

From US Signal and CATO

# 5 IT Projects to Save Money and Improve Your Productivity



Now's as good a time as any to identify the trends you can leverage to reduce costs, improve agility, and increase productivity

According to hundreds of IT executives and networking professionals who were interviewed around the globe, five networking and security technology changes require particular attention:



MPLS to SD-WAN

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Proprietary Cloud Connectivity to Cloud Access Optimization

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Security Appliances to Security as a Service

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“Shadow IT” to Controlled Cloud Access

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UC to UCaaS

# MPLS to SD-WAN

SD-WAN adoption is booming and for good reason. CIOs and their teams have taken to SD-WAN to reduce costs and improve their agility. The high-cost of international MPLS connections have given way to SD-WANs with affordable, SLA-backed private backbones.

Replacing MPLS's high costs and inflexibility is often an imperative of WAN transformation initiatives for which many organizations turn to SD-WAN. By using affordable Internet capacity, SD-WANs let companies slash monthly bandwidth spend.

## SD-WAN Benefits

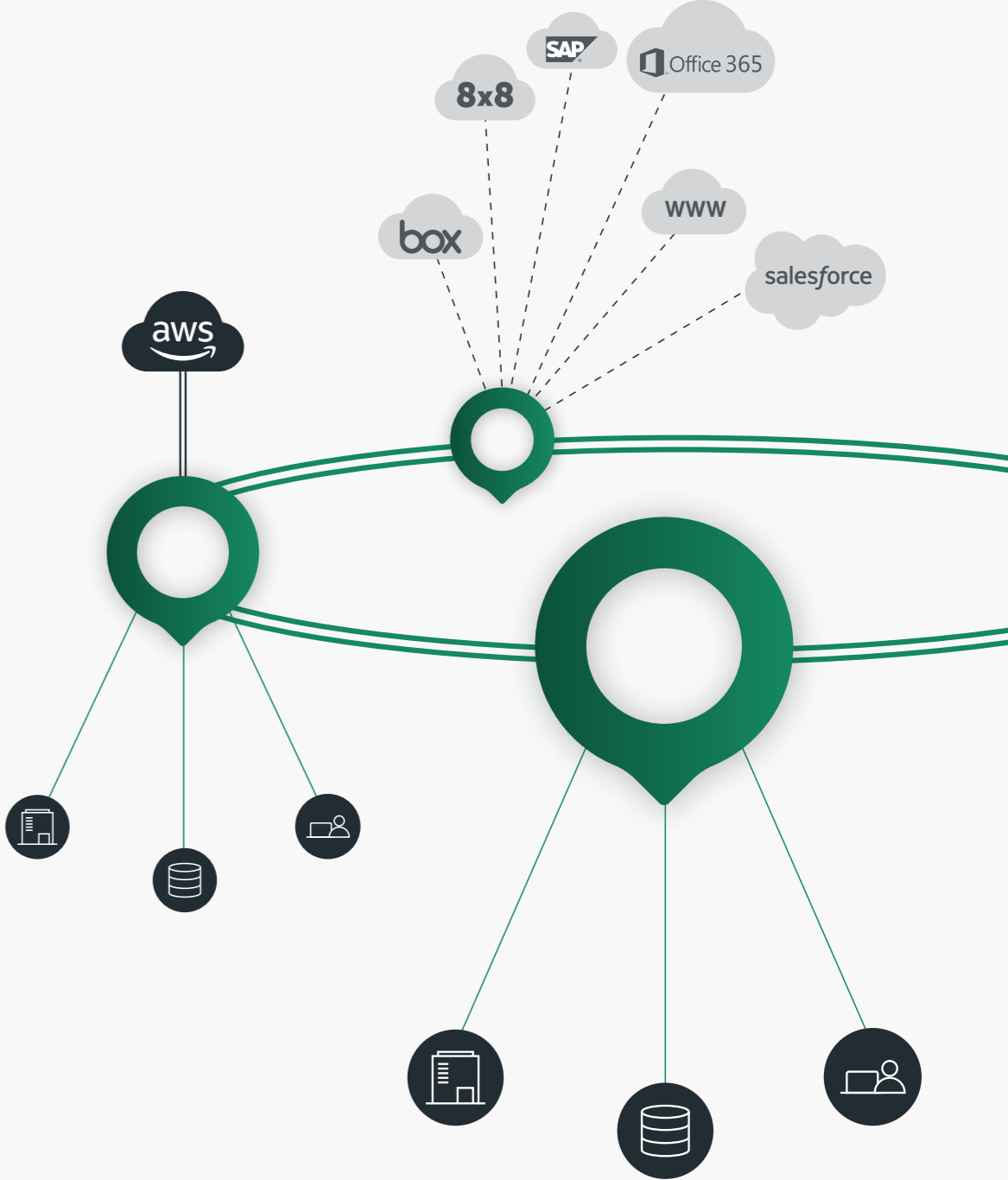
Internet connectivity also affords SD-WANs with other benefits. Sites can be deployed in minutes instead of months. Network uptime can reach five 9s as even small locations can be equipped with last-mile redundancy. With more bandwidth and application-aware routing, applications perform better — at least in certain scenarios.

## The Next Challenge

At the same time Internet-based SD-WANs show problems when used for worldwide application delivery. The sub-optimal routing of the Internet core is often unpredictable with too much latency to deliver a responsive, predictable application experience. Many CIOs find themselves stuck with MPLS and all of the costs and limitations associated with it.

## The Solution: An Affordable, Private Global Backbone

Packaging an affordable, private global backbone with SD-WAN frees companies from their MPLS dependency. Managed private backbones avoid the problems of the Internet core. Ubiquitous IP capacity reduces capacity costs. Building a managed, private IP-based backbone gives global SD-WAN services MPLS-like performance at a fraction of MPLS's cost.



