

nGeniusONE Service Assurance Platform for Microsoft Exchange Services

nGeniusONE Provides Fast Triage for Complex Microsoft Exchange Problems

Organizations rely heavily on the Microsoft® Exchange messaging platform for business-critical communication services as an essential part of day-to-day employee communications, customer interactions, and smooth operation of corporate business transactions. Slowdowns or other problems impacting Exchange may prevent users from processing crucial business services, such as receiving authorization to purchase inventory in a timely manner, following up on a customer request, or approving a discount for a new customer order.

Microsoft Exchange is dependent on a complex set of interconnected servers, a mix of protocols, e.g. SMTP, POP, HTTPS, MSRPC, and a broad range of

network infrastructure devices to operate efficiently, making discovery of the source of a degradation challenging. Managing Exchange service delivery across a globally complex enterprise environment without strong performance management visibility is even harder. The nGeniusONE® Service Assurance platform is a single solution that addresses the network, server and application performance of Exchange services to maintain operational efficiency in today's demanding corporate networks.

Designed for rapid triage, the nGeniusONE platform makes it possible for IT teams to play offense instead of defense when addressing Exchange issues. Powered by NETSCOUT's patented Adaptive Service Intelligence™ (ASI) technology, the highly scalable, deep packet inspection engine, nGeniusONE provides a comprehensive view of service performance across complex multi-

tier, multi-vendor, multi-location business data application services for rapid triage of issues impacting Microsoft Exchange, thus reducing Mean Time to Repair (MTTR).

Exchange Problems Solved by nGeniusONE

The nGeniusONE platform examines application interactions over the infrastructure to deliver holistic visibility into the performance of application tiers; network traffic; service enablers (e.g., DNS, DHCP, Active Directory/LDAP, and RADIUS); and end users to understand the full context of the Exchange service performance and anomalies contributing to the poor user experience. With its common workflow across all tiers of a service, the nGeniusONE platform reduces the time to triage performance-impacting issues such as:

- **Identify struggling Exchange servers** with visibility to traffic volume and individual sessions contributing to an underpowered server.
- **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 Active Directory issues.
- **Analyze enterprise-wide Exchange environments** with graphical views of poorly performing Mailbox, Hub Transport, and/or CAS servers and associated error code or latency issues.
- **Isolate source of degradations** with monitoring and analysis of Exchange communities including servers, affected users and impacted locations.

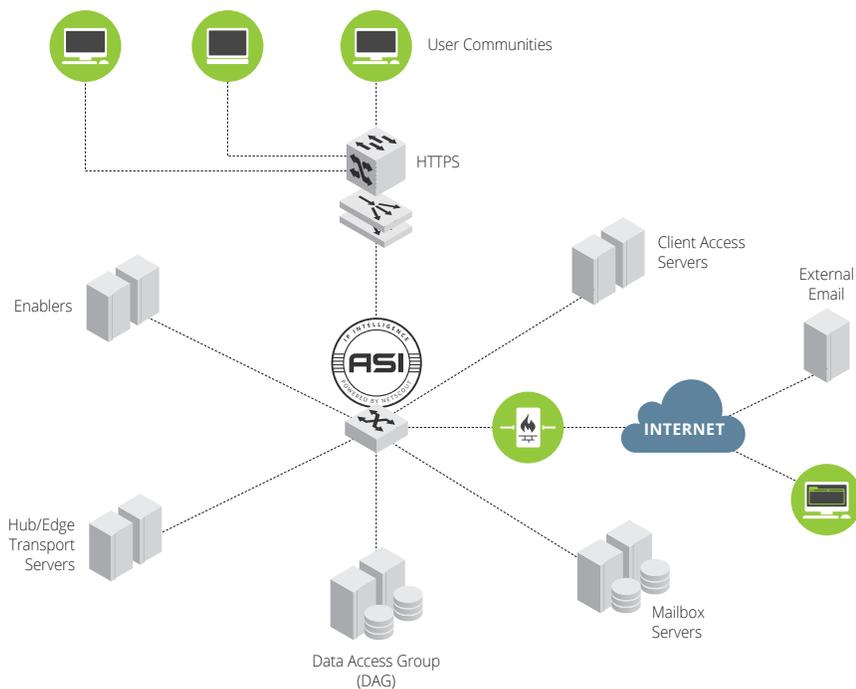


Figure 1: The nGeniusONE platform delivers cross-application and cross-network tier performance metrics including end-to-end analysis of Microsoft Exchange environments.

