



# The Shifting ROI of SD-WAN

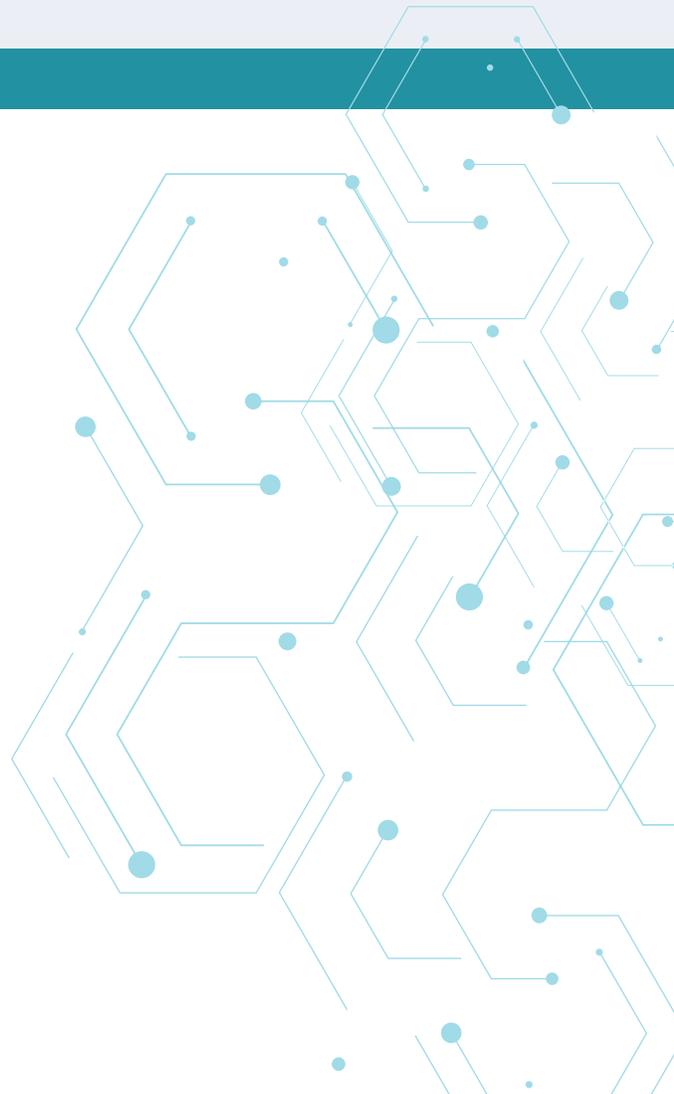
When the networking world first started talking about SD-WAN as it is today, many were interested only because of the potential cost savings. SD-WAN was a great way, in a world moving towards cloud, to justify the transition away from MPLS and save money along the way. As the space matures, the real value is in the automation and in the simplicity of centralized configuration. To understand the rise in interest we need to look the nature of SD-WAN and the problems it is designed to solve.

## SD-WAN and MPLS

The once-common architectural pattern of backhauling traffic to a central data center or headquarters has been augmented due to the rise of SaaS apps. SaaS apps use content distribution systems that replicate data to points of presence around the world for faster access. The apps are designed to use the closest point of presence to serve content to the end user.

The issue with pushing SaaS traffic through a data center is two-fold. SaaS traffic can eat up precious MPLS resources from branch offices, and those MPLS links can be easily overwhelmed by companies with heavy SaaS adoption. Secondly, routing SaaS traffic through a central location means that the SaaS point of presence is no longer optimized for the end-user. In the best case, this will only increase the number of layer 2 hops between the user and the application, but every hop and every mile can introduce additional latency.

Even with the lowering cost of MPLS, the question of ROI remains. A driving factor for many companies is to remove MPLS in favor of 2 lower cost, non-dedicated connections. The decision depends on a number of factors including available connections, implementation costs and scale. Each must be weighed in the final calculation on whether or not SD-WAN is right for your company.



