Extreme®
Connect Beyond the Network

SLX-OS 18r.2.00a for SLX 9850, SLX 9640, and SLX 9540

Release Notes v1.0

Contents

Document history

Version	Summary of changes	Publication date
1.0	Initial Release for 18r.2.00a	May 2019

Preface

Contacting Extreme Technical Support

As an Extreme customer, you can contact Extreme Technical Support using one of the following methods: 24x7 online or by telephone. OEM customers should contact their OEM/solution provider.

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

- GTAC (Global Technical Assistance Center) for immediate support
- Phone: 1-800-998-2408 (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.
- Email: support@extremenetworks.com. To expedite your message, enter the product name or model number in the subject line.
- GTAC Knowledge - Get on-demand and tested resolutions from the GTAC Knowledgebase or create a help case if you need more guidance.
- The Hub - A forum for Extreme customers to connect with one another, get questions answered, share ideas and feedback, and get problems solved. This community is monitored by Extreme Networks employees but is not intended to replace specific guidance from GTAC.
- Support Portal - Manage cases, downloads, service contracts, product licensing, and training and certifications.

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

- Your Extreme Networks service contract number and/or serial numbers for all involved Extreme Networks products
- A description of the failure
- A description of any action(s) 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

Extreme resources

Visit the Extreme website to locate related documentation for your product and additional Extreme resources.

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

Document feedback

Quality is our first concern at Extreme, and we have made every effort to ensure the accuracy and completeness of this document. However, if you find an error or an omission, or you think that a topic needs further development, we want to hear from you.

You can provide feedback in two ways:

• Use our short online feedback form at http://www.extremenetworks.com/documentation-feedback-pdf/

• Email us at internalinfodev@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.

Overview

The focus of SLX-OS 18r.2.00a release is enhancing the Border Routing solution for SLX 9850, SLX 9540 and SLX 9640, for customers requiring larger route scale for border routing with Internet peering.

The following key software capabilities are added in this release:

- BGP delayed route calculation
- BGP set metric type internal
- Ipv4 global subnet broadcast ACL to block traffic to network address
- Ipv6 subnet anycast address destination packet drop feature

New SKUs

No new SKUs added in this release.

Behavior changes

Behavior changes in release 18r.2.00a

The following system behaviors have changed in this release:

- ICMP rate limit default value set to ZERO by default for both IPv4 & IPv6

Behavior changes in release 18r.2.00

The following system behaviors have changed in this release:

- Multi-VRF support added for firmware download, copy support and copy configuration commands. User can specify the default-vrf and user-defined vrf using the use-vrf option in these commands.
- Multi-VRF support for NTP client and server: In the prior release (18r.1.x), NTP client tried to reach the external server via mgmt-vrf only. Support for default-vrf and user defined vrf is added in this release. In addition, NTP server ("serve" mode) support for mgmt-vrf and default-vrf is added in this release.
- The third party VM software is decoupled from the SLXOS package.
- DNS improvement: It is no longer required to mandatorily configure a domain name for FQDN DNS resolution. In the prior releases, we had to configure domain name using the command "ip dns domain-name … ", along with "ip dns name-server <ip>" command for DNS resolution to happen even for FQDNs. Note that, for non FQDNs, we still need to configure the domain-name for DNS resolution to happen.

  Support for default-vrf and user defined vrf is added in "ip dns name-server <ip> use-vrf<vrf>" command. Previously, this command always used the vrf of the application (ex: ping, traceroute) for which DNS resolution was required. Now, the DNS vrf is decoupled from the application context vrf.

- Added option to clear SNMP statistics (via "snmp-server preserve-statistics disable") when the CLI "clear counters" command is issued. Note that, when preserve SNMP stats is enabled (default configuration), SNMP statistics are preserved on HA failovers but not on system reloads.
- A defect in the firmware of the SSD used in the SLX 9540 may cause the SSD to stop responding. This is not corrected in the 18r.1.00 release. When this defect happens, the Extreme SLX-OS places the file system into a read-only mode to indicate that the file system is hung. A power-cycle fully recovers the device. An SSD controller firmware update is available, and GTAC can assist you in applying this to your systems. Please refer to Field Notice, FN-2018-422 for more information.
- 'ip mtu' now configures Layer3 MTU for both IPv4 and IPv6 MTU.
- Unknown-unicast Storm-control will not rate limit the VLL/P2P traffic in TCAM profile layer2-optimized-1.

- The management module for the SLX9850 product family has been upgraded from 16GB of memory to 32GB of memory. The deprecated version of the management module with 16GB of memory is supported up to software release SLX-OS 18r.2.00. **Extreme highly recommends upgrading to the 32GB version of the management module**.

If the combination of the 16GB (standby) and 32GB (active) management modules are installed in an SLX 9850, the following RAS log message will appear once the 32GB module becomes active:

```
M1 | Active | FFDC, WARNING, SLX9850-8, Detected system memory
size mismatch on dual MM – active has 32GB and standby has 16GB.
```

NOTE: A RAS log message will not appear on the console if the 32GB management module is in standby mode.

Software Features

New software features in 18r.2.00a

The following software features are new in this release:

Software Features

- BGP delayed route calculation
- BGP set metric type internal
- Ipv4 global subnet broadcast ACL to block traffic to network address
- Ipv6 subnet anycast address destination packet drop feature

New software features in 18r.2.00

The following software features are new in this release:

System/HW/OS

- SLX9640 System supporting 24x10G ports and up to 12x100G ports
- SLX9640 Licensing
- 25G breakout support for SLX9640
- 25G breakout support for SLX9850

Software Features

- Ipv4 route scale increase to 4M
- IPv6 route scale to 1M
- BGP PIC (Prefix Independent Convergence)
- BGP Flowspec
- BGP Large Community
- IP Prefix list scale increase to 12K
- Opti-scale routing support for SLX9850
- IP Broadcast ACL
- Receive ACL Multiple rules
- Receive ACL Rate Limiting
- sFlow BGP AS-Path support
- Flexible PBR
- Transparent Loopback support
- Logical Interface Descriptions for VE/Loopback interfaces
- Option to Preserve/Clear SNMP Statistics
- Microsoft Network Load Balancing Multilcast ARP changes
- Restrict Unknown Multicast Flooding
- Third party VM package separation
- vSLXOS support for ESXi Hypervisor with vSLX install software 2.1.0

CLI commands

CLI commands introduced in R18r.2.00a

New commands

- init-route-calc-delay
- ipv6 subnet-zero drop

Modified commands

- set metric-type

- show ip bgp summary

- show ipv6 bgp summary

CLI commands introduced in R18r.2.00

New commands

Note: For new feature additions, the configuration guide will have the full set of new CLI. The below gives the CLI changes in small feature changes and few other areas.

The following commands are new in this release:

Configuration:

- snmp-server preserve-statistics disable
- profile route route-enhance multi_vrf <off | on>
- ip global-subnet-broadcast-acl <name> (IP broadcast ACL global level)
- ip subnet-broadcast-acl <name>   (IP broadcast ACL Interface level)
- ip igmp snooping restrict-unknown-multicast(VLAN level configuration)

- prefix-independent-convergence (Global configuration level)

- telemetry collector <name>
    use-vrf default-vrf   (New VRF option added)
- hardware   (4x25G breakout mode)
        Connector 0/x
            breakout mode 4x25g

SLX9640 Only:

- profile etcam <default | ipv6-route | ipv4-v6-route>

- reload diag-mode
- reload system diag-mode

- show hardware profile etcam <default | ipv6-route | ipv4-v6-route>

Display:

- show hw route-info linecard 0
- show running-config prefix-independent-convergence

Modified commands

The following commands have been modified for this release:

Configuration:

- mac-address-table static <mac address> (This CLI can take multicast MAC as argument)
- arp 10.0.0.1 <mac address> (This CLI can take multicast MAC as argument)

- ip mtu (Configures MTU for both IP and IPv6 MTU)

- telemetry server **use-vrf** <vrf> (Enhanced to support default-vrf or user VRF)
- ip dns name-server <ip> use-vrf <vrf> (Enhanced to support default-vrf or user VRF)

Display/Clear:

- show hardware profile (Displays multi-vrf configuration)
- show policy-map control-plane [map-name <policy-map-name>]

