


vmware[®]

SD-WAN™

VMware SD-WAN and Equinix

Simplify SD-WAN Deployment to Multi-cloud

As more applications move to the cloud, enterprise network architects are reevaluating their WAN architecture to optimize the delivery and efficiency of the network connecting the end users to these cloud-based applications. Many are turning to Software-Defined Wide Area Networking (SD-WAN) to enable ways to route internet traffic locally and to take advantage of inexpensive internet services for non-critical applications.

VMware SD-WAN™, part of VMware SASE portfolio, enables remote or branch user direct access to applications deployed on clouds through a distributed network of highly available VMware Edge PoPs and the VMware Edge Cloud Orchestrator with VMware SD-WAN Edges.

By deploying VMware SD-WAN Edge on Equinix, as Equinix Network Edge, the complexity to connect securely to multiple clouds at the same time is greatly simplified. Instead of installing virtual edge clusters on different cloud providers, you can deploy a cluster of virtual edges at Equinix to service the different clouds.

The other benefit with VMware SD-WAN Edge on Equinix is the on-demand capability to establish secured private connectivity between metros and regions by taking advantage of Equinix Fabric's global network. This eliminates the capex, capacity planning and resources required to enable inter-metro networking and provides a secure and predictive connection instead of public Internet.

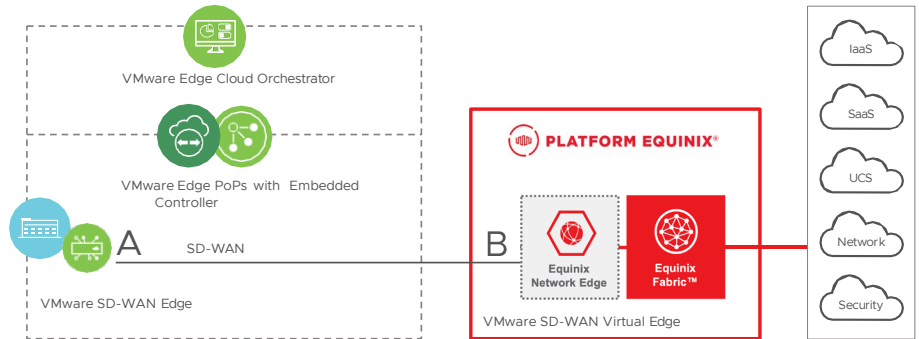
This paper outlines the VMware SD-WAN and Equinix solution and deployment guidance to enable the following use cases:

- Site to multi-cloud connectivity
- Site to site private connectivity between different metros or regions

Use case 1: Site to multi-cloud connectivity

The following shows a VMware SD-WAN Edge (A) deployed at an on-premises location, and another Edge (B) deployed virtually at Equinix, serving as a low-latency proximity gateway to access applications running in multiple clouds. Both these VMware SD-WAN Edge devices automatically join your VMware SD-WAN fabric once provisioned, and execute to the optimization policies according to the VMware Edge Cloud Orchestrator.

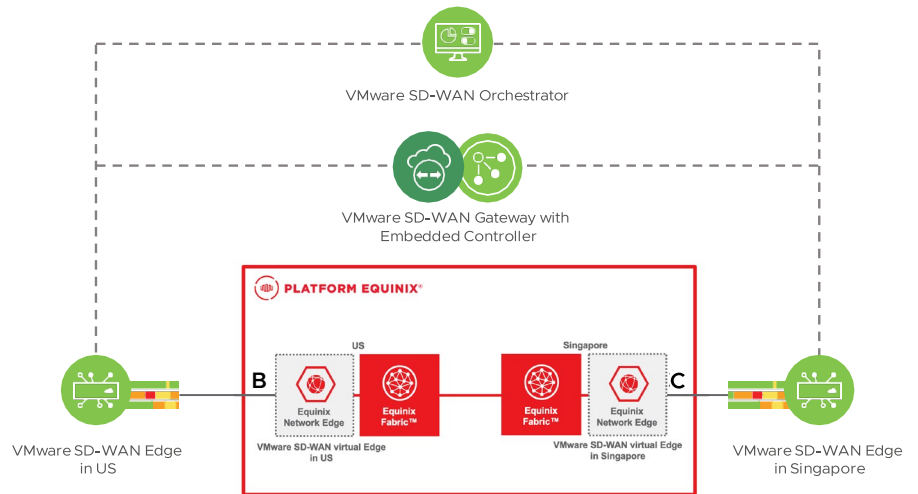
The VMware SD-WAN virtual Edge is hosted on the Equinix Network Edge and is pre-packaged with Equinix Fabric. The latter provides secured one-to-many connection to multiple cloud providers, ensuring application performance with low latency user experience.



