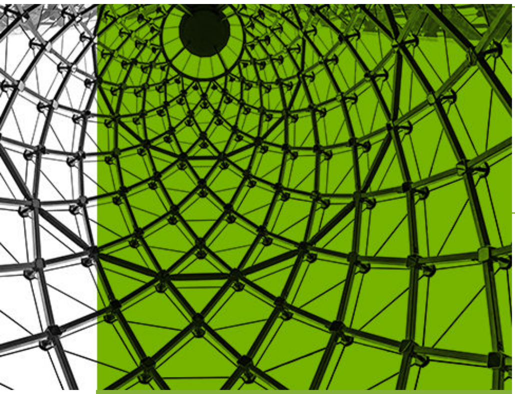


JUNIPER WAN ASSURANCE DATASHEET

Product overview

Juniper cloud services are moving IT operations closer to the intelligent Self-Driving Network™ in the era of the AI-native enterprise. Juniper WAN Assurance delivers simpler operations, shorter mean time to repair (MTTR), and better visibility into end user experiences across the WAN.

Product description

Juniper® WAN Assurance is a cloud service that brings automated operations and service levels to the enterprise access layer at the WAN edge. WAN Assurance is a key component of the Juniper AI-native SD-WAN solution, enabling IT teams to deliver superior user experiences across the WAN. When used in conjunction with Juniper® Wired and Wireless Assurance, the service transforms and unites all operations across network switches, IoT devices, access points, servers, printers, and other equipment. Juniper Session Smart™ Routers (SSR) and Juniper SRX Series Firewalls provide rich streaming telemetry that enables application health, WAN link health, and gateway health metrics and anomaly detection.

Marvis® AI further simplifies troubleshooting and streamlines the helpdesk with self-driving actions that automatically remediate issues. Marvis® AI Assistant turns insights into actions and fundamentally transforms IT operations from reactive troubleshooting to proactive remediation.

Juniper cloud services are 100% programmable using open APIs for full automation and/or integration with your IT applications.

WAN service-level experiences

Get operational visibility into user WAN experiences with service-level expectations (SLEs) for SSRs or SRX Series Firewalls. Measure the impact of both gateway and WAN circuit health on end user application experiences. A WAN Link Health SLE, which accounts for network congestion, cable issues, and ISP network availability, delivers insights into how these factors are affecting a given network user or application. The Juniper Mist™ SLE dashboard helps identify root causes of suboptimal application experiences in just a few clicks to proactively isolate "needle-in-a-haystack" problems (Figure 1).

