NETSCOUT®

nGeniusONE Solution for Microsoft Skype for Business

nGeniusONE Solution Provides Fast Triage for Microsoft Unified Communications and Collaboration

Organizations are implementing Microsoft® Skype for Business (Skype) Unified Communications and Collaboration (UC&C) services (including the former Microsoft Lync® technology) to improve communications, productivity, and collaboration among their employees, partners, and customers. The Skype collaboration platform is designed to connect with anyone, anywhere, on any device. The solution also offers enterprises the benefit of integrating with Microsoft Office products and Microsoft® Exchange environments.

However, once users become dependent on Skype's instant messaging, voice communications, video conferencing and screen-sharing capabilities, IT teams are expected to deliver UC&C services without disruptions and assure a high-quality end-user experience. Managing complex Microsoft Skype collaboration platforms is not easy, and the need is not met by

traditional component management tools. Like any UC&C technology, Skype performance can be adversely impacted by dropped calls, sudden disconnections, and echo & poor video quality.

In leveraging smart data generated by NETSCOUT's patented Adaptive Service Intelligence™ (ASI) technology, the nGeniusONE® Service Assurance platform is uniquely capable of managing Skype environments by correlating Microsoft Quality of Experience (QoE) metrics with real-time call quality data extracted at strategic network locations.

nGeniusONE's smart analytics for UC&C business applications are based on NETSCOUT® smart data that is well-structured, contextual, available in real time, and based on pervasive end-to-end visibility across the entire enterprise. nGeniusONE's smart analytics leverage this smart data to provide a comprehensive view of service performance across complex multi-tier, multi-vendor, multi-location Microsoft UC&C environments. With nGeniusONE, UC&C performance metrics, including those associated with

Skype technology, can be viewed by a range of keys, such as location (community of users), servers, users, applications, etc. This enables the nGeniusONE platform to offer an efficient top-down approach to UC&C problem identification, service triage, and resolution. Using contextual workflows, the precise location and the source of service degradation can be identified with system-wide visibility not available with other tools. This ultimately reduces mean-time-to-resolution (MTTR).

Microsoft Skype UC&C Performance Issues Solved by nGeniusONE Solution

IT teams need granular data for assuring a consistent user experience. Since Microsoft UC&C clients send call quality reports at the end of every call, it can be difficult to isolate and detect patterns of intermittent problems as they occur. IT teams need granular data to see the relationships and interrelated nature of the overall network infrastructure, application services, signaling, and enabling protocols necessary to deliver real-time services like Skype.
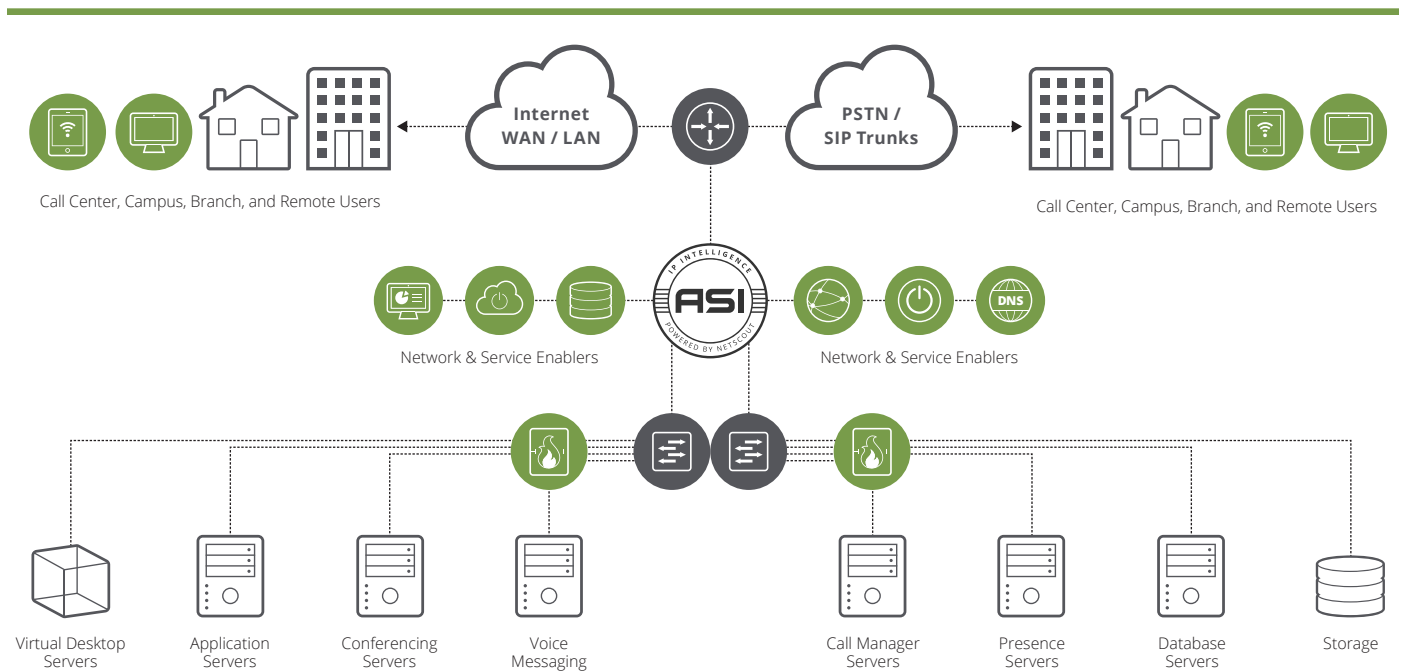

Figure 1: The nGeniusONE platform correlates Microsoft QoE Monitoring Server metrics with real-time granular per-user, per-session assessments from midpoint locations.

