nGeniusONE Solution for Cisco Unified Communications

nGeniusONE Solution Provides Fast Triage for Cisco UC/Jabber

Cisco Unified Communications (UC) is the IP Telephony of choice in many enterprise environments and for collaboration services, Cisco Jabber® is often adopted. Users become dependent on Jabber for voice, video, presence, instant messaging, and contact availability and quickly become intolerant of any disruptions. To reduce time to resolve problems before, during and after Cisco Jabber rollouts and upgrades, UC and IT staff needs a performance management solution that can quickly get to the source of the issue.

Implementing Cisco UC and Jabber deployments in complex UC environments is a challenge and is not met by simple point tools. nGenius® UC Server is uniquely capable of relating CDR data from Cisco UC with real-time call quality performance monitoring at strategic locations in the network. This information provides a comprehensive view and deeper insights into the root cause of service quality issues. Coupled with proactive application and network analysis, service quality alerts, and the state of the art continuous monitoring, IT and UC personnel can quickly resolve service quality issues before they become apparent to users.

nGenius UC Server is powered by Adaptive Service Intelligence™ (ASI) technology, the patented Deep Packet Inspection engine which generates highly scalable metadata that enables a comprehensive view of UC service performance across complex multi-tier, multi-vendor, multi-location Jabber environments. Using the efficient data organization provided by ASI, performance metrics can be viewed by a range of keys such as location (community of users), servers, users, applications, etc. This enables nGenius UC server to offer efficient top-down approach to problem identification, service triage, and resolution. Using contextual workflows, the precise location and the source of service degradation can be with system-wide visibility not available with other tools. This ultimately reduces mean time to resolution (MTTR).

nGenius UC Server leverages the same InfiniStream® appliances used by the nGeniusONE™ Service Assurance platform. Organizations can extend their existing investments to gain full visibility into the performance and service levels of all IP-based applications such as voice, video, and data delivered on a single converged IP network.

Figure 1: nGenius UC Server correlates Cisco CDR data with real-time granular per-user, per-session assessments from midpoint locations.
Cisco UC Environment Issues Solved By nGeniusONE Solution

IT and UC organizations need granular data for assuring a consistent user experience. Since the Jabber 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. Operations 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 voice, video, persistent chat, WebEx, etc.

As organizations deploy Cisco UC in large campus environments, network managers generally have to deal with managing distributed, multi-vendor platforms operating across numerous 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.

Finally, Cisco UC services depend on other servers such as Cisco Unity®, Microsoft® Exchange, Active Directory®, DNS, DHCP, TFTP, etc., for delivering UC services. Consequently, IT organizations must gain unified visibility into how voice, video, and data applications impact each other to effectively manage UC service performance.

Not only does the nGeniusONE platform support common call signaling issues that may impact Cisco UC and Jabber services like registration, call setup, teardown latencies, response times, errors and failures, it also triages other network-related issues like load balancing and SIP trunk interoperability issues. The nGeniusONE platform featuring UC Server adds to these capabilities enabling IT teams to precisely locate the source of voice and video call quality issues. The nGenius UC server provides visibility into some of the common media related issues including:

- QoS tags, VLAN, negotiated CODECs on a per segment basis
- Mean Opinion Score (MOS) values based on IP network impairments as well as based on conversational quality

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

nGeniusONE Platform Featuring UC Server

nGenius UC Server delivers granular UC application-specific metrics for voice and video session transmission, and the conversational quality to characterize voice and video service performance and the true user experience.

nGenius UC Server uses NetScout Intelligent Data Sources such as the InfiniStream appliance and nGenius Voice | Video Data Collector to provide IT with end-to-end visibility into the behavior and the quality of voice/video services. These intelligent data sources dynamically measure in real-time and extract granular call and session quality as well as 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-client, hard phones, multiple vendor network devices and IP Telephony equipment, these highly efficient data sources provide critical information necessary to assure the service quality of voice and video services operating across complex, multiple vendor, multi-location environments.

Within the Cisco UC environment, nGenius UC Server correlates mid-point measurements with the data collected from Call Data Records, VoIP call controllers, and Session Border Controllers (SBCs) to provide a unique view into the service behavior affecting users. nGenius UC Server 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 locate voice/video related 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, the IT organization can move from a reactive to a more proactive service delivery management approach.

To address any specific customer complaints about call quality, nGenius UC Server helps the 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.

Additionally, nGenius UC Server and NetScout Intelligent Data Sources extend the overall investment value of the nGeniusONE platform from NetScout. The nGeniusONE platform provides a unified view of interdependency of Cisco Call Manager servers with data applications and brings the performance management of all network-based services such as voice, video, and data under a single point of visibility.

Benefits to the nGeniusONE Solution

- **Triage Issues Quickly** – Decreases MTTR for Cisco UC and Jabber 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 a common ASI dataset, the platform improves time to knowledge by enabling collaboration between network, application, and UC teams for resolving jabber service delivery problems
- **Single Solution Supports Entire UC Service** – Enables proactive management of Cisco Jabber service quality alongside other IP Telephony services
- **Investment Protection** – Leverages same nGeniusONE platform for simultaneous performance management of all Cisco infrastructure and applications, providing unmatched investment protection and shared data