SECURE/AGILITY

How SD-WAN will Transform the Network

And lead to innovative, profitable business outcomes

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SDwan⁴
SDwan to the power of 4

By 2020, more than **50 percent** of WAN edge infrastructure refresh initiatives will be based on SD-WAN versus traditional routers.[1]
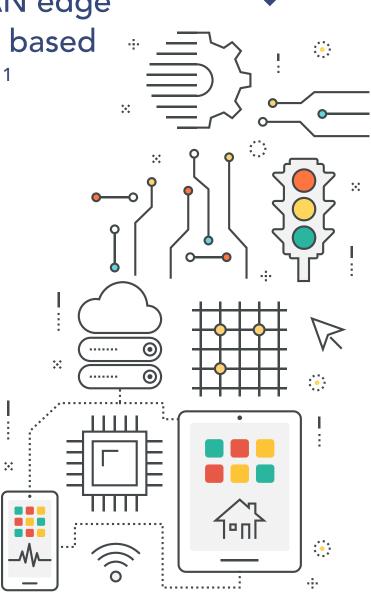
The reason for moving to Software-Defined Wide Area Networks (SD-WAN) is that businesses in nearly every sector are seeking gains in productivity, efficiency and cost reduction won from cloud-based applications and the Internet of Things (IoT).

Existing wide area networks—based on Multiprotocol Label Switching (MPLS)—are unable to deliver the necessary increase in bandwidth, cloud connectivity optimization, and enhanced security to achieve the benefits of cloud-based apps and IoT technology.

That's why companies are turning to Cisco for enterprise-grade SD-WAN technology, with intent-based networking, to solve their challenges through a carrier- and transport-agnostic cloud-delivered overlay WAN architecture. SD-WAN[4] Cloud Managed SD-WAN networks, powered by Cisco, substantially lower WAN costs, reduce deployment times, provide application resiliency and the robust security that MPLS can't deliver.

SD-WAN can enable digital and cloud transformation.

On the following pages, we'll show how companies are benefiting by transforming the network through Cisco SD-WAN powered by Cisco.

Benefits you can achieve by using SD-WAN

Examples of how organizations have achieved success include[2]:

80% reduction in cost/Mbps for a national insurance provider

$20M reduction in Operating Expenses (OpEx) over three years for a retailer

5-fold improvement in Office 365 performance for an energy provider

100% application uptime during network failures for a national food distributor

4-fold improvement in application latency for a healthcare provider

12-fold improvement in change control time for a 3,000-site bank

M&A integration within 2 weeks for a Fortune 50 healthcare provider

Guest wireless deployment at more than 1,000 stores for a retailer

Securely isolated more than 100 business partners for a manufacturer with more than 1,000 sites in the US

How important is SD-WAN?

• **80%** of organizations will primarily use public cloud by 2019

• **10 billion** mobile-connected devices by 2019

MPLS can't keep up with that kind of growth.

Outcomes such as these illustrate why organizations are using SD-WAN. This shift—along with the surge in IoT, mobile devices, and media-rich applications—is enabled by the increase in bandwidth and the predictable and fast performance that SD-WAN can deliver.

And as employees and customers rely on mobile devices to run applications and watch video both on and off site, the need for a more optimized network continues to grow. SD-WAN can efficiently provide a high level of optimization and bandwidth, whether at headquarters or at branch offices or at other locations, while significantly lowering costs.

SD-WAN delivers on all fronts

Organizations need to provide users with dynamic access while achieving agility in responding to changing demands. SD-WAN powered by Cisco delivers on those ends as well as:

Provides optimized cloud access and a better user experience. Many networking cloud solutions offer a hodgepodge of options, a lack of consistency and a poor user experience. SD-WAN—with its optimized performance for major SaaS applications—provides agile solutions to onboard public cloud access on Google Cloud and Microsoft Azure®, ensuring great user experiences.

Delivers reliable application performance and availability. Without dependable performance, business-critical applications can crash. SD-WAN meets tough service level agreements (SLAs), even during link outages and other network events.

Offers greater agility. Existing WANs lead to infrastructure sprawl with their complex amalgamation of devices and appliances. SD-WAN enables faster, easier WAN deployment and operation, as well as faster performance while using less bandwidth, and helps you deploy new revenue generating services in minutes—not months.

