Session Smart Networks License Entitlement Document

Abstract

This document defines licenses and accompanying entitlements and permitted features for Juniper Session Smart Networks products. It is included by reference with Juniper's Master Purchase and License Agreement

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Contents

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Introduction

Juniper Session Smart Networking software and related documentation (collectively, “Software”) are provided under the Juniper Master Purchase and License Agreement posted at https://www.juniper.net/content/dam/www/assets/legal/us/en/end_user_mpla_v1_february_2021.pdf (or another end user license agreement signed by Juniper Networks and the End User) (the “Master Agreement”). This License Entitlement Document is intended to help you understand the editions, entitlements, restrictions, prerequisites, and/or special license rights associated with the Software. If you have a question about your license rights and obligations, please contact your Juniper Networks sales representative.

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Licensing Information

Software Licenses for Session Smart Networking

Product licenses and associated entitlements are described in the following table:

Product License	License Entitlements and Permitted Features
Session Smart Networks: L3 NID License – maximum bandwidth throughput metric-simplex deployment Example SKU: S-SSN-S-xxM-1 S-SSN-S-xxM-3 S-SSN-S-xxM-5	The L3 NID license of the Session Smart Networking software entitles you to the following functionalities: monitoring & remote access, network management, application identification, analytics and static routing. A listing of the features provided by each functionality can be found below in the section Session Smart Networks: Subscription Licensing Tiers. This subscription license entitles you to a maximum bandwidth throughput for an individual (or simplex) L3 NID instance of the Session Smart Networking software. An individual (or simplex) L3 NID instance is defined as one instance of the Session Smart Networking software deployed on a single device. For a highly available (HA) L3 NID pair, two of these licenses are required. The terms of these licenses are one (1), three (3) or five (5) years. Standard support and maintenance services are included with this subscription as described in the Juniper Care Software Advantage Service Description Document available at https://www.juniper.net/assets/us/en/local/pdf/service-descriptions/9060083-en.pdf.

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Product License	License Entitlements and Permitted Features
Session Smart Networks: Services Edge Router License - maximum bandwidth throughput metric-simplex deployment and HA licenses Example SKU: S-SSN-A1-xxM-1 S-SSN-A1-xxM-3 S-SSN-A1-xxM-5 S-SSN-A1-xxM-H-1 S-SSN-A1-xxM-H-3 S-SSN-A1-xxM-H-5	The Services Edge Router license of the Session Smart Networking software entitles you to the following functionalities: high availability, monitoring & remote access, network management, application identification, analytics, static routing, dynamic routing, network address translation, traffic engineering, network firewall, SIP ALG, GRE and IPsec. A listing of the features provided by each functionality can be found below in the section Session Smart Networks: Subscription Licensing Tiers. This subscription license entitles you to a maximum bandwidth throughput for an individual (or simplex) Services Edge Router instance of the Session Smart Networking software. An individual (or simplex) Services Edge Router instance is defined as one instance of Session Smart Networking software deployed on a single device. For a highly available (HA) Services Edge Router pair, both a simplex and an HA license must be ordered. The HA license entitles the user to operate the element as a redundant node in an HA pair. The terms of these licenses are one (1), three (3) or five (5) years. This license entitles you to use the Juniper Session Smart Conductor software used in accordance with the router maximum bandwidth capacity entitlement. Standard support and maintenance services are included with this subscription as described in the Juniper Care Software Advantage Service Description Document available at https://www.juniper.net/assets/us/en/local/pdf/service-descriptions/9060083-en.pdf.

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Product License	License Entitlements and Permitted Features
Session Smart Networks: Services Edge Router License - advanced security-simplex deployment and HA licenses **Example SKU:** S-SSN-A2-xxM-1 S-SSN-A2-xxM-3 S-SSN-A2-xxM-5 S-SSN-A2-xxM-H-1 S-SSN-A2-xxM-H-3 S-SSN-A2-xxM-H-5	The Advanced Security Bundle license of the Services Edge Router solution (Session Smart Networking software) entitles you to the functionalities of the product license S-SSN-A1 plus the advanced security functionality. A listing of the features provided by each functionality can be found below in the section Session Smart Networks: Subscription Licensing Tiers. This subscription license entitles you to a maximum bandwidth throughput for an individual (or simplex) Services Edge Router instance of the Session Smart Networking software. An individual (or simplex) Services Edge Router instance is defined as one instance of Session Smart Networking software deployed on a single device. For a highly available (HA) Services Edge Router pair, both a simplex and an HA license must be ordered. The HA license entitles the user to operate the element as a redundant node in an HA pair. The terms of these licenses are one (1), three (3) or five (5) years. This license entitles you to use the Juniper Session Smart Conductor software used in accordance with the router maximum bandwidth capacity entitlement. Standard support and maintenance services are included with this subscription as described in the Juniper Care Software Advantage Service Description Document available at https://www.juniper.net/assets/us/en/local/pdf/service-descriptions/9060083-en.pdf.

