

nGeniusONE Service Assurance Platform



The realities of supporting large-scale, hybrid workforces altered the priorities for information technology (IT) teams that were already challenged by assuring business continuity across today's hybrid networks. In that sense, the pandemic only served to accelerate digital transformations that were already under way, with the increased dispersal of users, infrastructure, and applications adding complexity to Network Operations (NetOps), Security Operations (SecOps), and other IT challenges.

These hybrid workforce changes also impact the way work-from-home (WFH) users access voice, video, and conferencing tools that are more important than ever to everyday business service delivery. As a result, employees today expect high-quality user experiences on cloud-based Unified Communications as a Service (UCaaS) platforms accessed directly from home offices over virtual private networks (VPNs) and their own Internet Service Providers (ISPs), with virtual desktop infrastructure (VDIs) also frequently in the mix.

While these service delivery environments have changed for their WFH users, IT operations team still must manage their recently deployed investments in Unified

Communications & Collaboration (UC&C), Network Functions Virtualization (NFV), Software-Defined Networking (SDN), virtualization, cloud, mobility, and SD-WAN technologies.

Along the way, organizational data center migrations to Co-located (Co-lo) data centers and Carrier-Neutral Facilities (CNFs), as well as application workload shifts to multi-cloud platforms and adoption of Software as a Service (SaaS) solutions, all merged to increase IT needs for virtual visibility into third-party service delivery environments being managed on their behalf, often by multiple vendors.

For IT Operations, visibility blind spots across these complex remote, physical, and virtual environments could lead to disruptions in network and business service flows, resulting in lost customers, missed revenue opportunities, higher costs, and lower employee productivity.

Our Approach

nGeniusONE® is a real-time information platform that provides a “single pane of glass” to view the data, voice, and video service delivery performance to manage both the availability and quality of user experience.

Available on both hardware and virtual platforms, nGeniusONE leverages NETSCOUT® “smart data” as a universal source for providing smarter analytics for end-to-end visibility throughout private, virtualized, public, and multi-cloud environments.

NETSCOUT's InfiniStreamNG® (ISNG) and vSTREAM® appliances generate this smart data in real-time from network traffic packets, which then is used for nGeniusONE views, alerts, and reports, including key performance indicators (KPIs), network and application error details, specialized service monitors, session records, and packet decodes.

Our Solution

The nGeniusONE platform provides unmatched visibility into IP-based business services along with contextual workflows to speed problem resolution in a manner that is both easy for a Level 1 responder to use and powerful for an expert to operate. Rather than look at individual elements in isolation, nGeniusONE provides an overarching view into the performance characteristics of the components associated with service delivery. This approach exposes underlying service dependencies that help IT Operations to effectively manage health, availability, and end-user experience issues, while improving the ability to proactively identify and triage the root cause of performance issues.

These capabilities enable IT Operations to provide business continuity to the organizations they support, including:

- Application performance management across hybrid data center operations and multi-cloud services, including before, during, and after views that ensure app migrations have not impaired access or performance.
- UC&C technology monitoring necessary for assuring performance of multi-vendor (e.g., Cisco Webex, Microsoft Teams, Zoom, Google) conferencing platforms, as well as solutions involving Contact Centers, Unified Communications-as-a-Service (UCaaS)

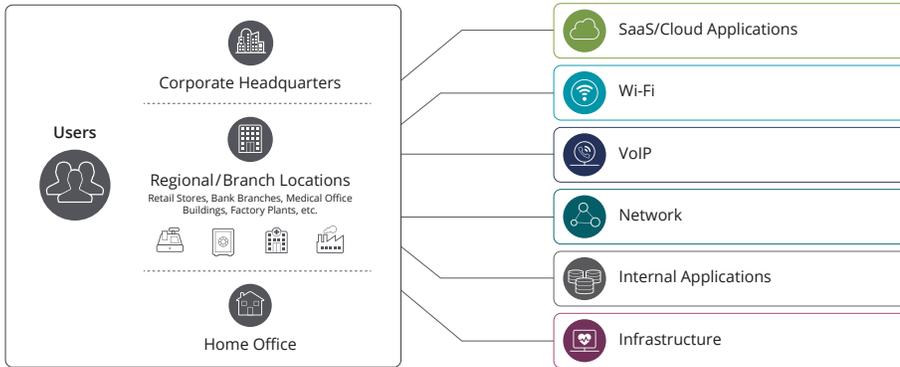


Figure 1: nGeniusONE analytics and NETSCOUT smart visibility enable NetOps, SecOps, and all IT Operations to view and monitor end-to-end performance across the multi-tier infrastructures supporting their personnel, whether those employees are in WFH, corporate, or regional environments.

options, on-premises voice and video services, and Session Initiation Protocol trunking deployments.

