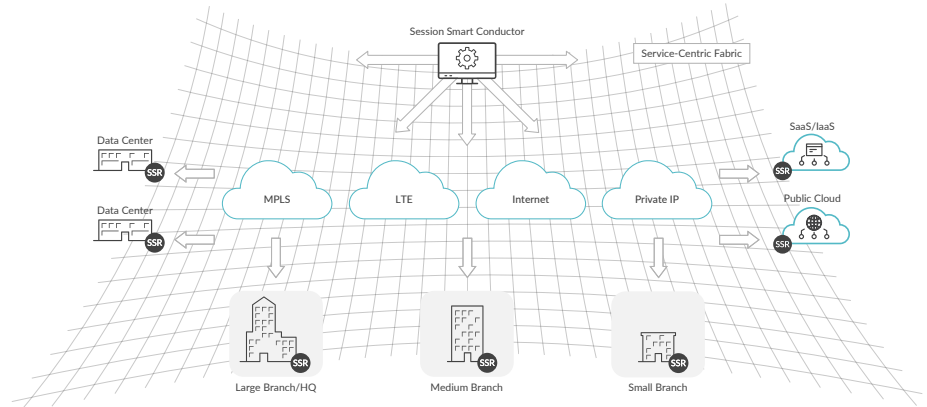


# SMART, SECURE ROUTING THAT DOES EXACTLY WHAT YOUR BUSINESS NEEDS

## Service Overview

The Session Smart Router takes distributed, software-defined routing to an entirely new level. This innovative networking solution enables enterprises and service providers to build service-centric fabrics that deliver breakthroughs in simplicity, security, performance, and savings. And most importantly, it creates a networking environment that delivers the agility businesses need to move with their customers and outpace their competitors.



## Product Components

The platform is comprised of two primary components: the Session Smart Router and the Session Smart Conductor. Together, they form a single logical control plane that is highly distributed, and a data plane that is truly session-aware. Together they support wide range of deployment models scaling from a small branch office to a high capacity edge router to a hyper-scale software-defined data center.

### Session Smart Router

The Session Smart Router combines a service-centric, control plane and a session aware data plane to offer IP routing, feature-rich policy management, improved visibility and proactive analytics.

### Session Smart Conductor

The Session Smart Conductor is a centralized management and policy engine that provides orchestration, administration, zero-touch provisioning, monitoring, and analytics for distributed Session Smart Routers—while maintaining a network-wide, multi-tenant service, and policy data model.

Category	Features
System and Network Services	SNAT/DNAT, Destination NAT, Shared NAT pool, IPv4/IPv6, DHCP client, DHCP relay, DHCP server, DHCP server extensions, DHCPv6 PD, DNS client, PPPoE, Proxy ARP, NAT traversal, BFD, Inline flow performance monitoring, Extended firewall Pinhole, Path MTU discovery
Advanced Services	SVR (Secure Vector Routing), Multipoint SVR, IPv6 SVR, Overlapping IP service segmentation, Ethernet over SVR
Routing	Service based routing, Static routing, BGPv4, BGP Multi-Path, BGP Route Reflector, BGP Graceful Restart, BGP over SVR, BGP route map, BGP prefix list, OSPFv2, BGP VRF, STEP (Services and Topology Exchange Protocol)
Traffic Engineering	Traffic scheduling and shaping, Flow Policing and Shaping, Packet marking (DiffServ), Service rate limiting
Network Firewall	Distributed stateful firewall, Distributed and automated access control, Fine-grained segmentation/tenancy, ICSA network firewall certified, ICMP blackhole
Application Identification	HTTP/S domain based identification, O365 identification, DNS based identification, Application Categorization
Analytics	Session metrics, network metrics, LTE metrics, peer path SLA, MOS score, session analytics, SSL/TLS metrics, session IPFIX records
Session Encryption	Session Payload Encryption (AES-256, AES-128), Session/Route Authentication (HMAC-SHA1, HMAC-SHA256, HMAC-SHA-256-128), Adaptive encryption, Rekeying, FIPS 140-2 Validated, Enhanced Replay Attack protection
Session Management	Vector based path selection, Load Balancing using proportional and hunt, Session migration, Session duplication, Session duplication for non-SVR, Session duplication for inter-node links, MOS for VoIP, Path of last resort, Session optimization, Session reliability
Monitoring	Monitoring agent, SNMPv2, Syslog, Audit logs
Management and Remote Access	GUI, CLI, REST, Remote access over SVR (LTE), Upgrade rollback, Zero Touch Provisioning, Remote service packet capture, User-defined configuration templates, Role based access control
AAA	Local registry, LDAP
Interface Options	Ethernet, LTE Support including Dual LTE and Dual SIM, T1
Platforms	Bare metal x86 server, KVM, VMWare ESXi, OpenStack, <a href="#">AWS</a> , <a href="#">Azure</a> , <a href="#">Google Cloud</a>

