

Migrating to an intelligent hybrid network? It's a virtual evolution.

Virtual Network Services – SD WAN



Designed. Delivered. Optimized. Together.

As demand for cloud and mobile technologies accelerates its exponential surge, application performance and public cloud access have become top priorities for businesses. Not only are you expected to reach more people in more places – you need to do it more cost-effectively and without sacrificing performance.

To overcome these challenges, businesses are turning to a software-defined WAN (SD WAN) hybrid networking approach to help balance the cost benefits of using the public internet with the performance of MultiProtocol Label Switching (MPLS). Premises-based SD WAN hardware can help you by routing traffic across different network paths based on changes in demand, application needs and network quality. It also lets you set quality of service (QoS) thresholds that use public and private WAN traffic without sacrificing performance or security.

While QoS allows you to prioritize applications within a specific WAN circuit, hybrid networking lets you select paths at the application level. To get this level of flexibility you need application visibility, path instrumentation and dynamic path routing. These all require new intelligence and network management approaches. Virtual Network Services – SD WAN all that, giving you the agility, routing intelligence and control your business needs.

MAKE THE MOVE TO SD WAN WITH VERIZON AND CISCO.

As the demands on networks evolve, networks evolve too. The virtualization that happened in the data center is now happening in the network. Virtual Network Services – SD WAN from Verizon, leveraging Cisco's IWAN platform, can give you an alternative to proprietary, appliance-based SD WAN services. It lets you use virtual network functions (VNFs) to simplify your ability to migrate to an intelligent hybrid network that integrates broadband or other network services into your corporate WAN. The solution allows you to easily take advantage of application routing and path selection to use both public and private IP services together. With its automated and dynamic policy-based route changes, you can send data over the available transport service best suited for each application. This helps you improve the use of your network resources to get better network and application performance. It also simplifies your management efforts.

Verizon and Cisco are recognized as a leader in delivering networking, security and cloud solutions that can help you with gamechanging virtualization initiatives.

You can easily and dynamically:

- Shape your WAN to handle changes in internet traffic.
- Maintain the performance and security of real-time and sensitive applications.
- Automatically measure and monitor performance of multiple services in your hybrid network.
- Use application routing to get granular control over when an application transaction should use a specific service.
- Keep private WAN services available for your mission-critical applications and help improve overall traffic flow by offloading internet-bound traffic.

AN EASIER APPROACH TO HYBRID NETWORKING

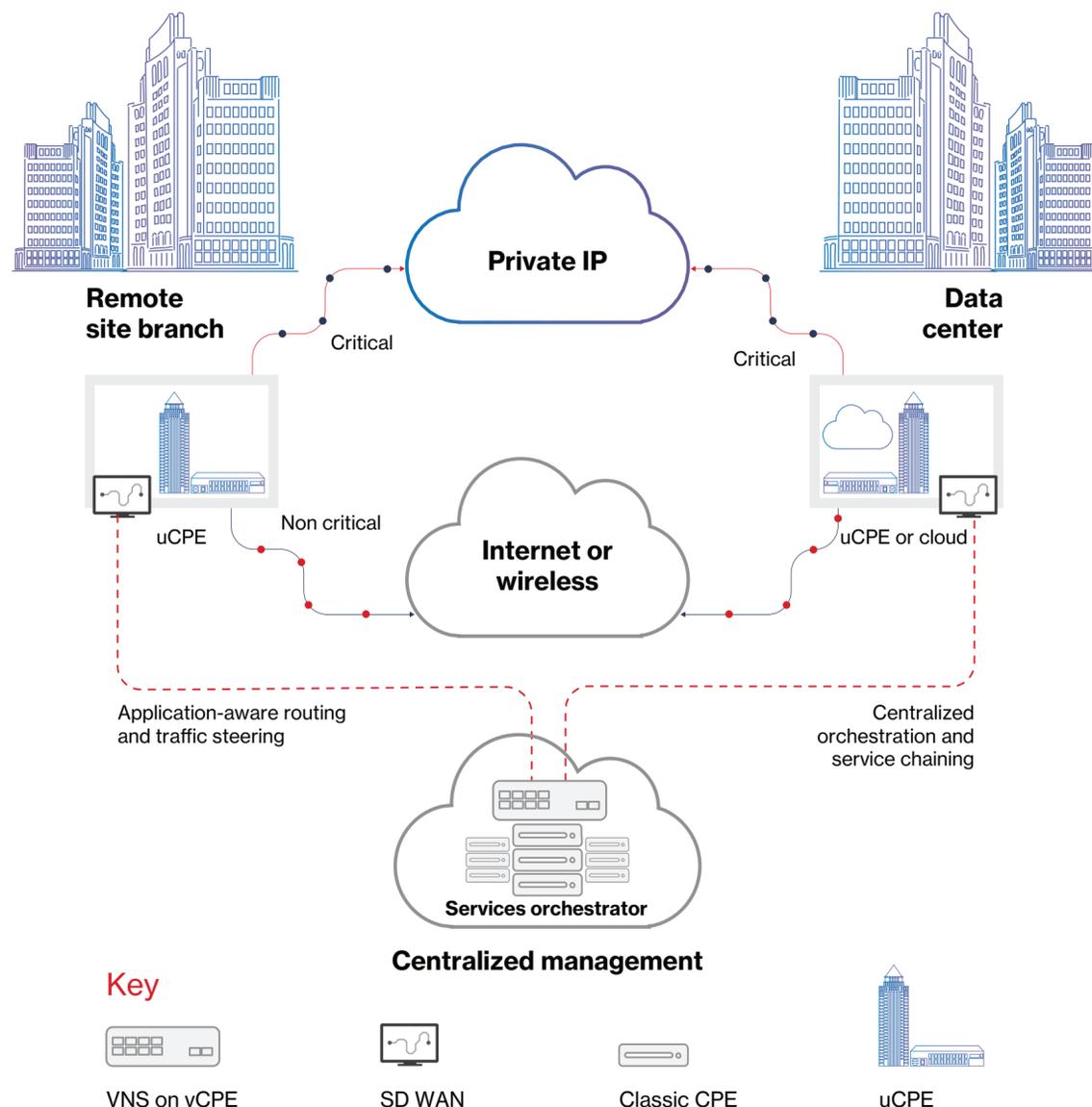
Virtual Network Services – SD WAN comes with easy-to-deploy uCPE (Universal Customer Premises

