

nGeniusONE Platform for Retail Banking

Digital Transformation Driving Retail Banking IT

With many competitors only a click away, to be successful banks must provide the best customer experience possible. In this always connected world, customers expect to access banking products and services seamlessly across multiple channels, from mobile apps to online banking, even into the branch. At the same time, the bank's IT team must do more with less, streamlining processes and providing high performance services to external and internal users while reducing costs.

These high performance services support all financial transactions from mobile to teller services in the branch to on-line banking. Banks are naturally concerned about the cost and loss of productivity from outages affecting these services. However, they also know customer loyalty is fleeting and competitors are just a click away, which has made it critical to proactively address issues before service degradations occur.

The nGeniusONE® Service Assurance platform provides real-time visibility into the performance of retail banking services by analyzing all traffic flows over the network, on premises or in the cloud. nGeniusONE leverages rich wire data by extracting key performance metrics, rather than relying on a multitude of incomplete point tools requiring a specific skillset to operate. Powered by Adaptive Service Intelligence™ (ASI) technology, for highly scalable and patented smart data, the nGeniusONE platform enables IT teams to identify the root cause for performance issues impacting the prompt delivery of application services occurring in the service delivery environment. With this end-to-end view, IT teams can quickly triage performance issues even in complex multi-vendor networks, ultimately reducing Mean-Time-to-Repair (MTTR).

Performance Issues Solved By the nGeniusONE Platform

nGeniusONE delivers end-to-end visibility into the performance of integrated retail banking application environments including

end users, proxy servers, load balancers, service enablers, backend database servers, application and web services, as well as the underlying network infrastructure. As a result, nGeniusONE uncovers service anomalies contributing to slow application response times and poor user experience including:

- **Session latencies** – nGeniusONE tracks performance by monitoring session response times between clients and servers. For critical banking activities such as virtual teller services, online bill pay, ATM transactions and more, the platform differentiates between different message types, independently reporting on the performance characteristics. With this information, IT teams are able to identify the root causes of application slowness, including possibly database connect times, credit card transaction failures, or even backend issues such as DNS failures.
- **Application errors and messages** – Important application errors and messages are automatically discovered, allowing IT teams to proactively investigate root causes of performance issues. Causes could include failures, bottlenecked performance, out of memory conditions, out of resource conditions and more. This is critically important for such things as credit card transaction processing applications (ISO 8583) as well as more general services such as Citrix, Exchange, or Office 365.
- **Web-based application error codes and messages** – Since HTTP and HTTPS traffic flows are analyzed by ASI, IT teams can monitor web-based banking applications to pinpoint slowdowns and errors like Error 404 – for page not found.
- **User impact** – IT teams get visibility into which community of users is affected, or which particular branch bank or other location is impacted by the problem. nGeniusONE enables these teams to understand quickly which users or locations are affected by a performance degradation and how their service is impaired.

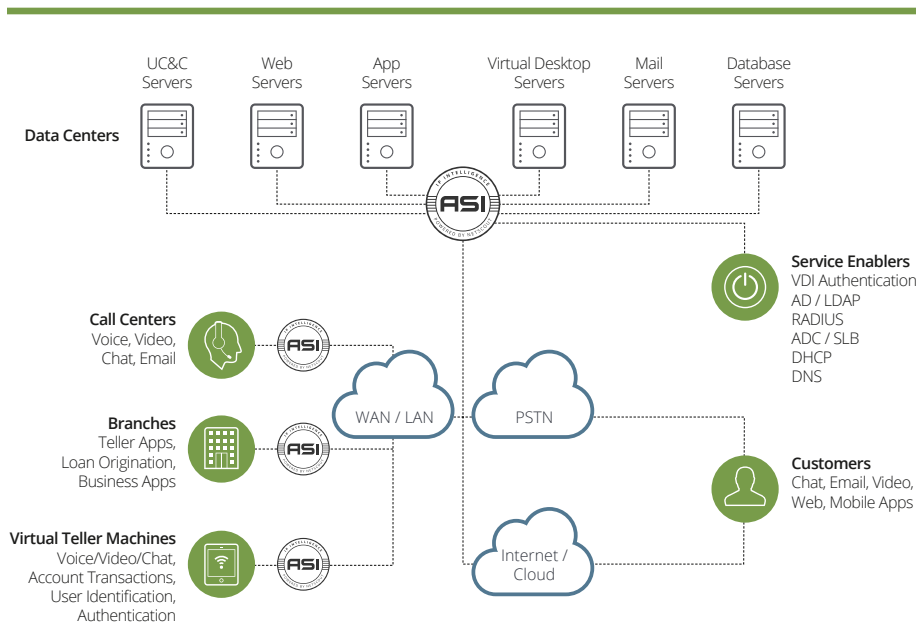


Figure 1: nGeniusONE provides end-to-end visibility into all of the critical systems required to support a successful retail banking environment.



nGeniusONE Platform Offers Seamless Top-Down Workflows

The nGeniusONE platform relies on the power of ASI to help IT teams quickly triage application performance impacting issues. Through continuous monitoring of all application traffic, ASI generates smart data which is consumed by the nGeniusONE solution to provide smart analytics for a holistic view into the performance of every component that could potentially degrade application performance. This highly structured data enables nGeniusONE to provide IT organizations with operational insights and visibility into the status of critical application performance issues commonly found in retail banking environments including: network and application server latencies; generated application errors; data transmission and traffic distribution bottlenecks; and the branch offices or data centers experiencing service degradation.

The nGeniusONE platform provides IT teams with an efficient top-down approach to situational analysis, problem identification, service triage, 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 groups which fosters IT team collaboration, improving their ability to quickly identify service quality issues and reduce MTTR.

In order to help IT teams faster troubleshoot issues related to retail banking application performance, the nGeniusONE platform provides 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 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 retail banking organizations include the Web Services monitor, SSL Certificate monitor, DNS monitor, database monitor, MQ monitor, ISO 8583 payment processing monitor, and others. Each of these break out performance metrics by specific message types, to enable IT teams to dig deep 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 monitor view, 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.
- **Session Analysis** – Session analysis helps IT teams analyze transaction latencies, network statistics such as average round trip time, number of TCP retransmissions, timeouts; as well as detailed session and flow information such as the client IP addresses receiving service from the load balancer, error codes, and server host and client information. Session analysis delivers application details in a ladder diagram with hop-by-hop message exchanges between clients, load balancers, and application servers.
- **Packet Analysis** – Packet analysis enables IT teams to perform deep-dive protocol level analysis and forensic evidence collection. Expert decodes provide application-specific details as well as a list of IP addresses pertaining to the clients and any proxy servers through which the application request has passed including the load balancing server.

A majority of performance issues can be efficiently triaged by using the Dashboard and the 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

For retail banking organizations, NETSCOUT® solutions are designed to provide insights into critical applications and services the business depends on. With NETSCOUT, IT organizations can:

- **Improve customer banking experience** with end-to-end visibility across the Enterprise, to teller stations in the branch banks, and/or directly to customers via mobile app or online.
- **Reduce MTTR** by proactively responding to service degradations impacting critical services such as credit card transaction processing, online banking, Citrix, or contact center services.
- **Rapid root cause identification** by understanding the inter-relationships and interdependencies between different backend applications such as database, web, DNS, DHCP, or SSL certificate authentication.
- **Improve IT team collaboration** with a single unified view into voice, network and application services providing end-to-end visibility into session-level details.

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