

SRX4100 and SRX4200 Services Gateways



Product Overview

The SRX4100 and SRX4200 Services Gateways offer outstanding protection, performance, scalability, availability, and integrated security services. Designed for high-performance security services architectures and seamless integration of networking and security in a single platform, the SRX4100 and SRX4200 are best suited for enterprise data centers, campuses, and regional headquarters, with a focus on application visibility and control, intrusion prevention, advanced threat protection, authentication, confidentiality of information, and integrated cloud-based security. Both devices are powered by Junos OS, the industry-leading operating system that keeps the world's largest mission-critical enterprise networks secure.

Product Description

The Juniper Networks® SRX4100 and SRX4200 Services Gateways are high-performance, next-generation firewalls and hardware-accelerated security services gateways that protect mission-critical data center networks, enterprise campuses, and regional headquarters. The SRX4100 and SRX4200 not only provide best-in-class security and advanced threat mitigation capabilities, they also integrate carrier-class routing in the same platform.

The SRX4100 and SRX4200 deliver a next-generation security solution that supports the changing needs of cloud-enabled enterprise networks. Whether rolling out new services in an enterprise data center or campus, connecting to the cloud, complying with industry standards, or achieving operational efficiency, the SRX4100 and SRX4200 help organizations realize their business objectives while providing scalability, ease of management, secure connectivity, and advanced threat mitigation capabilities. The SRX4100 and SRX4200 protect key corporate assets as next-generation firewalls, act as enforcement points for cloud-based security solutions, and provide application visibility and control to improve the user and application experience.

Architecture and Key Components

The SRX4100 and SRX4200 hardware and software architecture provides cost-effective security performance in a small 1 U form factor. Purpose-built to protect up to 40 Gbps Internet Mix (IMIX) firewall throughput network environments, the SRX4100 and SRX4200 incorporate multiple security services and networking functions on top of the industry-leading Juniper Networks Junos® operating system. The SRX4100 supports up to 20 Gbps (IMIX) of firewall performance, 7 Gbps of next-generation firewall (application security, intrusion prevention, enhanced URL filtering, and logging), and 5 Gbps of IPsec VPN in data center, enterprise campus, and regional headquarter deployments with IMIX traffic patterns. The SRX4200 supports up to 40 Gbps of firewall performance, 15 Gbps of next-generation firewall, and up to 9.6 Gbps of IPsec VPN in data center, enterprise campus, and regional headquarter deployments with IMIX traffic patterns.

Table 1: SRX4100 and SRX4200 Statistics¹

	SRX4100	SRX4200
Firewall throughput	40 Gbps	80 Gbps
Firewall throughput—IMIX	20 Gbps	40 Gbps
Firewall throughput with application security	18 Gbps	35 Gbps
IPsec VPN throughput—IMIX	5 Gbps	9.6 Gbps
Intrusion prevention	10 Gbps	20 Gbps
NGFW ² throughput	7 Gbps	15 Gbps
Connections per second	175,000	350,000
Maximum session	5 million	10 million

¹Performance, capacity and features listed are based on systems running Junos OS 15.1x49 and are measured under ideal testing conditions. Actual results may vary based on Junos OS releases and by deployments.

²Next-generation firewall (NGFW) is a combination of advanced features such as application security, IPS, and URLF in addition to the foundational services such as logging and stateful firewall.



The SRX4100 and SRX4200 recognize more than 3,500 applications and nested applications in plain-text or SSL-encrypted transactions. The firewalls also integrate with

Microsoft Active Directory and combine user information with application data to provide network-wide application and user visibility and control.

Features and Benefits

Table 2: SRX4100 and SRX4200 Features and Benefits

Business Requirement	Feature/Solution	SRX4100/SRX4200 Advantages
High performance	Up to 80 Gbps of firewall throughput (up to 40 Gbps of IMIX firewall throughput)	<ul style="list-style-type: none"> • Best suited for enterprise campus and data center edge deployments • Ideal for secure router deployments at the head office • Addresses future needs for scale and feature capacity
High-quality end-user experience	Application visibility and control	<ul style="list-style-type: none"> • Detects 3,500+ L3-L7 applications, including Web 2.0 • Controls and prioritizes traffic based on application and use role • Inspects and detects applications inside SSL-encrypted traffic
Advanced threat protection	Intrusion prevention system (IPS), antivirus, antispam, Spotlight Secure, Sky Advanced Threat Prevention	<ul style="list-style-type: none"> • Provides real-time updates to IPS signatures and protects against exploits • Implements industry-leading antivirus and URL filtering • Delivers open threat intelligence platform that integrates with third-party feeds • Protects against zero-day attacks
Professional-grade networking services	Routing, secure wire	<ul style="list-style-type: none"> • Supports carrier-class advanced routing and quality of service (QoS)
Highly secure	IPsec VPN	<ul style="list-style-type: none"> • Provides high-performance IPsec VPN with dedicated crypto engine • Offers diverse VPN options for various network designs, including remote access and dynamic site-to-site communications • Simplifies large VPN deployments with auto VPN • Includes hardware-based crypto acceleration
Highly reliable	Chassis cluster, redundant power supplies	<ul style="list-style-type: none"> • Provides stateful configuration and session synchronization • Supports active/active and active/backup deployment scenarios • Offers highly available hardware with dual power supply unit (PSU) • Delivers dedicated control and fabric link with seamless high availability
Easy to manage and scale	On-box GUI, Junos Space Security Director	<ul style="list-style-type: none"> • Enables centralized management for auto-provisioning, firewall policy management, Network Address Translation (NAT), and IPsec VPN deployments • Includes simple, easy-to-use on-box GUI for local management
Low TCO	Junos OS	<ul style="list-style-type: none"> • Integrates routing and security in a single device • Reduces OpEx with Junos OS automation capabilities



