Fast-track Your SD-WAN Journey by Partnering with a Managed Service Provider

FROST & SULLIVAN

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INTRODUCTION

Software-defined Wide Area Network (SD-WAN) technology is revolutionizing the way enterprises deploy hybrid networks. While Multiprotocol Label Switching (MPLS) has long dominated the enterprise WAN space, the emergence of SD-WAN is questioning the status quo of MPLS-only WAN, or a static hybrid WAN consisting of MPLS and Internet links. In an SD-WAN deployment, the underlying transport network is abstracted, and a centralized controller uses intelligent, application-aware software to route traffic over the *optimal* network technology, based on business policies. This means that enterprises do not have to depend solely on MPLS links for multi-site connectivity, but instead can consider hybrid WAN deployments that make the best of Internet (inexpensive and widely available) and MPLS (private and reliable) connections.

Therefore, it is no surprise that market adoption of the SD-WAN solution is increasing, with the market revenues exceeding $300 million in 2017.[1] In a recent Frost & Sullivan SD-WAN survey, 7% of enterprise IT decision-makers stated they have deployed SD-WAN; and 23% of them stated they plan to deploy SD-WAN in the next 12-24 months. While vendors have been selling directly to enterprises, a majority of enterprise respondents to the Frost & Sullivan end-user survey indicated a preference toward a managed SD-WAN solution versus the self-managed approach. This is because a managed service provider can combine underlying transport services with SD-WAN functionality, and manage the solution end-to-end.

In this paper, we take a close look at why enterprises are adopting SD-WAN, the benefits of a managed SD-WAN service over the do-it-yourself (DIY) approach, and how MetTel can help.

KEY REASONS COMPELLING ENTERPRISES TO EMBRACE SD-WAN

The impact of SD-WAN technology on enterprise WAN deployments is undeniable. An SD-WAN architecture addresses several challenges associated with the traditional static, hybrid WANs. On the following page, Figure 1 summarizes the key benefits of a software-defined WAN deployment.

[1] Analysis of the Software-Defined WAN Market, 2017

Figure 1: Business Benefits of SD-WAN

Cost Savings	SD-WAN technology enables cost-efficient use of public Internet and private networks. Enterprises can use aggregated, inexpensive Internet links to achieve high-speed bandwidth for less critical applications, while continuing to use private networks to run mission-critical applications via higher cost, private WAN services (MPLS or Ethernet). In addition, the ease of deployment and centralized control eliminates the need for a network engineer at every location, resulting in lower network management costs.
Agility	With SD-WAN solutions, transport routing changes can be made in real-time. The underlying transport infrastructure is abstracted, pooled and assigned to applications, based on software-defined policies. This enables transport links to be used in active-active mode to provide the best possible QoS leveraging multipath optimization and forward error correction. All applications are prioritized and are routed in order of importance, based on how they are defined by the enterprise.
Speed to Market	SD-WAN CPE dramatically reduces the time required to add new branch sites, as the CPE is a plug-and-play device that can be configured without oversight by on-site network personnel. The zero-touch provisioning feature enables the device, once plugged into the network, to automatically connect to the controller, and self-configure. New branch locations can deploy SD-WAN equipment, and start with readily available wireless LTE service, while waiting for a network service provider to provision wired services (Broadband circuits or MPLS).
Application-aware Routing	The SD-WAN controller defines the network policies for applications on branch routers, and chooses a path that best suits the application traffic. Real-time monitoring of traffic paths ensures that problems related to availability (sufficient bandwidth) and reliability (latency, jitter, and packet loss) are sensed before they affect the users; and traffic can be routed to a different path, if necessary. This reduces reliance on MPLS-only links (which typically offer WAN performance visibility and management features), as network engineers monitor both public and private networks to ensure suitable application performance, irrespective of the underlying infrastructure.
Optimized Cloud Connectivity	The ability to use public and private networks in a hybrid WAN, and make real-time changes to routing based on pre-defined policies, is of immense value to enterprises in the cloud networking space. MPLS could be the right choice to connect to an ERP application in a hosted private cloud, for reasons of security and compliance; while Internet links could suffice for accessing a less-critical SaaS application. An SD-WAN solution optimizes WANs for cloud connectivity, thus resulting in cost savings by eliminating the need for MPLS links at all sites.

Source: Frost & Sullivan

MANAGED VS. DO-IT-YOURSELF (DIY) APPROACH TO SD-WAN

As described in the previous section of this paper, a software-defined WAN gives enterprise IT managers immense control over their WAN by enabling them to make changes to the network based on centrally defined application policies. The SD-WAN appliances are plug-and-play devices with zero-touch provisioning, which auto-configure once connected to the network; thus, dramatically reducing installation times. Hence, the DIY approach has appealed to early adopters of SD-WAN deployments.