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Product License	License Entitlements and Permitted Features
Session Smart Networks: Session Smart Router License - maximum bandwidth throughput metric-simplex deployment and HA licenses Example SKU: S-SSN-P1-xxM-1 S-SSN-P1-xxM-3 S-SSN-P1-xxM-5 S-SSN-P1-xxM-H-1 S-SSN-P1-xxM-H-3 S-SSN-P1-xxM-H-5	The Session Smart Router license of the Session Smart Networking software entitles you to the following functionalities: high availability, monitoring & remote access, network management, application identification, analytics, static routing, dynamic routing, network address translation, traffic engineering, network firewall, SIP ALG, GRE, IPsec, SD-WAN, Secure Vector Routing, session management, encryption, Ethernet over SVR and advanced routing. A listing of the features provided by each functionality can be found below in the section Session Smart Networks: Subscription Licensing Tiers. This subscription license entitles you to a maximum bandwidth throughput for an individual (or simplex) Session Smart Router instance of the Session Smart Networking software. An individual (or simplex) Session Smart Router instance is defined as one instance of 128T software deployed on a single device. For a highly available (or HA) Session Smart Router pair, both a simplex and an HA license must be ordered. The HA license entitles the user to operate the element as a redundant node in an HA pair. The terms of these licenses are one (1), three (3) or five (5) years. This license entitles you to use the Juniper Session Smart Conductor software used in accordance with the router maximum bandwidth capacity entitlement. Standard support and maintenance services are included with this subscription as described in the Juniper Care Software Advantage Service Description Document available at https://www.juniper.net/assets/us/en/local/pdf/service-descriptions/9060083-en.pdf.

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Product License	License Entitlements and Permitted Features
Session Smart Networks: Session Smart Router License - maximum bandwidth throughput metric-simplex deployment and HA licenses Example SKU: S-SSN-P2-xxM-1 S-SSN-P2-xxM-3 S-SSN-P2-xxM-5 S-SSN-P2-xxM-H-1 S-SSN-P2-xxM-H-3 S-SSN-P2-xxM-H-5	The Advanced Security Bundle license of the Session Smart Router solution (Session Smart Networking software) entitles you to the functionalities of the product license S-SSN-P1 plus the advanced security functionality. A listing of the features provided by each functionality can be found below in the section Session Smart Networks: Subscription Licensing Tiers. This subscription license entitles you to a maximum bandwidth throughput for an individual (or simplex) Session Smart Router instance of the Session Smart Networking software. An individual (or simplex) Session Smart Router instance is defined as one instance of 128T software deployed on a single device. For a highly available (or HA) Session Smart Router pair, both a simplex and an HA license must be ordered. The HA license entitles the user to operate the element as a redundant node in an HA pair. The terms of these licenses are one (1), three (3) or five (5) years. This license entitles you to use the Juniper Session Smart Conductor software used in accordance with the router maximum bandwidth capacity entitlement. Standard support and maintenance services are included with this subscription as described in the Juniper Care Software Advantage Service Description Document available at https://www.juniper.net/assets/us/en/local/pdf/service-descriptions/9060083-en.pdf.