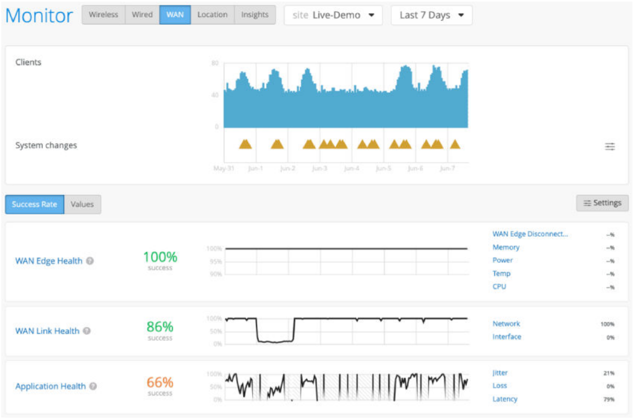


Figure 1: WAN SLEs

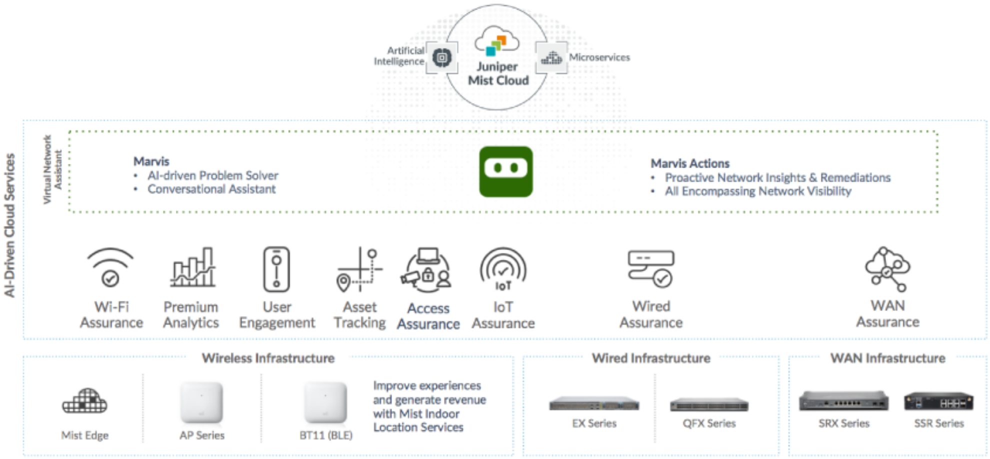


Figure 2: AI-native enterprise portfolio overview

WAN insights driven by Marvis AI

Know exactly how SSRs or SRX Series Firewalls are performing with metrics and insights down to the port level. These include CPU, memory utilization, bytes transferred, traffic utilization, and power draw. WAN Assurance also logs gateway events like configuration changes and system alerts. WAN and IPsec utilization insights tell you how much traffic traverses your encrypted tunnel versus your local breakout. You also gain visibility into per-user and per-application performance and experiences (Figure 3).

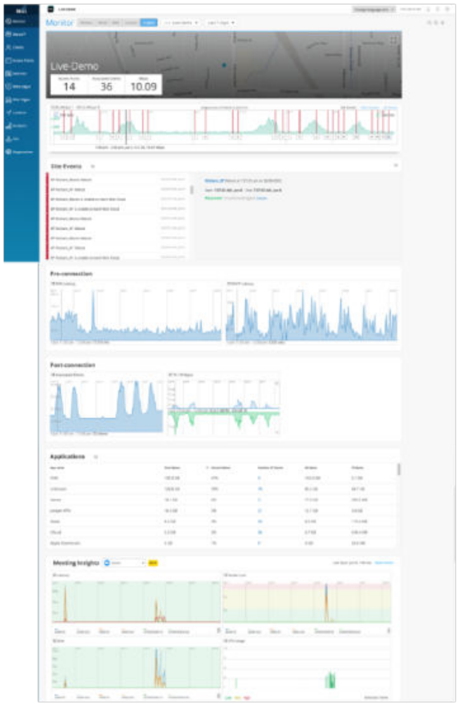
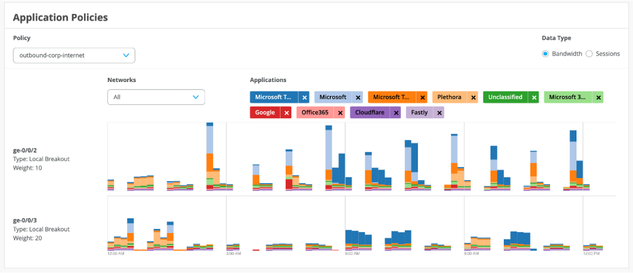


Figure 3: WAN Insights

The Congestion SLE lets operators know if their network interfaces are being overutilized and causing poor user experience. With App Routing Insights, operators can figure out what is disproportionally using bandwidth and the best way to remediate the problem. Options could be to purchase more bandwidth, adjust capacity planning, or throttle certain traffic types (Figure 4).



Application Policies

Policy: outbound-corp-internet

Data Type: ● Bandwidth ○ Sessions

Networks: All

Applications: Microsoft T... × | Microsoft × | Microsoft T... × | Plethora × | Unclassified × | Microsoft 3... × | Google × | Office365 × | Cloudflare × | Fastly ×

ge-0/0/2
Type: Local Breakout
Weight: 10

ge-0/0/3
Type: Local Breakout
Weight: 20

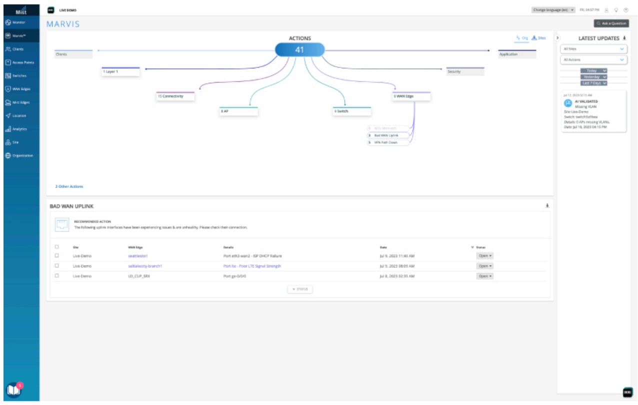
Figure 4: App Routing Insights

Dynamic packet capture (dPCAP) gives operators insights on how to shorten MTTR and easily search for needle-in-a-haystack issues. Instead of recreating issues on the network to capture the right packets, Marvis AI will notice when an issue is occurring and automatically capture the appropriate packets for analysis.

Marvis AI Assistant for WAN

Marvis AI Assistant moves IT operations closer to the Self-Driving Network™ with simplified troubleshooting and performance analysis for helpdesk staff and network administrators.