## Connection Costs

The basic MPLS cost structure is dependent on bandwidth and frequently reaches into the hundreds of dollars per Mbps per month. MPLS is thus capacity constrained. In comparison to internet connections it can also be considered expensive. Both symmetric and asymmetric internet connections can be much cheaper while offering more bandwidth to the end users. With the adoption of SaaS, the traditional MPLS bandwidth is insufficient to keep up with the increase in resource needs.

Another point of consideration is that basic internet connections are unmanaged and subject to the swath of issues that can occur. Quality of Service (QoS) offered as part of MPLS connections is not perfect. It must be honored end-to-end to actually work as designed. It does, however, offer a level of performance guarantee.

MPLS costs have also corrected with the rise in SD-WAN, but higher costs for links still exist for a reason. It is still more expensive than business internet provided by Comcast, but it comes with at least some performance SLA. Monitoring that performance is crucial to identify when QoS is not honored end to end, but there is a path to support when you've agreed on an SLA.

The gap is closing for connection costs, but for most companies there is ROI when considering a partial offloading of non-critical traffic to direct internet access. Mission-critical traffic, including voice traffic if it is a hosted solution, should still be pushed over MPLS links, but SaaS traffic is something to offload.

## Operational Costs

Much of the ROI from an SD-WAN deployment has shifted to the operational expenditure side. For many businesses the cost and time associated with setting up a new location is excessive. Months could separate a new location from a fully-baked MPLS setup. In contrast, with SD-WAN, the initial connections could be up and running in a matter of hours or days. The centralized configuration aspect also allows IT teams to limit the fat-finger problem and have a standard configuration to easily deploy across hundreds of remote locations.

SD-WAN vendors have identified that in order to open the door to offloading MPLS links of SaaS app traffic they need to provide basic security for branch offices. The top vendors include some sort of firewall to facilitate this, but the adoption of cloud proxies such as ZScaler and BlueCoat are picking up steam. Most new customers of SD-WAN also consider implementing a proxy for the direct internet access connections. For those without a cloud proxy the firewall rules at least includes trusting inbound connections initiated by the branch office. Traffic to an app such as Office 365 outbound can generally be thought of as secure and shouldn't need to travel to central resources for testing. Obviously this is a company-specific decision, but it seems clear that SaaS apps may need a different set of rules.

## Scale

The speed at which new infrastructure comes online is crucial for business success in many industries. While acquisitions are the easiest to understand there are also services companies that bring independent commercial shops under a corporate umbrella. Both scenarios require quick setup and often benefit from the centralized configuration that can be pushed to new devices. Waiting for an MPLS link doesn't make sense if the shop or office already has an internet connection. SD-WAN can be placed on-site easily to begin enforcing network traffic policies.

The ROI of SD-WAN in the case of scale is the speed at which new sites can come online, especially when considering mergers, acquisition, or services companies. These locations already have internet connections so deploying SD-WAN is as simple as deploying a box. Traditionally it would take much longer, even months, to get an MPLS link setup.

## SD-WAN in Action

SD-WAN is a large topic in today's network industry and a highly competitive market, but as the offerings mature and use cases become more standard, the ROI has fundamentally changed. If you are considering an SD-WAN deployment, AppNeta can give you visibility into your network to determine if it is performing optimally over every connection. Because the ROI of SD-WAN has been pushed from upfront cost savings to long-term operational benefits, it's crucial to validate and monitor every network path. MPLS is still useful for maintaining quality voice links and the increase in SaaS consumption in the enterprise has brought conventional internet into the limelight. Staying on top of the shifting use case of technologies like SD-WAN will be essential, and AppNeta can provide the necessary visibility, even with the added complexity of new architectures.

### ABOUT APPNETA

AppNeta is the leader in proactive end-user performance monitoring solutions built for the distributed digital enterprise. With AppNeta, IT and Network Ops teams can assure continual and exceptional delivery of business-critical applications. AppNeta's SaaS-based solutions give IT teams essential application and network performance data, allowing them to continuously monitor user experience across any application, network, data center or cloud. For more information, visit [www.appneta.com](http://www.appneta.com)

1.800.508.5233 | [SALES@APPNETA.COM](mailto:SALES@APPNETA.COM) | [APPNETA.COM](http://APPNETA.COM)