December 2024

Extreme SLX-OS 20.6.3a

Release Notes

Supporting ExtremeRouting and ExtremeSwitching
SLX 9740, SLX 9640, SLX 9540, SLX 9250, SLX 9150,
Extreme 8720, Extreme 8520, and Extreme 8820

Contents

Document History

Version	Summary of changes	Publication date
1.0	Initial version for 20.6.3a	December 2024

Preface

Getting Help

If you require assistance, contact Extreme Networks using one of the following methods:

- Extreme Portal: Search the GTAC (Global Technical Assistance Center) knowledge base; manage support cases and service contracts; download software; and obtain product licensing, training and certifications.
- The Hub: A forum for Extreme Networks customers to connect with one another, answer questions, and share ideas and feedback. This community is monitored by Extreme Networks employees but is not intended to replace specific guidance from GTAC.
- Call GTAC: For immediate support, call (800) 998 2408 (toll-free in U.S. and Canada) or 1 (408) 579 2826. For the support phone number in your country, visit www.extremenetworks.com/support/contact.

Before contacting Extreme Networks for technical support, have the following information ready:

- Your Extreme Networks service contract number or serial numbers for all involved Extreme Networks products
- A description of the failure
- A description of any actions already taken to resolve the problem
- A description of your network environment (such as layout, cable type, other relevant environmental information)
- Network load at the time of trouble (if known)
- The device history (for example, if you have returned the device before, or if this is a recurring problem)
- Any related RMA (Return Material Authorization) numbers

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1. Go to www.extremenetworks.com/support/service-notification-form.
2. Complete the form. All fields are required.
3. Select the products for which you want to receive notifications.
    Note: You can change your product selections or unsubscribe at any time.
4. Select **Submit**.

Extreme Resources

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White papers, data sheets, and the most recent versions of Extreme software and hardware manuals are available at https://www.extremenetworks.com/. Product documentation for all supported releases is available to registered users at https://www.extremenetworks.com/support/documentation/.

Document Feedback

The Information Development team at Extreme Networks has made every effort to ensure the accuracy and completeness of this document. We are always striving to improve our documentation and help you work better, so we want to hear from you. We welcome all feedback, but we especially want to know about:

- Content errors, or confusing or conflicting information
- Improvements that would help you find relevant information in the document
- Broken links or usability issues

You can provide feedback in the following ways:

- In a web browser, select the feedback icon and complete the online feedback form.
- Access the feedback form at http://www.extremenetworks.com/documentation-feedback-pdf/.
- Email us at documentation@extremenetworks.com.

Provide the publication title, part number, and as much detail as possible, including the topic heading and page number if applicable, as well as your suggestions for improvement.

Release Overview

Release SLX-OS 20.6.3a provides the following features:

- Baseboard Management Controller (BMC) Security Hardening
- MCT Resiliency Handling for Out-of-memory (OOM) condition
- Transit MPLSoGRE traffic
- TLS v1.3 support
- Enforce replacement of default passwords
- Logging for MAC table hash collisions
- Error Handling improvements during firmware upload
- Enhance show ARP display to include VLAN information
- MAC Address Scale Increase
- Allow all L2 protocols to pass on port in an VLL environment
- IPv6 ACL over VE processing to differentiate between Switching and Routing traffic
- Optic Qualification on RME ports of SLX platforms

Behavior Changes

The following are the behavioral changes for SLX-OS 20.6.3a

- Supported MAC scale is increased for SLX 9150, SLX 9250, Extreme 8520 and Extreme 8720 platforms.
- Threshold Monitoring for MAC Table will happen against new default limits – *a high limit of 70% and low limit of 50%* - across all SLX platforms.
- All password attributes are applicable to the *root* account since it is now managed by SLX-OS.

Software Features

The following key software features are added in the SLX-OS 20.6.3a release:

Feature Name	Supported SLX Platforms	Description
BMC Security Hardening	Extreme 8520, 8720, 8820, SLX 9740	Provides SLX-OS commands to configure BMC with user password and network configuration changes. This essentially allows users to move away from the BMC default values.
MCT Resiliency Handling for Out-of-memory (OOM) condition	All Platforms	Ensure MCT Cluster, under OOM condition on a MCT primary switch, is robust and allows traffic switchover to the peer in a reasonable convergence time.

Feature Name	Supported SLX Platforms	Description
Transit MPLSoGRE traffic	Extreme 8520, 8720, SLX 9150, 9250	Allow transit of MPLSoGRE traffic on SLX platforms, except in the case of dual tag bridge domain (BD) LIF.
TLS v1.3 support	All Platforms	TLS v1.3 support is added for all the security applications on SLX-OS. Default TLS version supported on SLX-OS would now be TLS v1.2 and v1.3.
Enforce replacement of default passwords	All Platforms	Allows user to change the default password for the system default account, *root*. All password attributes will be applicable to *root* account like other user accounts on SLX-OS.
Logging for MAC table hash collisions	All Platforms	Hash collisions in MAC table will be detected and notified through RASlogs.
Error Handling improvements during firmware upload	All Platforms	Error reporting for a mismatch between SLX platform and SLX-OS image is improved for all modes of firmware upload.
Enhance show ARP display to include VLAN information	All Platforms	Added VLAN/BD Info column to the show output for ARP and IPv6 neighbor commands.
MAC Address Scale	Extreme 8520, 8720, SLX 9150, 9250	Increased MAC address scale on certain SLX platforms. See *SLX-OS Scale and Standards matrix 20.6.3* document
Allow all L2 protocols to pass on port in an VLL environment	SLX 9740, Extreme 8820	Layer 2 traffic pass-through (for STP and LLDP protocols) across P2P bridge-domains (VLL) is supported for the listed SLX platforms.

Feature Name	Supported SLX Platforms	Description
IPv6 ACL over VE processing to differentiate between Switching and Routing traffic	Extreme 8520, 8720, 8820, SLX 9740, SLX 9150, SLX 9250	Allows to filter only routed traffic on a VE interface
Optic Qualification	Extreme 8820 and SLX 9740	Qualify optic 10301 (10G SR SFP+ 300m) on RME ports

CLI Commands

The following commands were added, modified, or deprecated for the 20.6.3a release:

New commands for 20.6.3a

- bmc
- interface management (bmc)
- ip (bmc)
- password (bmc)
- shutdown (bmc)
- user-id (bmc)
- show bmc config-history
- show bmc interface managment status
- show bmc interface management ip
- show bmc password status

Modified commands for 20.6.3a

- threshold-monitor mac-table
- ipv6 access-group
- tls min-version
- username
- show bmc status
- show arp
- show ipv6 neighbor
- show port-channel load-balance

Deprecated commands for 20.6.3a

- bmc user
- bmc lan ipscr
- bmc lan ipaddr
- bmc lan netmask
- bmc lan gateway

Hardware Support

Supported devices and software licenses

Supported devices	Description
SLX9740-40C	Extreme SLX 9740-40C Router. Base unit with 40x100GE/40GE capable QSFP28 ports, 2 unpopulated power supply slots, 6 unpopulated fan slots
SLX9740-40C-AC-F	Extreme SLX 9740-40C-AC-F Router. Base unit with 40x100GE/40GE capable QSFP28 ports, 2 AC power supplies, 6 fan modules
SLX9740-80C	Extreme SLX 9740-80C Router. Base unit with 80x100GE/40GE capable QSFP28 ports, 4 unpopulated power supply slots, 4 unpopulated fan slots
SLX9740-80C-AC-F	Extreme SLX 9740-80C-AC-F Router. Base unit with 80x100GE/40GE capable QSFP28 ports, 4AC power supplies, 4 fan modules
SLX9740-ADV-LIC-P	Advanced Feature License for MPLS, BGP-EVPN and Integrated Application Hosting for Extreme SLX 9740
SLX9150-48Y-8C	Extreme SLX 9150-48Y Switch with two empty power supply slots, six empty fan slots. Supports 48x25GE/10GE/1GE + 8x100GE/40GE.
SLX9150-48Y-8C-AC-F	Extreme SLX 9150-48Y Switch AC with Front to Back Airflow. Supports 48x25GE/10GE/1GE + 8x100GE/40GE with dual power supplies, six fans.
SLX9150-48Y-8C-AC-R	Extreme SLX 9150-48Y Switch AC with Back to Front Airflow. Supports 48x25GE/10GE/1GE + 8x100GE/40GE with dual power supplies, six fans.
SLX9150-48XT-6C	Extreme SLX 9150-48XT 10GBaseT Switch with two empty power supply slots, six empty fan slots, Supports 48x10GE/1GE + 6x100GE/40GE.
SLX9150-48XT-6C-AC-F	Extreme SLX 9150-48XT 10GBaseT Switch AC with Front to Back Airflow, Supports 48x10GE/1GE + 6x100GE/40GE with dual power supplies, six fans.
SLX9150-48XT-6C-AC-R	Extreme SLX 9150-48XT 10GBaseT Switch AC with Back to Front Airflow, Supports 48x10GE/1GE + 6x100GE/40GE with dual power supplies, six fans.
SLX9150-ADV-LIC-P	SLX 9150 Advanced Feature License for GuestVM, Analytics Path, PTP, BGP-EVPN.
SLX9250-32C	SLX 9250-32C Switch with two empty power supply slots, six empty fan slots. Supports 32x100/40GE.
SLX9250-32C-AC-F	SLX 9250-32C Switch AC with Front to Back Airflow. Supports 32x100GE/40GE with dual power supplies, six fans.
SLX9250-32C-AC-R	SLX 9250-32C Switch AC with Back to Front Airflow. Supports 32x100GE/40GE with dual power supplies, six fans.
SLX9250-ADV-LIC-P	SLX 9250 Advanced Feature License for GuestVM, Analytics Path, BGP-EVPN.
BR-SLX-9540-48S-AC-R	SLX 9540-48S Switch AC with Back to Front airflow (Non-port Side to port side airflow). Supports 48x10GE/1GE + 6x100GE/40GE. (1+1) redundant power supplies and (4+1) redundant fans included.
BR-SLX-9540-48S-AC-F	SLX 9540-48S Switch AC with Front to Back airflow (Port-side to non-port side airflow). Supports 48x10GE/1GE + 6x100GE/40GE. (1+1) redundant power supplies and (4+1) redundant fans included.
BR-SLX-9540-24S-DC-R	SLX 9540-24S Switch DC with Back to Front airflow (Non-port Side to port side airflow). Supports 24x10GE/1GE + 24x1GE ports.

