenarios, memory was overutilized terminating the metad process.	3.9.3200
2616751	AAA	Remote authentication presented an error while password hardening was enabled.	3.9.3100
2618911	ARP	When an ARP request arrives at the switch for the VRRP/MAGP VIP, the switch answers 2 times, once with VRRP/MAGP MAC and once more with SVI MAC (both times for the same VIP). It leads to passing 50% of all routed traffic to go over the IPL in MLAG.	3.9.3100
2587143	EVPN, Gratuitous ARP	If the ingress VTEP connected to egress through MLAG topology (PO->MPO), it will generate ARP requests back to GARP sender and may contain IP address of the existing VTEP L3 interface.	3.9.3100
2595978	JSON	Using "show interfaces ethernet" over a JSON request repetitively may consume high memory overtime.	3.9.3100
2587667	Logging	If the system time was changed to a time in the far future (year 2100 or higher), the log may not rotate properly.	3.9.3100

2403386	MAC Address	Changed the show command outputs to be lowercase MAC address.	3.9.3100
2579303	MIB	Some of the NVIDIA proprietary MIB files were not SMIv2 compliant.	3.9.3100
2383519	MIB	MELLANOX-IF-VPI-MIB contained some redundant fields in the mellanoxIfVPITable which were not being populated.	3.9.3100
2628091	MLAG	Enabling IPL on L3 VLAN interface without creating a L2 VLAN under it caused inconsistent configuration state.	3.9.3100
2618893	Management ACL	IP filter rule with target that contains "in-intf mgmt0" may not work after reboot.	3.9.3100
2701070	PBS	PBS iterator returns back a system PBS record.	3.9.3100
2659510	Power Supply	During high/low voltage in power supply on 1U, the log and health report showed an error log.	3.9.3100
2661611	SNMP	In the SNMPv1 trap packets, the field "agent-address" was set by default to 127.0.0.1 (instead of the IP address of the management interface).	3.9.3100
2343778	Spectrum-3, SN4700, Cable Length	Setting the cable-length of AOC cables to 5m may lead to loss of traffic.	3.9.3100
2501277	Spectrum-3, SN4700, PSU, Telemetry	On rare occasion, data read from PSU yields incorrect information. This does not affect system or PSU functionality.	3.9.3100
2668246	Upgrade	After upgrading to 3.9.3000 or after rebooting on earlier versions, the following errors may be observed: SDK LOG MESSAGE: [FLOW_COUNTER][spectrum_flow_counter_ref_dec: cm_ref_dec failed SDK LOG MESSAGE: [SHSPM][Failed to decrease ref of flow counter 163840000: Resource is in use ]. These errors may be safely ignored.	3.9.3100
2369177	VRF, IPsec	IPsec may not work properly if mgmt VRF is created.	3.9.3100



2596943	WebUI, Docker	Docker logging level shall not be configured via WebUI.	3.9.3100
2596190	Communication Compliance, Transceivers	On LR4 transceivers 00YD278, the firmware incorrectly identified the transceiver.	3.9.3000
2654965	Firmware Failure	In specific firmware failures, the SDK may repeatedly identify the failure instead of alerting only once.	3.9.3000
2596030	Log Rotate	CPU utilization occurred during log file rotation.	3.9.3000
2628709	Memory	When a route is not present in the database, it may lead to a possible memory leak in async router.	3.9.3000
2334805	Spectrum-2, Spectrum-3, PFC	On Spectrum-2 and Spectrum-3 systems, slow reaction time to Rx pause packets may lead to buffer overflow on servers.	3.9.3000
2404336	Spectrum-3, DR4	On very rare occasion, when connecting DR4 PAM4 transceiver to 100GbE DR1 NRZ, high BER may be experienced.	3.9.3000
2215445	Spectrum-3, SN4700, Link Up, 400GbE	Unexpected packet drops on the port ingress buffer may be experienced when working in 400GbE mode.	3.9.3000
2589651	ACL	The ACL "switch-priority" parameter is displayed as "switch-prio" in running-config. This makes copy-pasting command from running-config non-functional in part of "switch priority".	3.9.2500
2587062	EVPN, Gratuitous ARP	Starting tcpdump on the interface VLAN with NVE neighbor suppression enabled will trigger generation of update GARP packet to all EVPN neighbors of this interface.	3.9.2500
2596749	MLAG, MPO	MLAG peers in some cases might send BPDU with different PortID for the corresponding interfaces. This can cause a spanning-tree interoperability issue where once the connected switch received BPDUs with 2 different port indexes, it shuts down its port. MPO interfaces should be configured	3.9.2500

		in the same sequence on both switches of the MLAG cluster.	
2628160	PTP	PTP configuration parser cuts off the port name when it exceeds 16 characters.	3.9.2500
2603731	PTP, VLAN	PTP process restarts when modifying VLAN membership of non-PTP enabled VLANs, on a PTP-enabled switchport.	3.9.2500
2604512	Power Supply	When thousands of interrupts are received from a faulty device, switch may reboot.	3.9.2500
2589710	RIF	Adding a disabled port (where ADMIN state is DOWN) to a LAG on top of which there is a sub-port RIF will cause a drop of all incoming traffic on that port (even if the port is enabled afterward).	3.9.2500
2402108	Spectrum, PTP	On Spectrum systems only, PTP port becomes UNCALIBRATED on the SYNCHRONIZATION_FAULT event. The issue is rare and may occur once per 2-4 days.	3.9.2500
2459256	Spectrum-3, PTP	The PTP port cannot synchronize with the Master device (SPC3 switch) due to improper time values inside of the packet (timestamp and correction fields). The Uncalibrated event on the port can be observed in the logs.	3.9.2500
2434628	Tunneling	On Spectrum-2 and Spectrum-3 systems, any tunnel traffic with split-to-4 might cause a deadlock.	3.9.2500
2608822	Upgrade, MTU, IPL	After upgrade from version with default MTU 1500 to version 3.9.2400, members of IPL (Ethernet interfaces) do not get upgraded to 9216.	3.9.2500
2589974	WebUI	When "monitor" user is added via WebUI it is set as "admin" capability.	3.9.2500
2502091	CLI	When there are no alarms, the CLI transceiver diagnostics field shows nothing for "Ch1 Rx Power Alarm" instead of "None".	3.9.2400

