Extreme SLX-OS
Scale and Standards Matrix, 20.5.2

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

9037848-00 AA
July 2023

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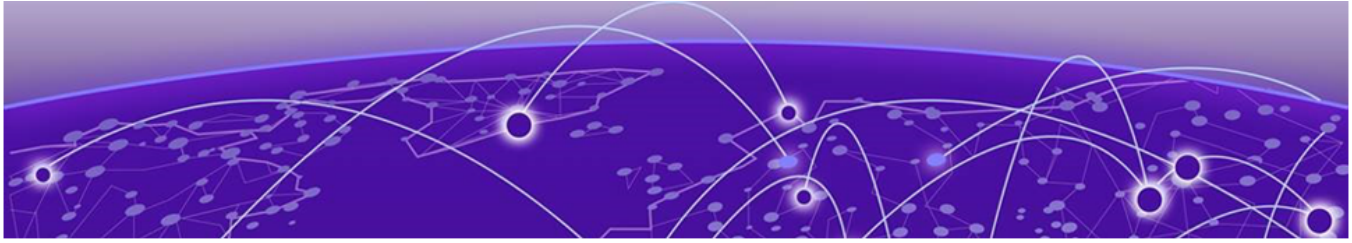

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Preface

Read the following topics to learn about:

- The meanings of text formats used in this document.
- Where you can find additional information and help.
- How to reach us with questions and comments.

Text Conventions

Unless otherwise noted, information in this document applies to all supported environments for the products in question. Exceptions, like command keywords associated with a specific software version, are identified in the text.

When a feature, function, or operation pertains to a specific hardware product, the product name is used. When features, functions, and operations are the same across an entire product family, such as ExtremeSwitching switches or SLX routers, the product is referred to as *the switch* or *the router*.

Table 1: Notes and warnings

Icon	Notice type	Alerts you to...
	Tip	Helpful tips and notices for using the product
	Note	Useful information or instructions
	Important	Important features or instructions
	Caution	Risk of personal injury, system damage, or loss of data
	Warning	Risk of severe personal injury

Table 2: Text

Convention	Description
`screen displays`	This typeface indicates command syntax, or represents information as it is displayed on the screen.
The words *enter* and *type*	When you see the word *enter* in this guide, you must type something, and then press the Return or Enter key. Do not press the Return or Enter key when an instruction simply says *type*.
Key names	Key names are written in boldface, for example **Ctrl** or **Esc**. If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: Press **Ctrl**+**Alt**+**Del**
Words in italicized type	Italics emphasize a point or denote new terms at the place where they are defined in the text. Italics are also used when referring to publication titles.
NEW!	New information. In a PDF, this is searchable text.

Table 3: Command syntax

Convention	Description
bold text	Bold text indicates command names, keywords, and command options.
italic text	Italic text indicates variable content.
`[ ]`	Syntax components displayed within square brackets are optional. Default responses to system prompts are enclosed in square brackets.
`{ x | y | z }`	A choice of required parameters is enclosed in curly brackets separated by vertical bars. You must select one of the options.
`x | y`	A vertical bar separates mutually exclusive elements.
`< >`	Nonprinting characters, such as passwords, are enclosed in angle brackets.
...	Repeat the previous element, for example, *member*`[`*member*`...]`.
\	In command examples, the backslash indicates a “soft” line break. When a backslash separates two lines of a command input, enter the entire command at the prompt without the backslash.

Documentation and Training

Find Extreme Networks product information at the following locations:

Current Product Documentation
Release Notes

Hardware and Software Compatibility for Extreme Networks products
Extreme Optics Compatibility
Other Resources such as articles, white papers, and case studies

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Training

Extreme Networks offers product training courses, both online and in person, as well as specialized certifications. For details, visit the Extreme Networks Training page.

Help and Support

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: (800) 998 2408 (toll-free in U.S. and Canada) or 1 (408) 579 2800. 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

Subscribe to Product Announcements

You can subscribe to email notifications for product and software release announcements, Field Notices, and Vulnerability Notices.

1. Go to The Hub.
2. In the list of categories, expand the **Product Announcements** list.
3. Select a product for which you would like to receive notifications.
4. Select **Subscribe**.
5. To select additional products, return to the **Product Announcements** list and repeat steps 3 and 4.

You can modify your product selections or unsubscribe at any time.

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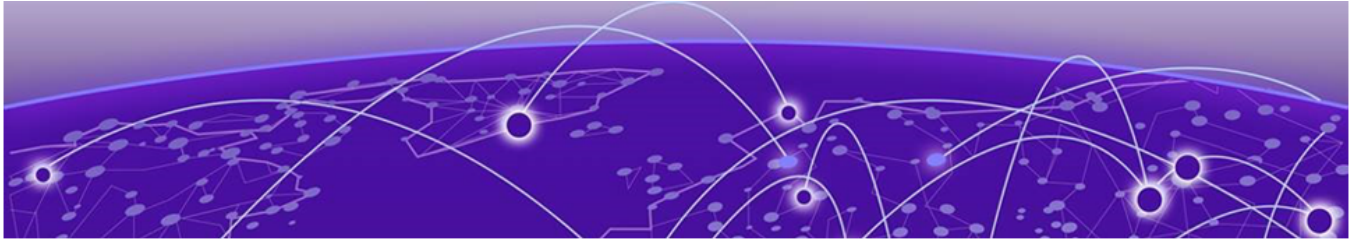
The User Enablement team at Extreme Networks has made every effort to ensure that this document is accurate, complete, and easy to use. We strive to improve our documentation to help you in your work, so we want to hear from you. We welcome all feedback, but we especially want to know about:

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

To send feedback, email us at documentation@extremenetworks.com.

Provide as much detail as possible including the publication title, topic heading, and page number (if applicable), along with your comments and suggestions for improvement.



About This Document

What's New in this Document

This document is released with Extreme SLX-OS 20.5.2 version.

For more information about the release, see the *Extreme SLX-OS Release Notes* for this version.

Supported Hardware

SLX-OS 20.5.2 supports the following hardware platforms.

- Extreme 8820
- Extreme 8720
- Extreme 8520
- ExtremeSwitching SLX 9540
- ExtremeSwitching SLX 9250
- ExtremeSwitching SLX 9150
- ExtremeRouting SLX 9740
- ExtremeRouting SLX 9640

Note

All configurations and software features that are applicable to SLX 9150 and SLX 9250 devices are also applicable for the Extreme 8520 and Extreme 8720 devices respectively.

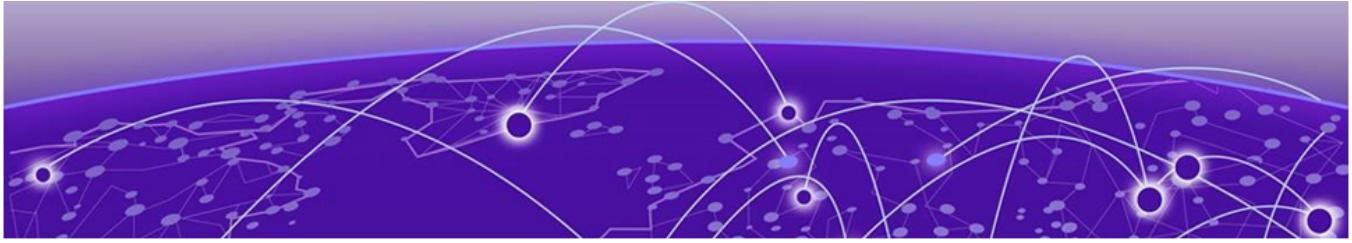
All configurations and software features that are applicable to SLX 9740 devices are also applicable for the Extreme 8820 devices.

The "Measured Boot with Remote Attestation" feature is only applicable to the Extreme 8520, Extreme 8720, and Extreme 8820 devices. It is not supported on the SLX 9150 and SLX 9250 devices.

Note

Although many software and hardware configurations are tested and supported for this release, documenting all possible configurations and scenarios is beyond this document's scope.

For information about other releases, see the documentation for those releases.