Supported devices	Description
BR-SLX-9540-24S-DC-F	SLX 9540-24S Switch DC with Front to Back airflow (Port-side to non-port side airflow). Supports 24x10GE/1GE + 24x1GE ports.
BR-SLX-9540-24S-AC-R	SLX 9540-24S Switch AC with Back to Front airflow (Non-port Side to port side airflow). Supports 24x10GE/1GE + 24x1GE ports.
BR-SLX-9540-24S-AC-F	SLX 9540-24S Switch AC with Front to Back airflow (Port-side to non-port side airflow). Supports 24x10GE/1GE + 24x1GE ports.
BR-SLX-9540-48S-DC-R	SLX 9540-48S Switch DC with Back to Front airflow (Non-port Side to port side airflow). Supports 48x10GE/1GE + 6x100GE/40GE. (1+1) redundant power supplies and (4+1) redundant fans included.
BR-SLX-9540-48S-DC-F	SLX 9540-48S Switch DC with Front to Back airflow (Port-side to non-port side airflow). Supports 48x10GE/1GE + 6x100GE/40GE. (1+1) redundant power supplies and (4+1) redundant fans included.
BR-SLX-9540-24S-COD-P	Upgrade 24x1GE to 24x10GE/1GE for SLX 9540
BR-SLX-9540-ADV-LIC-P	Advanced Feature License for SLX 9540
EN-SLX-9640-24S	Extreme SLX 9640-24S Router. Supports 24x10GE/1GE + 4x100GE/40GE. (24S+4C sku no Power supplies or Fans)
EN-SLX-9640-24S-12C	Extreme SLX 9640-24S Router. Supports 24x10GE/1GE + 12x100GE/40GE. (All ports 24S+12C sku with no Power supplies or Fans)
EN-SLX-9640-24S-AC-F	Extreme SLX 9640-24S Router AC with Front to Back airflow. Supports 24x10GE/1GE + 4x100GE/40GE.(1 Power supply 6 Fans)
EN-SLX-9640-24S-12C-AC-F	Extreme SLX 9640-24S Router AC with Front to Back airflow. Supports 24x10GE/1GE + 12x100GE/40GE.(1 Power supply 6 Fans)
EN-SLX-9640-4C-POD-P	Extreme SLX 9640 Ports on Demand License for 4 ports of 100GE/40GE Uplinks
EN-SLX-9640-ADV-LIC-P	Extreme SLX 9640 Advanced Feature License
8720-32C	Extreme 8720-32C Switch with two empty power supply slots, six empty fan slots and a 4-post rack mount kit, Supports 32x100/40GE
8720-32C-AC-F	Extreme 8720-32C Switch with front to back airflow, Supports 32x100/40G with two AC power supplies, six fans and a 4-post rack mount kit
8720-32C-AC-R	Extreme 8720-32C Switch with back to front airflow, Supports 32x100/40G with dual AC power supplies, six fans and a 4-post rack mount kit
8720-32C-DC-F	Extreme 8720-32C Switch with front to back airflow, Supports 32x100/40G with dual DC power supplies, six fans and a 4-post rack mount kit
8720-32C-DC-R	Extreme 8720-32C Switch with back to front airflow, Supports 32x100/40G with dual DC power supplies, six fans and a 4-post rack mount kit
8520-48Y-8C	Extreme 8520-48Y Switch with two empty power supply slots, six empty fan slots; Ships with one 4-post rack mount kit; Supports 48x25/10/1G and 8x100/40G ports
8520-48Y-8C-AC-F	Extreme 8520-48Y Switch with front-back airflow; Ships with two AC power supplies, six fans, one 4-post rack mount kit; Supports 48x25/10/1G and 8x100/40G ports
8520-48Y-8C-AC-R	Extreme 8520-48Y Switch with back-front airflow; Ships with two AC power supplies, six fans, one 4-post rack mount kit; Supports 48x25/10/1G and 8x100/40G ports

Supported devices	Description
8520-48Y-8C-DC-F	Extreme 8520-48Y Switch with front-back airflow; Ships with two DC power supplies, six fans, one 4-post rack mount kit; Supports 48x25/10/1G and 8x100/40G ports
8520-48Y-8C-DC-R	Extreme 8520-48Y Switch with back-front airflow; Ships with two DC power supplies, six fans, one 4-post rack mount kit; Supports 48x25/10/1G and 8x100/40G ports
8520-48XT-6C	Extreme 8520-48XT Switch with two empty power supply slots, six empty fan slots; Ships with one 4-post rack mount kit; Supports 48x10/1G copper ports and 6x100/40G fiber ports
8520-48XT-6C-AC-F	Extreme 8520-48XT Switch with front-back airflow; Ships with two AC power supplies, six fans, one 4-post rack mount kit; Supports 48x10/1G copper ports and 6x100/40G fiber ports
8520-48XT-6C-AC-R	Extreme 8520-48XT Switch with back-front airflow; Ships with two AC power supplies, six fans, one 4-post rack mount kit; Supports 48x10/1G copper ports and 6x100/40G fiber ports
8520-48XT-6C-DC-F	Extreme 8520-48XT Switch with front-back airflow; Ships with two DC power supplies, six fans, one 4-post rack mount kit; Supports 48x10/1G copper ports and 6x100/40G fiber ports
8520-48XT-6C-DC-R	Extreme 8520-48XT Switch with back-front airflow; Ships with two DC power supplies, six fans, one 4-post rack mount kit; Supports 48x10/1G copper ports and 6x100/40G fiber ports
8000-PRMR-LIC-P	Extreme 8000 Premier Feature License (includes Integrated Application Hosting)
8820-40C	Extreme 8820-40C base unit with 40x100GE/40GE QSFP28 ports with 2 unpopulated power supply slots, 6 unpopulated fan slots and a 4-post rack mount kit
8820-40C-AC-F	Extreme 8820-40C with Front-Back airflow. Base unit with 40x100GE/40GE QSFP28 ports with 2 AC power supplies, 6 fan modules and a 4-post rack mount kit
8820-40C-AC-R	Extreme 8820-40C with Back-Front airflow. Base unit with 40x100GE/40GE QSFP28 ports with 2 AC power supplies, 6 fan modules and a 4-post rack mount kit
8820-40C-DC-F	Extreme 8820-40C with Front-Back airflow. Base unit with 40x100GE/40GE QSFP28 ports with 2 DC power supplies, 6 fan modules and a 4-post rack mount kit
8820-40C-DC-R	Extreme 8820-40C with Back-Front airflow. Base unit with 40x100GE/40GE QSFP28 ports with 2 DC power supplies, 6 fan modules and a 4-post rack mount kit
8820-80C	Extreme 8820-80C. Base unit with 80x100GE/40GE QSFP28 ports with 4 unpopulated power supply slots, 4 unpopulated fan slots and a 4-post rack mount kit
8820-80C-AC-F	Extreme 8820-80C with Front-Back airflow. Base unit with 80x100GE/40GE QSFP28 ports with 4 AC power supplies, 4 fan modules and a 4-post rack mount kit

