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Why CEOs are Shifting from a Device-centric to a Business-driven Wide Area Network

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Biography

Simon Pamplin is the EMEA Technical Sales Director for Silver Peak (https://www.silver-peak.com/) and a regular speaker at events on topics ranging from the latest storage technologies and server virtualization to the current shift in data networking towards SD-WAN.

With over 20 years' experience in enterprise IT Simon is an expert in SD-WAN, IP, Storage, Data Centre and SDN technologies and is driven by the new technologies and the business benefits they can bring. Simon is experience in working across many countries and cultures within EMEA and Russia in multiple verticals.

Simon puts Silver Peak's success down to "Building a better WAN" – High performance, security, application visibility and flexibility of connection type = the most complete SD-WAN solution on the market and Gartner agrees.

Keywords Digital transformation, Business-first networking model, SD-WAN, WAN services, Cloud
Paper type Opinion

Abstract

Every enterprise's digital transformation journey is different, and as applications migrate to the cloud businesses both large and small are faced with opportunities and challenges. But without a network that can operate in an agile and secure manner, the applications, cloud services, and devices businesses deploy cannot live up to their potential. In this article the author explains why this is happen and how we are now seeing CEOs making the shift from WAN architectures towards business-first networking models.

Introduction

At an increasing rate, CEOs are making the shift from conventional router-centric wide area network (WAN) architectures towards a business-first networking model – a network that exists to serve the business, rather than limiting the capabilities of a company. This is because as more applications and services migrate to the cloud, businesses have found that their existing network is holding them back from realizing the full transformational promise of the cloud.

The problem is that today's router-centric WAN approaches cannot keep up, causing enterprises to hit the wall. Basic and router-centric WAN approaches were simply not architected to keep pace with the business requirements of a hyper-connected world. Like using a landline instead of a smartphone, the true nature of cloud cannot be realized within the confines of a traditional WAN approach. Router

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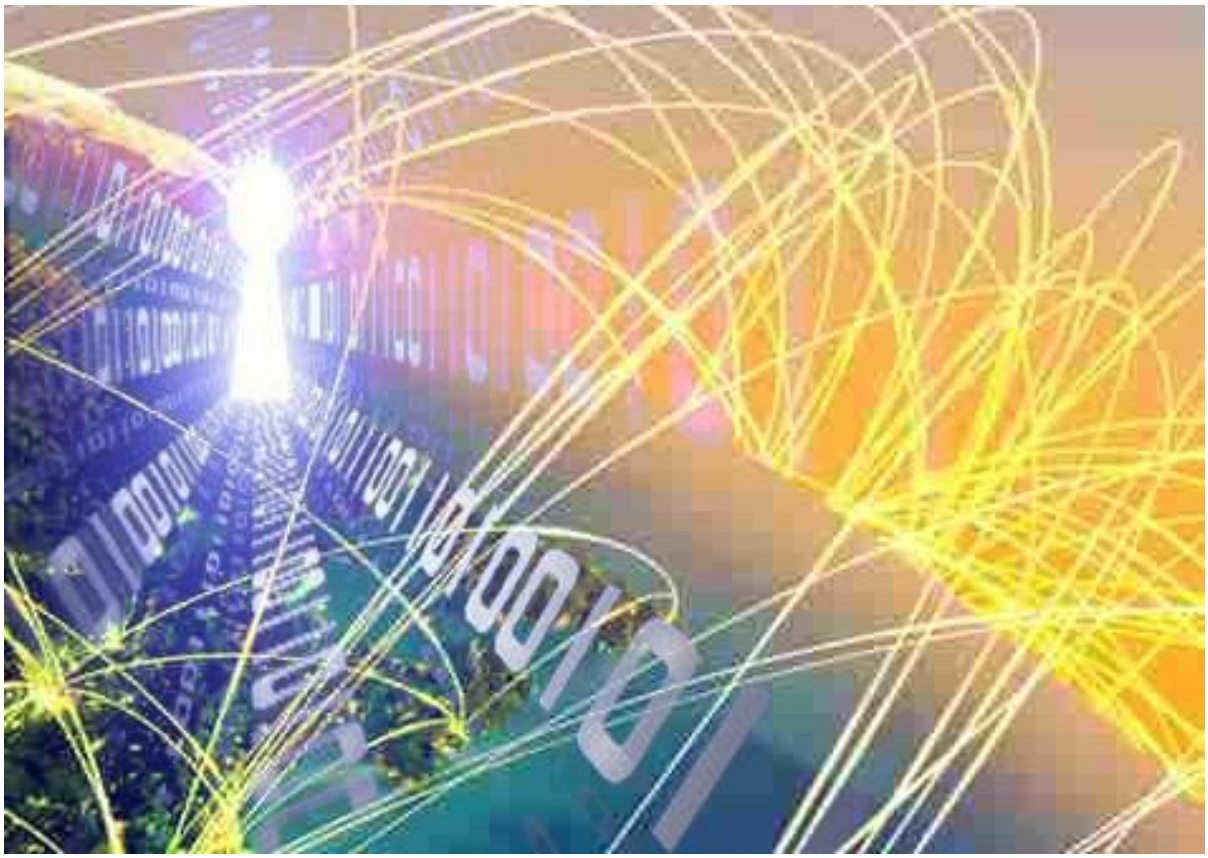
-based WANs have remained static in their capabilities while the cloud has dramatically altered the way businesses use networks. Network patterns have shifted, the fundamental nature of applications has changed, and the open nature of cloud has created a porous security climate for businesses to navigate.



