Simplify your network.

Virtual Network Services

Your network needs are constantly evolving to meet the demands of your business; but deploying and managing traditional network services can be complex and costly. You frequently need many different devices from different vendors to address each individual function. This not only drives up costs and limits your ability to respond quickly to changing needs, it also leaves you with a mishmash of disparate devices, applications and configuration models.

Meet the new enterprise network.

Virtual Network Services from Verizon lets you leave behind the old labor-intensive, slow-to-deploy and complex mix of devices, technologies and configuration models. Instead, you can use an agile, resilient and fluid service delivery model to quickly and easily help you capitalize on new opportunities in automation, analytics and customer engagement. Our solution provides a scalable, orchestrated and fully managed platform that integrates with a portfolio of technologies from industry-leading providers.

Virtual Network Services are available on our high-performance Hosted Network Services platform, via easy-to-deploy universal customer premises equipment (uCPE), or as a public cloud virtual deployment. Verizon offers a wide selection of plug-and-play network services - such as routing, WAN optimization, security, and software defined WAN (SD WAN) - that all integrate and work seamlessly together.

An integrated management portal, end-to-end orchestration and low-touch provisioning make service configuration and policy changes possible in hours rather than weeks, managing costs and speeding time to market, helping to:

- Improve application performance
- Better utilize network resources
- Eliminate potential errors related to manual configuration
- Centralize policy management and reporting

Plus, our world-class, end-to-end, full-service management means you can stay focused on your core business, not network administration,

Create a competitive edge with an application-driven network.

As part of our Software Defined Networking product suite, Virtual Network Services turns your physical network into an on-demand virtual network. That helps simplify management and control capital expense while increasing business agility, scalability and responsiveness. That means you can:

- Deploy services and updates in days, hours or even minutes
- React automatically to spikes in demand and quickly scale to meet evolving service deployments with rules-based management
- Easily budget and manage costs via an Opex model including our consolidated billing option, Virtual Network Services - One
- Maintain agility and innovation by eliminating vendor lock-in
- Decrease risk as you test, innovate and evolve new services
- Create a more intelligent network, with enhanced routing, easier management and greater flexibility

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Get the flexibility your business needs.

Virtual Network Services is all about flexibility and scalability, with size options to fit your specific service requirements—whether it's a retail kiosk or a data center deployment:

Virtual Network Service Function	Capacity Unit	Extra Small	Small	Medium	Large	X-Large	XX-Large
Routing	**Bandwidth (Mbps)**	Up to 10	Up to 20	Up to 50	Up to 100	Up to 1000	Up to 2000
Security	**Bandwidth (Mbps)**	Up to 10	Up to 20	Up to 50	Up to 100	Up to 1000	Up to 2000
SBCaaS	**Max Simultaneous Sessions**		Up to 250	Up to 1000	Up to 5000		
WAN Optimization	**Max Connections**	200	500	1000	2000	5000	
SD WAN	**Bandwidth (Mbps)**	Up to 10	Up to 20	Up to 50	Up to 100	Up to 1000	
Software Defined Secure Branch	**Bandwidth (Mbps)**	Up to 10	Up to 20	Up to 50	Up to 100	Up to 1000	

Three Service Package options are available depending upon the network function selected.

- Essential: Provides basic feature functionality.
- Core: Provides the services that are available in the Essential Service Package, plus additional functionality and options.
- Complete: Provides all the services that are available in the Essential and Core Service Packages plus additional advanced features, in order to provide support and security for critical locations and applications.

Ask your sales team for details.

Access the services you want and control costs.

A move from traditional to virtual networks allows you to control spending. Since the solution is technology provider neutral, you have the freedom to shop from a rich ecosystem of Verizon approved industry-leading technology providers, mixing and matching the services that best suit your organization. Pricing models include cost-efficient flat monthly billing and optional Virtual Network Services - One single line invoicing, wrapping software licensing, hardware and management.

