

Brocade SLX 9540 Switch



HIGHLIGHTS

- Provides flexible edge connectivity with cost-effective density, features, and performance optimized for data center interconnect, WAN edge, IXP, and colocation data center deployments
- Delivers up to 720 Mpps forwarding capacity and industry-leading 6 GB of tunable ultra-deep packet buffers in a 1 RU space
- Includes multiple configurations of dense 10 and 100 GbE for diverse deployment options
- Delivers carrier-class forwarding with full IPv4/v6 switching, MPLS, and VPLS
- Enables customizable real-time monitoring for improved troubleshooting, reduced MTTR, and optimized use of off-device Big Data analytics and monitoring platforms with Brocade SLX Insight Architecture
- Provides turnkey and customizable cross-domain workflow automation for the entire network lifecycle through Brocade Workflow Composer and network automation suites

Next-Generation Fixed Switch with Flexible Edge Connectivity for the Digital Organization

With cloud services, 4kHD video streaming, Internet-Of-Things, and mobile connectivity for billions of devices becoming standard, organizations must modernize the way they communicate and conduct business. In addition to consuming an enormous amount of network capacity, these services increase operational complexity just when organizations are striving to deliver the business agility and performance demanded by their customers.

In order to meet these demands, organizations require network platforms that deliver new capabilities to help analyze and automate network operations through software for reduced OpEx—while providing flexible deployment options with forwarding performance and scale that dramatically reduces CapEx.

A Flexible High-Performance Switching Platform

The Brocade® SLX® 9540 Switch is designed to deliver the cost-effective performance needed to address the ongoing explosion of network bandwidth, devices, and services today and in the future. This flexible platform powered by the Brocade SLX-OS operating system provides carrier-class advanced features leveraging proven Brocade routing, MPLS, and Carrier Ethernet technology deployed in the most demanding service provider, data center, and enterprise networks today. And it is all delivered through space- and power-efficient forwarding

hardware. The flexible architecture is designed for optimal operations, capably supporting diverse deployment options for data center edge, WAN edge, IXP, and colocation data center deployments that require deep buffering for lossless forwarding, advanced MPLS or Carrier Ethernet features, and greater bandwidth. In addition, the Brocade SLX 9540 helps address the increasing agility and analytics needs of digital organizations with innovative network automation and visibility supported through Brocade Workflow Composer™ with turnkey automation suites and the Brocade SLX Insight Architecture™.

Deployment Versatility with Ultra-Deep Buffers and MPLS

The Brocade SLX 9540 is the industry's most powerful compact deep buffer data center switch, providing a cost-efficient solution that is purpose-built for the most demanding service provider, enterprise data center, and MAN/WAN applications. The robust system architecture supported by Brocade SLX-OS and a versatile feature set including IPv4, IPv6, MPLS/VPLS, and OpenFlow forwarding combine with Carrier Ethernet 2.0, and OAM capabilities to provide deployment flexibility. This enables it to scale from the data center edge into the interconnect and MAN/WAN environments.

Designed with state-of-the-art network processing technology, the Brocade SLX 9540 has a non-blocking switching capacity of up to 1.08 Tbps in a 1 RU form factor. Advanced hardware with fine-grained QoS support enables full-duplex, high-speed performance for any mix of IPv4, IPv6, and MPLS/VPLS services.

The Brocade SLX 9540 is available in two different models. The Brocade SLX 9540-24S provides twenty-four 10 GbE/1 GbE combination ports along with twenty-four 1 GbE ports. The Brocade SLX 9540-48S provides forty-eight 10 GbE/1 GbE combination ports along with six 100 GbE/40 GbE combination ports.

Modular Virtualized Operating System

The Brocade SLX 9540 runs Brocade SLX-OS, a fully virtualized Linux-based operating system that delivers process-level resiliency and fault isolation. Brocade SLX-OS supports advanced routing, MPLS, and Carrier Ethernet 2.0 features and is highly programmable with support

for REST and NETCONF, enabling full network lifecycle automation with Brocade Workflow Composer and turnkey automation suites. It is based on Ubuntu Linux, which offers all the open source advantages and access to commonly used Linux tools.

