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Assuring Omnichannel Services in Retail Contact Centers

Introduction

In many retail organizations, the contact center is an essential part of the business, sometimes even the primary live interaction with the customer. As omnichannel is on the rise, the contact center is becoming a central touch point for managing the customer experience, whether via voice, video, e-mail, online chat, or social media.

Although voice communications are essential to managing the customer experience, modern contact centers depend on a variety of different applications to operate effectively including customer relationship management, different chat programs, payment processing applications, and on the back-end database, middleware, critical service enablers, to name a few. A solution is needed to provide a unified view into the inter-relationships and interdependencies of all of these different applications and services, with deep insights to identify specific points of failure.

nGeniusONE platform provides real-time visibility into the performance of voice, video, and application services by analyzing packet data across the network, on premises or in the cloud. Powered by Adaptive Service Intelligence™ (ASI) technology, the highly scalable and patented deep-packet inspection engine, the nGeniusONE platform provides IT organizations with a comprehensive view of retail contact center service performance across the service delivery environment. nGeniusONE leverages high-value packet data to generate "smart data" for smarter analytics to assure performance, manage risk, and facilitate superior decision-making regarding application and network services. With these smarter analytics, IT teams can quickly triage performance issues even in complex multivendor environments, ultimately reducing Mean Time to Repair (MTTR).

Contact Center Performance Issues Solved by nGeniusONE

The nGeniusONE platform delivers visibility into the performance of an omnichannel contact center service delivery environment including agent desktops/phones, UC Servers, load balancers, service enablers (e.g., DHCP, LDAP/AD, and DNS), backend database servers, middleware, application and web tiers, the network, WAN, and the end users. As a result, integrated views are available that shows the interrelationships between different elements used in the service delivery. nGeniusONE helps retail NetOps teams to understand the full context for voice and video service anomalies from an end user perspective, as well as any issues related to performance degradations in other applications or services.

By measuring the performance from an end user perspective, retail NetOps teams can accurately diagnose if the root cause of an issue OR of a quality problem is within the underlying infrastructure such as the network, routers, applications or UC servers, or if the issue is originating elsewhere, as in the SIP trunking service provider domain. nGeniusONE provides additional views to expose advanced media analytics such as call quality details; network-based views for precisely pinpointing the nature and the source of service degradations; community level views to view top community interactions so IT teams can quickly identify the source of problems and their impact on users; and service desk search to query on call history with contextual drilldown capabilities to get more insights into media and signaling, among many others.

The nGeniusONE platform supports UC&C technologies that use SIP/SCCP/H.323 and RTP protocols. The solution enables retail IT teams to efficiently identify, triage, and resolve many UC service delivery management problems such as:

- Delays in registering agent phones, call setup, and termination
- Call signaling failures or taking too long to process signaling messages
- Interoperability issues between SBC and SIP Trunking service provider
- Load balancing issues across different UC servers and SBCs
- LAN/WAN capacity management issues causing too many packet drops and transmission latencies
- QoS mismatch problems between different network elements
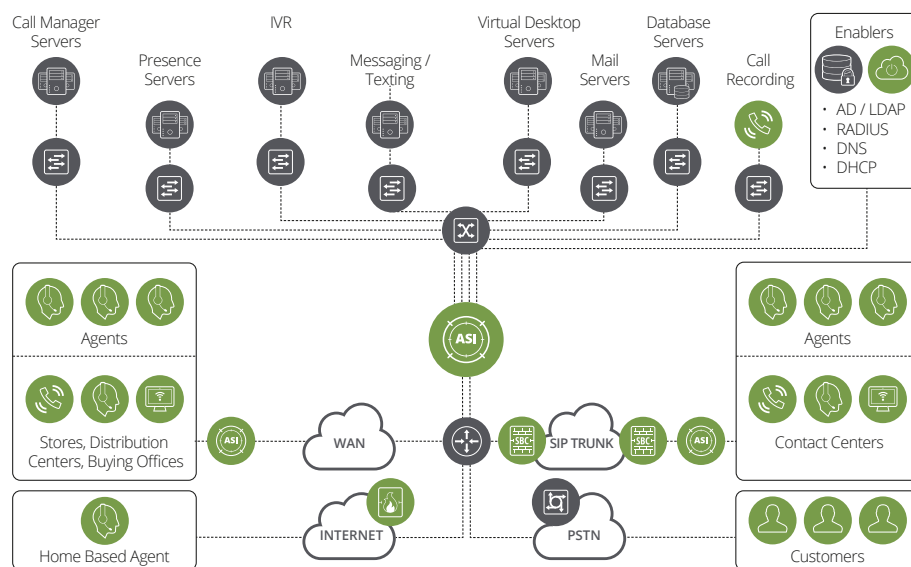

Figure 1: The nGeniusONE platform delivers high level visibility for managing voice, video, and application performance in complex, multivendor retail contact center environments.

