

Application Performance Management for Microsoft Azure Cloud

Visibility Without Borders Starts with NETSCOUT nGenius Enterprise Performance Management for Hybrid Cloud Environments

In today's digital world, enterprise organizations turn to Microsoft Azure to meet users' demands for a fast, seamless, and secure digital experience. Azure uses secure storage, powerful compute, and integrated data analytics to support a new breed of distributed, connected applications, helping businesses cut time to market and improve customer satisfaction in a cost-effective manner.

To reap the full benefits of Azure in a hybrid cloud world, companies need to optimize application performance and security. Existing tools are unable to meet the visibility gap challenges created by distributed hybrid cloud environments. They lack the domain specific insight necessary to deliver seamless, uniform visibility and shared situational awareness needed by the different IT teams. What's more, these tools often create confusion with inconsistent and conflicting information due to the uncorrelated data that obscures and masks performance and security insights essential for the business to compete at a breakneck pace.

Enterprises running application workloads through hybrid cloud environments, including Azure, need visibility that extends beyond each physical boundary – in short, they need Visibility without Borders. NETSCOUT® solutions provide actionable visibility to mitigate service performance issues, threats, and vulnerabilities. They deliver business continuity with network and application performance monitoring to reduce Mean Time to Knowledge (MTTK), increase continuous delivery and continuous integration (CD/CI) velocity, and control service performance and security in IT infrastructures comprised of data centers, co-locations, and public clouds.

Solution Overview

NETSCOUT uses the industry's most scalable, lightweight distributed architecture to generate Smart Data. NETSCOUT has developed technology to fill visibility gaps in the Azure cloud environments that are the result of a lack of traffic mirroring capability between the production network and monitoring tools. Through continuous capture and monitoring of packet traffic traversing the hybrid cloud environment, performing simultaneous deep-packet inspection and real-time analysis, NETSCOUT generates Smart Data at its point of collection. This provides a centralized view into the performance characteristics of infrastructure and application activity along with their dependencies throughout geographically dispersed data centers and cloud environments. Armed with valuable and timely application performance and security intelligence, IT organizations can proactively find and fix errors, latencies, and threats before they become service delivery problems.

NETSCOUT solutions enable workload migrations to Azure with confidence, providing a foundation for common situational awareness for NetOps, SecOps and other IT groups by monitoring a variety of availability, reliability, responsiveness, and threat metrics, making them easily accessible in real time to the right team members with custom views relevant to their function. Actionable visibility from NETSCOUT helps organizations to fully benefit from the advantages of Azure capabilities.

NETSCOUT SOLUTIONS ENABLE IT TEAMS TO:

- Accelerate deployments of services into Azure while assuring application reliability, availability, responsiveness, and business continuity.
 - Achieve digital-user experience objectives and swift issue resolution for application services with Smart Data and smart analytics from NETSCOUT.
 - Empower collaboration between enterprise IT and Microsoft Azure teams as they work together to achieve business goals.
 - Fill the gap in monitoring visibility with innovative traffic mirroring capabilities with the NETSCOUT® nGenius® Cloud vTAP.
 - Achieve quick time to value through Azure Marketplace.
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Manage Hybrid Cloud Complexity with Smart Data

NETSCOUT Smart Data is based on software-centric technology that can be deployed in any hybrid cloud environment. It offers pervasive visibility in Azure to monitor East-West (E/W) and North-South (N/S) traffic environments, as well as in VMware NSX to provide visibility into E/W traffic in micro-segmented clusters. Smart Data technology is suitable for monitoring any software architecture and especially microservices, since it continuously monitors and analyzes traffic data exchanges between workloads, indexes it and correlates the information to identify dependencies and actionable intelligence on security threats and vulnerabilities, as well as performance issues.

nGenius Cloud vTAP typically deploys in pairs, receiving traffic from an Azure Load Balancer for routing and traffic acquisition purposes, and forwarding a copy of the traffic to a vSTREAM® virtual appliance. (Figure 1). The vSTREAM virtual appliance then performs traffic analysis using NETSCOUT's patented Adaptive Service Intelligence® (ASI) technology, generating Smart Data to forward to nGeniusONE® for further network and application performance analysis, views, and reporting.

