

Extend VMware SD-WAN to Microsoft Azure Virtual WAN



Organizations need turnkey networking solutions that are easy to deploy, use, and manage, and that offer high availability and automatically scale to maximize the value of moving to the cloud. Through this collaboration, Microsoft and VMware offer large-scale branch connectivity in a simple, secure, and unified manner to Microsoft customers.

Overview

As migration to the cloud continues, and organizations use more software as a service (SaaS) and infrastructure as a service (IaaS) offerings from Microsoft on the Azure cloud, they need reliable, scalable, secure, and optimized access from their branch office locations to their cloud-hosted applications and services.

Legacy connectivity solutions are complex, time consuming to deploy and manage, and often lack enterprise-grade performance and security. Limited wide area network (WAN) bandwidth, poor network quality, and the high cost of private links impact productivity at branch office locations.

To provide optimized connections over the WAN to resources on Azure, Microsoft offers Azure Virtual WAN globally. VMware and Microsoft offer a joint solution that significantly improves connectivity to Azure Virtual WAN from branch office and remote locations. VMware SD-WAN™ by VeloCloud® enables customers to build networks for optimized cloud access by creating a virtual cloud network architecture that connects all their locations to Azure.

Joint customers leverage Microsoft's global WAN which spans over 170 countries and more than 8,000 ISP peerings, together with VMware SD-WAN to greatly simplify configuration for last-mile Internet connectivity and ensure application availability and performance.

This solution overview examines the various VMware SD-WAN use cases for connecting to Azure Virtual WAN.

Ensuring network performance

VMware SD-WAN aggregates all types of WAN connections—including Internet broadband, Multiprotocol Label Switching (MPLS) private lines, and wireless LTE—from branch offices and remote locations. It performs dynamic application aware per-packet link steering and path conditioning to deliver enterprise-class network quality and performance for the most demanding applications.

VMware SD-WAN enables enterprises to rapidly and cost-effectively leverage world-class SD-WAN capabilities when connecting to Microsoft Azure Virtual WAN, including traffic optimization, link remediation, security, and simplified operations. This ensures higher application performance and an improved user experience.

Cloud is about agility, availability and speed. It's about making sure the right resources are delivered just in time, reliably and efficiently, to drive the best possible business outcomes. VMware SD-WAN, as part of a virtual cloud network architecture, connects and protects applications, data, and users wherever they are.

The VMware SD-WAN Orchestrator provides a management and monitoring portal that greatly simplifies deployment efforts. Instead of traditional methods that require configurations done device-by-device, the VMware SD-WAN Orchestrator requires just a few mouse clicks on the user interface of its central console. The configuration is then distributed to all VMware SD-WAN Edge devices at branch offices and remote sites.

Extending VMware SD-WAN to Azure

Microsoft's Azure Virtual WAN service provides connectivity to cloud-hosted applications and services on Microsoft Azure. Microsoft's Azure Virtual WAN accelerates content and application delivery through optimized and low latency routes within the Azure cloud, improving application performance and user experience.

VMware SD-WAN has been integrated with Microsoft Azure Virtual WAN to provide a secure and reliable connection for organizations as they move to SaaS and IaaS offerings on the Azure cloud.

Connectivity to Azure Virtual WAN over the last mile can be enhanced by using VMware SD-WAN to provide better control and visibility into network connections and link remediation. This ensures reliable, secure and efficient access to Microsoft Azure. VMware SD-WAN simplifies the deployment with a fully automated and intuitive graphical user interface (GUI) based approach.

Customers have multiple choices for branch access to Azure Virtual WAN. Customers can directly connect their VMware SD-WAN Edge to Azure Virtual WAN. This approach offers visibility into the branch connectivity from the Azure Portal. The VMware SD-WAN Orchestrator offers flexibility to automate bulk provisioning for all branches or provision a specific branch.

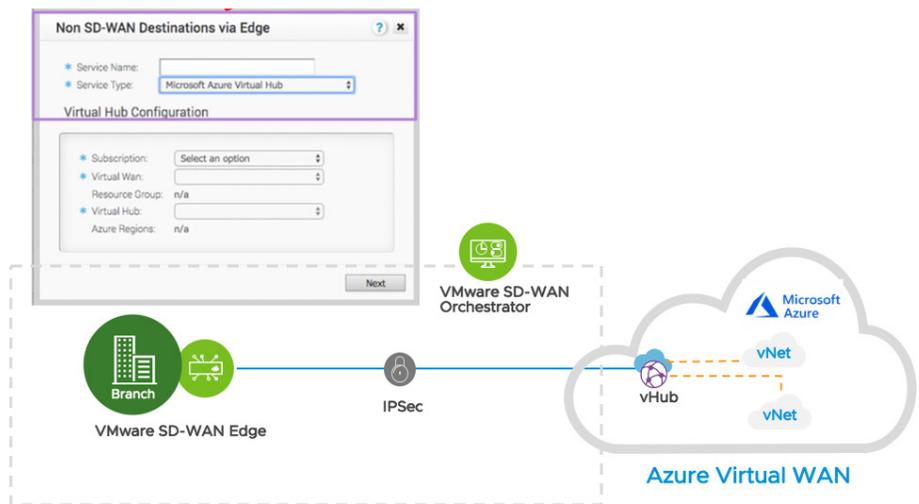


FIGURE 1: VMware SD-WAN Edge to Azure Virtual WAN Hub

Through this combined solution with Microsoft, IT organizations can automate connectivity into Microsoft cloud environments as new branches get added through VMware SD-WAN—without having to go through manual complex configuration. This fundamentally changes the economics and operating model for building global, highly available, and distributed networks.

