

End-to-End Application Visibility & Troubleshooting in VMware NSX-T Data Centers

Enterprises are seeking new levels of operational efficiency, business process agility, and enhanced security to increase revenue and competitiveness, which in many cases have propelled them to implement transformative digital technologies.

With the latest release of NSX-T, VMware is able to deliver the seamless and automated delivery of networking and security throughout a multi-cloud environment. NSX Data Center and NSX Cloud combine to make the deployment work throughout the data center and into the cloud. NSX-T is the technology that allows a “one click” experience for the implementation of networks and applications. This helps companies to accelerate their business through as much automation as possible while providing a common operational platform for IT.

Your bottom line depends on continuous availability and quality end-user experience; anything less puts your business at risk. What is needed is a service assurance solution that eliminates the blind spots and provides a seamless view that will scale across your NSX data center and NSX cloud.

Application Service Assurance Challenges

It is essential to maintain the performance of applications and services across any Software Defined Network (SDN) environment, including VMware NSX data center and NSX cloud, and pinpointing the root cause of degradations has become more challenging. IT personnel must quickly resolve issues that arise (reduce Mean-Time-to-Resolution – MTTR), and in many cases prove it is NOT an NSX data center or NSX cloud 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 SDN environment.

Enterprise organizations have depended on packet-based, layer-7 visibility for service and security assurance capabilities in their legacy data centers and require that same rich visibility in their SDN environments. Discovering the true source of disruptions in SDN can be significantly delayed if IT staff lack cost-effective visibility or are using inefficient point tools, especially across a complex service delivery path. Those issues are compounded by gaps in monitoring and application visibility for virtualized server technology that IT organizations and cloud providers have been leveraging in their data centers for years. With hybrid cloud being the norm today,

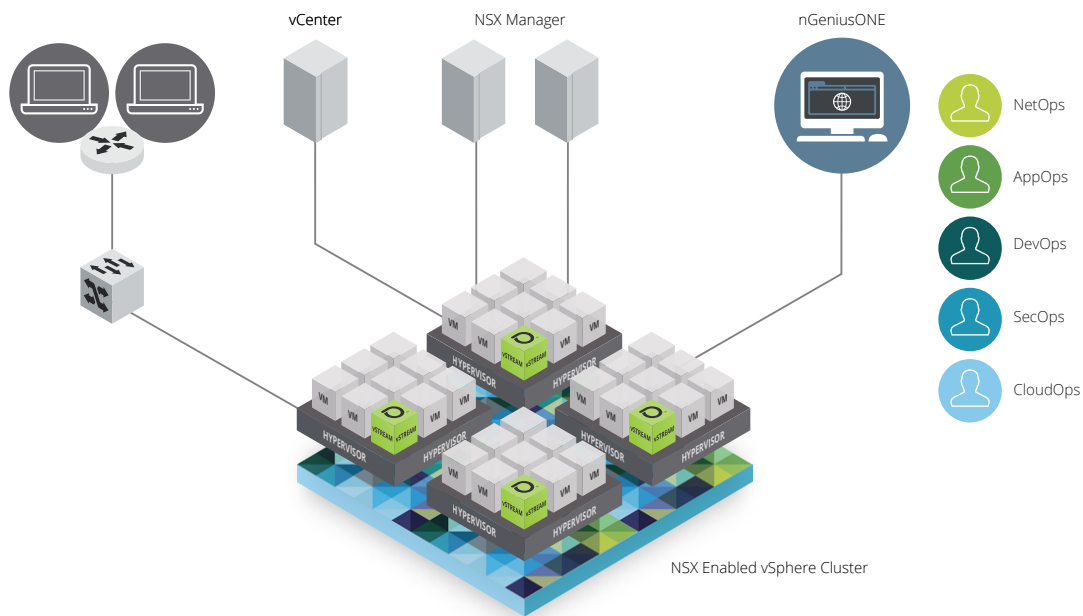


Figure 1: NSX-T Edition of vSTREAM with nGeniusONE Service Assurance platform delivers rich ASI intelligence for your organization’s mission-critical VMware NSX data center and improves collaboration among all members of the IT team, from NetOps to DevOps, AppOps, SecOps, and Cloud Ops.

consistency in visibility and application service assurance across the communications path is essential to avoid delays and conflicting analysis from point tools.

NSX-T Edition of vSTREAM Bridges the Visibility Gap

NETSCOUT is the first to partner with VMware to provide the most complete packet-data visibility solution, which historically was unavailable, to gain visibility into your VMware NSX data center. This revolutionary solution extends 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 delivers the same rich ASI intelligence directly from the heart of an organization's mission-critical VMware NSX data center and NSX cloud, that customers have deployed. The smart data provided by the NSX-T edition of vSTREAM (or simply vSTREAM) is consumed by NETSCOUT's proven nGeniusONE Service Assurance platform to deliver smart analytics to address the most challenging application and troubleshooting issues.

Unrivaled, end-to-end visibility into business application services along with contextual workflows to speed problem resolution are available with the NSX-T edition of vSTREAM and nGeniusONE, 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 their NSX data centers.

Only NETSCOUT can leverage the power of packet data through its patented ASI technology and is designed to scale to the needs of the world's largest enterprises and service providers. The NSX-T edition of vSTREAM is unique in delivering application visibility, troubleshooting and assurance directly from the hypervisor. nGeniusONE, with industry-leading support for more than 1,000 applications, including voice, video, and data, uses smart data from vSTREAM to pinpoint the source of application disruptions impacting the user community.

NSX-T Edition of vSTREAM in Action

To maintain the performance of applications, it is essential to be able to understand the interdependencies of the services through a VMware NSX data center. ASI analysis in the NSX-T edition of vSTREAM is performed locally and generates key performance indicators (KPIs) that are consumed and viewed in nGeniusONE. This avoids overburdening the network with added load from sending copies of packets to external tools. All of NETSCOUT's ASI-based monitoring platforms are integrated with the nGeniusONE service assurance platform to provide a common set of metadata analytics.

The NSX-T Edition of vSTREAM in combination with the nGeniusONE Service Assurance platform:

- Provides optimized visibility into east-west traffic in VMware NSX data centers and NSX cloud environments for end-to-end application performance, troubleshooting and user experience analysis.
- Conveys critical key performance, traffic, error, and server indicators (KPIs, KTIs, KEIs, and KSIs) for user experience, application performance, as well as application and network errors.
- Delivers service dependency mapping that exposes the underlying inter-relationships and connectivity between applications, servers, and users.

- Provides Service Dashboard rollups of application performance.
- On-demand packet capture for analysis by nGeniusONE.
- Reports 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.

Benefits of NSX-T Edition of vSTREAM

- **Achieve user experience goals and faster, more-dependable provisioning** for applications deployed in the NSX data center and NSX cloud with smart data and smart analytics from the NSX-T edition of vSTREAM and the nGeniusONE Service Assurance platform.
- **Bridge the collaboration and knowledge gap** between application, server, and network operations teams as they operate in the VMware NSX data centers and NSX Cloud, hybrid 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.
- **Solve problems rapidly and economically** with more complete visibility into East-West, as well as North-South traffic.
- **Reduce deployment complexity** and manual tasks with agentless architecture that operates independently of the application workloads being monitored.



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