



Highlights

With flexible configurations, scalability and the superior CDM architecture, nGenius® probes enable end-through-end views of the network, applications and services by:

- Supporting both physical and virtual network technologies to ensure a comprehensive view of the network
- Delivering response time measurements to detect application degradations
- Providing robust real-time analysis and historical reporting with unsurpassed granularity
- Proactively detecting network problems by providing real-time alarms
- Managing converged networks by providing visibility to key performance indicators and critical quality of experience (QoE) metrics

nGENIUS | PROBES

Dedicated hardware-based intelligent data sources that generate key network metrics utilized by the nGenius Service Assurance System

Network environments are ever changing and the task of managing their performance is becoming increasingly complex. Whether the network is contained within a single building or supports a global organization, IT professionals need solutions designed to detect issues, diagnose the root cause, verify changes and manage performance problems for all applications and services.

To meet this need, IT organizations require reliable and consistent information they can trust. The nGenius Probe is an intelligent data source that meets this requirement by monitoring packet-flow data directly from the network. Strategically placed nGenius Probe devices can be combined with other distributed data sources to provide end-to-end visibility across the network.

Empowered by CDM

NetScout's Common Data Model (CDM) Architecture allows traffic flow data from disparate network technologies, regardless of the location within the infrastructure, to be integrated into a common repository for consistent analysis, views and reports. CDM provides detailed information for emerging technologies and policy-based configurations, including VoIP, MPLS, QoS, VPNs and NetFlow.

Strategic network deployments of nGenius Probes

Flexible probe configurations allows the nGenius Service Assurance Solution to monitor traffic flows for virtually any network technology or topology and deliver a complete end-through-end view of the performance of applications and services

The nGenius probes are strategically placed on LAN, WAN, ATM and POS network links via passive taps, with the optional monitoring of span switch ports for 10/100/1000 LANs.

How It Works

As dedicated monitoring devices the nGenius Probes deliver performance data collected from critical network links or mirrored switch ports throughout the network to the nGenius Performance Manager. The ability to monitor a large array of network technologies, both physical and virtual, allows the nGenius probes to create and enable analysis and historical reporting of network metrics.



For More information

For more information please visit www.netscout.com or contact NetScout sales at 800-309-4804 or +1 978-614-4000.

With flexible configurations and unsurpassed scalability the nGenius Probes deliver critical network data to the nGenius Performance Manager enabling unprecedented network visibility and insight into network conditions

Key Features

Application Recognition and Monitoring

Support for a variety of application types, including

- Well-known, user-defined and complex applications
- Peer-to-peer applications
- Web-based applications and URLs
- Industry specific applications (e.g. IP FIX for financial, SMS for wireless service provider)

Packet Troubleshooting

- Robust packet capture decode engine
- Provides on-demand packet capture

Response Time Analysis / Key Performance Indicators

- Passive application responsiveness measurements
- Supports response time metrics for virtually all application types
- Supports 1-minute granularity: average response time, no. of active sessions, no. of successful transactions, and no. of server error types
- Supports 15 minute granularity: maximum & average response time per client/server pair, total no. of transactions, no. of successful transactions, TCP connect time, no. of active sessions, total packet loss, responses time distribution, no. of timeouts, no. of retries, and application payload
- Measure key performance indicators including packet loss, inter-packet delay, client and server errors, and timeouts

Convergence Management

- Supports volume, utilization, host and conversation details for RTP Voice and RTP Video protocols
- Supports application-layer details for call set-up protocols, such as SIP, H.323, Q.931 and MGCP, plus Cisco's SCCP and Avaya's H.323 extensions
- Supports VoIP quality metrics: jitter, call set-up time, packet loss, incomplete and failed calls

- Supports IP addresses, phone extensions and connect times
- Supports packet-level visibility and decode of voice protocols
- Supports voice configuration data including Codec, dialing plan and QoS assignments

Network Management Metrics

- TCP, HTTP and server-specific performance and error conditions
- Percent Utilization and Packet/Byte Counts for: link, host, host group, applications, conversations
- Link aggregation combines traffic data from multiple interfaces to support load balanced and redundant links
- Site monitoring tracks traffic from remote offices

Populates Alarming and Event Identification for the nGenius Service Assurance Solution

- Define alarms for link utilization, CRC errors, application utilization, application response time, application availability as well as broadcast packets, multicast packet and multicast packets on the LAN
- Burst Alarms at millisecond resolution
- "Power Alarms" highlight root cause by gathering top users and applications automatically at violation time for segments exceeding utilization, responsiveness and availability thresholds
- Supports rising, falling and time-over-threshold templates
- Supports auto-actions to trigger scripts, packets decode and SNMP traps