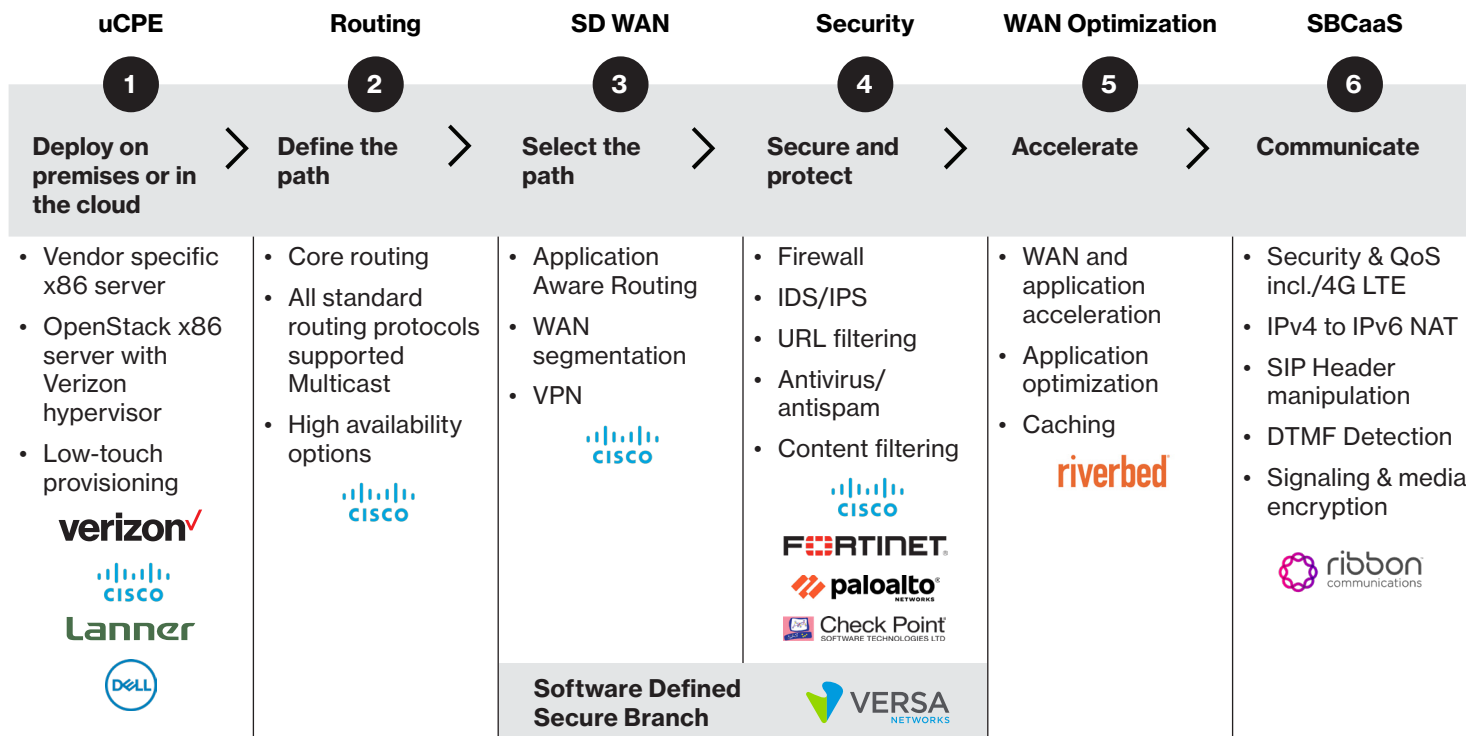### Reduce deployment snags with VNF Service Chaining.

We understand that successful network transformation is more complex than merely applying software defined technology. You need to know that all network functions will work in concert to drive improved application performance, as well as meet security and resilience objectives.

Working closely with our rich ecosystem of leading technology providers, we have broken down the barriers of network function virtualization, simplifying and expediting transformation through VNF service chains, known as Solution Bundles.