Marvis Actions is a one-stop information center that provides visibility into site-wide network issues that need immediate attention. Use Marvis Actions to find issues affecting user experience and get recommendations into resolutions (Figure 5).



Jul 12, 2023 02:15 AM
AI VALIDATED
Missing VLAN
Site: Live-Demo
Switch: switch5a5bea
Details: 0 APs missing VLANs.
Date: Jul 10, 2023 04:15 PM

BAD WAN UPLINK

RECOMMENDED ACTION
The following uplink interfaces have been experiencing issues & are unhealthy. Please check their connection.

Site	WAN Edge	Details	Date	Status
Live-Demo	seattlesbr1	Port eth3-wan2 - ISP DHCP Failure	Jul 9, 2023 11:40 AM	Open
Live-Demo	saltlakecity-branch1	Port lte - Poor LTE Signal Strength	Jul 9, 2023 08:09 AM	Open
Live-Demo	LD_CUP_SRX	Port ge-0/0/0	Jul 8, 2023 02:35 AM	Open

Figure 5: Marvis Actions

The Marvis Conversational Interface service allows IT teams to quickly get answers to troubleshooting questions. Simply ask a question in natural language, such as, “Why is my user’s video call experience bad?” and Marvis AI Assistant will provide recommendations to improve those experiences. Figure 6 shows Marvis AI Assistant informing IT of a WAN issue causing the CEO to have a poor video call experience.

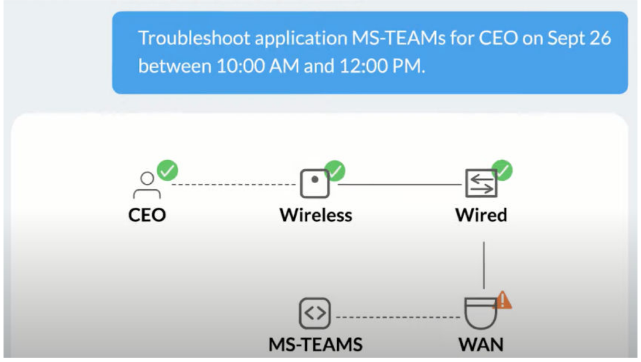

Troubleshoot application MS-TEAMs for CEO on Sept 26 between 10:00 AM and 12:00 PM.

Figure 6: Troubleshooting an application

Marvis Minis perform automated speed tests that give enterprises the ability to see if they are getting the full bandwidth that they purchased. Even when users aren’t present, operators are alerted to upstream network issues. This gives operators the opportunity to work on resolving issues before end users show up to the office.

AI-native SD-WAN powered by Session Smart

In addition to providing AIOps for Day 2 operations, WAN Assurance delivers life cycle management and operations. This includes Day 0 and Day 1 operations for the Juniper AI-native SD-WAN solution with Session Smart Routers that fuel an advanced, service-centric networking solution. Session Smart technology delivers an experience-based SD-WAN with deep session visibility and insights and fine-grained session control. Its tunnel-free approach enables agile, secure, and resilient WAN connectivity with breakthrough economics and simplicity.

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With WAN Assurance, IT teams can onboard, configure, and deploy SSRs and SRX Series Firewalls with operations such as:

- Zero Touch Provisioning (ZTP) and easy onboarding with Mist Claim Code
- Easy templating for rapid scale deployments
- Path and peering preferences
- Service and application policies
- Security policies
- Network and NAT configuration

Session Smart Routers are available on dedicated appliances (Table 1).

Table 1: SSR Appliances and suggested locations

Appliance	Suggested Location	Max Throughput (Unencrypted)	Relevant Datasheet
SSR120	Small branch	1.5 Gbps	SSR100 line of routers
SSR130	Medium branch	2 Gbps (line rate on ports)	
SSR400	Small branch		SSR400 line of routers
SSR440	Medium branch		
SSR1200	Large branch or small data center / campus	10 Gbps	SSR1000 line of routers
SSR1300	Medium data center / campus	20 Gbps (max. throughput on NIC)	
SSR1400	Large data center / campus	40 Gbps	
SSR1500	Extra large data center / campus	50 Gbps (max. throughput on NIC)	

The hardware datasheets provide standard specifications such as interface options, number of interfaces, encrypted throughput, memory, and hard drive capacity.

SSRs are also available in other form factors, including certified white boxes (see the Session Smart Routing datasheet) or the Juniper® NFX Series Network Services Platforms.

WAN Assurance also supports the following SRX Series Firewalls when deployed as WAN gateways:

- vSRX
- SRX 300
- SRX 320
- SRX 340
- SRX 345
- SRX 380

- SRX 1500
- SRX 1600
- SRX 2300
- SRX 4100
- SRX 4200
- SRX 4300
- SRX 4600

Choosing a WAN Edge device

When choosing a WAN edge platform within Juniper WAN Assurance, SSRs are generally recommended for their efficiency in network utilization, quick failover, rich telemetry, and integrated security, leveraging Secure Vector Routing and AI-enhanced cloud management.