VERSATILE COMPACT SWITCH

Deploy space, power, and cost-efficient density along with high performance for data center interconnect, WAN edge, IXP, colocation data center, and Metro Ethernet networks.

Brocade SLX 9540 Architecture

The Brocade SLX 9540 architecture is designed to support connectivity needs today and well into the future as bandwidth and application workload requirements change. Its different models and software license options are designed to optimize port density and capabilities, leveraging the latest Intel x86 CPU and merchant silicon packet processor technology for optimal space, power, and cooling in a highly reliable, carrier-class compact switching platform. The Brocade SLX 9540 delivers:

- *Multiple 1/10/40/100 GbE configurations for deployment flexibility*
- *Ultra-deep buffers for lossless forwarding in demanding data center and WAN applications*
- *Advanced forwarding—including IPv4, IPv6, MPLS/VPLS, and OpenFlow—to support diverse use cases*

Brocade SLX-OS runs in a virtualized environment over a KVM hypervisor, with the operating system compartmentalized and abstracted from the underlying hardware. The core operating system functions for the Brocade SLX 9540 are hosted in the System VM.

This approach provides clean failure domain isolation for the switch operating system while leveraging the x86 ecosystem—thereby removing single-vendor lock-in for system tools development and delivery. In addition, it supports a Guest VM, which is an open KVM environment for running third-party and customized monitoring, troubleshooting, and analytics applications.

Embedded Network Visibility

The Brocade SLX 9540 includes the Brocade SLX Insight Architecture delivered through Brocade SLX-OS. This new approach to network monitoring and troubleshooting provides a highly differentiated solution that makes it faster, easier, and more cost-effective to get the comprehensive, real-time visibility needed for network operations and automation. By embedding network visibility on every switch or router, the Brocade SLX Insight Architecture can help organizations achieve pervasive visibility throughout the network to help quickly identify problems, accelerate mean-time-to-remediation, and improve overall service levels.

The highly flexible Brocade SLX Insight Architecture enables organizations to easily deploy monitoring and troubleshooting applications throughout their networks, providing the pervasive real-time visibility they need without impacting production traffic. Embedding network visibility directly on every switch or router in the network helps reduce costs and provides for improved service levels and monetization. Required data can be optimized locally on-device for cost-effective delivery off-device to cloud-scale management, operational intelligence, and automation systems for additional analysis, action, or archiving.

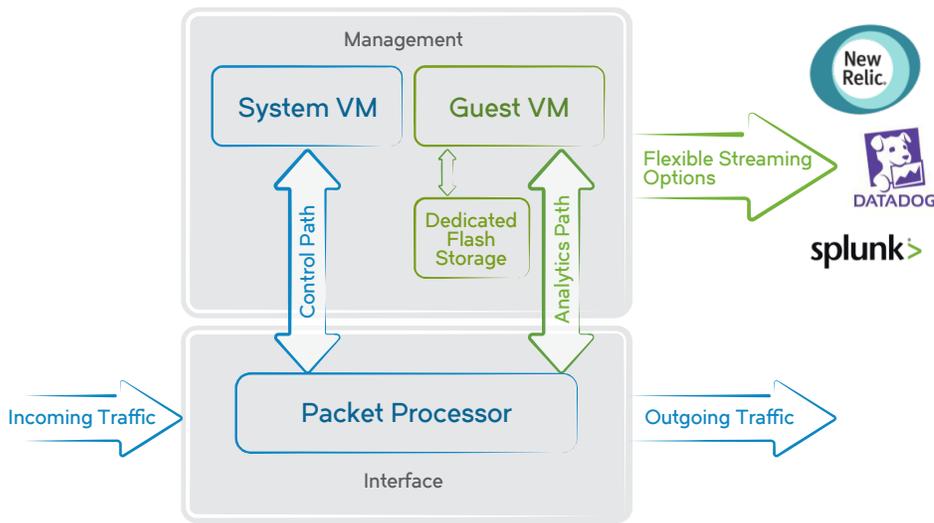


Figure 1: The Brocade SLX Insight Architecture in Brocade SLX switches and routers delivers open visibility capabilities for pervasive, customized insight into network traffic.

