

Military- and Carrier-Grade Call Quality Assured by NETSCOUT

Elite Defense Agency Moves Ahead with NETSCOUT Software Cost-Containment Approach

OVERVIEW

The Challenge

- Carrier- and government-grade mobile network and UC monitoring requirements
- Multi-call correlation requirements
- Tight Government agency budget

The Solution

- nGeniusONE® Service Assurance platform
- COTS InfiniStreamNG™ software appliances
- Iris Session Analyzer software

The Results

- Improved government agency communications
 - Enhanced mobile and data network service delivery quality
 - Cost containment leads to project approval
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Customer Profile

This Eastern Europe agency (agency) is globally renowned for providing elite defense services that safeguard its country's residents, visitors, infrastructure, and institutions.

As one of many government departments supporting the country's overall defense framework, this agency has embraced next-generation Unified Communications (UC) technology to help their subject matter experts collaborate in high-quality data and voice communications environments necessary to help sustain its mission.

The Challenge

The agency's data and voice network runs in a 4G environment managed by a leading telecommunications system integrator (SI). This network supports hundreds of government teams and users, and the SI regards this community as equivalent to mobile subscribers.

With the security challenges in today's geopolitical climate, the communications integrity required for effective national defensive activities is of utmost importance. As a result, the agency approached a select few industry vendors regarding viable solutions for their mobile network and user monitoring needs. Monitoring call quality from the subscriber's perspective was atop this list. Any call quality impairments in this military environment could jeopardize the agency's mission, assets, and the very citizens of this country.

As a result, the agency wanted to enhance monitoring of their 4G mobile network performance to validate the service responsiveness and integrity provided by their SI. The agency specifically wanted to monitor LTE/EPC Network interfaces (e.g., S1-MME, S5/S8, S10, and S11) and IMS/VoIP/VoLTE protocols (e.g., Cx, IMS, IMS DNS, SIP, Rx, and RTP). Only then would they be able to visualize the service quality being provided by their SI to their government users.

As part of their overall requirements, the agency also identified a need to uncover and analyze specific calls that failed to deliver required performance. Specifically, they wanted the ability to quickly focus and analyze calls with unique parameters, including merging calls for call correlation.

While the government recognized the importance of this project, the relatively small user base and highly focused scope meant there was a desire to acquire the best technical solution in the most efficient, economical way.

Solution in Action

The agency is addressing their mobile network voice and data monitoring challenges by deploying the NETSCOUT® nGeniusONE Service Assurance platform, with this solution located at both their SI's facility and their own location. In addition, the agency is using Iris Session Analyzer (ISA) software to uncover and analyze specific calls and sessions that fail to deliver required performance.

The smart analytics provided by nGeniusONE and ISA each leverage smart data generated by NETSCOUT Adaptive Service Intelligence™ (ASI) housed in commercial-off-the-shelf-based (COTS) InfiniStreamNG (ISNG) software appliances. With nGeniusONE, the agency is proactively monitoring their LTE/EPC and IMS/VoIP/VoLTE services. ASI-generated smart data delivers insights to improve government network and service performance, also providing detailed IP-level views into the control and user planes, as well as network usage and behavior.

The agency is taking advantage of nGeniusONE's smart analytics for UC to monitor DNS, SIP, and RTP, specifically benefiting from the ability to provide Quality of Service (QoS) information, identify transmission errors, and present Mean Opinion Score (MOS) data for voice quality.

The agency also relies on customized nGeniusONE Utilization Reporting provided by NETSCOUT Delivery Services, while also leveraging workflows originating from Dashboard views into network management, individual call views, and down to packet-level details.

In addition, the agency is correlating signaling and media to deliver a more complete picture of network issues, with Iris Session Analysis merging calls for call correlation. As a result, the agency can quickly isolate root cause and remove any performance barriers impacting call quality for users.

The Results

The agency is benefiting from NETSCOUT's solution providing them with full analysis-ranging from call quality, to LTE call correlation, to VoIP and business data services support. Technologically, the agency is also receiving the best solution, all consolidated in an integrated approach from one vendor.

The total solution is providing for improved quality on sensitive subscriber calls, further enabling the agency to get ahead of issues prior to the subscribers experiencing poor-quality calls.

When considering the agency's requirements from a service provider carrier perspective, the agency uses nGeniusONE to gain real-time, detailed IP packet-level insight and core-to-access visibility. In factoring their LTE/EPC and IMS/VoIP/VoLTE environment, the agency now effectively assesses overall network quality, takes proactive steps to modify the network before issues impact users, and quickly identifies and troubleshoots network problems.

While the agency had these requirements for years, their limited budget stood in the way of their deploying a solution. That's where NETSCOUT's ability to deliver both COTS ISNG and ISA software as solutions operating on NETSCOUT-certified third-party hardware platforms provided the required cost containment, so that the project could move toward deployment.

The agency also benefits from using ISNG as a single data source for both nGeniusONE and ISA, with ISNG providing the packet capture performance and data storage appropriate for the agency's traffic volumes and application performance. In addition, the agency benefits from ISNG providing real-time views of end-to-end call trace data and network-wide key performance indicator visibility to protect the reliability and availability of networks and services.

The agency moves forward with confidence in this project, knowing NETSCOUT offers the credibility borne from experience with large-scale government service deployments across the globe. The agency can rely on true, live 24x7 global support, with NETSCOUT MasterCare support centers providing follow-the-sun support crucial to military customers.

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