

# What does a CIO want from an SD-WAN?



## Introduction

As recently as a decade ago, few CIOs had much of a business orientation. Over the last ten years, however, several factors, including the digitization of business, has been causing the role of the CIO to change. According to [a recent Gartner survey](#), over the next several years the role of the CIO will continue to change. That survey stated that, “The CIO role is transitioning from delivery executive to business executive, from controlling cost and engineering processes, to driving revenue and exploiting data.”

While the role of the CIO is evolving to have significantly more business focus, there is [wide spread agreement](#) that the pace of business change is faster than ever and that the pace of change is accelerating. This rapidly changing environment means that when evaluating SD-WAN solutions, network organizations must realize that the type of WAN that met the business requirements ten years ago won't satisfy business requirements in today's environment.

### The gap between CIOs and network organizations

In too many instances in which the CIO has evolved to have a distinct business focus, the network organization has remained focused on arcane functionality such as using a CLI to write scripts which are difficult to maintain or modify. As shown in Figure 1, this has created a gap between what the CIO values and what the network organization is focused on delivering.



**Figure 1: Gap between CIO and Network Organization**

### CIO-level SD-WAN requirements

CIOs want a WAN that exhibits low cost and high availability. However, while a WAN with those characteristics would likely have delighted a CIO a decade ago, today CIOs regard those WAN characteristics as table stakes. As a result, few network organizations will close the gap with their CIO just by implementing an SD-WAN that lowers cost and increases availability.

To close the gap with their CIO, a network organization needs to implement an SD-WAN that makes their CIO successful. That means implementing an SD-WAN that:

- Enables rapid change to revenue generating business operations;
- Ensures acceptable performance for the company's critical business applications;
- Provides appropriate security functionality;
- Enables the company to comply with all government and industry regulations.

## **Network-level requirements**

To evaluate whether an SD-WAN accomplishes the four requirements listed above, network organizations must translate those CIO-level requirements into network-level requirements. For example, the CIO-level requirement to support the accelerating pace of business change translates into a network-level requirement that the SD-WAN must make it exceptionally easy and fast to implement any possible changes to the WAN. One thing this means is that wherever possible the SD-WAN should leverage emerging technologies such as machine learning.

All SD-WAN providers will claim that their solution ensures acceptable performance for a company's business critical applications. However, some of the leading SD-WAN solutions have similar characteristics to the traditional router-centric WAN that was popular a decade ago. For example, these SD-WAN solutions require tasks such as configuration and management be done in a manual fashion on a device-by-device basis, typically by using an arcane CLI. As a result, these solutions don't enable a network organization to make the changes that are necessary to ensure acceptable application performance in a fast and easy way.

The fact that some of the leading SD-WAN solutions have similar characteristics to a traditional router-centric WAN also means that the operations and management of these SD-WANs is centered on packets and not on the applications that are of critical importance to the CIO. Lacking detailed knowledge of the applications further complicates the task of ensuring the performance of those applications. The lack of detailed knowledge of an application also means that it isn't possible to satisfy the security and compliance requirements of that application by performing critical tasks such as routing its traffic over suitable links in an automated, easy way.

## **The CloudGenix Solution**

The key take-away from this white paper is that the type of WAN that met business requirements ten years ago will not satisfy business requirements in the current environment and hence will not help to close the gap between the CIO and the network organization. A good example of that is that the SD-WAN solutions that have an architecture that is similar to that of a traditional router-centric WAN lack the ease of use and detailed knowledge of applications that are required to enable a network organization to satisfy current and near-term CIO-level requirements.

In contrast to SD-WANs that have an outdated architecture, CloudGenix's AppFabric has a contemporary architecture that is application-centric and which enables network organizations to close the gap with their CIO. The CloudGenix solution enables network organizations to easily implement and manage top-down, application specific policies for how traffic should be treated with the goal of optimizing performance, enhancing security and enabling compliance. With regards optimizing performance, AppFabric allows network organizations to place applications into one of four performance tiers (platinum, gold, silver and bronze) and to assign appropriate resources for each tier. Network organizations might use this functionality to place business-critical applications such as Office 365 and voice in the platinum tier while placing a recreational application such as Facebook in the bronze tier. With regards enhancing security functionality and enabling compliance, AppFabric makes it easy for network organizations to indicate which WAN links, devices and interfaces are acceptable from both a security and compliance perspective on an application by application basis.