nGeniusONE Service Assurance Platform

The nGeniusONE® Service Assurance platform streamlines service delivery assurance and management activities by providing a converged solution for network and application performance management, delivering holistic visibility across complex, distributed environments. The visibility delivered by the nGeniusONE platform spans virtually any application or application tier, thereby enabling effective, end-to-end performance and availability management for diverse business services including Unified Communications and Collaboration (UC&C).

Using one cohesive, consistent set of analytics and views, based on one common database of metadata, the nGeniusONE platform improves communication and collaboration across the different functional IT groups. The platform also accelerates the evolution of IT organizations to more proactive service delivery management models where service issues and degradation can be detected before large numbers of users are impacted, boosting service availability and avoiding loss in revenue, customer satisfaction or worker productivity.

The multi-layered visibility provided by the nGeniusONE platform enables a top-down approach to problem identification, triage and resolution. This efficient approach dramatically reduces mean time to resolution (MTTR) and conserves IT time and resources by enabling the right expert to investigate the right service component at the right stage in the resolution chain.

The nGeniusONE platform is powered by Adaptive Service Intelligence™ (ASI) technology, NETSCOUT’s patented, next generation Deep Packet Inspection engine which generates highly scalable metadata that enable a comprehensive view of service, network, application, and server performance across complex multi-tier, multi-domain service delivery environments. NETSCOUT’s ASI technology dramatically increases the scale, depth, and speed of the analysis in the nGeniusONE platform by performing real-time granular data mining in the InfiniStream® appliance, as traffic crosses the wire, eliminating the need for middleware and extensive back-end processing, and reducing management traffic loads.

Unlike component-focused tools, the nGeniusONE platform delivers valuable macro-level insights into the performance of enterprise-wide services, application components, as well as user communities and server groups. This expands the IT architect’s understanding of service consumption patterns, application component utilization, and overall user experience to better support resource optimization and capacity planning.

Further, by virtue of being one integrated platform, nGeniusONE provides simplicity in acquisition, deployment, and training of IT staff, thereby reducing time to productivity.

Challenges Addressed by the nGeniusONE Platform

Today’s IT operations largely rely on multiple functional teams using silo-specific tools each focused on assuring the performance of a specific application, application tier, or network component. The delivery of an exceptional user experience is dependent on the ability of all IT operational teams to manage the performance of their specific service components and to effectively collaborate across team boundaries to optimize overall service performance and troubleshoot issues. However, this compartmentalized model of service delivery complicates the management of service performance and availability, as well as capacity planning across the different application and network tiers.

While usage of specific-point tools provides the individual IT teams deep visibility into their respective components or silos, it lacks service delivery context, and often leads to the use of conflicting performance metrics. Separate tools inhibit the ability to correlate events across system components, and impede the detection of emerging service issues. Additionally, this leads to inefficient workflows with time consuming hand-offs where one team attempts to translate and verify the views of the other team.

In response to a service issue, IT organizations largely rely on an inefficient, iterative process of component health verification and exclusion until the root cause is reached. The lack of unified visibility impedes the adoption of a structured, top-down approach to problem resolution which causes the loss of valuable man-hours investigating many potential causes before locating the ultimate source of the problem. This inefficient process also results in an MTTR that increases with service complexity which poses a risk to the availability of more complex services.

Finally, today’s approaches to managing service availability are largely reactive, causing the mobilization of IT staff only after a problem.

Figure 1: The nGeniusONE platform delivers cross-application tier and cross-network tier performance analytics to support end-to-end service delivery assurance and reduce MTTR.
is reported by the user. The reliance on such triggers may lead to action only after the problem severity has drastically increased, and after valuable time has elapsed. To meet the increasing requirements for high availability, IT organizations need to adopt proactive and predictive approaches to service delivery management in order to reduce MTTR and prevent avoidable service disruptions.

**nGeniusONE Platform for Service Delivery Assurance**

The nGeniusONE platform is a highly scalable, unified performance management system that combines real-time situational awareness, historical analysis, and multi-layered analysis capabilities to enable effective and efficient service delivery management in complex IT environments. The nGeniusONE platform converges network and application performance management to deliver holistic service visibility across application tiers, end-to-end networks, and diverse user devices. When Unified Communications and Collaboration is involved, the nGeniusONE platform analyzes specific metrics for multi-media quality assessment and call signaling performance. The service-oriented workflows of the nGeniusONE platform enable seamless, contextual transitioning across multiple layers of analysis facilitating efficient hand-off of incident response tasks across the different IT groups.

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 business services and their network and application components. The dashboard also delivers alarms and analytics-based, intelligent early warnings to enable the IT organization to proactively and predictively protect service availability and performance.

- **Service Dependency** visualizes the current state of the environment by automatic discovery and mapping of client-server relationships.

- **Performance Analysis** enables comprehensive, multi-dimensional analysis of application and network performance in context with the performance of all dependencies. This analysis layer includes pre-defined Service Monitors for common enterprise services including UC&C, a customizable Service Monitor to support user-defined service environments, and a Traffic Monitor for network performance management.

- **Session Analysis** enables session-level analysis with hop-by-hop transaction analysis.

- **Packet Analysis** enables deep-dive, protocol-level analysis and forensic evidence collection.

- **Situation Analysis** proactively detects anomalous events then analyzes related data to determine the actual situation and root cause, allowing IT to proactively address it.

Leveraging an advanced, highly scalable architecture, nGeniusONE platform delivers powerful capabilities including:

- High scalability with distributed processing and storage across all InfiniStream appliances.

- Highly granular application, UC&C service, and network performance metrics via NETSCOUT’s ASI technology.

- Enhanced macro visibility with views based on user communities and server groups.

- Any view/any metric historical reporting generated automatically on a schedule or on-demand.

- Standard browser-based access with a rich HTML5 interface.

**Benefits to Using nGeniusONE Platform**

- **Converges network and application performance management** to support a unified service delivery assurance and management strategy.

- **Delivers both macro- and micro-level insights** into service performance enterprise-wide.

- **Enhances situational awareness** with real-time monitoring dashboard and intelligent early warning against anomalous events.

- **Improves operational efficiency** via simplified workflows with contextually linked analysis layers.

- **Reduces MTTR** with intelligent, session-oriented analysis and high-performance packet-level analysis.

- **Enables network-wide capacity planning** and service availability management with flexible customizable reporting.

- **Provides full monitoring, troubleshooting and reporting** for UC&C services for both multimedia quality assessment and call signaling performance.