However, for networks already using Juniper's SRX Series Firewalls, integrating these with Mist enhances their capabilities and offers a more gradual transition to SD-WAN. This enables immediate AI and cloud management benefits while accommodating familiar environments.

Additionally, organizations can configure their security capabilities directly on the SSR and/or the SRX through Mist.

Ultimately, the choice between SSR and SRX should align with your specific needs and goals, ensuring a seamless integration with Mist.

Branch in a box

The SSR400 line of routers offers a “Branch in a box” solution. It consolidates multiple branch functions, including Wi-Fi, switching, SD-WAN, and security into a single, unified, and easy-to-manage platform. This simplifies operations by eliminating the need to deploy and manage a complex array of separate devices from various vendors, significantly reducing a branch's physical footprint and lowering its total cost of ownership.

Advanced Security Pack

Session Smart Router’s Advanced Security Pack (Figure 7) integrates further security functionality into the routing fabric:

- URL filtering prevents access to and from specific sites and to meet special business requirements
- An Intrusion Detection and Prevention System (IDS/IPS) protects against advanced malicious attacks

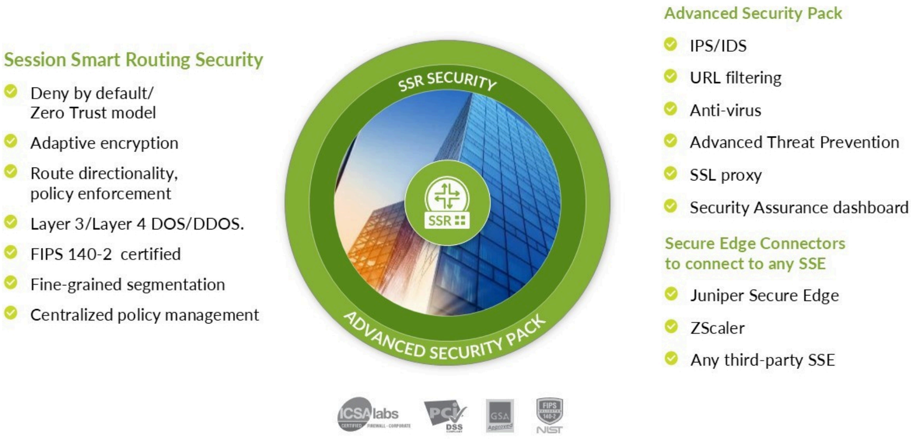
Session Smart Routing Security
Deny by default/ Zero Trust model
Adaptive encryption
Route directionality, policy enforcement
Layer 3/Layer 4 DOS/DDOS.
FIPS 140-2 certified
Fine-grained segmentation
Centralized policy management
SSR SECURITY
SSR
ADVANCED SECURITY PACK
Advanced Security Pack
IPS/IDS
URL filtering
Anti-virus
Advanced Threat Prevention
SSL proxy
Security Assurance dashboard
Secure Edge Connectors to connect to any SSE
Juniper Secure Edge
ZScaler
Any third-party SSE
ICSA labs
PCI DSS
GSA
FIPS
NIST

Figure 7: Foundational SSR router security and the Advanced Security Pack

These features eliminate the need for additional security appliances at the branch, providing this enhanced functionality within the Mist ecosystem of wired, wireless, and SD-WAN. If more cloud-integrated security is needed, customers have can add Juniper Secure Edge to the environment.

Meeting you where you are

When it comes to your network security, we want to help you on your terms. You can install the Advanced Security Pack standalone or alongside a Juniper SRX Series Firewall at your branch or data center.

The Advanced Security Pack can also be used to help you with your SASE Journey, giving you protection in the branch or data center before easily offloading that traffic to an SSE such as Juniper Secure Edge.

Risk profiling driven by AI

WAN Assurance is a key component of the Risk Profiling solution that brings network security to the distributed network edge. Risk

Profiling provides visibility into infected wired or wireless clients that's observable within the cloud and assigns a threat score determined by the Juniper ATP cloud. From within the cloud, you can geospatially locate infected devices and take one-touch mitigation actions like ban or deauthenticate.

About Juniper Networks

Juniper Networks is leading the convergence of AI and networking. Juniper's Mist™ AI-native networking platform is purpose-built to run AI workloads and simplify IT operations assuring exceptional secure user and application experiences—from the edge, to the data center, to the cloud. Additional information can be found at www.juniper.net, X, LinkedIn, and Facebook.

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