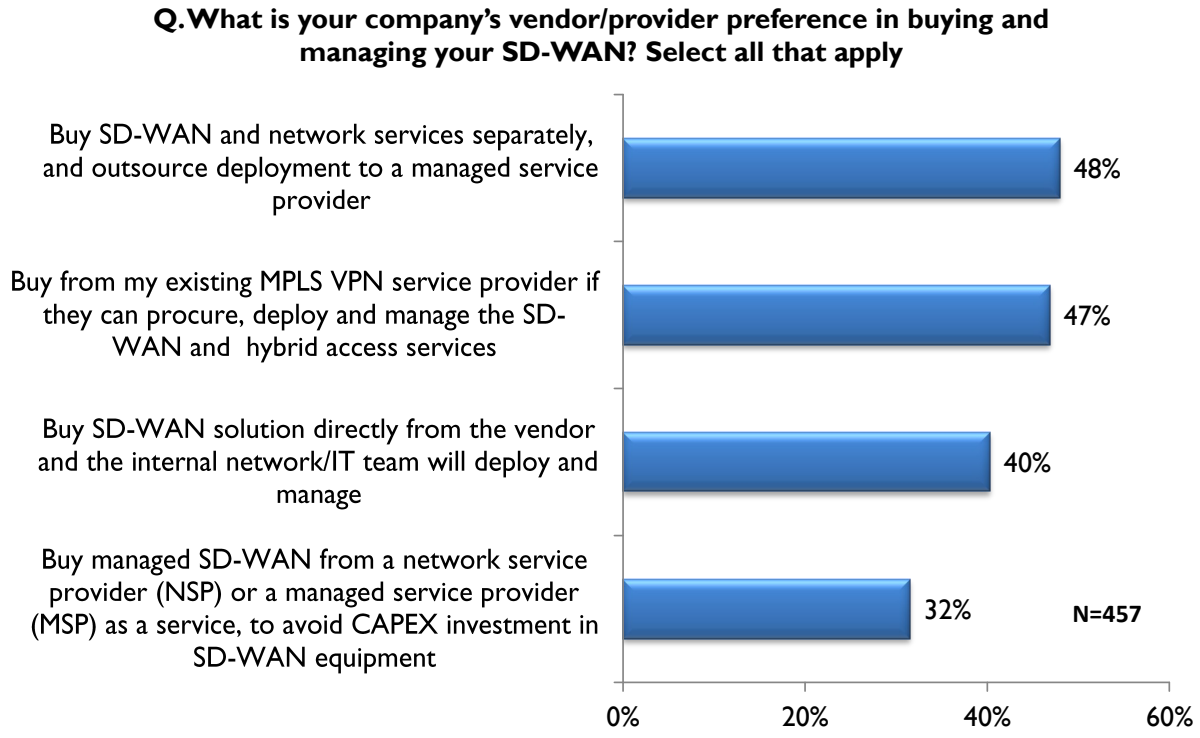
However, the WAN links are a critical part of the SD-WAN solution. While the ability to software-define the WAN is a revolutionary approach to WAN deployments, compared to the hardware-centric approach in the past, deploying and managing the underlying WAN infrastructure involves some heavy lifting from the enterprise IT departments. The process can be daunting when it involves multiple transport and access providers from across the globe. That is where a managed SD-WAN service can help. Managed service providers have the expertise and technology to integrate disparate operations and management systems across various access providers, presenting a unified view for enterprise network teams.

In managed SD-WAN, the service provider acts as a single point of contact for the complete SD-WAN solution, including the SD-WAN appliance, software license, WAN services, and managed services. Provider responsibilities in a managed SD-WAN service include:

- Procuring, installing, configuring and managing the SD-WAN edge device (physical or virtual) and software
- Installing and managing the WAN links—their own, from a partner, or provided by the customer—that support the SD-WAN solution
- Managing (at least, partially) moves, adds, and changes across the SD-WAN solution
- Monitoring the service 24x7, troubleshooting and restoring it in case of a problem
- Offering a service level agreement (SLA) for the entire solution, and ensuring that performance guarantees offered in the SLA are met
- Creating and offering optional value-added services such as additional security features or WAN optimization
- Supporting IT managers with a self-service portal interface that provides a granular level of visibility and control
- Billing for the service in a subscription-based model, where the customer pays a monthly recurring charge (MRC) for the managed SD-WAN. While some managed SD-WAN services are billed as a single MRC for the edge device, bandwidth charges and management fees, others charge bandwidth fees separately

In a recent Frost & Sullivan SD-WAN survey, when asked about their preferences for purchasing and managing their SD-WAN, IT decision makers responded as shown below in Figure 2.

