



## Choosing an SD-WAN Provider

Making the right decision about your SD-WAN provider leads to long-term success. This guide provides the considerations leading to the right choice.



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## Introduction

As with any technology that is [innovative and market disrupting](#), software-defined WAN (SD-WAN) has garnered much media attention and, in turn, attracted a large number of entrants wanting to grab a piece of the market. Market research leader IDC forecasts that the SD-WAN market will reach \$8B by 2021, a 69% compound annual growth rate (CAGR) from 2017. The total addressable market is huge.

Sifting through all the SD-WAN offerings can be daunting, especially when the layers are peeled back to examine what's really driving the solution. Each solution can vary widely in the way it is architected, constructed, and managed and how they interoperate with existing infrastructure. Product maturity, architecture, and comprehensiveness are other factors to consider.

This guide will provide guidance on asking the right questions of a potential SD-WAN provider and clarify the key attributes that separate vendors from each other.

## SD-WAN Vendor Evaluation

SD-WAN is becoming a common feature noted on providers' product lists across the industry from service providers, MSPs, services integrators, and VARs. Most often, the SD-WAN platform is not proprietary to the provider, but is delivered by a third party SD-WAN vendor. It can either be white labeled by the provider or will retain the SD-WAN vendor's branding in its entirety. Understanding the SD-WAN vendor's technology, capabilities, and functionality is critical to ensuring a good fit.

Much care must be taken in evaluating the track record of the SD-WAN solution because many SD-WAN vendors will claim to have been in-market for a while, but may just be doing so to capitalize on the popularity of SD-WAN by adding features to an older product or product line. In this case, their solution has likely not been exposed to enough use cases and tested in enough complex environments to be able to withstand any off-blueprint situation.

SD-WAN solutions that have truly been in market for several years, and are still around, have likely withstood enough real-world tests to be considered proven. It is important to note that the most dependable solutions are termed genuine SD-WAN, which are specifically built from the ground up on the principles of SDN and SD-WAN rather than solutions that evolved from a legacy technology to fuel a marketing pivoting strategy.

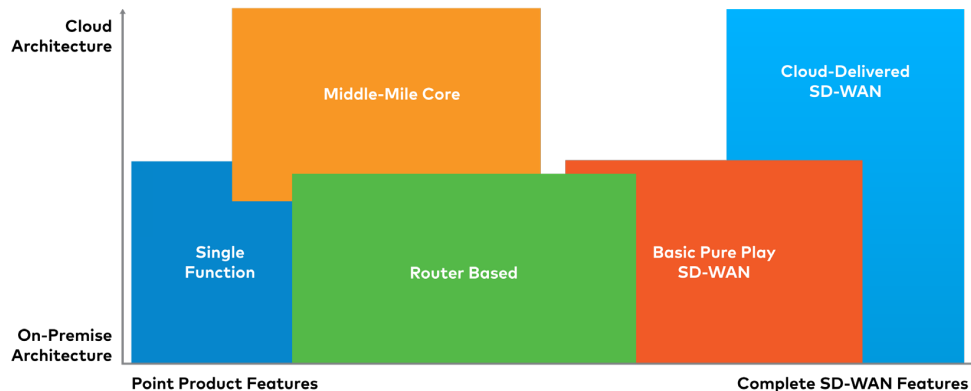
## Established Proof Points

The ability to provide multiple ironclad proof points as to the legitimacy of a solution is critically important. In an industry that is continuing to evolve, there are a few points that matter more than others. For example, you'll want to pose the following questions to your SD-WAN technology provider:

- How many clients have been successfully deployed on SD-WAN?
- How many sites have been deployed?
- Are there use cases that are representative of the client's business model?
- What is the typical deployment period, from time of decision to deployment?
- Do they have an established network that can be leveraged immediately?
- How many service providers have standardized on this SD-WAN solution?

## Architecture Type

Architecture matters with SD-WAN. There are several different types of SD-WAN architecture and while none are necessarily wrong, some are not able to fully support the current and evolving needs of enterprises. There are significant architectural differences between vendor solutions: how they have evolved as an SD-WAN vendor and how they deploy the solution to clients. Architecture is a key consideration in choosing the right SD-WAN technology that fits a business' specific requirements.



There is a clear delineation between vendors that developed SD-WAN technology organically and those that have adopted or added SD-WAN as a new market strategy. The entire architecture of organic SD-WAN vendors is built to support and deliver SD-WAN and it is their intrinsic core competency. All technology and market developments are completely focused on SD-WAN and optimizing the client experience. These type of vendors are considered Pure-Play and a commonality is the flexible and logical topology overlay, a rich application policy, and the high degrees of operational efficiencies they provide to clients.

Alternatively, those that are not considered Pure-Play SD-WAN vendors can be lumped into a more general category where SD-WAN is a bolt-on to existing product offerings or a product line within a larger portfolio of similar solutions. Their business and solution delivery architecture is not specifically designed for SD-WAN, and has been adapted to service this emerging market. [Gartner](#) provides a more granular categorization of these non-organic SD-WAN vendors as “routing vendors” and “pivoting vendors” (WAN optimization, WAN virtualization, and security).