Data Granularity

- 15-second, real-time views with 1-second peaks
- 1-minute historically logged data for all application, hosts, and conversation flows

Network Visibility

- LAN – Ethernet, Gigabit Ethernet
- WAN – Frame Relay (T3(DS3)/E3/), HSSI, ATM - (T3(DS3)/E3, OC-3c, OC-12c), POS (OC-3c, OC-12c, OC-48c)
- Virtual Channels – VLANs, DLCIs, PVCs, QoS Groups (via DSCP)
- Encrypted Channels – MPLS, IP-enabled VPN

Probe Implementation

- In-line connection via passive tapping device
- Span via Switch Mirror port for 10/100/1000 Ethernet

Supported Industry Standards

- LAN Probes: 10/100/1000 Ethernet: IEEE 802.3 standard for 10/100Base-T, IEEE 802.3ab standard for 1000Base-T, IEEE 802.3z standard for 1000Base-LX/1000Base-SX/1000Base-TX, IEEE 802.3ae for 10 Gigabit Ethernet, RFC2021, RFC1757, RFC1213, VLAN standards: 802.1q and Cisco ISL, SNMP Standards: SNMPv1,v2,v3
- WAN Probes: T1/E1/T3 (DS3)/E3/HSSI: IEEE 802.3 standard for 10/100Base-T, RFC1490 and Cisco ISL, SNMP Standards: SNMPv1,v2,v3
- ATM Probes: T3 (DS3)/E3/OC-3c/OC-12c: ATM Forum Standards: LANE 1.0/2.0, MPOA 1.0, RFC1577, SNMP Standards: SNMPv1,v2,v3
- POS Probes: OC-3c/OC-12c/OC-48c: SONET/SDH Standards ITU-T G707, Bellcore/Telcordia GR-253, PPP over SONET/SDH RFC 2615, PPP in HDLC-like framing RFC1662, SNMP Standards (Communication): SNMPv1,v2,v3

Product Specifications

	Specification	Note
Rack Unit	1 Server Rack Unit (1U)	
Dimensions	Chassis:25"D x 17"W x 1.72"H (63.5cm x 43.2cm x 4.4cm)	
Weight	24lbs. (10.7kg)	
Management Port	RJ45	
nGenius Flow Director Port	RJ45	
Console Port	DB9F	
Environmental Specifications	Operating Temperature: 50° to 104°F (10° to 40°C) Operating Humidity: 5% - 95% (non-condensing)	
Power Requirements	100/240VAC, 6A, 40/40Hz, 350W	
Regulatory and Agency Approvals	Safety: UL, CSA, TUV EMI/EMC: FCC Part 15 Class A, CISPR 22 Class A CE, VCCI, NOM Laser Safety: May utilize Class 1 laser device	Laser Safety applies to Gigabit Ethernet models only

Connectivity Specifications

Probe Type	Number of Monitoring Ports	Monitoring Interface Types	Taps and Cables (Order Separately)
Gigabit Ethernet	SFP Pluggable: 2, 4, 8 SX/LX/TX configurable combinations 10/100/1000Base-T: 2,4, 8	SFP (SX) Interface: LC SFP (LX) Interface: LC SFP (TX) Interface: RJ45 10/100/1000Base-T: RJ45	SX: Passive 60/40 optical splitter Multimode (62.5 or 50 Micron) fiber SC LX: Passive 60/40 optical splitter, Multimode (9 Micron) fiber SC T: Active splitter/passive failover, dual redundant 12v power supplies
WAN T3(DS3)/E3	1, 2	T3(DS3)/E3 Interface	T3 (DS3)/E3: Tap DB15, Probe to Tap DB15, Tap to Net BNC
ATM T3(DS3)/E3	1, 2	T3(DS3)/E3 Interface	T3 (DS3)/E3: Tap DB15, Probe to Tap DB15, Tap to Net BNC
ATM OC-3c/OC-12c	1, 2	OC-3c/OC-12c MM: LC OC-3c/OC-12c SM: LC	MM: Passive 60/40 optical splitter, Multimode (62.5 or 50 Micron) fiber SC SM: Passive 60/40 optical splitter, Multimode (9 Micron) fiber SC
POS OC-3c/OC-12c/OC-48c	1, 2 (OC-3c/OC-12c) 1 (OC-48c)	OC-3c/OC-12c MM: LC OC-3c/OC-12c SM: LC OC-48c: LC	MM: Passive 60/40 optical splitter, Multimode (62.5 or 50 Micron) fiber SC SM: Passive 60/40 optical splitter, Multimode (9 Micron) fiber SC OC-48c: Passive 70/30 optical splitter, Multimode (9 Micron) fiber LC



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