2513450	Cables, Power Display	Rx power display for channels 2,3, and 4 is missing from the show transceiver diagnostics CLI output.	3.9.2400
2578225	Power Supply	On SN2010 system with one power supply, "show power" reports an invalid output.	3.9.2400
2429542	SNMP	Large number of repeated queries to MellanoxSWUpdate SNMP Table showed a slow, yet steady, increase in Used Memory.	3.9.2400
2492055	Spectrum-2, SN3700, INI	On SN3700C, the INI power level was incorrect.	3.9.2400
2561709	Spectrum-3, Cables, QSFP-DD	"show interfaces ib * transceiver" shows incorrect value and format for QSFP-DD cables length.	3.9.2400
2341727	Spectrum-3, Port User Memory	After changing port user memory value, unexpected counters increases were observed.	3.9.2400
2509552	Spectrum-3, WJH	When enabling or disabling WJH under high traffic load to the host CPU, in very specific and low probability conditions, an error could occur, that may result in loss of data, channel failure or, in extreme cases, software failure.	3.9.2400
2179378	Speeds, Cables	When connecting Spectrum-2-based systems with Spectrum-3 based systems using 25GbE speed with LR module and auto-negotiation, there is no link up due to incorrect FEC selection.	3.9.2400
2579700	Upgrade, IPL	If IPL is configured on VLAN (i.e., "interface vlan 4000 ipl 1 peer-address 20.20.20.1" exists) but is not configured on port-channel (i.e., "interface port-channel 1 ipl 1" does not exist), upgrading to 3.9.2300 fails.	3.9.2400
2500350	VRRP	When VRRP was configured on a version 3.9.1020 or earlier, unable to delete VRRP instances from all interfaces.	3.9.2400
2482030	WebUI	In the WebUI, on version 3.9.20xx, going to Status --> Logs page and then pressing the "Dump Log File" button, sometimes produces a failure page displaying	3.9.2400

		corrupted log messages. These errors can be safely ignored.	
2399158	Driver	Driver will not load successfully when trying to reload the driver while the driver is during unload process.	3.9.2300
2416892	Kernel	During system reload when CPU is loaded with heavy traffic, a Kernel Panic may occur.	3.9.2300
2400150	PTP	Forced master port does not drop MANAGEMENT PTP messages.	3.9.2300
2435756	PTP, AMT	When PTP Acceptable Master Table (AMT) configuration is enabled, the switch does not work.	3.9.2300
2439494	PTP, GM	The log does not reflect that the PTP grandmaster clock has changed from 506b4b.ffff.88bb48 to 506b4b.ffff.88bb48.	3.9.2300
2407021	Router	On occasion, a deadlock may occur if the router was executed in async mode.	3.9.2300
2436673	SNMP	After power supply insertion, SNMP output for entity MIB was not updated properly.	3.9.2300
2410049	SNMP	MELLANOX-EFM-MIB testTrap node was updated to be read-write in order to be SMIv2 compliant.	3.9.2300
2457801	Spectrum, Firmware Upgrade, Transceiver	On Spectrum systems, 10GbE/1GbE Transceiver (FTLX8574D3BCV) stopped working after firmware upgrade.	3.9.2300
2431486	Spectrum-2, Optical Transceivers, Split Mode	When device is rebooted with locked Optical Transceivers in split mode, the firmware may get stuck.	3.9.2300
1883103	Spectrum-2, SN3700, Ixia, CRC	When connecting SN3700 at 200GbE to Ixia K400, Ixia receives CRC errors.	3.9.2300
2369780	Spectrum-2, Spectrum-3, ACL, Counters	When using 18K flow counters or more when ACL is configured on each port, the expected counters did not increase.	3.9.2300
1971750	Spectrum-2, Spectrum-3,	On Spectrum-2 and Spectrum-3 systems, the usage of ECMP NVE containers may	3.9.2300

	VXLAN, EVPN, ECMP Containers	cause a leak of KVD entries (i.e., the number of available KVD entries for the next allocations may be reduced).	
2407915	Spectrum-3, PAM4, Optic Cables	In Spectrum-3, while using Optic cable in Split 4x1 mode in PAM4, when two first ports are toggled, the other 2 ports go down.	3.9.2300
2411061	Spectrum-3, PFC	On Spectrum-3 systems, slow reaction time to Rx pause packets on 40GbE ports may lead to buffer overflow on servers.	3.9.2300
2415177	Spectrum-3, SDK Drivers	Loading and unloading the SDK drivers simultaneously leads to failure of the actions initiated. The possibility of loading and unloading SDK drivers simultaneously has now been disabled.	3.9.2300
2384299	Spectrum-3, SN4700, Cables, Split	On occasion, when using Dell QSFP28 copper cable in 40G (4x10G) split mode, the link goes down.	3.9.2300
2355323	Spectrum-3, Telemetry	When moving the port-status of two or more ingress ports up or down, congestion egress events will send events of threshold crossing without real reason, though the congestion histogram remains unaffected.	3.9.2300
2320854	Speed, 400GbE	When working in 400GbE, deleting the headroom configuration (changing buffer size to zero) on the fly may cause continual packet drops.	3.9.2300
2416693	VRF, Upgrade	In version 3.9.2006, "mgmt" VRF is considered a special VRF for switch management purposes. If a current configuration contains VRF with the name "mgmt" and an upgrade to 3.9.2006 (or later versions) is performed with "no boot next fallback-reboot enable", the switch will boot in an inconsistent state.	3.9.2300
2406375	sFlow, Ethernet Interfaces	Interface indexes are wider than 24-bit and do not fit into the data-source ID field.	3.9.2300
2367444	BGP, PIM	If a PIM DF is from a BGP path, the metric value in "show ip pim interface DF" is a very large value. This has no functional impact to the system.	3.9.2100