Supported devices	Description
8820-80C-AC-R	Extreme 8820-80C with Back-Front airflow. Base unit with 80x100GE/40GE QSFP28 ports with 4 AC power supplies, 4 fan modules and a 4-post rack mount kit
8820-80C-DC-F	Extreme 8820-80C with Front-Back airflow. Base unit with 80x100GE/40GE QSFP28 ports with 4 DC power supplies, 4 fan modules and a 4-post rack mount kit
8820-80C-DC-R	Extreme 8820-80C with Back-Front airflow. Base unit with 80x100GE/40GE QSFP28 ports with 4 DC power supplies, 4 fan modules and a 4-post rack mount kit

Supported power supplies, fans, and rack mount kits

XN-ACPWR-1600W-F	SLX 9740 Fixed AC 1600W Power Supply Front to Back. Power cords not included Extreme 8820 Fixed AC 1600W Power Supply Front to Back. Power cords not included
XN-ACPWR-1600W-R	SLX 9740 Fixed AC 1600W Power Supply Back to Front. Power cords not included. Extreme 8820 Fixed AC 1600W Power Supply Back to Front. Power cords not included
XN-DCPWR-1600W-F	SLX 9740 Fixed DC 1600W Power Supply Front to Back. Power cords not included Extreme 8820 Fixed DC 1600W Power Supply Front to Back. Power cords not included
XN-DCPWR-1600W-R	Extreme 8820 Fixed DC 1600W Power Supply Back to Front. Power cords not included.
XN-FAN-003-F	SLX 9740 FAN Front to Back airflow for SLX9740-40C Extreme 8820 FAN Front to Back airflow for 8820-40C
XN-FAN-003-R	SLX 9740 FAN Back to Front airflow for SLX9740-40C Extreme 8820 FAN Back to Front airflow for 8820-40C
XN-FAN-004-F	SLX 9740 FAN Front to Back airflow for SLX9740-80C Extreme 8820 FAN Front to Back airflow for 8820-80C
XN-FAN-004-R	SLX 9740 FAN Back to Front airflow for SLX9740-80C Extreme 8820 FAN Back to Front airflow for 8820-80C
XN-4P-RKMT299	2-Post Rail Kit for SLX 9740-40C
XN-2P-RKMT300	2-Post Rail Kit for SLX 9740-80C
XN-4P-RKMT301	4-Post Rail Kit for SLX 9740-80C
XN-4P-RKMT302	4-Post Rail Kit for SLX 9740-40C
XN-ACPWR-750W-F	AC 750W PSU, Front to Back Airflow supported on VSP 7400, SLX 9150, SLX 9250, X695, Extreme 8720, Extreme 8520
XN-ACPWR-750W-R	AC 750W PSU, Back to Front Airflow supported on VSP 7400, SLX 9150, SLX 9250, X695, Extreme 8720, Extreme 8520
XN-DCPWR-750W-F	DC 750W PSU, Front to Back Airflow supported on VSP 7400, SLX 9150, SLX 9250, X695, Extreme 8720, Extreme 8520
XN-DCPWR-750W-R	DC 750W PSU, Back to Front Airflow supported on VSP 7400, SLX 9150, SLX 9250, X695, Extreme 8720, Extreme 8520
XN-FAN-001-F	Front to back Fan for use in VSP 7400, SLX 9150, SLX 9250, X695, Extreme 8720, Extreme 8520
XN-FAN-001-R	Back to Front Fan for use in VSP 7400, SLX 9150, SLX 9250, X695, Extreme 8720, Extreme 8520
XN-4P-RKMT298	Four post rack mount rail kit supported on VSP 7400, SLX 9150, SLX 9250, X695, Extreme 8720, Extreme 8520
XN-2P-RKMT299	Two post rack mount rail kit supported on VSP 7400, SLX 9150, SLX 9250, X695, Extreme 8720, Extreme 8520, Extreme 8820
XN-2P-RKMT300	2-Post Rail Kit for Extreme 8820-80C
XN-4P-RKMT301	4-Post Rail Kit for Extreme 8820-80C

XN-4P-RKMT302	4-Post Rail Kit for Extreme 8820-40C

Supported Optics and Cables

For a complete list of all supported optics, see **Extreme Optics** at https://optics.extremenetworks.com/.

Supported FEC modes

SLX 9250 and Extreme 8720

Port Type	Media Type	Default FEC Mode	Supported FEC Modes
100G	Passive DAC	RS-FEC	RS-FEC Disabled
100G	SR4	RS-FEC	RS-FEC Disabled
100G	LR4	Disabled	RS-FEC Disabled
25G	Breakout DAC SR	Auto-Neg	RS-FEC FC-FEC Auto-Neg Disabled
25G	Breakout SR4	FC-FEC	RS-FEC FC-FEC Disabled
25G	Breakout LR	RS-FEC	RS-FEC FC-FEC Disabled

SLX 9740 and Extreme 8820

Port Type	Media Type	Default FEC Mode	Supported FEC Modes
100G	Passive DAC	RS-FEC	RS-FEC Disabled
100G	SR4	RS-FEC	RS-FEC Disabled
100G	LR4	Disabled	RS-FEC Disabled
25G	Breakout DAC SR	FC-FEC	FC-FEC RS-FEC Disabled
25G	Breakout SR4	FC-FEC	FC-FEC RS-FEC Disabled
25G	Breakout LR	RS-FEC	RS-FEC FC-FEC Disabled

SLX 9150 and Extreme 8520

Port Type	Media Type	Default FEC Mode	Supported FEC Modes
100G	Passive DAC	RS-FEC	RS-FEC Disabled
100G	SR4	RS-FEC	RS-FEC Disabled
100G	LR4	Disabled	RS-FEC Disabled
25G(Native)	DAC	Auto-Neg	RS-FEC FC-FEC Auto-Neg Disabled
25G(Native)	SFP	FC-FEC	RS-FEC FC-FEC Disabled
25G(Native)	LR	RS-FEC	RS-FEC FC-FEC Disabled

SLX 9540 and SLX 9640

Port Type	Media Type	Default FEC Mode	Supported FEC Modes
100G	Passive DAC	RS-FEC	RS-FEC Disabled
100G	SR4	RS-FEC	RS-FEC Disabled
100G	LR4	Disabled	RS-FEC Disabled
25G	Breakout LR	RS-FEC	RS-FEC FC-FEC Disabled

Software Download and Upgrade

For more information about the various methods of upgrading to SLX-OS 20.6.3a see the *Extreme SLX-OS Software Upgrade Guide.*

Image files

Download the following images from www.extremenetworks.com.

Image file name	Description
SLX-OS_20.6.3a.tar.gz	SLX-OS 20.6.3a software
SLX-OS_20.6.3a_mibs.tar.gz	SLX-OS 20.6.3a MIBS
SLX-OS_20.6.3a.md5	SLX-OS 20.6.3a md5 checksum
SLX-OS_20.6.3a-digests.tar.gz	SLX-OS 20.6.3a sha checksum
SLX-OS_20.6.3a-releasenotes.pdf	Release Notes

Baseboard Management Controller (BMC) firmware upgrade

- With SLX-OS 20.6.1 onwards, BMC firmware update will be performed along with SLX-OS update on BMC supported platforms. This upgrade will happen only if the installed BMC firmware version is older than the version bundled along with the SLX-OS firmware. Supported SLX platforms are Extreme 8520, Extreme 8720, Extreme 8820 and SLX 9740.
- No new SLX-OS CLI is introduced for BMC firmware upgrade, as this being an implicit BMC firmware update.
- With this new feature, BMC firmware image is bundled as part of SLX-OS image. When the user updates the OS, and, if BMC firmware version on the device is found to be older than the BMC image bundled with SLX-OS image, the BMC image bundled with SLX shall be updated on BMC along with SLX-OS update.
- By design, only BMC firmware upgrade is supported – downgrade is not supported.
- BMC firmware upgrade will occur with all supported SLX-OS upgrade methods – incremental, full install and net install
- In case the BMC upgrade fails, "firmware download" of SLX-OS will continue without any disruption.
- During BMC upgrade, IPMI/BMC connectivity will be impacted. Hence intermittent RASLOGS (e.g. FW-1404 and EM-1050, HIL-1404 etc) from environmental monitoring daemon may be observed. These intermittent RASLOG messages will disappear only after the device is reloaded.
- Existing BMC configuration will be preserved even after the BMC is updated.
- Limitations -
  - There is a small increase in SLX-OS installation time (around 4 to 7 minutes), if BMC firmware is also upgraded.
  - Intermittent RASLOGS or FFDC messages are generated due to interruption at BMC/IPMI channel.

