How to Choose Between DIY vs. Managed SD-WAN

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More companies are transitioning to SD-WAN to support their diverse infrastructure, but should you consider managed SD-WAN or manage it in-house?

If you are managing a growing business, you know the importance of providing a secure, connected communications platform to your employees, particularly if you have multiple locations, a distributed workforce, and multiple applications. Traditional PBX phone systems are no longer enough to support your dynamic and diverse application environment. What is the next level in communications and how do you provide the foundation your company's employees require to efficiently and reliably connect to their systems and each other?

For many, transitioning to an SD-WAN architecture is the answer. The next question is whether you should outsource managed SD-WAN to a service provider or keep it in-house. Let's break down the key considerations for SD-WAN and how it can be managed.

What Is SD-WAN?

Starting at the beginning, the SD-WAN acronym stands for "Software-defined Wide Area Network." Before we get there, however, let's define what a WAN is. Inc.com says, "A wide area network (WAN) is a data network, usually used for connecting computers, that spans a wide geographical area. WANs are often used by larger corporations or organizations to facilitate the exchange of data. Increasingly, however, even small businesses are utilizing WANs as a way of increasing their communications capabilities."

Originally, WANs were created to carry voice only, connecting private branch exchanges (PBXs) in remote offices together so the dispersed phone system worked as if it was all in a single location. Today, WANs also carry data and image transmission to enable functionality such as video conferencing. While WANs have their benefits and are a step up from a PBX system, they were never built to support all of the myriad cloud and other advanced applications used in today's business operations.

The increased use in cloud and other modern applications is driving the enterprise software industry forward. The Wall Street Journal reported that the number of software apps used in large firms has increased by 68% in the past four years, with an average of 129 apps used per company in 2018. Smaller companies use around 73 apps and according Gartner, Inc., a research and advisory firm, that number is

only expected to grow. WANs simply can't handle the number and diversity of this new environment.

Beyond their limitations, WANs are also often fraught with issues, namely latency and performance problems that accrue high maintenance and support costs. Similarly, there are increased costs in managing multiple private WAN networks and security is always a top concern.

SD-WANs solve these problems and is why the SD-WAN market value is expected to balloon from nearly $677 million in 2017 to $1.5 billion in 2022. SD-WAN is a virtual WAN architecture that leverages a centralized control function to direct traffic securely across the WAN. The SD-portion of the WAN provides the intelligence, capable of instantly understanding the type of data or voice being transmitted and what routing and security are needed to make it all seamless. This improves the WAN functionality at a lower cost for the organization and can handle all kinds of voice and data transmission, from on-premises applications to software-as-a-service applications and public and private cloud applications. It also ensures greater resiliency and business continuity.

Which SD-WAN?

In essence, SD-WAN is enabling companies to leverage any kind of software application across multiple locations with superior performance, providing a better user experience and lower maintenance costs on a more secure platform.

What is Managed SD-WAN?

Companies of all sizes and industries are looking to enable a remote workforce and utilize as many cloud systems and applications they need to execute their job tasks. Providing that kind of scalability and flexibility, however, is something many companies struggle to do. With all of the many moving parts involved with today's communications network, companies are seeking relief. The complicated web of technology, applications, carriers, security, users and upgrades make network management increasingly challenging and expensive. Additionally, it is common for IT teams, particularly in small-to-medium-sized businesses, to not fully understand the intricacies of SD-WAN. Even IT teams who do are often stretched too thin to provide the level of skill and service required to manage a dynamic SD-WAN network on an ongoing basis.

As such, increasingly more organizations are making the decision to transition to managed SD-WAN, outsourcing the management of their communication network and related applications to a service provider. Instead of building out a highly-skilled and expensive internal team, companies are seeing the benefits in partnering with a service provider that carries the specialized SD-WAN expertise and is experienced in setting up new networks or augmenting an existing network infrastructure quickly. A managed SD-WAN service provider typically offers installation services, as well as ongoing maintenance and upgrades, monitoring and connectivity services.

Swiss Luxury Watchmaker Gets Precision and Reliability in its Network

The best managed SD-WAN providers are also able to provide agnostic network design and planning services and ongoing integrations, as well as manage the various carriers and security issues for their clients. These offerings can be of particular value for companies with a global carrier network and a distributed workforce with varying broadband access types and infrastructures.

Why Some Companies Manage Their Own SD-WAN

Some companies want to control their own SD-WAN network. Whether they fear security issues or simply want to keep as many services in-house, they believe there may be too much risk in outsourcing. For these companies, outsourcing any service is always in question, but they must have the internal teams to support self-management.

Companies who effectively manage their own SD-WAN typically have a robust IT department with a dedicated communications team that has deep networking knowledge. They have the specialized skills to expertly design, manage and support a complex SD-WAN network and all of the connectivity issues that frequently come with it.