As seen in Figure 1, the key components of the Brocade SLX Insight Architecture include:

- **Flexible Packet Filtering:** The Brocade SLX Insight Architecture begins with flexible packet filtering in the packet processors for each interface. This provides organizations with a rich set of filters with which they can select the exact type of traffic they want to capture for visibility processing.
- **Guest VM:** The Brocade SLX Insight Architecture provides an open KVM environment that runs third-party applications and customized monitoring, troubleshooting, and analytics tools. Enabled by Brocade SLX-OS, this preconfigured guest VM is provided on each Brocade SLX 9540 switch to host third-party network operations and analytics applications on every device, extending visibility to the entire network.
- **Dedicated Analytics Path:** The Brocade SLX Insight Architecture provides an innovative internal analytics path between the packet processor for the Brocade SLX 9540 interfaces and the Brocade SLX Insight Architecture open KVM environment running on the dedicated cores of the Intel CPU. This enables applications running in the open KVM environment to extract forwarding data without disrupting the normal operation of the Brocade SLX 9540.
- **Flexible Streaming:** The Brocade SLX Insight Architecture provides flexible streaming¹ options, enabling captured data to be delivered to analytics applications off the platform.
- **Dedicated Analytics Storage:** The Brocade SLX 9540 provides 128 GB of on-device storage dedicated to the Brocade SLX Insight Architecture for applications running in the open KVM environment, enabling real-time data capture for fast and easy access.

Business Agility with Network Workflow Automation

With DevOps-style automation, the Brocade SLX 9540 and Brocade Workflow Composer help organizations improve business agility and accelerate innovation by automating the entire network lifecycle—from provisioning, validation, and troubleshooting to the remediation of networks services—while also aligning to IT operations and modern DevOps tool chains.

By automating and orchestrating across domains within the services delivery chain, Brocade Workflow Composer connects functional domains—such as the network, compute, storage, and applications—to minimize the number of transitions between functions. This streamlines the delivery of services and infrastructure changes so they are fast, reliable, and repeatable (see Figure 2). In addition, turnkey automation suites enable organizations to deploy Brocade Workflow Composer with Brocade SLX switches and routers without the need for customized development.

EMBEDDED NETWORK VISIBILITY

Keep network traffic and operations running smoothly with pervasive, real-time network analytics, monitoring, and troubleshooting.

Brocade SLX Insight Architecture

The Brocade SLX Insight Architecture delivers dynamic flow identification, intelligent pre-processing, and flexible data streaming capabilities on each router to support key network operations use cases without disrupting network traffic:

- *Real-time monitoring*
 - *Overlay and underlay visibility*
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¹ Streaming protocols are not currently supported in Brocade SLX-OS.