Modern business realities demand wide area network transformation

As businesses become more global, it is an imperative for widely distributed enterprises to be able to securely and efficiently connect users in remote sites directly to applications hosted in data centres or the cloud.

Today's business network is complex with distributed enterprises operating over multiple and highly varied geographical regions. At branch sites, nuanced differences in the way enterprises operate – including applications they prefer and policies they must abide by – lead to a matrix ecosystem of network infrastructure that IT teams are called on to manage.

Designed back when there was no cloud, the device-centric model routes all branch traffic via the corporate data centre. In layman's terms, this means traditional routers send all traffic from branch offices back to the data centre instead of directly to Software-as-a-Service (SaaS) and Infrastructure-as-a-Service (IaaS) applications and instances, ultimately, impairing performance and business productivity. The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backhaul requirement is needed for router-centric approaches as they lack advanced security functionalities that can identify, classify and automatically steer traffic to its intended destination.

Now the global cloud revolution is upon businesses, CEOs can no longer put up with WAN approaches that don't line up with business goals. Trying to stretch router-centric WAN approaches to match modern network requirements is a full-time job and means IT departments have less time to focus on what's really important – supporting business critical activities.

The business-first networking model – a top down approach

Over the last few years, businesses have been turning to software-defined networking in a wide area network or SD-WAN technologies to liberate applications from cumbersome complexities that don't suit the cloud era.

SD-WAN technology connects users securely and directly to applications, wherever they reside, using any combination of available underlying transport, including multiprotocol label switching (MPLS), broadband internet and even 4G. Basic SD-WAN solutions are a step in the right direction but fall well short of the goal of a fully automated, business-driven network.

When compared to traditional router-centric network model, business-driven networking solutions are defined by a top down approach. In essence, this means that the network supports the needs of a business and that device constraints do not limit enterprise capabilities. In contrast, the router-centric model starts from the bottom up, with the deployment and installation of routers and often discrete firewalls required at every branch location.

This demands on-site IT expertise and invariably calls for device-by-device configuration and management. Networks aren't meant to stand still, and evolving businesses require agility to keep pace with constant changes and updates such as deploying new applications or adjustments to the quality of service (QoS) and security policies. As a business grows, it is not feasible in terms of time or money to have such an inflexible and cumbersome update process every time a new application or policy needs to be added.

With a business-first networking model, IT centrally orchestrates QoS and security policies for applications in accordance with business intent. Consistent policies can be centrally programmed directly to 100s or 1000s of locations across the network. Using this configuration as a foundation, the network automatically and continuously connects users directly and securely to applications delivering the highest levels of application performance.

Through continuous real-time monitoring of applications and WAN services, a business-driven network can learn of any changes in network conditions that might affect performance – such as packet loss, latency, jitter – and prioritizes applications based on business criticality. With this next-generation approach the network automatically adapts to give every application the network and security resources it needs to deliver the highest quality of experience to users.


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Business-driven networks driving the future

As 2020 reaches its closure, developments in artificial intelligence and machine-learning technologies mean that SD-WANs are moving beyond automation and will ultimately enable enterprises to build a self-driving wide area network that gets smarter, more self-aware every day. Top tier SD-WAN solutions will automate real-time response, completely mitigating the impact of brownouts and blackouts, as continuous monitoring and analytics detect changing conditions and trigger immediate adjustments.

Given the advantages, a business-driven network affords over inflexible traditional networking infrastructure, it is no surprise that CEOs are choosing to shift to such an approach. Enterprises will be able to guarantee that their unique organizational priorities are reflected and supported by the way the network behaves. Instead of being restricted by the cumbersome, device-by-device manual programming to implement network changes on a router-centric WAN model, IT can free up time for other business critical activities, saving both time and money. Indeed, with the future scope of self-driving networks, it is only a matter of time before router-centric WAN is all but a business relic.