SRX4100



SRX4200

SRX4100 and SRX4200 Services Gateways Specifications

Software Specifications

Firewall Services

- Stateful and stateless firewall
- Zone-based firewall
- Screens and distributed denial of service (DDoS) protection
- Protection from protocol and traffic anomalies
- Unified Access Control (UAC)

Network Address Translation (NAT)

- Source NAT with Port Address Translation (PAT)
- Bidirectional 1:1 static NAT
- Destination NAT with PAT
- Persistent NAT
- IPv6 address translation

VPN Features

- Tunnels: Generic routing encapsulation (GRE), IP-IP, IPsec
- Site-site IPsec VPN, auto VPN, group VPN
- IPsec crypto algorithms: Data Encryption Standard (DES), triple DES (3DES), Advanced Encryption Standard (AES-256)
 - IPsec authentication algorithms: MD5, SHA-1, SHA-128, SHA-256
 - Pre-shared key and public key infrastructure (PKI) (X.509)
 - Perfect forward secrecy, anti-reply
 - IPv4 and IPv6 IPsec VPN
 - Multi-proxy ID for site-site VPN
 - Internet Key Exchange (IKEv1, IKEv2), NAT-T
 - Virtual router and quality-of-service (QoS) aware
- Standard-based dead peer detection (DPD) support

High Availability Features

- Virtual Router Redundancy Protocol (VRRP) – IPv4 and IPv6
- Stateful high availability:
 - Dual box clustering
 - Active/passive
 - Active/active
 - Configuration synchronization
 - Firewall session synchronization
 - Device/link detection
- IP monitoring with route and interface failover

Application Security Services

- Application visibility and control
- Application-based firewall
- Application QoS
- Advanced/application policy-based routing feature (APBR)
- User-based firewall
- Intrusion prevention system
- Antivirus
- Antispam
- Category/reputation-based URL filtering
- SSL forward proxy

Threat Defense and Intelligence Services

- Spotlight Secure threat intelligence
- Protection from botnets (command and control)
- Adaptive enforcement based on GeoIP
- Sky Advanced Threat Prevention to detect and block zero-day attacks

Routing Protocols

- IPv4, IPv6, static routes, RIP v1/v2
- OSPF/OSPF v3
- BGP with route reflector
- IS-IS
- Multicast: Internet Group Management Protocol (IGMP) v1/v2; Protocol Independent Multicast (PIM) sparse mode (SM)/dense mode (DM)/source-specific multicast (SSM); Session Description Protocol (SDP); Distance Vector Multicast Routing Protocol (DVMRP); Multicast Source Discovery Protocol (MSDP); reverse path forwarding (RPF)
- Encapsulation: VLAN, Point-to-Point Protocol over Ethernet (PPPoE)
- Virtual routers
- Policy-based routing, source-based routing
- Equal-cost multipath (ECMP)

QoS Features

- Support for 802.1p, DiffServ code point (DSCP), EXP
- Classification based on VLAN, data-link connection identifier (DLCI), interface, bundles, or multifield filters
- Marking, policing, and shaping
- Classification and scheduling
- Weighted random early detection (WRED)
- Guaranteed and maximum bandwidth
- Ingress traffic policing
- Virtual channels

Network Services

- Dynamic Host Configuration Protocol (DHCP) client/server/relay
- Domain Name System (DNS) proxy, dynamic DNS (DDNS)
- Juniper real-time performance monitoring (RPM) and IP monitoring
- Juniper flow monitoring (J-Flow)

Advanced Routing Services

- MPLS (RSVP, LDP)
- Circuit cross-connect (CCC), translational cross-connect (TCC)
- L2/L2 MPLS VPN, pseudowires
- Virtual private LAN service (VPLS), next-generation multicast VPN (NG-MVPN)
- MPLS traffic engineering and MPLS fast reroute

