

The Shift to SD-WAN

Research shows rapid move from private line MPLS
to broadband SD-WAN over next two years

Research Summary	Why the Shift to Broadband?	SD-WAN Security & Reliability
Cloud & SD-WAN Go Hand-in-Hand	SD-WAN as a Managed Service	SD-WAN Adds Agility

According to a survey of 160 mid-market and enterprise companies conducted by IDG Connect and Silver Peak, companies are rapidly adopting Software-Defined Wide Area Networks (SD-WAN). Survey respondents say that landlines and traditional WAN architectures are inadequate to maintain competitiveness as they move more of their applications and data to the Cloud.

Today, only 27% of survey respondents report having implemented SD-WAN; however, 92% expect to have done so within the next 12 months.

What is your timeframe for a SD-WAN implementation?



This move to SD-WAN will fundamentally transform how these companies communicate. The vast majority of the companies will soon be relying primarily on broadband and SD-WAN to connect their branches and remote offices.

1,000-4,999 employees



81%

5,000-9,999 employees



79%

10,000+ employees



79%

Percentage of companies saying that 75-100% of their connectivity to branches and remote offices will use or leverage broadband within two years.

2 Why the Shift to Broadband?



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MPLS was innovative in the early 2000s, when applications were hosted in physical, corporate data centers and broadband wasn't readily available. But today's applications reside in the cloud, reliable broadband is ubiquitous, and companies need to operate at "cloud speed" in order to be competitive.

WAN Connectivity Frustrations

High Cost 38%	No Direct Connect to Cloud/SaaS Applications 14%	Too Complex to Configure 13%
Unreliable Performance 13%	Branch/Remote Offices Take too Long to Provision/change 11%	Too Much Infrastructure Required at the Branch 11%

With today's reality of cloud-based applications, MPLS is no longer sufficient to address today's WAN requirements.

SD-WANs allow companies to:

- Use the Internet to augment MPLS through any form of connectivity
- Switch carriers, mix and match, or even replace MPLS entirely with broadband
- Simplify branch connectivity and securely deploy a branch in minutes instead of weeks or months
- Improve overall performance of the network
- Achieve better network visibility and control
- Satisfy employees and others with private-line-like performance
- Reduce WAN infrastructure costs by up to 90%

Why the Shift to Broadband? (cont.)

Research Summary	Why the Shift to Broadband?	Maturing of SD-WAN Security & Reliability
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Ninety-two percent of survey respondents still use MPLS today for half to all of their branch office communication. But they report that the two biggest frustrations with today's MPLS networks are their high cost and complexity. The use of private lines is typically far more expensive than the broadband links leveraged by SD-WAN overlays.

Eighty-one per cent of companies surveyed anticipate that 75-100% of their connectivity will be broadband-based within two years.

Many companies have had to wait for weeks, or even months, for landlines to be installed into new offices. The installation of MPLS at a branch can take even longer because of issues around the availability of MPLS lines in some areas. Broadband lines are far more ubiquitous, and are much more easily provisioned than MPLS lines. Incorporating broadband into the networking architecture means that branch offices can be up and connected in a matter of days – or just hours for some metro areas.

What is the number of branch offices/remote sites within your organization?



With 58% of respondents reporting 21 or more offices, the move to SD-WAN is more critical than ever. These growing businesses can't afford to wait weeks or months on a landline to open a new facility. Business today demands a better option.

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Business increasingly requires swift actions and responses to competitor initiatives. Slower, more complex technologies are often viewed as a significant barrier to success. Technology laggards in this case risk the loss of market share and profitability if they stick with the more expensive, more difficult to implement MPLS.

Eighty-two percent of respondents say that they are frustrated with the high cost or complexity of MPLS.

Although organizations are frustrated with MPLS, there are still concerns about moving business-critical traffic over the Internet. Respondents said that security and reliability are the main reasons why organizations have been holding back on moving to SD-WAN before now.

What, if anything, is keeping you from leveraging the Internet within your organization today?

Security Concerns 68%

Reliability Concerns 53%

In addition to this, 34% of respondents indicate that they are being held back by existing MPLS contracts. As these contracts expire, and the concerns about security and reliability are demonstrated to having been addressed by SD-WAN vendors, the move to SD-WAN will rapidly accelerate.

