

Extending Data Center Performance Monitoring with Software-Based Smart Visibility

Government Agency Leverages Software-based Smart Visibility for Service Assurance of Hybrid Cloud Environment

HIGHLIGHTS

The Challenge

- Data center transition to cloud to improve agency efficiency and reduce IT costs
- Unparalleled security and visibility needs across hundreds of sites
- New Amazon Web Service, Cisco ACI, and VMware environments

The Solution

- nGeniusONE® Service Assurance platform and nGenius® for Flows
- InfiniStreamNG™ hardware appliances, vSTREAM™, and nGenius Collector Virtual Appliance
- nGeniusPULSE server and nPoints

The Results

- Gained broad visibility across physical-to-virtual data center transition
 - Reduced-issues rollout of mission-critical applications
 - Lower MTRR with Smart Visibility into wireline, virtual/cloud, and NetFlow
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Customer Profile

Government agencies of all types have a strong “protect and serve” component of their mission, but this agency is so laser-focused on that mission, it puts them in a unique position even among government agencies. In order to successfully execute its mission, the agency depends upon the skill and talents of thousands of employees and contractors, coupled with highly secure, state-of-the-art information technology to provide up-to-date and completely accurate information on a 24x7x365 basis at hundreds of centralized and remote facilities.

The agency is a NETSCOUT® customer of several years, with their information technology (IT) team relying on the next-generation nGeniusONE Service Assurance platform for continuous visibility and monitoring of its network and application environment.

The Challenge

This agency's mission success depends in large part on quickly and successfully analyzing large volumes of data to safeguard national interests, government assets, and global citizens. In helping ensure the success of their mission, the agency developed and deployed an application suite that provides the ability to quickly extract meaningful analysis from always-growing data volumes.

Wanting to more nimbly spin-up compute and storage resources to support these mission-critical applications and newly developed apps, a strategic decision was made to embrace recent digital transformation innovations by consolidating existing data center operations and transitioning to a commercial cloud service provider (CSP) service. As part of this process, the agency employed a government-standard procurement process, which enabled deliberate selection of best-in-industry technology to install in the new CSP. As a result, they made an early decision to invest in Cisco Application Centric Infrastructure (ACI) Software-Defined Networking (SDN) architecture, which offered the benefits of application agility and data center automation.

The move to an annual CSP service also involved use of new-to-the-agency Amazon Web Services (AWS) and virtual VMware hypervisor technologies.

While the agency knew this next-generation fast-and-flat network could offer the business agility needed to more quickly deploy mission-critical applications, they also realized they did not have the end-to-end visibility required to manage performance of the new multi-tier ACI, AWS, and VMware environments running at the CSP.

As part of this project, the agency also wanted better visibility into overall performance at hundreds of remote locations, which historically was reliant on leveraging NetFlow-focused data.

With government constraints on the capital expenses associated with this project, the agency wanted to rely on one of their experienced technology partners to explore viable solutions to their next-generation data center monitoring requirements.

Solution in Action

The agency's rigorous review of available network and application performance management and service assurance technologies led them to select the NETSCOUT nGeniusONE Service Assurance solution. The real-time nGeniusONE information platform leverages NETSCOUT smart data as a universal data source for providing smarter analytics needed for end-to-end visibility throughout the agency's virtualized and hybrid cloud environments.

Deployed in the data center environment, InfiniStreamNG (ISNG) hardware appliances with NETSCOUT's patented Adaptive Service Intelligence™ (ASI) technology are transforming the agency's wire traffic into smart data, enabling the IT team to ensure security, manage risk, and drive service performance for mission-critical applications.

The agency addressed VMware platform monitoring needs by deploying the vSTREAM™ virtual appliance, which complements the ISNG platform's visibility into north-south traffic by monitoring east-west traffic in the CSP data center's virtualized environment.

For remote office visibility, the agency has transitioned to a software-based approach for NetFlow, with the nGenius Collector Virtual Appliance and nGenius for Flows solution using ASI technology to seamlessly integrate NetFlow data with nGeniusONE smart data.

With the importance of remote site performance, the agency is now getting ahead of issues, with the nGeniusPULSE infrastructure monitoring solution extending the service-oriented analysis of nGeniusONE and NETSCOUT smart data with NetFlow-specific views at these locations. One of the key benefits of selecting NETSCOUT was the "single pane of glass" capability to view the agency's overall virtualized and hybrid cloud environment, regardless of data source in use – wire data, NetFlow, or infrastructure information. When a problem is identified by nGeniusONE across the agency's environment and isolated as a potential infrastructure problem, IT can contextually drill-down directly from the nGeniusONE console to the underlying and specific infrastructure element in question within nGeniusPULSE.

The Results

The agency's data center transition is assured by NETSCOUT visibility and smart data providing contextual views the IT team needs for continuous monitoring of the new ACI, AWS, and VMware environments. The agency can now see the "big picture" of application performance across the hybrid multi-cloud and virtual environments, while continuously identifying application slowdowns and potential security threats. This enables rapid isolation of the true source of slowdowns and reducing time to address issues, often before users are impacted.

nGeniusONE offered the agency the key differentiators they sought in monitoring the new CSP platform – an integrated architecture offering single sign-on and single-pane views into their complete application and network environment. Equally important, NETSCOUT smart data supports the agency's mission of nimbly processing voluminous data to support preventive monitoring of residents, travelers, and government assets, leveraging the nGeniusONE information platform's real-time views into performance. Cost-effective and efficient, this common platform for all data sources reduces capital and expense costs otherwise associated with managing multiple tools and vendors, as well as time lost to trying to pinpoint problems with disparate, non-integrated information.

The agency now has a more complete view of remote site performance, which can be easily extended by deploying nGeniusPULSE software agents and further enhanced by NetFlow's conversion into NETSCOUT smart data for integrated analysis within NETSCOUT.

LEARN MORE

For more information about NETSCOUT Service Assurance solutions for Government, please visit:

<https://www.netscout.com/solutions/federal-civilian-state-local-governments>



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)

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