Enhancing Application and Security Assurance for VMware NSX-T Environments

NSX-T edition of vSTREAM with nGeniusONE Use Cases

- Maintain application continuity with NSX-T edition of vSTREAM™ by reducing the mean time to resolve (MTTR) application problems before they become business affecting.
- Monitor and analyze east-west traffic and changes associated with vMotion.
- Provides optimized visibility into VMware® ESX, NSX, and SD-WAN environments and applications for end-user experience service assurance.
- Understand the dependencies of an application and baseline its performance.
- Gaining holistic visibility of application health in hybrid environments, including VMware Cloud for AWS, VMware, VMware NSX, and non-virtualized legacy servers and networks.

"The NSX edition of vSTREAM is an exciting addition to NETSCOUT's smart data offering. The agentless integration with NSX provides seamless and unparalleled visibility into the performance of applications for both north-south and east-west traffic."

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Delivering Application Visibility in NSX-T Environments

The challenges of digital transformation are driving enterprises to seek new levels of operational efficiency, business process agility, and security in their essential business applications and services. VMware with NSX-T is the technology that allows a "one-click" experience for the implementation of networks and applications. This helps organizations accelerate their business through as much automation as possible, while providing a common operational platform for IT.

It is essential to maintain the performance of applications and services across any software-defined network (SDN) environment, including VMware NSX. Consistent, end-to-end visibility and troubleshooting at the application level are imperative for successful deployments of critical business services within this transformed data center. IT personnel must quickly resolve issues that arise (Mean-Time-to-Resolution – MTTR), and in many cases prove it is NOT an NSX issue at all (Mean-Time-to-Innocence – MTTI). This challenge is further compounded by the complexity of enterprise multi-cloud strategies and the wide variety of network, application, infrastructure, and security issues that can impact services across the VMware ESX, NSX, and SD-WAN deployments, alongside multi-cloud and legacy data center environments.

Enterprise organizations have depended on packet-based, application layer-7 visibility for service and security assurance capabilities in their legacy data centers and require the same visibility in their SDDC environments. Pinpointing the root cause of disruptions in SDDC can be significantly delayed if IT staff lack economical visibility or are using inefficient point tools, especially across a complex service delivery path.

NETSCOUT's NSX-T Edition of vSTREAM for VMware

NETSCOUT® has developed a revolutionary solution to extend the power of NETSCOUT's Adaptive Service Intelligence™ (ASI) packet-data analysis technology beyond traditional data centers and north-south traffic into virtualized environments to provide deep insights into east-west traffic. The NSX-T edition of vSTREAM (or simply vSTREAM) delivers the same rich ASI intelligence directly into the heart of an organization's mission-critical VMware NSX-T that customers have leveraged in their cloud and legacy environments. The smart data provided by vSTREAM is consumed by NETSCOUT's proven nGeniusONE® Service Assurance platform to deliver smart analytics to address the most challenging application and service assurance issues.

vSTREAM combined with the nGeniusONE platform delivers unrivaled visibility into business services and provides contextual workflows to speed problem resolution, making the solution both easy for a Level 1 responder to use and powerful for an expert to operate. Rather than looking at individual elements in isolation, the nGeniusONE solution offers an overarching view into the performance characteristics of applications and user experience, while validating that micro-segmentation security controls have been properly implemented. These views expose underlying service dependencies that help IT teams to more effectively manage health, availability, security, and user experience issues across NSX-T deployments.

- vSTREAM provides smart data for views and analysis in the nGeniusONE platform, which is designed to scale to the needs of the world's largest enterprises and service providers.
- The NSX-T edition of vSTREAM provides affordable monitoring of east-west IP traffic in SDDC environments to augment existing north-south traffic data analysis with InfiniStreamNG™ appliances enterprise-wide.
- Easy to deploy and easy to manage, the NSX-T edition of vSTREAM will seamlessly adapt to an organization's security policy and strategy.

ABOUT NETSCOUT

NETSCOUT helps assure digital business services against disruptions in availability, performance, and security. Our market and technology leadership stems from combining our patented smart data technology with smart analytics. Our approach transforms the way organizations plan, deliver, integrate, test, and deploy services and applications. As a visionary and committed VMware partner, NETSCOUT has the experience and resources to help organizations migrate to VMware NSX-T environments and minimize the disruptions that can come with digital transformation.