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SaaS Licenses for Session Smart Networking

Product licenses and associated entitlements are described in the following table:

Product License	License Entitlements and Permitted Features
Session Smart Networks: WAN Assurance SaaS Subscription license for SSN Flex Tiers - maximum bandwidth throughput metric-simplex deployment and HA licenses. 1,3 and 5 year terms Example SKU: S-WAN-S-50M-1 S-WAN-A1-100M-1 S-WAN-A1-100M-H-1 S-WAN-A2-100M-1 S-WAN-A2-100M-H-1 S-WAN-P1-1G-1 S-WAN-P1-1G-H-1 S-WAN-P2-1G-1 S-WAN-P2-1G-H-1	The WAN Assurance SaaS licenses are combined with their companion on-premises software license to deliver cloud-based day 0, 1 and 2 operations for Session Smart Networking software including L3NIDs, SER and SSR, this license entitles you to the following functionalities: Zero touch provisioning, WAN edge (gateway) insights, Service Level Expectations (SLEs), software updates and upgrades. The terms of these licenses are one (1), three (3) or five (5) years. This subscription license must be paired with the on-premises software license with matching metrics including Flex tier (e.g., S|A1|P1), bandwidth throughput, high availability support and license term. This license does not include entitlement for Marvis Virtual Network Assistant which requires a separate additional license. Standard support and maintenance services are included with this subscription as described in the Juniper Care Software Advantage Service Description Document available at https://www.juniper.net/assets/us/en/local/pdf/service-descriptions/9060083-en.pdf.

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Product License	License Entitlements and Permitted Features
Session Smart Networks: AI-Driven SD-WAN (AIWAN) SaaS licenses for SSN Flex Tiers - maximum bandwidth throughput metric-simplex deployment and HA licenses. 1,3 and 5 year terms Example SKU: S-AIWAN-S-50M-1 S-AIWAN-A1-100M-1 S-AIWAN-A1-100M-H-1 S-AIWAN-A2-100M-1 S-AIWAN-A2-100M-H-1 S-AIWAN-P1-1G-1 S-AIWAN-P1-1G-H-1 S-AIWAN-P2-1G-1 S-AIWAN-P2-1G-H-1	The AIWAN SaaS licenses combine the entitlement of the WAN Assurance SaaS license with the SSN Flex Tier license entitlement in a single fully integrated SaaS License. This subscription license must be paired with one these licenses with matching metrics including Flex tier (e.g., S|A1|P1), bandwidth throughput, license term. This license does not include entitlement for Marvis Virtual Network Assistant which requires a separate additional license. The terms of these licenses are one (1), three (3) or five (5) years. This subscription license entitles you to a maximum bandwidth throughput for an individual (or simplex) instance of Session Smart Networking software (L3NID, SER and SSR). An individual (or simplex) instance is defined as one instance of 128T software deployed on a single device. For ahighly available (or HA) Session Smart Router pair, both a simplex and an HA license must be ordered. The HA license entitles the user to operate the element as a redundant node in an HA pair. The terms of these licenses are one (1), three (3) or five (5) years. This subscription license also entitles you to cloud-based day 0, 1 and 2 operations for Session Smart Networking software including L3NIDs, SER and SSR, this license entitles you to the following specific functionalities: Zero touch provisioning, WAN edge (gateway) insights, Service Level Expectations (SLEs), software updates and upgrades. This license does not include entitlement for Marvis Virtual Network Assistant which requires a separate additional license. This license does not include entitlement for the SSN Conductor software. Standard support and maintenance services are included with this subscription as described in the Juniper Care Software Advantage Service Description Document available at https://www.juniper.net/assets/us/en/local/pdf/service-descriptions/9060083-en.pdf.

Product License	License Entitlements and Permitted Features
Virtual Network Assistant SaaS license for WAN edge operations for SSN Flex Tiers - maximum bandwidth throughput metric-simplex deployment and HA licenses. 1,3 and 5 year terms Example SKU: S-VNA-50M-1 S-VNA-100M-1 S-VNA-1G-1	The Virtual Network Assistant (VNA) SaaS licenses enable AI-driven WAN edge operations for a single instance or high-availability pair of the Session Smart Networking software (L3NID, SER and SSR). This license requires that WAN Assurance has been enabled by the purchase of either a WAN Assurance SaaS License or an AI-Driven SD-WAN (AIWAN) bundled SaaS license. This license entitles you to AI-driven capabilities including the Virtual Network Assistant conversational interface, anomaly detection, Marvis Actions, software updates and upgrades. Standard support and maintenance services are included with this subscription as described in the Juniper Care Software Advantage Service Description Document available at https://www.juniper.net/assets/us/en/local/pdf/service-descriptions/9060083-en.pdf.