## Technology Maturity and Deployment Readiness

The underlying architecture of the SD-WAN vendor lends itself directly to the type of customer infrastructure it can support. For instance, Pure-Play SD-WAN vendors are highly adaptable to numerous networking topologies because their technology is inherently vendor and technology agnostic. Customers are generally given a few deployment model options that may include a fully managed solution or a do-it-yourself (DIY) model where the solution is deployed in-house with assistance from a VAR or a service provider or MSP can manage the entire network.

Additional flexibility from organic SD-WAN vendors includes the options for hosted management, to manage the solution internally, or a shared approach.

Customers evaluating the adoption of SD-WAN need to ensure that the SD-WAN vendors they are evaluating completely understand their network architecture and transport model and offer a solution that works seamlessly and easily with it. Too much customization to make a model fit can result in bigger and broader issues down the line.

## Established and Realistic Roadmap

When making the critically important decision to choose an SD-WAN provider, just like any long-term relationship, it is important to know they have the enterprise's best interests at heart and that they're going to support future growth. A big part of that commitment to the customer is the roadmap and how it supports a long-term enterprise strategy.

Putting together a high-level roadmap can be relatively simple, but ask for more. A committed SD-WAN provider will take significant time, research, investment, expertise, and vetting to develop a roadmap that is long-term and offers a breadth and depth of functionality that aligns with enterprise and market requirements. It needs to be realistic, attainable, and aligned with the resources available to the vendor. It also needs to be able to support enterprise evolution whether that be in changing IT requirements or allowing the extension of services to reach an additional customer base.

## Ease of Deployment

Minimizing CapEx and OpEx costs is a critical concern for enterprises. Solution deployment upstart costs can be high and the ability to get those costs as close to zero as possible is key.

Any SD-WAN provider worth its salt will make it a priority to build their solution to help customers reduce the necessary network migration or implementation time. The key is the simplification of deployment which includes such functionalities as:

- A robust back-end infrastructure that is pervasive and global in nature and able to be leveraged by the customer, such as gateway federation
- Centralized management and remediation
- A global cloud gateway presence which extends SD-WAN to cloud services, applications, and resources on behalf of the enterprise
- Zero-touch provisioning for edges deployed at customer premises

## Flexibility, Scalability, Adaptability

The right SD-WAN solution is inherently flexible, scalable, and adaptable. An SD-WAN platform should be designed to be complementary, or sometimes, as an alternative or replacement to an MPLS platform, and it needs to break the restrictive chains imposed by MPLS.

A primary goal of SD-WAN is to eliminate a differentiation between “branches” or “remote locations” from main offices, transforming the entire organization into a completely unified enterprise where the service experience is optimized and the same for everyone, regardless of location or proximity to services. This mandates architectural flexibility to accommodate all possible permutations of network infrastructure and service availability.

Growth strategies should also be supported. Enterprises often will acquire new companies or additional sites that require network modifications to integrate into the overall corporate network environment. A strong SD-WAN solution will quickly adapt and scale to support additional edges and network demands.

## Routing Functionality

SD-WAN is designed to optimize traffic and delivery of all forms of media over the network, but it should not stop there. SD-WAN platforms need to include sophisticated routing functionality. This becomes critically important as enterprises put greater emphasis on eliminating their hardware footprints and reducing CapEx.



Additionally, routers are significantly slowing in adoption due to high maintenance costs, the inability to centrally configure and remediate, and limited dynamic multi-path optimization capabilities to support full business continuity. SD-WAN will quickly become the preferred option. In fact, in 2016, [Gartner predicted that 50% of routers will be replaced by SD-WAN by 2020.](#)

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## Security Ecosystem

[Ecosystems](#) are important to the success of enterprises today. Extending the interoperability of a SD-WAN solution to other complementary ones not only allows for an easier network integration process, but also opens the doors to integration with best of breed solutions such as security and cloud services down the line.

Additionally, an extensive ecosystem integration represents a few things:

- An SD-WAN vendor that has considered the numerous permutations of the use of its solution and partnered with companies that can augment the platform will mean an easier installation as solutions have already been field proven to be interoperable.
- The SD-WAN solution has been vetted by numerous organizations to the point that they are willing to associate their valuable brand with the vendor. This takes a great level of trust and cooperation to align with another company in this way.
- An SD-WAN solution that seamlessly incorporates both virtualized instances within the vCPE in the branch and services in the cloud.



According to ZK Research, 71% of large enterprises list network security as the largest network challenge, and it remains the number one network concern. An SD-WAN platform should include security and firewall functionality, and whereas these built-in network capabilities may be enough for most branch site deployments, it may not be enough for high-value or priority corporate sites. SD-WAN providers must establish robust integration strategies with widely accepted security partners who are able to offer complementary and augmenting solutions to establish a key differentiator.

To learn more about SD-WAN, visit the [CBTS website.](#)