## Hardware Recommendation

### Session Smart Router

The Session Smart Router supports a wide range of deployment models including scaling from a small branch office to a high capacity edge router to a hyper-scale, software-defined data center.

### Juniper Certified Whitebox Platforms

Juniper Networks publishes a list of platforms which have been certified to run the Session Smart Router. Additional information can be found at [doc.128technology.com](http://doc.128technology.com).

Deployment	Throughput	Recommended Hardware
Bare Metal	1-2 Gbps	4C ATOM/8GB RAM
	2-4 Gbps	8C ATOM/16GB RAM
	10-20 Gbps	8C XEON/32GB RAM
	10-20 Gbps	12C XEON/128GB RAM
	80-100 Gbps	22C XEON/256GB RAM

### NFX Platforms

The Session Smart Router can run as a Virtual Network Function (VNF) using VirtIO and SRIOV network virtualization technologies on the following NFX platforms:

Deployment	Configuration	Mode	Throughput	Encrypted Throughput
NFX 150	4C VNF	VirtIO	1170 Mb/s	200 Mb/s
	4C VNF	SRIOV	1800 Mb/s	210 Mb/s
NFX 250	4C VNF	SRIOV	4000 Mb/s	370 Mb/s
	4C VNF	SRIOV	4500 Mb/s	460 Mb/s
NFX 350	4C VNF	SRIOV	4500 Mb/s	460 Mb/s
	8C VNF	SRIOV	4500 Mb/s	1710 Mb/s

### Public Cloud Providers

The Session Smart Router can run as an instance on AWS and Azure.

Deployment	Throughput	Recommended Instance
AWS	3 Gbps	c5n.2xlarge (4 forwarding cores)



### Session Smart Conductor

The Session Smart Conductor can be deployed on a wide range of platforms including bare metal, virtualized on a hypervisor, as well as on private and public cloud providers.




#### Juniper Certified Whitebox Platforms

The Session Smart Conductor can run in bare metal. The recommended hardware sizing depends on the number of Session Smart Routers to be managed by the Session Smart Conductor.

Deployment	Number of Managed Routers	Recommended Hardware
Bare Metal	1-20	2C XEON/8GB RAM
	20-50	4C XEON/8GB RAM
	50-200	8C XEON/16GB RAM
	200-1000	12C XEON/32GB RAM
	100000-2000	16C XEON/64GB RAM

#### Public Cloud Providers

The Session Smart Conductor can run on all major private cloud providers. The recommended instance depends on the number of Session Smart Routers to be managed by the Session Smart Conductor:

Deployment	Number of Managed Routers	Recommended Instance
<b>AWS</b> 	1-20	c5.xlarge
	20-50	c5.2xlarge
	50-500	c5.4xlarge
	500-2000	c5.9xlarge
<b>Azure</b> 	1-20	F4s v2
	20-50	F8s v2
	50-500	F16s v2
	500-2000	F32s v2
<b>Google</b> 	1-20	Gen: First, Custom: 4 vCPU/8GB RAM
	20-50	n1-highcpu-8
	50-500	Gen: First, Custom: 16 vCPU/32GB RAM
	500-2000	Gen: First, Custom: 32 vCPU/64GB RAM

## Juniper Service and Support

Juniper ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability. For more details, please visit [www.juniper.net](http://www.juniper.net).

## About Juniper Networks

Juniper Networks brings simplicity to networking with products, solutions and services that connect the world. Through engineering innovation, we remove the constraints and complexities of networking in the cloud era to solve the toughest challenges our customers and partners face daily. At Juniper Networks, we believe that the network is a resource for sharing knowledge and human advancement that changes the world. We are committed to imagining groundbreaking ways to deliver automated, scalable and secure networks to move at the speed of business.

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