2248289	Counters	Sent traffic in certain size is wrongly increase to a smaller size counter, because port extended counter has a counter for sent traffic per packet-size range.	3.9.2100
2370866	Counters, Bulk Flow	On Spectrum systems, the allocation of a large bulk group of flow counters may fail once the number of allocated flow counters reaches 6K.	3.9.2100
2411080	IGMP	When receiving malformed IGMP packets memory leak occurs. In turn, this may affect the handling of IGMP control packets.	3.9.2100
2400648	IP Filter	IP Filter does not display the In-intf on "show ip filter."	3.9.2100
2392772	NTP, Logging	NTP tries to open sockets on all L3 interfaces with IP addresses, but fails on bind, because NTPD runs in a different context than the L3 interface VRF context.	3.9.2100
2357708	PTP, CRC	PTP does not work properly on the ports which have disabled CRC check and recalculation.	3.9.2100
2366059	SN3700, Module, COLORZ	On occasion, link down is experienced with INPHI COLORZ PAM4 100G optic cables on SN3700 systems.	3.9.2100
2392475	SSH	SSH session cannot be established with a configured listen interface for the SSH server ("ssh server listen interface").	3.9.2100
2333966	Shared Headroom	Configuring shared headroom on the fly may, on occasion, cause the chip to get stuck.	3.9.2100
2393040	Spectrum, IPv6	On Spectrum systems, when running IPv6 traffic on eight 100GbE ports at full speed (where 50K IPv6 prefixes are advertised), packet loss may be observed on several of the ports. Use "ipv6 routing disable-discard-counter" command to fix performance issues. For more information, see "IPv6" section under "IP Routing" section in the user manual.	3.9.2100
2402142	Spectrum-2, OpenFlow	Failed to add more than 20 actions per one Openflow rule.	3.9.2100

2327831	Spectrum-3, SN4700, Cables, BER, DAC	On rare occasions, BER may appear up to 1 minute after link up with DAC.	3.9.2100
2399948	Spectrum-3, SN4700, Port, Split	On rare occasion, in SN4700 systems, conducting 100G split (4x25G) in NRZ when splitter port 1 or 2 are down cause ports 3 and 4 to also go down.	3.9.2100
2399828	Upgrade, MTU	After upgrading to version 3.9.2006, ports with MTU 1500 cannot be assigned to IPL because the default MTU value changed to 9216.	3.9.2100
2373720	WJH, Ports	In the WJH library, local port 128 was considered an invalid port.	3.9.2100
2282506	Cables, Speeds, Firmware	In Spectrum, after changing speeds the firmware may get stuck.	3.9.2000
2135522	Driver, MTU	When sending a control packet that is larger than the port MTU, instead of control-sending queue will get stuck, driver will return an error.	3.9.2000
2329973	Initialization	Occasionally errors are observed in CLI and portd during initialization, after which the switch does not function normally due to a rare timing issue.	3.9.2000
2315204	JSON	Sending multiple JSON requests simultaneously can occasionally cause one of the requests to hang and return an error response even though it was executed successfully.	3.9.2000
2300457	JSON	On rare occasion, when the switch receives an asynchronous JSON request while the system is handling many additional operations, the request can sometimes get lost and will not be executed.	3.9.2000
2337827	Link, Operational Speed	When link drops from Active to Polling, operational speed will not be cleared (i.e., it will continue showing the last active state).	3.9.2000
2204195	Management Interfaces	Error string displays an unclear error message for RADIUS servers whose ciphers are not supported in secure mode.	3.9.2000

2302708	OpenFlow	In deinitialization phase, OpenFlow table was removed before table rules were removed causing assert. As result, a core file was generated and reboot/boot took longer than usual.	3.9.2000
2316068	OpenFlow, VLAN	When the OpenFlow SDN controller is connected to the switch via router port without VLAN, not all the ports under the group will work.	3.9.2000
2265508	PTP, Logging	Configuring PTP logging level to debug starts a phc2sys process in verbose mode that overloads the log.	3.9.2000
2339862	SNMP	"ConnectorPresent" at SNMP does not work well.	3.9.2000
2133819	SNMP, VTEP Certification	BFD failover test from the VTEP certification test suit fails, as ARP request is duplicated by the hardware VTEP.	3.9.2000
2127532	Spectrum-3, SN4700, Cables, BER	On SN4700 system, there is high BER on 200GbE copper cables.	3.9.2000
2259781	mDNS	mDNS announcements are being prevented from operating inside the container on the switch.	3.9.2000
2303013	ACL	When traffic is captured on an ACL rule with log enabled, the rules always appear in the syslog with deny action (even when permit is set).	3.9.1900
2316989	MLAG	In case MPO is set to LACP individual mode and a member in MPO is active, a repetitive misleading log appears in messages file.	3.9.1900
2294065	MLAG	In some scenario, when using Break before making an MLAG cluster could lead to a state where the MPO is set to flood block enabled even though the port is up.	3.9.1900
2304026	Monitor Session	From release 3.9.1000 and up, deleting a monitor session that had no destination port did not work.	3.9.1900
2322707	OpenFlow	When setting up a group where one of the ports contains a modifier and others do not,	3.9.1900



