

# CREATING BUSINESS-DRIVEN NETWORKS WITH SD-WAN AS A MANAGED SERVICE

*Infuse network intelligence, security, and flexibility to support today's high-performing applications and services*

## Challenge

MSPs must offer differentiated services, provide excellent customer service, and grow revenues, while managing costs. To do this they require a new approach that allows them to innovate and differentiate their service offerings.

## Solution

The Flexible Service Edge provides a unified edge platform that supports a range of services, from connectivity to managed router to full-feature SD-WAN. Service providers can seamlessly upgrade from one service to another with only a change in licensing—meaning they only pay for what they need at the moment and disruption is kept to a minimum.

## Benefits

- Accelerated performance for applications and revenue
- Strengthened and differentiated managed security baked into the network
- Simplified, automated, and scaled service delivery and support
- Transformational and strategic SD-WAN solution for today, tomorrow, and beyond

The SD-WAN market continues to experience incredible growth. According to IDC, 75% of U.S. enterprises plan to adopt an SD-WAN solution in the next two years. For the enterprise, an MSP-delivered service can have a positive impact on CapEx as well as OpEx and remove the burden of incremental IT staff and negotiations with multiple vendors. This represents a tremendous opportunity for managed service providers (MSPs) who can deliver services to enterprises at lower costs while improving security and reliability.

The challenge for MSPs is to differentiate services, provide excellent customer service and grow revenues, while managing costs. Connectivity services may be the appropriate place to start, but to retain customers and expand market share, MSPs must provide even more value in the form of innovative new services with an accelerated time to market.

Juniper provides this differentiation with a tunnel-free solution that reduces overhead and improves application performance, reducing customer churn. The Juniper® Flexible Service Edge (FSE) provides an extensible foundation for service innovation, helping MSPs evolve their offerings and move up the value stack on their timeline. The Flexible Service Edge is a unified platform that can start as an intelligent Layer 3 network interface device (NID), upgrade to a managed router, and then finally to a Juniper Session Smart Router—providing all the benefits of the tunnel-free SD-WAN solution.

With the Flexible Service Edge, service providers now have a launching point to deliver a host of new service offerings that can help them along their journey from managed circuits to managed SD-WAN, unified communications, and total digital transformation. This solution can also be remotely upgraded without any hardware changes, software changes, or downtime, for fast and easy service turn-up.

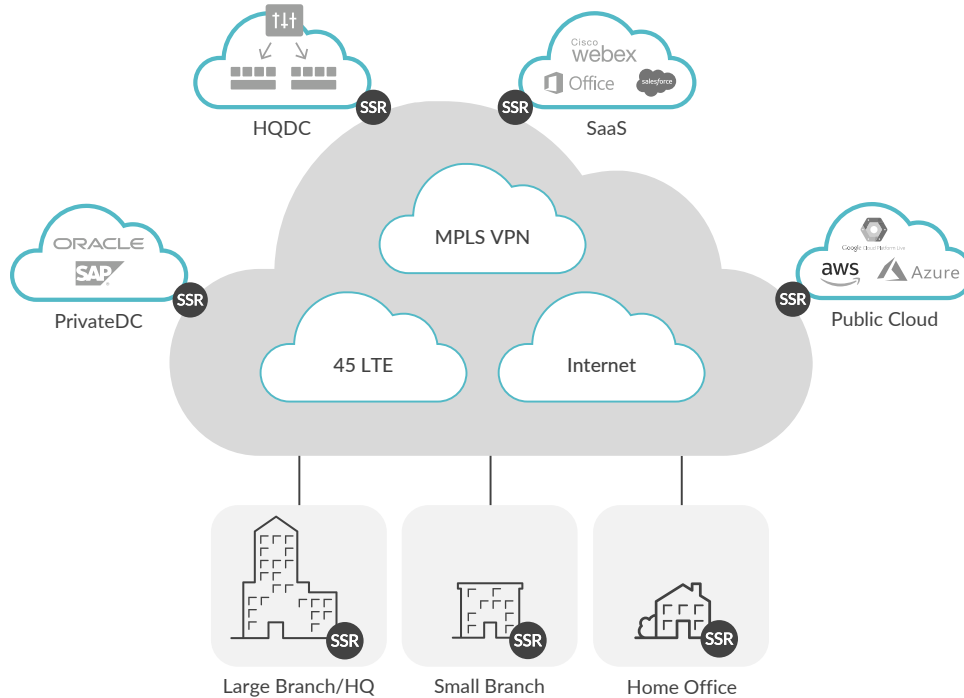


Figure 1: Session Smart SD-WAN

## The Challenge

Most SD-WAN solutions available today merely repackage legacy technologies along with abstraction, segmentation, analytics, and orchestration. While this approach may yield some business benefit, it does not provide an opportunity for MSPs to differentiate their service offerings.

