NETSCOUT®

APPLICATION HIGHLIGHTS

- Real-time and historical views support investigation and troubleshooting of problems whenever they occur.

- Multi-protocol and cross-domain support delivers intimate visibility into the most complex call paths.

- Correlation of signaling and media delivers a more complete picture of network issues.

Powered by nGeniusONE

nGenius® Session Analyzer (nSA) supports Service Providers with the ability to troubleshoot a range of subscriber sessions and events. Designed to streamline workflows within a single application, nSA utilizes the nGeniusONE® platform to provide a consistent end-user experience across different applications.

- All trace functions are supported across deployed ISNG RAN, G10, GeoBlade™, GeoSoft® RAN and SpIprobe platforms for a comprehensive and correlated end-to-end view.

Application includes support for a "Session Scheduler" module to simplify configuration and activation of recurring session captures.

- All modules are available from a standardized, icon-based console for quick access to Troubleshoot, Configure and View workflows.

- Share session summary and PDU message flow results as PCAP, HTML or .nSA file for extended use by auxiliary departments and vendors.

nGenius Session Analyzer

Single, Optimized System Improves Productivity

Isolate and Resolve Performance Barriers Quickly

Communications networks handle millions of calls and data transactions every day. While the majority of these transactions are successful, with the growing complexity of new technology, service introductions, element interoperability requirements, and dynamic usage patterns, problems can arise. When this happens, an operator's ability to quickly isolate the root cause and remove performance barriers is critical to maintaining customer satisfaction and protecting revenue.

Call and session trace tools are critical for Network Operations personnel to uncover and analyze the specific calls and sessions that fail to deliver required performance. Whether prompted by threshold-based network alarms or customer-escalation, call trace applications are mission-critical for network operators.

For decades, NETSCOUT® has supported the world's leading service providers with powerful session analysis applications and subscriber troubleshooting tools. Offering the most powerful call trace capabilities in the industry nGenius Session Analyzer (nSA), effectively addresses the complexities of an ever-changing technology landscape.

Simplified Setup Supports Timely Analysis

Service providers rely on NETSCOUT applications when identifying and troubleshooting their network and services. Our user-friendly interfaces reach across protocols and network domains to simplify technology and troubleshooting tasks.

An easy-to-use scenario-driven application takes the complexity out of robust session trace configurations and filter selections.

- Minimize the learning curve for less technical users.

- Reduce trace setup time for more experienced personnel.

nSA accelerates productivity in networks with hybrid (ISNG, G10, GeoBlade, GeoSoft RAN and SpIprobe) instrumentation deployments and intuitive menus designed to guide users through the selection of required and relevant filters, durations, and monitored objects based on underlying data sources.

- Simplified generic filters extend the application's use to personnel without specific protocol knowledge.
- Extended detailed protocol filters provide advanced filtering support for network experts.
- User filter templates can be saved and shared between users to recover time otherwise spent on re-creating filters.
- Search-enabled monitored object selection menus simplify trace configuration for all platforms from a single interface.

At-a-Glance Assessment and Actionable Investigation Paths

Once a session is started, nSA's intuitive results window optimizes troubleshooting functions. Session summary displays deliver correlated calls based on selected trace criteria.

- Full and accurate correlation of every call ensures all relevant signaling and media messages for a session are collected and presented.
- Simple click-through selection of a specific session populates a Ladder Diagram display and the PDU Details table.

While Ladder Diagram displays provide call flow visibility within the context of the network entities involved, the PDU Details table offers specific information about each message.

- PDU table columns may be easily customized to display any decodable field from the monitored protocols. Columns may be sorted, filtered, reordered, and resized. Color-coding enables quick identification of session timeouts and error return codes.

When further analysis is required, users may select individual PDUs for protocol decoding with the Packet Decoder or a specific user-plane flow summary to explore Flow Details including response codes and uplink and downlink statistics.

Workflows Deliver Accessibility and Productivity

With integrated scenario-driven menus, nSA assists users with every aspect of setting up a successful call or session trace. Fine-tune your problem investigation process with user-defined workflows, scenario builders, session management, local capture, and remote capture criteria.

GUI Functionality Expedites Resolution

The Results Window offers network operators a number of GUI-enabled capabilities that may be used to accelerate session investigation and problem resolution.

