

Assuring SIP Peering for Voice Services

Today, a majority of all voice traffic leaves a carrier's own operating network to terminate on another carrier's network. Optimizing the interconnection between carrier networks can save money and increase customer satisfaction for voice service users.

SIP peering arrangements allow cable operators to significantly reduce their interconnection charges with other carriers, but significant challenges still exist. When peering with other service providers, different vendor codecs and different network characteristics make it a challenge to identify and provide evidence to peering partners when issues arise.

NETSCOUT's nGeniusONE® Service Assurance platform enables the monitoring of SIP peering with comprehensive, real-time visibility into the performance of data and control plane traffic to assure performance, availability and quality, and obtain rich business and operational intelligence. This allows cable

operators to partner with SIP peering providers with greater confidence while delivering on user experience expectations.

Delivering a High-Quality Voice Experience

To guarantee a rich voice service and the highest quality of user experience, cable operators need a service delivery assurance solution that provides early warning of potential problems, actionable reporting and service metrics, and can deliver forensic evidence when peering issues occur. This requires the ability to view the data and control plane traffic, monitor key service enablers, and track application performance.

The nGeniusONE platform allows a cable operator to monitor operations and performance at the network, service enabler, and application level. These service delivery levels are complex, dynamic, and act in unison (Figure 1).

Network

At the network layer, the nGeniusONE platform provides visibility into network performance such as link congestions, network configuration problems, firewall issues and External Border Gateway Protocol (EBGP) timer settings.

Service Enabler

At the service enabler layer, the nGeniusONE platform can detect problems with the Electronic Number Mapping (ENUM) Server and Intelligent Routing Database (IRDB), including provisioning issues by monitoring at the ENUM server.

Application

At the application layer, the nGeniusONE platform monitors signal/voice quality degradation, no audio/one-way audio, Session Border Controller (SBC) capacity issues, SBC database issues and codec