3 The Maturing of SD-WAN Security & Reliability



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Given that security and reliability were previously the biggest concerns for moving from MPLS to broadband and SD-WAN, it is worth looking at how the industry has addressed these.

The importance of security varies significantly between industries and even between companies in the same industry; however, improving network security in general remains a top priority.

SD-WAN vendors – like many cloud providers – have made significant strides to address customer security concerns. Leading SD-WAN solutions work to protect data in-flight with high-performance, edge-to edge IPsec encryption and avoid complex configuration or performance degradation. They also strive to deliver basic NAT and firewalling capabilities, integrate with industry leading security companies, and provide virtual networks that enforce strict micro segmentation of traffic across the WAN.

Similarly, newer SD-WAN technologies address concerns around reliability. Since broadband is so much less expensive than MPLS, many companies implement two different Internet links from two different providers to assure uptime. If either link is having issues with packet loss the SD-WAN can automatically route traffic to the link with less loss.

Using the public Internet may cause concerns about packet loss, jitter and reliability, among other issues, so it's important that enterprises evaluate SD-WAN vendors on the ways in which they address performance and reliability to make broadband perform like a private line. Enterprises can look for SD-WAN vendors that provide such technologies as Forward Error Correction, with which vendors send the data to rebuild any packets lost in transit, and order correction, which deals with packets that arrive out of order. Enterprises should seek vendors are capable of helping them achieve 99.99% reliability.

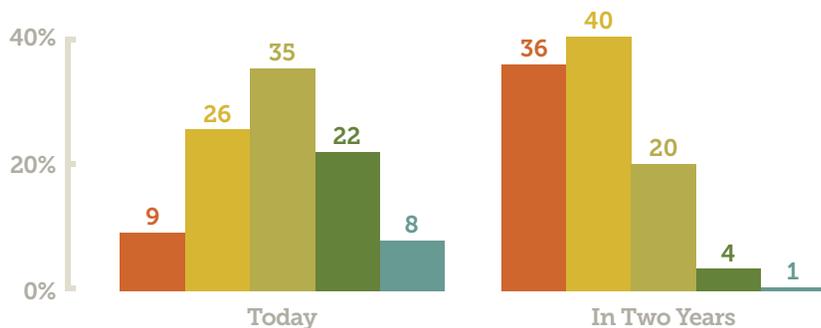
Ultimately, we've reached an inflection point. According to our survey of IT professionals the combination of expired MPLS contracts, frustration with MPLS costs and complexity, and the emergence of a new disruptive technology designed to connect users to applications of all types indicate that it's time to make the move to SD-WAN.

4 Cloud and SD-WAN Go Hand-in-Hand



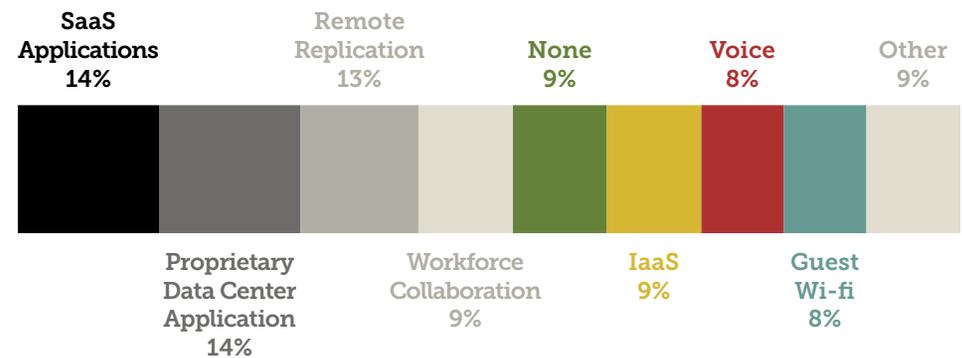
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As a result of this move to SD-WAN, respondents expect that an even higher percentage of their applications will be run in the cloud than they are today, requiring an infrastructure that can support this.



As the move to the cloud accelerates, and as companies continue adopting SD-WAN, respondents expect to run a wide range of applications and processes across the Internet:

Is there one application you wish you could run over the Internet that you are not today?