		all ports get the traffic with the modification.	
2320133	OpenFlow	The internal error occurs when modifying the group ALL with output ports which are in use by added flows.	3.9.1900
2325227	PIM, IGMP, Recirculation Port	Enabling recirculation port for telemetry will produce IGMP fail log messages when PIM is enabled on VLAN interface 1.	3.9.1900
2317280	RoCE, Multicast	RoceV1 Multicast packets are being discarded in the ingress port.	3.9.1900
2322317	Spectrum-3, BER, Link Flap, PAM4 LM	On rare occasion, link flapping due to bad BER causes traffic loss as a result of new PAM4 link maintenance flow on Spectrum-3 devices.	3.9.1900
2317282	Spectrum-3, SN4700, Fence	On SN4700 system, Fence may fail while running 400GbE 8x port when modifying mirror session configurations under traffic.	3.9.1900
2316339	Spectrum-3, Shared Buffers	On rare occasion, modifying shared buffers on a system with a split port while traffic is running may cause the firmware to get stuck.	3.9.1900
2277629	Static IP, DHCP	In cases where a management interface has both static IP and DHCP configured, reloading the switch will not assign an IP if no DHCP received.	3.9.1900
2277889	ZTP, BGP IP Prefix List	Exported text config files which include BGP IP prefix list configuration cannot be applied via ZTP because the 'cli session' command is not supported in the ZTP scenario.	3.9.1900
2288885	ACL	Setting an ACL group to be exactly the same as it was before may corrupt the group and cause traffic misbehavior.	3.9.1600
2292316	CLI, Port Description	Having a pipe symbol (   ) in the port description brakes the CLI output of two commands: "show interfaces status" and "show interfaces ethernet description".	3.9.1600
2263063	ECMP	When empty ECMP containers (such as unresolved next hops) are updated but still	3.9.1600

		remain empty, an error will occur (relevant only if an ACL action points to this ECMP).	
2258711	Histograms	In Spectrum-3 systems, Latency Histogram may have incorrect values if a port is configured to an 8x width.	3.9.1600
2268678	LAG	MSTP state is not updated correctly for ports in certain VLAG scenarios.	3.9.1600
2272649	MAC Address	When using show mac-address-table with MAC address in the following format "xxxx.xxxx.xxxx" it caused the CLI session to crash.	3.9.1600
2281215	MAGP	Host in MLAG cannot resolve ARP of base VLAN interface of MAGP which belongs to non-default VRF.	3.9.1600
2269143	Modules	In some cases, error may occur when using MCION query on a module with types "sfp_rx_los_soft_en" or "sfp_tx_fault_soft_en" that enable rx_los/tx_fault read from the memory map.	3.9.1600
2265665	OpenFlow	The OpenFlow rule does not work properly after a group is modified if the rule contains action group and additional actions.	3.9.1600
2132856	PIM	"show ip pim rp-hash "238.0.1.0" appears as an invalid group address.	3.9.1600
2293670	SNMP, Listen Interface, Static IPv6	SNMP process may cause flapping when mgmt0 with static IPv6 address (DHCP disabled on mgmt0) is configured as listen interface.	3.9.1600
2293106	Upgrade, Split, Speeds	After upgrading to 3.9.13xx, configuring split-ports to 100GbE or 50GbE causes the configuration to break.	3.9.1600
2274344	WJH	When WJH lib is enabled and WJH ACL is enabled, in very rare cases, undefined trap behavior may occur.	3.9.1600
2282379	WebUI, Auto-Negotiation	Configuring auto-negotiation through web UI may fail when choosing unsupported speed option.	3.9.1600
2261132	Spectrum-2, ECMP	ECMP hash on Spectrum-2 results in multiple next-hops for a single ping	3.9.1304

		session. For non-TCP/UDP packets, disable hashing on L4 source port for correct LAG/ECMP load balancing.	
2229754	Spectrum-3, SN4600C, Cables, Speeds	10GbE link up time, when using SN4600C with ConnectX-4, may take up to 2 minutes.	3.9.1304
2253387	ACL	Configuring the ACL table with bind-point RIF does not get configured as expected after switch rebooting the switch.	3.9.1300
2202191	BGP	BGP is unable to establish sessions configured in different VRFs (only one VRF will establish BGP session).	3.9.1300
2176212	BGP, Scale	Spectrum-2 and Spectrum-3 based systems may run into a condition where the SDK process consumes very high memory when running BGP with Max Scale.	3.9.1300
2147535	DHCP Relay	When configuring DHCP relay downstream interfaces and then immediately configure many (etc >100) IP interfaces, DHCP relay may not work properly.	3.9.1300
2250548	ECMP, CPU Utilization	When editing a MAC that points to a new ECMP with a next-hop that points to another ECMP, the SDK operation does not end.	3.9.1300
2250341	EVPN, IPv6, Neighbor Suppression	Enabling Neighbor Suppression leads to IPv6 link local although IPv6 is disabled. As such, EVPN advertises the Default Gateway.	3.9.1300
2214497	JSON	Using "show interface status" over a JSON request repetitively, may consume high memory overtime.	3.9.1300
2225704	Logging Monitor	Because the "logging monitor" commands use "echo \rMESSAGE\n > TTY" for every logged-in user, the CLI prompt is overwritten by MESSAGE, making it appear as if the prompt was never sent.	3.9.1300
2186662	Recirculation Port	"show interfaces ethernet link-diagnostics" reports an error in JSON API web UI if a recirculation port is defined.	3.9.1300

2055399	Recirculation Port	Attempting to perform invalid configuration on a recirculation port (e.g., changing speed or MTU, had no effect, but no error message was displayed to user. Now, an error message is displayed).	3.9.1300
2260839	SSH	Only deprecated cipher in SSH was supported. Added support for new ciphers.	3.9.1300
2156498	STP Failover Latency, 1GBASE-T	STP Failover Latency on 1GBASE-T is longer than expected (up to 250 msec) in Spectrum-based systems.	3.9.1300
2235436	Shared Buffer	In some cases, wrong reserved buffer and descriptor values were configured for ports. This could cause some traffic loss in cases of momentary congestion that should have been absorbed by those buffers.	3.9.1300
2170125	Spectrum-2, PTP, WJH	On Spectrum-2 systems and up, PTP cannot work with WJH enabled. As WJH is enabled by default, it must be disabled before PTP is enabled.	3.9.1300
2244903	Spectrum-2, Telemetry Threshold	Telemetry threshold events stop being generated after the LAG port member changes.	3.9.1300
2231115	Spectrum-3, Port Toggle	On rare occasion, when connecting DR4 to Spectrum-3 systems and DR1 to Spectrum system after toggling from both sides, link may not rise.	3.9.1300
2248899	Spectrum-3, RIF	In rare cases, creating a new RIF fails and the firmware does not complete the operation.	3.9.1300
2198406	Spectrum-3, SN4600C, Cables, pre-FEC	In rare cases, high pre-FEC errors are experienced on MFA1A00-Exxx optic cables (post-FEC is clean).	3.9.1300
2252889	Spectrum-3, SN4700, Link, Speeds, Optics Cable	In SN4700, the link up time using optics cables for 100/200/400GbE may take up to 30 seconds.	3.9.1300
2201102	Speeds, Port, Stress	The "Operational FEC" value is "auto" instead of the real FEC on some speeds if the input speed does not match the actual port speed.	3.9.1300