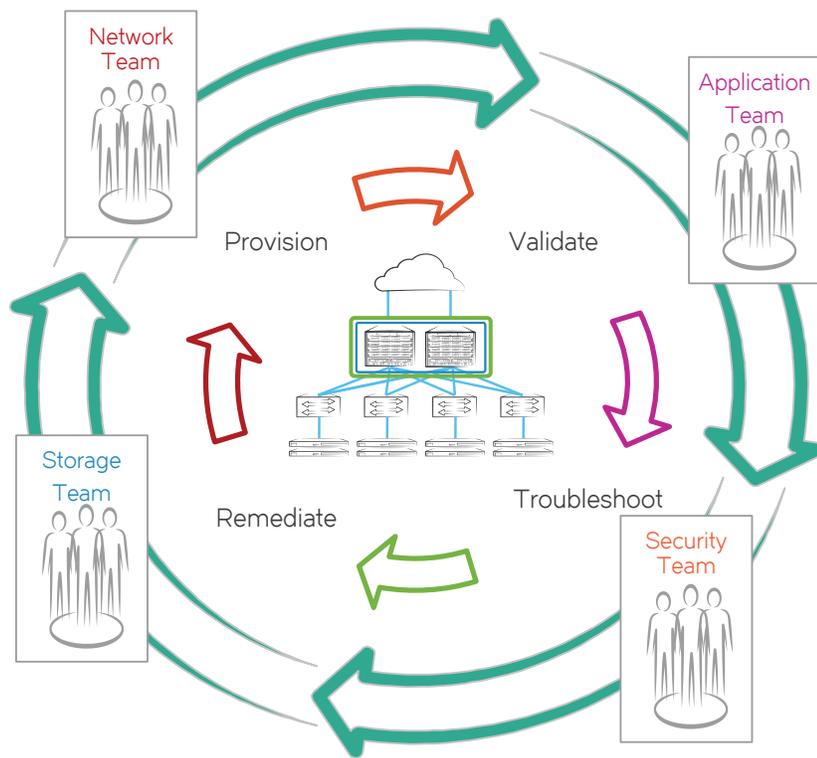


Figure 2: Software-driven lifecycle, cross-domain workflow automation with the Brocade Workflow Composer turnkey automation suites and Brocade SLX switches and routers.

Brocade Global Services

Brocade Global Services has the expertise to help organizations build scalable, efficient cloud infrastructures. Leveraging 20 years of expertise in storage, networking, and virtualization, Brocade Global Services delivers world-class professional services, technical support, and education services, enabling organizations to maximize their Brocade investments, accelerate new technology deployments, and optimize the performance of networking infrastructures.

Affordable Acquisition Options

Successful network deployments drive business forward, providing technical and financial agility. Brocade offers

the broadest financing models, from traditional leasing to Brocade Network Subscription. Network-as-a-Service allows organizations to subscribe to network assets today then upgrade on demand, scale up or down, or return them with 60-day notification. Brocade Network Subscription plans can be structured to meet IASC guidelines for OpEx or CapEx treatment to align with financial goals. Learn more at www.nonetworkcapex.com.

Maximizing Investments

To help optimize technology investments, Brocade and its partners offer complete solutions that include professional services, technical support, and education. For more information, contact a Brocade sales partner or visit www.brocade.com.

DEVOPS-STYLE AUTOMATION

Improve business agility and accelerate innovation with cross-domain network automation.

Brocade SLX 9540 and Brocade Workflow Composer

The Brocade SLX 9540, combined with Brocade Workflow Composer, delivers automation for provisioning, validation, troubleshooting, and remediation of network services, including:

- Automation of the entire network lifecycle with event-driven automation
- End-to-end IT workflow automation through cross-domain integration
- Customizable and do-it-yourself workflow automation options in multivendor network environments
- DevOps methodologies, open source technologies, and a thriving technical community
- Industry-standard REST/NETCONF-based APIs with Yang models, OpenFlow, scripting languages, and streaming APIs
- Turnkey automation with Brocade Workflow Composer Automation Suites for network essentials, IP fabric and IXP workflows, and Brocade SLX switches and routers

Brocade SLX 9540 Switch Features

Item	Brocade SLX 9540
Front view	
Rear view with fan modules	
Maximum 100 GbE/40 GbE ports	6
Maximum 10 GbE/1 GbE ports	48
Switch fabric capacity	1.08 Tbps
Forwarding capacity	720 Mpps
Airflow	Front to back or back to front (orderable option)
Fan module slots	5 (4+1 redundancy)
Maximum AC power supply rating	650 W
Power supply module slots	2 (1+1 redundancy)
Height	1.72 in/4.37 cm/1 RU
Width	17.32 in/44.00 cm
Depth chassis only without cable management or fan handles	17.51 in/44.47 cm
Weight chassis only	19.84 lb/9.00 kg