All SD-WAN solutions use two or more WAN transport networks by building an overlay network with encapsulation such as generic routing encapsulation (GRE), Virtual Extensible LAN (VXLAN), IPsec, dynamic multipoint VPN (DMVPN), or a proprietary tunneling technology. Overlays and tunnels attempt to mask network weaknesses and inflexibility by introducing wrappers, but these increase complexity. This causes costly overhead and prevents end-to-end networking, which hinders performance.

To deliver a differentiated service cost effectively, MSPs require a transformational approach to SD-WAN.

## Flexible Service Edge: Foundational Platform for Service Innovation and Growth

### Establish a footprint providing connectivity with the Session Smart NID

The Flexible Service Edge Solution can function as the Juniper Session Smart NID, an intelligent Layer 3 Network Interface Device (NID), to enable or improve internet access, cloud connectivity or VPN services. The FSE gives service providers maximum flexibility and extensibility by supporting multiple access methods, including internet, Carrier Ethernet and 4G/LTE. It provides detailed visibility into application-level usage and performance data so service providers can monitor service quality and streamline diagnostics to provide a superior customer experience.

### Leverage analytics to upsell to the Session Smart Managed Router

Because service providers now understand the attributes that impact service quality at the application level, they can more clearly demonstrate to customers when they should upgrade to a more robust service, such as a Managed Router. With the FSE, service providers can easily configure, monitor and control routing for their customers. Because moving up the value chain to the Juniper Session Smart Managed Router requires only a license change but no new hardware, service providers can quickly begin delivering high-margin services with minimal disruption.

## Transform into a strategic business partner with high-value services using the Session Smart Router

When ready, service providers can upgrade their FSE to unleash the full-functionality of the Juniper Session Smart Router (SSR) including intelligent application-centric routing and advanced security and policy management. The service provider can now deliver high-value services like managed SD-WAN, IoT and multi-service edge compute (MEC) and establish itself as a strategic partner enabling its customers' digital transformation journey.

### Transformational and Strategic Approach

The Flexible Service Edge is a solution for today, tomorrow, and beyond. As the end user organization and MSP's customers grow, the Flexible Service Edge can be used to securely connect hybrid/multicloud environments as strictly network/cloud security solutions, in IoT environments, data center interconnect, and more. This is a very versatile addition to the MSP's toolbox.

### Benefits

#### Service-centric fabric

- Service providers deploy multi-cloud, MEC and 5G solutions to deliver a differentiated user experience and improve customer satisfaction. To make the business case work, service providers demand scale to manage costs and agility to achieve time-to-market goals. The FSE's software-defined fabric maintains service and tenancy context throughout the network to connect users with experiences.

#### Improve business outcomes for new and existing services

- Intense competition for connectivity services puts extreme pressure on margins. At the same time, service providers must expand into new, higher-margin businesses. The FSE platform is cost-competitive for low and high-value services. It delivers reduced opex using automation and visibility, and its session-based and tunnel-free approach results in 30-50% bandwidth cost reduction.

#### Achieve cloud scale through zero-touch provisioning

- Going beyond traditional enterprise SD-WAN to 5G, IoT and edge compute means service providers' scaling requirements are growing by orders of magnitude. FSE's zero-touch provisioning enables service providers to rapidly and cost-effectively deploy and upgrade hundreds or thousands of end-points, including analytics and policy.

## Break free from legacy architectures

- Legacy SD-WAN solutions based on static VPN-based overlays, hardware-centric connectivity, centralized hub-and-spoke routing and IP address routing context prevent service providers from achieving the agility and economics delivered from the cloud. The FSE is a software-based solution that is programmable, distributed, elastic and mobile.

## Secure the edge with confidence

- Edge compute and 5G deployments will exponentially increase the number of edge points—meaning the security risk will grow exponentially as well. Securing only the perimeter will be inadequate in this scenario. The FSE has security baked in to the platform with a zero-trust, deny-by-default fabric whose Secure Vector Routing provides fine-grained security on a session level.

## Summary—Juniper Flexible Service Edge

The Flexible Service Edge lets MSPs launch a variety of high-value, cloud-centric services—quickly and cost-effectively. The solution serves as an extensible platform for innovation, allowing you to enable new functionality and deliver new services in an incremental, non-disruptive fashion with a simple software license update. The Juniper solution redefines the WAN Service Edge, helping you extend your value proposition, strengthen customer relationships, and restore margin and revenue growth in today's hypercompetitive marketplace.

### Next Steps

To find out more about these Juniper Networks products and solutions, please visit [www.128technology.com](http://www.128technology.com).

## 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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