2225134	Streaming, MTU, TTL	In Streaming Settings, the events "TTL value is too small" and "Packet size is larger than MTU" (under Forwarding > L3) are always streamed even if configured otherwise.	3.9.1300
2269400	VRF, BPF	Cannot use BPF filters due to default Linux restrictions for maximum amount of locked memory per process. Affected utilities include those which run in a VRF context such as tcpdump, ping, etc.	3.9.1300
2259946	VXLAN, Flood	On Spectrum-based systems, on some occasions, traffic that is flooded to the tunnel through an MC BRIDGE_MC container may be dropped.	3.9.1300
2269362	WJH	<p>The following changes have been made when another application takes control of WJH.</p> <p>"show what-just-happened status":</p> <p>Before change: WJH groups appeared with "Operational status" as Enabled.</p> <p>After change: If another application (e.g. NEO) takes control of WJH, the "Operational status" will be Disabled</p> <p>"show what-just-happened &lt;drop-reason-group&gt; " will no longer try to take control of WJH. Running the show command while another application controls WJH will now provide no output. If the OS needs to take control of WJH, the command must be disabled the flow must be enabled again.</p>	3.9.1300
2210991	WJH	WJH port down reasons is inconsistent with the PDDR register.	3.9.1300
2207047	WJH, Spectrum	On Spectrum-based systems, when what-just-happened buffer drop is enabled and while WJH Telemetry is activated, executing the "show what-just-happened" command ends with the following error: "% Request failed; sdkd subsystem is busy".	3.9.1300
2170270	ACL, Binding	Multi-groups linked together do not bind correctly when using multi-binding.	3.9.1000

2149871	BGP Unnumbered, IPv6	For a IPv6 route learned from a BGP unnumbered peer, the prefix and nexthop fields of the output of "show ipv6 bgp <prefix/mask> longer-prefixes detail" are incorrectly displayed. The nexthop should be the IPv6 link local address of the BGP unnumbered peer.  This is a display issue and will not affect the forwarding table.	3.9.1000
2149856	BGP Unnumbered, IPv6	For an IPv6 route learned from a BGP unnumbered peer, the nexthop field of "show ipv6 bgp <prefix/mask> detail" is displayed as a IPv4 address 169.254.101.101 instead of the link local address of the unnumbered peer.  This is a display issue and will not affect the forwarding table.	3.9.1000
2399702	CPU Temperature	Switch reports high CPU temperature in cold environment (<10C).	3.9.1000
1795410	EVPN	In some instances, when ARP suppression is enabled in an overlay network that uses IPv6, ND packets get duplicated.	3.9.1000
2223552	Ethernet Interfaces	IPv4 subnet /31 is not functional.	3.9.1000
2134062	Ethernet Interfaces	Traffic does not pass through the NVE interface because there are no routes in "Local" Linux routing table.	3.9.1000
2188104	IGMP Snooping	Splitting a port which has a static IGMP Snooping group causes an error.	3.9.1000
2090662	Link	While using 3rd party FPGA with Spectrum-based systems, 50GbE RSFEC does not raise a link while using auto-negotiation or force mode.	3.9.1000
2123235	Local Analyzer, Monitor Session, Destination Port	Configuration write immediately (less than one seconds) after configuring destination port of monitor session, could result in failure to remove the destination port after reload.	3.9.1000

2182108	Login Flooding	Using telnet server on a switch in combination with login flooding may lead to unexpected reboot.	3.9.1000
2210000	MLAG	MLAG process may crash in extreme scenarios.	3.9.1000
2164845	MLAG	When configuring load interval on MPO interface, running "show running config" will display errors.	3.9.1000
2020839	MLAG	MLAG VIP is deleted when management interface is flapping.	3.9.1000
2181505	MLAG, JSON	When hostname is bigger than 20 characters, "show mlag-vip" did not display the output correctly when using JSON print.	3.9.1000
2116517	Monitor Session	It takes a few seconds after the CLI prompt returns for a monitor session configuration change to be updated in the database.	3.9.1000
2211629	OvS, OpenFlow	Adding a large amount of flows which differ only in the "priority" field caused OvS to crash.	3.9.1000
2181356	OvS, OpenFlow	The SDK errors occur the OvS in the process of modifying OpenFlow group after removing flows which contain the group's "action" field.	3.9.1000
2126375	PBS	When a high scale of PBS multicast entries are used (with a high scale of flood vectors), some PBS multicast packets may be flooded instead of being sent to their intended ports.	3.9.1000
2169244	PTP	The message "clockcheck: clock jumped backward or running slower than expected!" appears in the log due to improper clock check procedure.	3.9.1000
1882815	PTP, Control Packets	When PTP shaper is enabled, traffic rate of over 95% might cause control packets loss.	3.9.1000
2230858	PTP, Spectrum	On Spectrum-based systems, on rare occasions, timestamp event of an ingress packet arrives before the packet itself and, eventually, the process of matching	3.9.1000