RFC Compliance

General Protocols

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 768	User Datagram Protocol (UDP)	X	X	X	X
RFC 791	Internet Protocol (IP)	X	X	X	X
RFC 792	Internet Control Message Protocol (ICMP)	X	X	X	X
RFC 793	Transmission Control Protocol (TCP)	X	X	X	X
RFC 826	ARP	X	X	X	X
RFC 894	IP over Ethernet	X	X	X	X

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 903	RARP	X	X	X	X
RFC 906	TFTP Bootstrap	X	X	X	X
RFC 950	Subnet	X	X	X	X
RFC 951	BootP	X	X	X	X
RFC 1027	Proxy ARP	X	X	X	X
RFC 1042	Standard for the Transmission of IP	X	X	X	X
RFC 1122	Requirements for Internet Hosts	X	X	X	X
RFC 1166	Internet Numbers	X	X	X	X
RFC 1542	BootP Extensions	X	X	X	X
RFC 1591	DNS (client)	X	X	X	X
RFC 1812	Requirements for IP Version 4 Routers	X	X	X	X
RFC 1858	Security Considerations for IP Fragment Filtering	X	X	X	X
RFC 2131	BootP/DHCP Helper	X	X	X	X
RFC 2784	Generic Routing Encapsulation (GRE)	N/A	X	X	X
RFC 2819	RMON Groups 1, 2, 3, 9	X	X	X	X
RFC 3021	Using 31-Bit Prefixes on IPv4 Point-to-Point Links	X	X	X	X
RFC 3046	DHCP Relay Agent Information Option	X	X	X	X

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 3232	Assigned Numbers	X	X	X	X
RFC 3527	Link Selection Sub Option for the Relay Agent Information Option for DHCPv4	X	X	X	X
RFC 3633	IPv6 Prefix Options for Dynamic Host Configuration Protocol (DHCP) version 6	X	X	X	X
RFC 3768	Virtual Router Redundancy Protocol (VRRP)	X	X	X	X
RFC 4001	INET-ADDRESS-MIB	X	X	X	X
RFC 4632	Classless Interdomain Routing (CIDR)	X	X	X	X
RFC 5880	Bidirectional Forwarding Detection	X	X	X	X
RFC 5881	Bidirectional Forwarding Detection for IPv4 and IPv6 (Single Hop)	X	X	X	X
RFC 5882	Generic Application of Bidirectional Forwarding Detection	X	X	X	X
RFC 5883	Bidirectional Forwarding Detection for Multihop Paths	X	X	X	X

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
EVPN Interworking with IPVPN draft-ietf-bess-evpn-ipvpn-interworking-04		N/A	X	X	X
Interconnect Solution for EVPN Overlay networks draft-ietf-bess-dci-evpn-overlay-10		N/A	X	X	X

BGPv4

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 1745	OSPF Interactions	X	X	X	X
RFC 1772	Application of BGP in the Internet	X	X	X	X
RFC 1997	Communities and Attributes	X	X	X	X
RFC 2385	BGP Session Protection via TCP MD5	X	X	X	X
RFC 2439	Route Flap Dampening	X	X	X	X
RFC 2918	Route Refresh Capability	X	X	X	X
RFC 3392	Capability Advertisement	X	X	X	X
RFC 3682	Generalized TTL Security Mechanism for eBGP Session Protection	X	X	X	X
RFC 4271	BGPv4	X	X	X	X
RFC 4364	BGP/MPLS IP Virtual Private Networks	N/A	X	X	X
RFC 4456	Route Reflection	X	X	X	X

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 4486	Sub codes for BGP Cease Notification Message	X	X	X	X
RFC 4724	Graceful Restart Mechanism for BGP	X	X	X	X
RFC 4760	Multiprotocol Extensions for BGPv4	X	X	X	X
RFC 5065	BGP4 Confederations	X	X	X	X
RFC 5291	Outbound Route Filtering Capability for BGP4	X	X	X	X
RFC 5396	Textual Representation of Autonomous System (AS) Numbers	X	X	X	X
RFC 5575	Dissemination of Flow Specification Rules (BGP Flow Spec)	N/A	X	X	X
RFC 5668	4-Octet AS specific BGP Extended Community	X	X	X	X
RFC 6198	Requirements for the Graceful Shutdown of BGP Sessions	X	X	X	X
RFC 6793	BGP Support for Four-octet AS Number Space	X	X	X	X
RFC 8092	BGP Large Community Attribute	X	X	X	X

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 8097	BGP Prefix Origin Validation State Extended Community	N/A	X	X	X
RFC 8210	Resource Public Key Infrastructure to Router Protocol	N/A	X	X	X
RFC 8326	Graceful BGP Session Shutdown	X	X	X	X
RFC 8481	Clarifications to BGP Origin Validation Based on Resource Public Key Infrastructure (RPKI)	N/A	X	X	X
Draft-ietf-rtgwg-bgp-pic-07.txt BGP Prefix Independent Convergence		X	X	X	X
sFlow BGP AS Path		X	X	X	X
RFC 7432	BGP MPLS Based Ethernet VPN	X	N/A	N/A	N/A
IETF Draft describing inter-subnet forwarding support using BGP EVPN Control Plane		X	N/A	N/A	N/A
IETF Draft describing advertisement of IP Prefix routes using BGP EVPN Control Plane		X	N/A	N/A	N/A

Element Security

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
AAA		X	X	X	X
Username/Password (Challenge and Response)		X	X	X	X
Bi-level Access Mode (Standard and EXEC Level)		X	X	X	X
Role-based Access Control (RBAC)		X	X	X	X
RFC 2865	RADIUS	X	X	X	X
RFC 2866	RADIUS Accounting	X	X	X	X
RFC 3162	RADIUS and IPv6	X	X	X	X
RFC 3986	Uniform Resource Identifier (URI): Generic Syntax	X	X	X	X
RFC 4251	Secure Shell (SSH) Protocol Architecture	X	X	X	X
RFC 4253	Secure Shell (SSH)	X	X	X	X
RFC 4346	TLS 1.1	X	X	X	X
RFC 4510 through 4519	LDAP/LDAP over TLS	X	X	X	X
RFC 4742	Using the NETCONF Configuration Protocol over Secure Shell (SSH)	X	X	X	X
RFC 5246	TLS 1.2	X	X	X	X
RFC 5280	Internet X.509 PKI Certificates	X	X	X	X
RFC 5905	NTP Version 4	X	X	X	X
RFC 5961	TCP Security	X	X	X	X

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 6020	YANG - A Data Modeling Language for the Network Configuration Protocol (NETCONF)	X	X	X	X
RFC 6021	Common YANG Data Types	X	X	X	X
RFC 6241	NETCONF Configuration Protocol (Partial)	X	X	X	X
RFC 6613	RADIUS over TCP	X	X	X	X
RFC 6614	Transport Layer Security (TLS) Encryption for RADIUS	X	X	X	X
RFC 6749, 7515, 7519	OAuth2 - JSON Web Token (JWT)	X	X	X	X
RFC 6960	Internet X.509 PKI Certificates	X	X	X	X
TACACS/TACACS+		X	X	X	X
NTP client and NTP server		X	X	X	X
Protection against Denial of Service (DoS) attacks such as TCP SYN or Smurf Attacks		X	X	X	X

Open Shortest Path First

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 1745	OSPF Interactions	X	X	X	X
RFC 1765	OSPF Database Overflow	X	X	X	X

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 2328	OSPF v2	X	X	X	X
RFC 3101	OSPF NSSA	X	X	X	X
RFC 3137	OSPF Stub Router Advertisement	X	X	X	X
RFC 3623	Graceful OSPF Restart	X	X	X	X
RFC 3630	TE Extensions to OSPF v2	N/A	X	X	X
RFC 4222	Prioritized Treatment of Specific OSPF Version 2	X	X	X	X
RFC 5250	OSPF Opaque LSA Option	X	X	X	X
RFC 5709	X	X	X	X	X
RFC 7166	X	X	X	X	X
RFC 7474	X	X	X	X	X

Intermediate System to Intermediate System

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 1142	OSI IS-IS Intra-domain Routing Protocol	X	X	X	X
RFC 1195	Routing in TCP/IP and Dual Environments	X	X	X	X
RFC 3277	IS-IS Blackhole Avoidance	X	X	X	X
RFC 5120	IS-IS Multi-Topology Support	X	X	X	X

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 5301	Dynamic Host Name Exchange	X	X	X	X
RFC 5302	Domain-wide Prefix Distribution	X	X	X	X
RFC 5303	Three-Way Handshake for IS-IS Point-to-Point	X	X	X	X
RFC 5304	IS-IS Cryptographic Authentication (MD-5)	X	X	X	X
RFC 5306	Restart Signaling for IS-IS (helper mode)	X	X	X	X
RFC 5309	Point-to-point operation over LAN in link state routing protocol	X	X	X	X

