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PowerWAN: Growth and Integration of SD-WAN Technology

Summary:
Modern businesses rely heavily on their networks to increase their bottom line. Securing a dedicated connection is expensive, but the advent of SD-WAN technology is quickly changing the game. We will examine how SD-WAN has revolutionized networks, where it is most effective and how the progressive technology works in comparison to obsolete network solutions.

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PowerWAN

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Table of Contents

The Evolution of SD-WAN

In order to see the value of SD-WAN, we must first understand the WAN technology that SD-WAN has evolved from.

What Do Modern Networks Look Like?
Modern WANs provide reliable WAN connections, but has grown within many organizations to become a complex bottlenecking of network data due to the further expansion of cloud based network applications. This can cause costly networks to suffer performance issues and become unreliable. SD-WAN, is rising to replace expensive and overly complicated WAN solutions.

Why Is SD-WAN Growing?

The SD-WAN market is projected to be worth $6 billion by 2020. As of 2015, the market is worth $225 million. What is it about SD-WAN that generates such a positive forecast?

Cloud Based Network
PowerWAN, Powernet's SD-WAN solution, provides many advantages over modern WAN, most notably that SD-WAN is based almost entirely in the cloud. Cloud connectivity allows for optimal connectivity on a global scale, enabling Multi-site locations to manage enterprise wide networks and control offsite resources from a central location.

Wide-scale management of network devices is done via the Orchestrator, a simple, single pane of glass that allows IT professionals to manage networks remotely from a central location via the cloud.

Reduced Costs
PowerWAN gives organizations the opportunity to

Smart QoS
Predetermined device policies recognize & prioritize data use of 2,500+ applications to accomplish business objectives.

save money in places that traditional WAN does not allow, such as utilizing broadband circuits to create a reliable and cost effective network. The need for expensive and time consuming network implementation is erased with PowerWAN's plug & play capability, allowing IT teams to save more time and money than ever before with set-up that takes just minutes, connecting to almost any pre-existing infrastructure. Provisioning and further network management take place from a central location via the orchestrator, minimizing IT cost and maximizing network performance.

Smart QoS
SD-WAN opens the door for more control and visibility over a network than ever before. Via the orchestrator, businesses can manage networks and prioritize smart QoS data for the entire network. Smart QoS (Quality of Service) recognizes applications that are essential to businesses and set up the Edge routers to give those applications data priority over low value or unnecessary processes. Smart QoS gets businesses up and running quickly with their SD-WAN network.

SD-WAN: (Software Defined - Wide Area Network) Utilizes intelligent, application-aware software to route traffic over the optimal network technology, based on business policies.

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[1] Frost & Sullivan, 2016.
[2] 2016 North American SD-WAN Solution Product Leadership Award

3

Stronger, Faster and more Secure

SD-WAN technology brings many new features to the table, while enhancing many features that are common within WAN connections.

Dynamic Multipath Optimization
Staying online is important. SD-WAN ensures that businesses are always operating on a reliable connection. PowerWAN's increased network reliability comes from the device's forward error correction, allowing it to strengthen a weak single circuit and the ability to take steer applications over two connections. These circuits may consist of one MPLS circuit and a broadband circuit for redundancy, or a cost effective pair of broadband circuits. With two circuits in place, PowerWAN can then utilize both connections to ensure the network consistently operates at full speed.

All bandwidth is aggregated and available to an organization at all times. For example; If a network consists of two connections, both with 5 meg, then it would have a total bandwidth of 10 meg to use at all times. If a connection fails, whether that be by brown-out or black-out, the second connection will then immediately take over within milliseconds. This is possible because the connection fails over on a per-packet basis. If someone were to unplug the primary connection during a real time VOIP call, the user making the call would be unable to notice the disconnection and rerouting of their call.

Multipath Optimization
keeps vital applications online and running efficiently at all times.

Applications also work in a similar manner. According to business policies set in the orchestrator, PowerWAN's smart QoS will monitor and steer applications across the network. Link steering analyzes which applications have the highest priority and routes those over the best connections, while applications with a low priority are steered over weaker connections within the network. This process is called multipath optimization.

Multipath optimization greatly increases network reliability by ensuring applications that are most vital to an organization are always online and functioning at a high level.

Plug & Play Efficiency
Setting up a PowerWAN network takes just minutes to complete. Once an Edge router is received simply connect it into the exisiting network and general set-up is complete. Smart QoS will then automatically configure and prioritize network applications based on preset parameters. Plug and play installation simplifies enterprise wide deployments of PowerWAN, allowing IT teams to work from a central location to set QoS parameters and monitor the network as a whole.

Plug & Play **:** PowerWAN's edge routers are set up via smart QoS to be network ready out of the box.

