What to look for in SD-WAN

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Increasingly more companies are transitioning from traditional connections to SD-WAN. Learn why and what to look for in an SD-WAN solution.

What Is SD-WAN?

SD-WAN, or "software-defined wide-area network" is a virtual WAN that uses software to control connectivity, management and services between centralized data centers and disparate, remote locations or cloud applications. This has become of significant value as companies are increasingly more distributed and workers are relying more and more on cloud-based applications and tools to execute their work.

The market valuation for SD-WAN is expected to surpass $30 billion by 2026 and SD-WAN technology is predicted to grow at a nearly 31% compound annual growth rate for the next several years. Gartner predicts approximately 30% of enterprises will use SD-WAN technology by 2023.

The business drivers for organizations transitioning to SD-WAN are primarily to streamline their network, reduce costs and lessen the maintenance burden while improving performance and uptime. IDC says, "Traditional enterprise WANs are increasingly not meeting the needs of today's modern digital businesses... Enterprises are interested in easier management of multiple connection types across their WAN to improve application performance and end-user experience."

The Benefits of SD-WAN

SD-WAN is growing in popularity for many reasons and as SD-WAN capabilities continue to expand, the value of the technology will only increase. We've outlined some of the top reasons companies transition to SD-WAN:

Related: How to Choose between DIY vs. Managed SD-WAN

Lower WAN costs

Many companies choose SD-WAN to replace more expensive MPLS and traditional WAN connections that require expensive hardware appliances to connect remote locations. SD-WAN simplifies your network infrastructure, allowing it to be centrally managed for a decrease in operating expenses.

Greater capabilities

Because of the lower capital and operating costs for SD-WAN, businesses can afford to build out their enterprise network infrastructure to meet the increasing

demand for business-critical applications and mobility. SD-WAN was built to support all kinds of applications, such as streaming video, cloud applications, AI and big data. As bandwidth demands continue to increase, SD-WAN ensures users can work the way they need to without limitations.

More control

SD-WAN gives administrators the ability to choose whichever method of connectivity works best for each location, including MPSL, LTE or a standard internet connection.

Faster deployment

One of the biggest benefits of SD-WAN is that it is fast, easy and relatively inexpensive to add a new branch or remote location online. Instead of scheduling and paying for a physical installation and hardware, new locations can be brought onto the network via the cloud.

Better performance via intelligent routing and path selection

SD-WAN automatically routes network traffic, prioritizing specific network activity to keep performance levels up across locations so you don't have to worry about latency and packet loss. With SD-WAN technology, you can offer a more consistent, positive user experience.

Greater resilience and agility

Because SD-WAN is more secure, reliable and quickly deployed than other options, you can confidently respond to change and growth without the typical lag time.

Better security

SD-WAN offers more security options, providing an additional layer of defense and in some cases, replacing your existing firewall.

Scalable capabilities with integrations

Growing businesses need to be able to scale their networks to support more employees and locations, as well as be able to support evolving ways of communicating. SD-WAN is highly scalable with few limitations and can integrate with other solutions, such as Microsoft Teams, to build out network capabilities beyond what was once possible.

Related: BCM One Releases Voice-Enabled Teams

What to Look for in an SD-WAN Solution

Not all SD-WAN solutions are the same, making it important for businesses to assess their current environment and what functionality they will need in the future as their business changes. Whether you work with a local IT provider or a giant vendor, there are certain SD-WAN considerations that may help you decide which solution is best for your organization:

Physical, Virtual or Hybrid?

One of the first things to consider when looking for an SD-WAN solution is whether you want to deploy the technology at the edge, in the cloud, or a combination of the two in a hybrid configuration. The difference between these options is how much of the SD-WAN functionality you want to be in the appliance itself or in the cloud or a virtual data center. You also have the option of having some functionality in both.

If your organization has yet to transition most applications to the cloud, you likely will want a physical appliance that is plugged in at each location. A physical appliance, therefore, contains the SD-WAN functionality at each location. If you are further along with your cloud adoption, you may want a more cloud-based SD-WAN solution, either private or public or a combination of both.

Finally, you may opt for a hybrid appliance where you have some appliances running completely on-premise and all of the functions running in the appliance, or some running in the cloud where a large or small portion of the functionality resides in the cloud.

Ease of Deployment

The harder it is and longer it takes to deploy your SD-WAN, the more costs and complications you are likely to experience. Make sure the SD-WAN technology is easy to install and set up through automation and can be centrally managed. When your IT administrators can view and manage the SD-WAN from a single location without having to physically travel to each location, you will not only save money, but you will be able to add new locations and maintain your network much more easily.

Connectivity Capability

You should be able to use all methods of connectivity, including MPLS, 4G/5G/LTE or a standard internet connection. This is called “agnostic connectivity” and ensures your network architects have the ultimate flexibility in how they design your network to meet the needs of all locations and users. Further, you want to be sure you have “carrier agnosticism” so you can have total control over who and how you connect to headquarters.

Network Traffic Routing

You need to know how the SD-WAN solution will route network traffic. For the best connectivity, accessibility and uptime and performance, you want "active/active" connectivity, where the system automatically switches traffic to the optimal channel when a circuit goes down or there is a brownout. You also want your system to be able to automatically and rapidly prioritize traffic based on its business function and value. For instance, email may have a lower priority than VoIP.

Network and Data Security

With so much data traveling through your network, it is critical to ensure your SD-WAN technology is secure, using IPsec transport encryption, VPN support, next-generation firewalls, and other security precautions. Additionally, every method of connectivity must also be supported with adequate security features. If your SD-WAN provider does not offer a robust security solution, you can partner with a third-party security vendor to ensure you have a holistic approach to security.

SD-WAN Controller Type

Depending on the type of SD-WAN you choose, there will be different options in the type of SD-WAN controller you will have. The controller manages traffic flows and the different types are an on-premise controller, cloud controller and a gateway controller. Unlike an on-premise controller that you would control and maintain, the cloud controller is hosted and managed by your SD-WAN supplier. A gateway controller works automatically to ease traffic on your main site's networks.

When you are evaluating SD-WAN, be sure to work with an agnostic solutions provider with extensive experience designing, planning, deploying and managing complex and multi-site technology solutions of all kinds. In this way, you will have confidence that your provider not only knows what they are doing and can guide you in the best options for your particular business environment, but they will also recommend solutions based on their value to your organization versus their own.