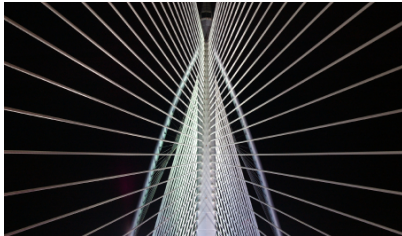


SD-WAN: The Backbone of Digital Transformation



By:

Some version of this statement is everywhere you turn these days: “*Cloud computing, 5G, mobility, artificial intelligence (AI), and the Internet of Things (IoT) are transforming the ways we work, collaborate and live.*” There’s a good reason we hear it everywhere: it’s true. These technologies are radically reshaping not only the way we do business but also the world we live in.

While these technologies often dominate headlines, however, software-defined networking (SD-WAN) is the unsung hero in the background enabling and consuming all these technologies. In much the same way virtualization has fundamentally changed the data center for cloud computing, SD-WAN is the backbone of digital transformation. It’s playing an indispensable role in transforming and securing corporate networks.

Doing any type of business in 2020 requires higher bandwidth, faster speeds and secure connections. These demands are growing at an exponential rate that is far exceeding the capabilities of many companies. The COVID-19 pandemic underscores how important this is as the crisis has forced companies to test the limits of mobility while maintaining secure connections. Another imperative COVID-19 has thrust into the foreground is long-term cost efficiency as companies look to invest in solutions that offer them flexibility, reliability and savings in times of economic turbulence—something SD-WAN is uniquely positioned to do.

As someone who's overseen thousands of SD-WAN deployments and is currently working with a leading fintech company to connect their banking clients across the globe, I can tell you that a *proper* SD-WAN deployment can empower any number of business operations in innovative ways and give companies the tools to navigate extraordinary circumstances.

If you pull back the curtain on any successful digital transformation, chances are you’ll find an SD-WAN element in play. And with the mass proliferation of IoT-enabled devices in combination with 5G on the horizon and edge computing all the rage, SD-WAN deployment is only set to accelerate. I expect to see an explosion of SD-WAN deployments in the future.

The importance of SD-WAN to digital transformation

Let's start at the beginning. Think of a traditional network as a collection of routers, switches, multiplexers and other purpose-built equipment all managed independently by proprietary, internal, purpose-built firmware and software. It's an extremely customized, fragile operation with any changes requiring lots of time, work and costs to support and maintain.

SD-WAN completely wipes the slate clean by virtualizing this infrastructure piece by piece. With SD-WAN, software rather than hardware manages the network and all its connections. This means you can implement major changes more quickly and cheaply while exerting total control over how that network runs. You can introduce automation, orchestrations and security in ways that weren't possible before. You will gain an entirely new way of looking at your network: with a view through data, with visibility into applications and network traffic. This will be critical as 5G will bring yet-to-be-developed-applications from theory into reality. SD-WAN future-proofs your network against the innovations to come.

The combination of IoT and 5G will be a major test for companies, bringing an unprecedented number of devices, applications and data volume to bear on their networks. Asking the right questions and knowing what to look for will be crucial to success in deploying SD-WAN and for a implementing a successful digital transformation plan.

As powerful as SD-WAN is, companies considering a deployment need to review several factors to determine if they're in a proper stage of their own digital transformation. Starting from the right place will allow them to realize the numerous benefits. The following are six key factors companies need to consider when deciding whether to deploy SD-WAN.

Geographic need

If you're a single-location organization, SD-WAN can be a powerful tool to help you overcome many of the barriers traditional networks face and mitigate anomalies in best effort networks. More importantly, organizations with multiple locations, disparate legacy systems, interoperability issues and multiple regional vendors will gain greater control. SD-WAN allows for flexibility, enabling individual locations to add new applications and services and gain operational efficiencies without having to rip and replace existing infrastructure.

However, SD-WAN's primary function is to connect multiple locations that aren't physically connected, so it's crucial that companies should look for an SD-WAN solution that provides no-touch provisioning. This eliminates the need for a technical person at every location enables updates and applications to be provisioned remotely without on-premise staff assistance.

Is your data already in the cloud?

The explosion of cloud has been a true digital transformation game-changer for businesses, as evidenced by the mass migration of remotely stored data into the cloud. While SD-WAN was originally designed to connect physical locations, cloud and mobile have upped the ante—and the adaptability of SD-WAN has come into view, opening a whole new avenue for advanced deployment.

When considering SD-WAN solutions, it's imperative that businesses confirm that they can seamlessly connect to cloud centers and mobile devices. They also need to be aware that while network service providers (NSPs) may offer SD-WAN capabilities, there's a clear distinction to be made with companies that specialize in WAN/SD-WAN offerings. Companies that specialize in SD-WAN often include innovative new services and heightened levels of expertise and support that aren't available through NSPs.

Securing data

It's common for SD-WAN vendors to offer simple security features, but that may not be enough to protect against application-layer attacks. Identifying a vendor that provides advanced security features that can easily be managed is crucial when it comes to securing data. Whichever SD-WAN solution you choose should allow administrators to take a layered approach to security, with the ability to monitor activity holistically across the entire network, into the cloud and data center, and all your applications, normalizing all the underlying complexities. Keep in mind that SD-WAN should not be your go-to security strategy: the openness of your SD-WAN solution to share data and control with your overall security strategy is what's important.

Plan for the future

The widespread adoption of IoT and 5G will have profound impacts on how we interact with our customers. From virtual and augmented reality to enabling technologies like artificial intelligence, SD-WAN solutions deployed with the foresight to eventually support disruptive technologies are necessary, even if your business is not quite there yet. The future of exactly how this technology will revolutionize the way we work may still not be fully realized, but it's clear that SD-WAN will play an integral role.

With the future in mind, it's critical that organizations assess not only current connectivity needs but also look for an SD-WAN solution that can aggregate many mutually distinct connectivity options. It should also be easily managed to support applications across multiple office locations, mobile devices, in the cloud and in the data center.

Crisis connectivity

The COVID-19 pandemic has ushered in the stark reality for many businesses that their workforces are not mobile enough—and their networks not flexible enough—to make the transition to remote work in a way where operations aren't seriously hindered. In fact, we're seeing that companies that have already moved to SD-WAN to implement remote connectivity are benefitting from greater bandwidth at less cost.

Cost efficiency

Another issue that is always top of mind for businesses (but has been pushed to the top of the list by the COVID-19 pandemic) is cost flexibility. To be clear, deploying SD-WAN does involve upfront costs, just as adopting any new technology does, but in the long term digitizing your network can bring real cost savings, freeing up valuable resources during economic downturns and booms alike. Think of it like investing in a Tesla or solar panels for your home. In the long term, this investment could save on

gas or electricity. As many of us are truly embracing collaboration tools now more than ever out of necessity—think Webex, Microsoft Teams and Zoom—SD-WAN can deliver these services remotely and more cost effectively than traditional internet connections.

While it's true that disruptive technologies like 5G and IoT will change the way we work and live, new technologies can introduce uncertainty to decision-making as tech leaders delay purchases, something that can hold businesses back from digital transformation. This doesn't have to be the case. Organizations can benefit from SD-WAN today and ensure a smooth transition tomorrow regardless of what the "next big" technology is, in turn helping companies digitally transform their businesses, increasing efficiencies and improving the customer experience.