

nGeniusPULSE

Visibility to the Network Edge to Ensure Availability and Performance From Anywhere

HIGHLIGHTS

- Detect business service issues experienced in remote sites or by remote users anywhere
- Monitor health of network and underlying services for business communications
- Correlate infrastructure health issues with business service problems
- Detect problems during off-hours or in the absence of user activity
- Monitor via wired and Wi-Fi networks
- Verify VPN availability
- Supports deployment in NETSCOUT® Smart Edge Monitoring to streamline troubleshooting

Product Overview

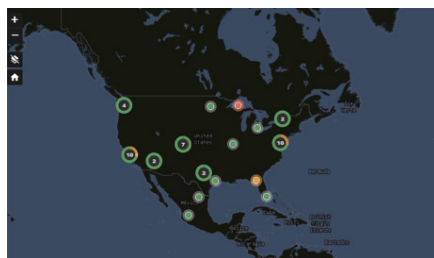
As part of the nGenius® Service Assurance portfolio providing end-to-end network visibility, nGenius®PULSE is an always-on and automated solution for cloud, hybrid, and virtual environments that helps customers manage the user experience and isolate issues between corporate infrastructure and the variety of cloud and other service providers assets they use. nGeniusPULSE also correlates the health of the supporting infrastructure with end user experience, ensuring that the most critical elements of the business eco-system are connected and working.

With automatic and continuous active (synthetic) testing of business services availability and performance, nGeniusPULSE provides 24x7 monitoring of critical applications and services from anywhere in the enterprise - in the data center, at remote offices or branches, for remote workers, and more.

The nGeniusPULSE solution is centrally-managed and deployed in a data center on a hardware or virtual server appliance. Sensors, called nPoints, are deployed anywhere throughout the organization to run active tests – over wired or Wi-Fi connections, and send results to the nGeniusPULSE Server. From the Server, results are displayed in an intuitive interface that includes dashboards, drilldowns, and alerts, as well as easy-to-use configuration and administration and an API for data extraction or configuration.

nGeniusPULSE can also be deployed as part of NETSCOUT Smart Edge Monitoring, via NETSCOUT's Edge Adaptor, to capture the packet-level data from synthetic tests. This packet data is analyzed by nGeniusONE to provide critical visibility into end-user experience.

Business Services		Overall Status	Sites				
NAME	STATUS		NAME	STATUS	NAME	STATUS	NAME
Office365	🟡	🟡	John Andler - some Office	🟢	Rockville Office	🟢	Denver Branch Office
Amazon AWS	🟢	🟢	Samantha S. - some Office	🟢	Scott P. - some Office	🟢	Robinson S. - some Office
Zoom	🟢	🟢		🟢		🟢	
Cisco WebEx	🟢	🟢		🟢		🟢	
Salesforce	🟢	🟢		🟢		🟢	



Product Capabilities

- Enterprise business application availability monitoring
- Capture and decrypt packet data from synthetic transactions for deep-dive analysis
- VoIP Call Testing and Network Performance Testing, including loss, latency, jitter, throughput, and other network service tests (e.g., HTTP, HTTPS, DNS, FTP)
- Server, Network Device, and Wi-Fi infrastructure health and availability monitoring
- Network Path Monitoring
- Advanced Custom Test Script Platform – Create custom tests with Python-enabled scripting platform to test customer-specific key performance indicators (KPIs)
- Up/Down and performance-based alerting
- Infrastructure Performance Monitoring (IPM), including the polling of third-party devices

Example Use Cases

- Compare Business Service Performance via Wired or Wi-Fi connections
- Test Web applications from login-to-logout
- Verify VPN availability
- Assure Voice over IP (VoIP) call quality
- Assure quality end-user experience as part of Smart Edge Monitoring



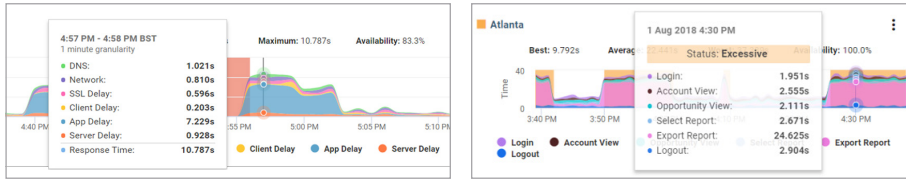


Figure 1: nGeniusPULSE monitors availability and performance of an organization’s revenue-generating applications and services. It also monitors the availability and performance of network and server infrastructure.