Use case 2: Site to site private connection between different metros or regions

The following extends the above SD-WAN deployment in a metro with a mirror set up in another metro in a different region – a VMware SD-WAN virtual Edge (B) is deployed at Equinix in a US location, and another (X) in a Singapore location. The VMware Edge Cloud Orchestrator provides centralized management, policy control and real-time monitoring on all the VMware SD-WAN Edge devices deployed physically on-premises and virtually at Equinix in all geographies.

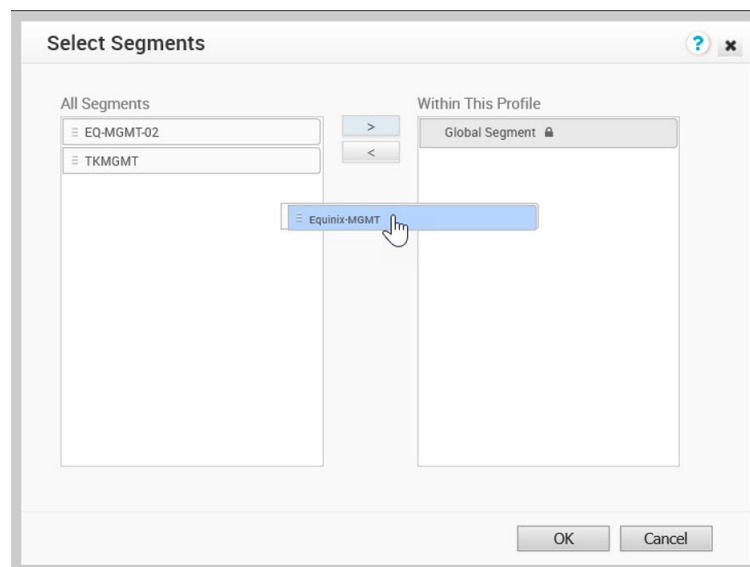
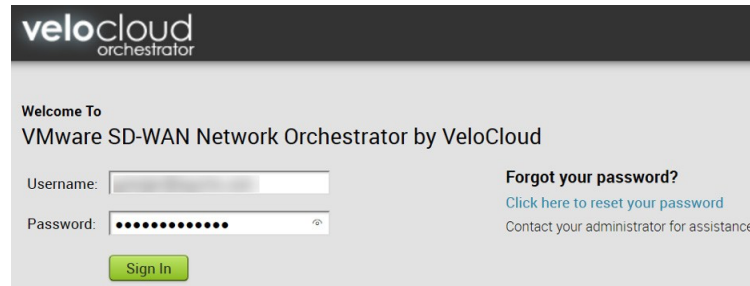
The VMware SD-WAN virtual Edge devices hosted in different metros within Equinix can also establish private point-to-point connection, via Equinix Fabric’s global network. This virtual connection takes minutes to set up and provides predictable performance and an optimal route with minimum latency for critical application traffic. Non-critical application traffic can continue to utilize the public Internet for connection.



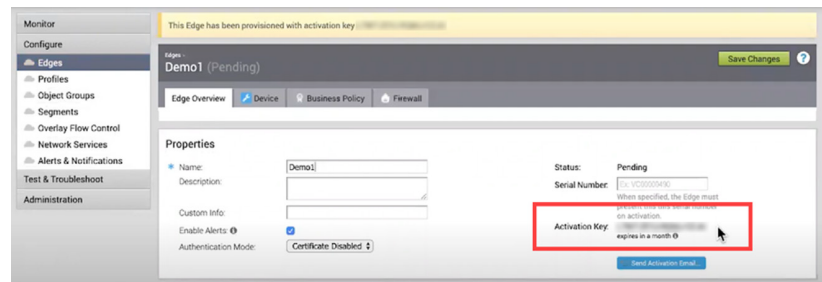
Solution deployment overview

The VMware SD-WAN virtual Edge at Equinix can be implemented using the following steps.