Brocade SLX 9540 Model Specifications

Item	Model	
	Brocade SLX 9540-24S	Brocade SLX 9540-48S
Front view		
Rear view		
100 GbE/40 GbE ports per switch	N/A	6
10 GbE/1 GbE ports per switch	24	48
1 GbE ports per switch	24	N/A
Port type	10 GbE SFP+ 1 GbE SFP+	100 GbE QSFP-28 40 GbE QSFP+ 10 GbE SFP+ 1 GbE SFP+
Packet buffers per switch	6 GB	6 GB
MAC address scale	640,000	640,000
VLAN scale	4,096	4,096
Route scale (in hardware)	256,000 (IPv4), 64,000 (IPv6)	256,000 (IPv4), 64,000 (IPv6)
Jumbo frame (maximum size)	9,216 bytes	9,216 bytes
QoS priority queues (per port)	8	8
MPLS	With advanced feature license	With advanced feature license
Carrier Ethernet 2.0	With advanced feature license	With advanced feature license
NSX	With advanced feature license	With advanced feature license

Brocade SLX 9540 Switch Specifications

IEEE Compliance

Ethernet	<ul style="list-style-type: none">• 802.3-2005 CSMA/CD Access Method and Physical Layer Specifications• 802.3ab 1000BASE-T• 802.3ae 10 Gigabit Ethernet• 802.3u 100BASE-TX, 100BASE-T4, 100BASE-FX Fast Ethernet at 100 Mbps with Auto-Negotiation• 802.3x Flow Control• 802.3z 1000BASE-X Gigabit Ethernet over fiber optic at 1 Gbps• 802.3ad Link Aggregation• 802.1Q Virtual Bridged LANs	<ul style="list-style-type: none">• 802.1D MAC Bridges• 802.1w Rapid STP• 802.1s Multiple Spanning Trees• 802.1ag Connectivity Fault Management (CFM)• 802.3ba 100 Gigabit Ethernet• 802.1ab Link Layer Discovery Protocol• 802.1x Port-Based Network Access Control• 802.3ah Ethernet in the First Mile Link OAM• ITU-T G.8013/Y.1731 OAM mechanisms for Ethernet
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RFC Compliance

General Protocols	<ul style="list-style-type: none">• RFC 768 UDP• RFC 791 IP• RFC 792 ICMP• RFC 793 TCP• RFC 826 ARP• RFC 854 TE LNET• RFC 894 IP over Ethernet• RFC 903 RARP• RFC 906 TFTP Bootstrap• RFC 950 Subnet• RFC951 BootP• RFC 1027 Proxy ARP• RFC 1042 Standard for The Transmission of IP• RFC 1166 Internet Numbers• RFC 1122 Host Extensions for IP Multicasting• RFC 1191 Path MTU Discovery• RFC 1340 Assigned Numbers• RFC 1519 CIDR• RFC 1542 BootP Extensions• RFC 1591 DNS (client)	<ul style="list-style-type: none">• RFC 1812 Requirements for IPv4 Routers• RFC 1858 Security Considerations for IP Fragment Filtering• RFC 2131 BootP/DHCP Helper• RFC 2578 Structure of Management Information Version 2• RFC 2784 Generic Routing Encapsulation• RFC 3021 Using 31-Bit Prefixes on IPv4 Point-to-Point Links• RFC 3768 VRRP• RFC 4001 Textual Conventions for Internet Network Addresses• RFC 4950 ICMP Extensions for MPLS• RFC 4459 MTU and Fragmentation• RFC 5880 Bidirectional Forwarding Detection• RFC 5881 Bidirectional Forwarding Detection for IPv4 and IPv6 (Single Hop)• RFC 5882 Generic Application of Bidirectional Forwarding Detection• RFC 5883 Bidirectional Forwarding Detection for Multihop Paths
Other Protocols	<ul style="list-style-type: none">• RFC 2474 DiffServ Definition• RFC 2475 An Architecture for Differentiated Services• RFC 2597 Assured Forwarding PHB Group• RFC 2697 Single Rate Three-Color Marker• RFC 2698 A Two-Rate Three-Color Marker• RFC 3246 An Expedited Forwarding PHB• RFC 1354 IP Forwarding MIB• RFC 1757 RMON Groups 1, 2, 3, 9• RFC 2068 HTTP• RFC 2665 Ethernet Interface MIB• RFC 2784 Generic Routing Encapsulation (GRE)	<ul style="list-style-type: none">• RFC 2865 RADIUS• RFC 2863 Interfaces Group MIB• RFC 3176 sFlow• RFC 4087 IP Tunnel MIB• RFC 4133 Entity MIB• RFC 4293 - IP MIB• RFC 4741 NETCONF (Partial)• RFC 5905 NTP Version 4• RFC 5880 Bidirectional Forwarding Detection• RFC 5961 TCP Security