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Juniper Session Smart Networks Instance-Based Entitlement

The Juniper Session Smart Networks instance bandwidth throughput-based license is similar to traditional router licenses. A separate node-based software license is associated with each physical Session Smart Networking instance in a network and specifies the maximum licensed bandwidth throughput for a 1, 3 or 5-year period. For highly available deployments, two physical instances and therefore two software licenses are required. An instance license does not require license activation keys and is not “node-locked” to a specific hardware asset (e.g., by serial number).

Bandwidth Utilization License

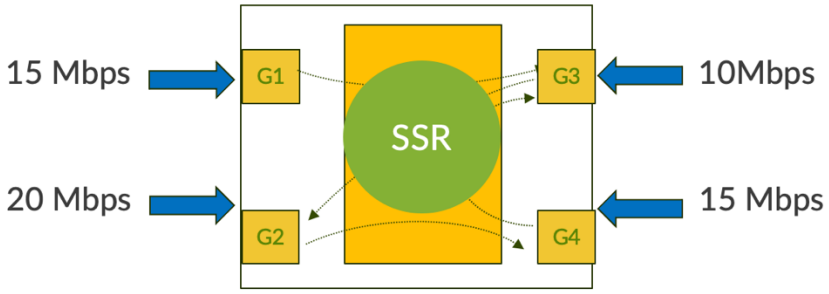
Each router license specifies the maximum licensed bandwidth utilization. Determining compliance with the maximum licensed bandwidth utilization is done by comparing the peak router bandwidth utilization to the maximum licensed bandwidth utilization. The peak router bandwidth utilization is measured using a monthly 95th percentile bandwidth utilization calculation model described below.

The router bandwidth utilization is calculated based on the aggregate of all the bandwidth throughput from all sessions traversing the router (i.e., the total sum of the forwarding throughput of the router across all interfaces). The bandwidth throughput associated with a designated management interface is not included in the calculation. An example of router bandwidth utilization calculation is set forth below:

Router Bandwidth Throughput

G1 ---> G3: 15Mbps
G2---> G4: 20Mbps
G3---> G2: 10Mbps
G4 ---> G3: 15Mbps

Total: 60 Mbps



The router bandwidth utilization is measured on a 5-second interval. Every 5-minutes, the last 5-second samples (60 samples) are averaged. Of all 5-minute averaged values, the top highest 5% values are discarded (95th Percentile Operation). The 95th Percentile Operation is calculated every month. The peak router bandwidth utilization is the highest router bandwidth utilization value of all resulting values after the 95th Percentile Operation during the month. Note that because the router bandwidth utilization measurements are averaged, and the top highest 5% values are discarded, microbursts are filtered. The Juniper Session Smart Networking software does not police or enforce a maximum bandwidth throughput by default.

The peak router bandwidth utilization measurements are available on every Juniper Session Smart Router. The values are available via the Entitlement page in the GUI or via API (REST resource: /api/v1/router/<router-name>/entitlement/utilization). Additionally, the values for every router can be retrieved and displayed from the Juniper Session Smart Conductor CLI via the command “show entitlement router all”.

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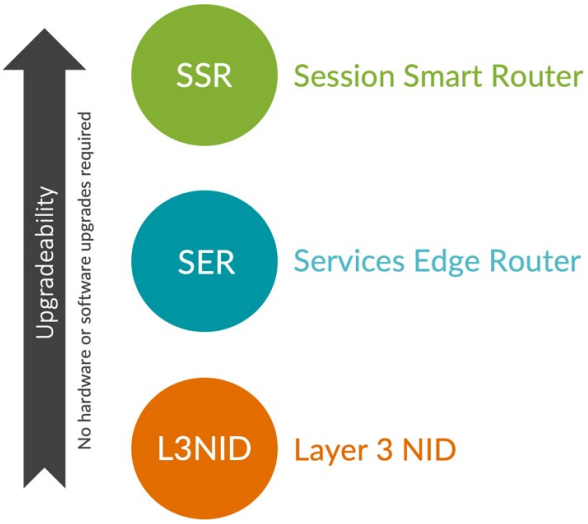
Session Smart Networks: Subscription Licensing Tiers

The Juniper Session Smart Software is licensed in 2 dimensions, by functional subscription tiers and by bandwidth throughput. All licenses are available as 1-year, 3-year or 5-year term licenses.

