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The Role of the Network in Digital Transformation

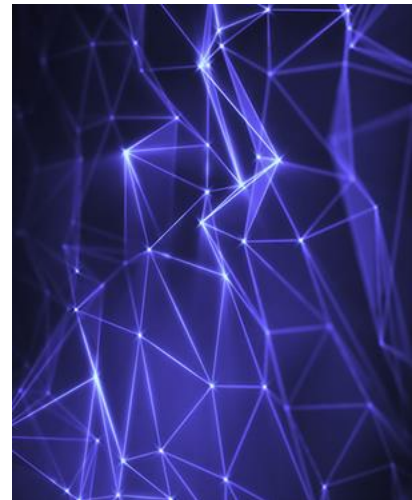
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Digital transformation is commonly conceived as the digitalization of business processes and customer interactions with little regard given to the foundation of what is arguably the most critical component of digital transformation projects – the network. Often how the network is designed and managed can make or break a successful digital transformation.

The good news is that perception is now changing. Enterprises are starting to understand the fundamental role of the network and are taking preemptive measures to ensure the network supports a smooth and successful digital transformation by collaborating with experts in the space, such as managed network solutions providers.

To clarify, a digital transformation is when an enterprise migrates data and applications to the cloud, through SaaS, or public, private, or hybrid cloud, establishing a modernized technology environment that takes advantage of the benefits of cloud platforms.

Because enterprises focus so much on “the cloud” or SaaS, they don’t always think through how their operational flows need to change to also take into consideration other aspects of the network demands such as premises-based operations of the network or remote access and support. As digital transformation drives more cloud and SaaS needs, there are cost effective means of scaling and resiliency, such as using fiber, broadband and cellular combined with SD-WAN to optimize the application performance. The introduction of more cost-effective Internet access and remote users drives the need to re-evaluate the security envelope in which managed network security and the Security Service Edge (SSE) components of SASE play a huge role. Large enterprises would like to adopt a best-in-class model for the elements of the SASE framework.



So it's important to identify technologies that work well together and to choose a good managed service provider to ensure optimal performance and reliability.



Solution Options for SASE

Small- and mid-size enterprises are more likely to choose a single vendor solution for SASE. In that respect, using a managed service provider to review the options available is crucial because not all technologies are created equal. It's also important to understand that SASE has been defined as a "framework" rather than an architecture, combining SD-WAN with security technologies and bringing them together into a cloud service.

For example, some solutions come from the SD-WAN/networking side and have integrated security. SD-WAN has played a pivotal role in enabling the global digital transformation of organizations. At first, it simply provided a more flexible way for branch offices to connect to cloud-based applications. But as networks continued to evolve, SD-WAN became essential, providing fast and secure access between clouds and data centers. SASE solutions working in a SD-WAN environment became the centerpiece to extend that same access coupled with security to remote and mobile workers. Today, new SD-WAN platforms serve as essential building blocks for highly dynamic and broadly distributed networks.

Others have their foundation in security and have supplemented with SD-WAN/networking. SD-WAN is a perfect example of security-driven networking, where having security in place as a foundation allows the network to scale and change without compromising security. A small number offer SASE from the ground up. SASE delivers capabilities based on the identity of a user, its real-time context, security, and compliance policies.

This fits well with the shifting focus to remote working and managing large numbers of users and uncontrolled devices. For more complex environments, a single vendor SASE solution might not be the best fit and they are more likely to take a best in breed approach – combining the elements of a SASE solution together from multiple technology platforms.

Managed Service Providers Offer Flexibility, Options to Support Digital Transformation

Managed service providers can play a key role across industries and enterprise sizes given their breadth of knowledge, and their ability to deliver and support multiple technologies to customize a solution that is exactly right for a specific enterprise. Unlike internal staff who will perform many disparate roles throughout the day, they are solely dedicated to managing networking and security solutions. These providers offer: 1) deep expertise to pull from; 2) experience operating multiple platforms in many cases and an understanding of how they fit customer needs; 3) data from across platforms to make the experience better than the sum of the parts; 4) capabilities in running the network so the enterprise can focus on its business.