- **Presentation:** Customize the order and appearance of columns in Session Summary and PDU Message Flow tables. Expand summary level metrics to reveal underlying details on demand.
- **Filtering/Sorting:** All table columns support filtering and sorting to hone in on sessions and messages of interest. Color-coding and custom call failure configurations/categorization improve isolation of "unacceptable" calls/sessions.

FEATURES AND BENEFITS

Accelerated Set-Up

- Optimized selection menus guide users through relevant steps with easy-to-define scenario builders and filter selections.

Complete Correlation

- Full and accurate correlation of every call ensures all relevant messages for a session are collected and presented.

Summary Dashboards

- Highlight user event and response code distributions for at-a-glance assessment of subscriber activity within a session.

Privacy and Storage

- Digit and content masking support conceals network traffic and call content from unauthorized access to comply with security regulations and subscriber privacy requirements.
- Longer-term storage of schedule session collection is available for forensics and on-going drive test analysis scenarios.

Actionable Results

- Advanced filtering and sorting capabilities allow users to focus on the information that matters most.
- Expand top level messages and graphical summaries with one-click access to additional details.

Usability Features Empower Customer Support

nSA offers a number of features geared towards less technical users-bringing value of E2E Multi-Protocol Correlation (MPC) to departments beyond the NOC.

- Ability to select all monitored network nodes eliminates the need for topology familiarity.
- Simple filters enable tracing when only subscriber information is known.
- Real-time trace options support troubleshooting when problem recreation is required.
- Results Windows are easily customized for Tier-1 support users.
- Reports and export options standardize communications when problems must be handed off to other tiers or carriers for resolution or validation.

Solution Components

NETSCOUT solutions are comprised of a device-agnostic collection and correlation layer that feeds purpose-driven work flow modules and applications such as nSA.

InfiniStreamNG and the GeoProbe G10 Platform

The nSA solution is fully-compatible with the InfiniStreamNG™ platform operating in Geo-mode. In addition, the GeoProbe G10 platform may be used. Designed specifically to address high bandwidth IP interfaces and data center applications, the GeoProbe G10 is well-suited for a variety of applications and network domains including mobile data services and data centers (Gn/Gi), next-generation 4G networks (LTE/EPC, VoLTE), 5G, and multimedia and convergence (VoIP/IMS, conversational video). When optionally enhanced with deep packet classification (DPC) capabilities, the nSA solution can deliver unrivaled service granularity with every trace.

GeoBlade

Designed to meet the high resiliency and reliability targets of modern communications service providers (CSPs), GeoBlade spans IP-based technologies and services with elastic software and innovative modular hardware. GeoBlade supports mobile data and data center protocols, next-generation 4G networks, and multimedia and convergence scenarios.

InfiniStreamNG RAN and GeoSoft RAN

Harvesting information directly from inherent element trace ports, NETSCOUT's RAN-based solutions combine data from multiple elements and vendors for use with a proven network-wide monitoring system. With GeoSoft RAN and InfiniStreamNG RAN, nSA visibility and value is enhanced with end-to-end troubleshooting capabilities.

- A single, unified view of subscriber traffic across network boundaries (RAN and Core) and technology domains (2G/3G/LTE/5G/NB-IoT) arms Tier 1 RAN Operations teams with the real-time and historical information they need to quickly isolate and resolve congestion and interference problems.

GeoProbe SpIprobes

The SpIprobe platform provides true real-time multi-protocol tracking of every transaction across a network, enabling bearer / service, subscriber, link / interface, and node status monitoring for 2G, 2.5G, 3G, VoIP and other network types.

WORKFLOW HIGHLIGHTS

Input Filter
- Selection of filter parameters by Subscriber type, Subscriber ID, Time Zone, and Duration.
- Support for predefined scenarios or manual custom inputs.

Session Summary
- Selection of session results that fall within a time line summary of successful and failed calls.
- Distribution parameters organized by Service, Transaction, Response Code, or Status Event.
- Visibility to uncorrelated session listings.
- Session Analysis launch based on distribution results.

Session Page
- Drill-down to correlated session views.
- Toggle from transaction records to view session details.
- Ladder diagram and table formats views available.

Packet Decode Page
- Launch for full session PDU decode.
- Support drill-down from message to packet.

NETSCOUT®