- show policy-map [detail <policy-map-name>]
- Show route-map <route-map-name>
- show access-list {subnet-broadcast|global-subnet-broadcast} {ip | ipv6}
- show access-list {subnet-broadcast|global-subnet-broadcast} {ip | ipv6}<acl_name>
- show statistics access-list {subnet-broadcast|global-subnet-broadcast} {ip | ipv6} <acl_name>
- show statistics access-list {subnet-broadcast} {ip | ipv6}<acl_name> interface {eth|ve} <name>
- show ip igmp snooping vlan <vlan-id>
- clear policy-map-counters control-plane [<policy-map-name>]
- clear counters access-list {subnet-broadcast|global-subnet-broadcast} {ip|ipv6} <name>
- clear counters access-list {subnet-broadcast|global-subnet-broadcast} {ip|ipv6} <name> interface {eth|ve} <name>

SLX9640 Only:

- show hw route-info <interface | linecard> <intf number | linecard number>
- show hardware profile

Deprecated commands

- ipv6 mtu   This is deprecated and replaced by "ip mtu"

- http server shutdown   Replaced by "http server use-vrf <vrf> shutdown"
- telnet server shutdown   Replaced by "telnet server use-vrf <vrf> shutdown"
- profile route route-enhance   "hw_opt" option in the end deprecated for SLX9640

RFCs, Standards, and Scalability

For RFCs, standards, and scale numbers supported in this release, refer to the [Extreme SLX-OS Scale and Standards Matrix for SLX 9850 and SLX 9540](#).

Hardware support

Supported devices

The following devices are supported in this release:

Supported Hardware	Description
BR-SLX9850-4-BND-AC	Extreme SLX 9850 4-slot chassis with 1 management module, 5 switch fabric modules, 2 3000W AC power supplies, 3 fan modules, and accessory kit. Power cord not included.
BR-SLX9850-4-BND-DC	Extreme SLX 9850 4-slot chassis with 1 management module, 5 switch fabric modules, 2 3000W DC power supplies, 3 fan modules, and accessory kit. Power cord not included.
BR-SLX9850-8-BND-AC	Extreme SLX 9850 8-slot chassis with 1 management module, 5 switch fabric modules, 4 3000W AC power supplies, 3 fan modules, and accessory kit. Power cord not included.
BR-SLX9850-8-BND-DC	Extreme SLX 9850 8-slot chassis with 1 management module, 5 switch fabric modules, 4 3000W DC power supplies, and 3 fan modules, and accessory kit. Power cord not included.
BR-SLX9850-10GX72S-M	Extreme SLX 9850 72-port 10 GbE/1 GbE dual-speed (M) interface module with IPv4/IPv6/MPLS hardware support. Requires SFP+ optics for 10 GbE connectivity and SFP optics for 1 GbE connectivity. Supports up to 750,000 MAC. Supports up to 1,500,000 IPv4 routes, 140,000 IPv6 routes with OptiScale™ Internet Routing.
BR-SLX9850-100GX36CQ-M	Extreme SLX 9850 36-port 100 GbE, 60-port 40 GbE, or 240-port 10 GbE flex-speed (M) interface module with IPv4/IPv6/MPLS hardware support. Requires QSFP28 optics for 100 GbE, QSFP+ optics for 40 GbE, and 40 GbE to 10 GbE breakout for 10 GbE connectivity. Supports up to 750,000 MAC. Supports up to 1,500,000 IPv4 routes, 140,000 IPv6 routes with OptiScale™ Internet Routing.
BR-SLX9850-10GX72S-D	Extreme SLX985072-port 10GbE/1GbE (D) interface module with IPv4/IPv6 hardware support. Requires SFP+ optics for 10GbE connectivity and SFP optics for 10Gbe connectivity. Supports 750K MAC, 256K IPv4 routes and 64K IPv6 routes with up to 8GB packet buffers
BR-SLX9850-100GX36CQ-D	Extreme SLX 9850 36-port 100GbE, 60-port 40GbE, or 240-port 10GbE flex-speed (D) interface module with IPv4/IPv6 hardware support. Requires QSFP28, QSFP+ optics & 40GbE to 10GbE
BR-SLX9850-100GX12CQ-M	Extreme SLX 9850 12-port 100 GbE, 20-port 40GbE, or 80-port 10GbE flex-speed (M) interface module with IPv4/IPv6/MPLS hardware support. Requires QSFP28, QSFP+ optics & 40GbE to 10GbE breakout (for 10 GbE) connectivity. Supports up to 750,000 MAC. Supports up to 1,500,000 IPv4 routes, 140,000 IPv6 routes with OptiScale™ Internet Routing.
BR-SLX9850-100GX6CQ-M-UPG	6x100G POD SW license to be used with SLX9850-100Gx12CQ-M 100G blade only
XBR-SLX9850-4-S	Extreme SLX9850 Spare 4-slot chassis
XBR-SLX9850-8-S	Extreme SLX9850 Spare 8-slot chassis
BR-SLX9850-MM	Extreme SLX 9850 management module for 4-slot and 8-slot systems, includes 16GB RAM, 2 internal Solid State Drives, 4-Core Intel CPU, 2 USB 3.0 ports, 2 RJ-45 console ports, and 10GbE Services port
BR-SLX9850-4-SFM	Extreme SLX 9850 switch fabric module for 4-slot chassis
BR-SLX9850-8-SFM	Extreme SLX 9850 switch fabric module for 8-slot chassis
XBR-SLX9850-ACPWR-3000	Extreme SLX 9850 AC 3000W power supply for 4- and 8-slot chassis, 90-270V AC input
XBR-SLX9850-DCPWR-3000	Extreme SLX 9850 DC 3000W power supply for 4- and 8-slot chassis
XBR-SLX9850-4-FANM	Extreme SLX 9850 fan module for 4-slot chassis. Fan module has 2 fans
XBR-SLX9850-8-FANM	Extreme SLX 9850 fan module for 8-slot chassis. Fan module has 4 fans
XBR-SLX9850-4-CAB	Extreme SLX 9850 Cable Combo Kit for 4-slot chassis
XBR-SLX9850-8-CAB	Extreme SLX 9850 Cable Combo Kit for 8-slot chassis
XBR-SLX9850-4-SFMPNL	Extreme SLX 9850 switch fabric module blank panel for 4-slot chassis
XBR-SLX9850-8-SFMPNL	Extreme SLX 9850 switch fabric module blank panel for 8-slot chassis
XBR-SLX9850-PWRPNL	Extreme SLX 9850 power supply blank panel for 4-slot and 8-slot chassis
XBR-SLX9850-IMPNL	Extreme SLX 9850 interface module blank panel for 4-slot and 8-slot chassis
XBR-SLX9850-MMPNL	Extreme SLX 9850 management module blank panel for 4-slot and 8-slot chassis
XBR-SLX9850-4-4PRM-KIT	Extreme SLX 9850 four-post rack mounting kit for 4-slot chassis. Include 27-31" flush and recessed mounting
XBR-SLX9850-4-2PRM-KIT	Extreme SLX 9850 two-post rack mounting kit for 4-slot chassis. Include telco flush and midplane mounting
XBR-SLX9850-8-4PRM-KIT	Extreme SLX 9850 four-post rack mounting kit for 8-slot chassis. Include flush and recessed mounting
XBR-SLX9850-8-2PRM-KIT	Extreme SLX 9850 two-post rack mounting kit for 8-slot chassis. Include telco flush and midplane mounting
BR-SLX-9540-24S-AC-F	Extreme SLX 9540-24S Switch AC with Front to Back airflow. Supports 24x10GE/1GE + 24x1GE ports
BR-SLX-9540-24S-DC-F	Extreme SLX 9540-48S Switch DC with Front to Back airflow. Supports 48x10GE/1GE + 6x100GE/40GE