# Proprietary Cloud Connectivity to Cloud Access Optimization

With the cloud, IT is challenged to provide the same seamless experience as when users accessed applications in private data centers. Those challenges can be easily met by optimizing the network for cloud access. IT professionals know the value of cloud services but integrating the cloud into legacy MPLS network deployments remains challenging for many reasons:



**Erratic Internet performance** disrupts the cloud experience. Cloud data center and cloud application traffic must leave the controlled world of MPLS and traverse the Internet core with its congestion and unpredictable routing. Proprietary cloud connectivity options, such as AWS Direct Connect or Azure ExpressRoute, address the Internet performance issue but require additional investment and do not address the backhauling problem.



**Backhauling cloud traffic** to a centralized, secure Internet gateway has been the norm for enterprise networks but adds latency to the cloud session.



**Capital and operational expense increase significantly** when companies secure the cloud. Many organizations find they must set up and maintain virtual firewalls for every cloud data center.



**Poor multicloud user experience** ensues as users end up juggling numerous logins when connecting to different clouds.

## The Solution: Native Cloud Connectivity

Building native cloud connectivity, network optimization, and security into a global SD-WAN can deliver to their users a superior cloud experience while meeting enterprise requirements for security and control.

Users authenticate once against the SD-WAN (using multi-factor authentication) to access multiple clouds. Cloud resources are more responsive thanks to the SD-WAN's numerous network optimization techniques, some designed specifically for the cloud. All the while IT can protect cloud resources and users from Internet-borne threats using the same SD-WAN security services that protect the rest of the enterprise.



# Security Appliances to Security Services

Security teams still rely heavily on security appliances, but each security appliance comes with a hefty capital outlay and plenty of operational overhead. FWaaS replaces the traditional branch firewall appliance with a network security stack in the cloud. It's a security revolution that delivers four key benefits:

## No capacity constraints

Traffic growth or activating processing-intensive features on the firewall often necessitate appliance upgrades outside of budgetary cycles. FWaaS avoids those problems by leveraging cloud scalability and elasticity.

## Maintenance and vulnerability patching

With FWaaS, the provider, not IT, handles software updates and patching without additional cost or sudden hardware upgrades.

## Simplified management

With FWaaS, one logical rule set defines access control across all relevant enterprise resources.

## Universal traffic inspection

FWaaS provides visibility into and control over all WAN and Internet traffic for fixed and mobile users.

## The Solution: Firewall-as-a-Service

FWaaS addresses the limitations of security appliances, enabling companies to improve their security posture and reduce operational expenditures.



# “Shadow IT” to Controlled Cloud Access

While the cloud brings many benefits, IT executives still grapple with the downsides caused by users accessing unauthorized cloud applications:



**Risk of infiltration** grows from users accessing malware-infected cloud services.



**Data loss** becomes a pressing concern because users fail to implement the necessary backup procedures or leak business-critical information undetected.



**Protecting data privacy and enforcing compliance** with GDPR and other standards and regulations becomes more difficult.

Cloud Access Security Brokers (CASB) provide an enforcement point for enterprise security policies as users access cloud-based resources. But CASBs introduce yet another security element to purchase and deploy. Increasing an enterprise’s operational overhead and fragmenting IT’s view into their security infrastructure.

## The Solution: Make Cloud Access and Security Part of the SD-WAN

The same policy set used for governing access to internal resources extends to SaaS applications and the Internet. IT gains full visibility into SaaS usage with analytics showing which locations and users, fixed or mobile, are accessing the various SaaS applications. SaaS performance improves as a global SD-WAN service avoids the congestion of the public Internet, routing SaaS traffic across optimized backbones and exiting at the PoP nearest to the customer’s instance in the SaaS service.



# UC to UCaaS

Unified communications (UC) changed how we communicate. UC-as-a-Service (UCaaS) changes how we consume UC — avoiding overhead, reducing downtime and deploying in minutes.



**Increased opex** — UCaaS allows you to switch to an opex model, avoiding the costs and complexity of deploying and maintaining UC infrastructure.



**Improved uptime** — Resiliency is higher with UCaaS offerings, as they're less susceptible to single-event outages that can plague UC systems.



**Lightening fast deployment** — UCaaS can deploy in minutes, far faster than setting up a UC server and the supporting infrastructure.

UCaaS works even more effectively across SD-WAN. The Internet backhaul typical of MPLS networks translates into inefficient routing of UCaaS voice traffic, often degrading call quality. SD-WAN allows for local Internet breakout, eliminating the backhaul problem.

## The Solution: Implement SD-WAN as a Global Service

When implementing SD-WAN as a global service, UCaaS traffic can be carried across an optimized global connection to doorstep of the UCaaS service, eliminating Internet performance problems.



# Reduce Networking Costs and Improve Agility

Addressing the five technology changes cited from an infrastructure perspective requires a global networking service with its own backbone, built-in security capabilities, and the ability to connect sites, cloud resources, and mobile users.

Together, US Signal and CATO offer a global, geographically distributed, SLA-backed network of PoPs, interconnected by multiple tier-1 carriers. A fully managed suite of enterprise-grade and agile security capabilities, built into the network. By converging networking and security onto an SLA-backed backbone is organizations drop MPLS without compromising network performance or reliability, eliminate branch appliances, gain direct, secure Internet access everywhere, and seamlessly extend the enterprise WAN to mobile users, cloud data centers, and cloud applications.

**Sound like a perfect fit? Let's chat!**

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