We've performed extensive testing to verify full functionality and performance of these service chains, helping reduce costly software investments, and performance testing labor and delays, whether they are deployed on premises based universal CPE (uCPE), our Hosted Network Services platform, or in a public cloud environment.

Transform your network with world-class services from our rich ecosystem of leading technology providers, with service chaining tested, certified and fully managed by tenured staff.

Virtualized network functions - Network as a Service.

uCPE		Routing		SD WAN		Security		WAN Optimization		SBCaaS
1		**2**		**3**		**4**		**5**		**6**
Deploy on premises or in the cloud	>	**Define the path**	>	**Select the path**	>	**Secure and protect**	>	**Accelerate**	>	**Communicate**
• Vendor specific x86 server • OpenStack x86 server with Verizon hypervisor • Low-touch provisioning **verizon√** **CISCO** **Lanner** **DELL**		• Core routing • All standard routing protocols supported Multicast • High availability options **CISCO**		• Application Aware Routing • WAN segmentation • VPN **CISCO**		• Firewall • IDS/IPS • URL filtering • Antivirus/ antispam • Content filtering **CISCO** **F⸪RTINET** **paloalto** NETWORKS **Check Point** SOFTWARE TECHNOLOGIES LTD		• WAN and application acceleration • Application optimization • Caching **riverbed**		• Security & QoS incl./4G LTE • IPv4 to IPv6 NAT • SIP Header manipulation • DTMF Detection • Signaling & media encryption **ribbon** communications
				Software Defined Secure Branch		**VERSA** NETWORKS				

Focus your resources where they can do the most good.

Network transformation can be a heavy lift, especially where in-house IT resources may be limited or burdened with day to day responsibilities.

Verizon's Virtual Network Services are all about reducing the complexity of managing your network resources. During your initial implementation, experienced, certified Network Engineers assist with network architecture planning and design, coordinating internal Verizon and technology partner teams. Beyond deployment, as an alternative to having to add additional resources, assigned Network Engineer(s) can continue to provide services, including but not limited to network optimization support, new device implementation, lifecycle and change management support.

We make it even easier for you by offering WAN management options at the network function level for the most complex service chains, regardless of your network architecture, including premises based, public or private cloud, or any hybrid combination, around the globe.

With Full Management and Co Managment, our Managed Network Services Organization (MNSO) team will generate trouble tickets on your behalf in the event of a network failure, driving rapid fault resolution using closed loop assurance. With our Monitor management level, available with select VNS functions, we'll work hand-in-hand with you to maintain efficient network operation and up-time, while you retain management control of your policies for security and privacy. Our state of the art IMPACT platform includes three-minute device polling, auto-generated alarms and device/service outage notifications to help provide reliable network function performance while enabling you to focus your in-house resources where you need them the most.

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WAN Analysis Reporting.

Our reporting tools enable you to view and analyze data collected on your Verizon managed network. WAN Analysis Reporting is offered as Software-as-a-Service, with the data and software securely hosted within the Verizon network, using data collected directly from your existing premises based network equipment. Using SevOne technology, WAN Analysis Reporting enables a consolidated view of your Verizon-provided network infrastructure within a single portal. Changes to physical infrastructure or devices are either sent to or discovered by WAN Analysis automatically, reducing time spent managing "data," enabling more time to manage your network.

The Verizon advantage.

As your one-stop shop for managed Virtual Network Services, we make it easy to get the agility, flexibility and performance you need from your network. Verizon is recognized as a leader in providing networking, security and cloud solutions and we deliver game-changing virtualization for the modern, hyper-connected world. With our experience managing more than 500,000 security, network and hosting devices, and over 4,000 customer networks in 185+ countries, you can be confident in our ability to deliver the end- to-end managed services you need.

Learn more:

Find out how you can deploy and manage a more efficient, intelligent network withVirtual Network Services. Visit https://www.verizon.com/business/products/networks/virtual-network-services/ or contact your account representative today.

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