Supported Hardware	Description
BR-SLX-9540-24S-AC-R	Extreme SLX 9540-24S Switch AC with Back to Front airflow. Supports 24x10GE/1GE + 24x1GE ports
BR-SLX-9540-24S-DC-R	Extreme SLX 9540-24S Switch DC with Back to Front airflow. Supports 24x10GE/1GE + 24x1GE ports
BR-SLX-9540-48S-AC-F	Extreme SLX 9540-48S Switch AC with Front to Back airflow. Supports 48x10GE/1GE + 6x100GE/40GE
BR-SLX-9540-48S-DC-F	Extreme SLX 9540-48S Switch DC with Front to Back airflow. Supports 48x10GE/1GE + 6x100GE/40GE
BR-SLX-9540-48S-AC-R	Extreme SLX 9540-48S Switch AC with Back to Front airflow. Supports 48x10GE/1GE + 6x100GE/40GE
BR-SLX-9540-48S-DC-R	Extreme SLX 9540-48S Switch DC with Back to Front airflow. Supports 48x10GE/1GE + 6x100GE/40GE
BR-SLX-9540-24S-COD	Upgrade 24x1GE to 24x10GE/1GE
BR-SLX-9540-2C-POD	Ports on Demand for 2x100GE/40GE Uplinks
BR-SLX-9540-ADV-LIC-P	Advanced Feature License for MPLS, BGP-EVPN, CE2.0, NSX, OptiScale™ Internet Routing (for Extreme SLX 9540-24S and 9540-48S)
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-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-9640-24S-AC-F	Extreme SLX 9640-24S Router AC with Front to Back airflow. Supports 24x10GE/1GE + 4x100GE/40GE.(1 Power supply 6 Fans)
XEN-SLX9640-FAN-R	SLX 9640 FAN Back to Front airflow
XEN-SLX9640-FAN-R	SLX 9640 FAN Back to Front airflow
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

Supported power supplies

- Extreme SLX 9850 AC 3000W power supply for 4- and 8-slot chassis, 90-270V AC input
- Extreme SLX 9850 DC 3000W power supply for 4- and 8-slot chassis, 48V DC input
- SLX 9540 and SLX 9640 power supplies

XBR-ACPWR-650-F	**SLX Fixed AC 650W Power Supply Front to Back airflow. Power cords not included.**
XBR-ACPWR-650-R	SLX Fixed AC 650W Power Supply Back to Front airflow. Power cords not included.
XBR-DCPWR-650-F	SLX Fixed DC 650W Power Supply Front to BDCk airflow. Power cords not included.
XBR-DCPWR-650-R	SLX Fixed DC 650W Power Supply BDCk to Front airflow. Power cords not included.

Supported optics

Unique Identifier	Category	Offical SKU	Official Description
1	Copper	1G-SFP-TX	MODULE, MINI-GBIC, TX, 1000BASE, RJ45
2	Optics	1G-SFP-SX-OM	1000BASE-SX SFP OPTIC, MMF LC
3		1G-SFP-SX-OM-8	1000BASE-SX SFP OPTIC, MMF LC 8
4	Optics	1G-SFP-LX-OM	1000BASE-LX SFP OPTIC, SMF LC
5		1G-SFP-LX-OM-8	1000BASE-LX SFP OPTIC, SMF LC 8
6	Optics	1G-SFP-BXU	1000BASE-BXU SFP OPTIC SMF
7	Optics	1G-SFP-BXD	1000BASE-BXD SFP OPTIC SMF
8	Optics	1G-SFP-LHA-OM	1000BASE-LHA SFP OPTIC, SMF, LC CONN
9	Optics	1G-SFP-CWDM80-1470	CWDM MGBIC OPTIC, 80KM, 1470nm, LC Connector
10		1G-SFP-CWDM80-1490	CWDM MGBIC OPTIC, 80KM, 1490nm, LC Connector
11		1G-SFP-CWDM80-1510	CWDM MGBIC OPTIC, 80KM, 1510nm, LC Connector
12		1G-SFP-CWDM80-1530	CWDM MGBIC OPTIC, 80KM, 1530nm, LC Connector
13		1G-SFP-CWDM80-1550	CWDM MGBIC OPTIC, 80KM, 1550nm, LC Connector
14		1G-SFP-CWDM80-1570	CWDM MGBIC OPTIC, 80KM, 1570nm, LC Connector
15		1G-SFP-CWDM80-1590	CWDM MGBIC OPTIC, 80KM, 1590nm, LC Connector
16		1G-SFP-CWDM80-1610	CWDM MGBIC OPTIC, 80KM, 1610nm, LC Connector
17	Optics	10G-SFP-USR	10G USR SFP+ TRANS 100M OVER MMF
18	Optics	10G-SFP-USR-E	10GE USR SFP+,HIGH RX SENSITIVITY
19		10G-SFP-USR-8-E	10GE USR SFP+,HIGH RX SENSITIVITY (8-pack)
20	Optics	10G-SFP-USR-SA	10GE USR SFP+ OPTIC (LC),RANGE 100M MMF, TAA
21	Optics	10G-SFP-SR	10G SR SFP+ TRANS 300M OVER MMF
22		10G-SFP-SR-8	10G SR SFP+ TRANS 300M OVER MMF 8
23	Optics	10G-SFP-SR-S	10GBASE-SR, SFP+OPTIC(LC), 300M MMF, 70C
24	Optics	10G-SFP-SR-SA	10GBASE-SR, SFP+OPTIC(LC), 300M MMF, TAA, 70C
25	Optics	10G-SFP-LR	10G LR SFP+ TRANS 10KM OVER SMF
26		10G-SFP-LR-8	10G LR SFP+ TRANS 10KM OVER SMF 8
27	Optics	10G-SFP-LR-S	10GBASE-LR, SFP+ OPTIC (LC),10KM OVERSMF, 70C
28	Optics	10G-SFP-LR-SA	10GBASE-LR, SFP+ OPTIC (LC),10KM OVERSMF, TAA, 70C

29	Optics	10G-SFP-ER	10G ER SFP+ TRANS 40KM OVER SMF
30	Optics	10G-SFP-ZR	10GBASE-ZR SFP+ UP TO 80KM
31	Optics	10G-SFP-ZRD-T	10GBASE-ZRD TUNABLE DWDM 80 KM SFP+
32	Optics	10G-SFP-BXU-S	10GE LR SFP+ OPTIC (LC) BIDIRECTIONAL UP
33	Optics	10G-SFP-BXD-S	10GE LR SFP+ OPTIC (LC) BIDIRECTIONAL DO
34	Copper	*Methode SP7051	Methode SP7051-BRCD SFP+ 10G-Base-T (10G speed only)
35	Copper	10G-SFP-TWX-P-0101	10 GbE SFP+ optics Twinax Passive Copper cable: 1m
36	Copper	10G-SFP-TWX-P-0301	10 GbE SFP+ optics Twinax Passive Copper cable: 3m
37	Copper	10G-SFP-TWX-P-0501	10 GbE SFP+ optics Twinax Passive Copper cable: 5m
38	Copper	10G-SFP-TWX-0101	10 GbE SFP+ optics Twinax Active Copper cable: 1m
39	Copper	10G-SFP-TWX-0301	10 GbE SFP+ optics Twinax Active Copper cable: 3m
40	Copper	10G-SFP-TWX-0501	10 GbE SFP+ optics Twinax Active Copper cable: 5m
41	Copper	10GE-SFP-AOC-0701	10GE SFP+ Direct Attach Cables 7m - Active Optical cables
42	Copper	10GE-SFP-AOC-1001	10GE SFP+ Direct Attach Cables 10m - Active Optical cables
43	Optics	40G-QSFP-SR4-1	40G QSFP+ SR4 TRANS 100M OVER MMF
44	Optics	40G-QSFP-SR4-INT	40G QSFP+ 100M OVER MMF 10G BREAKOUT
45	Optics	40G-QSFP-ESR4	40G QSFP+ 300M OVER MMF
46	Optics	40G-QSFP-ESR4-INT	40G QSFP+ 300M OVER MMF 10G BREAKOUT
47	Optics	40G-QSFP-LR4-1	40G QSFP+ LR4 FTRANS 10KM OVER SMF
48	Optics	40G-QSFP-LR4-INT	40G QSFP+ LR4 TRANS 10KM OVER SMF 10G BREAKOUT
49	Optics	40G-QSFP-ER4-1	40G QSFP+ ER4 40KM OVER SMF
50	Optics	40G-QSFPvSLX-SR-BIDI	40GE SR QSFP+ optic (LC), Bidirectional, 100m over OM3 MMF
51	Optics	40G-QSFP-LM4	40GBASE-LM4 QSFP+, 1310nm, 160m over duplex LC OM4 MMF, 2km over duplex LC SMF
52	Copper	40G-QSFP-C-0101	40G QSFP+ TO QSFP+ PASSIVE COPPER 1M
53	Copper	40G-QSFP-C-0301	40G QSFP+ TO QSFP+ PASSIVE COPPER 3M
54	Copper	40G-QSFP-C-0501	40G QSFP+ TO QSFP+ PASSIVE COPPER 5M
55	Copper	40G-QSFP-QSFP-C-0101	40G QSFP+ TO QSFP+ ACTIVE COPPER 1M
56	Copper	40G-QSFP-QSFP-C-0301	40G QSFP+ TO QSFP+ ACTIVE COPPER 3M
57	Copper	40G-QSFP-QSFP-C-0501	40G QSFP+ TO QSFP+ ACTIVE COPPER 5M
58	Optics	40G-QSFP-QSFP-AOC-1001	40G QSFP+ to QSFP+ ACTIVE OPTICAL CABLE 10M

