

# SERVICE PROVIDERS SOLUTION BRIEF

Deliver VMware NSX® SD-WAN by VeloCloud™ and Services with Confidence and Ease

Your service provider business continues to evolve, adapt, and expand to meet your customers' needs. NSX SD-WAN enables global service providers to increase revenue, deliver advanced services and increase flexibility. With NSX SD-WAN Service Providers can deliver elastic transport, performance for cloud applications, and integrate advanced services all via a zero-touch deployment model.

NSX SD-WAN seamlessly integrates with existing service provider networks and is a transformational approach for Wide Area Network (WAN) architectures. NSX SD-WAN enables bandwidth on-demand, provides direct & optimal access to cloud-based applications, simplifies deployment of services and improves operational automation.

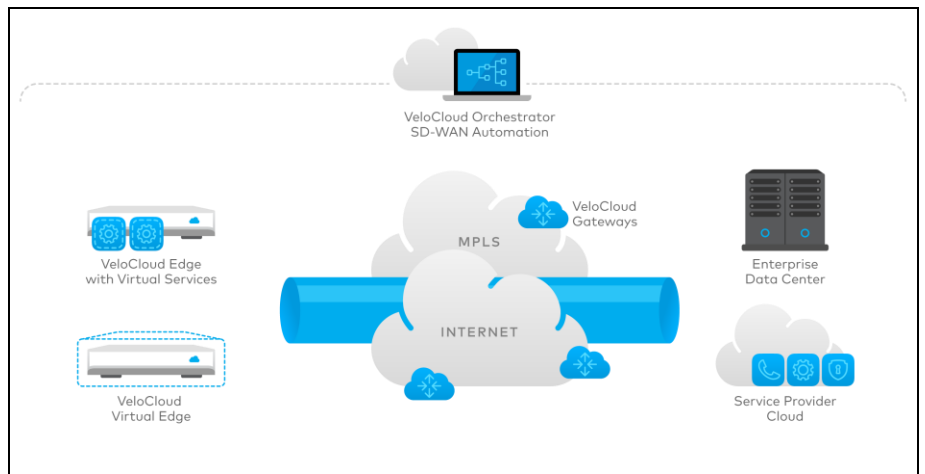


Figure 1

## NSX SD-WAN Capabilities

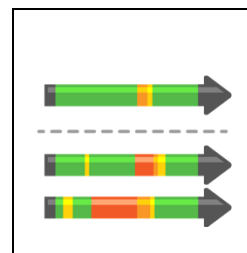
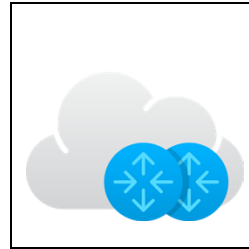


Figure 2: Unified Elastic Transport

Meet enterprise customer demands for agile and economical bandwidth expansion with new services that augment MPLS WANs using Internet bandwidth. NSX SD-WAN Dynamic Multi-Path Optimization(DMPO) enables a secure, high performance WAN between enterprise sites and virtual Gateways deployed at the provider MPLS edge. The unified NSX SD-WAN overlay controls both hybrid and Internet connected sites. VMware NSX® SD-WAN Orchestrator by VeloCloud™ also extends visibility, QoS and control to off-net and IP-VPN connected customer sites.



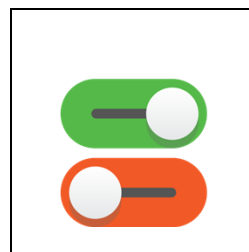
**Figure 3: Managed Cloud On-Ramp**

Enable enterprise customers to connect to cloud delivered services with confidence using an agile, transport independent overlay that ensures private network performance, reliability, and manageability. Achieve policy-based, application aware forwarding of selected traffic to cloud datacenters with a zero-touch deployment enterprise appliance or virtual NSX SD-WAN Edge. Multi-tenant virtual NSX SD-WAN Gateways are easily deployed inside cloud provider points-of-presence and provide secure handoffs segmented by customer to the desired cloud services.



**Figure 4: Virtualized Services Delivery**

VMware NSX® SD-WAN Edge by VeloCloud™ and VMware NSX® SD-WAN Gateway by VeloCloud™ in the cloud host multiple virtualized network functions (VNFs) to reduce both appliance complexity and provider truck rolls. Cloud orchestrated network services insertion forwards site traffic by application to selected services deployed at cloud POPs and enterprise regional "hubs". Virtual NSX SD-WAN Edges and virtual NSX SD-WAN Gateways delivering NSX SD-WAN services can even be deployed as VNFs on a service provider's universal CPE. Service agility is improved for faster time to revenue and reduced operational cost.



**Figure 5: Policy-Based Automation**

The NSX SD-WAN Orchestrator enables quick and cost-effective deployment of new branch sites and services. A multi-tenant, cloud-based NOC dashboard for monitoring, configuration, and troubleshooting enables efficient delivery of revenue generating managed services. New services provisioning is effortless with one-click virtual services insertion. Business- defined policies available to the end customer via self-service portals reduce costs and improve customer satisfaction. An open API enables single-pane-of-glass management integration.

The rise in online collaboration and rich media applications is driving enterprises to explore using Internet links for economical expansion of their private MPLS networks.

### Why NSX SD-WAN?

To satisfy these requirements, service providers need a solution to augment existing network services effectively. Both enterprises and their service providers must adapt their network architecture to accommodate the increasing shift of applications and datacenters to the cloud while delivering the expected levels of reliability, performance, and security.

The rapid delivery of additional value services and reduction of operational costs are driving providers to demand virtual services delivery and universal CPEs. Additionally, service providers benefit from the automation efficiencies of SDN with ease of programmability and abstraction extended from the datacenter to the complex configurations of the WAN.

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<sup>1</sup> Footnote First Line U.S. and Worldwide Server Installed Base 2007–2011 Forecast, Doc #207044, May 2007;

<sup>2</sup> Footnote Secondary Line Multicore Innovations Disrupt The Worldwide Server Market, Doc #206035, March 2007;

<sup>3</sup> Source: VMware