Extreme 8820

To From	20.4.3/a/b	20.5.1/a	20.5.2a	20.6.1/a/b	20.6.2/a	20.6.3a
20.4.3 (Factory Image)						
20.5.1/a						
20.5.2a		For upgrade: normal firmware download / coldboot				
20.6.1/a/b						
20.6.2/a						
20.6.3a						

Extreme 8720

To From	20.4.3/a/b	20.5.1/a	20.5.2a	20.6.1/a/b	20.6.2/a	20.6.3a
20.4.3/a/b						
20.5.1/a						
20.5.2a		For upgrade and downgrade: normal firmware download / coldboot				
20.6.1/a/b						
20.6.2/a						
20.6.3a						

Extreme 8520

To From	20.4.3/a/b	20.5.1/a	20.5.2a	20.6.1/a/b	20.6.2/a	20.6.3a
20.4.3/a/b						
20.5.1/a						
20.5.2a		For upgrade and downgrade: normal firmware download / coldboot				
20.6.1/a/b						
20.6.2/a						
20.6.3a						

SLX 9740

To From	20.4.3/a/b	20.5.1/a	20.5.2a	20.6.1/a/b	20.6.2/a	20.6.3a
20.4.3/a/b						
20.5.1/a						
20.5.2a		For upgrade and downgrade: normal firmware download / coldboot				
20.6.1/a/b						
20.6.2/a						
20.6.3a						

SLX 9540 and SLX 9640

To ⟍ From	20.4.3/a/b	20.5.1/a	20.5.2a	20.6.1/a/b	20.6.2/a	20.6.3a
20.4.3/a/b						
20.5.1/a						
20.5.2a	For upgrade and downgrade: normal firmware download / coldboot					
20.6.1/a/b						
20.6.2/a						
20.6.3a						

SLX 9150 and SLX 9250

To ⟍ From	20.4.3/a/b	20.5.1/a	20.5.2a	20.6.1/a/b	20.6.2/a	20.6.3a
20.4.3/a/b						
20.5.1/a						
20.5.2a	For upgrade and downgrade: normal firmware download / coldboot					
20.6.1/a/b						
20.6.2/a						
20.6.3a						

Upgrade and Downgrade considerations for Threshold Monitor configuration:

Downgrade Considerations:
1. If the configured value for Cpu "limit" exceeds valid range in older release [0-80] then downgrade will be blocked with error. User can reconfigure Cpu "limit" in the range [0-80] and downgrade.

2. If the configured value for Memory "high-limit" exceeds valid range in older release [0-80] or if it is less than the default value of "limit" in older release [60], then downgrade will be blocked with error. User can reconfigure Memory "high-limit" in the range [60-80] and downgrade.

3. If the startup file has "actions" configured as "snmp" or "all", then config replay process triggered in firmware full-install downgrade, will lead all the corresponding threshold-monitor CLI parameters, such as poll, retry, to reset to respective default values.

Upgrade Considerations:
1. If the startup file has "Memory limit and /or low-limit" configured, then config replay process triggered in firmware full-install downgrade, will lead all the corresponding threshold-monitor CLI parameters, such as poll, retry, to reset to respective default values.

SLX TPVM Support Information
SLX-OS 20.6.3a supports TPVM 4.6.1 and later and TPVM 4.7.0 and later, on all platforms.

Upgrading the TPVM without configuration persistence (Legacy upgrade method)

Upgrading TPVM from 4.5.x to 4.6.x or 4.7.x
Consider the following when upgrading TPVM for 4.6.x or 4.7.x

- To perform full upgrade from TPVM 4.5.x to latest 4.6.x, do the following:
    - Upgrade to SLX-OS 20.6.x while the existing TPVM 4.5.x installation continues to run
    - Copy the new *tpvm-4.6.X-X.amd64.deb* to */tftpboot/SWBD2900* directory on the SLX device.
    - Install latest TPVM 4.6.x using **tpvm upgrade** command
- To perform full upgrade from TPVM 4.5.x or 4.6.x to latest 4.7.x, do the following:
    - Upgrade to SLX-OS 20.7.x while the existing TPVM 4.5.x or 4.6.x installation continues to run
    - Copy the new *tpvm-4.7.X-X.amd64.deb* to */tftpboot/SWBD2900* directory on the SLX device.
    - Install latest TPVM 4.7.x using **tpvm upgrade** command

Notes:

- Security updates are added to the TPVM image and to the separate Debian file used for incremental TPVM update. Main TPVM image size is ~2.0 GB and the TPVM incremental update Debian file size is ~0.5 GB. You must have at least 1GB of free space on the switch before

proceeding with the `tpvm upgrade incremental` command. The latest version in the TPVM 4.6.x branch, TPVM 4.6.18, has security updates till November 29th, 2024.

- Ubuntu Linux distribution on TPVM is upgraded to 20.04 LTS from TPVM version 4.6.0 onwards. As Ubuntu Linux distribution on TPVM is upgraded to 20.04 LTS incremental upgrade is not supported, upgrading TPVM from 4.5.x to 4.6.x needs a full upgrade. Please refer to the respective TPVM 4.6.x Release notes for more information.

- Ubuntu Linux distribution on TPVM is upgraded to 22.04 LTS from TPVM version 4.7.0 onwards. As Ubuntu Linux distribution on TPVM is upgraded to 22.04 LTS incremental upgrade is not supported, upgrading TPVM from 4.5.x or 4.6.x to 4.7.x needs a full upgrade. Please refer to the respective TPVM 4.7.x Release notes for more information.

- The latest version in the TPVM 4.6.x branch, TPVM 4.6.18, has security updates till November 29th, 2024. Main TPVM image size is ~2.1 GB and the TPVM incremental update Debian file size is ~0.8 GB.

- The latest version in the TPVM 4.7.x branch, TPVM 4.7.0, has security updates till November 29th, 2024. Main TPVM image size is ~2.2 GB and the TPVM incremental update Debian file size is ~0.7 GB.

- Updates within the same series of TPVM releases, for example, between a version of 4.6.x and another version of 4.6.x, incremental upgrades are supported. Use the **tpvm upgrade incremental** command to do the upgrade.

Limitations and Restrictions

Copy flash to startup and reload with TPVM

setNTPServer and setLDAPServer statuses are reported as failed in the output of the `show tpvm status-history`. After reload, TPVM is expected to be running when the above configurations are re-applied. When the TPVM is not running and the NTP and LDAP configurations are applied, these errors are seen. This is a limitation as reapplying NTP and LDAP configurations are not supported.

You need to have minimum 1GB free space on TPVM when you try to perform the security patch upgrade using the command `tpvm upgrade incremental …`

TPVM upgrade incremental command and file support is available only from 4.5 if we try to perform the incremental upgrade from 4.4.0 to latest, the upgrade fails and ask to perform the tpvm upgrade.

TPVM upgrade incremental command will not be supported when you try TPVM deploy in config mode and TPVM upgrade incremental command will not support with snapshot option.

Do not use the **tpvm upgrade incremental** command to upgrade the patches with *tpvm-4.X.X-X.amd64.deb*. Use the *tpvm_inc_upg-4.X.X-X.amd64.deb* image file to perform incremental upgrades.

Similarly, do not use the *tpvm_inc_upg-4.X.X-X.amd64.deb* image file to perform full upgrade. Do not use this file to perform **tpvm deploy** in *config mode* and *option*.

Port macro restrictions on breakout port configuration on SLX 9740

A port macro (PM) is a port group. Each PM has 4 ports, which are contiguous. PM0 has ports 0/1-0/4, PM1 has ports 0/5-0/8, PM2 has ports 0/9-0/12, and so on.

There are 9 PMs in the SLX 9740-40C and 18 PMs in the SLX 9740-80C. Only the odd ports can be split to 4x10G or 4x25G using the breakout cables: 0/1, 0/3, 0/9, 0/11, 0/13, 0/15, 0/17, 0/19, 0/21, 0/23, 0/25, 0/27, 0/29, 0/31, 0/33, 0/35, 0/37, 0/39, 0/41, 0/43, 0/49, 0/51, 0/53, 0/55, 0/57, 0/59, 0/61, 0/63, 0/65, 0/67, 0/69, 0/71, 0/73, 0/75, 0/77, and 0/79. Breaking out these ports using the breakout cables results in 72 interfaces for the SLX 9740-40 and 144 interfaces for the SLX 9740-80C.

- Ports 5-8 and 45-48 cannot be broken up and are supported only in 100G.
- For any PM, 40G and 10G ports cannot coexist with 25G ports. The following configurations are not supported:

PM Configuration	Examples
If any port is configured as 40G or 4x10G breakout, no 4x25G breakout is allowed unless the 40G ports will be removed as part of the breakout operation.	• If 0/3 or 0/4 is 40G, you cannot configure 0/1 as 4x25G breakout. • If 0/1 is 4x10G breakout, you cannot configure 0/3 as 4x25G breakout. • If 0/3 is 4x10G breakout, you cannot configure 0/1 as 4x25G breakout. • If 0/1 or 0/2 is 40G, you can configure 0/1 as 4x25G breakout because 0/1 and 0/2 will be removed. • If 0/3 or 0/4 is 40G, you can configure 0/3 as 4x25G breakout because 0/3 and 0/4 will be removed.
If 4x25G breakout is configured, no 40G or 4x10G.	• If 0/1 is configured as 4x25G breakout, you cannot configure 0/3 or 0/4 as 40G. • If 0/1 is configured as 4x25G breakout, you cannot configure 0/3 as 4x10G breakout. • If 0/3 is configured as 4x25G breakout, you cannot configure 0/1 or 0/2 as 40G. • If 0/3 is configured as 4x25G breakout, you cannot configure 0/1 as 4x10G breakout.