59	Copper	40G-QSFP-4SFP-C-0101	4X10GE QSFP+TO4SFP+ COPPER BREAKOUT 1M
60	Copper	40G-QSFP-4SFP-C-0301	4X10GE QSFP+TO4SFP+ COPPER BREAKOUT 3M
61	Copper	40G-QSFP-4SFP-C-0501	4X10GE QSFP+TO4SFP+ COPPER BREAKOUT 5M
62	Optics	40G-QSFP-4SFP-AOC-1001	4X10GE QSFP+TO4SFP+ Fiber BREAKOUT 10M
63	Optics	100G-QSFP-ESR4	100GBASE-SR4 QSFP+ 300M
64	Optics	100G-QSFP28-SR4	100G QSFP28 SR4 TRANS 100M OVER MMF
65	Optics	100G-QSFP28-LR4L-2KM	100G QSFP28 LR4 LITE TRANS 2KM OVER SMF
66	Optics	100G-QSFP28-LR4-10KM	100G QSFP28 LR4 TRANS 10KM OVER SMF
67	Optics	100G-QSFP28-LR4-LP-10KM	100G QSFP28 LR4 LOWPOWER 2KM OVER SMF
68	Optics	100G-QSFP28-CWDM4-2KM	100GBASE CWDM4 QSFP TRANS LC 2KM OVER SM
69	Copper	100G-QSFP-QSFP-P-0101	100G QSFP Passive Direct Attach Copper Cable, 1M
70	Copper	100G-QSFP-QSFP-P-0301	100G QSFP Passive Direct Attach Copper Cable, 3M
71	Copper	100G-QSFP-QSFP-P-0501	100G QSFP Passive Direct Attach Copper Cable, 5M
72	Copper	100G-QSFP-QSFP-AOC-1001	100G QSFP Direct Attach Active Optical Cable, 10M
73	Copper	100G-QSFP-QSFP-P-0101	100G QSFP Passive Direct Attach Copper Cable, 1M
74	Copper	100G-QSFP-QSFP-P-0301	100G QSFP Passive Direct Attach Copper Cable, 3M
75	Copper	100G-QSFP-QSFP-P-0501	100G QSFP Passive Direct Attach Copper Cable, 5M
76	Optics	*Inphi IN-Q2AY2-XX	Inphi 100G QSFP-28 ColorZ DWDM (80km)

*Optics reference qualified and should be purchased from the respective vendors. Extreme doesn't sell these.

Zero Touch Provisioning (ZTP)

- ZTP is enabled by default on SLX switches from factory or by "write erase". Upon switch power-on or reboot by "write erase", it will automatically connect to DHCP server through both management interface and inband ports with connection for firmware to download and configuring the switch based on the DHCP configuration.

- If the switch does not have a DHCP server connected or the DHCP server is not configured for ZTP, the switch will keep searching the DHCP server for ZTP.

  The serial console of the switch will display ZTP message as following:

  ZTP, Sat Nov 17 07:55:37 2018, ========== ZTP start ==========

  ZTP, Sat Nov 17 07:55:37 2018, disable raslog

  ZTP, Sat Nov 17 07:55:37 2018, CLI is ready

  ZTP, Sat Nov 17 07:55:49 2018, inband ports are enabled

  ZTP, Sat Nov 17 07:55:49 2018, serial number = 1818N-41522

  ZTP, Sat Nov 17 07:55:49 2018, model name = EN-SLX-9030-48S

  ZTP, Sat Nov 17 07:55:49 2018, use both management interface and inband interfaces

  ZTP, Sat Nov 17 07:55:49 2018, checking inband interfaces link status

  ZTP, Sat Nov 17 07:56:43 2018, find link up on interfaces: eth0 Eth0.1 Eth0.9 Eth0.10 Eth0.11

  ZTP, Sat Nov 17 07:56:43 2018, start dhcp process on interfaces: eth0 Eth0.1 Eth0.9 Eth0.10 Eth0.11

  ZTP, Sat Nov 17 07:56:53 2018, get no dhcp response from all interfaces

  ZTP, Sat Nov 17 07:56:53 2018, retry in 10 seconds

  ZTP, Sat Nov 17 07:57:03 2018, inband ports are enabled

  ZTP, Sat Nov 17 07:57:03 2018, serial number = 1818N-41522

  ZTP, Sat Nov 17 07:57:03 2018, model name = EN-SLX-9030-48S

  ZTP, Sat Nov 17 07:57:03 2018, use both management interface and inband interfaces

  ZTP, Sat Nov 17 07:57:03 2018, checking inband interfaces link status

  ZTP, Sat Nov 17 07:57:04 2018, find link up on interfaces: eth0 Eth0.1 Eth0.6 Eth0.9 Eth0.10 Eth0.11

ZTP, Sat Nov 17 07:57:04 2018, start dhcp process on interfaces: eth0 Eth0.1 Eth0.6 Eth0.9 Eth0.10 Eth0.11

ZTP, Sat Nov 17 07:57:14 2018, get no dhcp response from all interfaces

ZTP, Sat Nov 17 07:57:14 2018, retry in 10 seconds

You need to login onto the serial console, wait for the above message to show up to confirm ZTP has been triggered, and then run "dhcp ztp cancel" and "reload system" to cancel the ZTP operation.

SLX#

SLX# dhcp ztp cancel

After ZTP has been confirmed canceled, you need to run "reload system" before configuring the switch.

Do you want to continue? [y/n]

 SLX#

SLX# reload system

Warning: This operation will cause the chassis to reboot and

requires all existing telnet, secure telnet and SSH sessions to be

restarted.

Unsaved configuration will be lost. Please run `copy running-config startup-config` to save the current configuration if not done already.

Are you sure you want to reboot the chassis [y/n]? y

017/03/27-21:14:13, [RAS-1007], 567,, INFO, SLX9030, System is about to reload.

Software upgrade and downgrade

Image file names

Download the following images from www.extremenetworks.com.

Image file name	Description
slxos18r.2.00a.tar.gz	SLX-OS 18r.2.00a software
slxos18r.2.00a_all_mibs.tar.gz	SLX-OS 18r.2.00a MIBS
slxos18r.2.00a.md5	SLX-OS 18r.2.00a md5 checksum
tpvm2.0.0.tar.gz	SLX-OS TPVM software package

IMPORTANT: Starting in 18r.2.00 release, tpvm2.0.0.tar.gz package is decoupled from SLX-OS 18r.2.00 software. Please follow the instructions in the *Extreme SLX-OS Management Configuration Guide, 18r.2.00* before performing firmware download. If TPVM is already installed ensure it is un-installed before proceeding to the upgrade to 18r.2.00.