IPv4 Multicast

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 1112	IGMP v1	X	X	X	X
RFC 2236	IGMP v2	X	X	X	X
RFC 3376	IGMP v3	X	X	X	X
RFC 4601	PIM-SM	X	X	X	X
RFC 4607	PIM-SSM	X	X	X	X
RFC 4610	Anycast RP using PIM	X	X	X	X
RFC 5059	BSR for PIM	X	X	X	X
PIM IPv4 MCT		X	X	X	N/A

Quality of Service

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 2474	DiffServ Definition	X	X	X	X
RFC 2475	An Architecture for Differentiated Services	X	X	X	X
RFC 2597	Assured Forwarding PHB Group	X	X	X	X
RFC 2697	Single Rate Three-Color Marker	X	X	X	X
RFC 2698	A Two-Rate Three-Color Marker	X	X	X	X
RFC 3246	An Expedited Forwarding PHB	X	X	X	X

IPv6 Core

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 1887	IPv6 unicast address allocation architecture	X	X	X	X
RFC 1981	IPv6 Path MTU Discovery	X	X	X	X
RFC 2375	IPv6 Multicast Address Assignments	X	X	X	X
RFC 2450	Proposed TLA and NLA Assignment Rules	X	X	X	X

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 2460	IPv6 Specification	X	X	X	X
RFC 2464	Transmission of IPv6 over Ethernet Networks	X	X	X	X
RFC 2471	IPv6 Testing Address allocation	X	X	X	X
RFC 2711	IPv6 Router Alert Option	X	X	X	X
RFC 3315	Dynamic Host Configuration Protocol for IPv6 (DHCPv6)	X	X	X	X
RFC 3587	IPv6 Global Unicast Address Format	X	X	X	X
RFC 3701	IPv6 Testing Address allocation	X	X	X	X
RFC 4193	Unique Local IPv6 Unicast Addresses	X	X	X	X
RFC 4291	IPv6 Addressing architecture	X	X	X	X
RFC 4301	IP Security Architecture	X	X	X	X
RFC 4303	Encapsulating Security Payload (ESP)	X	X	X	X
RFC 4305	ESP and AH cryptography	X	X	X	X
RFC 4443	ICMPv6	X	X	X	X
RFC 4552	Auth for OSPFv3 using AH/ESP	X	X	X	X

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 4835	Cryptographic Alg. Req. for ESP	X	X	X	X
RFC 4861	Neighbor Discovery for IPv6	X	X	X	X
RFC 4862	IPv6 Stateless Address Auto-configuration	X	X	X	X
RFC 8200	IPv6 Specification	X	X	X	X
RFC 8201	IPv6 Path MTU Discovery	X	X	X	X

IPv6 Routing

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 2545	Use of BGP-MP for IPv6	X	X	X	X
RFC 5308	Routing IPv6 with IS-IS	X	X	X	X
RFC 5340	OSPFv3 for IPv6	X	X	X	X
RFC 6164	Using 127-Bit IPv6 Prefixes on Inter-Router Links	X	X	X	X
RFC 8106	Support for IPv6 Router Advertisements with DNS Attributes	X	X	X	X

Multiprotocol Label Switching

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 2205	RSVP v1 Functional Specification	N/A	X	X	X
RFC 2209	RSVP v1 Message Processing Rules	N/A	X	X	X
RFC 2674	P-BRIDGE-MIB	N/A	X	X	X
RFC 2702	TE over MPLS	N/A	X	X	X
RFC 2961	RSVP Refresh Overhead Reduction Extensions	N/A	X	X	X
RFC 3031	MPLS Architecture	N/A	X	X	X
RFC 3032	MPLS Label Stack Encoding	N/A	X	X	X
RFC 3037	LDP Applicability	N/A	X	X	X
RFC 3097	RSVP Cryptographic Authentication	N/A	X	X	X
RFC 3209	RSVP-TE	N/A	X	X	X
RFC 3478	LDP Graceful Restart	N/A	X	X	X
RFC 3813	MPLS-LSR-STD-MIB	N/A	X	X	X
RFC 3815	MPLS-LDP-STD-MIB MPLS-LDP-GENERIC-STD-MIB	N/A	X	X	X
RFC 4090	Fast Re-Route for RSVP-TE for LSP Tunnels; partial support	N/A	X	X	X
RFC 4379	OAM	N/A	X	X	X

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 4448	Encapsulation Methods for Transport of Ethernet over MPLS Networks	N/A	X	X	X
RFC 5036	LDP Specification	N/A	X	X	X
RFC 5305	ISIS-TE	N/A	X	X	X
RFC 5443	LDP IGP Synchronizatio n	N/A	X	X	X
RFC 5561	LDP Capabilities	N/A	X	X	X
RFC 5712	MPLS traffic Engineering Soft Preemption	N/A	X	X	X
RFC 5918	LDP "Typed Wildcard" FEC	N/A	X	X	X
RFC 5919	Signaling LDP Label Advertisement Completion	N/A	X	X	X

Layer 2 Virtual Private Network and Pseudowire Emulation Edge to Edge

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 3343	TTL Processing in MPLS Networks	N/A	X	X	X
RFC 3985	Pseudowire Emulation Edge to Edge (PWE3) Architecture	N/A	X	X	X

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 4265	VPN-TC-STD-MIB	N/A	X	X	X
RFC 4364	BGP/MPLS IP Virtual Private Networks4	N/A	X	X	X
RFC 4447	Pseudowire Setup and Maintenance using LDP	N/A	X	X	X
RFC 4448	Encapsulation Methods for Transport of Ethernet Frames Over IP/MPLS Networks	N/A	X	X	X
RFC 4664	Framework for Layer 2 Virtual Private Networks	N/A	X	X	X
RFC 4665	Service Requirements for Layer 2 Provider-Provisioned Virtual Private Networks	N/A	X	X	X
RFC 4762	Virtual Private LAN Service (VPLS) Using LDP Signaling	N/A	X	X	X
RFC 5542	PW-TC-STD-MIB	N/A	X	X	X
RFC 5601	IANA-PWE3-MIB PW-STD-MIB	N/A	X	X	X
RFC 6391	Flow-Aware Transport of Pseudowires	N/A	X	X	X

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 6870	PW Preferential Forwarding Status Bit3	N/A	X	X	X
RFC 7348	Virtual eXtensible Local Area Network (VXLAN): A Framework for Overlaying Virtualized Layer 2 Networks over Layer 3 Networks (Partial)	X	X	X	X
RFC 8365	A Network Virtualization Overlay Solution Using Ethernet VPN (EVPN) (partial)	X	X	X	X
draft-sd-l2vpn-evpn-overlay-03		X	X	X	X
draft-ietf-bess-evpn-prefix-advertisement-11		X	X	X	X

Manageability and Visibility

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
Integrated industry-standard Command Line Interface (CLI)		X	X	X	X
RFC 854	Telnet	X	X	X	X
RFC 1573	IANAifType-MIB	X	X	X	X

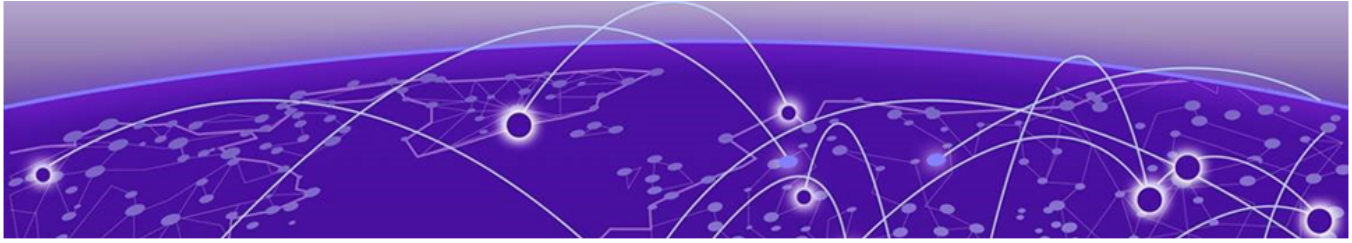
RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 2068	HTTP	X	X	X	X
RFC 2571	SNMP-FRAMEWORK-MIB	X	X	X	X
RFC 2572	SNMP-MPD-MIB	X	X	X	X
RFC 2573	SNMP-TARGET-MIB SNMP-NOTIFICATION-MIB	X	X	X	X
RFC 2574	SNMP-USER-BASED-SM-MIB	X	X	X	X
RFC 2575	SNMP-VIEW-BASED-ACM-MIB	X	X	X	X
RFC 2576	SNMP-COMMUNITY-MIB	X	X	X	X
RFC 2818	HTTPS	X	X	X	X
RFC 2665	Ethernet Interface MIB	X	X	X	X
RFC 2677	IANA-ADDRESS-FAMILY-NUMBERS-MIB	X	X	X	X
IANA ifType-MIB [https://www.iana.org/assignments/ianaiftype-mip/ianaiftype-mib		X	X	X	X
RFC 2790	HOST-RESOURCES-MIB	X	X	X	X
RFC 2856	HCNUM-TC	X	X	X	X
RFC 2863	IF-MIB	X	X	X	X
RFC 2932	IANA-RTPROTO-MIB	X	X	X	X
RFC 3176	sFlow	X	X	X	X
sFlow extension to VXLAN		X	X	X	X
RFC 3273	RMON2-MIB	X	X	X	X

