CATO
NETWORKS

INDUSTRY SURVEY

TELCOS AND THE FUTURE OF THE WAN IN 2019

Executive Summary

In this year's survey, we wanted to better understand the "hows" and "whys" of WAN transformation. As digital business initiatives sweep enterprises, companies are rethinking how they interconnect sites, users, and cloud resources.

Replacing MPLS with SD-WAN has undoubtedly been part of the WAN transformation story, but only a part. SD-WAN makes the WAN nimbler, more cost-effective, but fails to address numerous networking challenges facing today's organizations such as:

- Secure, direct Internet access from branch offices
- Predictable, responsive global application performance without MPLS's high costs
- Easy and affordable optimized cloud access
- Optimized and secure mobile experience worldwide

SD-WAN's focus on connecting sites with physical appliances means the technology has limited value for the new kinds of networked IoT devices that business networks will need to accommodate in the future.

Addressing these challenges through point solutions returns IT to the network complexity that ultimately limited agility, visibility, and control. What's needed is a comprehensive networking platform connecting and securing **all** enterprise users and resources at scale *everywhere*, positioning IT to solve the enterprise's networking challenges of today — and tomorrow.

Two approaches exist: enterprises can build the global network themselves (do-it-yourself (DIY)) or leverage a managed network service. For many reasons, stitching together a global network is a costly, complex, and an inherently limited approach to network transformation. (For a deeper dive into why that's the case see this eBook.) Managed network services let enterprises offload the complexity and challenge of designing a global network and focus internal IT resources on the business — an approach that's in line with the current thinking of many CIOs and IT executives.

But to be the enterprise's global platform, managed network services need to combine the best of both worlds: the uptime, predictability, reach, and "white glove" service of the best of the telco experience with the agility, cost structures and versatility of cloud providers like Amazon Web Services (AWS). It's charting the course to this new kind of cloud-native, network service platform that we'll examine in this survey.

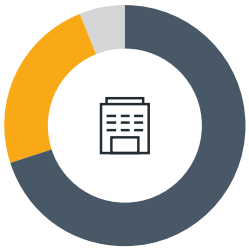
About the Survey

A total of 1621 respondents took our “Telcos and the Future of SD-WAN in 2019” survey between December 10, 2018 and January 7, 2019.

This report focused on those 432 respondents who work in IT, purchase telco services, and whose organizations have some MPLS in their backbone.

The respondents represent a cross section of the IT market. Companies with more than 2500 employees accounted for 42% of respondents. The vast majority (70%) had 11 or more locations with 24% of respondents from companies with more than 100 locations. All respondents have some kind of cloud presence and most respondents indicated their organizations have at least two physical datacenters (77%).

42%
Companies with more than 2500 employees



24%
Companies with more than 100 locations

70%
11 or more locations

Most respondents were 35 or older (88%) and came from companies headquartered in the US (57%) and Europe (24%) with remote sites in North America (72%), Europe (44%), and Asia (40%). Respondents were distributed across industries with the three most popular sectors being "manufacturing" (17%), “healthcare and pharmaceuticals” (12%), and “retail & consumer durables” (9%).

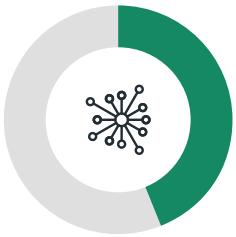
The Top 5 Trends

As we analyzed the tens of thousands of data points comprising our survey results, five macro observations became apparent:

- WAN transformation: it’s the new normal
- Managed services will be essential for WAN transformation
- Enterprises rely on telcos, grudgingly
- Managed network services require visibility and control
- Security is essential for WAN transformation

Let's take a look at each one of them.

WAN Transformation: It's the New Normal



44%

Had or were considering deploying SD-WAN in 12 months

46%

Primary motivation for considering SD-WAN? Improved Internet access

85%

Will confront use cases in 2019 poorly addressed or outright ignored by SD-WAN

The number of organizations transforming their networks has increased dramatically in the past year. Nearly half of respondents (44%, q21) indicated that they had or were considering deploying SD-WAN in 12 months. Last year the number was just over a quarter of respondents. Another third (33%, q21) of respondents are considering SD-WAN but have no current plans to deploy the technology.

The primary motivation for considering SD-WAN? Improved Internet access (46%, q22) followed by the need for additional bandwidth (39%, q22), improved last-mile availability (38%, q22) and excessive WAN related costs (37%, q22).

At the same time, while SD-WAN indicates WAN transformation, SD-WAN alone inadequately addresses the range of challenges facing enterprises. The overwhelming majority of respondents (85%, q2) indicated they will be confronting use cases in 2019 poorly addressed or outright ignored by SD-WAN, such as providing secure, Internet access from any location (50%) and improving visibility into and control over mobile access to cloud applications, such as Office 365 (46%).

Managed Services Will Be Essential For WAN Transformation

Described their SD-WAN suppliers as managed service providers

Described their SD-WAN suppliers as appliance vendors

As we noted, there's a growing trend towards managed network services. This year, 75% of respondents described their SD-WAN supplier as some kind of managed service provider (q25); the remaining 25% were appliance vendors.

Managed services have always simplified network deployments, offloading the complexity of designing, deploying, maintaining and managing the network onto the service provider. But they can also address the use cases out of scope for SD-WAN.