Upgrade and downgrade considerations

- Upgrade from a 32-bit to 64-bit SLX-OS is a two-step sequential process as shown below:
    1) Upgrade using 'coldboot' to 17r.1.01b
    2) Upgrade using 'fullinstall' to 64-bit SLX OS
- Upgrade/Downgrade using 'fullinstall' on an SLX 9850 takes up to 60 minutes for completion as compared to 25 minutes for 'coldboot'
- Upgrade from a 64-bit to 64-bit SLX-OS is performed using 'coldboot' option
- When firmware upgrade or downgrade is performed, following matrix can be used as a reference
- It is recommended to use 7zip or WinRAR to Un-compress the SLXOS tar file

Note on SLX9640:

After "write erase", upon switch boot up, log in to serial console as admin
1. *Run "dhcp ztp cancel"*
2. *Run "reload system"*
3. *After switch boot up, you could Install license or any config command*

To From	16r.1.00 17r.1.00 17r.1.01 (32-bit)	17r.1.01b (32-bit)	17r.2.00a (64-bit)	18r.1.00a (64-bit)	18r.2.00/18r.2.00a (64-bit)
16r.1.00 17r.1.00 17r.1.01 (32-bit)	coldboot	Coldboot	Two Step Process: 1. Upgrade to 17r.1.01b 2. Upgrade to 17r.2.00a	Two Step Process: 1. Upgrade to 17r.1.01b 2. Upgrade to 18r.1.00a	Two Step Process: 1. Upgrade to 17r.1.01b 2. Upgrade to 18r.2.00/18r.2.00a
17r.1.01b (32-bit)	coldboot	Coldboot	fullinstall	fullinstall	Fullinstall
17r.2.0 (64-bit)	Two Step Process: 1. Downgrade to 17r.1.01b 2. coldboot to 16r.1.00	Fullinstall	coldboot	coldboot	Coldboot
18r.1.00a (64-bit)	Two Step Process: 1. Downgrade to 17r.1.01b 2. coldboot to 16r.1.00	Fullinstall	coldboot	coldboot	Coldboot
18r.2.00 / 18r.2.00a (64-bit)	Two Step Process: 1. Downgrade to 17r.1.01b 2. coldboot to 16r.1.00	Fullinstall	coldboot	coldboot	Coldboot

Upgrade Steps from 32-bit to 64-bit SLX-OS

1. Make sure the device is running SLXOS 17r.1.01b or later, if not, please see the 17r.1.01b documentation on how to upgrade to that release.
2. Upgrade to SLX-OS 18r.2.00 using 'fullinstall'

3. Save Configuration

   To save the config, run

   copy running-config startup-config

4. Firmware download with "**fullinstal**l" option from source directory

   ```
   device# firmware download fullinstall ftp user releaseuser password releaseuser file
   release.plist
   ```

   Notes:

   Firmware download with the "fullinstall" option will retain the startup configuration file, and upon auto reboot of the device, it will replay the startup configuration file automatically.

Upgrade/downgrade using firmware download CLI through USB:

- Upgrade from SLX-SLX 17r.1.01a to SLX-OS 17r.2.01 is supported via firmware download CLI with "fullinstall" option.
- Upgrade from SLX 17r.1.01b to SLX-OS 17r.2.01a or later is supported via firmware download CLI with "fullinstall" option.
- USB based FWD upgrade from SLX-OS 17r.1.01a (32-bit) to SLX-OS 17r.2.01 (64-bit) or later is supported with "fullinstall" option.
- USB3.0 used for firmware download can be in VFAT or EXT4 format.

Instruction to check and upgrade FPGAs/CPLDs:

Refer to the *SLX-OS Upgrade Guide* for all variations on upgrading SLX-OS.

FPGA/CPLD versions:

SLX-9850	Release Date
MM sys FPGA	08/25/2016
LC sys FPGA	08/30/2016
SFM sys FPGA	08/04/2016
SLX-9540	**Release Date**
Sys FPGA	02/09/2017
CPLD 0	02/09/2017

CPLD 1	02/09/2017
SLX-9640	**Release Date**
Sys FPGA	05/03/2018
CPUCPLD	05/03/2018
IOCPLD-1	08/03/2018
IOCPLD-2	08/03/2018

MCT upgrade process from 32-bit OS to 64-bit OS

This section describes the procedure to upgrade from SLX-OS 17r.1.01x to SLX-OS 17r.2.01 and later releases with minimal traffic loss disruption to the customer.

The below steps are written based on the nomenclature used for MCT nodes being A and B
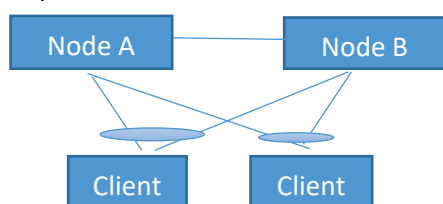
1. Configure client-isolation-mode under the cluster to be loose on Node A and Node B respectively.

   > Device(config)#**cluster** *<Name of the cluster> <cluster-id>*
   > **client-isolation loose**

2. Isolate Node A from the network using the follow steps:

   a) Disable the MCT clients from the MCT node that needs to be taken offline using **client-interfaces-shutdown** command.
   b) Disable the link connected to MCT peer node and uplink to the core.

3. Copy running-configuration to startup-configuration on node A.
4. Upgrade node "A" using firmware download with fullinstall option to the 18r.2.00 image. While the upgrade on node A is happening, the traffic passes through node B with <30sec downtime (depending on the scale and other parameters).
5. Verify that once the node comes UP, the member-vlan configuration under the cluster is removed.
6. Create a evpn template as in below and add to the existing configuration.

   evpn <evpn-instance-name>
    route-target both auto ignore-as
    rd auto
    vlan add <NUMBER:1-4090>

7. Isolate Node B from the network using the same steps as in Step 1. Note that there is a complete traffic loss at this step.
8. Copy running-configuration to startup-configuration on node B.

9. Bring back A to network by bringing the client-interfaces UP using the following command under cluster configuration.

no client-interfaces-shutdown

   Also, enable the interface going to the peer MCT node and the uplink to the CORE network.
10. Upgrade MCT node B by repeating the steps 3-5.
11. Once the upgrade is completed, bring back MCT node B to network by using the same step as 8.
12. Configure "no client-isolation" under the cluster configuration on both Node A and Node B.

TPVM considerations for upgrading SLX9850 & SLX9540 to 18r.2.0

When upgrading a SLX9850 and SLX9540 from previous releases to 18r.2.00, if TPVM is installed in the system, you **must** un-install it by running the "tpvm uninstall" command before starting firmware download. Otherwise, it will cause system initialization issue.

 After the system is upgraded to 18r.2.00, you can install the TPVM image from 18r.2.00 by running the "tpvm install" command.

Limitations and restrictions

BFD:

- Sessions with less than 200ms timer may flap in scale conditions
- Known issues with BFD when BFD is configured over multi-slot LAG

L3VPN:

- Known issues with Peer-group, RR-group and Prefix-list ORF

FRR facility backup

- VPLS/VLL Bypass traffic will not work when router/untagged VE interfaces configured as MPLS uplink ports

MCT L3 cases are not supported when ICL interface is configured as router/untagged VE
it is required for all MPLS uplinks to be tagged interfaces to use FRR bypass for VLL/VPLS/L3VPN applications

L3VPN jumbo limitation

- The IPMTU value configured in CLI is applicable, if outgoing routing interface is an undelay IP interface (VE or L3 port); the IPMTU value configured in CLI is not applicable if the outgoing interface is uplink for IPoMPLS, L3VPN traffic, or ICL for MCT peers. Jumbo frames over MPLS/L3VPN tunnels can be accepted based the port L2MTU values.

Increase scale support for class-maps under the service policy

- The ACL/VLAN/BD Rate Limiting scale numbers are dependent on tcam profile configured. Basically, based on the tcam entries reserved for the feature, user can scale number of policers/stats for appropriate application.

  Consider below example with tcam profile "layer2-optimised-1".

  - Create 2K Vlan/BD based class-maps and 2K ACL based class-maps associate those with policy-map pmap1.
  - Configure 1k distinct policer attributes (cir/cbs/eir/ebs) for all the policy-map/class-map combination and bind the policy-map pmap1 to any interface.
  - Now overall there will be 4K policers active for that interface with 4k distinct class-maps (match criteria).
- Note: The 4K policers (class-maps) scale will not be applicable to port-channel. There are only 1,215 policers are reserved for port-channels.
- Based on the requirement user must set the tcam profile and must reboot the box for activating the same.

QoS/Rate Limiting

- If the user tries to bind the policer with configured CIR/EIR value is less than 22000 bps in SLX9850 or SLX 9540 the operational CIR/EIR will be zero and the same will be notified to the user via syslog on console.

Misc

- IPV4 syslog server and IPV6 syslog server can't be configured together.

- IPv6 based syslog server with the 'format RFC-5424' option is not supported.
- Issues with special-characters in password.
  - Dollar sign ($), double-quote sign ("), and single-quote (') are not supported by the firmware download command.
  - Double-quote (") is not supported the copy support command.
  - Single-quote (') is not supported by the copy config command.

SLX 9640 Only
- MCT/L3 - The bridge-domain will need to use VC raw mode for traffic to work.