In fact, NETSCOUT offers a variety of deployment strategies to gain visibility throughout the complex, distributed, hybrid cloud environments that enterprises rely on for achieving their business success. vSTREAM Smart Data is based on monitoring in any environment across the hybrid cloud, including virtual machines (VMs), Docker or Kubernetes containers/pods, software on the target servers of interest, or NSX as a native Plug-in (or Service Virtual Machine).

nGeniusONE solution analyses and converts the Smart Data into actionable insight with top-down service-oriented workflows that guide the user through the triage process of root-cause analysis. Leveraging intuitive, contextual workflows, nGeniusONE helps IT professionals navigate the triage process with service dashboards that offer visibility into critical service issues; with service monitors, that provide details on load, latency and errors; and finally, with session analysis that shares details on hop-by-hop performance; all of which combined provides the valuable information to pinpoint the root-cause of issues impacting application performance to users.

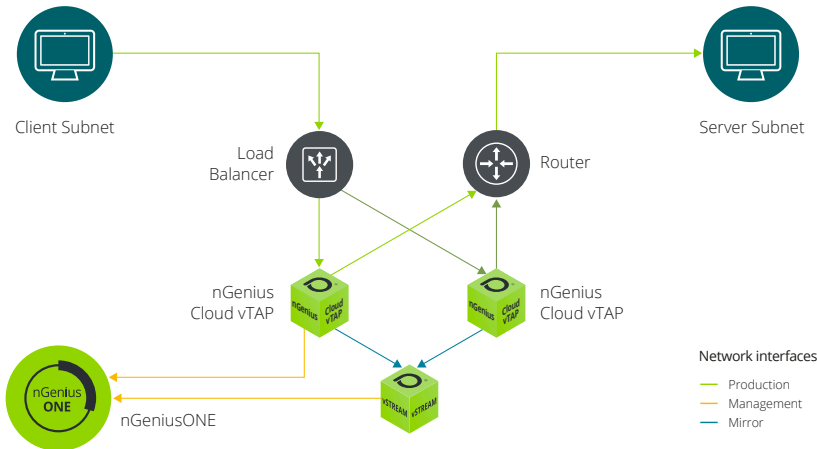


Figure 1: In Microsoft Azure Cloud, traffic from the Client Subnet to the Server Subnet is mirrored via the NETSCOUT nGenius Cloud vTAP to a vSTREAM virtual appliance for performance management, triage and troubleshooting analysis by the nGeniusONE solution.

Unlimited, Unchained, Unrestricted Application Performance Management

NETSCOUT Smart Data fuels end-to-end visibility and deep packet inspection at scale for analytics necessary to help protect application performance for the enterprise, gain more control of service quality, and preserve the user experience in hybrid cloud environments.

With the NETSCOUT solution, see Figure 2, information is timely and precise, able to support multiple, diverse stakeholders with data flexibility to meet specific business requirements.

nGeniusONE provides application performance management for Azure and helps IT organizations to:

- Assure application service delivery in hybrid cloud environments.
- Migrate application workloads to Azure while reducing business risk.
- Deliver a consistent and high-quality user experience before, during and after cloud migration.

NETSCOUT also helps to keep business moving and growing with Smart Data for Azure VMware Solution, which is an Azure service and VMware-validated solution that allows customers to seamlessly integrate their VMware on-premises environments with Azure.

Solution Components

In complete alignment with the needs of cloud-centric digital transformation strategies, NETSCOUT provides application performance management for Azure and delivers Visibility Without Borders®. Enterprises gain real-time, pervasive visibility, and in-depth analytics by leveraging key capabilities of NETSCOUT’s enterprise product portfolio.

Deployed in combination, the following products support the successful migration of workloads to the cloud by providing an effective analytics feedback loop based on real-time and continuous monitoring of packet data.

