

nGeniusONE Platform for SIP Trunking

nGeniusONE Platform Provides Fast Triage for SIP Trunking

SIP Trunking is a part of most enterprise organization's Unified Communications and Collaboration (UC&C) operations today. There may be a completed deployment, a partial implementation with additional site rollouts on the horizon, or a plan for the first installation in the coming budget cycle. Regardless of the stage the SIP Trunk project is in, IT staff needs performance management visibility to rapidly triage issues in the complex UC&C environments that now have SIP Trunking.

The rollout of SIP Trunk services enterprise-wide is complicated. However, visibility with the nGeniusONE® Service Assurance platform provides a comprehensive performance management application for Unified Communications and Collaboration deployments that includes voice, video, and data services. This allows enterprises to analyze service delivery across internal networks through to the network edge demarcation device for SIP Trunking to

assure the availability and quality of UC&C services efficiently.

IT teams involved in managing Session Border Controllers (SBCs) and SIP Trunks delivered by external Internet Telephony Service Provider (ITSP) vendors can collaborate more effectively to identify the root cause of issues in complex UC&C environments. In a vendor independent manner, the nGeniusONE platform supports multiple SIP Trunk-related vendors like Oracle/ Acme Packet, Huawei, Avaya, AudioCodes, Cisco Cube and Ribbon Networks.

The nGeniusONE platform leverages rich packet-flow data removing the need to rely on server agents, vendor- specific metrics, or a multitude of point tools requiring a specific skillset to operate. Powered by Adaptive Service Intelligence® (ASI) technology for real-time, in-depth, smart data, nGeniusONE delivers a common user interface for smart analytics to seamlessly and contextually go from health status in dashboard views to service dependency maps to session analysis

and service monitors to precisely pinpoint errors and service disruptions. This provides a comprehensive view of call signaling performance across complex multi-tier, multi-vendor, multi-location UC&C environments. The platform also includes advanced UC&C media analytics software, leveraging ASI metrics to provide deeper insights into voice and video media performance. This enables IT teams to triage issues faster with the nGeniusONE platform, ultimately reducing mean time to resolution (MTTR).

SIP Trunk Problems Solved by the nGeniusONE Platform

The nGeniusONE platform examines all service-level interactions to deliver holistic visibility into the performance of application tiers, network, service enablers, and end users to understand the full context of voice and video service anomalies. Therefore, the nGeniusONE platform reduces the time to triage UC&C performance impacting problems by providing visibility into the

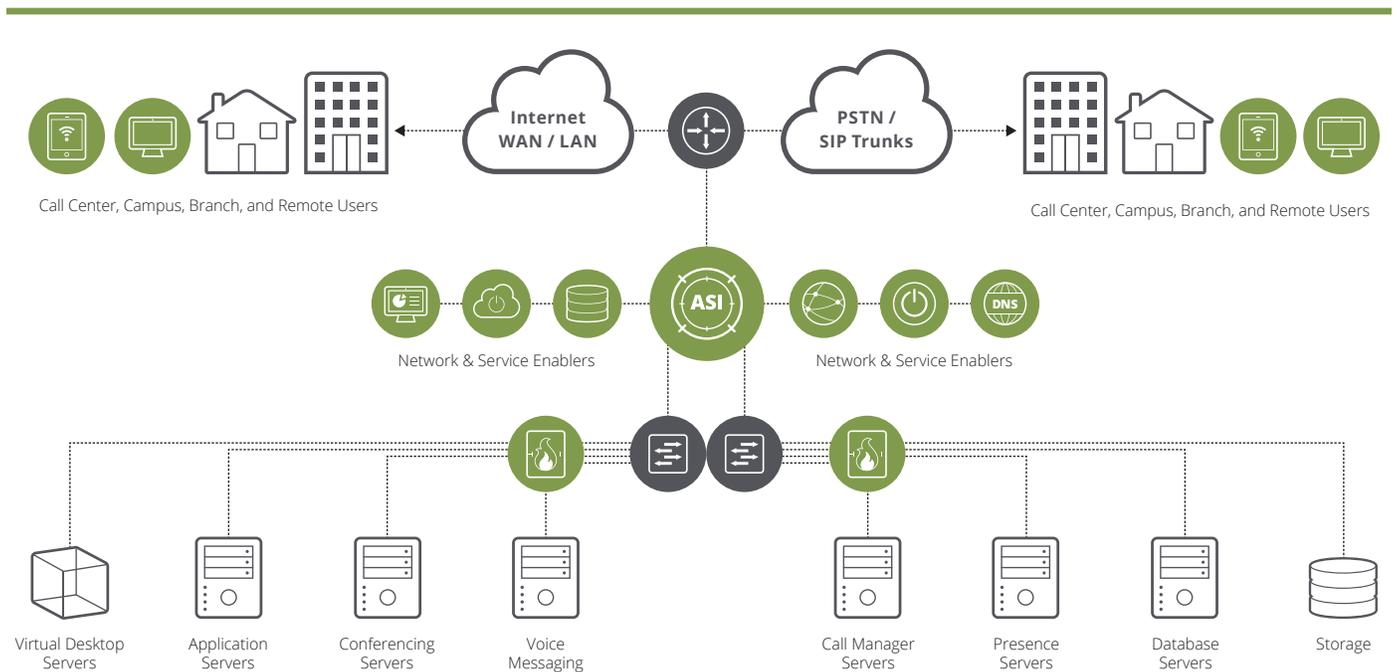


Figure 1: The nGeniusONE platform delivers cross-application tier and cross-network tier performance analytics to support end-to-end unified service delivery management.

relationships and interrelated nature of the overall network infrastructure, application services, signaling, and enabling protocols such as DNS, DHCP, Active Directory/LDAP which are necessary to deliver voice and video services.