Closed with code changes 18r.2.00a

This section lists software defects with Critical, High, and Medium Technical Severity closed with a code change as of **May 2019** in 18r.2.00a.

Parent Defect ID:	SLXOS-25863	Issue ID:	SLXOS-37182
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 2 Switching
Reported in Release:	SLXOS 18r.2.00a	Technology:	MCT - Multi-Chassis Trunking
Symptom:	Prefix routes are not installed.		
Condition:	Prefix route sources are from MCT (IBGP) and non-MCT (EBGP) peer. When MPLS tunnel is brought down and IP reach ability is available. The prefix route from NON-MCT peers are not installed.		
Workaround:	Shutdown the MCT Peer,there should not be any functionality impact as ICL down is down.		

Parent Defect ID:	SLXOS-28000	Issue ID:	SLXOS-37197
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.2.00	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	BGP peering sessions might flap with reason "Hold Timer Expired" notification from remote		
Condition:	2000 BGP peers are configured with the same route-map for outbound filtering and the system is stable. At this point the route-map is modified		

Parent Defect ID:	SLXOS-28003	Issue ID:	SLXOS-37198
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.2.00	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	Learning route updates over BGP peering sessions might be slow with default MTU value		
Condition:	BGP peering sessions are established over an IP interface with default MTU value of 1500		
Workaround:	Configure interface MTU and IP MTU values greater than 4096 bytes (BGP MAXIMUM MESSAGE SIZE)		

Parent Defect ID:	SLXOS-27624	Issue ID:	SLXOS-37202
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.2.00	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	BGP peering session may not remain stable when multiple large IP prefix lists are configured for outbound prefix filtering		

Condition:	Multiple IP prefix lists each with 1K rules are configured for outbound prefix filtering. The configured prefix lists are attached to multiple BGP peers at the same time using a script.
Workaround:	Configure one BGP peer at a time with IP prefix list and wait for the out-policy update to complete . Repeat the configuration for the next BGP peer

Parent Defect ID:	SLXOS-27626	Issue ID:	SLXOS-37203
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.2.00	Technology:	IP Addressing
Symptom:	BGP IPV6 peering sessions might flap when 10 or more IPv6 BGP peers are configured with large prefix list		
Condition:	BGP is converging after a reload or by administratively resetting all the neighbors. At this point, IPV6 prefix lists each containing 1K or more rules are created and added as an out-policy to 10 or more IPV6 BGP peers		

Parent Defect ID:	SLXOS-29174	Issue ID:	SLXOS-37206
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.2.00	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	In a less common scenario where full internet routes are leaked from one vrf to another, and some triggers like interface shutdown, bgp neighbor shutdown are performed, ribmgr reload may happen.		
Condition:	When BGP PIC is enabled with full internet route leak from one vrf to another.		

Parent Defect ID:	SLXOS-29148	Issue ID:	SLXOS-37208
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.2.00	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	Few BGP sessions might stay in "ESTAB*cp" state indicating in-progress out-policy change even though there is no out-policy change for those peers		
Condition:	All BGP peering sessions are cleared several times		

Parent Defect ID:	SLXOS-29294	Issue ID:	SLXOS-37213
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.2.00	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	BGP protocol might converge slow after a reload in a scaled network.		

Condition:	BGP is configured with multi-vrf and highly scaled to process 9M RIB IN routes and generate 14M RIB-OUT routes. Multiple 4K prefix lists are configured and attached to multiple BGP peers across different VRF's for out-bound prefix filtering

Parent Defect ID:	SLXOS-29045	Issue ID:	SLXOS-37217
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.2.00	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	BGP peering sessions might flap when IP prefix list with more than 1K rules is applied in inbound direction		
Condition:	BGP is configured with 2K peering sessions. IP prefix list with more than 1K rules are configured for few of the BGP peers which receive internet routes for inbound prefix filtering		

Parent Defect ID:	SLXOS-27983	Issue ID:	SLXOS-37303
Severity:	S3 - Medium		
Product:	SLX-OS	Technology Group:	Security
Reported in Release:	SLXOS 17r.1.01ah	Technology:	ACLs - Access Control Lists
Symptom:	IP address is showing negative in ACL logging output.		
Condition:	IP is showing negative for some IP addresses and when terminal monitor is enabled. For normal telnet session or console correct IP address is showing.		

Parent Defect ID:	SLXOS-25770	Issue ID:	SLXOS-37378
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.1.00	Technology:	Static Routing (IPv4)
Symptom:	CCEP physical main interface shows admin down state even though interface is UP		
Condition:	Adding interface as client interface under cluster		
Workaround:	perform no deploy/deploy under client		

Parent Defect ID:	SLXOS-27468	Issue ID:	SLXOS-37380
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.1.00	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	When a large route-map consisting of several instances of match/set statements is added to BGP peer in and out(same route-map configured both for route-map in and route-map out) BGP daemon would terminate and cause the router to reload.		
Condition:	A large route-map consisting of several instances of match/set statement should be configured and added to BGP peer in and peer out		

Parent Defect ID:	SLXOS-37552	Issue ID:	SLXOS-37735
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.2.00	Technology:	BGP4+ - IPv6 Border Gateway Protocol
Symptom:	While performing MM failover, RIBMGR application component may experience a fault on the new Active MM causing the system go through complete reboot.		
Condition:	BGP PIC is enabled on a SLX9850 and administrator does MM Failover.		

Parent Defect ID:	SLXOS-37572	Issue ID:	SLXOS-37739
Severity:	S1 - Critical		
Product:	SLX-OS	Technology Group:	MPLS
Reported in Release:	SLXOS 18r.2.00	Technology:	IP over MPLS
Symptom:	After an MPLS RSVP LSP fails over to bypass, an MPLS ping initiated for the LSP causes unexpected reload of MPLS deamon		
Condition:	Issue will be seen only when the FRR failover happens for an RSVP LSP. Prior to failover, in protected path, MPLS ping works fine.		
Workaround:	No		

Parent Defect ID:	SLXOS-37604	Issue ID:	SLXOS-37742
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.2.00	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	IPv4 traffic may get blocked after powering off and then powering on a linecard on an SLX9850 configured with BGP PIC and having BGP sessions.		
Condition:	On SLX9850 with BGP PIC configuration enabled and having active BGP sessions. And if a linecard is powered off/on, in a corner case scneario, IPv4 traffic may get blocked.		

Parent Defect ID:	SLXOS-25900	Issue ID:	SLXOS-37757
Severity:	S3 - Medium		
Product:	SLX-OS	Technology Group:	Layer 2 Switching
Reported in Release:	SLXOS 18r.1.00	Technology:	VLAN - Virtual LAN
Symptom:	The command 'show vlan detail' implemented to filter the output based on VLAN ID.		
Condition:	The command 'show vlan detail' throws the output for all the VLANs configured for the system and cannot be filtered based on the VLAN ID. This makes the output cumbersome to look with too many VLANs and many ports on each VLAN. A filter based on VLAN ID is required to display the output per VLAN basis.		

Workaround:	None

Parent Defect ID:	SLXOS-37642	Issue ID:	SLXOS-37761
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Management
Reported in Release:	SLXOS 18r.2.00	Technology:	Software Installation & Upgrade
Symptom:	RIBM module may get killed and box will go through reload.		
Condition:	This may happen if customer is having BGP PIC enabled, inter-vrf route leak configuration, 10K+ prefix list entries and large number of routes.		

Parent Defect ID:	SLXOS-37506	Issue ID:	SLXOS-37762
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.2.00	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	Unexpected reload of the device is observed when BGP policy is added and removed multiple times		
Condition:	When the route-map used for the inbound/outbound policy is removed and added to BGP neighbor several times with very large number of IP routes (seen with 800K or more IP routes), the problem may occur.		

Parent Defect ID:	SLXOS-37649	Issue ID:	SLXOS-37765
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.2.00	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	Few prefixes may point to incorrect/old nexthop paths.		
Condition:	This issue is seen to happen if the customer is having BGP PIC enabled, and has performed interface shutdown causing BGP PIC to switchover from primary to backup. And then reinjects same prefixes from a different BGP Peer.		

