

The Viptela SEN empowers the CIO to significantly reduce costs, dramatically improve time to enable new services, and raise the security threshold across the network.

Executive Summary

MPLS Layer 3 VPNs were designed for connectivity when the majority of branch office traffic flowed within an enterprise's intranet boundary. However, new applications and cloud service models are shifting traffic patterns. Today, majority of enterprise traffic flows to public clouds and Internet. This change creates new requirements for secure connectivity, video and real-time application performance, efficient Cloud experience, and dynamic change control. The Viptela Secure Extensible Network (SEN) solution provides the benefits of private MPLS Layer 3 VPNs for the wide area network (WAN) while overcoming the key drawbacks associated with these MPLS VPNs.

Current Network Design

Figure 1 shows a typical enterprise network architecture. Multiple networks are needed to connect various facilities — campus, data centers, branches, and business partners — because MPLS cannot solve the connectivity requirements of all these entities.

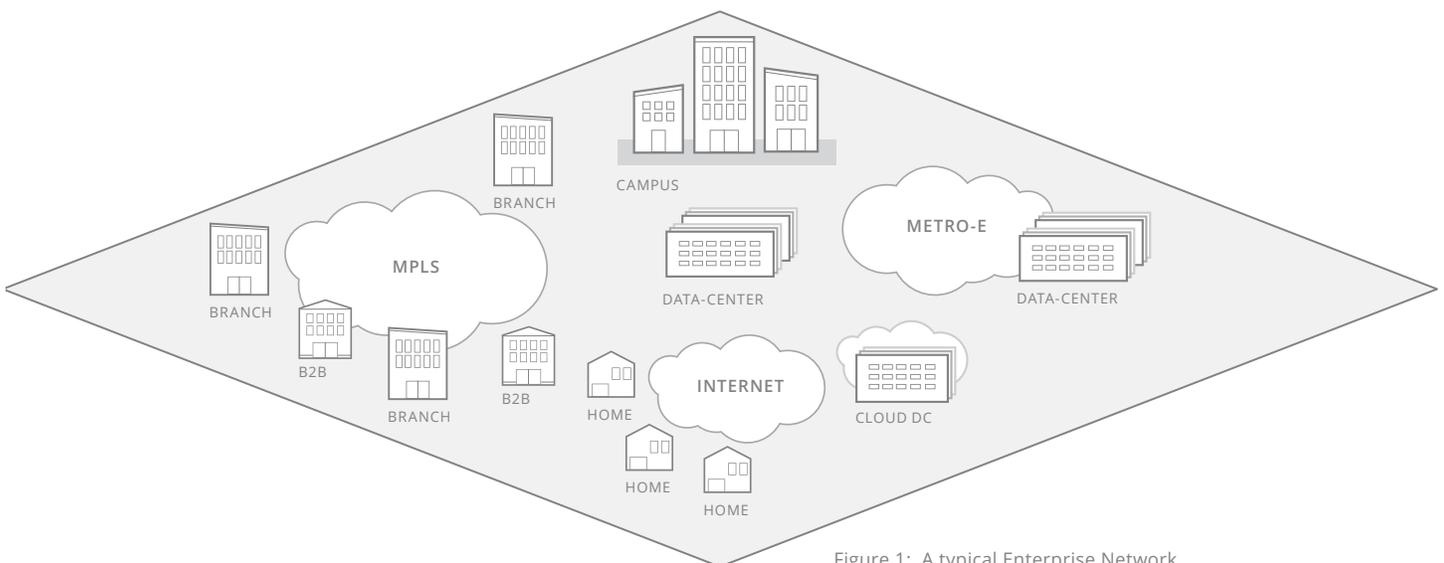


Figure 1: A typical Enterprise Network

The MPLS Problem

MPLS Layer 3 VPNs were designed for private multi-site connectivity. However, many challenges exist with this network infrastructure:

- No cost-effective option to deal with the increased capacity requirements for VDI, video, and other high-bandwidth applications
- Poor user experience (UX) for cloud applications and Internet access because of the centralized DMZ architecture
- Security isolation is not guaranteed, so encryption is required
- No end-to-end network segmentation between lines of business and B2B partners
- Long lead times to add new sites and business partners

A new approach is needed to address these problems.

The Viptela Approach

The Viptela SEN solution provides enterprises with a single solution for secure ubiquitous connectivity. It offers all the major benefits of MPLS Layer 3 VPN service and works over any underlying transport. This solution is accomplished by virtualizing the network and critical services, in five steps shown below.

