

End-User Service Quality Improves With NETSCOUT Visibility

nGeniusPULSE Reduce MTTR for Application Issues Experienced at Military Remote Locations

OVERVIEW

The Challenge

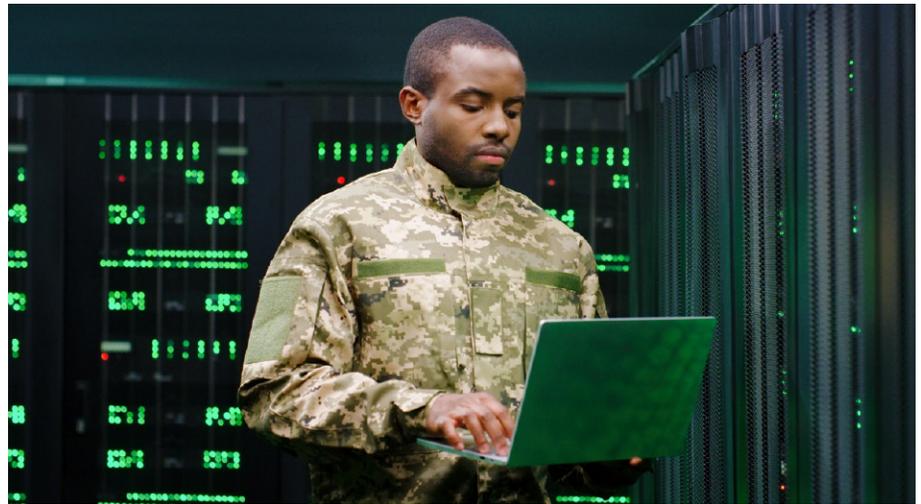
- Needed end-user experience visibility throughout major, global environment
- Needed both passive, packet-based monitoring as well as active transaction testing

The Solution

- nGeniusONE® Service Assurance platform
- InfiniStreamNG® software and vSTREAM™ virtual appliances
- nGenius®PULSE with 2000 and 3000 series nPoint sensors
- Software-based nGenius 5000 series Packet Flow Switches
- NETSCOUT® On-Site Engineers

The Results

- Improving end-user experience from remote locations with unique combination of passive and active visibility
- Improved team collaboration and reduced MTTR



Customer Profile

Ensuring the security, performance, and availability of their application services worldwide for this branch of the United States Military is a challenging mission for their IT and Security operations teams. This military branch is supported by hundreds of thousands of active-duty personnel and ready reservists, along with many thousands more civilian employees deployed in global locations. The criticality of swift, unencumbered communications to and from these service people and locations cannot be overstated, particularly considering that the safety and protection of US citizens may hang in the balance.

Military branch personnel leverage their networked applications for multiple purposes, ranging from simple email, voice services, and video conferencing (unified communications & collaboration – UC&C), to enterprise resource planning (ERP) for ordering and delivering all their equipment, uniforms, food, and other supplies, just to highlight a few important services. Given the importance of these activities, IT and SecOps teams are ever diligent in helping deliver seamless, secure communications to all, regardless of the physical location.

The Challenge

The overriding mission of this organization's IT team is to optimize the availability, performance, and security of the applications, communications, and networking systems used between personnel around the world and departments and agencies they work with. This required:

- Comprehensive network and application performance visibility
- Continuous monitoring and automated remediation processes
- Orchestration of security and network management systems

Ultimately, a key goal and driver for visibility into these services was to additionally ensure quality end-user experience from dozens of global locations. Regardless of whether personnel were using Microsoft Office 365 (O365) or Microsoft Teams, Web and cloud services using HTTP and DNS, or accessing data centers over VPN or with virtual desktop interfaces (VDIs) like Citrix, the users expected and required a high-quality, seamless experience.

Solution in Action

With end-user performance from primary global locations of critical importance, the lead technical advisor and other IT staff turned to their recently deployed NETSCOUT solutions for service assurance and performance management. The complete solution included:

- nGeniusONE Service Assurance platform with InfiniStreamNG (ISNG) appliances for real-time, passive monitoring of application and network performance via packet flows throughout the worldwide network.
- nGenius Packet Flow Switches for network packet acquisition, aggregation, and distribution to ISNG appliances and other monitoring tools.
- nGeniusPULSE with distributed nPoint devices for continuous testing and end-user experience analysis.

Specifically related to the end-user experience mission, nGeniusPULSE with series 2000 and 3000 nPoint sensors had been deployed at nearly 100 remote locations to measure, evaluate, troubleshoot, and understand issues impacting performance experienced by the users. At each remote location, a series of custom-configured, scheduled, synthetic tests were implemented to evaluate data center and cloud-based applications. These active tests, known as Business Transaction Tests (BTT), were intended to track and trend metrics on application service quality as felt by end users. The tests operated continuously, even when users were not active, which enabled

IT and SecOps teams to ensure that issues were detected as they emerged, sometimes before personnel even knew they existed.

nGeniusPULSE BTTs configured and implemented by the IT and SecOps teams of this organization included the following:

- Internet connectivity activity and performance
- VPN access health and responsiveness
- Print services transactions
- Citrix VDI use
- Web (HTTP) and DNS performance, particularly for evaluating cloud services like O365 and Microsoft Teams

The organization leveraged the information from these tests to improve performance for end users in a variety of situations. In one case, they expanded the number of VPN gateways available for secure, remote end-user access based on data revealed in nGeniusPULSE. CPU Utilization on the VPN concentrators was in a perpetual cycle - climbing to 90 percent shedding users, which would reset utilization, and then start climbing. Adding VPN gateways in some of the major regions eliminated this issue, resulting in more reliable and consistent VPN remote access for users.

The IT and SecOps teams extended the value of the HTTP and DNS testing and monitoring by using NETSCOUT's ability to feed data to the organization's SPLUNK implementation.

The Results

Communications is a strategic imperative for this organization and its thousands of personnel worldwide. The IT and SecOps teams have implemented a complete NETSCOUT solution to help assure the availability, reliability, and performance of the network and application services to these end-users in theatre. The scalability provided in the NETSCOUT solutions ensured that problems were detected, triaged, and troubleshooted quickly and efficiently wherever they occurred.

Further, nGeniusPULSE provided valuable data, with tests that measured and validated performance experienced by end-users' in remote locations that ultimately reduced time to pinpoint and resolve issues quickly.

With NETSCOUT, they benefitted from having a single vendor solution for both passive, packet-based performance management as well as active, BTT monitoring that provided visibility anywhere - across their data center, AWS cloud and remote locations - for virtually all of their application services. This optimized the investment made by the organization and was more cost-effective from a vendor management perspective. Speed, efficiency, and collaboration between the IT and SecOps teams, as well as with third-party vendors, also improved with this solution, eliminating finger-pointing of the past and replacing it with proactive, cooperative activities, including service introductions, application migrations, and capacity planning.

Ultimately, for the personnel and operations around the globe, delivering a secure, flawless end-user experience, has been the real benefit for this organization.

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<https://www.netscout.com/solutions/federal-department-defense-agencies>



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