1. In the VMware Edge Cloud Orchestrator, create an Equinix Managed Segment.




2. Copy your FQDN and Activation Key.



4. Once the SD-WAN virtual devices have successfully joined your VMware SD-WAN fabric, you can create point-to-point connection between the devices in different metros in the Equinix Fabric portal, as shown below. These devices will establish SD-WAN tunnel over Equinix connection automatically.

Select Locations

Preview



Origin
Locations with ports or Virtual Devices

Connect Using

Port Virtual Device

Destination
Locations you can connect with

APAC [Looking for a Different Location?](#)

Select Location:

Osaka Latency (RTT) --	Perth Latency (RTT) --	Tokyo Latency (RTT) --
Sydney Latency (RTT) --	Hong Kong Latency (RTT) --	Singapore Latency (RTT) --
Seoul Latency (RTT) --	Melbourne Latency (RTT) --	Canberra Latency (RTT) --

Solution components

VMware SD-WAN

- VMware SD-WAN Edge:** VMware SD-WAN Edge expands WAN bandwidth by logically combining WAN links to offer capacity that individual applications need. VMware SD-WAN Edge automatically joins the SD-WAN fabric once powered on and connected to the Internet and downloads the business policies from the VMware Edge Cloud Orchestrator. These edge devices differentiate and prioritize traffic among over 3000 applications based on business intent. The VMware SD-WAN Edges implement Dynamic Multipath Optimization™ (DMPO) enabling real time monitoring, packet steering and link remediation on the links connecting them with other edges. With a VMware SD-WAN Edge instance on Platform Equinix, all the optimization features can be extended further and closest to the cloud applications.
- VMware Edge Cloud Orchestrator:** VMware Edge Cloud Orchestrator is the management plane of the architecture. It pushes the business policies on the VMware SD-WAN edges as soon as they connect to the fabric, and seamlessly updates the application recognition engine on thousands of VMware SD-WAN Edges with a single click. A cloud-hosted or on-premises secure and scalable web-based central management tool provides simplified configuration, provisioning, monitoring, fault management, logging, and reporting. The Orchestrator also offers a single pane of glass for real-time insights into network and application performance. The integration enables insights into network and application performance for the edge of the Equinix platform.

- **VMware Edge PoPs:** VMware Edge PoPs are hosted multi-tenant virtual instances on cloud, functioning as the control plane and optional data plane for the SD-WAN network for cloud onramp. These Edge PoPs are automatically assigned to the SD-WAN Edges depending on the type of traffic. These horizontally scalable gateways enable route distribution among the SD-WAN Edges as soon as the Edges are powered on and connected to the SD-WAN fabric, reducing the complexity and spend on traditional infrastructure.

Equinix solution

- **Equinix Fabric:** Equinix Fabric is a switch platform that provides private connectivity to a large selection of public cloud, network, and other service providers in the form of virtual connections. These connections are provisioned using software-defined networking, and you manage them through a portal or using API. Available across 40+ locations, Equinix Fabric is designed for scalability and agility, allowing you to interconnect between Equinix locations globally, and connects to other Equinix services, such as Equinix Network Edge or Metal.
- **Equinix Network Edge:** Network Edge is a network function virtualization (NFV) infrastructure managed by Equinix. It allows deploying virtual instances of network appliances (routers, firewalls, SD-WAN, and so on) from key providers, such as VMware, Cisco, Juniper Networks, Fortinet, and Palo Alto Networks.

Additional Information

- [Watch a video](#) about VMware SD-WAN integrations with Equinix Network Edge.
- User guides and release notes for [Equinix Fabric](#) and [Equinix Network Edge](#) are available on the Equinix website.