Depending on their architectures, service providers can eliminate the backhaul typical of out-of-region access to centralized cloud connections or VPN concentrators. Distributed communication hubs in the service provider's global network can provide local, high-speed access to cloud datacenters worldwide. The same is true for mobile access. Authenticating mobile users at the local communication hub, not some remote, centralized point, eliminates much of the latency that's degraded enterprise remote access.

Enterprises Rely on Telcos, Grudgingly

How will enterprises consume managed network services? Telcos would be the logical candidates. But as our report shows, telcos continue to have mixed track records with enterprises. Networking professionals might appreciate the reliability and uptime of MPLS, but the experience working with the telcos yields very different results.

Respondents noted that telcos provide "Average service level," and "There is nothing about our telco which makes us like or dislike them, they are just 'as expected.'" Overall, respondents gave telcos a failing grade (54 of 100, q14) when asked if they thought network service pricing was fair. It's exactly that "mediocre-ness" that is the problem.

Many other kinds of providers are well liked by enterprises. Respondents gave high marks for the overall experience with cloud providers (3.71 for cloud application providers, 3.70 for cloud datacenter providers), Global Telcos? They scored the lowest of all organizations (3.24, q7).

The global telco runs an unquestionably a complex beast. Integrating the multitude of routers, firewalls, and WAN optimization appliances into a seamless service takes significant talent. Telcos must orchestrate, monitor, and manage many technical domains. Troubleshooting problems requires close coordination with their suppliers. All of which impacts the customer experience in many ways.

Building the network from third-party appliances and services puts the technical expertise outside of the organization, which significantly degrades customer service. Nearly half of respondents (48%, q17) indicated they only reach support personnel with the necessary technical expertise to resolve an inquiry on their second attempt. No wonder most respondents indicated their biggest frustration with the telco customer service was the time to resolve problems (71%, q10). Relying on third-party providers also limits the speed of feature introductions. Only 2% of respondents indicated that the telcos' ability to introduce new features and enhancement exceeded their expectations (q18).

Network complexity also forces organizations to open tickets for even minor changes. Moves, adds, and changes (MACs) take at least one business day (8 hours or more) for nearly half of qualified respondents (46%, q16). Opening locations is a big frustration for nearly half of respondents (46%, q12). More than 70% indicated that deploying new locations requires at least 15 days (73.84%, q15) and 38% (q15) indicated that new locations require 45 days or more.

And then there's the most popular pain of telco services — bandwidth costs. The sheer complexity of their networks force telcos to cover those costs by charging more for capacity. Respondents made "high bandwidth costs" the biggest frustration in working with telcos (47%, q12).

71%

Frustrated with the telco customer service time to resolve problems

73%

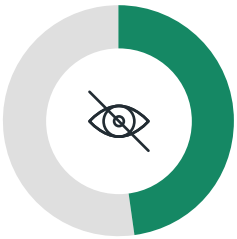
Indicated that deploying new locations requires at least 15 days

47%

Made "high bandwidth costs" the biggest frustration in working with telcos

Managed Network Services Require Visibility and Control

What's needed is a different kind of service, one that brings the visibility and control to managed services. This year, nearly half of respondents (48%, q10) complained about the lack of visibility into the telco network.



48%

Complained about the lack of visibility into the telco network

56%

Prefer co-management approach to WAN management

24%

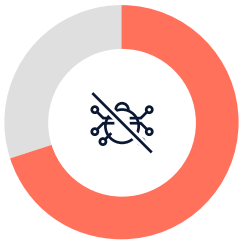
Prefer self-service approach to WAN management

To address that issue, new management models have emerged. Co-management, allows both the telco and the enterprise to change the WAN. Often, though, this capability is limited to just networking and not the security infrastructure. Co-management was by far the most preferred approach to WAN management (56%, q23).

Self-service management, another change from the traditional telco management, gives enterprises sole control over all aspects of their network. Self-service management was the second (24%, q23) most popular management model.

Security: Essential for WAN Transformation

Main Security Challenges



70%

Defending against malware/ransomware

49%

Enforcing corporate security policies on mobile users

45%

The cost of buying and managing security appliances and software

To achieve the goals of digital transformation, security implications must be considered in any network transformation. Reducing bandwidth costs, improving cloud or Internet performance, increasing agility — the major motivations for considering SD-WAN require secure Internet access.

But SD-WAN alone is unable to address the main security challenges facing IT organization — defending against malware/ransomware (70%, q5) and enforcing corporate security policies on mobile users (49%, q5). The result: organizations must purchase additional security tools to protect their branch offices increasing complexity and reducing visibility. The "cost of buying and managing security appliances and software" was the third major security challenge (45%, q5).

Cato: The Cloud-Native Carrier

If the respondents in our survey are any indication, enterprises are looking for a new kind of managed service. One that not only connects locations but synthesizes site connectivity with security, cloud access, and mobility into one seamless, high-performance experience worldwide. It's a service with the cost, velocity, and agility needed to power the digital business.

We call providers who deliver this new kind of managed service experience, cloud-native carriers. Their engines are cloud-native software stacks and their underlying networks leverage IP economics. Cloud-native carriers bring the best of cloud services to the world of networking.

Cato is the world's first cloud-native carrier. Cato connects the entire digital business — sites, mobile users, and the cloud — into one global network. A network that is protected by enterprise-grade security, managed through a single-pane-of-glass, and backed by world-class support and engineering organization. It's Cato and it's networking at the speed of now.

The Cato Private Backbone Provides Affordable, Enterprise-Grade Connectivity Worldwide