Parent Defect ID:	SLXOS-36052	Issue ID:	SLXOS-37828
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Management
Reported in Release:	SLXOS 17s.1.03	Technology:	CLI - Command Line Interface
Symptom:	[PI-RESTAPI] Device is getting "application communication failure" after shutdown http server with user-defined vrf		
Condition:	Shutdown http server with user-defined vrf		

Parent Defect ID:	SLXOS-37457	Issue ID:	SLXOS-37831
Severity:	S3 - Medium		
Product:	SLX-OS	Technology Group:	Management

Reported in Release:	SLXOS 18r.1.00	Technology:	CLI - Command Line Interface
Symptom:	Dcm daemon termination while applying the following "http server" command with default-vrf.		
Condition:	While configuring the" http server" commands with default-vrf .		

Parent Defect ID:	SLXOS-37701	Issue ID:	SLXOS-38067
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18x.1.00a	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	EVPN Type5 IPv4 routes may take long time to be installed in RIB.		
Condition:	Observed on SLX-9030 with 123k EVPN Type5 IPv4 routes.		

Parent Defect ID:	SLXOS-38113	Issue ID:	SLXOS-38137
Severity:	S3 - Medium		
Product:	SLX-OS	Technology Group:	Other
Reported in Release:	SLXOS 18r.2.00	Technology:	Other
Symptom:	this is related a debugging tool dump seeprom data for a given qsfp, which is not for direct use by our customers. This defect was wrong labeled as "Customer" to start with.		
Condition:	N/A		
Workaround:	the fix on the debugging tool is a temporary for another team to use and get no feedback yet. Will revisit this issue when needed next time.		

Parent Defect ID:	SLXOS-26327	Issue ID:	SLXOS-38210
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18s.1.01	Technology:	Multi-VRF
Symptom:	In EVPN Type-5 Route import into multiple vrf table use-case. while deleting import RT on one of the vrf , cleanup TYPE-5 EVPN routes happens on all vrf table.		
Condition:	Importing EVPN Type-5 L3 Prefix Route into more than one VRF table.		
Workaround:	when Route Target is deleted under vrf configuration, User should trigger the clear command "clear bgp evpn neighbor <peer-ip> soft in"		

Parent Defect ID:	SLXOS-38228	Issue ID:	SLXOS-38288
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 2 Switching
Reported in Release:	SLXOS 18r.1.00aa	Technology:	Other
Symptom:	L2sysd process termination		
Condition:	With high scaling ARP entries and SPT configured		
Workaround:	NA		
Solution:	Porting the code changes for the fix		

Parent Defect ID:	SLXOS-28558	Issue ID:	SLXOS-38291
Severity:	S4 - Low		
Product:	SLX-OS	Technology Group:	Management
Reported in Release:	SLXOS 18x.1.00	Technology:	Software Installation & Upgrade
Symptom:	Issue regarding the firmware download bin image.		

Parent Defect ID:	SLXOS-38175	Issue ID:	SLXOS-38293
Severity:	S3 - Medium		
Product:	SLX-OS	Technology Group:	Other
Reported in Release:	SLXOS 18r.2.00	Technology:	Other
Symptom:	Due to this issue CPU Utilization becomes high as hslagtd process ends up using more cpu cycles due to sdk thread execution model change resulting in slow response to ping		
Condition:	This is seen on system on start and during normal operation as the sdk thread consumes more cpu cycles		
Workaround:	None		

Parent Defect ID:	SLXOS-38227	Issue ID:	SLXOS-38321
Severity:	S3 - Medium		
Product:	SLX-OS	Technology Group:	Layer 2 Switching
Reported in Release:	SLXOS 18r.2.00a	Technology:	Other
Symptom:	ELD HA failover cold restart failure		
Condition:	HA switchover with cold restart		
Workaround:	NA		

Parent Defect ID:	SLXOS-37863	Issue ID:	SLXOS-38323
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18x.1.00a	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	After shutting down the CCEP po on leaf1 (vrrp master), BGP session (on ve4) switches over to leaf2. But 40k prefix routes learned via BGP are not advertised into EVPN on leaf2. None of the remote leaf nodes including cluster peer leaf1 has the routes.		
Condition:	Sometime prefix routes are not exported to EVPN table from VRF table. Hence routes were not advertised to EVPN peers.		

Parent Defect ID:	SLXOS-37903	Issue ID:	SLXOS-38325
Severity:	S3 - Medium		
Product:	SLX-OS	Technology Group:	MPLS
Reported in Release:	SLXOS 18r.1.00b	Technology:	LDP - Label Distribution Protocol
Symptom:	LDP neighbors which are Operational peers are not displaying properly in 'show mpls ldp peer'.		
Condition:	if there are more than 2 ldp peers configured be it link local or targeted, the show command just shows only 2 peers under normal conditions.		

Workaround:	No

Parent Defect ID:	SLXOS-38386	Issue ID:	SLXOS-38387
Severity:	S3 - Medium		
Product:	SLX-OS	Technology Group:	Management
Reported in Release:	SLXOS 18r.1.00b	Technology:	Software Installation & Upgrade
Symptom:	fullinstall FWDL failure recovery does not reset a boot environment flag. Hence the subsequent reboot of system(by any means) will end up in replaying the startup config file which is unnecessary,		
Condition:	Only when fullinstall FWDL fails.		
Solution:	As a fix, concerned bootenv is unset as part of failure recovery.		

Parent Defect ID:	SLXOS-38274	Issue ID:	SLXOS-38412
Severity:	S3 - Medium		
Product:	SLX-OS	Technology Group:	Monitoring
Reported in Release:	SLXOS 18r.2.00a	Technology:	OAM - Operations, Admin & Maintenance
Symptom:	Dot1ag daemon will crash when CFM PDU with incorrect length is received.		
Condition:	Receiving CFM PDU with incorrect length.		

Parent Defect ID:	SLXOS-22544	Issue ID:	SLXOS-38418
Severity:	S3 - Medium		
Product:	SLX-OS	Technology Group:	Layer 2 Switching
Reported in Release:	SLXOS 17r.1.01a	Technology:	LAG - Link Aggregation Group
Symptom:	Port-channel flap.		
Condition:	Change(remove/update) in strom-control configuration on physical interface, when port-channel member is configured with "lacp timeout short" (port-channel should configured with strom-control).		

Parent Defect ID:	SLXOS-38198	Issue ID:	SLXOS-38503
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.2.00a	Technology:	OSPF - IPv4 Open Shortest Path First
Symptom:	Ospf6dd Daemon is crashing in ospfv3 tests after unconfiguring trunk member ports , device is going for panic reload .		
Condition:	Sometimes when trunk/LAG ports are unconfigured, OSPF6 daemon can crash		

Parent Defect ID:	SLXOS-38284	Issue ID:	SLXOS-38527
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.1.00a	Technology:	Other

Symptom:	Routed Traffic For Routing over tunnel case over underlay in vlan mode gets dropped at the egress PE.
Condition:	For Routing over tunnel case over Underlay in vlan mode, inner L2 header was carrying vlan, which was unexpected, and hence causing problems at other node.
Workaround:	None

Parent Defect ID:	SLXOS-26496	Issue ID:	SLXOS-38559
Severity:	S3 - Medium		
Product:	SLX-OS	Technology Group:	Management
Reported in Release:	SLXOS 18x.1.00	Technology:	SNMP - Simple Network Management Protocol
Symptom:	Console is flooded with "ifStats: get_if_utilization fails" message.		
Condition:	When Loopback or VE interfaces are configured and snmwalk is done for IF-MIB (ifTable/ifXTable) or bcsiIfStatsTable, this debug messages are shown on the console.		
Workaround:	For IF-MIB (ifTable/ifXTable) or bcsiIfStatsTable, make SNMP GET/walk operations selective and don't run them against Loopback or VE interfaces.		
Solution:	Excluded Interface stats for VE and Loopback interfaces since, it's not supported. * For ifTable and ifXTable, zero values are shown for VE/Loopback interfaces. * For bcsiIfStatsTable, they (VE/Loopback interface) are skipped.		