Monitor	Elements	Monitoring Method	Measurements
Enterprise Applications	SaaS and data center applications	Synthetic tests; Business Transaction Testing (BTT)	Application, DNS, SSL, Client, Network and Server delay
VoIP Services	On-premises and cloud hosted, SIP-based VoIP systems	Synthetic test using VoIP infrastructure to make real phone calls	MOS, Loss, Latency, Jitter, Dial Delay, Ring Delay, Codec
Network	Network performance, DNS, FTP, VPN, and other network services, Edit the polled speed of an interface to get correct utilization measurements	Synthetic Test; Custom Scripts	Path, Loss, Latency, Jitter, Availability, and Other Service-Specific Metrics
Wi-Fi Performance	Service performance over Wi-Fi connections. Supports all Wi-Fi networks	Synthetic test	Signal Strength, Connection Time; Plus Any/All of the Above Active Tests
Servers	Windows, Linux	SNMP and WinRM polling	Uptime, CPU, Memory, Disk Usage and I/O, Network I/O
Network Devices	Routers, Switches, Firewalls	SNMP polling	Uptime, CPU, Memory, Interface Status, Utilization
Wi-Fi Infrastructure	Wireless LAN Controllers Access Points, Radios ¹	SNMP polling of Wireless LAN Controllers	Uptime, CPU, Memory, Interface Status, Channel Utilization, Retry Rate, Error Frame Rate
VMware Infrastructure	Hypervisors, Virtual Machines	VMware APIs	Uptime, CPU, Disk Latency and I/O, Network I/O and Packet Drops, Top VMs

¹ nGeniusPULSE supports monitoring wireless network infrastructures that use these controllers:

- Cisco hardware controllers (2500, 5500, 8500 series)
- Aruba hardware controllers (7000 and 7200 series)
- Aruba Instant Access Points (IAP) when Virtual Controller IP is enabled

NETSCOUT Smart Edge Monitoring

The Edge Adaptor enables Smart Data to be received from nGeniusPULSE nPoints strategically deployed throughout the enterprise for analysis by nGeniusONE. Synthetic tests, including Business Transaction Tests, are supported and can be configured and scheduled to provide analysis from regional offices, branch locations, and even home offices for evaluating user experience with applications hosted in Data Centers, cloud, and SaaS environments. Packets captured from these tests will be sent to InfiniStreamNG® or vSTREAM® appliances for analysis. The metadata (ASI) generated from these tests is consumed alongside passive packet monitoring Smart Data in nGeniusONE to provide views and analysis that identify issues impacting end-user experience, along with details to quickly pinpoint the cause of the degradation.

SPECIFICATIONS



nGeniusPULSE Server



nGeniusPULSE Collector

Hardware Specifications

Platform	Dell R740 R2	Super-micro: 800-1248 V4 1U
CPU	2 Intel Xeon Silver 4110	8-Core Dual Broadwell 2.1 Ghz
RAM	96GB	64GB
Storage	10 x 1TB, 2 x 600GB	16TB
Power	Dual, Hot-Plug, Redundant Power Supply (1+1), 750W	

Virtual Specifications

Production Requirements

CPU	16-Core	8-Core
RAM	64GB	32GB
Storage	4TB	4TB

Minimum Requirements

CPU	4-core
RAM	16GB
Standby Server	Available In Both Hardware and Virtual Models

Storage 50GB

System Capacity

nPoints - nGeniusPULSE Server supports up to 5,000 nPoints*
 *Total number varies based on type and frequency of tests being run

See the nGeniusPULSE nPoint Data Sheet at:
<https://www.netscout.com/product/npoint>

Monitored Elements (MEs) - nGeniusPULSE Server with built-in Collector supports up to 25,000 MEs
 - nGeniusPULSE Server with external Collectors in a distributed deployment supports up to 500,000 MEs
 nGeniusPULSE Collector (external) supports up to 50,000 MEs

nGenius nPoint SPECIFICATIONS



nPoint 3000



nPoint 2000

Hardware Specifications

NP3000-H

NP2000-H

Wi-Fi	802.11ac 2x2 radio	None
Power	PoE 802.3af/at, USB-C	PoE 802.3af/at
Ethernet	1 Gbps	1 Gbps
Mounting	Mounting holes, Kensington lock	none
Size	5.25 x 5.25 x 1 inches 133 x 133 x 25 mm	4.4 x 1.6 x 1.3 inches 111 x 41 x 33 mm
Operating Temperature	32°F to 104°F (0°C to +40°C)	32°F to 122°F (0°C to +50°C)

Virtual Specifications

NP3000-V

NP2000-V

Supported Operating System	Windows®10, Windows® Server 2008 R2, 2012 R2, and 2016, Most 64-bit Linux operating systems including Red Hat® Enterprise, CentOS®, and Ubuntu® NOTE: Docker nPoint MacOS® is also available.	Windows®10, Windows® Server 2008 R2, 2012 R2, and 2016 Most 64-bit Linux operating systems including Red Hat® Enterprise, CentOS®, and Ubuntu® NOTE: Docker nPoint MacOS® is also available.
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Minimum Platform Requirements

CPU	2-Core	2-Core
RAM	4GB	2GB
Storage	2GB	1GB

Testing Capabilities

nPoint 3000

nPoint 2000

Web	✓	✓
Network Performance	✓	✓
VoIP	✓	✓
Business Transaction	✓	-
Wi-Fi	✓ (NP3000-H)	-

nGeniusONE Service Assurance Platform

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 the user's experience.

Available on both hardware and virtual platforms, nGeniusONE leverages NETSCOUT Smart Data as a universal source for providing smart analytics for end-to-end visibility throughout private, virtualized, public, and hybrid cloud environments.

ASI Technology



Adaptive Service Intelligence® (ASI) technology transforms wire traffic into Smart Data, providing real-time visibility into user experience for the most advanced and adaptable information platform to ensure security, manage risk, and drive service performance.



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