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 3289	DIFFSERV-DSCP-TC INTEGRATED-SERVICES-MIB DIFFSERV-MIB	X	X	X	X
RFC 3418	SNMPv2-MIB	X	X	X	X
RFC 3419	TRANSPORT-ADDRESS-MIB	X	X	X	X
RFC 3584	Coexistence between Version 1, Version 2, and Version 3 of the Internet-standard Network Management Framework	X	X	X	X
RFC 3593	PerfHist-TC-MIB	X	X	X	X
RFC 3705	HC-PerfHist-TC-MIB	X	X	X	X
sFLow Version 5 and sFLow VxLAN extensions		X	X	X	X
Secure Copy (SCP v2) SFTP		X	X	X	X
SFTP		X	X	X	X
RFC 8040	RESTCONF Protocol – PATCH, PUT, POST, DELETE support	X	X	X	X
RFC 4022	TCP-MIB	X	X	X	X
RFC 4087	IP Tunnel MIB	X	X	X	X
RFC 4113	UDP-MIB	X	X	X	X
RFC 4133	Entity MIB	X	X	X	X
RFC 4253	Secure Shell (SSH)	X	X	X	X
RFC 4254	Secure Shell (SSH) Connection Protocol	X	X	X	X

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 4344	SSH Transport Layer Encryption Modes	X	X	X	X
RFC 4419	Diffie-Hellman Group Exchange for the Secure Shell (SSH) Transport Layer Protocol	X	X	X	X
RFC 6187	X.509v3 Certificates for Secure Shell Authentication	X	X	X	X
draft-ietf-secsh-filexfer-13.txt SSH File Transfer Protocol (SFTP)		X	X	X	X
Secure Copy (SCP v2)		X	X	X	X
RFC 4293	IP MIB	X	X	X	X
RFC 4741	NETCONF (Partial)	X	X	X	X
Chrome		X	X	X	X
Curl		X	X	X	X
Tcpdump		X	X	X	X
Wireshark		X	X	X	X
SNMP v1/v2c/v3		X	X	X	X
RFC 1157	Simple Network Management Protocol	X	X	X	X
RFC 1908	Coexistence between Version 1 and Version 2 of the Internet-standard Network Management Framework	X	X	X	X

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
RFC 2578	Structure of Management Information Version 2	X	X	X	X
RFC 2579	Textual Conventions for SMIv2	X	X	X	X
RFC 2580	Conformance Statements for SMIv2	X	X	X	X
RFC 3410	Introduction and Applicability Statements for Internet Standard Management Framework	X	X	X	X
RFC 3411	An Architecture for Describing SNMP Management Frameworks	X	X	X	X
RFC 3412	Message Processing and Dispatching	X	X	X	X
RFC 3413	SNMP Applications	X	X	X	X
RFC 3414	User-based Security Model	X	X	X	X
RFC 3415	View-based Access Control Model	X	X	X	X
RFC 3416	Version 2 of SNMP Protocol Operations	X	X	X	X
RFC 3417	Transport Mappings	X	X	X	X
RFC 2819	RMON Groups 1, 2, 3, 9	X	X	X	X
IEEE8021-PAE-MIB		X	X	X	X
IEEE802 LLDP MIB		X	X	X	X

RFC Number	RFC Name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
IEEE8023-LAG-MIB		X	X	X	X
RFC 1213	MIB-II	X	X	X	X
RFC 4292	IP-FORWARD-MIB	X	X	X	X
RFC 4188	BRIDGE-MIB	X	X	X	X
RFC 4750	OSPF-MIB	X	X	X	X
RFC 5643	OSPFv3 MIB	X	X	X	X
RFC 4363	Q-BRIDGE-MIB	X	X	X	X
RFC 3635	EtherLike-MIB	X	X	X	X
RFC 3811	MPLS TC STD MIB	N/A	X	X	X
RFC 3812	MPLS-TE-STD-MIB	N/A	X	X	X
RFC 3813	MPLS-LSR-STD-MIB	N/A	X	X	X
RFC 3826	SNMP-USM-AES MIB	X	X	X	X
RFC 4273	BGP4-MIB	X	X	X	X
draft-ietf-idr-bgp4-mibv2-15		X	X	X	X
RFC 4318	RSTP-MIB	X	X	X	X
RFC 4444	ISIS-MIB	X	X	X	X
RFC 4878	DOT3-OAM-MIB	X	X	X	X
RFC 7257	VPLS-GENERIC-MIB VPLS-LDP-MIB VPLS-BGP-MIB	X	X	X	X
RFC 7330	BFD-TC-STD-MIB IANA-BFD-TC-STD-MIB	X	X	X	X
RFC 7331	BFD-STD-MIB	X	X	X	X



SLX-OS IEEE standards compliance

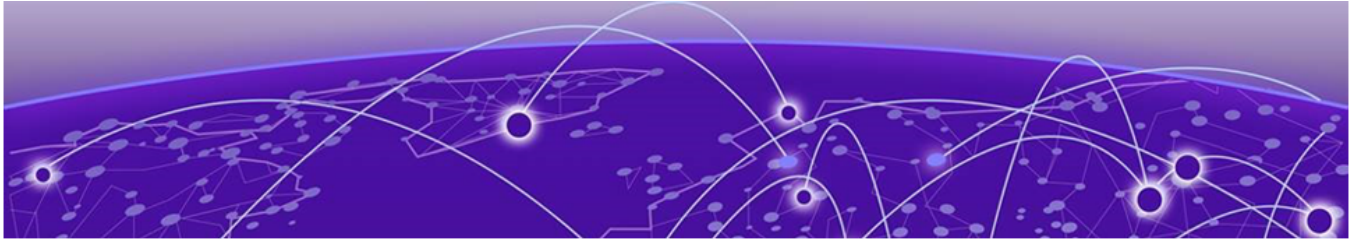
IEEE Standards Compliance Matrix on page 32

IEEE Standards Compliance Matrix

IEEE standard number	IEEE standard name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
IEEE Std 802.1AB-2005	LLDP-MIB LLDP-EXT-DOT1-MIB LLDP-EXT-DOT3-MIB	X	X	X	X
IEEE 802.1AG D8.1	IEEE8021-CFM-MIB	X	X	X	X
IEEE 802.1AP	IEEE8021-CFM-V2-MIB	X	X	X	X
IEEE 802.3-2005	CSMA/CD Access Method and Physical Layer Specifications	X	X	X	X
IEEE 802.3AB	1000BASE-T	X	X	X	X
IEEE 802.3AE	10G Ethernet	X	X	X	X
IEEE 802.3U	100BASE-TX, 100BASE-T4 100BASE-FX Fast Ethernet at 100 Mbps with Auto-Negotiation	X	X	X	X
IEEE 802.3X	Flow Control	X	X	X	X

IEEE standard number	IEEE standard name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
IEEE 802.3Z	1000BASE-X Gigabit Ethernet over fiber optic at 1 Gbps	X	X	X	X
IEEE 802.3AD	LAG-MIB	X	X	X	X
IEEE 802.1Q	Virtual Bridged VLANs	X	X	X	X
IEEE 802.1D	MAC Bridges	X	X	X	X
IEEE 802.1W	Rapid Spanning Tree Protocol	X	X	X	X
IEEE 802.1S	Multiple Spanning Trees	X	X	X	X
IEEE 802.1AG	Connectivity Fault Management (CFM)	N/A	X	X	X
IEEE 802.3BA	100 Gigabit Ethernet	X	X	X	X
IEEE 802.1AB	Link Layer Discovery Protocol	X	X	X	X
IEEE 802.1X	Port-Based Network Access Control	X	X	X	X
IEEE 802.3AH	Ethernet in the First Mile Link OAM3	N/A	X	X	X
IEEE 8021	PAE-MIB	X	X	X	X
ITU-T G.8013/ Y.1731	OAM functions and mechanisms for Ethernet-based networks	N/A	X	X	X
ITU-T G.8032	Ethernet Ring Protection	N/A	X	X	50ms protection switching not supported.

