



### SOLUTION HIGHLIGHTS

Encourage cross collaboration while supporting the individual needs of diverse operations teams.

- 24x7 Network-wide Coverage and Small Cell Scaling over 1M Cells
- Comprehensive 5G, NB-IoT, LTE and 3G Vendor Support
- Efficient Workflows for Distinct RAN Users
- 5G, NB-IoT, LTE and 3G Inter-RAT Support
- Cross-Department Collaboration Tools
- Real-Time and Historical Data
- Integrated RAN Control Plane and User Plane Call Trace Visibility
- Virtual Enterprise Solution Deployment Expertise from 2013
- Smart RAN Data Feeds Service Provider Big Data Platforms for Geomarketing and Advanced AI Analytics

## Radio Access Network Monitoring and Troubleshooting

### Empower Operations Teams with RAN-enabled Solutions

#### Deliver a Quality Experience for Mobile Subscribers

With modern subscribers demanding increasingly complex services including voice and video conferencing, music downloading, and mobile TV, operators need to raise the bar with hosted offerings in order to effectively compete with OTT alternatives. As these types of services quickly translate into significant revenue streams, they also require the highest Quality of Service (QoS) from the networks in order to meet Quality of Experience (QoE) expectations.

This critical objective typically falls within the responsibility of the radio access network (RAN) Operations team. As subscribers access new services from bandwidth-hungry devices, this team will face new challenges that will threaten their productivity and their ability to deliver a quality experience for mobile subscribers.

With the introduction of NETSCOUT's RAN-based solutions, operators can more effectively address the most complex technology turns at the point of access.

#### Extend Visibility Beyond the Core with NETSCOUT's Session Analyzer Applications

With a single, unified view of subscriber traffic across network boundaries (RAN and Core) and technology domains (5G/NB-IoT/LTE/3G/2G), NETSCOUT's session analyzers arm Tier 1 RAN Operations teams with the real-time and historical information they need in order to quickly isolate and resolve congestion and interference problems that contribute to 70% of all subscriber issues.

### Real-Time Network Element Data

Troubleshoot issues from core to RAN with real-time information. Continuous, 24x7, cross-element monitoring and data correlation ensures that RAN teams see all that happens, as it happens—dramatically reducing the time to access and analyze information. With session analysis, RAN Operations teams can accelerate their response and fault isolation, meeting aggressive troubleshooting time frames and minimizing escalations to more costly support resources.

### Historical Data Recall On Demand

Resolve issues that cannot be recreated. When stubborn trouble tickets linger, additional context may be required for resolution. NETSCOUT's session analyzers deliver that context with readily-accessible historical information that allows teams to paint a better picture without a costly truck roll.

### Collaborative Workflows

Facilitate cross-department resolution with targeted workflows and collaborative capabilities. When multiple organizations are involved in solving a problem the ability to augment escalations and handoffs with meaningful information ensures resolution progress—avoiding ticket stall or ping-pong troubleshooting. NETSCOUT's session analyzers support a more collaborative approach with flexible export options for internal audiences and vendor mitigation. In addition, seamless drill to lower level troubleshooting tools extends the solution's value to multiple departments.

### Independent and Efficient Data Collection

Harvesting information directly from inherent element trace ports, GeoSoft RAN-based solutions combine data from multiple elements and vendors for use with a proven network-wide monitoring system.

Offering a vendor-independent view of RAN performance across deployed access infrastructures, mobile operators can readily address a variety of scenarios.

- Validate benchmarks and maintain Core/Access/Device system functionality by reporting the most pertinent Key Performance Indicators (KPIs) and Key Quality Indicators (KQIs).
- Identify issues impacting new service QoS/QoE in real time with 24x7 monitoring capabilities, reporting and trending analysis features.
- Baseline, monitor and troubleshoot control plane and user plane signaling in order to effectively support new handset introductions.
- Gracefully address NEM software upgrades with support that extends from FOA to production environments.
- Accelerate resolution with handset manufacturers and NEMs by providing actionable information with captures from the session analyzer.

### Address Network Planning and Optimization Tasks with Geoanalytics

With the addition of TrueCall®, engineering teams can further leverage RAN data collection with 24x7x365, network-wide, real-time and historical RAN geoanalytics.

## SOLUTION COMPONENTS

NETSCOUT's RAN monitoring platforms enable data collection across legacy and next-generation access technologies delivering an industry-proven lower total cost of ownership (TCO).

### GeoSoft RAN

Scalable, software-based radio access network monitoring extends visibility to service and network issues support for traceport data collection in multi-technology, multi-vendor environments.

### InfiniStreamNG RAN

Cost-effective RAN monitoring for LTE and 5G Massive Cell Deployments. Delivers real-time views of RAN control plane allowing end-to-end visibility across physical and virtual network environments.

### RAN Flow Broker

Ensures load balancing for ISNG RAN and GeoSoft RAN deployments. RAN Flow Broker also manages IMSI and IMEI meta data allowing full subscriber identity analysis for the NETSCOUT® smart RAN ASI data feed and the TrueCall Geoanalytics application.

### Session Analyzers

With data from the RAN, NETSCOUT's session analyzers improve visibility into the access network for troubleshooting, data analysis, and planning activities.

- Network performance, small cell offload management, service introductions, CAPEX spend management.
- First call trouble resolution, outage prevention, and network upgrade management.
- Acquisition and analysis of supporting data for technology advancement and new services.

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