QoS

- PCP remarking is not supported for SLX 9740 and Extreme 8820.
- Egress rate limiting in a Bridge Domain configuration is not supported for SLX 9740 and Extreme 8820.
- DSCP-COS map is not supported for SLX 9740 and Extreme 8820.
- On SLX 9640 platform, L3 QoS is not supported for VxLAN L3 gateway.
- On SLX 9540 and SLX 9640, if Trust-DSCP feature is enabled, then non-IP packets will take only the default traffic class value. *For more details, refer the QoS section of SLX-OS 20.6.2 Traffic Management guide.*

Others

- sflow sampling does not work for VLL when BUM rate limiting is applied on interface in SLX 9740

- sflow sample traffic to CPU is rate limited. You can use the **qos cpu slot** command to change the rate.
- When Resilient Hashing CLI is enabled or disabled, or the *max-path* value is changed, it may cause **BFD sessions** in **related VRFs** to go down. However, **BFD sessions in unrelated VRFs will not be affected.**
- Resilient Hashing feature is supported only on SLX 9150, SLX 9250, SLX 9740, Extreme 8720 and Extreme 8520. Other platforms are not supported.
- Resilient Hashing supports 32K flowset entries for Extreme 8720 and Extreme 8520.

Open Config Telemetry Support
- User authentication not supported.
- gNMI calls through inband interfaces not supported.
- Usage of wild cards is not supported.
- gNMI SET is not supported.
- gNMI ON CHANGE subscription is not supported.

SNMP
- Not all counters related to UDP, and TCP MIBs are supported.
- Configuring an in-band port into a Management VRF requires SNMP agent reload.

Maximum Logical Interfaces or LIFs scale
Maximum Logical Interface (LIF) (Port-VLAN/Port-Bridge Domain (BD)) associations supported on SLX 9150, SLX 9250, Extreme 8520, Extreme 8720 is 14200. Since VLAN and BD resources share the same hardware table memory space, the max scale of one has a trade-off with the scale of the other. That is, for example, the maximum Port-BD associations cannot be scaled to 14200 when the combined scale of VLAN and BDs exceeds 8096.

IPv6 Manageability support on TPVM
- The TPVM management interface can be configured with a single IPv6 address. You can configure an IPv4 address in addition to the IPv6 address. Configuring IPv4 address is optional.
- tpvm stop and tpvm start commands must be issued to configure the TPVM management interface's IPv4 and IPv6 address.

Removal of DF towards IP Fabric (Local Bias support for LVTEP)
- Single-homed LVTEP client (spine uplink DOWN in one of the MCT nodes) is not supported.
- Need to have backup routing over ICL to reach the spines in case of uplink failure.

ICMP and ICMPv6 redirect
Enable/disable ICMP and ICMPv6 redirect are only available on SLX 9540 and SLX 9640. On these platforms, these are only supported on physical ports.

Transporting IPv6 traffic over GRE IPv4 Tunnel
- If GRE feature is enabled, IPv6 ACL filters to drop OSPFv3 packets will not work for SLX 9740 and Extreme 8820 platforms.
- Multicast traffic is not supported over IPv6 GRE overlay. Multicast packets will be dropped.
- IPv6 ACL is not supported on GRE tunnel.

- IPv4 and IPv6 control packets over the GRE Tunnel are not accounted for in the GRE tunnel statistics.
- DSCP value from the inner IPv6 packet is not copied to outer GRE header on SLX 9540 and SLX 9640 platforms.

Flow Based Mirroring

(Applicable to SLX 9150, SLX 9250, Extreme 8720 and Extreme 8520 platforms)

- Flow based ingress mirroring does not support port-channel port as a mirroring source port.
- Flow based ingress mirroring supports VLAN as a mirroring source port, but VLAN range is not supported.

MPLS over GRE

(Applicable to SLX 9150, SLX 9250, Extreme 8720 and Extreme 8520 platforms)

Transit MPLSoGRE and dual-tag BD LIF are mutually exclusive on the same interface (Ethernet or Port-channel) - both features cannot co-exist on the same interface.

- MPLSoGRE traffic will be impacted on an interface where dual-tagged BD LIF is configured.
- Other interfaces, without a dual-tagged BD LIF, are not impacted.

Unsupported characters in SLX-OS and TPVM passwords

The following characters are not supported in the SLX-OS and TPVM passwords.

- & (ampersand)
- \ (backslash)
- ' (single quote)

Open Defects

The following software defects are open in SLX-OS 20.6.3a as of December 2024:

Parent Defect ID:	SLXOS-64409	Issue ID:	SLXOS-64606
Severity:	S2 - Major		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.3.4a
Technology Group:	Management	Technology:	CLI - Command Line Interface
Symptom:	TPVM configuration is lost when the device reloads with default configuration during firmware update.		
Condition:	Issue happens when "default-config" option is provided in "firmware download" command.		
Workaround:	Execute following commands - "copy default-config startup-config" and then "firmware download" command without "default-config" option.		

Parent Defect ID:	SLXOS-68095	Issue ID:	SLXOS-68095
Severity:	S2 - Major		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.4.2
Technology Group:	-	Technology:	-
Symptom:	Convergence of L3VNI Asymmetric traffic takes 30 seconds.		
Condition:	Reloading one of the Multi-homed peer.		

Parent Defect ID:	SLXOS-70172	Issue ID:	SLXOS-70172
Severity:	S2 - Major		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.4.3
Technology Group:	Layer 3 Routing/Network Layer	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	Unexpected reload of device.		
Condition:	Device reloaded unexpectedly on execution of execution of "clear ip route all vrf" with "prefix-independent-convergence-static" already configured.		

Parent Defect ID:	SLXOS-73347	Issue ID:	SLXOS-73347
Severity:	S2 - Major		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.5.2
Technology Group:	Layer 2 Switching	Technology:	Other
Symptom:	In VPLS environments, sometimes MAC is not learned on AC ports resulting in flooding of L2 traffic destined for the missed MAC.		
Condition:	In VPLS environments, MAC is not learned on AC ports because of Ingress Vlan Editing table full which could happen under the following conditions: - More than one tag-type is configured on the system.		

	- Many different types of Vlan editing configured on the system.
	- Issue is seen on 9740/8820 only
Workaround:	Changes in the configuration could resolve the issue. Different tag-types need more Vlan editing resources. Reducing the number of different tag-types and reconfiguring the port could resolve the issue.

Parent Defect ID:	SLXOS-75012	Issue ID:	SLXOS-75012
Severity:	S2 - Major		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.5.3
Technology Group:	Traffic Management	Technology:	Traffic Queueing and Scheduling
Symptom:	QoS user map TC-to-COS is not allowed to configure on interface (Physical/Logical).		
Condition:	When we apply the service policy first on the interface (physical/Logical) before QoS Map		

Parent Defect ID:	SLXOS-76376	Issue ID:	SLXOS-76376
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.4.3a
Technology Group:	Layer 3 Routing/Network Layer	Technology:	ARP - Address Resolution Protocol
Symptom:	Some ARP entries fail to refresh during age-out		
Condition:	Upon receiving GARP in a distributed IP-Fabric network		

Parent Defect ID:	SLXOS-76551	Issue ID:	SLXOS-76551
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.6.1a
Technology Group:	Layer 2 Switching	Technology:	VXLAN - Virtual Extensible LAN
Symptom:	In an EVPN-Multihoming (EPNN-MH) topology, some traffic destined for the remote VTEP is being dropped.		
Condition:	In an EVPN-Multihoming topology, changes in the underlay path due to an uplink port-channel flap result in some traffic destined for the remote VTEP being dropped.		
Workaround:	Shutting down the Ethernet Segment (ES) interface facilitates traffic switchover through the alternate MH peer device.		
Recovery:			

Parent Defect ID:	SLXOS-76585	Issue ID:	SLXOS-76585

Severity:	S2 - Major		
Product:	SLX-OS	**Reported in Release:**	SLX-OS 20.5.1a
Technology Group:	Layer 2 Switching	**Technology:**	Other
Symptom:	Transit MPLS over GRE packets are being dropped by the SLX when IP/GRE/MPLS payload is set to 8847		
Condition:	On the transit node in the MPLS/GRE path, the received packet should have protocol type as 0x8847		

Parent Defect ID:	SLXOS-76700	**Issue ID:**	SLXOS-76700
Severity:	S3 - Moderate		
Product:	SLX-OS	**Reported in Release:**	SLX-OS 20.5.3
Technology Group:	Security	**Technology:**	SSH - Secure Shell
Symptom:	Unable to login via SSH with user configure port number.		
Condition:	After upgrade to SLXOS20.5.3 from 20.4.3		
Workaround:	Remove and re-configure "ssh server port xxxx".		