IEEE standard number	IEEE standard name	SLX 9150/SLX 9250, Extreme 8520/ Extreme 8720	SLX 9540	SLX 9640	SLX 9740/ Extreme 8820
MEF	MEF-SOAM-TC-MIB	X	X	X	X
MEF	MEF-SOAM-PM-MIB	X	X	X	X
IEEE Std 802.1AB-2009	LLDP DOT1-BasicSet	X	X	X	X
802.1Q-2018	LLDP ETS Recommendation TLV, LLDP PFC Configuration TLV	X	N/A	N/A	N/A
IEEE 802.1Q-2018 clause 37/802.1Qaz	Enhanced Transmission Selection	X	N/A	N/A	N/A
IEEE 802.1Q-2018 clause 36/802.1Qbb	Priority Flow Control	X	N/A	N/A	N/A



Scalability Matrixes

SLX 9740, SLX 9640, SLX 9540, and Extreme 8820 Scalability Comparison

This section describes scalability metrics that are common to the three platforms.

Support Type	SLX 9740/Extreme 8820	SLX 9640	SLX 9540
LAYER 2 SWITCHING			
Trunk groups supported	77 groups for 1U (1 to 256 IDs) 153 groups for 2U (1 to 256 IDs)	Default profile: 256 groups with 64 ports	Default profile: 256 groups with 64 ports
Ports per trunk group	64	64	64
Maximum LACP trunk threshold	64	64	64
Maximum MAC addresses per switch	600000 (default profile) 190000 (route profile)	750000	750000
Jumbo frames	9216 bytes	9216 bytes	9216 bytes
Number of VLANs	4096	4096	4096
Maximum bridge domains	4000	4000	4000
RSTP			
Maximum Spanning- Tree instances (RSTP)	RSTP is 1 instance only RPVST/PVST 128, MSTP 32	RSTP is 1 instance only RPVST/PVST 128, MSTP 32	RSTP is 1 instance only RPVST/PVST 128, MSTP 32
MULTICAST			
Maximum IGMP v2/v3 L3 entries	16000	16000	16000

Support Type	SLX 9740/Extreme 8820	SLX 9640	SLX 9540
L2 multicast cache	16000	16000	16000
IPv4 software multicast cache for PIM/SM	20000	20000	20000
IPv4 hardware multicast entries	20000	20000	20000
Maximum IGMP snooping VLANs	500	500	500
Maximum static entries (IGMPv2) with uplink - IPv4	1000	1000	1000
Maximum static entries (IGMPv3) with uplink - IPv4	1000	1000	1000
Snoop multicast IGMP join/leave rate per port	1000 per sec	1000 per sec	1000 per sec
IGMP join/leave rate (with PIM-SM)	4000 per sec	4000 per sec	4000 per sec
PIM SM maximum local receivers (IGMP)	4000	4000	4000
PIM SM maximum OIFs per system	64000	64000	64000
PIM SM maximum OIFs per S,G	128	128	128
Maximum VLAN replications per entry	128	128	128
Maximum multicast VRFs	50	50	50
Maximum IGMP groups per system	16000	16000	16000
Maximum IGMP groups per interface	128	128	128
Maximum IGMP OIFs per system	8000	8000	8000
Maximum multicast prefixes advertised by an RP	250	250	250
Maximum BSR RP per multicast domain	56	56	56

Support Type	SLX 9740/Extreme 8820	SLX 9640	SLX 9540
Maximum static RPs per system	56	56	56
Maximum RPset x RP per system	56	56	56
Maximum PIM Anycast RPs per system	56	56	56
Maximum Anycast RP peers per system	8	8	8
PIM fast hello	Min Hello: 1 sec Neighbor Removal: 3 sec	Min Hello: 1 sec Neighbor Removal: 3 sec	Min Hello: 1 sec Neighbor Removal: 3 sec
Multicast ECMP paths	32	32	32
LAYER 3 FEATURES - IPv4			
Maximum IP interfaces per system (IPv4, IPv6)	8000	4090	4090
Maximum virtual Ethernet interfaces per system	8000	4090	4090
Maximum ARP entries	Default profile: 102000 Route profile: 95000	96000	96000
Maximum static ARP entries	Default profile: 102000 Route profile: 95000	96000	96000
Maximum directly connected host routes (or IP next-hops)	64000	48000	48000
Possible secondary IP addresses	255	255	255
Maximum loopback interfaces	255	255	255
Maximum OSPF areas (per VRF)	200	200	200
OSPF routers in a single area	200	200	200
OSPF adjacencies	200	200	200
Maximum OSPF routes	100000	100000	100000
Maximum static route entries	32000	25000	25000

Support Type	SLX 9740/Extreme 8820	SLX 9640	SLX 9540
Maximum BGP peer groups	1024	1024	1024
Maximum BGP routes in RIB	9M in, 14M out	9M in, 14M out	9M in, 14M out
BGP peers (IPv4 and IPv6 concurrent)	2400	2400	2400
BGP dynamic listen range supported (IPv4 and IPv6 concurrent including all VRFs)	2400	2400	2400
Maximum BGP additional paths for received prefixes	128	64	64
Maximum IS-IS routes	25000	25000	25000
IS-IS adjacencies	Broadcast: 255 P2P: 1024	Broadcast: 255 P2P: 1024	Broadcast: 255 P2P: 1024
IS-IS LSPs	255	255	255
Maximum IPv4 routes	Default profile: 2M Route profile: 3.5M	Default profile: 4M	Default profile: 1M (with compression)
Maximum VEs per system	8000	4000	4000
Maximum VRFs per system (BGP VRF IPv4/ IPv6)	1024	1024	1024
Maximum VRFs per system (OSPF VRF IPv4/IPv6)	1024	1024	1024
Maximum VRFs per system (static VRF IPv4/IPv6)	1024	1024	1024
IS-IS routers in a level	255	255	255
Maximum ECMP paths	128	64	64
VRRP/VRRPe instances per system (IPv4, IPv6)	1000	1000	1000
VRRP instances per IP interface	10	16	16
VRRP/VRRPe instances with time scale	128	128	128

Support Type	SLX 9740/Extreme 8820	SLX 9640	SLX 9540
Maximum GRE tunnels	1024	1024	1024
Maximum IS-IS interfaces	Broadcast: 255 P2P: 1024	Broadcast: 255 P2P: 1024	Broadcast: 255 P2P: 1024
LAYER 3 FEATURES - IPv6			
Maximum IPv6 static route entries	32000	32000	32000
Maximum IPv6 routes	Default profile: 2M Route profile: 3.5M	Default profile: 256000 routes v4-v6 profile: 700000 routes IPv6-route profile: 1M routes	OptiScale profile LPM: 64000 (routes except /47 and /48) LEM: 180000 (routes with /47 and /48)
Maximum ND entries	Default profile: 102000 Route profile: 95000	32000	32000
Maximum OSPFv3 routes	64000	64000	64000
Maximum OSPFv3 interfaces	256	256	256
Maximum OSPFv3 neighbors	256	256	256
Maximum OSPFv3 areas	10	10	10
Maximum BGPv6 routes in the RIB	Same as IPv4	Same as IPv4	Same as IPv4
Maximum BGPv6 neighbors	2400	2400	2400
Maximum DHCPv6 Delegated Prefixes	Per System: • Maximum Scale - 20000 • Default Maximum Scale - 8000 Per Interface: • Maximum Scale - 20000 • Default Maximum Scale - 1000	Per System: • Maximum Scale - 20000 • Default Maximum Scale - 8000 Per Interface: • Maximum Scale - 20000 • Default Maximum Scale - 1000	Per System: • Maximum Scale - 20000 • Default Maximum Scale - 8000 Per Interface: • Maximum Scale - 20000 • Default Maximum Scale - 1000
BGP FLOWSPEC			
Maximum local flowspec rules alone	1000	1000	1000
Maximum remote flowspec rules alone	1000	1000	1000

