Versa FlexVNF

Product Description

The networking industry is in a major transformation. Where the delivery of networking and security services was the exclusive domain of fixed, proprietary hardware appliances, now software combined with major advances in commodity server architectures and virtualization have ushered in a new era in networking. Virtualized network functions (VNF) are the network architecture where L3-L7 network and security services are virtualized in software and decoupled from the underlying hardware. Utilizing this approach makes rolling out new or upgrading existing network and security services faster, more flexible and less complex, while significantly reducing costs and operational overhead.

Versa Networks solutions allow service providers and large enterprises to transform the WAN and branch network to achieve unprecedented business advantages. Versa's software-based approach provides unmatched agility, cost savings and flexibility vs. traditional network hardware. For service providers, Versa solutions enable next-generation managed services for virtual customer premises equipment (vCPE), managed software defined WAN (SD-WAN) and managed security. For enterprises, Versa provides carrier-grade solutions for SD-WAN and branch security projects.

Highly flexible Versa FlexVNF software allows customers to create a broad spectrum of branch architectures from a thin branch, with the majority of virtualized functions located in the point of presence (PoP) or data center, all the way to a thick branch with all virtualized network and security functions running onsite – such as an SD-WAN deployment with full security. Regardless of where each function is located, all network and security

components are provisioned and managed centrally through the Versa Director management platform.

Versa FlexVNF includes the broadest set of VNFs in the industry – from a full set of networking capabilities, including SD-WAN, to a wide range of basic and advanced security functions – making it possible to design rich managed services and enterprise architectures, and deliver them with agility since they were designed to work seamlessly together.

Versa FlexVNF is purpose-built with many carrier-grade operational capabilities, including a distributed control and data plane fabric with built-in elasticity and capacity on-demand. Powerful service chaining for both Versa and third party services, including appliances, enables providers and large enterprises to easily integrate multiple network and security functions into complex managed services and enterprise architectures.

Another key Versa capability for improving operational efficiency and service agility, as well as lowering total costs, is multi-tenancy. Versa FlexVNF has built-in multi-tenancy that enables service for thousands of customers, providing deployment flexibility and economy of scale.
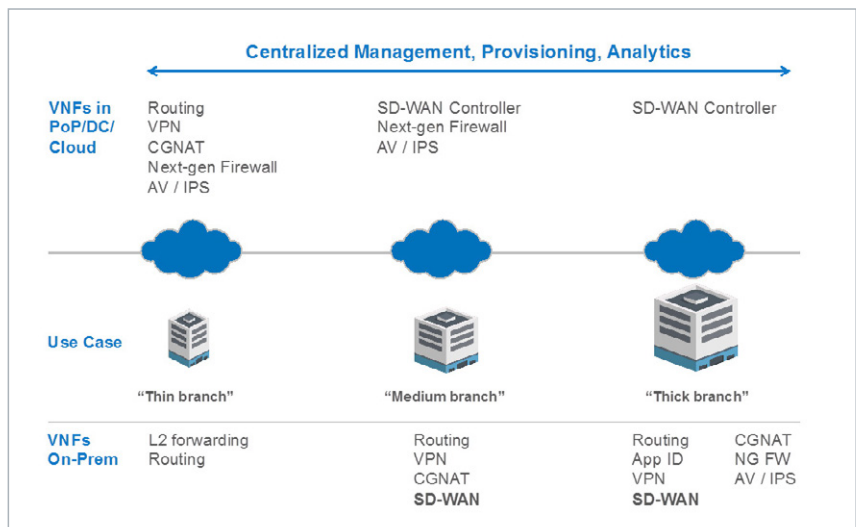
Versa FlexVNF is fundamentally different than proprietary and expensive network equipment. Deployed on low-cost Intel-based servers and appliances utilizing advances in the latest processors and virtualized infrastructure, Versa FlexVNF radically reduces capital purchases and expensive upgrades/refreshes that are common with legacy network hardware devices.

Versa FlexVNF supports the widest set of deployment options in the industry, and can be deployed in both legacy networks and new SDN environments. It can run on bare metal servers and white box appliances, hypervisor VMs (VMware ESXi & KVM), or Linux containers. FlexVNF takes full advantage of multi-socket and multi-core processors and Intel DPDK support for maximum use of the underlying hardware resources, resulting in excellent performance and throughput.

Versa FlexVNF is operations-ready and supports standard protocols and log formats, including Syslog, IPFIX and SNMP, making it compatible with existing network management, monitoring, and reporting systems.

The result is carrier-grade VNF-based services and architectures that can scale out and in on-demand, while maintaining service continuity and delivery of both Versa and third party network and security functions – all with significantly reduced hardware costs and better service agility.