Parent Defect ID:	SLXOS-76738	**Issue ID:**	SLXOS-76738
Severity:	S3 - Moderate		
Product:	SLX-OS	**Reported in Release:**	SLX-OS 20.6.2a
Technology Group:	Layer 3 Routing/Network Layer	**Technology:**	BGP4 - IPv4 Border Gateway Protocol
Symptom:	L3vpn routes advertised with zero label		
Condition:	reload or upgrading the node.		
Workaround:	Need to reset the BGP sessions.		

Parent Defect ID:	SLXOS-76759	**Issue ID:**	SLXOS-76759
Severity:	S3 - Moderate		
Product:	SLX-OS	**Reported in Release:**	SLX-OS 20.5.2a
Technology Group:	Security	**Technology:**	Security Vulnerability
Symptom:	As the UDP port 111 was being kept open by rpcbind service, to avoid security vulnerabilities, now rejecting all incoming packets to this UDP port.		
Condition:	Port scan reports indicated that the UDP port 111 is being kept open.		

Parent Defect ID:	SLXOS-76808	**Issue ID:**	SLXOS-76808
Severity:	S3 - Moderate		
Product:	SLX-OS	**Reported in Release:**	SLX-OS 20.5.3
Technology Group:	Monitoring	**Technology:**	sFlow
Symptom:	It is possible to configure 'sflow enable' on a Port-channel interface using REST API, even though the same is blocked while using the CLI		
Condition:	Configure 'sflow enable' using REST API (curl command) on a disallowed platform		

Parent Defect ID:	SLXOS-76861	Issue ID:	SLXOS-76861
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.6.1a
Technology Group:	Layer 3 Routing/Network Layer	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	BGP routes imported from EVPN VRF to VPNv4 VRF are not marked as BEST and not installed in RIB of that VPNv4 VRF.		
Condition:	Importing Type-5 routes into the VRF in which IRB interface is not configured.		

Parent Defect ID:	SLXOS-77081	Issue ID:	SLXOS-77081
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.4.3c
Technology Group:	Platform	Technology:	Environmental Monitoring(EM)
Symptom:	FRU removal and insertion raslogs shall be observed and EMd(Environment Monitoring Deamon) core shall be observed.		
Condition:	This issue shall be observed when the BMC is rebooted or reset when the SLX-OS is operating normally.		
Workaround:	None		
Recovery:	Reboot the SLX-OS		

Parent Defect ID:	SLXOS-77115	Issue ID:	SLXOS-77115
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.4.3d
Technology Group:	Layer 3 Routing/Network Layer	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	One of the SLX processes runs out of memory and the device may unexpectedly reboot		
Condition:	This issue is seen only with BGP PIC feature enabled and the device is exposed to Internet Feed level route scale.		

Parent Defect ID:	SLXOS-77132	Issue ID:	SLXOS-77132
Severity:	S1 - Critical		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.5.3a
Technology Group:	Layer 2 Switching	Technology:	VXLAN - Virtual Extensible LAN
Symptom:	VxLAN Tunnel does not come back up after reloading the device		
Condition:	When Insight port is configured and SNMP walk is issued, the SNMP-GET for the Insight port can go into an infinite loop causing the system to be non-responsive.		
Workaround:	Un-configure the Insight port		
Recovery:	Un-configure the Insight port and reload		

Parent Defect ID:	SLXOS-77277	Issue ID:	SLXOS-77277
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.6.3
Technology Group:	Layer 2 Switching	Technology:	Other
Symptom:	Defaults are not restored for 'threshold-monitor mac-table' high or low limits		
Condition:	Firmware downgrade from SLX-OS 20.6.3 release to an earlier release		
Workaround:	Unconfigure the existing CLI or reconfigure the defaults using 'threshold-monitor mac-table high-limit 90 low-limit 70'		

Defects Closed with Code Changes

The following software defects were closed in SLX-OS 20.6.3a with code changes as of December 2024:

Parent Defect ID:	SLXOS-77365	Issue ID:	SLXOS-77365
Severity:	S1 - Critical		
Product:	SLX-OS	Reported in Release:	SLXOS 20.6.3
Technology Group:	Management	Technology:	Other
Symptom:	Issue is seen only with certain SSH clients like PuTTY / MobaXTerm. Also there is no impact to the system functionality when the issue is seen (silent cores under / are generated).		
Condition:	OpenSSL 3.0 upgrade resulted in triggering OpenSSL cleanup on sshd process termination. This is a new flow that is introduced due to the addition of OPENSSL_cleanup() API in OpenSSL 1.1.0. The cleanup requires a coordination between the sshd application and OpenSSL library which if not done correctly results in crash.		
Recovery:	Prevent registration of OPENSSL_cleanup() in the exit handler of the process.		

Parent Defect ID:	SLXOS-77282	Issue ID:	SLXOS-77371
Severity:	S2 - Major		
Product:	SLX-OS	Reported in Release:	SLXOS 20.6.2a
Technology Group:	Platform	Technology:	Environmental Monitoring(EM)
Symptom:	on SLX-9250, When upgrading to SLX20.6.1 or higher firmware on devices with DC PSU. The DC PSU presence looks toggling sporadically based on the RASLogs.		
Condition:	Issue is seen only on SLX20.6.1 or later firmware images		
Workaround:	These RASLOGS can be Suppressed, as it is not a functional issue.		
Recovery:	Fix is done to take care of the DC PSU and recovery can be done by moving to firmware image with the fix 20.6.3a.		

Parent Defect ID:	SLXOS-77375	Issue ID:	SLXOS-77375
Severity:	S2 - Major		
Product:	SLX-OS	Reported in Release:	SLXOS 20.6.3
Technology Group:	Security	Technology:	SSH - Secure Shell
Symptom:	Shell is not accessible for admin users		
Condition:	When root account is disabled after changing root password from shell		
Workaround:	Enable root account		

Parent Defect ID:	SLXOS-77384	Issue ID:	SLXOS-77384
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLXOS 20.6.3
Technology Group:	Management	Technology:	Other

Symptom:	FWDL to 20.6.3 === followed-by ===> FWDL to 20.6.2a (with nocommit option) === and ===> firmware restore led to boot failure.
Condition:	As a part of OpenSSL 3.0 upgrade, all the components were upgraded to use new libcrypto/libssl libraries. However, ConfD was an exception as it was not compatible with the new libbcrypto version. So libcrypto.so.1.0.2 was packaged separately as a part of ConfD tar. On the device, it was extracted under /usr/confd/lib folde. On downgrade to a lower release (say 20.6.2), libcrypto.so.1.0.2 was explicitly removed from both the partitions. Please refer to this commit - https://github.extremenetworks.com/Engineering/slxos/commit/213 23d0c78d9ddd32f3d552dd4476959b0f5f768.
Recovery:	On downgrade to a lower version, remove libcrypto.so.1.0.2 only from /mnt partition

Parent Defect ID:	SLXOS-75848	Issue ID:	SLXOS-75848
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.4.1
Technology Group:	Layer 3 Routing/Network Layer	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	BGP is advertising a stale route to its peers. And any traffic directed to that route is getting blackholed.		
Condition:	In a rare situation of where a 3rd party BGP nexthop is also redistributed as a local route via RTM.		

Parent Defect ID:	SLXOS-75940	Issue ID:	SLXOS-75940
Severity:	S2 - Major		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.5.2a
Technology Group:	Layer 3 Routing/Network Layer	Technology:	Other
Symptom:	Layer4 SCTP traffic is not load-balanced across the ECMP Paths		
Condition:	SCTP over VxLAN traffic is terminating on Border Leaf node in IP Fabric		

Parent Defect ID:	SLXOS-75954	Issue ID:	SLXOS-75954
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.5.2b
Technology Group:	Traffic Management	Technology:	Traffic Queueing and Scheduling
Symptom:	'show tm voq-stat ingress-device all max-queue-depth' command is not displaying the 'Max Util' value properly		
Condition:	When max-queue-size is configured with more than 1 MB		

Parent Defect ID:	SLXOS-76095	Issue ID:	SLXOS-76095
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.5.3
Technology Group:	Layer 3 Routing/Network Layer	Technology:	DHCP - Dynamic Host Configuration Protocol
Symptom:	DHCP server is not processing DHCP requests from client		
Condition:	When the padding value is non-zero in the DHCP packets		

Parent Defect ID:	SLXOS-76134	Issue ID:	SLXOS-76134
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.5.3
Technology Group:	Other	Technology:	Other
Symptom:	show media CLI on the 40G ports was always reporting high alarm for TxPower.		
Condition:	Issue was in reading the correct threshold values for the TxPower which was wrongly read, which caused this issue to report high alarms for any TxPower value		
Workaround:	None		
Recovery:	None		

Parent Defect ID:	SLXOS-76183	Issue ID:	SLXOS-76183
Severity:	S2 - Major		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.6.1a
Technology Group:	Management	Technology:	SNMP - Simple Network Management Protocol
Symptom:	SNMP Trap is not generated for port events		
Condition:	When the port flaps on a node, an SNMP Trap is not generated in the remote node		

Parent Defect ID:	SLXOS-76376	Issue ID:	SLXOS-76376
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.4.3a
Technology Group:	Layer 3 Routing/Network Layer	Technology:	ARP - Address Resolution Protocol
Symptom:	Some ARP entries fail to refresh during age-out		
Condition:	Upon receiving GARP in a distributed IP-Fabric network		

Parent Defect ID:	SLXOS-76398	Issue ID:	SLXOS-76398

Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.3.4b
Technology Group:	Other	Technology:	Other
Symptom:	The threshold monitor show CLI on AFBR-710ASMZ-EX2 optic is shown as 10G ER optic when it actually is a 10 SR optic.		
Condition:	When AFBR-710ASMZ-EX2 is used and show threshold monitor CLI is executed on it.		