Support Type	SLX 9740/Extreme 8820	SLX 9640	SLX 9540
Maximum local and remote flowspec rules together	1000	1000	1000
BGP LARGE-COMMUNITY			
Maximum largecommunity that can be added/ replaced/deleted for incoming route updates (NLRI) using set directive	32	32	32
Maximum largecommunity standard/ extended ACL type	1024 rules per list. Max seq # is 65535	1024 rules per list. Max seq # is 65535	1024 rules per list. Max seq # is 65535
Maximum largecommunity ACL that can be matched in route-map	32	32	32
Maximum largecommunity attributes that can be received per route update (including in bound set large community)	64	64	64
MPLS			
Maximum MPLS labels	15000	15000	15000
Maximum label stacking depth	3	3	3
Maximum target LDP sessions	100	100	100
Maximum ingress	5000	5000	5000
Maximum transit LSPs	20000 cross-connects	20000 cross-connects	20000 cross-connects
Maximum point-to-point per system with MCT	500	500	500
Maximum point-to-multipoint per system with MCT	8000	8000	8000

Support Type	SLX 9740/Extreme 8820	SLX 9640	SLX 9540
Maximum endpoints per point-to-point per system	1000	8000	8000
Maximum endpoints per point-to-multipoint per system (non-MCT, MCT)	20000	20000	20000
Maximum point-to-multipoint MACs per system (max vpls mac table)	Default profile: 600000 Route profile: 190000	750000	750000
Total point-to-multipoint VC labels per system	8000	8000	8000
Maximum routes per VRF/VPN	Default profile: 2M Route profile: 3M	Same as the default VRF	256000
Maximum MPLS VPNs (IPv4) per system	512	512	512
Maximum MPLS VPNs (IPv6) per system	512	512	512
Maximum adaptive LSP (ingress/egress)	5000	5000	5000
Maximum FRR instances	5000 facility or 2000 1- to-1 detour	5000 facility or 2000 1- to-1 detour	5000 facility or 2000 1- to-1 detour
Maximum point-to-multipoint LSP load balance	16	16	16
Maximum LDP ECMP paths	16	16	16
RSVP LSP history support	Max 32 events per LSP at ingress router	Max 32 events per LSP at ingress router	Max 32 events per LSP at ingress router
Maximum autobandwidth templates	100	100	100
Maximum recorded samples per autobandwidth LSP	1500	1500	1500
Single-hop LSP accounting	5000	5000	5000

Support Type	SLX 9740/Extreme 8820	SLX 9640	SLX 9540
Maximum point-to-multipoint instances with IPv4/IPv6 VE VRF support (MCT)	8000	2600	2600
Maximum bypass LSP per system	512	512	512
Maximum LDP sessions	100	100	100
Maximum LDP FEC	5000	5000	5000
RATE LIMITING AND TRAFFIC POLICING FEATURES			
Granularity	22kbps	22kbps	22kbps
Rate-limiters/ trafficpolicers per system	1000/32000	1000/32000	1000/32000
ACL			
Maximum named L2 ACL statements	2000	2000	2000
Maximum IP receive ACLS	200	200	200
Maximum IPv6 receive ACLs	50	50	50
Max configurable PBR route maps	200	200	200
OAM			
Maximum BFD sessions	1000 (16 sessions multihop)	250 (16 sessions multihop)	250 (16 sessions multihop)
802.1ag sessions	4000	4000	4000
Y.1731 SLM/DM sessions	127	100	100
EVPN-VXLAN SCALING (IP Fabric)			
VxLAN Tunnel (such as ToR, DCI, hybrid cloud)	1000	512	512
L2 VNI (bridge domains)	8000	4000	4000
L3 VNI	1024	512	512
Maximum VRFs	1024	512	512
LAYER 2			
Maximum VLANs	4090	4090	4090

Support Type	SLX 9740/Extreme 8820	SLX 9640	SLX 9540
Maximum bridge domains	4000	4000	4000
Maximum MAC entries	Default profile: 600000 non-MCT (256000 MCT/ EVPN) Route profile: 190000	168000	168000
Maximum VNIs	8000	256 (IPv4 only)	256 (IPv4 only)
LAYER 3			
Maximum VEs	8000	4000	4000
Maximum VRFs	1024	512	512
SNMP			
Maximum communities	256	256	256
Maximum contexts	256	256	256
Maximum community maps	256	256	256
Maximum SNMP v3 users	10	10	10
Maximum groups	10	10	10
Maximum views	10	10	10
Maximum v1/v2c trap hosts	12	12	12
Maximum v3 trap hosts	6	6	6

SLX 9740/Extreme 8820 Scalability

Support Type	SLX 9740/Extreme 8820
RSTP	
Maximum physical ports supported with STP/RSTP	Max number of front-end ports
PVST	
Maximum VLANs	126
Maximum interfaces	Max number of front-end ports; (ports x VLANs < = 2000)
Maximum instances	126
Maximum port-VLAN associations	2048
LAYER 3 FEATURES - IPv4	

Support Type	SLX 9740/Extreme 8820
Maximum ARP/ND suppression scale	8000
MPLS	
MPLS tunnels	5000
ACL	
Ingress IPv4 ACLs (ACLs, PBR, RACL, RL, RACL-RL, v4 broadcast ACL) per system	Default profile: 4086 IPv6 Optimised profile: 2038
Ingress IPv6 ACLs (ACLs, PBR, RL, RACL, RACL-RL)	Default profile: 2038 IPv6 Optimised profile: 2038
Ingress MAC ACL, RL	Default profile: 2038 IPv6 Optimised profile: 2038
Egress L2 ACL, RL	Default profile: 245 IPv6 Optimised profile: 1014
Egress L3 IPv4 ACL, RL	Default profile: 245 IPv6 Optimised profile: 1014
Egress IPv6 ACL	IPv6 Optimised: 245
Policy based routing (PBR)	4000
IPv6 PBR	2000
Max configurable stanzas in PBR	1024
MULTI-CHASSIS TRUNKING (MCT support)	
Number of vPorts: (# of VLANs) times (# of ports)	100000
Maximum MCT clients	72 (1U) (72 x 25G/10G + 4x100G possibility) 144 (2U) (144*25G/10G + 8x100G possibility)
Maximum VLANs for ICL	All VLANs
Maximum L2 / unified bridging instances (VPLS/EVPN, L2, VXLAN) with MCT and BUM RL	4000
Maximum endpoints in MCT for L2/ bridging (VPLS, EVPN, L2, VXLAN)	100000 AC LIFs
MCT VPLS	8000 PW instances total 8000 total VNI (including 4000 for VLAN and 4000 for BD) 100000 for all types of services
MCT VLL	500
Maximum MAC addresses for MCT	Default profile: 256000 Route profile: 190000
EVPN-VXLAN SCALING (IP Fabric) LAYER 3	
Maximum BD VEs	4000
ND entries	102000
Static Anycast Gateway address per system (IPv4, IPv6)	8000

Support Type	SLX 9740/Extreme 8820
Static Anycast Gateway address per VE interface (IPv4, IPv6)	512
BGP EVPN IPv4 and IPv6 route	HW: 2M SW: 5M
BGP EVPN mac IP routes	HW: 102000 ARP, 102000 ND SW: 2M
BGP EVPN mac routes	HW: 250000 SW: 2M
QoS	
Maximum number of traffic classes	8
On-chip buffers per ASIC (shared between ingress and egress)	Ingress OCB: 16MB per core (32MB total) Ingress DRAM Buffer: 8GB Egress OCB: 48MB per core (96MB total)
Maximum schedulers on system	40
Maximum shapers on system	40
Maximum policy-map config on system (Created in SW globally)	1000
Maximum class-map config per policy	4000
Maximum policy-map config per interface	1
Service-policy per interface	1 per direction
Maximum class-map config on system (created in SW globally)	32000
Default class-map per policy	1
Match ACL class-map per policy	4000 non-default class map per policy map
Port-based in service-policy on system	Number of ports supported
Match ACL class in service-policy on system	4000 non-default class maps per policy map
Port-based out service policy on system	Number of ports supported
Maximum ACL tables per class	1
Number of policers (HW supported)	16000
QoS priority queues (per port)	8
BFD	
IPv4 Sessions	1000
IPv6 Sessions	1000
IPv4/IPv6 Concurrent (50:50) Sessions	1000
BFD over VxLAN IPv4/IPv6 Concurrent (50:50) Sessions	8000
BFD over MCT	1000

Support Type	SLX 9740/Extreme 8820
Monitoring/Mirroring	
Maximum Unique Mirror Destinations per device (can be SPAN or RSPAN or ERSPAN destination)	3
Maximum Monitor Sessions (can be SPAN or RSPAN or ERSPAN monitor session)	512