Some of the most common problems with SD-WAN are:

- Quality of connections
- Underlay and overlay considerations
- Feature considerations
- Working with multiple carriers
- Extending the network into the cloud
- Support issues
- SD-WAN costs
- Deciding to deploy

Security is also a growing problem, particularly with all of the cloud applications, personal devices, and public WiFis commonly in use. According to Networkworld, security is the biggest pain point for organizations deploying SD-WAN. In an interview with an executive vice president of an American multinational cybersecurity company, the article's author discovered why SD-WAN is creating new security challenges:

"The biggest challenge we see organizations face is the result of trying to apply a consistent security framework to this new environment. It needs to not only secure the primary SD-WAN connection, but also be integrated into whatever security solutions that have been deployed elsewhere, such as in the cloud or at the remote network. This allows organizations to implement a single security strategy that includes application protection, web filtering, sandboxing, network access control, SSL inspection, and solutions such as NGFW, IPS, and VPN to protect applications, workflows, and data in motion."

Clearly, it requires a highly-skilled security team who is versed in SD-WAN to reliably manage an SD-WAN network. For companies who have these specialized skills in-house and have access to industry-leading security systems, managing their own SD-WAN network may make sense. More often, companies who opt for the DIY model simply aren't aware of the value of a managed solution.

Things to Consider When Deciding Between DIY and Managed SD-WAN

Once you have determined that your connectivity requirements demand SD-WAN, it's time to decide whether it makes sense to build and manage it in-house or outsource to a service provider. One survey found 54% of respondents prefer a fully managed SD-WAN, while the remaining respondents were split between a DIY approach and a "co-managed" approach.

Before you decide where you lie on the spectrum, there are several questions to consider:

- How many skilled resources do you have on staff to dedicate to designing, planning, implementing, monitoring, and maintaining a secure, reliable and scalable SD-WAN network while also aggregating and managing multiple network providers?
- What is your desired timeframe to implement an end-to-end SD-WAN network?
- What is your budget and can you accurately forecast what a DIY approach and a managed SD-WAN approach will cost?
- What is the risk/reward in a DIY approach versus managed SD-WAN?
- Do you have the resources capable of merging voice, data and video applications into a comprehensive solution that optimizes bandwidth by prioritizing traffic?
- Is your IT team capable of providing 24/7 monitoring and support to ensure 100% uptime and rapidly troubleshoot and restore service issues?
- Is your dedicated SD-WAN IT team prepared to manage system upgrades and non-stop application delivery?
- Have you evaluated the various service providers in terms of services provided, cost and timeframe?

Choosing a Managed SD-WAN Provider

As the demand for outsourcing SD-WAN has increased, there are more service providers coming on-board. All managed SD-WAN providers are not the same, requiring leaders to carefully consider not only the cost differential but also their comprehensive service offering. Networkworld outlined eight considerations when comparing managed SD-WAN providers:

1. Deep domain expertise
2. Best-in-class QA processes
3. Flexible migration options
4. Focus on agility and cloud
5. Varying technology options
6. Multiple connectivity options
7. Global reach
8. Sound security offerings

Another consideration is the bandwidth and responsiveness of each provider. How quickly can each service provider troubleshoot and restore service if they detect an issue during their 24/7 monitoring? Do they provide complete vendor management on a global scale? Can they help you set up and optimize applications in your SD-WAN network? Understanding the full scale of offerings will help you differentiate providers.

The key benefits of partnering with a managed SD-WAN service provider is that they should serve as the centralized point of contact for all of your vendors and manage the totality of your network services. You should be able to trust their recommendations and have full confidence that they are completely agnostic in those recommendations.

Your chosen provider should value your business objectives and be capable of customizing their service offering and recommendations to fit your specific business needs - both now and as your business grows. One of the primary reasons companies move to SD-WAN is to reduce costs. Be sure your vendor has the experience to know how to optimize your budget without sacrificing the reliability, performance and security of your network.

All of this means they should have the practices and expertise in place to identify risks ahead of time and mitigate them, particularly during the transition period. Instead of complicating your network, they should be focused on finding a holistic approach that streamlines capacity and optimizes bandwidth.

As your company grows and your communication and collaboration needs evolve, it is important to have confidence in your provider. The faster you can build out your network, the faster your people can work without disruption. The ultimate goal is to have your communications capabilities so streamlined and fluid that no one using them thinks about the technology and services going on in the background to support it.

All that your people want is to be able to log into and use the applications they need to be productive - regardless of where they are working. Partnering with the right managed SD-WAN service provider will ensure you keep the lines open, connected and optimized without blowing your budget or risking security events.