NETSCOUT®

Centralizing and Modernizing State Government Data Center Operations with NETSCOUT

IT Enhances Service Delivery & User Access, Improves SLA Compliance

OVERVIEW

The Challenge

- Data center centralization and 40G network upgrade initiatives
- Increased IT complexity with VMware® virtual desktop infrastructure and Avaya VoIP rollouts
- New technology enhances need for infrastructure SLA validation and compliance

The Solution

- nGeniusONE® Service Assurance platform with UC smart analytics
- InfiniStreamNG™ appliances
- nGenius® packet flow switches

The Results

- Successful data center centralization
- Improved government service delivery
- Increased employee productivity

Customer Profile

This U.S. State's information technology (IT) team functions as a service provider to numerous government organizations, including in-state agencies and universities.

The IT team's strategic plan focuses on providing secure, shared services to government agencies and state workers, using scalable, state-of-the-art technology.

For years, the IT team has measured network edge responsiveness and bandwidth utilization in their distributed data center using NETSCOUT's nGeniusONE Service Assurance platform and InfiniStream appliances hosting Adaptive Service Intelligence smart data technology.

The Challenge

With the agency's increasing network performance demands and instances of dropped packets that can cause data retransmissions, resultant application delays, and network latency, IT was revisiting both their network design and technology employed across their distributed architecture.

After reviewing their options, the agency determined it was time to centralize their data center operations down to two facilities and simultaneously transition to 40G network speeds. These strategic changes promised to result in better service delivery for agencies, employees, and constituents, as well as faster network responsiveness and reduced operating expenses (OpEx) via improved IT efficiencies.

But there were several transitions that needed to occur to ensure a successful data center transformation. For one, IT needed to consolidate data center servers and collapse the existing distributed network. In addition, the 40GB network would also require next-generation data sources and packet broker technology to support increased speeds.

As part of the technology modernization component, IT was rolling out a VMware virtual desktop infrastructure (VDI) environment. As a result, IT would now be responsible for the complex monitoring of 5,000 concurrent VDI user sessions, running over multiple VDI service tiers, including remote access, client, virtualization, Web, front-end, application, and database.

The technology modernization also involved implementing a new Avaya Voice over IP (VoIP) environment, which would necessitate real-time Unified Communications (UC) visibility and monitoring capabilities to assure high-level user experience to in-state agency and university users.

Given government budgeting cycles, IT was necessarily adopting a phased approach to this project. With so much riding on project success, the agency's thinking was "We have one shot to get it right."

Solution in Action

The IT team felt the success of this project hinged on end-to-end network visibility, which led them to deploy InfiniStreamNG™ (ISNG) appliances and nGenius 3900 or 5010 packet flow switches at the new data center and nearby back-up disaster recovery location.

In providing smart data for the agency's existing nGeniusONE platform, IT taps the 40GB network for visibility into wire data and passes it to the ISNG. As a result, IT is provided with a holistic network view and real-time, actionable traffic-based intelligence with high-density monitoring at line rate.

IT also addresses the challenge of monitoring new (e.g., Avaya, VMware) and legacy applications by using the NETSCOUT® solution to provide "before, during, and after" visibility and key performance indicators (KPIs) that improve planning and ongoing measurement of performance.

In assuring the success of the new virtual desktop technology deployment, IT team uses nGeniusONE to gain access to actionable metrics from monitoring and analyze the consumption and performance of VMware VDI services. IT relies on the NETSCOUT solution to deliver visibility across all VDI tiers, including remote access, client, virtualization, Web, front-end application, and related database systems.

In providing real-time UC monitoring to ensure high-performance Avaya VoIP services, nGeniusONE views enable IT to access Quality of Service (QoS) and inspection points, as well as walk through the network to perform any required VoIP troubleshooting. The value of vendor-independent analysis has been particularly beneficial for the organization as they assure the overall UC environment, including the Avaya VoIP technology and the agency's Cisco Unified Computing Server (UCS) clusters.

The Results

NETSCOUT's ISNG and PFS solutions were huge contributors to IT's successful data center operations centralization and 40GB rollout. Government agencies, university students, and state users all benefit from higher network performance and improved service delivery with the updated 40G environment.

The agency has realized further return on investment (ROI) in extending the nGeniusONE solution into their centralized data center infrastructure to optimize the performance of their new VoIP and VDI technology, which is ensuring quality end-user performance. Given the high price tag on these initiatives, this proactive service assurance is enabling IT leadership to have confidence in the rollout of the high-profile digital transformation.

NETSCOUT's solution also provides the service assurance required for highly available VDI services. The resultant success of the VDI rollout delivers multiple efficiencies to the agency, including on-demand delivery of desktop environments and applications, improved data security via centralized information and access control, and simplified desktop administration. IT members are provided with clear and actionable insights required to realize the operational benefits associated with desktop virtualization, and reduce the time it takes to identify and resolve service problems. With this successful deployment, state and university users benefit from enhanced productivity promoted by "anywhere, anytime" virtual desktop access.

In addition, IT now has the solution necessary to validate SLA compliance for the new VoIP and virtual desktop services delivered to agencies and universities, with NETSCOUT's next-generation data sources feeding nGeniusONE's smart performance analytics.

For IT, vendor management is easier, more seamless and cost-effective, now that they have embraced the nGenius packet flow switches to feed network wire traffic to the nGeniusONE service assurance solution

As a result of this project, the agency is now better equipped to assure service delivery for critical government and university services, using NETSCOUT to provide "single pane of glass visibility" across the multi-vendor IT deployment.

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