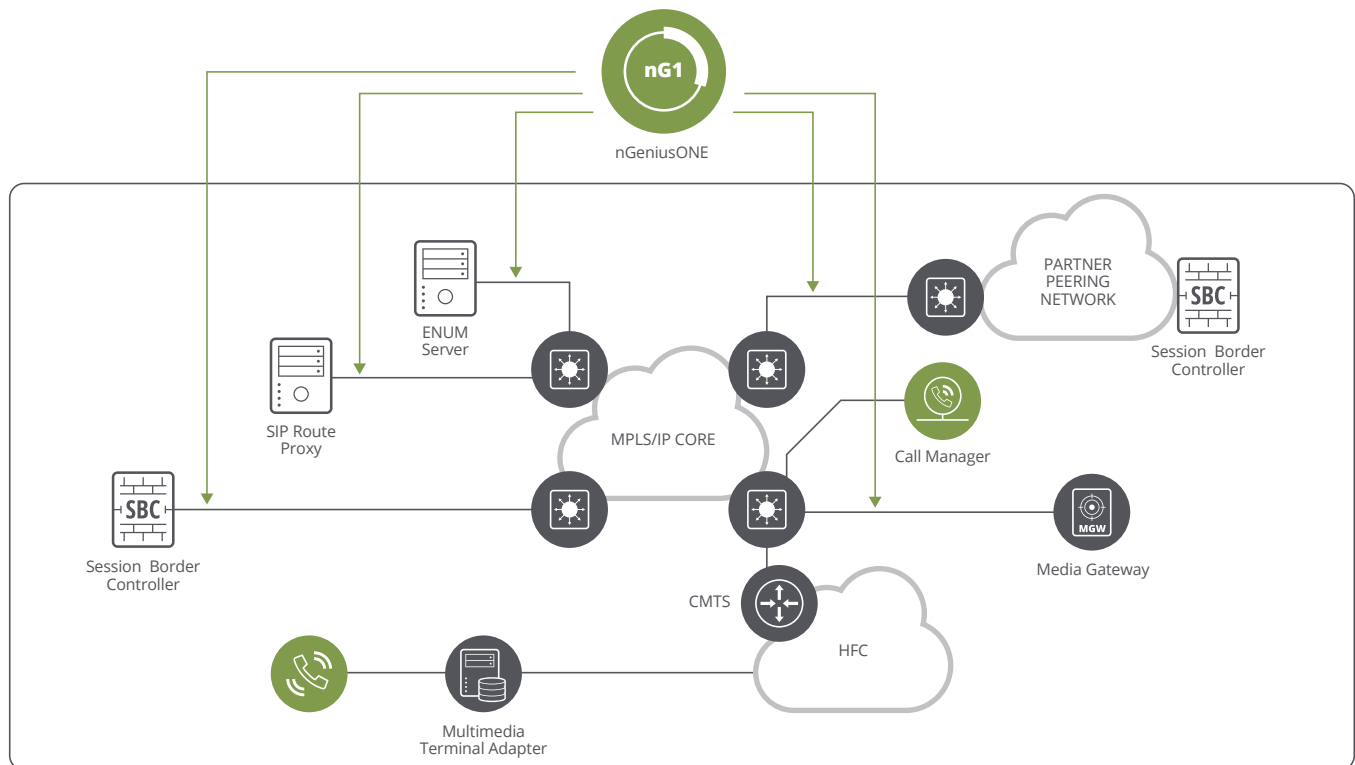


Figure 1: Unified Service Delivery Management framework for monitoring SIP peering.



mismatch errors. The solution is able to deliver at a per-location basis the ratio of the minimum Mean Opinion Score (MOS) to the average MOS score and provide visibility into the quality of the voice traffic received from the peering partner by monitoring at the SBC server.

Monitoring SIP Peering

The nGeniusONE platform allows cable operators to get real-time visibility of what is happening on their voice service and SIP peering infrastructure, real-time network performance information on a per-location basis, generate executive-level usage reports, and validate that peering connections are up and running smoothly.

The solution provides visibility across the entire network. The scalable, proactive, service-oriented approach prevents service-impacting performance issues and manages the dynamic complex nature of IP service delivery with rich protocol analysis and provides valuable forensic data that can be shared with peering partners when problems arise.

With the nGeniusONE platform, cable operators can confidently monitor voice services across multiple regions and manage operations while protecting the user experience, sustaining new subscriber acquisition and reducing churn. This is while assuring that cable operators are able to optimize operation of their SIP peering connections and simplifying operations with seamless visibility across resources.

Unified Service Delivery Management

The NETSCOUT® solution is a highly scalable, unified performance management platform that combines real-time situational awareness, historical analysis, and multi-layered analysis capabilities to enable effective and efficient service delivery management in complex, converged services networks. The solution converges network, service enabler and application performance management to deliver holistic service visibility across application tiers, end-to-end networks, and diverse user devices. Service-oriented workflows enable seamless, contextual transitioning across multiple layers of analysis, facilitating efficient hand off of incident response tasks across the different Network Operations groups.

The solution streamlines service delivery management by providing layers that support data, voice and video services with multidimensional reporting and data analytics.

- Real-time Service Dashboard provides service visualization with Intelligent Early Warning for proactive service delivery management.
- Network and service performance analysis provides correlated views of key performance metrics of the signaling bearer and enabler components from access, core and service networks.
- Session analysis enables session-level subscriber analysis with hop-by-hop transaction analysis.
- Deep-dive packet analysis enables protocol-level analysis and forensic evidence collection.

Leveraging an advanced, highly scalable architecture, the nGeniusONE solution delivers powerful capabilities, including:

- Single performance management platform supporting multi-technology, multi-service networks for data, voice and video services.
- Real-time correlated data plane and control plane monitoring and analysis for voice, video and data traffic.
- Modern, service-oriented workflow support proactive and reactive management activities to quickly identify, triage and resolve performance incidents.

The NETSCOUT Advantage

The nGeniusONE service assurance solution unifies multiple analysis views into a single pane of glass providing an integrated analysis architecture that simplifies and streamline performance management activities. The most demanding cable networks in the world trust NETSCOUT Service Assurance and Analytics Solutions to deliver insight and assure the performance, availability and quality of their network and services.



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