		between the packet and timestamp takes place only when the next packet arrives.	
2236267	Port Mirroring	Deleting a monitor session immediately (within a second) after configuring destination port may cause errors.	3.9.1000
2119187	Recirculation Port	If all configurations are not cleared before configuring the recirculation port, the configurations cannot be changed after configuration.	3.9.1000
1996065	RoCE	When configuring a default mapping of switch-priority to traffic-class, configuration sticks when enabling RoCE.	3.9.1000
1980024	RoCE, Traffic Pool	When changing the traffic pool type of traffic pool 'roce-reserved' that is dedicated to RoCE traffic, setting a type that matches the current RoCE mode default will not remain when switching to a different RoCE mode.	3.9.1000
2211133	RoCE, Trust Mode	When enabling RoCE, the Trust Mode value becomes the current default instead of being retained when disabling RoCE.	3.9.1000
2190712	SN3420, INI Switches	Cables stamping did not appear in the output.	3.9.1000
2174105	SNMP, QoS, MIB	OS memory leak detected when querying QoS MIB.	3.9.1000
2199242	Security	Regeneration of certificate failed if the switch was unable locate it.	3.9.1000
2081509	Spectrum-2, BER, Cables	Connecting to ConnectX-5 adapter card with copper splitter cable MCP7H50-V001R30 in 100G (2x50GbE NRZ) FC-FEC/NO-FEC causes high BER.	3.9.1000
2006865	Spectrum-2, Cables	Link flaps in 200GbE with AOM Optic cable MMA1T00-VS.	3.9.1000
2211210	Spectrum-2, SN3700C, Split Port	Split mode with one PLL module [MFS1S50-Vxxx] is not functional in SN3700C systems.	3.9.1000
2183145	Spectrum-3, Cables, Speed	Using 400GbE with 3rd party systems is not supported.	3.9.1000



2163778	Spectrum-3, LAG	After a while, LAG members become out of sync with one another.	3.9.1000
2131366	Spectrum-3, PFC	Setting PFC using PG0, when changing "on the fly" from lossy to lossless while also configuring a large headroom size (1800 and above), may lead to errors.	3.9.1000
2223613	Spectrum-3, Port Toggle	When partner port is toggled, the linkdown counter increases twice instead of once.	3.9.1000
2202602	Spectrum-3, SN4600C, Cables, ConnectX-4	On rare occasion, when connecting between an SN4600C system and ConnectX-4 card with Molex Splitter Copper cable 2x50GbE in AutoNeg with NO FEC mode, high BER may be observed.	3.9.1000
2134499	Spectrum-3, SN4700, Speed Change	After configuring 400GbE, moving to a different speed requires a reload.	3.9.1000
2177461	Spectrum-3, VLAN, Ports	Packets with VLAN headers are sent to incorrect port (sent according to PCP instead of default).	3.9.1000
2200397	Speeds, Link	When moving from a 400GbE link to a 1GbE link, packets may drop for 1 msec right after link up.	3.9.1000
2180194	WEB UI, Spectrum-3, QSFP-DD	The Web UI does not show on Spectrum-3 system's ethernet interfaces that were split as qsfp-dd-split.	3.9.1000
2211628	WEB UI, Speed, Auto-Negotiation	Configuring any speed from Web UI automatically sets the auto-negotiation flag to "yes".	3.9.1000
2199201	WJH	On very rare occasions, driver crashes while reading WJH packets on Spectrum systems.	3.9.1000
1995084	WJH	Without any traffic or events on the idle system, the CPU load is constantly above 4%.	3.9.1000
2173203	WJH, Port Mirroring, Monitor Session	Configuring 3 monitor sessions and a recirculation port on Spectrum systems or configuring 8 monitor sessions and enabling WJH buffer drop on Spectrum-2 systems, caused internal errors. The	3.9.1000

		operations that exceed system resources are now blocked in the CLI.	
2193602	Web UI, debug dump	Multiple debug dumps may be issued simultaneously, causing the switch to crash on some occasions.	3.9.1000
2082371	WebUI	Some monitor session commands may return "Operation In Progress" error.	3.9.1000
2142240	LAG, Multicast	On Spectrum-2 and Spectrum-3 systems, when configuring more than 16 LAGs, the Multicast container/Flooding vectors may overwrite each other's configuration.	3.9.0920
2208813	Spectrum-3, SN4600C, BER	At times, high effective BER is experienced when using LUX42604CO module.	3.9.0920
2199272	Spectrum-3, SN4600C, Cables	1AT-3Q4M01XX-12A cable has long link-up time.	3.9.0920
2201389	Spectrum-3, SN4600C, LED	When splitting, port LEDs on SN4600C are off.	3.9.0920
2203793	Spectrum-3, SN4600C, Link Up	At times, when connecting between an SN4600C system and ConnectX-5 card, the link up time can take up to 2 minutes.	3.9.0920
2174243	Spectrum-2, ACL, Routes	On rare occasions on Spectrum-2 systems, while deleting ACLs or modifying routes, the firmware will hang and will not accept additional configuration.	3.9.0914
2169358	Spectrum-3, Split-Port	In some cases, with mix split port configuration on Spectrum-3 systems, bridge traffic would egress a trunk port without a VLAN.	3.9.0914
2155707	Spectrum-3, Split-Port	In some cases, with mix split port configuration on Spectrum-3 systems, host tx traffic is dropped on mc_no_buffer_drop even though buffer is configured correctly.	3.9.0914
2153830	BGP Unnumbered	BGP unnumbered neighborship is not re-established after upgrade or reboot and remains in IDLE state when more than 15k unnumbered routes are installed.	3.9.0900
2149659	IGMP Snooping, Memory	When processing control packets (IGMP/LLDP/LACP), memory allocation was unsuccessful.	3.9.0900