Figure 2: Organizations' Preference in Buying SD-WAN



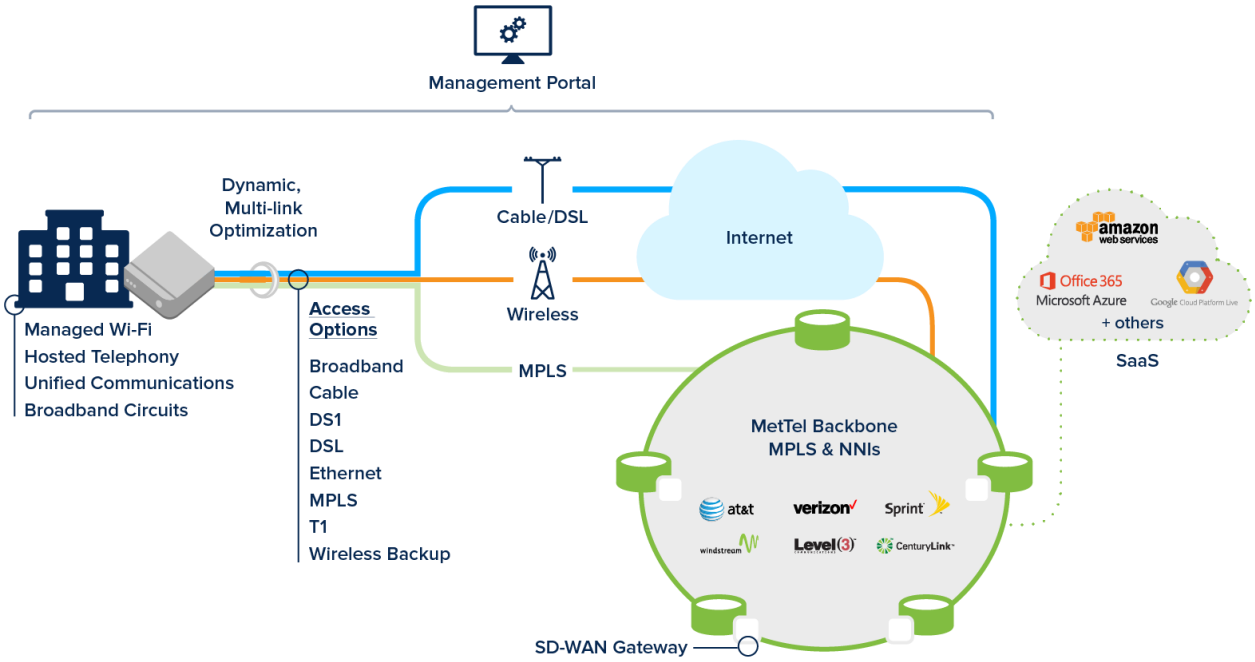
Source: Frost & Sullivan

As indicated in Figure 2, an overarching number of respondents would prefer to buy SD-WAN from a managed service provider. As businesses evaluate a managed SD-WAN service provider, there are several options for them to choose from including traditional network service providers such as the ILECs and CLECs; managed service providers that aggregate network and solutions from multiple vendors; and alternative service providers that bring a variety of capabilities including multi-vendor network integration, multi-vendor voice, data and security solutions.

WHY METTEL

MetTel is a managed network solutions provider with services spanning voice, data, Internet, mobility and security services. The company-managed network services are a result of the exhaustive network-to-network interconnections (NNIs) MetTel has in place with leading ILECs, CLECs, ISPs and IXCs. MetTel combines other enterprise solutions along with network integration and a single billing platform, to offer businesses a single vendor solution for all their communication needs. Figure 3, below, summarizes MetTel's hybrid WAN solution portfolio.

Figure 3: MetTel's Hybrid WAN Solution Capabilities



Source: MetTel

To address the growing market demand for SD-WAN, MetTel has partnered with the leading SD-WAN vendor VeloCloud. Following is a list of value-added services MetTel provides as part of its managed SD-WAN service offering:

- SD-WAN architecture simplifies hybrid WAN deployments, and most businesses are looking to use Internet links alongside MPLS links. MetTel is able to support various access and transport services from multiple service providers. The company's expansive NNIs with service providers ensures that MetTel serves as the single provider for MPLS, Internet, wireless, and line of sight services.
- MetTel deployment of SD-WAN gateways in all of its data centers across North America enables its customers to send traffic via MetTel's secure private network instead of the public Internet. Coupled with MetTel's extensive NNIs, this approach is unique and offers a highly secure deployment of SD-WAN service.
- MetTel has direct connectivity established with leading cloud vendors, meaning that businesses can add private cloud connectivity as part of their SD-WAN solution to AWS, Google, and Azure clouds in a seamless manner; and offers additional discounts on transfer costs directly from cloud providers
- The managed SD-WAN service is offered in a subscription-based pricing model, eliminating an upfront CAPEX investment.
- MetTel offers a single point of contact for billing across different services, as well as a consolidated management portal through which enterprise IT administrators can manage their communication solutions.

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