As enterprise technology shifts from the highly controlled environment of the data center to public and hybrid cloud platforms, how do businesses today deliver the promise of Digital Transformation seamlessly, simply, securely, and cost effectively, while providing a user experience that enables users and businesses to operate efficiently?

In addition to supporting the ongoing operations, managed network service providers help during the “lift and shift” of data and applications – a complex, and carefully coordinated process that can involve moving massive amounts of data from one environment to the other. The right managed service provider can provide valuable guidance and project management expertise to establish the right strategy for businesses to access these new environments seamlessly, providing a positive experience for their users. The result is improved application performance and reliable, secure connectivity. As we examine innovative technology approaches to Digital Transformation, it is important to understand the challenges all organizations face when it comes to addressing this monumental paradigm shift in IT today and the role the network plays within it:

Lack of Technology and Dedicated IT Skills – A dedicated, highly skilled IT team is essential to the success of any Digital Transformation project. But building such a team is becoming increasingly difficult, especially in the area of networking. That’s why more organizations are looking for partners or managed services to help.

Application Performance – Quite often when data center applications are moved to the cloud or planned to be moved to the cloud, they must be re-written or optimized specifically for the new environment. Public cloud environments are by nature distributed geographically and that is why applications, many of which are custom, often need to be re-engineered to maintain their often custom nature, sustain or even improve their performance, work seamlessly with other applications and data stored in the cloud, and preserve a high level of security. It is important that enterprises understand this and are teaming with the right outsourced solutions provider who understands application performance.

Network Security – As enterprises move applications out of their data centers, which have become the fortified bastions of their security program, they need to re-evaluate their security posture for their physical locations as well as their remote and mobile users.

Uptime and Resiliency of the Cloud Environment – Because of the distributed nature of public cloud environments, if one data center goes down it doesn't mean the entire enterprise operation goes down. All public cloud environments are designed with multiple redundancies and failovers that prevent costly downtime. The uptime and resiliency of the cloud environment is unmatched and provides enterprise customers with peace of mind and lets them rely on the cloud operations to correct any problems, unlike owning and managing one's own data center.

Management and Support – Managing applications and data housed in one's data center requires constant supervision. Server maintenance, software upgrades, and security concerns are just a few of the issues that keep IT staff up at night and require internal resources to manage. While the networks traditionally used to access data centers are generally reliable and secure, they are notoriously costly and inflexible. Managed network service providers relieve many of the headaches IT executives have had to deal with over the years.

Budget Concerns and Constraints – A Digital Transformation effort that leverages a public cloud environment is attractive to enterprise CFOs who are concerned about the financial implications of such a large undertaking. However, moving from purchased servers and databases to rented space in a public cloud reduces capital expense and shifts spending to an operating expense model, where budgeting becomes more predictable and manageable but can spin out of control without proper controls and oversight.

All these points are well and good, but how does the network play into all aspects of Digital Transformation, and how should an enterprise understand it? From our point of view, there are three key things to think about when factoring the role of the network into Digital Transformation:

Understanding the Network Drives the Customer Experience – In the end, regardless of how the network fits into the overall Digital Transformation landscape, it is user experience that counts. Most important is to ensure the performance of the network given the unique business applications and processes an enterprise demands, and that the network has a level of predictability for optimal customer experience. Without predictability, or consistency of performance, ensuring the right application experience can be an elusive goal. Enlisting the expertise of a managed network solutions provider in this area can prove invaluable.

Expertise – It is unrealistic to expect an IT department to have the breadth of expertise and knowledge to integrate all of these disparate network operations and security elements. Understanding the infrastructure, security, network management, and private connectivity to the cloud is where a managed network service provider can provide the right kind of help to optimize network services for a particular enterprise's Digital Transformation needs.

Holistic Support – Again, few IT organizations have the network support that a holistic support model can provide for each element of network infrastructure, security, and traffic management. A topnotch managed network service provider should be able to provide a universal or holistic perspective to each environment to deliver the best services possible.

Digital transformation is high up on the "to do" lists of IT executives everywhere these days. Of course it involves much more than adding bells and whistles. Decision makers should give serious consideration to the foundational role network architecture, operations, and management plays in delivering positive user experience, and to putting a dedicated, highly skilled team on the job to ensure the network supports a smooth and successful transformation.