Provides advanced threat protection. Given the increased sophistication of cyber threats, traditional WANs can leave businesses unprotected. SD-WAN employs the zero-trust model. Every component mutually authenticates each other, all edge devices are authorized before they are allowed into the network, and every packet is encrypted using SSL and IP Security (IPsec) technologies.

SD-WAN delivers on all fronts

Ensures a resilient network. Traditional WANs can be prone to faults, even during normal operations. SD-WAN is designed for fail over and to choose best or optimized path at all times.

Separates the control plane and data plane. Without SD-WAN provides a clear separation between management-plane, control plane and data plane. This enables each component to work independently and efficiently, as well as facilitates scaling of components based on the network needs.

Enables zero touch provisioning. SD-WAN routers are configured and managed using zero touch provisioning (ZTP), cutting device and maintenance operational expenses.

Reduces WAN expenses while increasing bandwidth. One of the most expensive IT budget line items is the WAN. This can result in insufficient bandwidth at branches and other locations, leading to poor user experiences. SD-WAN powered by Cisco can provide increased bandwidth at the reduced cost.

Why will SD-WAN make all the difference?

- Up to **50%** is expected as the annual increase in enterprise bandwidth and video adoption

- **30 billion** IoT devices will be connected to the internet by 2020

MPLS can't deliver on the needed bandwidth.

SD-WAN with intent-based networking constantly learns, adapts and protects the network

The advantages of intent-based networking include:

- **Simplifying policy management** across all your remote sites through machine learning and advanced orchestration with centralized cloud managed fabric to improve scale, performance and monitoring of your WAN, while reducing the complexity of managing network policies

- **Securely connecting users to applications** over any type of connection including MPLS, Internet and 4G LTE

- **Automating the provisioning** of new branch locations and network services in minutes rather than months

- **Offering end-point flexibility** to support any type of end-point (physical or virtual) to deliver rich services including WAN Op, firewall or basic WAN connectivity as well as branch, WAN aggregation and cloud

- **Enforcing multi-layer security** for hybrid cloud-based and on-premise infrastructure including encryption, authentication, segmentation and service chaining

- **Enhancing application quality of experience** through real-time application optimization for productivity and SaaS applications, and intent-based dynamic path control for network and application performance optimization

- **Using data analytics** to optimize the application experience

Need to help your organization transform the network? **See next page.**

More reasons why SD-WAN is important

- **20-50%** increase in enterprise bandwidth per year through 2018

- **73%** growth in mobile devices from 2014-2018

MPLS can't keep pace with your growth.

SD-WAN delivers an end-to-end secure platform across the access, WAN, data center and cloud for the digital business

SD-WAN simplifies how organizations move workloads to any cloud, consume cloud hosted applications or enable new services in remote locations. By providing the strongest security and the flexibility to support any platform, SD-WAN ensures that your users always have the best possible experience with the highest protection over any type of WAN connection. Using advanced analytics, SD-WAN makes your WAN smarter by continuously optimizing application performance and providing protection from the sophisticated threats.

Three more reasons why your business needs SD-WAN

- **90%** of revenue is generated in the branch

- **80%** of users are served by the branch office

- **30%** of advanced threats will target branch offices by 2016 (up from 5%)

MPLS can't provide the bandwidth and security you need.

SD-WAN to the power of 4

SDwan[4] – powered by Cisco and with the choice of either Viptela or Meraki solutions. Seamless and secure integration of SDwan[4] to your existing environment and delivering a centralised SD-WAN that ensures a common WAN edge and end-to-end security framework.

Learn More

Contact us today to schedule a meeting, and we'll answer your questions.

inform@secureagility.com

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[1]Skorupa, Joe; Lerner, Andrew; Canales, Christian. Forecast: SD-WAN and Its Impact on Traditional Router and MPLS Services Revenue, Worldwide; November 7, 2016. https://www.gartner.com/doc/3505022/forecast-sdwan-impact-traditional-router (accessed accessed December 19, 2017)

[2]Cisco Enterprise Grade SD-WAN, https://www.cisco.com/c/dam/en/us/solutions/collateral/enterprise-networks/sd-wan/nb-07-enterprise-grade-wp-cte-en.pdf (accessed December 19, 2017)