Brocade SLX 9540 Switch Specifications *(continued)*

BGP4	<ul style="list-style-type: none"> • RFC 1745 OSPF Interactions • RFC 1772 Application of BGP in the Internet • RFC 1997 Communities and Attributes • RFC 2385 BGP Session Protection via TCP MD5 • RFC 2439 Route Flap Dampening • RFC 2918 Route Refresh Capability • RFC 3392 Capability Advertisement • RFC 3682 Generalized TTL Security Mechanism for eBGP Session Protection • RFC 4271 BGPv4 • RFC 4273 BGP-4 MIB • RFC 4364 BGP/MPLS IP VPNs 	<ul style="list-style-type: none"> • RFC 4456 Route Reflection • RFC 4486 Sub Codes for BGP Cease Notification Message • RFC 4724 Graceful Restart Mechanism for BGP • RFC 4893 BGP Support for Four-octet AS Number Space • RFC 5065 BGP4 Confederations • RFC 5291 Outbound Route Filtering Capability for BGP-4 • RFC 5396 Textual Representation of Autonomous System (AS) Numbers • RFC 5668 4-Octet AS specific BGP Extended Community
OSPF	<ul style="list-style-type: none"> • RFC 2328 OSPF v2 • RFC 3101 OSPF NSSA • RFC 1745 OSPF Interactions • RFC 1765 OSPF Database Overflow • RFC 1850 OSPF v2 MIB • RFC 2154 OSPF with Digital Signature (Password, MD-5) 	<ul style="list-style-type: none"> • RFC 3137 OSPF Stub Router Advertisement • RFC 3630 TE Extensions to OSPF v2 • RFC 3623 Graceful OSPF Restart • RFC 4222 Prioritized Treatment of Specific OSPF Version 2 • RFC 5250 OSPF Opaque LSA Option
IS-IS	<ul style="list-style-type: none"> • RFC 1195 Routing in TCP/IP and Dual Environments • RFC 1142 OSI IS-IS Intra-domain Routing Protocol • RFC 3277 IS-IS Blackhole Avoidance • RFC 5120 IS-IS Multi-Topology Support • RFC 5301 Dynamic Host Name Exchange • RFC 5302 Domain-wide Prefix Distribution 	<ul style="list-style-type: none"> • RFC 5303 Three-Way Handshake for IS-IS Point-to-Point • RFC 5304 IS-IS Cryptographic Authentication(MD-5) • RFC 5306 Restart Signaling for ISIS (helper mode) • RFC 5309 Point-to-point operation over LAN in link state routing protocols
IPv4 Multicast	<ul style="list-style-type: none"> • RFC 1112 IGMP v1 • RFC 2236 IGMP v2 • RFC 4601 PIM-SM • RFC 3376 IGMP v3 	<ul style="list-style-type: none"> • RFC 4607 PIM-SSM • RFC 4610 Anycast RP using PIM • RFC 5059 BSR for PIM
QoS	<ul style="list-style-type: none"> • RFC 2474 DiffServ Definition • RFC 2475 An Architecture for Differentiated Services • RFC 2597 Assured Forwarding PHB Group 	<ul style="list-style-type: none"> • RFC 2697 Single Rate Three-Color Marker • RFC 2698 A Two-Rate Three-Color Marker • RFC 3246 An Expedited Forwarding PHB
IPv6 Core	<ul style="list-style-type: none"> • RFC 1887 IPv6 unicast address allocation architecture • RFC 1981 IPv6 Path MTU Discovery • RFC 2375 IPv6 Multicast Address Assignments • RFC 2450 Proposed TLA and NLA Assignment Rules • RFC 2460 IPv6 Specification • RFC 2462 IPv6 Stateless Address—Auto-Configuration • RFC 2464 Transmission of IPv6 over Ethernet Networks • RFC 2471 IPv6 Testing Address allocation • RFC 2711 IPv6 Router Alert Option • RFC 3587 IPv6 Global Unicast—Address Format 	<ul style="list-style-type: none"> • RFC 4193 Unique Local IPv6 Unicast Addresses • RFC 4291 IPv6 Addressing Architecture • RFC 4301 IP Security Architecture • RFC 4303 Encapsulation Security Payload • RFC 4305 ESP and AH cryptography • RFC 4443 ICMPv6 • RFC 4552 Auth for OSPFv3 using AH /ESP • RFC 4835 Cryptographic Alg. Req. for ESP • RFC 4816 Neighbor Discovery for IP version 6 (IPv6)
IPv6 Routing	<ul style="list-style-type: none"> • RFC 2740 OSPFv3 for IPv6 • RFC 5308 Routing IPv6 with IS-IS • RFC 2545 Use of BGP-MP for IPv6 	<ul style="list-style-type: none"> • RFC 6106 Support for IPv6 Router Advertisements with DNS Attributes • RFC 6164 Using 127-Bit IPv6 Prefixes on Inter-Router Links

