NETSCOUT

Application Performance Management for Azure

Successful Hybrid Cloud Requires Visibility Without Borders

With unrelenting marketplace competition, enterprise organizations are accelerating their digital transformation with Microsoft Azure to achieve revenue and customer satisfaction goals. Using intelligent cloud and intelligent edge solutions, Azure supports a new breed of distributed, connected applications, enabling businesses to reduce time to market and deliver a better customer experience through faster application delivery pipelines.

In many cases, the decision to move an application to the Azure cloud is made by the business and delegated to IT with the following expectations:

- Quick Time-to-Market
- Cost Reduction
- Performance Improvement

While the request is simple, the existing applications are inherently complex and inter-dependent. As a result, managing applications in the hybrid cloud, comprised of on-prem datacenters as well as private and public Azure clouds, often result in degraded quality and unexpected spend.

Whether migrating applications using lift and shift, refactoring existing applications or developing new ones with microservices, managing the business in the hybrid Azure cloud relies heavily on an enterprise's ability to quickly identify issues as they occur and eliminate performance "blind-spots."

Enterprises running application workloads through hybrid cloud environments, including Azure, need Visibility Without Borders, which does not begin and end at each physical boundary. Rather, visibility must be seamless, uniform and vendor agnostic to accomplish the goal of improving customer experience and detailed insights into application performance and service delivery across the overall communications paths.

Today, NETSCOUT® application performance management for Azure is improving application visibility for companies transitioning to Azure. With NETSCOUT, enterprises gain more control of service quality and preserve the user experience across hybrid environments.

Solution Overview

The NETSCOUT solution for Azure allows enterprises to fully understand the issues affecting the performance and security of their digital services so they can get ahead of any problem and ensure a positive business outcome. The inherent technology in the solution is unique in how it understands and monitors services and their dependencies for any hybrid cloud or multi-cloud architecture, distilling in real time the various issues and pinpointing the root cause. Only NETSCOUT uses wire data, enriched with multiple data sources to deliver consistent, precise visibility across all aspects of any environment, improving analytics efficacy and enabling the automation that IT and DevSecOps teams need. The NETSCOUT solution assures the highest quality customer and user experience as applications and other workloads move to the cloud.

The NETSCOUT solution allows IT and DevSecOps to:

- Optimize the performance of application workloads in the hybrid Azure cloud.
- Assure outstanding customer experience for applications developed natively in the Azure cloud and relying on microservices.
- Accelerate deployment of services in Azure, while assuring application reliability, availability, responsiveness, and business continuity.
- Achieve end-user experience objectives and swift issue resolution.
- Empower collaboration between enterprises and Microsoft Azure team as they work together to achieve business goals.
- Quick time to value with an easy to deploy and manage approach of services available on Azure Marketplace.

Use Case Example: DevSecOps Team Mitigates Risk to Meet Automation Goals

In migrating workloads to Azure, a DevSecOps team sought to automate tasks and accelerate continuous delivery and deployment pipelines. They recognized the increasing complexity in the production environment and the need for real-time system-level feedback to assure application performance. As such, the team deployed the NETSCOUT solution for continuous monitoring to improve their understanding of the complexities and performance of applications both in the Azure cloud and the data center.

Armed with this information, the DevSecOps team optimized the performance of applications that were either refactored or lifted-and-shifted to the cloud, and assured a consistent outstanding customer experience.
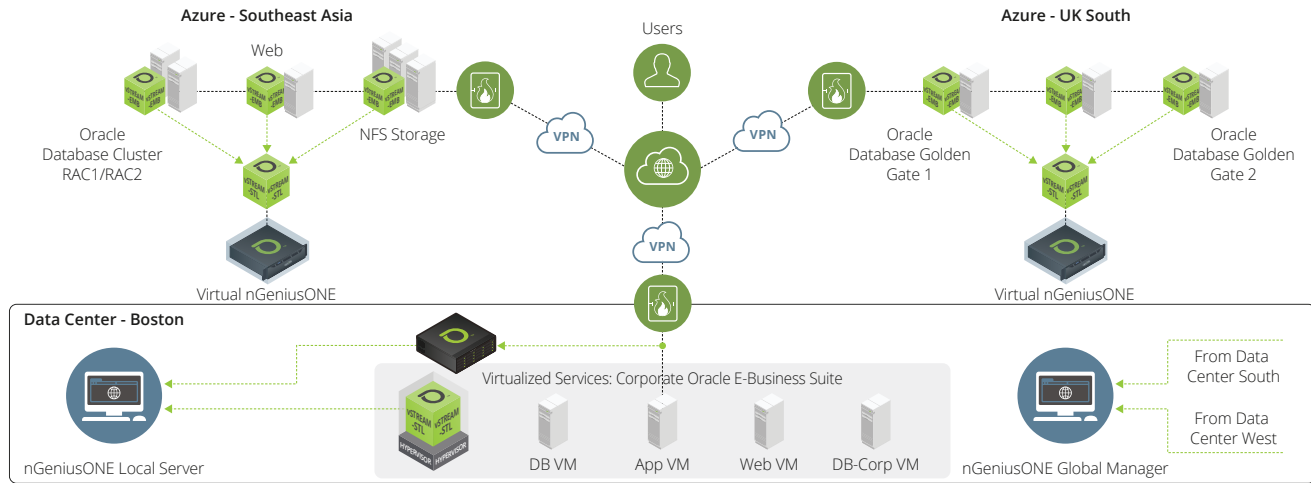
ENTERPRISE

Figure 1: Migrate application workloads to the Azure cloud with confidence.