	Management, Spanning-Tree		
2176178	IGMPv3 Immediate Leave	IGMPv3 membership report with mixed "leave" and "join" MC groups fail to leave the IGMP MC groups. This occurs only when IGMP "immediate leave" is enabled.	3.9.0900
2176203	IGMPv3, IGMP Snooping	IGMPv3 membership report with mixed "leave" and "join" MC groups removes all IGMP Snooping entries.	3.9.0900
2148230	Logging	Default configuration of log rotation criteria "size" appears in "show running-config".	3.9.0900
2125880	Running-Config, BFD	In show running-config output, BFD interface commands appear before interface IP commands.  As a result, when applying a configuration text file, BFD interface commands do not work.	3.9.0900
2190783	SYSDUMP	In versions 3.8.2100 and up, on rare occasion, a system dump could cause a switch halt.	3.9.0900
2170857	Spectrum-2, PSU	On SN3700 system with DC-PSU, when removing or inserting a single PSU during the run time, the operating system does not properly recognize the PSU state and shows them as if they are in fail state.	3.9.0900
2169714	Switch Management	In version 3.9.06xx, when more than 1000 DNS resolutions occur via DHCP, the switch may get stuck.	3.9.0900
2132100	VLAN, JSON	JSON VLAN name is incorrectly parsed when the name includes more than 24 characters.	3.9.0900
2147531	Multicast, ACL, PBS	When a high scale of PBS multicast entries are used (with a high scale of flood vectors), some PBS multicast packets could be flooded instead of sent to their intended ports.	3.9.0610
2094598	BGP	BGP Route Table changes the displayed routes for local routes injected.	3.9.0600

2093798	CLI, MGMTD	Running "switchport allowed-vlan auto-completion" takes a few minutes when using high CPU usage for MGMTD and CLI.	3.9.0600
1963505	ECMP	<p>Using API "sx_api_router_ecmp_set" API with the command "sx_access_cmd_set" allows the user to provide a list of next hops.</p> <p>If the current state of the ECMP container is that ALL of its next hops are unresolved, and the user provides a new list of next hops, where at least one of the next hops is already resolved, SDK will not update the hardware accordingly and traffic loss will be caused.</p>	3.9.0600
2101941	EVPN	Remote Zero MAC leads to a crash.	3.9.0600
2107105	Ethernet Interfaces	In version 3.9.0300, an error message, which is a false alarm, may appear stating that "voltage is out of range".	3.9.0600
2089486	General Management	When "SSH server login record-period" is set to 30 days and the successful login count is higher than 20K, a delay may be experienced in initializing SSH, the console, or web sessions.	3.9.0600
2113499	IGMP, IPv6	IPv6 ICMP6 does not work when IGMP MRouter is enabled.	3.9.0600
2119977	Logging	Logging to remote host in WELF format is not working.	3.9.0600
2065500	Logging	When Remote Logging is configured to use a specific source interface, a remote syslog session will be sent with default UDP port 514 regardless of the user configured UDP port.	3.9.0600
2089963	MLAG	In MLAG, occasionally peer MPO moved to STP state discarding when it was actually in forwarding mode.	3.9.0600
2094174	Management Interfaces, IPv6	The IPv6 address of management interfaces disappears when link flips, if it is a static IP.	3.9.0600

2098223	Management Interfaces, LLDP, IPv6	Setting IPv6 address on management interfaces may cause incorrect LLDP BPDUs content. As a result, BPDUs could be discarded by LLDP tools installed on the host.	3.9.0600
2091403	Multicast, Buffers	OSPF packets are dropped when the egress multicast buffer is congested.  BGP and OSPF packets were modified to work with high priority (VLAN PCP 6) to address the issue.	3.9.0600
2089437	NTP	NTP protocol times out when configuring loopback as source-interface—data is sent but cannot be received on the loopback interface.	3.9.0600
2119014	OpenFlow	Execution of "no protocol openflow" leads to crash of OVS process due to errors.	3.9.0600
2103969	OpenFlow	OpenFlow group select has incorrect load balancing.	3.9.0600
2064818	PFC, RoCE	When explicitly disabling PFC configuration and then enabling RoCE lossless/semi-lossless mode, PFC will remain disabled and will be shown on running-configuration.	3.9.0600
2115043	SNMP, MIB	On systems with fixed PSUs (where PSUs cannot be removed), when one PSU is down, SNMP OID 1.3.6.1.2.1.99 fails.	3.9.0600
1914418	Spectrum-2, Modules	Bidi module is currently not supported.	3.9.0600
2116286	Spectrum-2, SN3420	1GbE and 10GbE speeds are not supported on SFP ports.	3.9.0600
2021127	Spectrum-2, SN3700C	SDQ gets stuck when completions are not received.	3.9.0600
2083448	Spectrum-3, SN4700, Cables, Link Flap	Using copper cables in 200GbE speed causes link flap.	3.9.0600
2120268	WJH	A large number of named what-just-happened files may cause new files not to be written, with errors in log.	3.9.0600

2089470	WJH	What-just-happened pcap files cannot be read by tcpdump -r on switch.	3.9.0600
2083531	WJH	Heavy duty generation of what-just-happened pcap files (e.g., typing "show what-just-happened*watch") might overflow the space allocated for it and cause errors in the log.	3.9.0600
2071192	WJH	what-just-happened-named pcap files are not included in sysdump.	3.9.0600
2020828	BGP	BGP Peer-Group Route-Map is not configured when configuration is reapplied after running "no protocol bgp" or "no router bgp" commands.	3.9.0300
1975186	BGP	The commands "neighbor export-localpref" and "neighbor import-localpref" do not work after running the following BGP commands: activate address-family, route-reflector, route-map, update-source, add to group.	3.9.0300
2047120	EVPN	JSON output for "show ip bgp evpn * detail" is incorrect.	3.9.0300
1891679	EVPN	Show IP BGP EVPN for a specific VNI was not showing IMET routes.	3.9.0300
2077291	IGMP	Receiving 'IGMP Leave' packets may lead to traffic loss with enabled immediate-leave mode.	3.9.0300
2078535	Interfaces	On a switch that was running continuously for at least 7 weeks, the output of "show interface <>" showed incorrect values for "last change in operational status".	3.9.0300
2042436	LDAP	Missing LDAP group support.	3.9.0300
1993198	Logging	In some cases, ipstrc.log grows indefinitely.	3.9.0300
2056545	Shared Buffer, Advanced Buffer Configuration, Advanced Mode	When upgrading with Advanced Buffer Configuration, if configured pool size is bigger than current available resources, pool size configuration fails with error logs.  Note that as a part of the solution, the maximal allowed size will be set instead.	3.9.0300

