

# nGeniusONE Solution for Media Quality

## Fast Triage for Call Quality

Degradation in network performance, impacts on voice and video media quality, resulting in problems such as one-way audio, gaps in voice conversation, and frozen video sessions. When such issues arise, IT teams need solutions to quickly find the root cause for these problems. Unlike narrowly focused point tools, the nGeniusONE® Service Assurance platform provides a holistic view of user experience for all converged IP-based services to help protect end-user experience.

nGeniusONE is uniquely capable of monitoring call quality by capturing performance metrics at strategic locations in the network to provide a comprehensive view and deeper insights into the root cause of service quality issues. Using proactive application and network analysis, service quality alerts, and state of the art continuous monitoring, UC&C and IT personal can quickly resolve service quality issues before they become apparent to end users.

The nGeniusONE Service Assurance platform converts wire data into Smart Data, removing the need to rely on server agents or vendor-specific metrics, or a multitude of point tools requiring a specific skillset to operate. Powered by Adaptive Service Intelligence™ (ASI) technology, the highly scalable and patented Deep Packet Inspection engine, the nGeniusONE platform provides a comprehensive view of service performance across complex multi-tier, multi-vendor, multi-location UC&C environments. Leveraging key performance metrics and metadata generated by ASI, nGeniusONE provides deep insights into voice and video media performance. Using the efficient data organization provided by ASI, performance data can be viewed by a range of keys such as location (community of users), servers, users, applications, etc. This enables the nGeniusONE solution to offer an efficient top-down approach to problem identification, service triage, and resolution. Using contextual workflows, the source of service

degradations can be quickly identified due to the system-wide visibility not available with other tools. This ultimately reduces mean time to resolution (MTTR).

## Problems Solved by nGeniusONE with UC&C Capabilities

IT & UC&C organizations need the ability to see the relationships and interrelated nature of overall network infrastructure, applications, services, and enabling protocols necessary to deliver voice and video sessions. However, point tools and agent-based approaches make it difficult to isolate and detect voice and video call quality problems across distributed, multi-vendor platforms operating across multiple locations. In such environments, manually correlating data from disparate sources to find the root cause becomes extremely difficult and may not provide the necessary visibility into the end-to-end behaviour of both networks and applications on the delivered call quality.

