

nGeniusONE Service Assurance Platform

The nGeniusONE® Service Assurance platform provides real-time visibility into the performance of business critical applications such as web-based applications, voice and video communications, database, financial, or other services by analyzing all traffic flows across the network, on premises or in the cloud. nGeniusONE with NETSCOUT's patented Adaptive Service Intelligence™ (ASI) technology leverages the high-value wire traffic to generate "smart data" for smarter analytics to assure performance, manage risk, and facilitate superior decision making regarding application and network services.

Powered by ASI technology, the highly scalable and patented deep packet inspection engine, the nGeniusONE platform enables IT teams to identify the root cause for performance issues impacting the prompt delivery of application services occurring across the service delivery environment. With this end-to-end view, IT teams can quickly triage performance issues even in complex multi-vendor environments, ultimately reducing Mean Time to Repair (MTTR).

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 InfiniStreamNG™ hardware, software, and virtual appliances, as traffic crosses the wire.

The nGeniusONE platform delivers valuable macro-level insights into the performance of enterprise-wide services, application components, 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.

Performance Issues Solved by the nGeniusONE Platform

The nGeniusONE platform delivers visibility into the performance of an integrated service delivery environment, including desktop virtualization, application servers, load balancers, routers, service enablers (e.g., DHCP, LDAP/Active Directory, and DNS), backend database servers, the application and Web tiers, the network, WAN, and the end users, whether on premises, in virtualized or hybrid environments, or in the cloud. nGeniusONE's integrated view

shows the interrelationships between different elements used in service delivery, revealing the full context of service anomalies contributing to slow application response times and poor user experiences, including:

- Server Load Issues IT teams get visibility into the load to and from each different application and database server that may be contributing to the workload for each server.
- Session Latencies Tracking and trending application performance (utilization, top users) and session response times (between clients and servers) are keys in determining where in the path a slowdown may be emerging.
- Connection Issues Triage connection issues with quick and easy-to-interpret performance indicators and error analysis to reveal common issues, like load balancer encryption misconfigurations and/or DHCP and Active Directory privilege issues.
- User Impact IT teams need visibility into which community of users or particular location is affected by a performance degradation and how their service is impaired.

nGeniusONE Platform Offers Seamless Top-Down Workflows

The nGeniusONE platform relies on the power of ASI and smart data to help IT teams quickly troubleshoot application performance impacting issues. Through continuous monitoring of all application traffic, ASI data enables the nGeniusONE platform to provide a holistic view into the performance of components that could potentially degrade an application's performance. This highly structured data enables nGeniusONE to provide enterprise organizations with operational insights and visibility into the status of critical application performance issues commonly found in service delivery environments including: network and application server latencies; generated application errors; data transmission and traffic distribution bottlenecks; and the branch office, campus core, or data center locations experiencing service degradation.

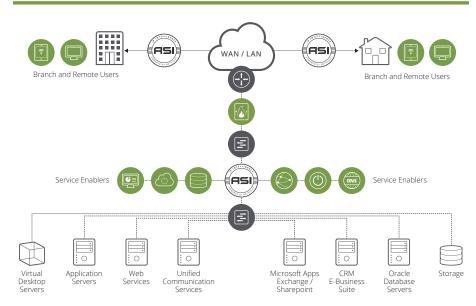


Figure 1: nGeniusONE provides end-to-end visibility into the critical systems required to support a successful service delivery environment.

The nGeniusONE platform provides IT teams with an efficient top-down approach to situational analysis, problem identification, service troubleshooting, and resolution. Using a consistent set of service-oriented workflows, the nGeniusONE platform enables seamless, contextual transitioning across multiple layers of analysis. These workflows allow the nGeniusONE platform to facilitate efficient and informed hand-off of incident response tasks across different IT groups which fosters IT team collaboration, improving the ability of IT teams to quickly identify service quality issues.

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

- Service Dashboard The dashboard delivers real-time health status, metrics, alarms, and intelligent early warning of application performance problems. IT teams can use the dashboard to quickly spot performance issues related to a composite service such as financial transaction processing, Citrix, or business services such as e-mail, including the web components, key middleware and service enablers, backend databases, and load balancers in a single view.
- Service Dependency Map The service dependency map provides visibility into all the dependencies among various components. This feature enables IT teams to analyze the service delivery environment and discover the client-server relationships and their performance.
- Specialized Service Monitors –
 Specialized service monitors of critical importance to IT organizations include the Web Services monitor, DNS monitor, Voice Call Quality monitor, Database monitor, MQ monitor, and others. Each of these break out performance metrics by specific message types, to enable IT teams to dig deeper into the application and really identify the scope and root cause of performance degradations.

- Universal Monitor Enables IT teams
 to quickly triage and isolate the sources
 contributing to application performance
 degradation. Using this service monitor,
 IT teams get a consolidated view of
 application request workloads, number
 of new and existing sessions for each
 server, application and network latencies,
 and network errors, providing holistic
 visibility into the performance of all servers
 supporting the service. This universal
 monitor can be used to investigate any
 application, whether off the shelf or custom.
- Session Analysis enables session-level analysis with hop-by-hop transaction details instead of a second 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.

Most performance issues can be efficiently triaged by using the Dashboard, Service Dependency Maps, and/or any Specialized or Universal Monitor screens alone. However, should deep dive troubleshooting be needed, IT teams can contextually drill down to the Session and the Packet Analysis layers.

Benefits of nGeniusONE Solution

- Provides proactive monitoring to assure high-quality application performance:
 Delivers end-to-end visibility into, and service assurance of, wide-ranging custom and commercial applications environments, pin-pointing root cause of application slow-downs.
- Accelerates custom application deployment and problem resolution: nGeniusONE Service Monitors expose unique characteristics of critical applications, providing the ability to triage problems and assess application performance as part of a common workflow.

- Improves contact center efficiency and end-user experience, supporting business retention: Provides end-toend visibility into multi-vendor UC&C technology performance to optimize all "live" customer and user exchanges, with nGeniusONE's advanced media analytics leveraging ASI metadata to provide realtime assessment of voice, video, and signaling performance quality.
- Ensure quality of services throughout digital transformation migrations:
 Enterprise customers today employ nGeniusONE to test and monitor new projects over wired, wireless, cloud, and virtualized migrations providing "before, during, and after" deployment service monitoring to assure quality user experience.
- Enterprise-wide network service assurance and capacity planning to support complex, worldwide business demands: The highly scalable nGeniusONE architecture today supports enterprise deployments encompassing global networks, multiple data centers, and thousands of end users. nGeniusONE leverages NETSCOUT's physical, virtual, and COTS data sources to acquire endto-end visibility in any mixed-network environment.
- Improves IT collaboration and efficiency: For resource-constrained IT teams, nGeniusONE's intuitive workflows offer lower technology costs by reducing labor-hours associated with decreases in both War Room and MTTR activities, also supporting tool consolidation opportunities for network, application, UC&C, server, database, and incident response teams.



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