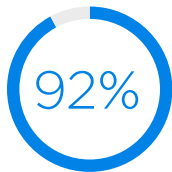


THE DEMAND FOR SD-WAN

Why cloud-based applications and workloads
are driving a migration to SD-WAN



With more applications moving to the cloud, CxOs are reconsidering what infrastructure they'll need today, and tomorrow.



of organizations operate a multi-cloud strategy.³

Cloud-based technologies are becoming a default choice for enterprise organizations seeking to support an increasingly remote workforce with on-demand access to information and applications from any location. Nearly every enterprise today (92 percent) relies on a multi-cloud strategy,¹ with eight in 10 maintaining a hybrid cloud.²

Workloads of all types are moving to the cloud, as the adoption of software, platforms and infrastructure as-a-service continues to spike. The percentage of businesses that are planning to move away from their traditional data centers is 80 percent, underscoring the trend.⁴ This migration has driven a massive increase in network traffic, forcing business and IT leaders to reevaluate whether or not their WAN is built to handle the demand and to support the reliable performance of business-critical applications.

Businesses today need a flexible, reliable network that allows them to make optimal use of bandwidth. A network that's designed to support as-a-service, cloud computing, big data, mobility and video collaboration, among other use cases. Software-defined wide area networking (SD-WAN) meets these needs, allowing physical network resources to be centrally managed and efficiently consumed as needed.



Traffic can be prioritized by category and intelligently routed, ensuring business-critical applications remain available at all times. The key benefit of this approach is that IT leaders can make optimal use of bandwidth already at their disposal, ensuring the efficient, reliable performance of applications and other cloud-based services at existing and new locations, regardless of access or transport method. As a software-based solution, SD-WAN is easy to deploy and manage, and offers IT leaders the ability to gather near real-time visibility and insight into performance, so they can respond with agility to changing conditions.

In this white paper, we'll explore the relationship between software-defined networking and the performance of cloud-based applications and workloads, as well as how SD-WAN can empower your business for success today and tomorrow.

Making efficient use of bandwidth

One of the many value propositions of SD-WAN is ease of deployment. SD-WAN can be deployed quickly, without a major network overhaul or capital investments. Since SD-WAN hosts many of the premises-side functions in the cloud, deployment is simplified and customer premises equipment (CPE) is reduced. This expedites bringing existing and new sites online, regardless of internet access type, connecting multiple locations together into a single, unified network fabric that can be centrally managed via the cloud. SD-WAN can utilize, extend or replace existing WAN solutions, offering the power of choice.

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Once implemented, application policies can be defined that enable traffic to be steered along the best performing connection path in real-time using application-aware routing. These policies are applied based on your business needs. This allows you to optimize usage of the bandwidth you have for performance.

Should additional bandwidth be needed, you can procure it on a site-by-site basis, tapping into lower cost options at sites with less strict requirements. Cloud applications and cloud-hosted infrastructure and workloads stay available and work as they are supposed to — based on the rules you define and the assistance of an intelligent, software-defined network.



Providing visibility and insight

Another benefit of SD-WAN is the enhanced visibility and insight it provides into network performance. Most SD-WAN solutions offer IT leaders access to a management portal where they can view statistics on performance, traffic and utilization across the network. In most cases, the network is able to be viewed as a single entity, instead of a collection of disparate pieces. This empowers leaders to make informed decisions on policies to ensure optimal performance of the network and keep cloud-based applications and infrastructure accessible and running smoothly.

For organizations with multiple sites, all with varied performance requirements, this is of particular value — reducing the complexity of network management.

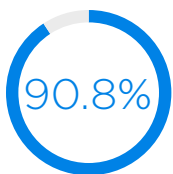
Leaders can gain near real-time answers to questions like:

- What is my network availability and how is it performing?
- Is the network strained by bandwidth-heavy applications?
- Which applications are consuming the most resources?
- Is there an unusual amount of low-priority traffic bogging things down?
- How are security protocols performing and is there cause for concern?

Leveraging this information, policies can be adjusted to route traffic over primary and secondary connections in a manner that makes optimal use of bandwidth and creates cost efficiencies. Managers can make informed decisions quickly, ensuring business-critical, cloud-hosted applications remain available at all times, without taking their focus off larger business goals.

Eliminate complexity with managed services

SD-WAN can be offered as a provider-managed service, simplifying the complexity of maintenance and ongoing management. Partnering with a trusted provider to manage your network extends the capabilities and capacity of your team — freeing up time to focus on strategic initiatives. In a recent study, 90.8 percent of enterprise IT professionals said they plan to increase the use of SD-WAN technology.⁵



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Equipment is usually included as part of the monthly service, allowing organizations to avoid costly capital expenditures or long-term hardware commitments that can result in an inflexible network infrastructure. Additionally, some providers may offer a network firewall and unified threat management (UTM) with their service, for organizations that don't have a purpose-built solution in place or that are seeking to upgrade their security. In many cases, this security may improve that of an organization's existing network, providing enhanced protection.

Enterprise organizations with multiple locations may prefer to partner with a trusted provider to plan, design, implement and operate their service, ensuring seamless connectivity between their sites without overtaxing internal resources.

Partnering with a trusted provider

At Spectrum Enterprise, we know that migrating your network is a process. As your partner, we're here to guide you on your journey, whether you want to augment, extend or replace your current WAN. We'll work hand-in-hand with you to choose the right connectivity and design for your SD-WAN based on your organization's unique business and location requirements.

Our network engineers are here to take the heavy lifting of design, connectivity, configuration and enablement off of your plate, so that you can focus on strategic initiatives.

As more applications, workloads and compute instances are moving to the cloud, a high-performance network solution is a must. SD-WAN prepares organizations to meet tomorrow's demands, ensuring optimal usage of bandwidth and performance of cloud-hosted services, and on-demand access to information and business applications from any location. If your organization's applications and workloads reside in the cloud, then a software-defined networking solution is an essential part of your strategy.

[Learn more](#)

1. ["Flexera 2021 State of the Cloud Report,"](#) Flexera, 2021.
2. Ibid.
3. Ibid.
4. ["Enterprise Networking: Building the Network of the Future with SD-WAN,"](#) Deloitte, 2021.
5. ["2021 SD-WAN Managed Services Survey,"](#) Futurium, 2021.
6. Ibid.

About Spectrum Enterprise

Spectrum Enterprise, a part of Charter Communications, Inc., is a national provider of scalable, fiber technology solutions serving many of America's largest businesses and communications service providers. The broad Spectrum Enterprise portfolio includes [networking and managed services solutions](#): [Internet access](#), [Ethernet access and networks](#), [Voice](#) and [TV solutions](#). The Spectrum Enterprise team of experts works closely with clients to achieve greater business success by providing solutions designed to meet their evolving needs. For more information, visit enterprise.spectrum.com.