SYSTEM REQUIREMENTS

In order to deploy the VMware NSX-T edition of vSTREAM virtual appliance v. 6.1.1, the following is required:

NSX-T – 2.5 (vCenter compute targets only)

vSphere 5.5, or 6.0, 6.5, 6.7

Unique Innovation for East-West (App) Visibility

Only NETSCOUT leverages the power of packet data through our patented ASI technology. The NSX-T edition of vSTREAM is unique in delivering application visibility and assurance directly from the hypervisor. nGeniusONE, with industry-leading support for more than 1,000 voice, video, and data applications, uses smart data from vSTREAM to pinpoint the source of application disruptions impacting the user community.

vSTREAM in combination with the nGeniusONE platform:

- Reports critical key performance indicators (KPIs) for user experience, application performance, and application and network errors
- Delivers automated Service Dependency mapping that exposes the connectivity between applications, servers, and users
- Provides Service Dashboard rollups of application performance
- Continuous reporting on application behavior, regardless of virtual machine / container location or movement
- Provides continuous monitoring and trending of data in customizable reports for use by IT staff and business stakeholders
- Access to protocol-specific metadata and detailed transaction views of sessions

How it Works

The NSX-T edition of vSTREAM is a service virtual machine (SVM) that can be installed on every hypervisor in a VMware cluster and leverages the NSX NetX API to process copies of packets flowing into and out of VMs on the same ESX host (see Figure 1).

Packet forwarding to the NSX-T edition of vSTREAM is simple and easily controlled using an NSX-T security group. Any VM that belongs to the vSTREAM security group will automatically be monitored by it. NSX-T provides various means of defining membership rules for security groups, and using a security group to control packet forwarding allows IT to align their application visibility and assurance with their security policies and practices.
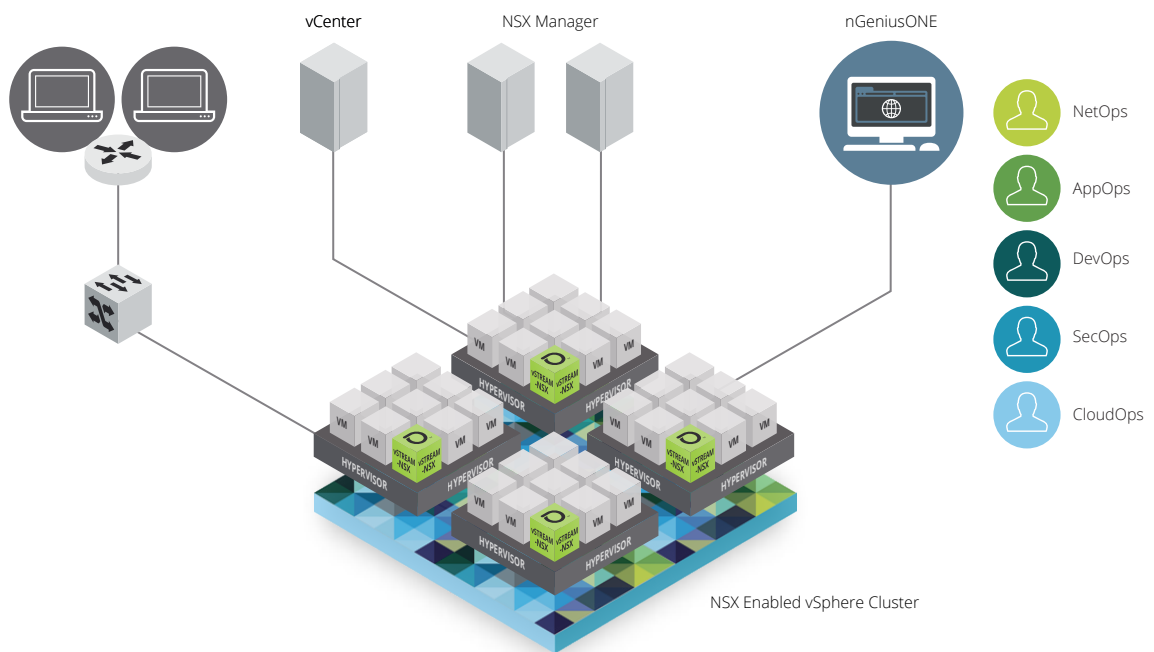

Figure 1: NSX-T Edition of vSTREAM with nGeniusONE Service Assurance platform.

The analysis performed locally by ASI in the NSX-T edition of vSTREAM generates KPIs for correlation and presentation in nGeniusONE. This has the benefit of avoiding over-burdening the network with added load from sending copies of packets to external data sources.

If direct access to packet data is required, vSTREAM can perform on-demand packet captures for in-depth analysis when necessary.

Key Benefits

- Achieve user-experience goals and faster, more dependable provisioning for applications deployed in the NSX-T environment with smart data and smart analytics from the NSX-T edition of vSTREAM and the nGeniusONE platform
- Bridge the collaboration and knowledge gaps between application, server, and network operations teams as they operate in the VMware NSX-T, cloud, and legacy environments
- Quick time to value with easy-to-deploy and easy-to-manage approach; the NSX-T edition of vSTREAM will seamlessly adapt to an organization's security policy and strategy
- Fast resolution time of application and network issues economically with complete visibility into east-west, as well as north-south traffic
- Reduce complexity and manual tasks with high-performance, agentless architecture that operates independently of the application workloads being monitored

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