# NETSCOUT.

# Delivering Edge-Thru-Edge Visibility Over Your Secure SD-WAN



## Challenges Faced by IT Organizations

Enterprise organizations have started to resume digital transformation projects that were stalled during the COVID-19 lockdowns and work-from-home orders. Adoption of software-defined wide area network (SD-WAN) technologies is one of those projects. However, as enterprises perform these migrations, they are discovering a gap in visibility at the network edge that is necessary in helping their IT organizations monitor and assure quality network and application performance.

Visibility at this point in the network is critical for efficient, effective troubleshooting. This is where the domains of responsibility shift between the corporate IT to WAN / internet providers. When problems emerge for users at SD-WAN connected corporate locations, network operations (NetOps) teams need to determine the source of the trouble. Is it:

- Somewhere in their corporate office, wherever the application service is hosted (data center, cloud, SaaS)?
- With the WAN or internet service provider?
- Or even with the SD-WAN device itself?

Valuable time can be lost troubleshooting performance issues when multiple vendors and corporate IT are involved - which can quickly devolve into a finger pointing exercise with each party claiming the problem "is not with us!" The protracted experience becomes increasingly problematic the longer the poor performance exists as it can impact employee productivity, customer service, revenue, and even a company's reputation.

One of the values of SD-WAN is secure, encrypted transmission of application services from edge to application host. However, this creates yet another challenge to precise problem resolution. Ability to analyze the actual application packet enables better, faster problem identification and resolution. When they are masked by encryption, the troubleshooting process can be extended and/or may even prevent discovery of the true root cause of the problem.
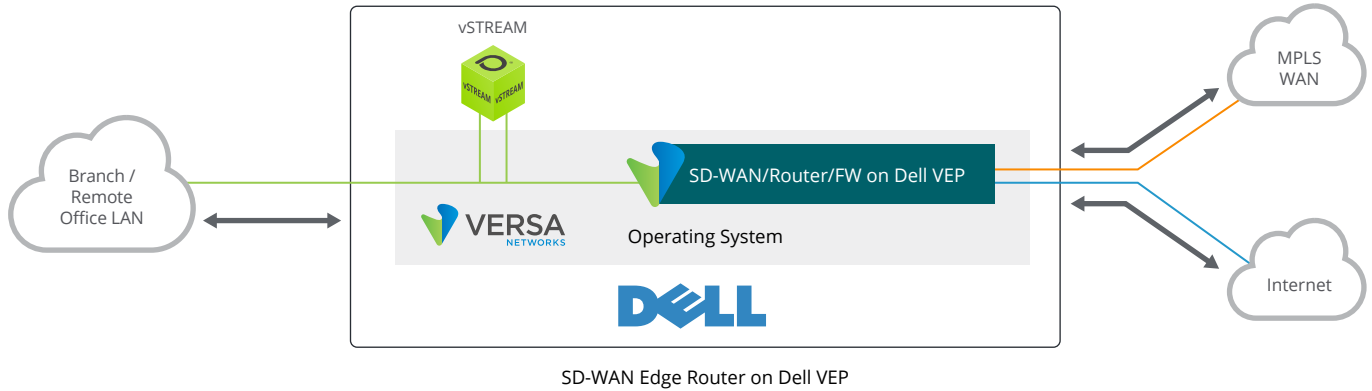
## The Partnership – Better Together

Dell Technologies, Versa Networks, and NETSCOUT® have collaborated to deliver a 'better together' solution for SD-WAN connectivity. Enterprises using the Versa SD-WAN connectivity solution on the Dell Technologies networking Virtual Edge Platform (VEP) can now assure quality network and application performance and rapid problem triage with on-board visibility from NETSCOUT.

The solution is built on the Dell VEP with Versa Networks VOS™ (Versa Operating System) running the SD-WAN. The NETSCOUT vSTREAM® virtual monitoring appliance operates as Virtual Network Functions (VNFs) on the Dell VEP (Figure 1). Unencrypted traffic flows between the LAN and the Dell VEP. The Versa SD-WAN encrypts or decrypts the traffic and differentiates flows between the Internet and MPLS. The vSTREAM monitors and collects the unencrypted packet traffic exiting and entering between the LAN and the VEP at the network edge. The vSTREAM forwards the Smart Data in real time to the nGeniusONE® solution for centralized visibility, analysis and troubleshooting.

Packet data is converted in real time into NETSCOUT's patented Adaptive Service Intelligence® (ASI) technology Smart Data, which is encrypted by Versa SD-WAN and sent to a centrally located nGeniusONE Service Assurance server running on a Dell R740 server. nGeniusONE provides deep packet intelligence at scale and is a centralized resource for monitoring the health and performance of the SD-WAN environment. It also supports edge-through-edge application visibility for the overall enterprise environment and applications traversing the network, as monitored by other InfiniStreamNG® appliances strategically deployed in the network and vSTREAM appliances in the virtualized environments.

vSTREAM

Branch /
Remote
Office LAN

VERSA
NETWORKS

SD-WAN/Router/FW on Dell VEP

Operating System

DELL

MPLS
WAN

Internet

SD-WAN Edge Router on Dell VEP

**Figure 1: The combination solution of Versa Networks SD-WAN Operating System with vSTREAM virtual appliance monitoring on Dell VEP.**

Leveraging the vSTREAM, Versa SD-WAN and Dell VEP technology integration, nGeniusONE will use Smart Data to provide actionable details about network and application performance and unified communications, including:

· **Performance Analysis –** at-a-glance views and key performance indicators (KPIs) into overall service performance required to keep your business applications up and running throughout the network, across all platforms.

· **Service Dependency Mapping –** of the application environment with discovery and mapping of service dependencies, reducing migration risk by visualizing potentially "hidden" client /server relationships and messaging performance.

· **Application Analysis –** into business and protocol-specific monitors that offer metrics for troubleshooting and improving performance and user experience.

· **Session Analysis –** with drill down from application session information to session level details, NetOps can evaluate in-depth traffic flow information for detailed forensics and possible on-demand packet capture.

## Visibility Benefits

This joint Dell Technologies VEP, Versa Networks SD-WAN, and NETSCOUT vSTREAM solution provides the benefits IT Operations need to assure high-quality, edge-through-edge experience for today's remote users:

· Assure quality delivery of application services at the network edge for locations using Versa SD-WAN connectivity on Dell VEPs with extended visibility from NETSCOUT vSTREAM.

· Reduce MTTR for triage and troubleshooting performance disruptions and outages impacting WAN access for employees over SD-WAN.

· Improve troubleshooting efficiency and effectiveness with visibility into unencrypted traffic for quicker, more precise analysis.

· Enhance collaboration among all members of IT staff, including Network Operations, WAN, data center and cloud, and application developer teams with nGeniusONE; including analysis across the SD-WAN environments as well as throughout the enterprise, virtualized, and cloud environments.

· Optimize success of WAN digital transformation projects while helping maintain performance and availability of SD-WAN for assuring employee and customer service productivity.

## Required Solution Components

· Dell Virtual Edge Platform (VEP)

· Versa Networks VOS™ (Versa Operating System)

· NETSCOUT vSTREAM virtual appliance

· NETSCOUT nGeniusONE – virtual appliance

or

· NETSCOUT nGeniusONE on Dell PowerEdge R740 Server - physical

**NETSCOUT**®

DELL Technologies    VERSA NETWORKS