Application Performance Management for Microsoft Azure

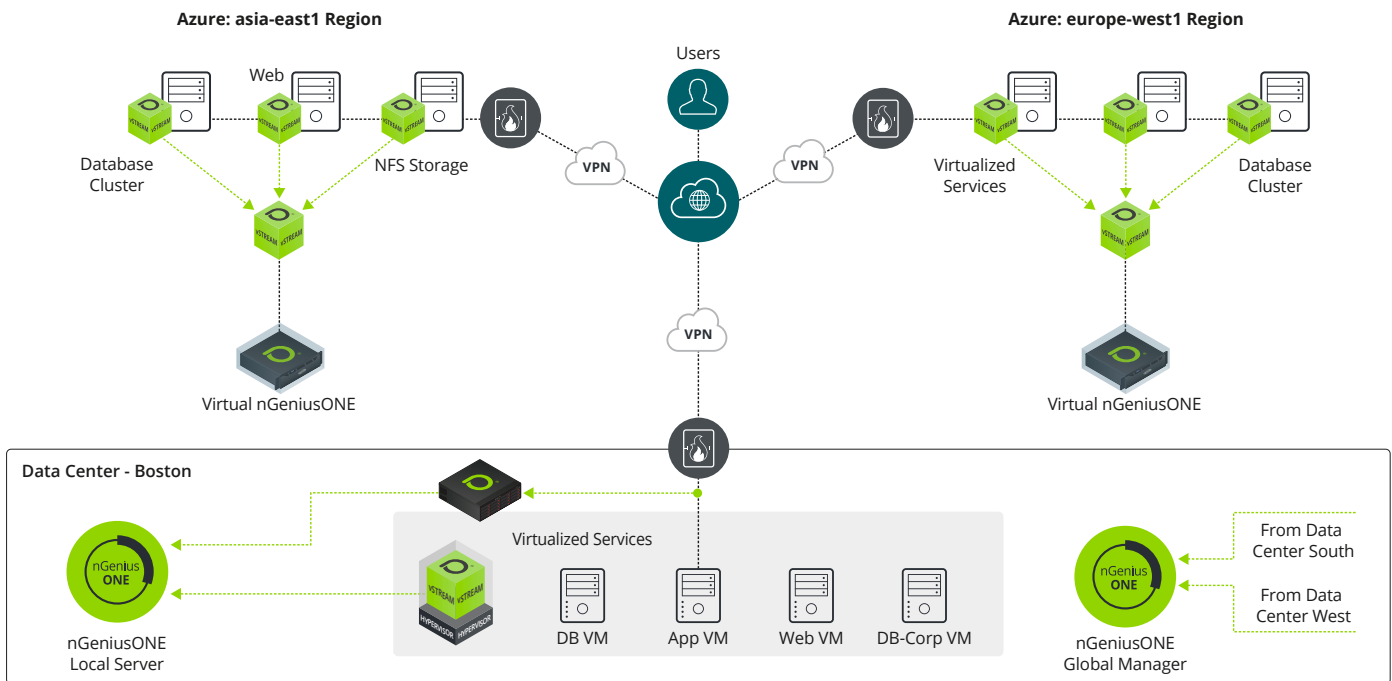


Figure 2: Migrate workloads to Microsoft Azure with confidence.

vSTREAM

With vSTREAM, a common set of metadata is made available to a wide range of analytics stacks for enhanced application performance and security insights. When vSTREAM is used with Azure, wire data is transformed into Smart Data.

Instantiate vSTREAM in the Azure environment as a virtual application, agent VM, or agent in a container.

- Analyzes real-time views of sessions, conversations, and end-to-end call traces.
- Assesses application traffic volumes, server response times, and throughputs.
- Reports on critical key performance indicators (KPIs).
- Aggregates error counts and error codes specific to the various applications and servers.

Virtual nGeniusONE

Virtual nGeniusONE is used with Azure to deliver an overarching view into the performance across infrastructure and application components associated with delivering digital services.

Instantiate Virtual nGeniusONE as a VM in the Azure environment.

- Supports proactive service triage for root cause analysis and application performance troubleshooting in hybrid cloud environments.
- Combines real-time monitoring, historical analysis, and multi-layered analytics capabilities.
- Promotes effective management of the health and availability of diverse applications and infrastructure with business impact analysis.

nGenius Cloud vTAP

nGenius Cloud vTAP bridges the visibility gap in Azure environments, delivering traffic mirroring capabilities between the production network and monitoring tools.

Instantiate nGenius Cloud vTAP in the Azure environment.

- Inserts unobtrusively into the data path as a router to distribute traffic between networks or subnets.
- Provides visibility for application performance management, triage, and troubleshooting activities by forwarding a copy of the traffic to one or more vSTREAM virtual appliances.

LEARN MORE

Visit Azure Marketplace for more information:

https://azuremarketplace.microsoft.com/en-us/marketplace/apps/netscout.netscout_app_performance_management_for_azure?tab=Overview



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