- Network performance management, including validating the performance of internet bandwidth, VPN capacity, and hybrid cloud/SaaS performance levels.

These core service assurance capabilities enable IT operations to leverage nGeniusONE performance analytics and NETSCOUT smart visibility solutions to assure the success of digital transitions involving:

- Cloud performance monitoring, including a vendor-agnostic approach that factors our partnerships with leading public cloud providers (e.g., AWS, Microsoft Azure, Google Cloud, and Oracle Cloud Infrastructure).
- Data center transformations, involving application and service migrations to a mix of geographically distributed Co-lo's and CNFs.
- SDN (e.g., Cisco ACI, VMware) and SD-WAN (e.g., Dell, VMware) rollouts.
- Remote workforce migrations featuring extended deployment of multi-vendor VPN and VDI (e.g., Citrix, VMware Horizon virtual desktop infrastructure).
- "As-a-service" rollouts, involving UCaaS, software (SaaS), desktop (DaaS), and infrastructure (IaaS).

Extending Our End-User Experience Assurance Approach

Leveraging NETSCOUT's "last-mile" visibility across the full service edge environment (i.e., client edges, network edges, cloud service edges, and data center service edges), our Omnis™ Smart Edge Monitoring solution uniquely combines and extends the benefits of nGeniusONE with our nGenius®PULSE and nPoint synthetic testing approach in a single platform to provide critical insights into end-user experience.

Omnis Smart Edge Monitoring performance analytics take advantage of NETSCOUT's patented Adaptive Service Intelligence® (ASI) technology in both ISNG and vSTREAM packet-based data sources, as well as nGeniusPULSE nPoint synthetic test sensors for key metrics. nPoint sensors deployed at the client edge in WFH and other remote locations can be configured to generate synthetic tests for analysis by nGeniusONE to provide critical visibility into end-user experience. In this manner, Omnis Smart Edge Monitoring enables cross-IT team operations to visualize the quality of WFH and remote employee interactions with SaaS, UCaaS, DaaS, and IaaS technology platforms being accessed directly through their VPN, VDI, and ISPs. As a result, Omnis Smart Edge Monitoring introduces levels of visibility that had long eluded IT teams, as this network

traffic bypasses the traditional north-south traffic visibility used by IT operations for communications passing through data centers. This NETSCOUT approach provides a way to evaluate user experience even when the traffic does not traverse across that traditional monitored path.

In this manner, Omnis Smart Edge Monitoring enables IT Operations to visualize remote service delivery environments at per-employee levels and assure the third-party services being delivered to those users are accessible, reliable, and performance in compliant with their respective Service Level Agreements.

Our Value

The nGeniusONE platform enables IT Operations to measure user experience, not just monitor it. With this approach, nGeniusONE offers unmatched service assurance value in supporting the following IT focus areas:

- Reducing IT fatigue and tool sprawl, with a single-vendor visibility approach used to identify root cause on issues impacting any user, on any service, on any network.
- Assuring availability and reliability of business service performance to end users, regardless of their locations or platforms and networks in use.
- Measuring responsiveness of application performance in all enterprise environments, whether WFH, remote office, or corporate.
- Validating quality of service being delivered by voice, video, conferencing, and collaboration solutions.
- Ensuring security of business service delivery occurring in WFH and remote business locations.
- Rapidly restoring services when outages do occur, with single-pane-of-glass views leveraging the universal ASI smart data source and nGeniusONE's intuitive troubleshooting workflows in a manner that satisfies IT needs for improved root cause analysis and reduced mean-time-to-repair cycles.



Corporate Headquarters
 NETSCOUT Systems, Inc.
 Westford, MA 01886-4105
 Phone: +1 978-614-4000
www.netscout.com

Sales Information
 Toll Free US: 800-309-4804
 (International numbers below)

Product Support
 Toll Free US: 888-357-7667
 (International numbers below)

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