Centralized management

Quickly and easily spin up the network services you need from the vendors you want.

Equipment that lets you easily and dynamically deploy exactly the SD WAN services you need. With as little as one uCPE per site, you can choose to run multiple combinations of other network services, such as routing, security and WAN optimization in a plug-and-play fashion. Our automated orchestration and service chaining integrate all the different services so they work seamlessly together. The ability to spin up those services on demand gives you the agility and control you need. Plus you get full management capabilities.

- Deploy quickly instead of weeks or months.
- Select from up to five different sizing models with flexible, pay-as-you-go pricing models.
- Get integrated full-service management and world-class transport services like Private IP and Internet Dedicated Services, plus support for Verizon Wireless 4G LTE.
- Boost agility by changing service tiers and even vendors quickly and efficiently – plus automatically update these changes across your VNFs with integrated service chaining.



Take the complexity and difficulty out of moving to a hybrid SD WAN approach.

And since the solution is vendor neutral, you have the freedom to shop from a rich ecosystem of leading vendors, mixing and matching the best-in-class services that are the right fit for your needs, including the following:

- Essential and application-aware routing (NAT, split tunnel, DPI and URL-based) • Security and encryption (AES-256)
- QoS (classification, policing, remarking and scheduling)
- Service-side routing and multicast
- Advanced policies (service chaining and extranet)
- VPNs up to system scale

GET BETTER VISIBILITY AND CONTROL OVER YOUR NETWORK.

Verizon gives you the tools, monitoring, oversight and life-cycle support you need for application visibility, control and performance – regardless of changes in your network traffic.

- Make better use of your network with more granular control over where and under what circumstances an application transaction uses a specific service.
- Improve traffic flow by offloading internet-bound traffic, keeping WAN services available for real-time and mission-critical applications.
- Create routing policies on an app-by-app basis to make sure each workload uses the best available transport.

BENEFITS OF VIRTUAL NETWORK SERVICES– SD WAN

Our comprehensive solution delivers a range of benefits for your business, including:

- More efficient operations, with managed orchestration of VNFs tied together into a unified service
- Better control over costs and capital expenditures
- Better network and application performance with on-the-fly resource availability
- Greater ability to distribute traffic across multiple available paths
- Ability to add cost-effective broadband circuits to dedicated WAN circuits where needed
- Better routing decisions automatically made based on application requirements and actual network conditions
- Fewer human errors, simpler configuration and faster provisioning with automation
- Better user experiences with critical applications due to corrective actions based on performance monitoring
- Higher business agility due to flexible network load balancing and backup
- Greater ability to avoid downtime with proven change-management processes
- Easier migrations using standardized SD WAN operational practices
- Simplified management with end-to-end managed services
- Scalable network resources allocated on the fly according to application needs

WHY VERIZON

As your one-stop shop for managed virtual network services, we make it easy to get the agility, flexibility and performance you need to help secure your network and meet the fast-changing demands of business. Verizon is recognized as a leader in delivering networking, security and cloud solutions that provide game-changing virtualization initiatives for the modern, hyper-connected world.

With our experience managing over 400,000 security, network and hosting devices, and over 4,000 customer networks in 150+ countries, you can have confidence in our ability to smooth your transition to virtual network services and deliver the end-to-end managed services that will help you protect your mission-critical data and your business. And 98 percent of the Fortune 500 rely on our services and technologies.

WHY CISCO

Cisco is a global leader in IT, helping companies seize the opportunities of tomorrow by proving that amazing things can happen when you connect the previously unconnected.

Our Intelligent WAN (IWAN) delivers a rich user experience over Multiprotocol Label Switching (MPLS) or Internet IWAN helps free resources for new, innovative business services. IT may more quickly roll out bandwidth-intensive applications such as video, virtual desktop infrastructure (VDI), and guest Wi-Fi with cost control and a great user experience.

CISCO AND VERIZON JOINTLY DESIGN, DELIVER AND IMPROVE SD WAN SOLUTIONS.

With our joint investment in R&D, you get rigorously tested solutions before they are deployed. Reduce the complexity of process and managing multiple providers using our combined management workflows, getting solutions deployed reliably and hassle-free. Once deployed, our day 2 support, optimization, and proactive management improve performance and reduce risk. When you can't compromise on the most important projects, bet on the best. Cisco and Verizon, where delivering better matters.

Learn more.

Your network and mission critical applications need a better approach. To find out how you can get the agility, flexibility and high performance of a hybrid network, contact your Verizon account representative or visit www.getsdwan.com

Make your net *work.*



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Designed. Delivered. Optimized. Together.

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