Management, Automation, Logging, and Reporting

- SSH, Telnet, SNMP
- Smart image download
- Juniper CLI and Web UI
- Juniper Networks Junos Space Security Director
- Python
- Junos events, commit and OP scripts
- Application and bandwidth usage reporting
- Debug and troubleshooting tools

Hardware Specifications

Table 3: SRX4100 and SRX4200 Hardware Specifications

Connectivity	SRX4100	SRX4200
Total onboard ports	8x1GbE/10GbE	8x1GbE/10GbE
Onboard small form-factor pluggable plus (SFP+) transceiver ports	8x1GbE/10GbE	8x1GbE/10GbE
Out-of-Band (OOB) management ports	1x1GbE	1x1GbE
Dedicated high availability (HA) ports	2x1GbE/10GbE (SFP/SFP+)	2x1GbE/10GbE (SFP/SFP+)
Console (RJ-45)	1	1
USB 2.0 ports (type A)	2	2
Memory and Storage		
System memory (RAM)	64 GB	64 GB
Secondary storage (SSD)	240 GB with 1+1 RAID	240 GB with 1+1 RAID
Dimensions and Power		
Form factor	1U	1U
Size (WxHxD)	17.48 x 1.7x.25 in (44.39 x 4.31 x 63.5 cm)	17.48 x 1.7x.25 in (44.39 x 4.31 x 63.5 cm)
Weight (device and PSU)	Chassis with two AC power supplies: 29 lb (13.15 kg) Chassis with two DC power supplies: 28.9 lb (13.06 kg) Chassis with package for shipping: 47.5 lb (21.54 kg)	Chassis with two AC power supplies: 29 lb (13.15 kg) Chassis with two DC power supplies: 28.9 lb (13.06 kg) Chassis with package for shipping: 47.5 lb (21.54 kg)
Redundant PSU	1+1	1+1
Power supply	2x 650 W redundant AC-DC/DC-DC PSU	2x 650 W redundant AC-DC/DC-DC PSU
Average power consumption	200 W	200 W
Average heat dissipation	685 BTU / hour	685 BTU / hour
Maximum current consumption	4A (for 110 V AC power) 2A (for 220 V AC power) 9A (for -48 V DC power)	4A (for 110 V AC power) 2A (for 220 V AC power) 9A (for -48 V DC power)
Maximum inrush current	50 A by 1 AC cycle	50 A by 1 AC cycle
Acoustic noise level	70 dBA	70 dBA
Airflow/cooling	Front to back	Front to back
Operating temperature	32° to 104° F (0° to 40° C)	32° to 104° F (0° to 40° C)
Operating humidity	5% to 90% noncondensing	5% to 90% noncondensing
Meantime between failures (MTBF)	12 years (105,120 hours)	12 years (105,120 hours)
FCC classification	Class A	Class A
RoHS compliance	RoHS 2	RoHS 2
Performance and Scale		
Routing/firewall (64 B packet size) throughput Gbps ¹	5	10
Routing/firewall (IMIX packet size) throughput Gbps ¹	20	40
Routing/firewall (1,518 B packet size) throughput Gbps ¹	40	80
IPsec VPN (IMIX packet size) Gbps ¹	5	9.6
IPsec VPN (1,400 B packet size) Gbps ¹	10	20
Application visibility and control in Gbps ²	18	35
Recommended IPS in Gbps ²	10	20
Next-generation firewall in Gbps ²	7	15
Connections per second (CPS)	175,000	350,000
Maximum security policies	60,000	60,000
Maximum concurrent sessions (IPv4 or IPv6)	5 million	10 million
Route table size (RIB/FIB) (IPv4 or IPv6)	2 million/2 million	2 million/2 million

¹ Throughput numbers based on UDP packets and RFC2544 test methodology

² Throughput numbers based on HTTP traffic with 44 KB transaction size and up to the numbers captured here

Juniper Networks Services and Support

Juniper Networks is the leader in performance-enabling services that are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to maximize operational efficiency while reducing costs and minimizing risk, achieving a faster time to value for your network. Juniper Networks ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability. For services information specific to SRX Series Services Gateways, please read the [Firewall Conversion Service](#) or the [SRX Series QuickStart Service](#) data sheets. For more details, please visit www.juniper.net/us/en/products-services.

Ordering Information

To order Juniper Networks SRX Series Services Gateways, and to access software licensing information, please visit the [How to Buy](#) page.

About Juniper Networks

Juniper Networks challenges the status quo with products, solutions and services that transform the economics of networking. Our team co-innovates with customers and partners to deliver automated, scalable and secure networks with agility, performance and value. Additional information can be found at [Juniper Networks](#) or connect with Juniper on [Twitter](#) and [Facebook](#).

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