

nGeniusPULSE

Visibility to the Edge of the Network Monitor Availability and Performance of Enterprise Business Services

HIGHLIGHTS

- Detect business service issues experienced by remote sites and remote users anywhere
- Know about problems in the absence of real-user activity especially during off-hours
- Monitor via wired and Wi-Fi networks
- Verify VPN availability
- Streamline troubleshooting workflows with nGeniusONE® integration
- Correlate infrastructure health issues with business service problems

Business Services	Service Tests	Servers	Network Devices	Sites	Boston	Rockville	San Francisco	New York	Denver
Oracle E-Business	Yellow	Yellow	Grey	Green	Red	Red	Red	Red	Red
Comcast VoIP for Business	Yellow	Yellow	Green	Green	Green	Green	Green	Green	Green
SAP	Green	Grey	Grey	Green	Green	Green	Green	Green	Green
Microsoft Exchange	Green	Green	Grey	Green	Green	Green	Green	Green	Green
ADP Workforce	Green	Yellow	Green	Green	Green	Green	Green	Green	Green

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 assets they own and the multitude of service providers they use. nGeniusPULSE also correlates service delivery with health of the supporting infrastructure, 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 branches, with remote workers, for IoT devices 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 includes direct technical support from NETSCOUT's best-in-class support teams with 24x7 support services.

nGeniusPULSE also extends the service-oriented approach of nGeniusONE and Adaptive Service Intelligence® (ASI) to infrastructure monitoring. When an issue is identified by nGeniusONE and isolated as a potential infrastructure problem, IT can drill-down directly from the nGeniusONE console to the underlying and specific infrastructure element in question within nGeniusPULSE.

Product Capabilities

- Enterprise Business Application Availability Monitoring
- Compare Business Service Performance via Wired and/or Wi-Fi Connections
- Business Transaction Testing (BTT) – Customer-Defined Testing from Web Application Login-to-Logout
- VoIP Call Testing
- Network Performance Testing
- VPN Availability
- HTTP, HTTPS, DNS, FTP, and Other Network Service Tests
- Network Path Monitoring
- Wi-Fi Infrastructure Health and Availability Monitoring
- Network Device Health and Availability Monitoring
- Server Health and Availability Monitoring
- Advanced Custom Test Script Platform
- Hardware and Software Monitoring Agents
- Web-based User Interface
- Up/Down and Performance-based Alerting



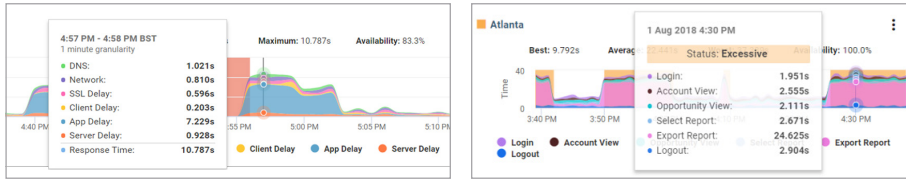


Figure 1: nGeniusPULSE monitors availability and performance of an organization’s revenue generating applications and services. It also monitors the availability and performance of network and server infrastructure.

Monitor	Elements	Monitoring Method	Measurements
Business Applications	SaaS and data center applications	Synthetic tests; Business Transaction Testing (BTT)	Application, DNS, SSL, Client, Network and Server delay
VoIP Services	On-premise 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	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
- Ruckus Virtual SmartZone v3.6 and higher

nPoint Deployment Options

nGeniusPULSE has deployment options to fit multiple scenarios and conduct active tests from anywhere users are located. nPoints provide continuous and automatic testing from locations such as warehouses, branch offices, laptops, servers working from home, individual floors in a building, server closets - or even on “things” such as trains, ambulances, forklifts, or ships. An organization can deploy one or multiple types of nPoints, in any combination, depending on testing requirements and environment.

- **nPoint 3000** – Conduct service tests via Wi-Fi and wired connections to compare results. The hardware nPoint 3000 is a small purpose-built device with a built-in Wi-Fi radio allowing you to monitor service delivery – including SaaS, data center apps, VoIP, and network performance tests over wired and/or Wi-Fi connections from any location. The nPoint 3000 can also perform Business Transaction Tests from anywhere it is deployed.
- **nPoint 2000** – Conduct service tests over Ethernet connection. The nPoint 2000 is a small, purpose-built hardware device that runs on Power-over-Ethernet (PoE) and can easily be deployed anywhere to perform business service tests. If PoE is not present, a simple PoE injector can be used.
- **Virtual nPoint** – The nPoint 3000 and nPoint 2000 can be deployed as a software-based agent on Windows or Linux machines such as laptops, servers, or VMs – or emailed to a remote home-based user who is having issues to help diagnose the problem. This is especially useful when troubleshooting a problem at a remote location where you do not already have instrumentation.

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®	Windows®10, Windows® Server 2008 R2, 2012 R2, and 2016 Most 64-bit Linux operating systems including Red Hat® Enterprise, CentOS®, and Ubuntu®
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)	-



nGeniusPULSE Server



nGeniusPULSE Collector

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 smarter analytics for end-to-end visibility throughout private, virtualized, public, and hybrid cloud environments.

ASI Technology



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.

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

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



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