Parent Defect ID:	SLXOS-76408	Issue ID:	SLXOS-76408
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.5.3b
Technology Group:	Layer 3 Routing/Network Layer	Technology:	DHCP - Dynamic Host Configuration Protocol
Symptom:	Control protocol flaps due to packet buffer exhaustion and may lead to traffic loss		
Condition:	Flaps due to the packet buffer exhaustion is seen only with DHCP Relay configuration		
Recovery:	Remove the DHCP Relay configuration on the node and then reload		

Parent Defect ID:	SLXOS-76436	Issue ID:	SLXOS-76436
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.6.1a
Technology Group:	Management	Technology:	SNMP - Simple Network Management Protocol
Symptom:	SNMP requests are not processed.		
Condition:	When no VE interface is up and running in the device.		

Parent Defect ID:	SLXOS-76447	Issue ID:	SLXOS-76447
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.6.1a
Technology Group:	Traffic Management	Technology:	Traffic Queueing and Scheduling
Symptom:	'Output Paused 512 BitTimes' column of the 'show qos flowcontrol interface' CLI output is always empty		
Condition:	Enable Priority-based Flow Control or Configure Pause generation on any ethernet or port-channel interface		

Parent Defect ID:	SLXOS-76451	Issue ID:	SLXOS-76451
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.6.1a

Technology Group:	Layer 3 Routing/Network Layer	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	Prefixes were not properly learned in the VRFs on clients.		
Condition:	Configure BGP neighbor with route-reflector-client under VPNv4/VPNv6 family.		

Parent Defect ID:	SLXOS-76453	Issue ID:	SLXOS-76453
Severity:	S1 - Critical		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.4.3c
Technology Group:	IP Multicast	Technology:	IGMP - Internet Group Management Protocol
Symptom:	SLX 9640 device experienced unexpected reload		
Condition:	IGMP gets message from HSL using recvfrom socket system call (igmp_sock_read_from_hsl). In this function to read the data we are allocating memory of size RCV_BUFSIZ. RCV_BUFSIZ is defined as 9000 in our code. #define RCV_BUFSIZ 9000 In issue case igmp received a fragmented packet with packet length grater than 9000bytes size (tot_len = 14552) and we are trying to copy that using memcpy causing crash.		

Parent Defect ID:	SLXOS-76457	Issue ID:	SLXOS-76457
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.5.2a
Technology Group:	Layer 3 Routing/Network Layer	Technology:	IP Addressing
Symptom:	Ping and traffic forwarding fails on a Layer 3 Port-channel		
Condition:	After repeated interface flaps, ping and traffic forwarding fails on the Layer 3 Port-channel interface		
Workaround:	Delete the Port-channel and create a new Port-channel interface with the same member ports		

Parent Defect ID:	SLXOS-76469	Issue ID:	SLXOS-76469
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.3.2d
Technology Group:	Management	Technology:	CLI - Command Line Interface
Symptom:	Disruption in traffic after reload		
Condition:	When an ip access-list attached to an interface has more than one rule with vlan configuration		
Workaround:	Delete and reconfigure the access-list configuration		

Parent Defect ID:	SLXOS-76471	Issue ID:	SLXOS-76471
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.6.1
Technology Group:	Management	Technology:	SNMP - Simple Network Management Protocol
Symptom:	engine boot counter value is not updated in SNMPv3 traps.		
Condition:	When the switch comes up after a reload.		

Parent Defect ID:	SLXOS-76529	Issue ID:	SLXOS-76529
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.4.2b
Technology Group:	Platform	Technology:	Port Optics & FEC
Symptom:	The threshold monitor show CLI for a 10 LR optic is shown as 1G SR optic and thus wrongly reports out of range status.		
Condition:	When using TAS-A1NB1-FAHM optic which is a 10G LR one.		
Workaround:	No Workaround for this issue.		

Parent Defect ID:	SLXOS-76532	Issue ID:	SLXOS-76532
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.5.2a
Technology Group:	Layer 3 Routing/Network Layer	Technology:	BFD - BiDirectional Forwarding Detection
Symptom:	Hardware BFD sessions are down in 8720 device during reload.		
Condition:	This issue is seen in XGS SLX devices during device reload		
Recovery:	We have to reload SLX device to recover.		

Parent Defect ID:	SLXOS-76551	Issue ID:	SLXOS-76551
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.6.1a
Technology Group:	Layer 2 Switching	Technology:	VXLAN - Virtual Extensible LAN
Symptom:	In an EVPN-Multihoming (EPNN-MH) topology, some traffic destined for the remote VTEP is being dropped.		
Condition:	In an EVPN-Multihoming topology, changes in the underlay path due to an uplink port-channel flap result in some traffic destined for the remote VTEP being dropped.		
Workaround:	Shutting down the Ethernet Segment (ES) interface facilitates traffic switchover through the alternate MH peer device.		
Recovery:			

Parent Defect ID:	SLXOS-76585	**Issue ID:**	SLXOS-76585
Severity:	S2 - Major		
Product:	SLX-OS	**Reported in Release:**	SLX-OS 20.5.1a
Technology Group:	Layer 2 Switching	**Technology:**	Other
Symptom:	Transit MPLS over GRE packets are being dropped by the SLX when IP/GRE/MPLS payload is set to 8847		
Condition:	On the transit node in the MPLS/GRE path, the received packet should have protocol type as 0x8847		

Parent Defect ID:	SLXOS-76587	**Issue ID:**	SLXOS-76587
Severity:	S2 - Major		
Product:	SLX-OS	**Reported in Release:**	SLX-OS 20.5.1b
Technology Group:	Layer 3 Routing/Network Layer	**Technology:**	BFD - BiDirectional Forwarding Detection
Symptom:	BFD sessions are down on Active SLX device after failover.		
Condition:	Issue is seen during standby SLX device reload in SRIOV setup.		
Workaround:	Bouncing the VE interface recovers the BFD sessions.		

Parent Defect ID:	SLXOS-76645	**Issue ID:**	SLXOS-76645
Severity:	S3 - Moderate		
Product:	SLX-OS	**Reported in Release:**	SLX-OS 20.6.1a
Technology Group:	-	**Technology:**	-
Symptom:	The traffic counters are wrapped around 2^48 ~ 281474976710656, instead of 2^64.		
Condition:	Issue is seen after the traffic counters exceed 2^48.		
Workaround:	No work-around. Issue is in the SDK.		
Recovery:	No recovery. Issue is in the SDK.		

Parent Defect ID:	SLXOS-76650	**Issue ID:**	SLXOS-76650
Severity:	S3 - Moderate		
Product:	SLX-OS	**Reported in Release:**	SLX-OS 20.6.1a
Technology Group:	Security	**Technology:**	HTTP/HTTPS
Symptom:	"Show crypto ca certificates" CLI output shows SHA1 fingerprint instead of SHA256 as It is deprecated.		
Condition:	It is show command issue.		