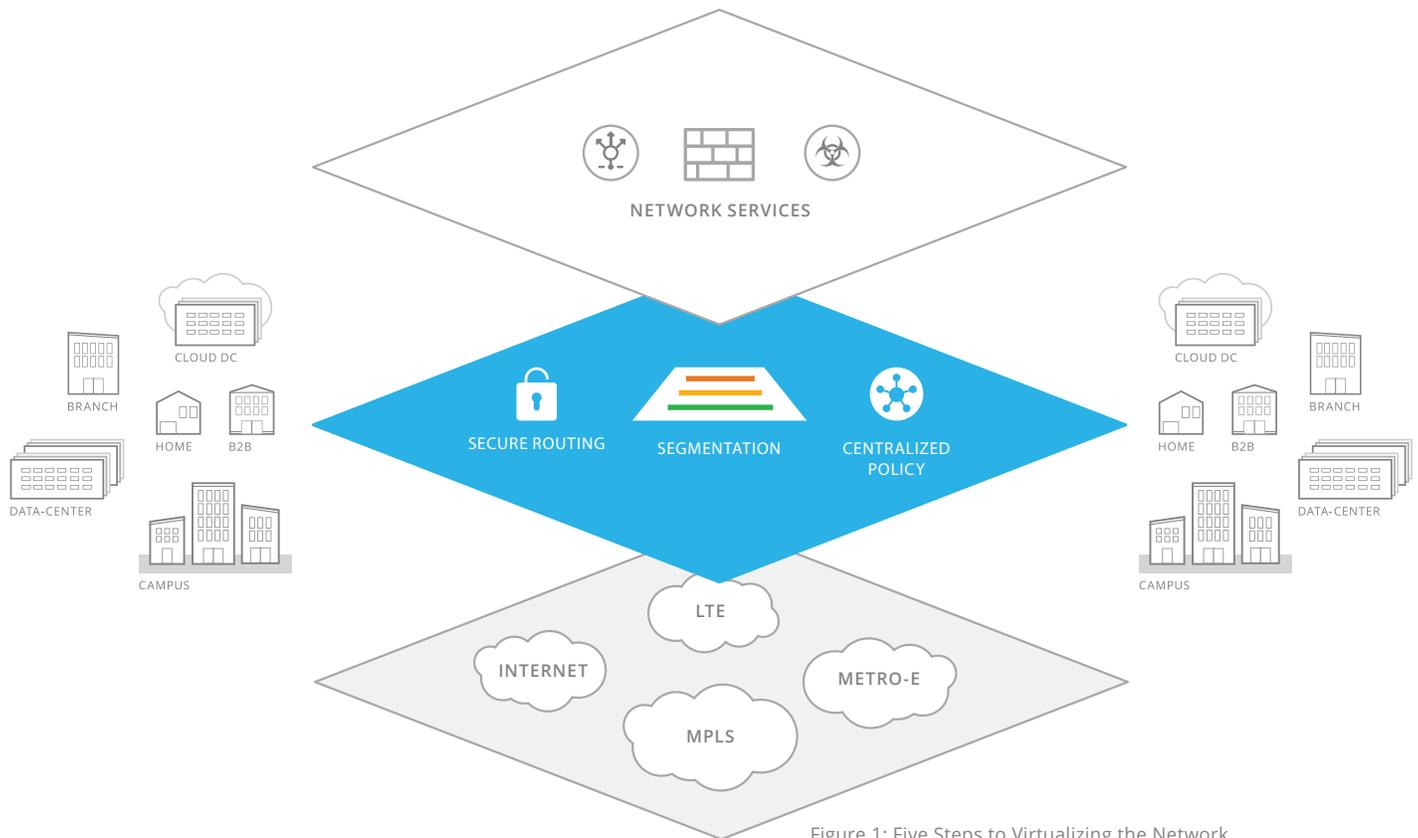


Figure 1: Five Steps to Virtualizing the Network

1
Enable transport independence

2
Automatically secure the routed end points

3
Provide end-to-end segmentation

4
Enforce policies with a centralized controller

5
Advertise Layer 4 – 7 network services

The Viptela SEN solution enables enterprises to:

- Provide secure connectivity anywhere
- Extend the benefits of virtualization outside the data center
- Rapidly enable new services and applications

For the CIO, this translates to a savings of up to 80 percent in carrier OpEx, a significant improvement in time to enable new services, and a consistent high level of security across the network.



Deployment Options from MPLS to Viptela

Enterprises can deploy the Viptela SEN solution in conjunction with an existing MPLS network, or alternatively, to completely replace MPLS Layer 3 VPNs:

• Step 1

Backup for MPLS: The Viptela SEN solution can be initially deployed as a backup for MPLS at some or all sites. This topology ensures that the enterprise sites are always connected. With any failure in the MPLS service, all sites seamlessly transition to the Viptela overlay network. Thus enterprises can leverage Internet and LTE connections for additional last-mile resilience.

• Step 2

Traffic steering for high-bandwidth and cloud applications: High-bandwidth applications like video, VDI, Internet, and cloud applications are straining the low-bandwidth MPLS pipes. To address this situation, the Viptela SEN solution can be deployed alongside MPLS VPNs to carry these high-bandwidth applications.

• Step 3

New sites onto Viptela: Footprint limitations in the carrier's network introduce delays in bringing up new sites. A Viptela-enabled site can be up and running immediately over the Internet or LTE, and provide secure, high-bandwidth integration into the rest of the MPLS network.

• Step 4

Replace MPLS: The Viptela SEN solution can completely replace MPLS VPNs, enabling enterprises to leverage high-bandwidth commodity links to build a secure overlay to all entities in the network. This solution greatly simplifies the entire network and provides the greatest cost savings.



The Viptela Secure Extensible Network

For more information on the Viptela solution and how it can help your network, please contact sales@viptela.com



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