2107031	Spectrum-3, SN4700, BER	On some occasions, uncorrectable errors may be observed on some lanes from time to time.	3.9.0300
2080970	WSMD	In very rare cases, heavy web loads caused WSMD to crash.	3.9.0300
2001178	rsyslog	When rsyslog is flooded with log requests, restarting the rsyslog during the deinitialization flow will result in a crash.	3.9.0300
2052149	OpenFlow	OVS crashes when adding 128 ports into the OpenFlow.	3.8.2300
2004069	OpenFlow	The OpenFlow rule with action "Normal" floods the tagged ARP packets through all ports on the switch.	3.8.2300
2004983	ARP	MLAG EVPN forwards broadcast control packets causing traffic failure. An ARP request packet may be looped in setup when working with MLAG on MLAG (leaf and spine) setup with EVPN.	3.8.2204
1996686	BGP	BGP session gets stuck in connect state when adding peer to a peer group when already configured correct password.	3.8.2204
1996134	BGP	Export route-map was not configured when adding peer to peer-group with import-export route-map configuration.	3.8.2204
1995007	BGP	BGP route-map set as-path prepend does not function after reboot.	3.8.2204
2004263	BGP, SNMP	At times, using snmpwalk with many BGP neighbors takes more than 10 seconds.	3.8.2204
1993412	BID-PIM	Switch crashes when PIM SM/SMM is configured and receives PIM BiDir control packets.	3.8.2204
1975648	Docker	Docker daemon failed to start.	3.8.2204
2032671	EVPN, MLAG, ARP	ARP broadcast duplication. In some cases, ARP broadcast packets received from remote VxLAN gateway can be recursively encapsulated into VxLAN and sent back to the network.	3.8.2204

1978440	IGMPv3	IGMPv3 membership reports appear in the log with group IP of 0.0.0.X instead of the real group IP.	3.8.2204
1969162	IPv6	Ping to an IPv6 address does not work when there is MLD querier in the network on a different VLAN.	3.8.2204
1971824	Logging	Redundant log message appears in serial output.	3.8.2204
2036570	MLAG	In case of a traffic loop inside a setup which consists an MLAG cluster, one of the peers in the MLAG cluster could learn its own router MAC. In this scenario, the MLAG peer issued a Notice Log endlessly.	3.8.2204
1999327	MLAG Spanning Tree	MPO on slave side was transmitting BPDUs packets when MLAG is UP and MPO is globally up.	3.8.2204
1928167	MLAG VIP	If MLAG VIP ip is lower than MGMT IP address, it was chosen as the advertised IP for LLDP after performing switch reboot.	3.8.2204
1992686	Management Interfaces	The CLI command "ip default-gateway <inter-face>" sets the gateway address to 0.0.0.0 and prevents the user from adding other gateways and the command cannot be removed.	3.8.2204
1972348	Management Interfaces	The CLI allowed for configuration of an invalid IP and netmask, such as 0.0.0.0/0, on the management interfaces.	3.8.2204
1980025	PTP	The CLI command "show ptp vrf *" does not show PTP information for specific VRF.	3.8.2204
1887128	QoS	Changing the default mapping of the Switch Priority to Traffic Class will cause traffic loss.	3.8.2204
2003356	Wizard	On manufactured systems, closing the terminal suddenly during the wizard process will cause the wizard to consume 100% of the CPU.	3.8.2204
1931123	BGP	BGP session resets when a peer does not support Enhanced Route Refresh and it moves from one update group to another.	3.8.2100



1930219	CLI	Changed wording from "soruce" to "source".	3.8.2100
1975466	General	In some rare cases, the system could fail to perform a reboot after a software failure.	3.8.2100
1821346	ICMP	A ping to down-state interface VLAN will continue to work.	3.8.2100
1916589	Interfaces	"no interface ethernet <> encapsulation dot1q vlan force" removes VLAN encapsulation.	3.8.2100
1962006	Logging	In case multiple identical log messages are sent in a short period of time, the aggregation may not work properly.	3.8.2100
1929574	Logging	If BPDU Guard is enabled on an interface and the interface receives a BPDU packet, its status should indicate "down" and a log should be added to the system log files.	3.8.2100
1963903	MLAG, L2 SWITCHING	Learning new MAC entries at high rate could lead, in certain cases, to a resource leak that later prevents the switch from learning new MAC entries.	3.8.2100
1914226	OVS	OVS crashes after connection of the SDN controller.	3.8.2100
1868545	OpenFlow	The following CLI commands deleted configuration: "openflow del-flows", "openflow del-group", "openflow del-meter".	3.8.2100
1940694	RoCE	An incorrect port PFC state is displayed after disabling RoCE lossy mode.	3.8.2100
1920541	RoCE	Global Flow Control configuration is not displayed in running-config after applying RoCE.	3.8.2100
1929437	SN3700-V	On SN3700-V systems, when ports are split and then unsplit, errors appear.	3.8.2100
1967868	SNMP	SNMPd crashes when running snmpwalk or reading hrDeviceTable in HOST-RESOURCES-MIB, when loopback or LAG interface is configured	3.8.2100

1970902	Spanning Tree, MLAG	When enabling BPDU filter on an MPO port and one side of the MPO port is down (MPO is in a state of partially up globally), it may send BPDU packets through the port and ignore the BPDU filter configuration.	3.8.2100
1972132	Spectrum-2, SN3700	In some cases, traffic is not received by the switch-host interface in SN3700 systems.	3.8.2100
1902394	Spectrum-2, SN3700	On SN3700 switch system, link may not rise using 200GbE optical cables.	3.8.2100
1900827	Spectrum-2, Split	Configuring a split on Spectrum-2 switch systems causes misconfiguration.	3.8.2100
1969680	Split Ports	Show running-config may associate configuration with the wrong port after the port was split and unsplit.	3.8.2100
1919595	Static Route	Default route is excluded from recursive next-hop resolution.	3.8.2100
1938393	WJH ACL	In some cases, the switch crashes when WJH ACL feature is enabled.	3.8.2100

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