

# Network and Application Performance Management for Department of Defense Agencies



Department of Defense Agencies (DoD) are being tasked with transforming their complex network and service infrastructures by initiatives like the DoD Software Modernization Implementation Plan (approved in March 2023). Even prior to the formulation of initiatives like this, leadership teams across the DoD, Intelligence Community, and Joint Agency landscape were being challenged to “do more with less,” as ongoing digital transformation initiatives (e.g., cloud computing, data sharing, cybersecurity) converged with fluctuating budget allocation and information technology (IT) skillset gaps.

Hundreds of thousands of personnel are dispersed in remote locations, increasing the complexity of mission operations. This underscores the need to visualize the client and digital edges with the same clarity as network, data center, and cloud service edges of agency networks.

The confluence of these factors has resulted in an evolving IT landscape across DoD, Intelligence, and Joint Agency operations. This has brought enhanced needs for observability across all service edges, high-quality user experience for personnel regardless of their location or application or network in use, and for secure operations.

## Our Approach

NETSCOUT® provides end-through-end real-time visibility into the health, performance, and security of critical mission data, services, and applications in today's evolving Department of Defense (DoD) agency environments.

NETSCOUT nGenius® Enterprise Performance Management provides DoD Information Technology Operations (IT Operations) with a solution that delivers proactive monitoring and rapid troubleshooting. NETSCOUT uses predictive analysis, network topology and health diagnostics reporting, and onboard packet captures to reduce mean time to repair (MTTR) cycles.

Using scalable deep packet inspection (DPI) Smart Data from InfiniStreamNG® (ISNG) and vSTREAM® appliances, NETSCOUT solutions provide packet-based performance insights and can incorporate synthetic testing for user experience assurance throughout the organization's environment. (e.g., on-premises or co-located data centers, public or private cloud). NETSCOUT scalable DPI also provides real-time visibility and analysis for any service deployed (e.g., government and business applications, voice, video, Software as a Service, and Unified Communications as a Service), from wherever those services are accessed (e.g., DoD facilities, field operations, remote environments).

nGeniusONE is the foundation of NETSCOUT's nGenius Enterprise Performance Management solution for observability at essential business edges (i.e., remote client, network, cloud, and data center service edges) and user experience assurance. Additionally, In assisting agency efforts to improve collaboration between Network Operations (NetOps), System Operations (SysOps), and Security Operations (SecOps) staff, a scalable DPI ISNG appliance can be used as a joint data source for both nGeniusONE and the NETSCOUT Omnis™ Cyber Intelligence enterprise-wide network threat and risk investigation solution, which helps reduce the impact of cyber threats on agency operations.

## Delivering Value to Department of Defense IT Operations

NETSCOUT's global U.S. DoD footprint includes Army, Navy, Marines, Air Force, Coast Guard, Intelligence Community (IC), and Joint Agency installations in several major theatres, including North America, Europe, and Asia. In this manner, NETSCOUT's solutions play a critical role across numerous DoD agencies, addressing challenges that involve:

- Expanding network visibility for health and performance of deployments involving 4G and 5G, as well as enhancing application visibility for assuring voice, video, and data services.
- Proactively monitoring to optimize internal services and reduce service outages and triage activities.
- Confirming deployment readiness of new applications.
- Rolling out Cisco® Application Centric Infrastructure (ACI) Software-Defined Networking (SDN) solutions.
- Validating Co-located Data Center (Co-Lo), Hybrid Cloud, and VMware virtual migrations.
- Assuring Virtual Private Network (VPN) and Virtual desktop infrastructure (VDI) access and performance supporting secure remote systems access.
- Visualizing and monitoring Enterprise IT as a Service (EITaaS) and Network as a Service (NaaS) deployments.
- Assuring Joint All-Domain Command and Control (JADC2) operations, as well as Joint Worldwide Intelligence Communication System (JWICS) performance.
- Visualizing and monitoring non-classified Internet Protocol Router Network (NIPR) and Secret Internet Protocol Router Network (SIPR).
- Investigating cybersecurity incidents and collecting forensics.

As a trusted vendor serving DoD communities, NETSCOUT's technology had earned certifications that include Department of Defense Information

Network (DDIN) Approved Products List (APL), Common Criteria Certifications, FIPS Certifications, IPv6 Certifications, and Army Certificate of Networthiness. In addition, NETSCOUT personnel supporting business and monitoring activities across DoD environments have gained as-need security clearances to support agency operations.

## NETSCOUT in Action

NETSCOUT operates large-scale nGeniusONE deployments supporting DoD, Homeland Security, Intelligence Community, and Service Providers in the manner described below.

- **DoD operations support** includes agency-specific Cyber Centers globally and major. Command Operations Centers, global communications architecture, and an enterprise solution for end-to-end monitoring, application, and network performance management. nGenius Enterprise Performance Management supported another agency's Cisco ACI data center migration. This solution has also supported a second agency's migration to a new private data center, with nGeniusONE providing "before, during, and after" views to assure IT Operations that application and network performance and user experience had not been adversely impacted by this transition.
- **Homeland Security operations support** includes agency-specific Web-based content management monitoring, as well as network, cloud, and applications visibility projects. Another Homeland Security agency used nGeniusONE to expand visibility across hundreds of sites, as well as new Amazon Web Services, Cisco ACI, and VMware environments.
- **Intelligence Community operations support**, including network visibility, performance, and packet-based forensic security solutions.
- **Service Provider operations support**, including Network Functional Virtualization, Software-Defined Networking, 5G, and Edge computing projects.

Additionally, nGeniusONE was incorporated in a performance management solution that one Intelligence Agency used to visualize data center, network, and remote client edge performance user experience in a deployment that also included NETSCOUT Omnis Cyber Intelligence.

## Value of nGenius Enterprise Performance Management

This NETSCOUT solution enables IT Operations to monitor network and application performance while also measuring user experience quality. With this approach, nGenius Enterprise Performance Management solutions provide comprehensive visibility to support the following IT focus areas:

- Reducing IT fatigue and tool sprawl, with a single-vendor visibility approach used to identify root cause on issues impacting any user, on any service, on any network.
- Assuring availability and reliability of service performance to users, regardless of their missions, locations, or platforms and networks in use.
- Measuring responsiveness of application performance in all agency environments, whether in the field, remote facilities, or headquarters.
- Validating quality of service being delivered by voice, video, conferencing, and collaboration solutions.
- Ensuring security of business service delivery occurring in remote environments.
- Rapidly restoring services when outages occur, with single-pane-of-glass views leveraging the universal NETSCOUT smart data source and nGeniusONE's intuitive troubleshooting workflows in a manner that satisfies IT needs for improved root cause analysis and reduced MTTR cycles.



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