



Versa WAN Edge – WAN Optimization Capabilities Brief

Digital Transformation has created a compelling event to transform the enterprise IT infrastructure. Businesses are consuming business critical applications, workloads and SaaS services from public clouds while also preserving some applications in private data centers. This has created the need for increased intelligence at the network edge to become dynamic and automated and deliver the best user experience to users who are accessing these applications from anywhere, anytime. Along with this cloud migration, businesses are leveraging the Internet to connect to cloud in addition to MPLS for site-to-site or site-to-data center connectivity

Enterprise IT organizations are under continued pressure to deliver the highest level of performance in a complex and evolving hybrid network. However, unpredictable network conditions, lack of visibility, and limited control, continually impact application performance.

WAN and SaaS Optimization Capabilities of Versa WAN Edge Solution

Versa Secure WAN Edge solution integrates routing, market leading SD-WAN, security and WAN Optimization. Versa Secure WAN Edge is architected to provide a rich set of network functions within a single appliance at a site or across sites such as branch offices and data center. This enables Versa to deliver a high-performance and an optimal end-user experience even under sub optimal network conditions.

Versa WAN Edge solution offers following set of Traffic Optimization capabilities:

- Built-in Application Identification with 3600+ signatures using a built-in Deep Packet Inspection (DPI) engine that can also identify encrypted applications (built-in SSL/TLS Proxy)
- URL Categorization and Filtering to identify applications and associate performance profiles for traffic steering
- Application Level Traffic Optimization capabilities
 - Voice and Video CODEC based traffic analysis by over 190 different built in CODECs
 - Inline analysis of qualities of the flow, encoding that is used, and determined the user experience
 - Compute MOS score and manage traffic for best user experience
 - Analysis of TCP based flow qualities for non-Voice and Video flows, assigning Versa Application Experience Score and managing for the best Application Experience of popular applications
- Application acceleration capabilities including Forward Error Correction (FEC), Packet Cloning, and Packet Striping
- TCP Optimization with built-in TCP Proxy and TCP Congestion Management capabilities to optimize all segments of an end-to-end TCP connection:
 - Client to Versa
 - Versa to Versa (i.e. : Branch-to-Hub or Branch-to-Branch)
 - Versa to Cloud/Internet
 - Versa to application server including DIA/DCA deployment scenarios
- Versa Operating System (VOS™) supports the following TCP Optimization features:



- TCP Optimization / Acceleration
- TCP Proxy for bookended or single ended deployments
- TCP SACK, Window Scaling, Timestamping support
- Caching and Intelligent TCP Buffer management for high Bandwidth Delay Product (BDP) WANs including satellite WANs
- Improved TCP Loss Detection via Recent ACK (RACK) and Loss Recovery via Tail Loss Probing (TLP) Recovery
- Integrated latest congestion control algorithms including Rate Pacing and BBR congestion control to manage congestion and random traffic loss
- Versa WAN Edge Solution supports Compression, Deduplication and Caching WAN Optimization features:
 - Deduplication for TCP connections, where TCP stream data is broken up into variable length chunks, and stream references are sent instead of the actual stream data
 - Deduplication for protocols such as CIFS, SMB2/3, Citrix ICA, NFS v3 and for SaaS applications including Office365, Salesforce and Box
 - Application specific optimization for CIFS, SMB2/3, Citrix ICA and SRDF
 - Optimizations for SaaS applications including Office365, Salesforce and Box

Key Benefits

Accelerated application performance and reduced bandwidth consumption:

- Reduces bandwidth utilization by up to 95%, deferring costly network bandwidth upgrades
- Increases performance by up to 100x for on-premises applications
- Leverages application awareness to distinguish between business and non-critical network traffic to select optimal acceleration path
- Enables rapid, resilient, and secure replication and backup over the WAN

Integrated visibility:

- Provides visibility across SD-WAN, Security, Routing and WAN Optimization features
- Extends visibility to response time analysis
- Ensures QoS classifications and acceleration benefits are put in play
- Improves network troubleshooting capabilities through enhanced packet capture for further analysis

Enhanced control and management:

- Supports Web interface based ongoing centralized management and CLI
- Identified and reports on applications in use across the organization
- Management Plane integration with REST API for hybrid features—path selection, QoS, and secure transport—and custom API scripts for monitoring
- Secures optimized traffic across private and Internet links with standards-based encrypted overlays

About Versa Networks

Versa Networks, the leader in Secure SD-WAN, combines full-featured SD-WAN, complete integrated security, advanced scalable routing, genuine multi-tenancy, and sophisticated analytics to meet WAN Edge requirements for small to extremely large Enterprises and Service Providers. Versa Secure SD-WAN is available on-premises, hosted through Service Providers, Cloud-Delivered, and via the simplified Versa Titan cloud service designed for Lean IT. Versa Networks is privately held and funded by Sequoia Capital, Mayfield, Artis Ventures, Verizon Ventures, Comcast Ventures and Liberty Global Ventures.

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