UC&C and network managers typically must deal with managing distributed, multi-vendor platforms operating across multiple locations, spanning several geographical areas. In such environments, manually correlating data from disparate sources to find the root cause of problems becomes extremely difficult and may not provide the necessary visibility into the end-to-end behavior of both network and application on the delivered call quality.

In addition, Skype depends on data applications (e.g., Microsoft SharePoint®, Microsoft Exchange, Active Directory®, DNS, DHCP, etc.) for delivering UC&C services. Consequently, IT organizations must gain unified visibility into how voice, video, and data applications impact each other to effectively manage UC&C service performance.

The nGeniusONE platform supports common call signaling problems related to registration, call setup, teardown latencies, response times, errors, and failures. It also helps identify other network-related issues, such as improper load balancing and SIP trunk interoperability. As a result, the nGeniusONE platform provides visibility into factors contributing to call quality degradation, such as:

- Quality of Service (QoS) tags, virtual local-area network, negotiated codecs on a per-segment basis

- Mean Opinion Score (MOS) values based on IP network impairments, as well as conversational quality

- Precise location and source of service degradation (e.g., one-way audio, echo, noise level) using advanced visualizations (e.g., network-based views, bi-directional streams, community-based views, and listing of all conversations for a single user)

nGeniusONE Platform for UC&C Visibility and Monitoring

The nGeniusONE platform delivers granular UC&C application-specific metrics for voice and video session transmission and conversational quality necessary for IT to characterize voice and video service performance and true user experience.

The nGeniusONE platform uses NETSCOUT smart visibility solutions (e.g., InfiniStreamNG™ platform, nGenius Lync Data Collector, vSCOUT™ & vSTREAM™ solutions for Hybrid Cloud environments) to provide IT with end-to-end visibility into the behavior and the quality of Skype services. These intelligent data sources dynamically measure and extract granular call and session quality, as well as user experience metrics, in real-time from active voice and video media streams. NETSCOUT smart visibility solutions are deployed at key locations (e.g., along the call path, at traffic aggregation points, and at points of demarcation that may include soft-client, hard phones, multiple vendor network devices and IP Telephony equipment) to provide critical information necessary to assure the service quality of voice and video services operating across complex, multi-vendor, multi-location environments.

The nGeniusONE platform correlates midpoint measurements with the data collected from Microsoft QoE Monitoring Server, VoIP call controllers, and Session Border Controllers (SBCs) to provide a unique view into the service behavior affecting users. Additionally, the platform can extract Skype diagnostic data through the integration with Microsoft's software-defined networking (SDN) API. As a result of this deeper integration, the nGeniusONE platform presents performance metrics on an end-to-end basis, using an intuitive, network-oriented view that displays performance and call quality metrics for all UC&C service components deployed along the call path. Using this data presentation model, all IT teams supporting the network, voice and video applications, and endpoint devices can effectively collaborate to quickly triage and isolate UC&C performance problems, precisely locate the impairment anywhere in the network, and rapidly resolve problems before users are disrupted.

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

In addition, providing UC&C visibility extends the overall investment value of the nGeniusONE platform from NETSCOUT. The nGeniusONE platform provides a unified view of interdependency of Skype/Lync servers with data applications and brings the performance management of all network-based services (i.e., voice, video, and data) under a single point of visibility.

Benefits of the nGeniusONE Solution

- **Triage Issues Quickly** – Decreases MTTR for Skype/Lync services with real-time, end-to-end, and comprehensive service visualization that enables IT teams to quickly triage service issues by pinpointing the source of voice and video call quality problems.

- **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.

- **Improve IT Team Collaboration** – Using ASI-generated smart data, the platform improves mean-time-to-knowledge by enabling collaboration between network, application, and UC&C teams for resolving voice and video service delivery problems.

- **Single Solution Supports Entire UC&C Service** – Enables proactive management of Skype/Lync service quality alongside other IP Telephony services.

- **Investment Protection** – Leverages the same nGeniusONE platform for simultaneous performance management of all Microsoft applications, including Skype, Exchange, SharePoint, and Active Directory, providing unmatched investment protection and shared data.

LEARN MORE

For more information about NETSCOUT Unified Communications Visibility & Monitoring solutions, visit:

https:// www.netscout.com/solutions/ unifiedcommunications-monitoring

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