Juniper’s Security Platform: Software-Defined Secure Networks (SDSN)

Today’s layered security model (based on perimeter security) is not enough to protect against new sophisticated threats and the increasing surface area of possible attacks. SDSN is the future of network security, embracing SDN by leveraging the cloud to solve current network security issues more effectively.

SDSN evolves the old-guard security mindset around policy, detection, and enforcement. The main components include:

1. Leveraging the network as points of threat detection and enforcement.
2. Leveraging the economy of the cloud to share threat intelligence at scale to accelerate and adapt detection.
3. Implementing a centralized controller/policy engine to dynamically adapt policy that stays ahead of constantly evolving threats and attacks.

Learn more about Software-Defined Secure Networks by watching this video.

Branch and Secure Router

- **Reduce TCO with secure router**, advanced routing (MPLS), switching, next-gen firewall, and UTM firewall functionalities on a single branch SRX Series product.
- **Increased reliability with automation** for bootstrapping, policy configuration, and other operational management processes.
- **Consistent, common feature set** across all the branch models.
- **Simplified administration**: Centralized management, autoVPN, and dynamic hub-and-spoke VPN functionality reduces overhead.
- **Zero-touch provisioning**: Junos automation framework provides zero-touch provisioning which provides ease of management.

Data Center

- **Scalability and reliability**: In-service software and hardware upgrades reduce downtime.
- **Fastest virtual firewall** in the industry with the 100 Gbps vSRX.
- **Automation**: The Junos automation framework reduces the time and resources required for repetitive, mundane, day-to-day operations.
- **Security efficacy**: When tested with NSS, Juniper achieved 98% efficacy, greater than PAN and Cisco.
- **IPv6 and advanced routing**: Junos routing features IPv6 and dynamic routing protocol.
- **Open standards** support third-party threat feeds, allowing customers to write their own IPS and application ID signatures.

Service Provider

- **Reduce OpEx**: The same Junos platform for routing, switching, and security, with a common automation framework, reduces learning curve.
- **Reliability**: The SRX5000 line tested six-nines, or <14 seconds of downtime per year. ISSU and ISHU provide easy ways to upgrade the firewalls within minutes, reducing downtime.
- **Additional revenue opportunities with VCPE/CCPE**: Next-gen firewall services, router, and T1 connectivity, all in the same platform.
- **100GbE**: The SRX Series features the only 100GbE interface shipping today.
- **100 Gbps vSRX** for virtual LAN scaling up and out while using load balancers.
- **Automation reduces complexity**: Junos for security, switching, and routing eliminates complexity; providing consistent commands and scripts that can be programmed and reused.

* Future

Enterprise Edge

- **Scalability and reliability** suitable for enterprises, service providers, and carriers.
- **Security efficacy**: When tested with NSS, Juniper achieved 98% efficacy, greater than PAN and Cisco.
- **Automation, commit, and rollback**: Automate firewall change management processes, reducing the risk of human error. Roll back to the last known running configuration, completely eliminating the risk of prolonged outages due to misconfigurations.
- **Zero-day protection**: Sky Advanced Threat Prevention integrates with SRX Series firewalls to detect and enforce malware never seen before.
- **Scalability** for scale (0.7 Gbps to 2 Tbps) and form factor (appliance, chassis, virtual).

- **Automatically update policies** based on threats discovered by Sky Advanced Threat Prevention and deploy to firewalls and switches with Policy Enforcer.
- **Open** signature; supports any third-party threat feed and supports open standards.
- **Network and security unified** via Junos and automation.

Network as a single enforcement domain - Every element is a policy enforcement point
**Key Juniper Differentiators**

- **World’s fastest firewall:** Ideally suited for service provider, large enterprise, and public sector networks, the high-end SRX Series supports 2 Tbps firewall, six-nines carrier-grade reliability, more than 100 Gbps intrusion prevention system (IPS), and an industry record-breaking 100 million concurrent user sessions Tbps firewall throughput in an IMIX configuration.

- **World’s fastest virtual firewall:** 5x speed enhancements for the vSRX enables the industry’s first 100 Gbps firewall (future). The vSRX delivers core firewall, networking, and advanced security capabilities for enterprises and service providers.

- **Latest centralized management control:** Junos Space Security Director manages thousands of enforcement points and updates threats within seconds with newly designed intuitive interface.

- **Threat intelligence and advanced malware protection:** Spotlight Secure and Sky Advanced Threat Prevention are state-of-the-art intelligence gathering/enforcement and zero-day malware prevention solutions built to stop threats faster.

- **Open and programmable:** Automate the tasks of setting up, rolling out, or managing security infrastructure using standard, open APIs.

**Competition**

Juniper competes mainly with Check Point, Cisco, Fortinet, and Palo Alto Networks.

**Check Point**
- Often more expensive than Juniper
- Experiences frequent customer support issues
- Requires two-box solution for branch use case; does not support PoE
- Cannot support MPLS and IPsec on same box
- Lack of automation (auto-provision and config)
- Not shipping 100GbE interface yet
- Licensing model is extremely confusing

**Cisco**
- Competing product lines from Cisco create confusion for customers
- Closed models lock customers in for years
- Multiple management consoles
- Lacks next-gen firewall features for small branch deployments (for less than 1 Gbps)
- 100GbE interface is not available
- Appliance strategy is expensive; forklift upgrade required from 10GbE to 40GbE
- ACI, SDN controller supports only Cisco devices

**Fortinet**
- Good hardware pricing but expensive support pricing, making overall TCO high
- Poor performance when anything but firewall services are turned on
- Performance drops 93% when SSL decryption is enabled (worst in NSS SSL test)
- Deceiving data sheet numbers
- Customers are required to purchase both a switch and a router at the branch location, which adds to the cost
- Reliability: No third-party validation (such as Telecordia)

**Palo Alto Networks**
- Very expensive
- No complete end-to-end solution from SDN controller to underlay network to security
- Low SSL forward proxy performance (can drop 70%)
- Limited routing and MPLS support on the box
- Unable to provide automation to bootstrap, configure, manage, and retire the firewall
- Unable to support 100 million sessions
- Lacks data center experience and scalability
- Does not support 100GbE interface

**Related Information**
- Enhanced Security Director Video
- Sky Advanced Threat Prevention Video
- SRX Series Sales Central Page (internal and ingenious champions only—requires login)
- Public website for SRX Series and Security
- Compare all SRX Series Products Online

**Product and Services**

<table>
<thead>
<tr>
<th>Model #</th>
<th>Interfaces</th>
<th>FW Performance: Large Packet (Gbps)</th>
<th>FW Performance: IMIX (Gbps)</th>
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