To illustrate this concept further, if a large service chain were to purchase PowerWAN, they would deliver and install the device at each branch of the business. Once the plug and play set-up is complete within the branch, IT can access the network orchestrator to make alterations to parameters, allowing them to decide which applications will take priority over others in each branch. Once the rules are set smart QoS will monitor and maintain the enterprise-wide network from that point on, ensuring important network applications are running on the strongest connections. This allows the network and the business to run efficiently, saving human capital while keeping all vital resources online at all times.

Available Security Options

What good is a network if it is not secure? PowerWAN's security measures work to keep networks protected by utilizing encrypted connections. Additional security measures are available via Fortinet for businesses looking to acquire further granular control of applications and their performance with Layer 7 Unified Threat Management. PowerWAN ensures network protection is readily available at all times.

Connecting Franchises

PowerWAN provides a reliable, secure network, but how does it stack up against the competition?
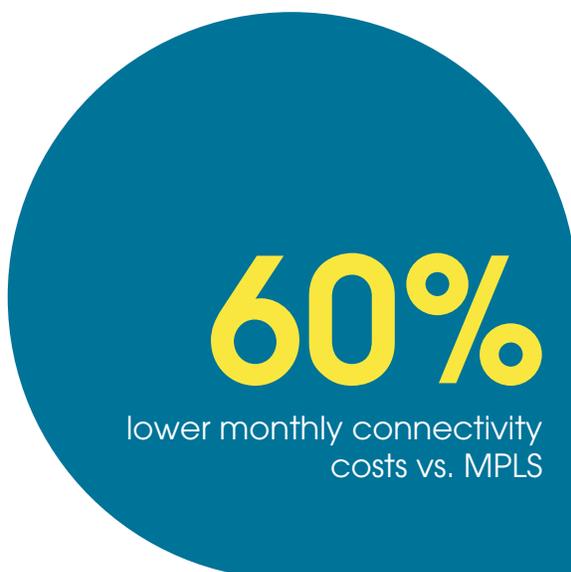
Broadband -
Weak, unrealiable, afforable.

MPLS -
Strong, reliable, expensive.

PowerWAN -
Strong, reliable, affordable.

Value vs. Price

When setting up a network businesses have three primary options. Broadband, which provides a standard connection with unreliable service on its own, but is offered at a low price. MPLS provides a strong and secure network service, but at a high monthly rate. PowerWAN, the third option, provides the best of both worlds. It provides a very reliable network with a strong connection at a low monthly rate. This allows businesses to acheive the reliability and strength of a private circuit, while only paying the low monthly rates of broadband circuits.

When implemented on a large scale, PowerWAN is the most cost-effective solution. The quality of two broadband connections with PowerWAN enhancements would equal that of an MPLS connection, but is significantly less costly. If an organization implemented network connections across 4,000 locations, PowerWAN (with two broadband circuits) would cost 60% less than MPLS circuits. PowerWAN would provide the same value at a lower price, making it the obvious choice for enterprise wide implementation.

60%
lower monthly connectivity costs vs. MPLS
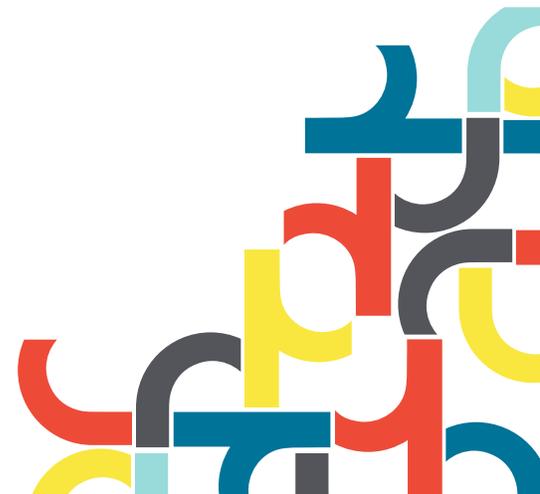
Network Visibility

Both Broadband and MPLS networks have limited visibility on their own. Network outages fall on the end-user to identify and address. Deploying PowerWAN within a network provides enterprise-wide network visibility, allowing smart QoS to address network outages on its own while simultaneously rerouting applications to an alternate, secure connection. It also provides increased visibility into network applications, allowing businesses to view in-depth reports of data use within the network. PowerWAN's smart QoS enables the software to run an entire network on its own, a key feature that sets our SD-WAN solution apart from the competition.

Connecting your Business

SD-WAN will continue to grow as an industry leading technology. Businesses across the globe are upgrading their network with SD-WAN at an increasingly high rate. Organizations with multiple locations are a perfect fit for PowerWAN. A business's network is vital to its success. Seize the opportunity to take full control of your network today with PowerWAN.

About Powernet

Powernet enables businesses to connect internally and externally through innovative telecommunications solutions. Combining more than 24 years of telecom experience with Wi-Fi, voice, data, IT managed services and carrier services, we provide our partners and clients the unparalleled service and innovative technology they need to achieve their business goals. Visit powernetco.com to learn more.

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