The Session Smart Networking software contains three functional subscription tiers: The Layer 3 NID (Network Interface Device), the Services Edge Router (SER) and the Session Smart Router (SSR). Each subscription tier builds upon the previous tier and entitles the user the aggregate functionality defined in the "license entitlements and permitted features" above.



Each subscription tier is further licensed by the following bandwidth throughput tiers: 10 Mbps, 25 Mbps, 50 Mbps, 100 Mbps, 250 Mbps, 500 Mbps, 1Gbps, 2.5 Gbps, 5 Gbps, 10 Gbps, 20 Gbps, 40 Gbps, 100 Gbps.

The features included with each functionality are described below:

- High availability: redundant operation across 2 devices, VRRP interface redundancy.
- Monitoring and remote access: monitoring agent, SNMPv2, Syslog, monitoring and remote access over SVR.
- Network management: path MTU discovery, MSS auto adjust, IP TTL handling, DHCP client, DHCP relay, DHCP server, DHCP server extended Config, DHCPv6 PD, Proxy ARP, DNS client, PPPoE, PPPoE VLAN
- Application identification: SSL/TLS application identification, O365 module application identification, DNS based application identification, Application fingerprinting and categorization.
- Analytics: Session metrics, network metrics, LTE metrics, peer path SLA, MOS score, session analytics, SSL/TLS metrics, Session IPFIX records.
- Static routing: service route non peer type, static routes.
- Dynamic routing: BGPv4, BGP Multi-Path, BGP Route Reflector, BGP Graceful Restart, BGP over SVR, BGP Route Map, BGP Prefix List, OSPFv2, BGP VRF, OSPF VRF, BFD for Routing Protocols, BGP Conditional advertisement.
- Network address translation: SNAT/DNAT, destination NAPT, shared NAT Pool, IPv4/v6.
- Traffic engineering: classification, packet marking (DiffServ), traffic scheduling and shaping, per flow policing and shaping, per adjacency traffic engineering.
- Network firewall: distributed stateful firewall, distributed and automated access control by service, ICSA network firewall certified, extended firewall pinhole, ICMP blackhole.
- SIP ALG: static SIP ALG.
- GRE: Generic Routing Encapsulation tunneling, SSE Provider connectivity.
- IPsec client: IPsec, IKEv2, SSE Provider connectivity.
- Secure vector routing: service route peer type, ping over SVR.

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- Session management: load balancing using proportional and hunt, dynamic routing based on application/service policy, session migration, session duplication, session duplication for non-SVR, session duplication for inter-node links, path of last resort, session optimization, session reliability, path selection (SLA, MoS, average latency), DSCP based service identification for IPsec, service health learning, service route redundancy, adaptive FEC.
- Encryption: per session payload encryption (AES-256, AES-128), per session/route authentication (HMAC-SHA1, HMAC-SHA256, HMACSHA-256-128), adaptive encryption, rekeying, FIPS140-2 validated, ICSA PCI DSS compliance, enhanced replay attack protection, transport-based encryption.
- Ethernet over SVR: layer 2 services over Secure Vector Routing.
- Advanced routing: STEP, STEP HA, STEP SLA.
- Advanced security: URL filtering, IDP.

Upgrades

The Juniper Session Smart Networking software supports license upgrades in two scenarios. The first scenario is an upgrade of bandwidth throughput from one tier (e.g., 50 Mbps) to a higher tier (e.g., 250 Mbps). The second upgrade scenario is an upgrade from one Session Smart Network functional subscription tier to a higher-level function subscription tier (e.g., from the L3NID to the full Session Smart Router).

In both cases, the customer is required to purchase the new term license for the (upgrade-to) product. The term of the new license must be the same or greater than the old licenses. The bandwidth throughput tier and the functional subscription tiers must be the same or greater than the old license. The new license term will start on the day of purchase of the new license to Juniper Networks. The old license (upgrade-from) will be terminated, and Juniper Networks will provide a credit for the remaining value of the old subscription.

Downgrades

Downgrades are not supported for active subscriptions. Downgrades are defined as a change of bandwidth throughput or functional subscription tier that is of less value than the current subscription.

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