The nGeniusONE platform provides visibility into the performance of SIP/SCCP/H323/RTP based call signaling and media protocol issues from an end-user perspective and enables IT teams to precisely diagnose if the root cause is related to the underlying infrastructure such as the network, routers, servers, or is related to misconfiguration of call processing servers, Session Border Controllers, and PSTN gateways. Even if the issue is within the SIP Trunking service provider domain, visibility is provided.

This ability allows the nGeniusONE platform to uncover the root cause of voice and video service delivery problems quickly, which dramatically reduces the time to diagnose service delivery issues from hours to minutes.

The nGeniusONE platform for SIP Trunking provides visibility into some of the following common voice and video call signaling issues:

- Registration with SIP Trunk service provider, call setup, teardown latencies and response times
- Number of failures and error codes including trending
- SBC load balancing problems
- SIP Trunk interoperability issues
- Identify SBC failures
- WAN capacity management issues encompassing network bandwidth and queue management, as well as component capacity management (e.g. routers, firewalls, session border controller elements)

nGeniusONE Platform Supports SIP Trunking

In order to help IT teams address voice, video call signaling, and media quality issues, the nGeniusONE platform relies on the power of ASI. Using the smart data provided by ASI, performance data can be viewed by a range of keys such as location (community of users), QoS level, codec, VLAN, servers, applications, etc. This enables the nGeniusONE platform to offer an efficient approach to problem identification, service triage, and resolution.

Using intuitive workflows, the precise location and the source of voice and video call quality issues can be quickly identified in a matter of few seconds due to the system wide visibility not available with other tools. This ultimately reduces MTTR.

The nGeniusONE platform provides service-oriented workflows to enable seamless, contextual transitioning across multiple layers of analysis. This allows the nGeniusONE platform to facilitate efficient and informed hand-off of incident response tasks across the different IT groups and service provider support groups involved in end-to-end services.

The nGeniusONE platform extends ASI data and provides additional views to provide advanced media analytics and call search capabilities such as network-based views for precisely pinpointing the nature and the source of service degradation; community level views to view top community interactions so IT teams can quickly identify the source of problems and their impact on a community of users; and service desk search to find out call history for an individual user with contextual drilldown into media and signaling details among several others.

The nGeniusONE platform streamlines service delivery management by providing the following key analysis layers:

- **Service Dashboard** provides real-time, at a glance, holistic status visibility of all UC&C voice and video services and their network and application components. The dashboard delivers alarms and intelligent early warnings so the IT organization can focus their triage efforts where needed.
- **Service Dependency** visualizes the current state of the environment by automatic discovery and mapping of client - server relationships.
- **Performance Analysis** enables comprehensive analysis of UC&C transactions such as call setup performance, voice and video quality, and traffic analysis to identify the root cause of UC&C performance issue.
- **Session Analysis** enables session-level analysis, ladder diagrams, with hop-by-hop transaction analysis for UC&C services to help identify interoperability issues with endpoints e.g. call servers and SIP peering points, etc.
- **Packet Analysis** enables deep-dive, protocol-level analysis and forensic evidence collection.

A majority of UC&C service issues can be efficiently triaged within the first two layers. Should deep dive troubleshooting be needed, IT teams can contextually perform session and packet analysis.

nGeniusPULSE

nGenius®PULSE and nPoints provide valuable visibility from the user's or administrator's perspective whether using collaborative communications software for intra-company productivity, contact centers for customer service, or even CCaaS provider environments to assure service availability and performance for all your users. nGeniusPULSE proactive synthetic testing automatically sends consistent, configurable, scheduled tests from the user desktop, even when the users are not active. This provides early warning of emerging communications problems for that user, from wherever they are performing their jobs, with corporate or cloud-based environments. This contributes to troubleshooting by discovering a problem early, to alert IT that a problem exists that can be quickly addressed to avoid broader impact on users inside or outside your company.

Smart Edge Monitoring

When deployed as part of the NETSCOUT® Smart Edge Monitoring solution, nGeniusONE and nGeniusPULSE combine to extend IT's ability to truly visualize real-time, end-user experience for all of your users at the client edge. Smart Edge Monitoring is an entirely new, patent-pending architecture that combines smart data analytics with synthetic transaction testing to deliver visibility and support for end-users experience whether working at home, business offices, or remote locations.

In leveraging the Cloud Adaptor in InfiniStreamNG® or vSTREAM® appliances, ASI technology now combines passive, packet-based monitoring data with nPoint synthetic test monitoring to quickly understand what the end-user experience is and exactly why issues are occurring. As a result, this unique solution drives significant reductions in time-to-resolution for any communication issue in your UC&C infrastructure or applications.

Benefits of the nGeniusONE Platform for SIP Trunking

- **Triage issues quickly** – Decreases MTTR with real-time, end-to-end, and comprehensive service visualization that enables IT teams to quickly triage SIP Trunking issues by pinpointing the source of voice and video call quality problems.
- **Improve IT team collaboration** – Using a common ASI dataset, the platform improves time to knowledge of root cause and resolution by enabling collaboration between network, application, and UC&C teams for addressing SIP Trunking service delivery problems.
- **Single solution supports entire UC&C service** – Allows the enterprise to monitor the performance of multi-vendor UC&C environment along with the SBC or other edge devices, with a single solution.
- **Optimize available bandwidth** – Combined service management for voice, video, and data applications helps enterprises optimize the environment with directed capacity upgrades.
- **Investment protection** – Protects investment already made in NETSCOUT® technology. Single solution provides visibility into the performance of both data center and cloud-based voice, video, and data applications.



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