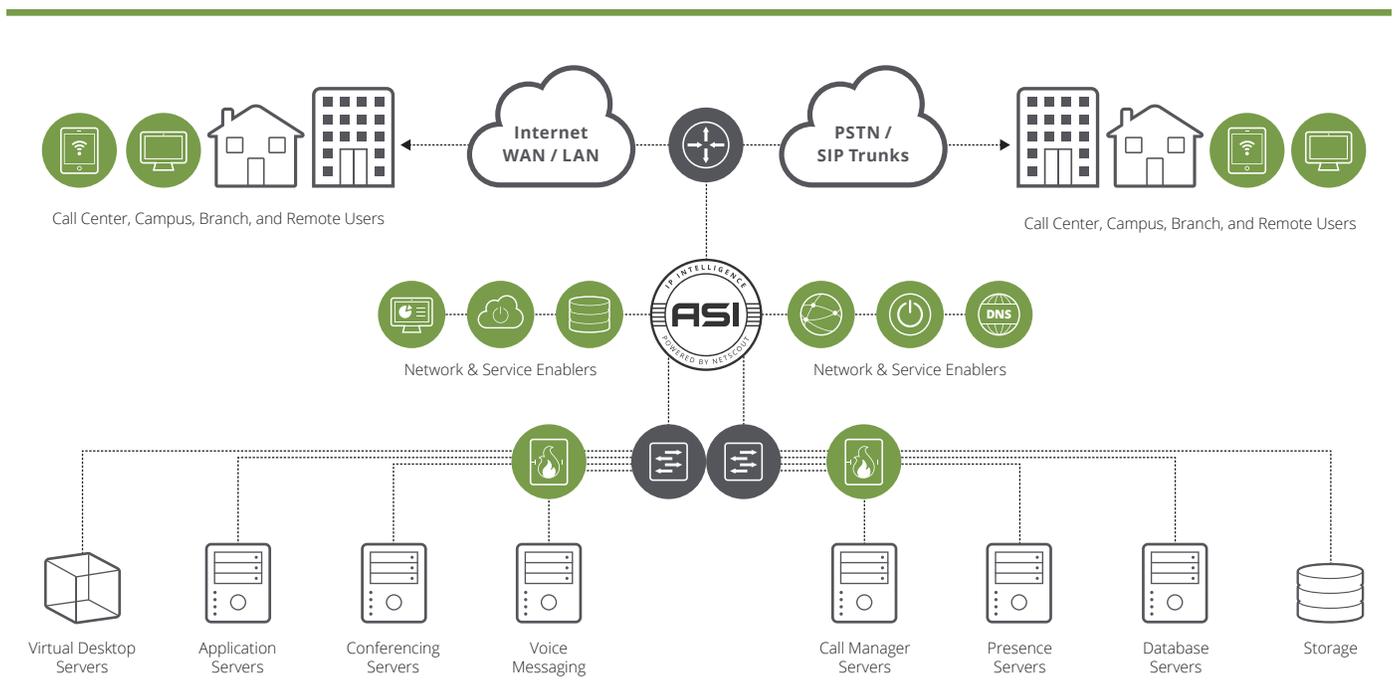


Figure 1: The nGeniusONE platform delivers Smart Data and rich analytics to support end-to-end visibility into the service delivery environment.



nGeniusONE automatically detects voice and video quality impairments and delivers real-time QoE measurements such as IP network-based Mean Opinion Score (MOS), listening and conversational quality MOS for VoIP calls, as well as video MOS for IP-based video conferencing and desktop video sessions. It delivers fine-grained key performance metrics by providing visibility into network packet loss, jitter, DSCP value changes, negotiated CODECs, and impairments to speech introduced within the payload such as echo and speech levels that are often the main reasons for voice and video quality issues.

The visibility into these and other detailed sets of key performance indicators and diagnostic data help isolate the root cause(s) of voice and video media quality problems quickly. To facilitate quick service triage, the nGeniusONE platform provides hop-by-hop network-based views which enable IT teams to precisely locate root causes of voice and video call quality problems whether they are introduced by the underlying infrastructure such as the network, routers, servers, or caused by misconfiguration of call processing servers, Session Border Controllers (SBC's), PSTN gateways, or if the issue is caused by WAN/SIP Trunking service providers.

Through correlated metrics along the call path, nGeniusONE helps IT organizations move from reactive to a more proactive service delivery management approach. Additionally, to address any customer complaint about call quality, nGeniusONE helps first-level support staff to make an informed decision based on facts and quickly escalate the problem to the right team member for fast resolution.

The nGeniusONE platform provides visibility into some of the following common causes for voice and video call quality issues:

- Changes in QoS tags, VLAN, and negotiated CODECs on a per segment basis
- IP network impairments such as packet loss, jitter
- Payload metrics such as echo and speech levels
- MOS values based on IP network impairments as well as based on conversational quality

## nGeniusONE Platform

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

The nGeniusONE platform also provides 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 observe 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.

In order to help IT teams address voice and video media quality issues, the nGeniusONE platform uses NETSCOUT® Intelligent Data Sources such as the InfiniStreamNG™ appliance and nGenius® Unified Communications Collector to extract granular performance metrics and metadata using ASI. These intelligent data sources dynamically extract user experience metrics from active voice and video media streams.

Deployed along the call path, at traffic aggregation points, and at points of demarcation that may include soft-clients, hard phones, multiple vendor network devices and IT telephony equipment, these highly efficient data sources generate highly granular performance metrics and metadata needed to assure the service quality of voice and video services operating across complex, multiple vendor multi-location environments.

nGeniusONE then presents the performance metrics in an easy-to-view network-oriented visualization displaying correlated metrics from along the service delivery chain. Using this unique data presentation model, all service teams supporting the network, voice

and video applications, and the endpoint devices can effectively collaborate to quickly triage and isolate call quality problems, precisely locate the impairment anywhere in the network and rapidly resolve problems before users are disrupted.

Using the nGeniusONE platform, organizations gain full visibility into the performance and service levels achieved by all IP-based applications such as voice, video, and data delivered on a single converged IP network.

## Benefits of the nGeniusONE Solution

- **Triage Issues Quickly** – Decreases MTTR with real-time, end-to-end, and comprehensive service visualization that enables IT teams to quickly triage service issues to pinpoint location and sources of voice and video call quality problems
- **Improve IT Team Collaboration** – Using a common ASI dataset, the platform improves time to knowledge by enabling collaboration between network, application, and UC&C teams for resolving voice and video service quality problems
- **Single Solution Supports Entire UC&C Service** – Allows the enterprise to monitor the performance of multi-vendor UC&C environment with a single solution
- **Increase Reliability** – Provides visibility into true user experience by measuring call quality performance due to impairments observed in the network transmission, media traffic and call signaling
- **Investment Protection** – Protects investment already made in NETSCOUT Intelligent Data Sources. Single solution provides visibility into the performance of voice, video, and data applications

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