

All SD WANs are not created equal

By Hein Witte 19 Nov 2019

Like a cart-wheel, the hub and spoke is inflexible.



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The traditional hub and spoke network design offers centralised orchestration but also requires that all traffic be directed back to the central point.

Business applications are all traditionally housed within the central datacentre and all connectivity is directed through this point. With the consumerisation of IT this design has become outdated and business inhibiting.

Users want to be able to access the internet at work the same way they do at home, for example, to make use of internet banking or file transfers and internet native services. If all connectivity needs to traverse the entire corporate network backbone, then performance is adversely affected, and the user experience is poor as a result. It also vastly increases the capacity required, with a subsequent increase in cost, despite sleek network traffic engineering.

From business applications to email and cloud services, users want to be able to connect directly and have a fast, alwayson experience. The requirement for external internet-facing capability at every location is growing at a rapid pace. This requires network architecture to be completely relooked with a sophisticated system to support changing requirements.

What is SD-WAN and what can it do for my business?

Traditional networks were not built for internet and cloud-based services, they were designed for traffic going to centralised corporate inhouse applications. When traffic has to traverse an entire network back to a central location before it can break out to internet and cloud-based services, access to these services will be slow and expensive.

SD-WAN offers a revolutionary new network architecture that is able to be implemented in an internet-facing manner. It uses advanced software algorithms to pick the best traffic paths for applications, optimising traffic and the capacity required. This adds a flexible element to the network that allows it to cater to the dynamic networking needs of an increasingly digital age, with next-generation security at the periphery.



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Not only does SD-WAN facilitate a consumer-based secure connectivity service in the business landscape, but it can also deliver a tremendous shift in cost performance. For example, a business may have required a dedicated 2mbps line costing thousands of Rands to support their traditional network design.

With SD-WAN it is possible to get 10 times the capacity for less than half of the cost using Internet-facing capacity. In addition, because SD-WAN can utilise optimal traffic paths and still link back to corporate facilities, it is possible to create a hybrid network with access to legacy assets whilst leveraging Internet native and cloud applications.

All SD-WANs are not created equal

Traditional hierarchical network designs have matured over many years, so they are stable, and the centralised nature means they have a high level of control with Virtual Private Networks (VPNs) that all traverse back to a central point. Each remote location only has one connection, back to the central point.

With SD-WAN however, this is all different. Applications are accessed directly wherever they reside, which is typically on the Internet or in the cloud, and multiple Internet-facing connections are used. To facilitate this in a cost-effective and secure manner a sophisticated system is necessary to optimise capacity utilisation and ensure that security parameters at the periphery are up to scratch. The user experience needs to be manageable across business applications as well as internet native and cloud-based transactions.

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