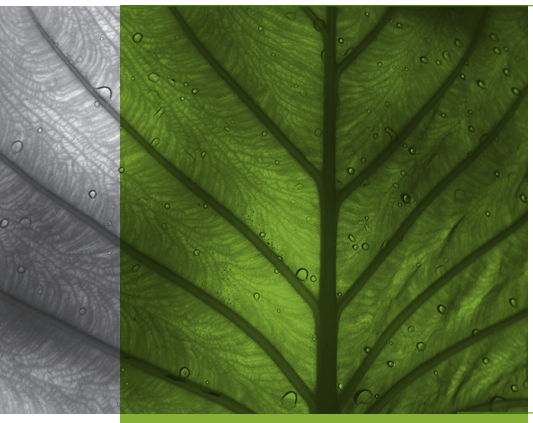

DEPLOYING ENTERPRISE-CLASS COMMUNICATIONS AS A MANAGED SERVICE WITH AI-DRIVEN SD-WAN

Ensure reliable, cost-effective, high-performance unified communications with advanced capabilities that help businesses get ahead

Challenge

MSPs need to deliver innovative new services with an accelerated time to market, but they face increasingly difficult challenges such as limited and expensive WAN bandwidth and complex architectures.

Solution

AI-driven SD-WAN, integrated with Mist AI, offers unique advantages with its ability to conserve bandwidth, guarantee SLAs, employ alternate paths for existing traffic, apply zero touch security, and provide complete visibility of sessions as they cross the network.

Benefits

- *Provides a distributed, agile, and resilient routing platform with zero-touch provisioning, centralized automation, and easily integrated orchestration*
- *Proactive AI-driven operations and support for lowest Mean Time to Repair (MTTR)*
- *Utilizes breakthrough security that applies highly flexible, dynamic segmentation*
- *Ensures cost savings and improves efficiency by eliminating middleboxes, overlays, and tunneling*

Managed service providers (MSPs) that specialize in unified communications (UC) can help organizations stay connected, enhancing collaboration so that operations align with business goals. MSPs are also a cost-effective solution for enterprises as they strive to improve their communications infrastructure. As a true partner, MSPs allow business owners to focus on growing their business rather than spending time learning new technology and managing deployment projects.

However, to be a trusted partner, MSPs need to demonstrate their ability to address enterprise communications challenges, as well as their service differentiation. By helping their customers support strategic initiatives versus the day-to-day IT activities, MSPs can offer the expertise required for enterprises to adopt innovative solutions.

One way for MSPs to provide their customers with improved UC experiences is to leverage the software-defined WAN. SD-WANs enable organizations to leverage multiple heterogeneous networks to improve resiliency, guarantee application-specific service-level agreements (SLAs), and integrate functions that would have once required standalone middleboxes.

The Juniper® AI-driven SD-WAN, integrated with Mist AI, solution brings unique advantages to SD-WAN and UC services with the ability to conserve bandwidth, guarantee SLAs, utilize alternate paths for existing traffic, and provide complete visibility of sessions as they cross the network. These advantages allow MSPs to differentiate their offerings from alternative solutions on the market, and it provides the value that helps enterprises compete and thrive.