SLX 9640 and SLX 9540 Scalability

Support Type	SLX 9640	SLX 9540
LAYER 3 FEATURES - IPv4		
Maximum concurrent IPv4/ IPv6 routes in hardware	Default profile: 4M IPv4 and 256000 IPv6 routes v4-v6 profile: 4M IPv4, 700000 IPv6 routes IPv6-route profile: 1M IPv4, 1M IPv6 routes	OptiScale profile LPM: 256000 (routes except /23, /24, /32) LEM: 750000 (routes with /23, /24, /32)
MULTICAST		
Maximum IGMP snooping VLANs (MCT)	500	500
RATE LIMITING AND TRAFFIC POLICING FEATURES		
Maximum shared IPv4 ACLs per system	Per system: 6000 IPv4 ACE CAM sharing: 10000 IPv4 ACE	Per system: 6000 IPv4 ACE CAM sharing: 10000 IPv4 ACE
Maximum shared IPv6 ACLs per system	Per system: 6000 IPv6 ACE CAM sharing: 1000 IPv6 ACE	Per system: 6000 IPv6 ACE CAM sharing: 1000 IPv6 ACE
Maximum shared L2 ACLs per system	Per system: 2000 L2 ACE CAM sharing: 2000 L2 ACE	Per system: 2000 L2 ACE CAM sharing: 2000 L2 ACE
MULTI-CHASSIS TRUNKING (vLAG support)		
Number of vPorts: (# of VLANs) times (# of ports)	100000	100000
Number of VLANs for logical port (single port or LAG)	225	225
Maximum MCT clients	72 (24 10G ports and 48 25G breakout ports)	40
Maximum number of L2/ unified bridging instances (VPLS/EVPN, L2, VXLAN) with MCT and BUM RL	4000	4000

Support Type	SLX 9640	SLX 9540
Maximum number of endpoints in MCT for L2/ bridging (VPLS, EVPN, L2, VXLAN)	80000 AC LIFs 8000 PW instances total 8000 total VNI (including 4000 for VLAN and 4000 for BD) 100000 for all types of services	80000 AC LIFs 8000 PW instances total 8000 total VNI (including 4000 for VLAN and 4000 for BD) 100000 for all types of services
Maximum number of MAC addresses for MCT	180000	180000
MVRP		
Maximum dynamic VLANs advertised over MVRP (with/without MCT)	2000	2000
Maximum MACs on 2000 dynamic VLANs (with/ without MCT)	250000	250000

SLX 9150, SLX 9250, Extreme 8520, and Extreme 8720 Scalability

Support Type	SLX 9150/Extreme 8520	SLX 9250/Extreme 8720
LAYER 2 SWITCHING		
Number of trunk groups supported	Default profile: 80 groups (1 to 256 IDs)	Default profile: 128 groups (1 to 256 IDs)
Number of ports per trunk group	64	64
Max LACP trunk threshold	64	64
Maximum MAC addresses per switch	64000	64000
Jumbo frames	9216 bytes	9216 bytes
Number of VLANs	4096	4096
Maximum Bridge Domains (BD)	4000	4000
Maximum port-BD/port-VLAN association (Logical Interfaces or LIFs)	14200	14200
RSTP		
Maximum Spanning-Tree instances (RSTP)	RSTP is 1 instance only	RSTP is 1 instance only
Maximum physical ports supported with STP/RSTP	Equal to max number of front-end ports	Equal to max number of front-end ports
MSTP		
Maximum instances	32	32
Maximum VLANs per instance	4090	4090

Support Type	SLX 9150/Extreme 8520	SLX 9250/Extreme 8720
Maximum physical interfaces participating per instance	Equal to max number of front-end ports	Equal to max number of front-end ports
Maximum LAG interfaces participating per instance	64	128
PVST		
Maximum VLANS	254	254
Maximum interfaces	Equal to max number of front-end ports	Equal to max number of front-end ports
Maximum instances	254	254
Maximum port-VLAN associations	2032	2032
MULTICAST		
IPv4 software multicast cache for PIM/SM	8000	8000
IPv4 hardware multicast entries	8000	8000
Maximum (IGMP/MLD) snooping VLANs	512	512
Maximum (IGMP/MLD) snooping VLANs (MCT)	512	512
Maximum static entry (IGMPv2 and MLDv1) with uplink - IPv4	8000	8000
Snoop multicast IGMP join rate per port	500/s	500/s
Snoop multicast IGMP leave rate per port	500/s	500/s
PIM SM maximum OIFs per system	15500 (Max VLAN-port combination)	15500 (Max VLAN-port combination)
PIM SM maximum OIFs per entry	128	128
PIM join/prune rate	1500/s	1500/s
Maximum VLAN replication per entry	128	128
Maximum multicast VRFs	50	50
Maximum IGMP/MLD groups per interface	No restriction	No restriction
Maximum IGMP/MLD OIF per entry	128	128
Maximum multicast prefix advertised by an RP	250	250
Maximum BSR RP per multicast domain	56	56

Support Type	SLX 9150/Extreme 8520	SLX 9250/Extreme 8720
Maximum static RP per system	56	56
Maximum RPset x RP per system	56	56
Maximum PIM Anycast RPs per system	56	56
Maximum Anycast RP peers per system	8	8
Multicast ECMP paths	64	64
LAYER 3 FEATURES - IPv4		
Maximum IP interfaces per system (Ipv4, Ipv6)	4000	4000
Maximum Virtual Ethernet Interfaces per system	8000	8000
Maximum ARP entries	47000	47000
Maximum static ARP entries	47000	47000
Maximum IP next-hops	48000	48000
Possible secondary IP addresses	254	254
Maximum loopback interfaces	255	255
Maximum OSPF areas (per VRF)	200	200
OSPF routers in a single area	200	200
Maximum OSPF routes	64000	64000
Maximum static route entries	24000	24000
Maximum BGP peer groups	1024	1024
Maximum BGP routes in RIB	3.25M (in + out)	3.25M (in + out)
BGP peers (IPv4 and IPv6 concurrent including all VRFs)	2400	2400
BGP dynamic listen range supported (IPv4 and IPv6 concurrent including all VRFs)	2400	2400
Maximum BGP additional paths for received prefixes	128	128
Maximum IS-IS routes	25000	25000
Number of adjacencies	Broadcast: 255 P2P: 1024	Broadcast: 255 P2P: 1024
Number of IS-IS LSPs	255	255
Number of IS-IS routers in a level	255	255

Support Type	SLX 9150/Extreme 8520	SLX 9250/Extreme 8720
Maximum IS-IS interfaces	Broadcast: 255 P2P: 1024	Broadcast: 255 P2P: 1024
Maximum IPv4 routes	163840	163840
Maximum VRFs per system (BGP VRF IPv4/IPv6)	1024	1024
Maximum VRFs per system (OSPF VRF IPv4/IPv6)	1024	1024
Maximum VRFs per system static VRF IPv4/IPv6)	1024	1024
ECMP FEC scale	16000	16000
Maximum ECMP paths	128	128
Number of VRRP/VRRPe instances per system (IPv4, IPv6)	255	255
Number of VRRP instances per IP interface	16	16
LAYER 3 FEATURES - IPv6		
Maximum IPv6 static route entries	10000	10000
Maximum IPv6 routes	64512	64512
Maximum ND entries	33000	33000
Maximum OSPFv3 routes	64000	64000
Maximum OSPFv3 interfaces	200	200
Maximum OSPFv3 neighbors	200	200
Maximum OSPFv3 areas per VRF	10	10
Maximum BGPv6 routes in the RIB	Same as IPv4	Same as IPv4
Maximum BGPv6 neighbors	512	512
Maximum DHCPv6 Delegated Prefixes	Per System: • Maximum Scale - 20000 • Default Maximum Scale - 8000 Per Interface: • Maximum Scale - 20000 • Default Maximum Scale - 1000	Per System: • Maximum Scale - 20000 • Default Maximum Scale - 8000 Per Interface: • Maximum Scale - 20000 • Default Maximum Scale - 1000
RATE LIMITING AND TRAFFIC POLICING FEATURES		
Granularity	1kbps	1kbps