In addition to UC signaling and media metrics, the nGeniusONE platform also provides insights into other data applications and services running in a retail contact center environment, from customer relationship software or enterprise resource planning applications to backend database or supporting critical service enablers. This allows NetOps to assure delivery of all essential contact center services from a single pane of glass.

nGeniusONE Support for Contact Center Services in a Retail Environment

In order to help retail NetOps address voice, video, application performance, call signaling, and media quality issues, the nGeniusONE platform relies on the power of ASI. The data is efficiently organized so that it 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 a top-down workflow-based approach to problem identification, troubleshooting, and resolution.

Through the use of intuitive workflows, retail IT teams can seamlessly transition across multiple layers of analysis. This enables the service delivery teams to efficiently hand-off incident response tasks across different internal IT groups as well as with external service provider support groups that are involved in troubleshooting UC&C or application performance issues. As a result, service delivery teams supporting the network, UC&C, endpoint devices, and SIP trunking service providers can effectively collaborate to quickly triage and isolate call quality problems and other performance degradations interfering with contact center operations.

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

- **Service Dashboard** – Delivers real-time health status, metrics, alarms and intelligent early warning of application performance problems. Retail IT teams can use the dashboard to quickly spot performance issues related to contact center services including network and server components, session border controllers, call managers, service enablers, backend databases, and load balancers in a single view.
- **Service Dependency Map** – Visualizes the current state of the environment by automatically discovering and mapping client - server relationships. This graphical representation of interactions provides visibility into all tiers and the components that are accessed when delivering a retail service to end-users.
- **Service Monitors (Call Server Monitor, Media Monitor, DNS Monitor, and more)** – Enable retail IT teams to quickly triage, visualize and isolate the sources contributing to service performance degradation across different tiers such as Call processing/UC servers, DNS servers, front and backend servers, and load balancers. Using the analysis from these service monitors, IT teams get a consolidated view of application request workloads, traffic latencies, SIP/SCCP/H.323 signaling errors, and media performance providing end-to-end visibility into the performance of application, voice, and video service components across all tiers.
- **Session Analysis** – Helps retail IT teams analyze transaction latencies, network-related information such as average response time and QoS tagging, as well as detailed session and flow information.
- **Packet Analysis** – Enables retail IT teams to perform deep-dive protocol level analysis and forensic evidence collection. Packet analysis provides UC&C and other application specific details and any proxy servers through which the voice, video, and application requests have passed including the load balancing server.

Most performance issues can be efficiently triaged by using the dashboard, service dependency map, and the service monitors alone. However, should deep dive troubleshooting be needed, retail IT teams can contextually drill down to the session and packet analysis layers.

Benefits of the nGeniusONE Solution for Contact Centers in Retail Organizations

- **Quickly and Efficiently Troubleshoot Service Performance Issues in Contact Centers** – Reduce MTTR by enabling retail IT teams to view service performance end-to-end across multi-tier, multi-vendor, multi-location environments and maintain connectivity for contact center agents, whether on site or remotely located.
- **Increase Call Quality and Reliability** – nGeniusONE provides visibility into customer experience by measuring call quality performance due to impairments observed in network transmission, media traffic, and call signaling. This helps IT improve communication reliability between contact center agents and the customer.
- **Monitor Voice and Video Performance within a Single Solution** – Combined visibility of data, voice, and video helps retail organizations optimize the performance of voice and video over a converged IP network protecting their ability to reach customers and drive business.
- **Improve IT Team Collaboration** – Enable collaboration between network, application, and UC&C teams by providing a common ASI dataset and workflows across all tiers of the UC&C service. Improved communications reduces MTTR and increases uptime of critical retail contact center services such as voice, video, CRM software, and others, better enabling agents to respond to customer requests.

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