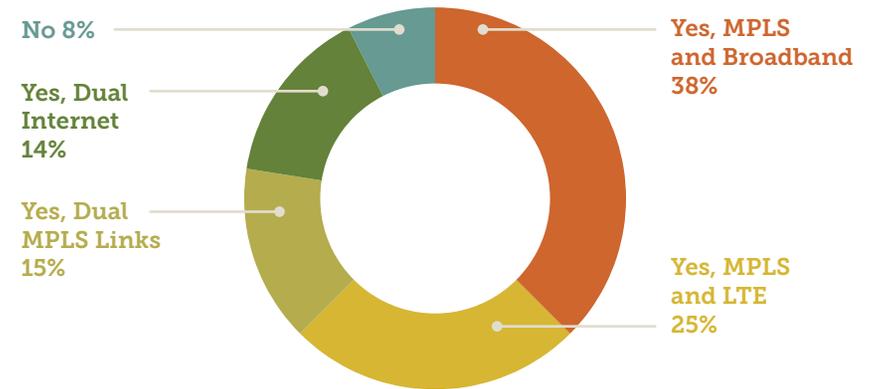


Seventy percent of respondents report that today 50% or more of their applications are in the cloud, but in two years 96% of respondents expect that 50% or more will be in the cloud.

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MPLS has had a 20-year run, and even with this move toward SD-WAN the **survey finds that MPLS will not go away**. Many companies run, and will continue to operate, a hybrid environment where, for example, traffic such as voice and video use MPLS links and all other traffic uses broadband links. Today 92% of companies have multiple connections to their branch offices, most commonly MPLS and either broadband or LTE – but are not utilizing them through SD-WAN, thus not reaping the benefits.

Do you currently have multiple connections to your branch offices?



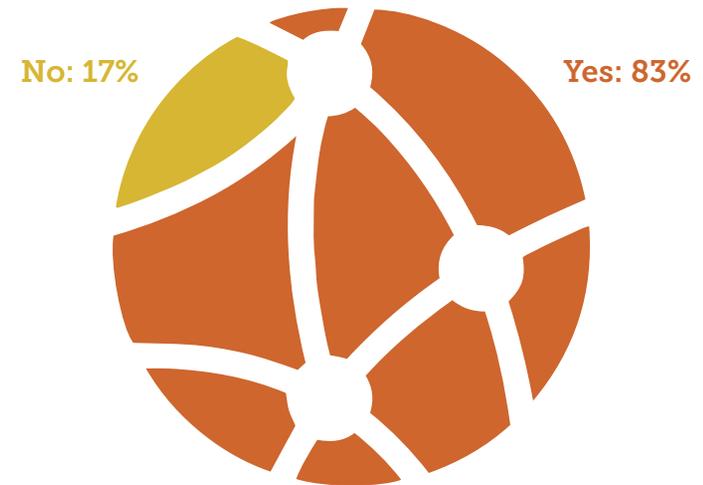
5 SD-WAN as a Managed Service

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Ninety-four percent of respondents state that WAN optimization will remain important, as these technologies can increase the performance of WANs with tools such as compression, data deduplication, traffic shaping, and data caching.

Given some of the complexity of building and a managing a WAN, many enterprises will consider turning to managed service providers. It's important for enterprises to look to service providers who understand the transition to SD-WAN and offer services that support both traditional and cloud-centric applications.

Would you consider outsourcing your WAN to a managed service provider?



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Agility is increasingly a differentiator for business success today. Leveraging the cloud enables companies to “spin up” new services in a matter of minutes rather than days or weeks.

Transitioning to this new WAN model deserves careful consideration based on cost advantages and improved services. Consider how broadband WANs can automatically select the optimum path for key applications to minimize disruption as the organization introduces new services into the WAN. One option is to restrict voice and video traffic to MPLS networks and use Internet VPN for the rest.

It comes down to potential payback. As organizations look to reduce bandwidth costs, companies can either fully deploy a broadband WAN or take a hybrid approach to utilize both broadband and MPLS at the same time. They can implement policies to dictate traffic movement to either form of connectivity based on industry and organizational requirements. The opportunity is clear and present to evaluate and pursue the SD-WAN alternative for reduced costs and competitive advantage.

[IDG Connect](#) is part of the world’s largest technology media and services company focused on connecting buyers and sellers with relevant content and insight.

[Silver Peak](#) is the leader in building hybrid and SD-WANs.