

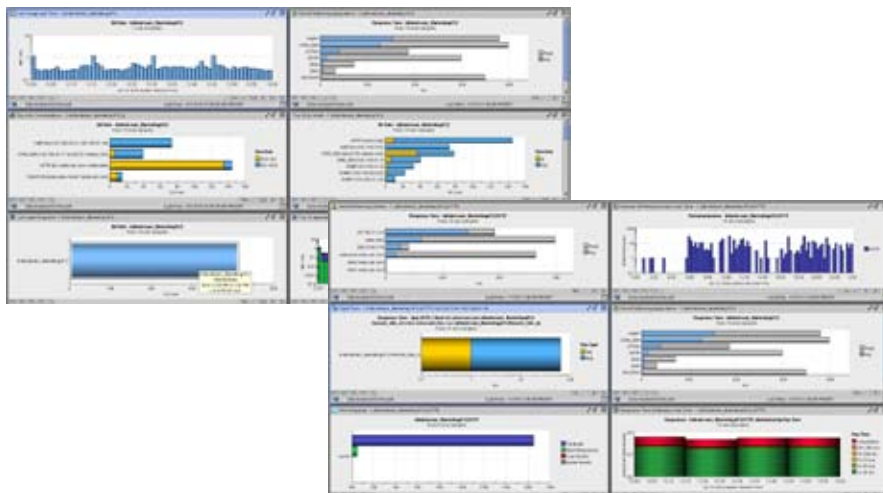


**nGENIUS** | PERFORMANCE MANAGER

Comprehensive, unified software for the intelligent management, analysis and reporting of network and application performance across the modern IP network

**Highlights**

- Unifies key performance management functionality in one product for fast time to value:
- Full context of network activity helps optimize service delivery, manage capacity, minimize and restore degradations
- High-definition application visibility reveals how the business uses network resources
- KPI-to-Flow-to-Packet approach streamlines diagnosis and troubleshooting processes enabling accelerated problem resolution
- Intelligent, real-time alarms provide proactive detection
- On-demand and scheduled reporting fosters communication and collaboration
- Integrates data from multiple sources, including nGenius InfiniStream® appliances, nGenius Probe devices, nGenius Virtual Agents, nGenius Collectors for NetFlow, and SNMP MIB2 data, for comprehensive visibility



The nGenius Performance Management Solution provides a unified view of services delivery by enabling data from various sources to be viewed in the same charts and workspaces. The above screen captures detailed voice performance in a converged network as well as which applications are seen in each Class of Service..

**Comprehensive Performance Management**

nGenius Performance Manager is a comprehensive, unified performance management solution used to provide unprecedented visibility into complex networks for:

- Application and network traffic recognition and monitoring
- High definition packet/flow analysis for volume and response time analysis and troubleshooting
- Data, voice, video convergence management
- Reporting and capacity planning
- Alarming and event identification
- Packet decode and analysis

NetScout’s nGenius Performance Manager leverages intelligent Deep Packet Capture (iDPC) and flow-based metrics to deliver complete visibility into real-time, operational intelligence that spans

- High-level key performance indicators (KPIs), such as response time, client and server errors or jitter
- Application flow data, such as utilization, conversations or top talkers
- Packet-level analysis, such as Expert analysis, decodes or bounce diagrams

The value of this top-down, KPI-to-Flow-to-Packet approach lies in its ability to progressively and contextually guide the troubleshooting process. In doing so, it reduces the time to identify, analyze, diagnose and resolve network and application performance problems and restore essential business services.

nGenius Performance Manager also integrates with nGenius K2 Service Deliver Manager which provides services-aware, predictive analysis capabilities. It automatically

**For More information**

For more information please visit [www.netscout.com](http://www.netscout.com) or contact NetScout sales at 800-309-4804 or +1 978-614-4000.



detects abnormal network and application usage and displays this information in an easy-to-read dashboard designed to visually display the health of essential business services.

**How it Works**

nGenius Performance Manager collects performance data from a wide variety of network data sources, allowing it to monitor the usage patterns of all network infrastructures, topologies and applications (see “Network Visibility” and “Data Sources” for details). nGenius Performance Manager then presents the results in customizable real-time and historical views and reports that highlight the performance of applications, identify the users and abusers of network resources, as well as the network capacity various resources are consuming.

Dedicated data collection devices – such as nGenius InfiniStream appliances, nGenius Probe devices and nGenius Virtual Agents – are strategically distributed throughout the core, distribution and access layers of the network and within virtual environments in order to provide nGenius Performance Manager with the granular “packet-flow” performance data necessary to monitor networked applications for a complete picture of all factors that explain network performance.

Flexible, focused workspaces, such as this one highlighting response times, are easy to create and can be saved for future viewing.



