

State Government IT Meets Strategic Technology Challenges with NETSCOUT

Vendor-Agnostic Approach Cuts Complexity to Resolve Voice Quality in Multi-Vendor Environment

HIGHLIGHTS

The Challenge

- Deploying next-generation technology solutions in government agency environment
- North-south & east-west traffic visibility issues
- Challenging IT delivery portfolio across multiple government agencies

The Solution

- nGeniusONE® Service Assurance platform
- vSTREAM™ virtual appliance
- nGenius®PULSE Virtual Server appliance with hardware nPoints
- InfiniStreamNG™ hardware appliance
- nGenius packet flow switch

The Results

- Improved end-user experience in wired, wireless, UC, and virtual environments
- Enhanced visibility into VMware® virtual server performance
- IT advances Strategic Plan projects



Customer Profile

The business of government service delivery in this Western U.S. State relies in part on the expertise provided by their centralized Information Technology (IT) team. The network, application, data, Unified Communications (UC), and wireless technology platforms required to deliver everyday state government services are the collective responsibility of this IT team. The IT team manages a multi-location data center network to coordinate delivery of these technologies, also overseeing other partner agencies similarly focused on providing technology support to government business and State residents.

The agency is a NETSCOUT® customer of several years, with IT relying on the next-generation nGeniusONE Service Assurance platform to help their efforts to upgrade to a 10G network environment.

The Challenge

The State's four-year Strategic Plan for technology services identifies business goals familiar to so many of today's government IT organizations, including maximizing cloud computing and virtual platforms, as well as improving data-driven service delivery. In contemplating these digital transformation projects, the Strategic Plan also prioritizes vendor technology solutions offering value and efficiency to the State.

While IT worked to advance strategic initiatives (e.g., virtual platforms), they found themselves encountering visibility issues in both their next-generation and legacy platforms. For example, east-west traffic visibility gaps hindered their efforts to see how well their new VMware ESX virtual server platforms were operating in their data center. Meanwhile, north-south visibility issues made it difficult for IT to visualize traffic originating from the data center to partner agencies, which meant there were challenges with monitoring application performance at these locations.

"NETSCOUT is the best vendor we have." – State Information Technology Strategic Planning

IT was also dealing with telecommunications challenges, as they were unable to ensure parity of service delivery being provided by three different vendor phone systems. With multigenerational equipment that included Cisco technology and another vendor's private branch exchange (PBX) telephone network, the agency experienced issues with quality of external calls originating from partner agencies to the main data center. For IT, this represented a perfect storm of a vendor mix of technologies causing voice communications issues, and they were without a vendor-agnostic solution that could actively test to identify telephony issues.

IT's telco delivery responsibilities also extended to ensuring the configurations in new facilities supporting the next-generation workstation environments being established, including Microsoft Skype for Business (Skype) UC technology. Existing toolsets did not offer the mobility, nor flexibility necessary to determine whether these new offices had been wired correctly.

With the agency's wireless network also under their domain, the IT team found themselves in the spotlight when high-profile government meetings were scheduled at headquarters facilities. With numerous government administrators participating in highly important strategic meetings, the wireless network supporting session communications experienced heavy usage. While IT knew there were corresponding spikes in wireless network usage, they did not have the visibility required to measure performance or user experience during these meetings. Any outage or performance delay would likely bring adverse attention to the IT team.

Solution in Action

This government agency now regards NETSCOUT as their go-to vendor for service assurance, with IT strategic, network, application, and UC teams leveraging smart data and smarter analytics to address the types of project needs that follow.

Expanded Network and Application

Visibility: The IT team now benefits from pervasive visibility into network traffic flowing from the data center to partner agencies, using the nGeniusONE Service Assurance platform with NETSCOUT's patented Adaptive Service Intelligence™ (ASI) technology to convert the agency's high-value wire traffic to generate "smart data" for nGeniusONE's smarter analytics. In promoting this pervasive visibility, the nGenius packet flow switch installed at the data center reliably feeds network traffic to the InfiniStreamNG (ISNG) hardware appliance with ASI technology. As a result, the IT is monitoring the government applications in use at partner agencies, leveraging nGeniusONE service dashboard and service monitor views that visualize app performance, availability, errors, and user experience.

VMware Virtual Server Performance

Management: The IT team is removing network & application visibility gaps in their new VMware environment by deploying the vSTREAM™ virtual appliance, which supplements the ISNG's visibility of north-south traffic by monitoring east-west traffic in the data center's virtualized environment. The vSTREAM works in combination with nGeniusONE to provide smart data and smarter analytics required to address server-to-server performance challenges occurring in IT's VMware ESX virtual server environment.

UC, Wired, and Wireless Performance

Management: In response to the wide-ranging UC and wireless performance issues being experienced by some of the agencies, the IT team is adding the NETSCOUT nGeniusPULSE infrastructure management solution to the wire-data monitoring of nGeniusONE. In the UC realm, telecom specialists are achieving required parity of service in their multi-vendor voice environment by using nGeniusPULSE active testing capabilities for Voice over IP (VoIP) performance testing. IT now has the means to ensure calls emanating from remote locations to the main data center are of high quality, with nGeniusPULSE hardware nPoints providing "anywhere, anytime" active VoIP tests that include quantifiable

metrics for Mean Opinion Score (MOS) and jitter that telecom specialists can use for effective troubleshooting. IT is using the same nGeniusPULSE solution to ensure new office environments are ready to accommodate new desktop user environments and Unified Communications & Collaboration technology. IT is also using nGeniusPULSE's ability to monitor wireless network performance during executive government meetings to ensure the wireless environments supporting State representatives are performing without wi-fi infrastructure issues.

The Results

The agency views NETSCOUT as their "best vendor" for IT solutions, benefitting for years from nGeniusONE's flexibility in solving the agency's diverse network, application, data, and UC performance challenges.

Financially, IT is making these collective service delivery improvements while reducing operating expenses by using NETSCOUT as their single vendor for service assurance, smart-data visibility, packet broker, and infrastructure monitoring technologies. The IT team is also demonstrating extended NETSCOUT technology return on investment to agency management through continued use of long-installed nGeniusONE, ISNG, and PFS technology platforms

NETSCOUT smart data and smarter analytics enable IT to leverage their structured and unstructured data sets to provide automated information and analytics required to give them confidence in taking on future Strategic Plan targets.

LEARN MORE

For more information about NETSCOUT solutions for Federal Civilian, State & Local Governments visit

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



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