nGeniusONE Support for Microsoft Exchange

In order to help IT teams address Exchange performance issues, the nGeniusONE platform relies on the power of ASI. Using the efficient data organization provided by ASI, performance data can be viewed by a range of metrics, such as impacted Exchange CAS server, client or server locations (community of users), Hub Transport servers, or VLANs, among other resources. This enables the nGeniusONE platform to offer an efficient top-down approach to problem identification, situation analysis, service triage and resolution.

nGeniusONE provides a simple view of Exchange, showing which users are connecting to which Mailbox servers or Hub Transport servers, as well as how much strain they are putting on the external e-mail servers in terms of both volume of traffic and errors being generated. This allows nGeniusONE to pinpoint busy and degraded performance for specific servers and simultaneously identify the users or locations causing or suffering from the problems.

The nGeniusONE platform ultimately improves troubleshooting efforts and reduces MTTR, as it:

- Isolates underpowered Client Access Servers (CAS) that may be causing slow emails for users
- Pinpoints the location of network delay and/or congestion causing slow transactions and timeouts in Outlook at branch offices
- Reveals issues with Mailbox servers that are generating errors that may prevent users from connecting to their mailboxes
- Discovers synchronization issues in the Database Availability Group (DAG) impacting users' mobile devices ability to synchronize correctly or efficiently

The nGeniusONE platform provides a consistent set of service-oriented workflows to enable seamless, contextual transitioning across multiple layers of analysis. This allows the nGeniusONE platform to facilitate efficient and informed hand-off of incident response tasks across the different IT groups involved in delivery of an application from one end to the other.

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

- **Service Dashboard** delivers health status, alarms, and intelligent early warnings for Exchange service, and other service enablers, so the IT organization can focus their triage efforts where needed
- **Service Dependency** provides an automatic discovery and mapping of the global Exchange service environment including client - server relationships
- **Universal Monitor** enables comprehensive analysis of application services, like Exchange, that includes server load, application errors and failures, as well as network and application latency. Universal Monitor provides holistic visibility into new and active transaction volume as well as TCP and average application response time metrics across the Exchange environment including CAS, Client, DAG, Hub, Mailbox, and the affected user community.
- **Session Analysis** delivers session-level analysis and ladder diagrams, with hop-by-hop transaction analysis for Exchange services and associated network domains to help identify the specific issues (e.g., with clients, locations, servers, load balancers, etc.)
- **Packet Analysis** enables deep-dive, protocol-level analysis and forensic evidence collection of Exchange applications and services

A majority of Exchange issues can be efficiently triaged by the Dashboard and the Universal Monitor. Should deep dive troubleshooting be needed, IT teams can contextually drill down further and perform session and packet analysis.

Benefits of nGeniusONE for Microsoft Exchange

- **Triage Issues Quickly** – Decreases MTTR with end-to-end, comprehensive service visibility that enables IT teams to quickly research Exchange service issues and pinpoint the source of problems
- **Protect User Experience** – Rapidly troubleshoot problems with Exchange that depend on service enablers like DNS, AD/LDAP, DHCP or RADIUS, to restore essential employee e-mail services to quality performance
- **Improve IT Team Collaboration** – Using the common ASI dataset, the platform improves time to knowledge by enabling collaboration between network, application, and server teams for resolving Exchange-related service delivery problems
- **Single Solution Supporting All Application Layers** – Allows the enterprise to monitor the performance of the multi-vendor infrastructure and Exchange service environment with a single solution
- **Optimize Available Bandwidth** – Analysis of data applications, voice, video, Exchange, and all enabling services helps enterprises to optimize the environment with directed capacity changes and upgrades



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