Brocade SLX 9540 Switch Specifications *(continued)*

MPLS	<ul style="list-style-type: none">• RFC 2205 RSVP v1 Functional Specification• RFC 2209 RSVP v1 Message Processing Rules• RFC 2702 TE over MPLS• RFC 2961 RSVP Refresh Overhead Reduction Extensions• RFC 3031 MPLS Architecture• RFC 3032 MPLS Label Stack Encoding• RFC 3037 LDP Applicability• RFC 3097 RSVP Cryptographic Authentication• RFC 3209 RSVP-TE• RFC 3270 MPLS Support of Differentiated Services• RFC 3478 LDP Graceful Restart• RFC 3813 MPLS LSR MIB• RFC 3815 Definition of Managed Objects for the MPLS, LDP• RFC 4090 Fast Reroute Extensions to RSVP-TE for LSP Tunnels	<ul style="list-style-type: none">• RFC 4379 OAM• RFC 4448 Encapsulation methods for transport of Ethernet over MPLS networks• RFC 4461 Signaling Requirements for Point-to-Multipoint Traffic-Engineered MPLS Label Switched Path (LSR)• RFC 4875 Extensions to RSVP-TE for P2MP TE LSPs• RFC 5036 LDP Specification• RFC 5305 ISIS-TE• RFC 5443 LDP IG P Synchronization• RFC 5561 LDP Capabilities• RFC 5712 MPLS Traffic Engineering Soft Preemption• RFC 5918 LDP "Typed Wildcard" FEC• RFC 5919 Signaling LDP Label Advertisement Completion
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Layer 2 VPN and PWE3	<ul style="list-style-type: none">• RFC 3343 TT L Processing in MPLS networks• RFC 3985 Pseudowire Emulation Edge to Edge (PWE3) Architecture• RFC 4364 BGP/MPLS IP Virtual Private Networks• RFC 4447 Pseudowire Setup and Maintenance using LDP• RFC 4448 Encapsulation Methods for Transport of Ethernet over MPLS Networks• RFC 4664 Framework for Layer 2 Virtual Private Networks• RFC 4665 Service Requirements for Layer 2 Provider-Provisioned Virtual Private Networks	<ul style="list-style-type: none">• RFC 4762 VPLS using LDP Signaling• RFC 5542 Definitions of Textual Conventions for Pseudowire (PW) Management• RFC 5601 Pseudowire (PW) Management Information Base• draft-sd-l2vpn-evpn-overlay-03 A Network Virtualization Overlay Solution using EVPN• draft-ietf-bess-evpn-overlay-04 A Network Virtualization Overlay Solution using EVPN
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Network Management

<ul style="list-style-type: none">• Integrated industry-standard Command Line Interface (CLI)• sFlow (RFC 3176)• Telnet• SNMP v1, v2c, v3	<ul style="list-style-type: none">• SNMP MIB II• RMON• Support for automated configuration management using NETCONF Entity MIB (Version 3)
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Element Security Options