Product Features

Platform	
Form Factor	Baremetal (ISO), Virtual Appliance (OVA, QCOW2)
Hypervisor	VMware ESXi 5.1 & above, KVM
Ethernet	802.1Q(VLAN Tagging), Aggregated Ethernet (LACP), CFM (Connectivity and Fault Management)
Resiliency	High Availability with Active-Standby
Operations	CLI, Syslog, IPFIX, SNMPv1, SNMPv2, SNMPv3, Packet capture utility
Network Functions	
DHCP	Client, Relay and Server
Routing	Static routing, Bidirectional Forwarding Detection (BFD), VRRP, Routing Instances (VRF), OSPF, BGP, ECMP, Policy Based Forwarding
QoS	Classification, Marking, Rate-Limiting, Scheduling, Queuing, Shaping
CG-NAT	Static NAT, Dynamic NAT, NAPT, Destination NAT, Static NAT with Port Translation, Inter-Tenant NAT, ALG support; FTP, TFTP, PPTP, SIP, ICMP, IKE
Stateful Firewall	Zone-based, Address Objects, Address groups, Rules, Policies, DDoS (TCP/UDP/ICMP Flood), Syn-cookies, Port-scans, ALG support; SIP, FTP, PPTP, TFTP, ICMP
Application Visibility	Identify more than 2000+ applications and protocols, Application group support, Application filter support. Application visibility and log support
Next-generation Firewall	Application Identity (AppID) based policy rules, IP Blacklisting, Whitelisting, Geo-IP, Customer App-ID signatures, SSL certificate-based protection, Expired certificates, untrusted CAs, Unsupported cyphers and key lengths
Anti-Virus	Network/Flow based protection with auto signature updates. HTTP, FTP, SMTP, POP3, IMAP, MAPI support
URL Filtering	URL categories & reputation, including customer-defined, Cloud-based lookups, Policy trigger based on URL category, URL profile (blacklist, whitelist, category reputation), Captive portal response including customer defined. Actions include block, inform, ask, justify, and override
IDS/IPS	Default & customer defined signatures & profiles. Versa & Snort rule formats, L7 DDoS. Security package with incremental updates. Full, incremental (daily) & real-time threat (every hour)
Software-Defined WAN	Secure, zero touch branch provisioning, Template-based policies with parameterization, Centralized route, policy enforcement, L7 Application SLA enforcement over network link SLAs with QoS, Intelligent path selection – default and user-defined, load balance across WAN links, various overlays including MPLS over VXLAN, IPsec over VXLAN, redundant SD-WAN controller, seamless integration with existing WAN optimization devices and branch routers
VPN	Site-to-Site, Route/Policy based VPN, IKEv2, IKEv1, DPD, PFS Confidentiality algorithms: Tunnel mode ESP with AES-128, AES-256 Modes: CBC, XCBC, GCM Authentication & Integrity: Pre-shared and PKI Authentication with RSA certificates, hashing, Diffie Hellman key exchange
Load Balancing	Layer 4 load balancing, monitoring, persistence, Deployment modes; Transparent, Routed and Direct Server Return

System Requirements

Hypervisor Supported		
VMware vSphere 5.5 & 6.0		
KVM – RHEL/CentOS 6.4, Ubuntu 12.04, 14.04		
VMware vCloud Director Version Support		
vCloud Director 5.5 & 6.0		
OpenStack Version Support		
Havana, Icehouse, Juno, Kilo		
OpenStack Distro Support		
Red Hat, Canonical Ubuntu, Piston CloudOS		
Minimum Hardware Requirements		
Generic FlexVNF	CPU: 2 cores (Intel Atom Rangeley or Intel Xeon)	
	Memory: 4 GB	
	Disk: 20GB	
FlexVNF at the branch	CPU: 2/4/8 cores (Intel Atom Rangeley or Intel Xeon)	
	Memory: 4/8 GB	
	SSD: 64GB or more	
FlexVNF at the hub or controller	Dual socket	
	CPU: 8 core Intel Xeon E5/socket	
	Memory: 64GB/socket	
	HDD: 1 TB	
	Two Gen3 PCI slots/socket	
	Interfaces: 10/40/100 Gbps	
	Optional add-ons: Intel Quick Assist add-on card, TPM chip	

About Versa Networks

Founded by network industry veterans, Versa Networks is an innovative vendor in the NFV and virtualized network functions (VNF) market. Versa solutions allow service providers and large enterprises to transform the WAN and branch network to achieve unprecedented business advantages. Versa's software-based approach provides unmatched agility, cost savings and flexibility vs. traditional network hardware. The company is backed by premier venture investors Sequoia, Mayfield and Verizon Ventures.

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