Parent Defect ID:	SLXOS-76652	**Issue ID:**	SLXOS-76652
Severity:	S3 - Moderate		

Product:	SLX-OS	**Reported in Release:**	SLX-OS 20.6.1a
Technology Group:	Layer 3 Routing/Network Layer	**Technology:**	ARP - Address Resolution Protocol
Symptom:	Packets are forwarded with an incorrect destination MAC		
Condition:	Host moves with a different MAC address on an L3 interface		

Parent Defect ID:	SLXOS-76676	**Issue ID:**	SLXOS-76676
Severity:	S3 - Moderate		
Product:	SLX-OS	**Reported in Release:**	SLX-OS 20.6.2
Technology Group:	Platform	**Technology:**	Port Optics & FEC
Symptom:	Show media optical monitoring reports wrong values in CLI.		
Condition:	Issue observed only for breakout port		

Parent Defect ID:	SLXOS-76679	**Issue ID:**	SLXOS-76679
Severity:	S3 - Moderate		
Product:	SLX-OS	**Reported in Release:**	SLX-OS 20.6.2
Technology Group:	Management	**Technology:**	SNMP - Simple Network Management Protocol
Symptom:	Incorrect values in BFD session related SNMP traps		
Condition:	When the BFD session comes up		

Parent Defect ID:	SLXOS-76698	**Issue ID:**	SLXOS-76698
Severity:	S3 - Moderate		
Product:	SLX-OS	**Reported in Release:**	SLX-OS 20.6.1
Technology Group:	Layer 3 Routing/Network Layer	**Technology:**	ARP - Address Resolution Protocol
Symptom:	Traffic loss, of more than 500 milliseconds, observed for few traffic streams		
Condition:	One of the leaf nodes is reloaded		

Parent Defect ID:	SLXOS-76700	**Issue ID:**	SLXOS-76700
Severity:	S3 - Moderate		
Product:	SLX-OS	**Reported in Release:**	SLX-OS 20.5.3
Technology Group:	Security	**Technology:**	SSH - Secure Shell
Symptom:	Unable to login via SSH with user configure port number.		
Condition:	After upgrade to SLXOS20.5.3 from 20.4.3		
Workaround:	Remove and re-configure "ssh server port xxxx".		

Parent Defect ID:	SLXOS-76723	**Issue ID:**	SLXOS-76723

Severity:	S2 - Major		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.5.1b
Technology Group:	Security	Technology:	PBR - Policy-Based Routing
Symptom:	PBR is not updating the new route to reach configured next-hop when the previously selected route is unreachable.		
Condition:	"next-hop-recursion" configuration is enabled for PBR. PBR next hop is configured with non directly connected IP.		

Parent Defect ID:	SLXOS-76724	Issue ID:	SLXOS-76724
Severity:	S2 - Major		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.5.1b
Technology Group:	Security	Technology:	PBR - Policy-Based Routing
Symptom:	VRRP-E peers are stuck with Master/Master state due to split brain issue after applying PBR		

Condition:	1. Configure the PBR ACL with permit rule to redirect all packets to configured PBR next-hop. 2. Configure the PBR ACL with deny rule for VRRP-E multicast destination to skip PBR action.
	
	    seq 10 permit ip any any count
	    seq 20 deny ip any host 224.0.0.2 count		

Parent Defect ID:	SLXOS-76738	Issue ID:	SLXOS-76738
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.6.2a
Technology Group:	Layer 3 Routing/Network Layer	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	L3vpn routes advertised with zero label		
Condition:	reload or upgrading the node.		
Workaround:	Need to reset the BGP sessions.		

Parent Defect ID:	SLXOS-76808	Issue ID:	SLXOS-76808
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.5.3
Technology Group:	Monitoring	Technology:	sFlow
Symptom:	It is possible to configure 'sflow enable' on a Port-channel interface using REST API, even though the same is blocked while using the CLI		
Condition:	Configure 'sflow enable' using REST API (curl command) on a disallowed platform		

Parent Defect ID:	SLXOS-76861	Issue ID:	SLXOS-76861

Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.6.1a
Technology Group:	Layer 3 Routing/Network Layer	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	BGP routes imported from EVPN VRF to VPNv4 VRF are not marked as BEST and not installed in RIB of that VPNv4 VRF.		
Condition:	Importing Type-5 routes into the VRF in which IRB interface is not configured.		

Parent Defect ID:	SLXOS-76927	Issue ID:	SLXOS-76927
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.5.1a
Technology Group:	Layer 2 Switching	Technology:	LAG - Link Aggregation Group
Symptom:	System reloaded due to an Out of Memory (OOM) condition.		
Condition:	The Out of Memory (OOM) condition occurred due to a memory leak in the L2agt process. A small 8-byte memory leak per Logical Interface (LIF) during CCEP interface up/down event handling was aggravated by a continuously flapping of port-channel, leading to a significant memory leak.		
Workaround:	No known workarounds		
Recovery:	No known recovery methods		

Parent Defect ID:	SLXOS-76859	Issue ID:	SLXOS-76931
Severity:	S2 - Major		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.5.2c
Technology Group:	IP Multicast	Technology:	IPv4 Multicast Routing
Symptom:	SLX device is causing a loop in MCT network topology		
Condition:	It is applicable for SLX 9740 and Extreme 8820 devices, when Multicast traffic is received by MCT peer and flooded to ICL link.		

Parent Defect ID:	SLXOS-76940	Issue ID:	SLXOS-76940
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.6.2a
Technology Group:	Platform	Technology:	Port Optics & FEC
Symptom:	Display issue of fec mode in "show interface eth" output for BO DAC optic in 9740 device on 20.6.2a.		
Condition:	Using 4x25G BO DAC optic on Golden Eagle or Trusted Eagle platforms.		
Workaround:	No workaround for this issue.		

Parent Defect ID:	SLXOS-77081	Issue ID:	SLXOS-77081

Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.4.3c
Technology Group:	Platform	Technology:	Environmental Monitoring(EM)
Symptom:	FRU removal and insertion raslogs shall be observed and EMd(Environment Monitoring Deamon) core shall be observed.		
Condition:	This issue shall be observed when the BMC is rebooted or reset when the SLX-OS is operating normally.		
Workaround:	None		
Recovery:	Reboot the SLX-OS		

Parent Defect ID:	SLXOS-77115	Issue ID:	SLXOS-77115
Severity:	S3 - Moderate		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.4.3d
Technology Group:	Layer 3 Routing/Network Layer	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	One of the SLX processes runs out of memory and the device may unexpectedly reboot		
Condition:	This issue is seen only with BGP PIC feature enabled and the device is exposed to Internet Feed level route scale.		

Parent Defect ID:	SLXOS-77132	Issue ID:	SLXOS-77132
Severity:	S1 - Critical		
Product:	SLX-OS	Reported in Release:	SLX-OS 20.5.3a
Technology Group:	Layer 2 Switching	Technology:	VXLAN - Virtual Extensible LAN
Symptom:	VxLAN Tunnel does not come back up after reloading the device		
Condition:	When Insight port is configured and SNMP walk is issued, the SNMP-GET for the Insight port can go into an infinite loop causing the system to be non-responsive.		
Workaround:	Un-configure the Insight port		
Recovery:	Un-configure the Insight port and reload		

Defects Closed without Code Changes

The following software defects were closed in SLX-OS 20.6.3a without code changes as of December 2024:

Parent Defect ID:	SLXOS-65249	Issue ID:	SLXOS-65249
Reason Code:	Not Reproducible	Severity:	S2 - Major
Product:	SLX-OS	Reported in Release:	SLX-OS 20.4.1
Technology Group:	Layer 3 Routing/Network Layer	Technology:	ARP - Address Resolution Protocol
Symptom:	In SLX 9740, Traffic Convergence takes ~3 seconds.		
Condition:	Nexthop change takes place in ECMP prefixes.		

Parent Defect ID:	SLXOS-66144	Issue ID:	SLXOS-66144
Reason Code:	Not Reproducible	Severity:	S2 - Major
Product:	SLX-OS	Reported in Release:	SLX-OS 20.4.1
Technology Group:	Layer 3 Routing/Network Layer	Technology:	ARP - Address Resolution Protocol
Symptom:	Traffic takes more than 900 msec in the N-S direction when a port channel between the Gateway and Border Leaf fails. Minimum link is configured over this port channel and the trigger is the shutdown of one interface belonging to the port channel.		
Condition:	Minimum-link is configured between border leaf and gateway. When a port channel member between them is shutdown in the BL side, the PO is expected to fail. The GW should redirect the traffic to the other border leaf. This was seen to take more than 900 ms. The GW is a SLX 9640.		

Parent Defect ID:	SLXOS-66738	Issue ID:	SLXOS-66738
Reason Code:	Not Reproducible	Severity:	S3 - Moderate
Product:	SLX-OS	Reported in Release:	SLX-OS 20.4.1
Technology Group:	Monitoring	Technology:	Port Mirroring
Symptom:	In port mirroring configuration if destination interface is a port-channel and source interface is either a port-channel or member of a port-channel then destination port-channel interface goes down.		
Condition:	Issue is seen if in port mirroring configuration destination interface is configured as a port-channel.		

Parent Defect ID:	SLXOS-70592	Issue ID:	SLXOS-70592
Reason Code:	Will Not Fix	Severity:	S2 - Major
Product:	SLX-OS	Reported in Release:	SLX-OS 20.4.3

Technology Group:	Layer 3 Routing/Network Layer	Technology:	BFD - BiDirectional Forwarding Detection
Symptom:	BFD sessions flap while rebooting a leaf node		
Condition:	In an MCT pair, BFD sessions flap while rebooting a leaf node with SRIOV clients		