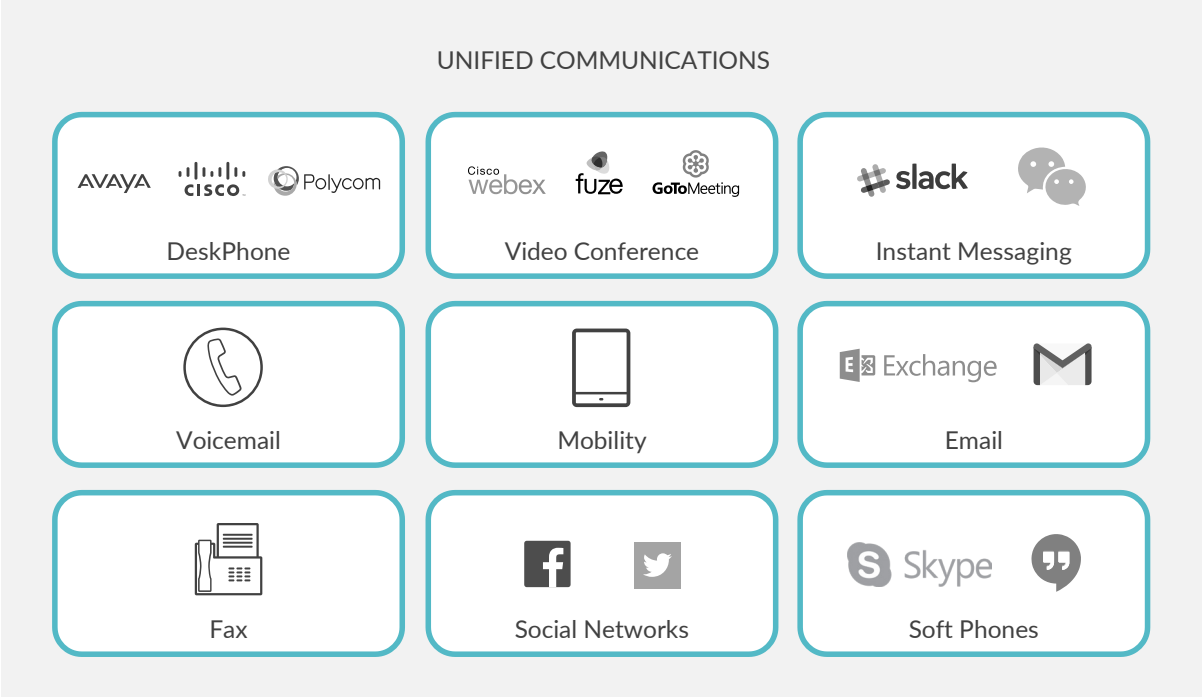

Figure 1: Unified communications (UC) applications

The Challenge

Delivering enterprise-class UC services over the WAN can be a considerable challenge for MSPs. They need to deliver innovative new services with an accelerated time to market, but they face increasingly difficult challenges such as declining revenues, increasing costs, and the burden of complex architectures. Enterprise mobility and BYOD has put the network under increasing pressure as usage of traditional desk phones declines. Businesses are turning to hybrid technologies such as Skype for Business, Google Hangouts, and other communications services. Limited and expensive WAN bandwidth, along with unpredictable Internet performance, hinders deployment of large-scale UC services, while poor traffic monitoring and network visibility cause disruption to those services.

The Juniper AI-driven SD-WAN Solution

As a key component of the AI-driven SD-WAN solution, the Juniper Session Smart Router ensures 100% uptime over heterogeneous networks to the MSP data center for enhanced reliability of hosted solutions in public clouds and Software as a Service (SaaS) applications. Backup with 4G/LTE technology guarantees connectivity in case of outages, while Secure Vector Routing (SVR) keeps sessions alive in case of failures over a single path.

Traditional solutions require backup IPsec tunnels to be set up or maintained at all times, which can drop calls causing poor user experience and unnecessary costs. With the AI-driven SD-WAN solution, UC services can be assigned to the path with the most suitable mean opinion score (MOS) to best support SLAs. These unique capabilities delivered by the Session Smart Router give MSPs a competitive advantage because they can offer a reliable quality of service (QoS) suitable for business-critical UC services that align with their customers' strategic objectives.

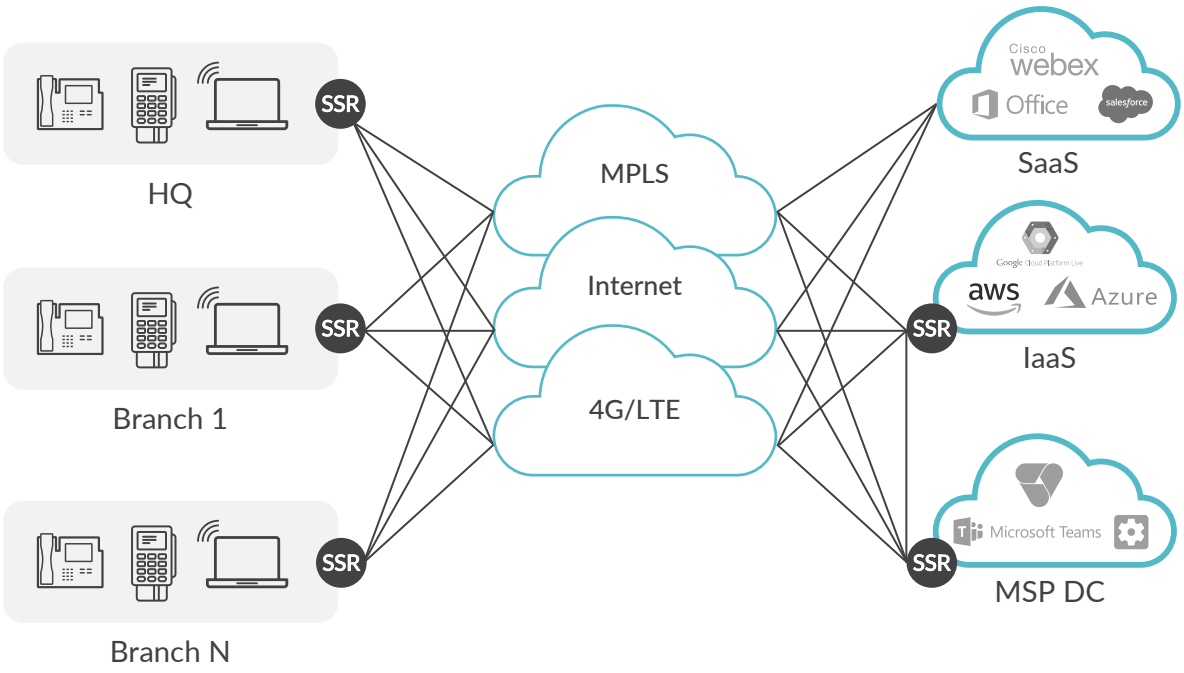

Figure 2: AI-driven SD-WAN for Unified Communications

WAN Assurance

The solution includes Juniper WAN Assurance, a cloud service that brings AI-powered automation and service levels to the solution. Driven by the power of Mist AI and Marvis Virtual Network Assistant, WAN Assurance simplifies operations with insights, proactive anomaly detection and remediation, and automated troubleshooting.