Support Type	SLX 9150/Extreme 8520	SLX 9250/Extreme 8720
Number of rate-limiters/traffic-policers per system	8000 in SW	8000 in SW
ACL		
Maximum shared IPv4 ACLs per system	2000 ACL groups with 2000 ACL statements each (SW) IPv4 ACL DB standard ingress count: 767/768, egress count 245/246 Extended ingress count: 767/768 egress count 245/246 Same DB is shared by PBR, ACL rate limiters and RACL	2000 ACL groups with 2000 ACL statements each (SW) IPv4 ACL DB standard ingress count: 767/768, egress count 245/246. Extended ingress count: 767/768 egress count 245/246 Same DB is shared by PBR, ACL rate limiters and RACL
Maximum shared IPv6 ACLs per system	2000 ACL groups with 2000 ACL statements each (SW) IPv6 ACL DB standard: 767/768. Extended: 767/768 Same DB is shared by PBR, ACL rate limiters and RACL	2000 ACL groups with 2000 ACL statements each (SW) IPv6 ACL DB standard: 767/768. Extended: 767/768 Same DB is shared by PBR, ACL rate limiters and RACL
Maximum shared L2 ACLs per system	2000 ACL groups with 2000 ACL statements each (SW) MAC ACL DB standard ingress count: 501/502, egress count: 245/246 Extended ingress count: 501/502, egress count 245/246 L2 rate limiter shares same DB	2000 ACL groups with 2000 ACL statements each (SW) MAC ACL DB standard ingress count: 501/502, egress count: 245/246 Extended ingress count: 501/502, egress count 245/246 L2 rate limiter shares same DB
Policy Based Routing (PBR)	767 (TCAM entries shared with v4 ACL)	767 (TCAM entries shared with v4 ACL)
IPv6 PBR	767 (TCAM entries shared with v6 ACL)	767 (TCAM entries shared with v6 ACL)
Maximum configurable PBR route maps	200	200
Maximum configurable stanzas in PBR	1024	1024
Maximum number of IP receive ACLs	Same as IPv4 ACL	Same as IPv4 ACL
Maximum number of IPv6 receive ACLs	Same as IPv6 ACL	Same as IPv6 ACL
MULTI-CHASSIS TRUNKING (vLAG support)		

Support Type	SLX 9150/Extreme 8520	SLX 9250/Extreme 8720
Maximum port-BD/port-VLAN association (Logical Interfaces or LIFs)	14200	14200
VLANs for logical port (single port or LAG)	4000 (4000 VLAN or 4000 BD)	4000 (4000 VLAN or 4000 BD)
Maximum MCT clients	62	126
Maximum VLANs for ICL	4090 VLAN + 4000 BD (VxLAN tunnels)	4090 VLAN + 4000 BD (VxLAN tunnels)
Maximum L2 / unified bridging instances (VPLS, EVPN, L2, VXLAN) with MCT	4000 VLAN + 4000 BD (EVPN-VXLAN) VPLS not supported	4000 VLAN + 4000 BD (EVPN-VXLAN) VPLS not supported
Maximum L2 / unified bridging instances (VPLS, EVPN, L2, VXLAN) with MCT and BUM RL	4000 VLAN + 1000 BD (EVPN-VXLAN) VPLS not supported	4000 VLAN + 1000 BD (EVPN-VXLAN) VPLS not supported
Maximum endpoints in MCT for L2/bridging (VPLS, EVPN, L2, VXLAN)	VPLS not supported 6000 VXLAN VNIs L2: 15000	VPLS not supported 6000 VXLAN VNIs L2: 15000
Maximum MAC addresses for MCT	64000	64000
EVPN-VXLAN Scaling (IP Fabric)		
VxLAN tunnel (such as ToR, DCI, hybrid cloud)	250	250
L2 VNI (bridge domains)	4000 VLAN + 2000 BD	4000 VLAN + 2000 BD
L3 VNI	128	128
Layer 2		
Maximum VLANs	4090	4090
Maximum bridge domains	• 4000 for Centralized Routing • 2000 for Distributed Routing	• 4000 for Centralized Routing • 2000 for Distributed Routing
Maximum MAC entries	64000	64000
Maximum ARP entries	47000	47000
Maximum VNI	4000 + 2000 + 128	4000 + 2000 + 128
Layer 3		
Maximum BGP peers (IPv4+IPv6)	1000	1000
Maximum VE	8000	8000
Maximum BD VE	4000	4000
Maximum VRF	1024	1024
ND entries	34000	34000

Support Type	SLX 9150/Extreme 8520	SLX 9250/Extreme 8720
Static Anycast Gateway address per system (IPv4, IPv6)	8000	8000
Static Anycast Gateway address per VE interface (IPv4, IPv6)	512	512
BGP EVPN IPv4 and IPv6 routes	HW IPv4: 128000 HW IPv6: 10000 SW: 2M (shared with all EVPN route types)	HW IPv4: 128000 HW IPv6: 10000 SW: 2M (shared with all EVPN route types)
BGP EVPN MAC IP routes	HW: 47000 SW: 2M (shared with all EVPN route types)	HW: 47000 SW: 2M (shared with all EVPN route types)
BGP EVPN MAC routes	HW: 47000 SW: 2M (shared with all EVPN route types)	HW: 47000 SW: 2M (shared with all EVPN route types)
QoS		
Maximum traffic classes	8	8
On chip buffers per ASIC (shared between ingress and egress)	32MB	32MB
Maximum schedulers on system	80	128
Maximum shapers on system	80	128
Maximum policy-map config on system (Created in SW globally)	1000	1000
Maximum class-map config per policy	4000	4000
Maximum policy-map config per interface	1	1
Service policy per interface	1 per direction	1 per direction
Maximum class-map config on system (Created in SW globally)	32000	32000
Default class-map per policy	1	1
Match ACL class-map per policy	4000 non-default class map per policy-map	4000 non-default class map per policy-map
Port-based in service-policy on system	64	128
Match ACL class ACL in service-policy on system	4000 non default-class map per policy-map	4000 non default-class map per policy-map
Port-based in service-policy on system	64	128
Maximum ACL tables per class	1	1
Number of policers	1024	1024

Support Type	SLX 9150/Extreme 8520	SLX 9250/Extreme 8720
Maximum unique RED profiles configured (SW)	120	120
Maximum unique RED profiles configured (HW)	128	128
QoS priority queues (per port)	8	8
PCP-->TC, DSCP-->TC	61	61
DSCP-->DSCP	10	10
DSCP-->CoS, TC-->CoS	12	12
TC-->DSCP	Not applicable	Not applicable
Maximum per-port priority pause level	Pause and PFC not applicable in 20.2.3	Pause and PFC not applicable in 20.2.3
SNMP		
Maximum communities	256	256
Maximum contexts	256	256
Maximum community maps	256	256
Maximum SNMP v3 users	10	10
Maximum groups	10	10
Maximum views	10	10
Maximum v1/v2c trap hosts	12	12
Maximum v3 trap hosts	6	6
NETCONF		
Maximum SSH concurrent sessions	16	16
REST/RESTCONF		
Maximum REST/RESTCONF sessions	30	30
BFD		
IPv4 Hardware Sessions	1000	1000
IPv6 Hardware Sessions	600	600
IPv4/IPv6 Concurrent Hardware Sessions	• 850 for IPv4 • 150 for IPv6	• 850 for IPv4 • 150 for IPv6
Software sessions supported (concurrent (50:50) IPv4 and IPv6 sessions)	1000	1000
Monitoring/Mirroring		
Maximum Unique Mirror Destinations per device (can be SPAN or RSPAN or ERSPAN destination)	2	2

Support Type	SLX 9150/Extreme 8520	SLX 9250/Extreme 8720
Maximum Monitor Sessions (can be SPAN or RSPAN or ERSPAN monitor session)	512	512
EVPN Multihoming IP Fabric Scaling		
VxLAN Tunnel	252	252
Max ESI Segment across Fabric	1500	1500
Max MAC Entries	64000	64000
Max ARP entries	47000	47000
Max ND Entries	34000	34000
Static Anycast Gateway address per system (IPv4, IPv6)	8000	8000
Static Anycast Gateway address per VE interface (IPv4, IPv6)	512	512
BGP EVPN IPv4 and IPv6 route	• HW IPv4: 128000 • HW IPv6: 10000 • SW: 2M (shared with all EVPN route types)	• HW IPv4: 128000 • HW IPv6: 10000 • SW: 2M (shared with all EVPN route types)
BGP EVPN MAC IP routes	• HW: 47000 • SW: 2M (shared with all EVPN route types)	• HW: 47000 • SW: 2M (shared with all EVPN route types)
BGP EVPN MAC routes	• HW: 47000 • SW: 2M (shared with all EVPN route types)	• HW: 47000 • SW: 2M (shared with all EVPN route types)