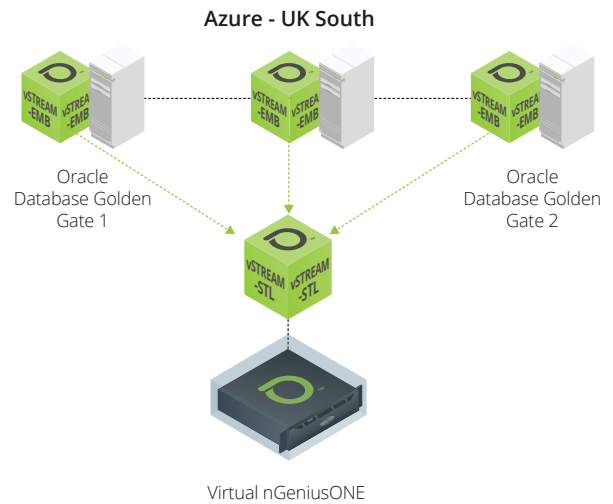## Manage Hybrid Cloud Complexity with Smart Data

Azure cloud technologies allow DevSecOps to deliver services at the speed and agility required for digital transformation. However, these technologies also increase fragility because of the myriad components, located across the hybrid cloud which must work together seamlessly. Without NETSCOUT smart data, teams are forced to use multiple, incoherent sources of information and spend time "connecting the dots" to understand their IT environment. This limits the effectiveness of analytics and slows the adoption of new automation capabilities, limiting the velocity and pace of transformation the business requires.

NETSCOUT uses the industry's most scalable, lightweight distributed architecture to generate smart data from monitored packet data to distill precise and relevant intelligence in real-time from applications and services including their interactions.

This innovative smart data technology goes beyond traditional north-south traffic views. Through continuous monitoring and by capturing high-volume wire data (traffic flows) traversing the Azure cloud - performing simultaneous deep packet inspection and real-time analysis - NETSCOUT generates smart data at the point of collection. With NETSCOUT application performance management for Azure, DevSecOps teams gain valuable and timely intelligence so that they can proactively find and fix errors, latencies, and threats before they become service delivery problems.

- **Dev:** Develop a high quality code and identify precursor situations leading to widespread issues.
- **QA:** Mitigate risk by optimizing validation of application and service performance.
- **Ops:** Capture telemetry and provide feedback to Dev and QA to optimize performance.

Figure 1 Diagram Detail

Azure - UK South

Oracle Database Golden Gate 1

Oracle Database Golden Gate 2

Virtual nGeniusONE

KEY:

- **vSTREAM Standalone:** for Azure, wire data is transformed into smart data.
- **vSTREAM Embedded:** for software-based instrumentation that forwards copies of packets on-demand to vSTREAM standalone.
- **Virtual nGeniusONE:** for Azure, overarching view into the performance characteristics of all infrastructure and application components across geographically dispersed data centers and cloud.

Unrestricted Application Performance Management

NETSCOUT's smart data fuels the end-to-end visibility and deep analytics needed to protect the enterprise, gain more control of service quality, and preserve the user experience in hybrid cloud environments.

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

NETSCOUT application performance management for Azure allows you to:

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

Solution Components

In complete alignment with the needs of cloud-centric digital transformation strategies, NETSCOUT application performance management for Azure delivers Visibility Without Borders. This means real-time, pervasive visibility and deep 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 wire data.

vSTREAM

NETSCOUT's virtual appliance enables the consolidation of multiple specialized analytics tools. With vSTREAM™ standalone, a common set of metadata is made available to a wide range of analytics stacks for enhanced application performance and cybersecurity insights. With vSTREAM for Azure, wire data is transformed into smart data.

- Instantiate vSTREAM as an Azure Virtual Machine Image (VMI) in the cloud environment.
- Analyzes real-time views of sessions, conversations and end-to-end call traces.
- Assesses application traffic volumes, server response times and throughputs.
- Aggregates error counts and error codes specific to the various applications and servers.

vSTREAM Embedded

vSTREAM Embedded for Azure bridges the visibility limitations of traditional wire data acquisition techniques with software-based instrumentation.

- Install vSTREAM Embedded in the Azure VMI, which hosts the monitored application.
- Operates on the Guest OS alongside monitored applications.
- Reports on critical key performance indicators (KPIs).
- Forwards copies of server packets to the vSTREAM standalone virtual appliance.

Virtual nGeniusONE

NETSCOUT's Virtual nGeniusONE® for Azure delivers an overarching view into the performance characteristics of all infrastructure and application components associated with delivering digital services.

- Instantiate Virtual nGeniusONE as a VMI in the Azure cloud 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.

NETSCOUT.

Corporate Headquarters
NETSCOUT Systems, Inc.
Westford, MA 01886-4105
Phone: +1 978-614-4000
www.netscout.com

Sales Information
Toll Free US: 800-309-4804
(International numbers below)

Product Support
Toll Free US: 888-357-7667
(International numbers below)

NETSCOUT offers sales, support, and services in over 32 countries. Global addresses, and international numbers are listed on the NETSCOUT website at: www.netscout.com/company/contact-us