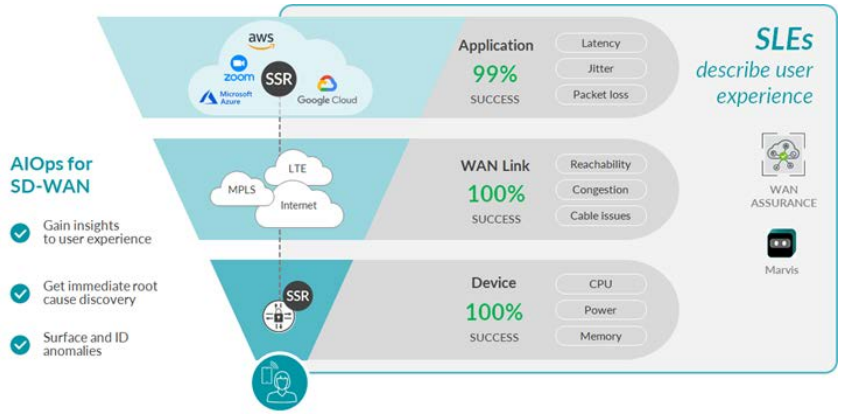

Figure 3: WAN Assurance Delivers Service Level Experiences

The resultant AIOps allows your team the ability to monitor the user experience on the network in real time and identify potential disruptions. With the help of Marvis Virtual Network Assistant, Juniper's conversational AI interface, your team can confidently and easily resolve the issue across the AI-driven SD-WAN with rapid speed (Figure 3).

For an example of WAN Assurance in action, see the short explainer video.

Unique AI-driven SD-WAN Advantages

- Session-centric routing provides the ability to route sessions over paths that meet SLAs required for UC services.
- Continuous monitoring and complete visibility helps UC providers ensure high-level QoS for the paths their services take.
- Session migration enables the session to switch paths in case of failures.
- Tunnel-free technology ensures bandwidth savings of 30-50%, resulting in lower costs and superior performance.
- Real-time application identification ensures that video and voice sessions are given appropriate priority.
- AI-driven operations and support ensures highest quality user experiences and rapid Mean Time to Repair (MTTR)

AI-driven SD-WAN Solution Features and Benefits

Features	Benefits
Transformational simplicity	• The AI-driven SD-WAN solution dramatically reduces complexity by leveraging an innovative SVR architecture. • It eliminates standalone network functions with a routing platform that provides them natively, replacing fragmented overlay-based, virtual networks with an end-to-end network model that extends across network boundaries and unmanaged network connectivity. • This provides greater opportunity for revenue to the MSP and increases customer satisfaction overall.
Breakthrough security	• AI-driven SD-WAN creates a "deny by default" routing fabric that transforms any IP network into a distributed network firewall offering adaptive encryption, per-hop authentication, and global access control. • With this solution, enterprises can gain fine-grained control with highly flexible, dynamic segmentation. • This innovative "hypersegmentation" model enables zero trust security that stretches across network barriers—even on large-scale networks.
Agility and resiliency	• MSPs can accelerate the deployment of new services and new locations with zero-touch provisioning (ZTP), centralized automation, and easily integrated orchestration. • Using a distributed, intelligent routing platform, MSPs can also respond to changing traffic conditions in real time, reacting to and optimizing the network to meet their customers' specific application requirements. • This means better margins for the MSP and a network as agile and scalable as the business demands.
Cost savings	• The AI-driven SD-WAN solution reduces complexity, inefficiency, and cost by eliminating middleboxes, overlays, and tunneling. • Providing security and load-balancing functions natively within the fabric also reduces the reliance on high-cost MPLS through the use of a range of highly optimized alternative connectivity options. • This aligns network costs with real-world consumption and enables elastic, network-wide bandwidth licensing based on peak network utilization—not overprovisioned node-based capacity. • The solution not only allows MSPs to improve margins, but to increase overall revenues as well.

Summary

Reliable, Cost-Effective, High-Performance UC with AI-driven SD-WAN

Enterprises are demanding UC solutions that support a multitude of business activities while eliminating complexity and reducing costs. With the Juniper AI-driven SD-WAN solution, MSPs can offer a reliable quality of service (QoS suitable for business-critical UC services that align with their customers' strategic objectives. AI-driven SD-WAN and the Session Smart Router enable an efficient use of bandwidth, ensure 100% uptime for UC services during failures, and provide in-depth analytics. By offering a solution that guarantees SLAs, delivers a high level of QoS, and provides complete visibility into all sessions across the network, MSPs can differentiate themselves from the competition and become a trusted partner for enterprises looking to centralize and strengthen their communications.

Next Steps

To learn more about the Juniper AI-driven SD-WAN and Juniper Session Smart Router, please contact your Juniper account representative and go to 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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