# SD-WAN: OPTIMIZE BANDWIDTH AND ACHIEVE COST EFFICIENCIES

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The enterprise wide area network (WAN) is becoming more complex and costly as it tries to accommodate an increasing number of user demands. High-definition video conferencing, real-time collaboration on cloud-hosted applications and other bandwidth-intensive activities are driving this trend.

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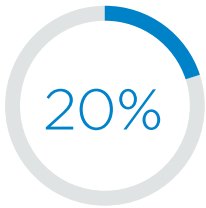
of IT professionals said they plan to migrate all of their applications to the cloud within the next year, according to a 2021 survey.[2]

Eighty-seven percent of enterprises have already adopted, or are planning to adopt, internet-based connectivity as their main WAN technology — changing the way traffic flows on the network.[1] Even now, increased data loads (especially from video conferencing and streaming), broad acceptance of remote work practices and once-unthinkable standards for speed and connectivity are causing enterprise networks to feel the pressure.

The pressing need for more bandwidth

The adoption of new or updated technologies like the Internet of Things (IoT), artificial intelligence (AI) and machine learning are driving the need for more bandwidth. Additionally, collaboration tools and cloud applications are further propelling this need. In a 2021 survey of IT professionals, 48 percent said they plan to migrate 50 percent or more of their applications to the cloud in the coming year.[3] Twenty percent plan to migrate all of their applications.[4]

To support these technologies, IT leaders need a way to simplify the management of their networks and better optimize the allocation of bandwidth. This has become a key priority for businesses, especially those with multi-site network topographies.

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Why existing network solutions aren't enough

Organizations need a network model that prioritizes mission-critical applications and other important traffic in near real-time while offloading non-critical traffic to secondary connections. But legacy networks can prevent this type of traffic plan due to their rigid infrastructures that are not easily modified. One area where this lack of modification is especially apparent is at the individual site locations. Each site may have different bandwidth needs that change throughout the month. The rigid nature of traditional networks can cause a WAN to be under or over utilized and inefficient.

Cost efficiencies are another primary consideration. Simply adding bandwidth to existing networks can be costly. Maintaining backup circuits, which might be used only seldom or intermittently, is likewise an expensive proposition for many organizations. When it comes to allocating bandwidth by location, IT managers struggle to balance the bandwidth needs of one site over another, especially as demand fluctuates.

Staying ahead of digital transformation trends presents challenges as well. As organizations increase their use of bandwidth-intensive technologies such as the cloud, collaboration software, IoT and machine learning, network managers must adapt and evolve to meet network needs. For instance, ensuring a fast and secure path to the cloud and other mission-critical applications for all users is paramount.

Allocating bandwidth with SD-WAN

A software-defined wide area network (SD-WAN) virtualizes network functions so they can be managed from a central source. This simplifies network management and permits enterprises to direct traffic through any combination of connection types, including fiber, coax, wireless and others. This orchestration of resources allows SD-WAN to efficiently allocate available bandwidth and to prioritize and route traffic over both primary and secondary connections. Due to its vast potential for network optimization, SD-WAN adoption is accelerating. In a 2021 study of enterprise IT professionals, over 90 percent said that SD-WAN technology will grow as part of their strategy.[6]

SD-WAN fulfills the need for more bandwidth by taking full advantage of the unused and underutilized circuits, or even redundant connections that already exist within an organization's network. Compared to traditional WAN services, SD-WAN promises greater agility and flexibility, even within existing infrastructures, by making the most efficient use of the bandwidth an organization already owns.

SD-WAN is also an effective way to guarantee access to high-bandwidth, mission-critical applications such as cloud collaboration. SD-WAN solutions enable a network to support these workloads efficiently by setting policies that ensure mission-critical applications get priority.

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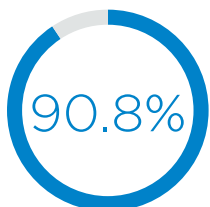
of enterprise IT professionals said SD-WAN technology will grow as part of their strategy.[5]

77%
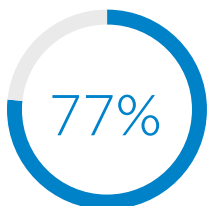
of IT-dependent businesses prefer a fully managed or co-managed SD-WAN solution.[7]

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Achieving cost efficiencies with a managed SD-WAN solution

In addition to optimizing bandwidth, a managed SD-WAN solution can optimize costs by reducing the expenses associated with network infrastructure and management. Since SD-WAN hosts many of the premise-side functions in the cloud, customer premise equipment (CPE) is reduced. This decreases upfront infrastructure costs and allows for quicker deployment, giving organizations the flexibility to augment, extend or replace their current WAN as needed.

A managed SD-WAN solution can also provide a portal that allows IT managers a centralized view into how their network is functioning. This allows organizations to see the performance of their network, while the SD-WAN provider handles the majority of the network management and maintenance.

As organizations struggle to keep up with the constantly changing needs being placed on their networks, a managed SD-WAN solution provides an efficient and near real-time allocation of bandwidth to meet those needs now and into the future. It gives organizations greater visibility into their networks and enables application-aware routing while reducing costs and the day-to-day workload on IT staff. Given the choice, 77 percent of IT-dependent businesses opt for a fully managed or co-managed SD-WAN solution as a way to streamline operations and reduce management costs.[8]

Learn more

1. "Enterprise Networking: Building the Network of the Future with SD-WAN," Deloitte, 2021.
2. Mike Loukides, "The Cloud in 2021: Adoption Continues," O'Reilly, Dec. 7, 2021.
3. Ibid.
4. Ibid.
5. "2021 SD-WAN Managed Services Survey," Futuriom, 2021.
6. Ibid.
7. "2021 State of SD-WAN Study," Altman Solon, 2021.
8. Ibid.

About Spectrum Enterprise

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