VMware SD-WAN hosted Gateways are deployed at interconnect points around the world to provide scalability, redundancy, and flexibility in traffic steering. VMware SD-WAN Gateways optimize connections to Azure Virtual WAN from branch locations and enable delivery of services from the cloud. This approach is beneficial for customers looking for application aware quality of service (QoS) and last-mile transport optimization.

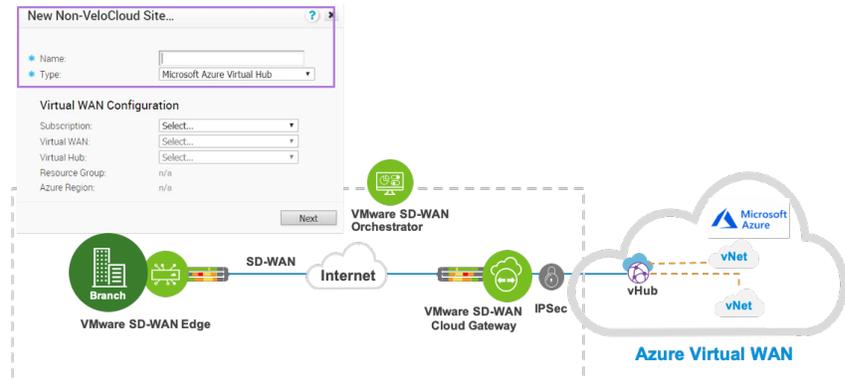


FIGURE 2: VMware SD-WAN Edge to VMware SD-WAN Gateway to Azure Virtual WAN Hub

Offering a simple design with easy deployment

With the integration of VMware SD-WAN and Azure Virtual WAN, organizations can experience an easy deployment with both options listed above.

While connecting directly from the VMware SD-WAN Edge to Azure Virtual WAN customers can simplify their connectivity with an automation workflow once the application credentials from Azure are stored in the VMware SD-WAN Orchestrator, and Azure Virtual WAN resources are configured.

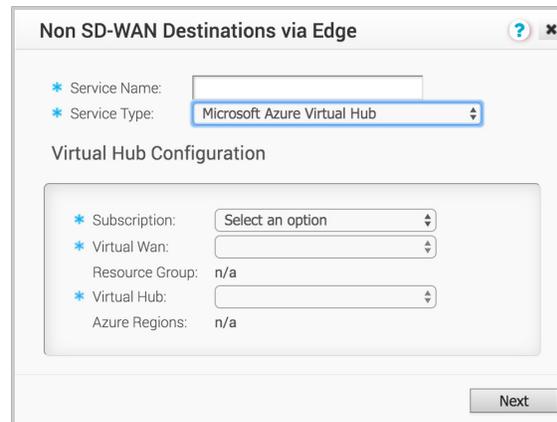


FIGURE 3: Configuration step in VMware SD-WAN Orchestrator GUI for direct connect from VMware SD-WAN Edge

Key benefits

- Flexible option to automate setup of IPSec tunnel from all VMware SD-WAN Edges or perform site specific automation.
- Monitor and troubleshoot branch connectivity from Azure Portal.

When using the VMware SD-WAN Gateway as the option for connectivity, customers benefit from the simplified network design and reduced complexity by using custom configuration templates for their branch office devices.

The screenshot shows a configuration window titled "New Non-VeloCloud Site...". It contains the following fields:

- Name:** An empty text input field.
- Type:** A dropdown menu currently showing "Microsoft Azure Virtual Hub".
- Virtual WAN Configuration:**
 - Subscription:** A dropdown menu showing "Select..."
 - Virtual WAN:** A dropdown menu showing "Select..."
 - Virtual Hub:** A dropdown menu showing "Select..."
 - Resource Group:** A text field containing "n/a".
 - Azure Region:** A text field containing "n/a".

A "Next" button is located at the bottom right of the window.

FIGURE 4: Creating a connection to a vNet hub via the VMware SD-WAN Orchestrator GUI

Key benefits:

- VMware SD-WAN delivers last-mile secure, optimized, and reliable connectivity to Azure Virtual WAN from branch office locations.
- Customers with workloads in Azure get simple-to-deploy, automated, high-performance connectivity from their remote locations.

Enabling seamless cloud migration

As customers plan their cloud strategy and migrate workloads to Azure, secure and reliable connectivity into Azure is necessary. VMware has partnered with Microsoft to optimize last-mile access to Azure.

Using VMware SD-WAN Orchestrator and Edge Devices

For every deployment, orchestration, management, and monitoring are critical aspects. VMware SD-WAN Orchestrators provide users with simple configuration and management of their VMware SD-WAN Edge devices.

Summary

This combined solution from VMware and Microsoft enables organizations—across all industries and around the globe—to gain simple-to-deploy, secure, high-performance connectivity from branch office locations to Microsoft Azure as an overlay without having to redesign their networks. The simple, automated deployment method allows customers to scale across thousands of branches easily and reach their goals of migrating to the Azure cloud.

VMware SD-WAN enables enterprises to support the migration to Microsoft SaaS offerings, including Bing, Dynamics 365, Office 365, and Xbox, and to IaaS infrastructure on Azure to host their own applications with high performance and reliability.

The cloud-hosted VMware SD-WAN Orchestrator allows for ease of configuration of the VMware SD-WAN Edge devices in branch locations to Azure Virtual WAN. It provides the capability to apply business policy-based application prioritization for traffic as well as the ability to directly break traffic out from the branch to Azure without backhauling using costly links through the enterprise data center. Customers can also take advantage of globally distributed network of VMware SD-WAN Gateways. No other SD-WAN vendor offers the range of flexibility and choice of connectivity options into Azure Virtual WAN.

How to get started

Test drive the VMware SD-WAN solution: <https://www.velocloud.com/try/>

For more information see: www.velocloud.com