Parent Defect ID:	SLXOS-37885	Issue ID:	SLXOS-38684
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 2 Switching
Reported in Release:	SLXOS 18r.1.00aa	Technology:	MCT - Multi-Chassis Trunking
Symptom:	MCT Peer is configured with Client-isolation Loose, upon MM failover, for whatever reason, the client-isolation mode is changed to Strict, though the running config is still in Loose mode. System reload will not trigger this defect, as the config reply will take care of setting it to the same Client-isolation Loose mode.		
Condition:	HA failover		

Parent Defect ID:	SLXOS-25961	Issue ID:	SLXOS-38691
Severity:	S3 - Medium		
Product:	SLX-OS	Technology Group:	MPLS
Reported in Release:	SLXOS 18r.1.00a	Technology:	MPLS VPLS - Virtual Private LAN Services
Symptom:	Unexpected dot1ag daemon termination.		
Condition:	Configuring port-channel and executing "show interface status".		

Parent Defect ID:	SLXOS-38108	Issue ID:	SLXOS-38823

Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Management
Reported in Release:	SLXOS 18r.1.00a	Technology:	Licensing
Symptom:	LICD termination while upgrading the code from 18r.1.0.0a to 18r.1.0.0aa.		
Condition:	LICD termination while upgrading the code from 18r.1.0.0a to 18r.1.0.0aa.		

Parent Defect ID:	SLXOS-38774	Issue ID:	SLXOS-38829
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.1.00b	Technology:	BGP4 - IPv4 Border Gateway Protocol
Symptom:	Extended communities may not be advertised/received by BGP peers.		
Condition:	Extended communities have to be present in the path attributes of BGP routes.		
Workaround:	NA		

Parent Defect ID:	SLXOS-38644	Issue ID:	SLXOS-38856
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Other
Reported in Release:	SLXOS 18r.1.00b	Technology:	Other
Symptom:	While redistributing OSPF Routes into BGP routes are actually augmented incorrectly (an extra community is appended).		
Condition:	If the route-map used to preform route redistribution contains a set directive of "set community x:y" will cause the issue Where x:y can be any value and the command can also contain multiple communities in the directive.		
Workaround:	None		

Parent Defect ID:	SLXOS-38299	Issue ID:	SLXOS-38987
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Other
Reported in Release:	SLXOS 18x.1.00a	Technology:	Other
Symptom:	Sometimes, a panic dump may be seen while rebooting the setup.		
Condition:	This is a rare condition which may be seen while device is rebooting or when sending high rate traffic to CPU.		
Workaround:	N/A		

Parent Defect ID:	SLXOS-38493	Issue ID:	SLXOS-39252
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Other
Reported in Release:	SLXOS 18r.1.00aa	Technology:	Other
Symptom:	file transfer may be affected if destination port is udp 646 and pkt has fragment offset.		
Condition:	During file transfer if destination port is udp 646 between source and destination without "mpls ldp" being enabled on the box. UDP packet with		

	destination port 646 is trapped to cpu even without mpls being enabled on the box.		

Parent Defect ID:	SLXOS-39220	**Issue ID:**	SLXOS-39409
Severity:	S1 - Critical		
Product:	SLX-OS	**Technology Group:**	Management
Reported in Release:	SLXOS 18s.1.01a	**Technology:**	SNMP - Simple Network Management Protocol
Symptom:	LLDP-MIB::lldpLocPortId value is not correct (appears corrupted) when queried via SNMP GET operation.		
Condition:	Issue occurs only for SNMP GET operation (on LLDP-MIB::lldpLocPortId). SNMP GET-NEXT and snmpwalk returns correct values.		
Workaround:	1. Use SNMP GET-NEXT or snmpwalk instead of SNMP GET when querying LLDP-MIB::lldpLocPortId via SNMP. 2. Use CLI to query (LLDP-MIB::lldpLocPortId) instead of SNMP, if it's feasible.		

Parent Defect ID:	SLXOS-37463	**Issue ID:**	SLXOS-39467
Severity:	S3 - Medium		
Product:	SLX-OS	**Technology Group:**	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.1.00a	**Technology:**	BGP4 - IPv4 Border Gateway Protocol
Symptom:	A warning is seen on console as follows. "No. of prefix received from BGP Peer 2000:31:1:8::153: exceeds warning limit 0"		
Condition:	When the maximum prefix config is at the IPv6 neighbor level and the ipv6 address-family activate cmd at the peer-group level and the device is reloaded with that saved config.		
Workaround:	Remove maximum prefix config at the neighbor and re-config.		

Parent Defect ID:	SLXOS-39237	**Issue ID:**	SLXOS-39774
Severity:	S2 - High		
Product:	SLX-OS	**Technology Group:**	Management
Reported in Release:	SLXOS 18x.1.00a	**Technology:**	Other
Symptom:	MCDSd management cluster distributed services daemon may restart with switch reboot during cluster formation.		
Condition:	The problem may occur when an MCT cluster on a leaf node pair is configured with other event happening at the same time, like toggling the ICL or rebooting one of the leaf nodes.		
Workaround:	None		

Parent Defect ID:	SLXOS-38397	**Issue ID:**	SLXOS-40073
Severity:	S3 - Medium		
Product:	SLX-OS	**Technology Group:**	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.2.00a	**Technology:**	BGP4+ - IPv6 Border Gateway Protocol

Symptom:	Unexpected reload of device can be expected when Ipv6 BFD packets are received.
Condition:	When an Ipv6 BFD packets are received with non supported length, system reloads unexpectedly

Parent Defect ID:	SLXOS-40087	Issue ID:	SLXOS-40166
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Management
Reported in Release:	SLXOS 18r.2.00	Technology:	High Availability
Symptom:	hasmd hang which was killed by SWD and switch reloaded in external login attach.		
Condition:	the issue may happen in brutal force login attack.		
Workaround:	hasmd was stuck in stty setting forever when there was external login attack. The workaround is to remove the stty setting from hasmd context.		

Parent Defect ID:	SLXOS-39783	Issue ID:	SLXOS-40180
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Monitoring
Reported in Release:	SLXOS 18r.1.00a	Technology:	OAM - Operations, Admin & Maintenance
Symptom:	nf_conntrack feature in Linux kernel track all IP packets coming to CPU. It can cause nf_conntrack table full issue & fragmented packet drop issue.		
Condition:	There is no specific condition trigger this, by default the service is up and running.		
Workaround:	NA		

Parent Defect ID:	SLXOS-40476	Issue ID:	SLXOS-40478
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Management
Reported in Release:	SLXOS 18r.2.00	Technology:	High Availability
Symptom:	During DOS attacks,flood of disable pam_unix log messages are seen on console		
Condition:	DOS attacks on system		
Workaround:	Configure syslog server to redirect these messages		

Parent Defect ID:	SLXOS-40058	Issue ID:	SLXOS-40713
Severity:	S3 - Medium		
Product:	SLX-OS	Technology Group:	Other
Reported in Release:	SLXOS 18r.2.00	Technology:	Other
Symptom:	Entire traffic drop on all port connected to Core-1 when there is MTU exception.		
Condition:	It looks when Jumbo pkts send on Core-1 ports with default or 1500 MTU config then entire traffic will get be drop at egress queues.		
Workaround:	Workaround is to Configure Jumbo MTU 9216 on interfaces.		

Parent Defect ID:	SLXOS-29389	Issue ID:	SLXOS-40740
Severity:	S2 - High		

Product:	SLX-OS	Technology Group:	Layer 3 Routing/Network Layer
Reported in Release:	SLXOS 18r.2.00	Technology:	ARP - Address Resolution Protocol
Symptom:	MTU configured on VE interfaces to go to default value 1500 after reload if multiple VE?s have different MTU other that default MTU.		
Condition:	Reload with MTU configured in VE interfaces		
Workaround:	No		

Parent Defect ID:	SLXOS-25701	Issue ID:	SLXOS-38688
Severity:	S4 - Low		
Product:	SLX-OS	Technology Group:	Management
Reported in Release:	SLXOS 17r.2.01a	Technology:	Configuration Fundamentals
Symptom:	Route-map sorts based on the action (permit or deny) and then the sequence number instead of just sequence number		
Condition:	show running route-map not display the route-map in sequence order.		

Parent Defect ID:	SLXOS-40574	Issue ID:	SLXOS-40755
Severity:	S2 - High		
Product:	SLX-OS	Technology Group:	Security
Reported in Release:	SLXOS 18r.2.00	Technology:	ACLs - Access Control Lists
Symptom:	Protocol sessions on routers not come up after reboot. Routers are connected via one or more SLX box.		
Condition:	receive ACL is applied on one or more transit SLX routers.		
Workaround:	After reboot complete, remove and configure back receive ACL		