<ul style="list-style-type: none">• TLS 1.1 and 1.2• AAA• RADIUS• Secure Shell (SSH v2)• Secure Copy (SCP v2)• HTTPs	<ul style="list-style-type: none">• TACACS/TACACS+• Username/Password (Challenge and Response)• Bi-level Access Mode (Standard and EXEC Level)• Protection against Denial of Service (DoS) attacks, such as TCP SYN or Smurf Attacks
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Environmental

<ul style="list-style-type: none">• Operating temperature: 0°C to 40°C (32°F to 104°F)• Storage temperature: -25°C to 55°C (-13°F to 131°F)• Relative humidity: 5% to 90%, at 40°C (104°F), non-condensing	<ul style="list-style-type: none">• Storage humidity: 95% maximum relative humidity, non-condensing• Operating altitude: 6,600 ft (2,012 m)• Storage altitude: 15,000 ft (4,500 m) maximum
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Safety Agency Approvals

<ul style="list-style-type: none">• CAN/CSA-C22.2 No. 60950-1-07• ANSI/UL 60950-1• IEC 60950-1	<ul style="list-style-type: none">• EN 60950-1 Safety of Information Technology Equipment• EN 60825-1• EN 60825-2
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Brocade SLX 9540 Switch Specifications *(continued)*

Power and Grounding

- ETS 300 132-1 Equipment Requirements for AC Power Equipment Derived from DC Sources
 - ETS 300 132-2 Equipment Requirements for DC Powered Equipment
 - ETS 300 253 Facility Requirements
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Physical Design and Mounting

Rack mount 19-inch rack mount supporting racks compliant with:

- ANSI/EIA -310-D
 - GR-63-CORE Seismic Zone 4
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Environmental Regulatory Compliance

- EU 2011/65/EU RoHS
 - EU 2012/19/EU WEEE
 - EC/1907/2006 REACH
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Brocade SLX 9540 Ordering Information

Part Number

Description

Brocade SLX 9540 Switch Models

BR-SLX-9540-24S-AC-F	Brocade SLX 9540-24S Switch AC with Front to Back airflow. Supports 24×10 GbE/1 GbE + 24×1 GbE ports.
BR-SLX-9540-24S-DC-F	Brocade SLX 9540-24S Switch DC with Front to Back airflow. Supports 24×10 GbE/1 GbE + 24×1 GbE ports.
BR-SLX-9540-24S-AC-R	Brocade SLX 9540-24S Switch AC with Back to Front airflow. Supports 24×10 GbE/1 GbE + 24×1 GbE ports.
BR-SLX-9540-24S-DC-R	Brocade SLX 9540-24S Switch DC with Back to Front airflow. Supports 24×10 GbE/1 GbE + 24×1 GbE ports.
BR-SLX-9540-48S-AC-F	Brocade SLX 9540-48S Switch AC with Front to Back airflow. Supports 48×10 GbE/1 GbE + 6×100 GbE/40 GbE ports.
BR-SLX-9540-48S-DC-F	Brocade SLX 9540-48S Switch DC with Front to Back airflow. Supports 48×10 GbE/1 GbE + 6×100 GbE/40 GbE ports.
BR-SLX-9540-48S-AC-R	Brocade SLX 9540-48S Switch AC with Back to Front airflow. Supports 48×10 GbE/1 GbE + 6×100 GbE/40 GbE ports.
BR-SLX-9540-48S-DC-R	Brocade SLX 9540-48S Switch DC with Back to Front airflow. Supports 48×10 GbE/1 GbE + 6×100 GbE/40 GbE ports.

Brocade SLX 9540 Upgrade Licenses

BR-SLX-9540-24S-COD-P	Upgrade 24 x 1 GbE ports to 24×10 GbE/1 GbE ports. (SLX 9540-24S)
BR-SLX-9540-2C-POD-P	Ports on Demand to enable 2×100 GbE/40 GbE ports. (SLX 9540-24S)
BR-SLX-9540-ADV-LIC-P	Advanced Feature License for MPLS, BGP-EVPN, CE2.0, NSX (SLX 9540-24S, SLX 9540-48S)

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