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**Key Features**

**Application and network traffic recognition and monitoring**

nGenius Performance Manager provides robust support for today’s most complex service delivery environments with extensive application recognition and monitoring, including:

- Well-known and children of well-known applications
- User-defined, custom-developed applications
- Virtualized applications
- Complex applications using port-ranging/ port-hopping
- Web-based applications and URLs
- Peer-to-peer applications
- VoIP signaling and transmission protocols
- Financial services applications and 600+ market data feeds
- Service provider-specific applications such as CDMA and GSM protocols
- WAN-optimized protocols, such Riverbed

**High definition packet/flow analysis for volume and response time analysis and troubleshooting**

The value of the nGenius Service Assurance Solution top-down, KPI-to-Flow-to-Packet approach lies in its ability to seamlessly provide multiple diagnosis paths from service problems and anomalies to packet level information. This approach reduces the time required to identify, diagnose and resolve network and application performance problems and helps accelerate restoration of essential business services. Features include:

- Passive and active application responsiveness measurements
- Response time metrics for virtually all application types
- Separates network flight time versus server think time

- 1-minute granularity: average response time, no. of active sessions, no. of successful transactions, and no. of server error types
- 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
- Contextually integrates with nGenius InfiniStream® console for decode and Expert analysis
- Contextually integrates with Sniffer (need attribution) Intelligence modules for advanced packet-level troubleshooting analysis
- Contextually integrates with Sniffer MultiSegment Analysis for visibility and analysis of application flows across multiple network segments

**Data, voice, video convergence management**

nGenius Performance Manager provides end-to-end unified visibility that allows IT professionals not only to understand how individual services are delivered, but also how they interact with and impact the performance of one another. The nGenius Service Assurance Solution delivers critical visibility into converged environments with:

- Quality of Experience monitoring with MOS and R-Factor monitoring with direct links to packet impairment views and the evidence that allows an understanding of how voice quality is being impacted
- Volume, utilization, host and conversation details for RTP Voice and RTP Video protocols
- 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
- VoIP quality metrics: jitter, call set-up time, packet loss, incomplete and failed calls, and MOS scores



- IP addresses, phone extensions and connect times
- Packet-level visibility and decode of voice protocols
- Call session recording and play-back using packet recording devices
- Voice configuration data including Co-dec, dialing plan and QoS assignments

**Reporting and Capacity Planning**

With nGenius Performance Manager, network managers can report on and analyze growth trends and usage patterns in order to make decisions about optimizing bandwidth, rescheduling activities or reallocating traffic, with:

- On demand, ad-hoc reports for instant collaboration
- Custom-defined scheduling of Newspaper-style reports
- Daily, weekly and monthly trend-based reporting
- Top-down analysis through drill-downs
- HTML, PDF, Web viewer, CSV and auto-email formats

**Alarming and event notification**

nGenius Performance Manager recognizes and alerts users of service impacting issues the moment they happen by delivering:

- Virtual interface alarming on NetFlow, QoS, Site, DLCI, VLANs and PVCs
- Threshold-based with evidence for utilization, errors, response time and availability metrics
- Burst Alarms with millisecond resolution
- “Power Alarms” highlight root cause by gathering top users and applications automatically at violation time
- Rising, falling and time-over-threshold parameters
- Auto-actions to trigger scripts, packets decodes and SNMP traps
- User notification by email, visual indications in viewing console and alert notification export

**Packet decode and analysis**

nGenius Performance Manager can trigger ad-hoc packet capture for nGenius Probes or mine packets stored on nGenius InfiniStream appliances to provide:

- TCP Session/Follow Stream support
- Multi-hop and Multi-tier bounce diagram support
- Pre- and post-capture filtering
- Text, hex, host, application, pattern and custom filtering capabilities
- Save, share, import and export capture files in standard formats (dat, cap, dmp, pcap)
- Extended duration analysis by trace file merging

**Third Party Integration**

nGenius Performance Manager supports feeds to third-party fault management systems:

- Out-of-the-box integration support with HP, IBM and EMC
  - HP Operations Manager and Network Node Manager
  - IBM Tivoli NetView, Netcool/OMNibus
  - EMC Ionix

**Architecture & Scalability**

nGenius Performance Manager, along with the nGenius Service Assurance Solution, distributed architecture is designed to support today’s largest and most complex service delivery environments, by offering:

- Dedicated Global Server configurations for managing large or geographically dispersed environments
- Three-tiered, web-based client/server access methodology
- Standby Server options for disaster recovery
- Access control through role-based security
- External authentication through Cisco ACS Server, LDAP v3, Radius and Windows Active Directory
- Local and remote storage of reports
- Remotely update nGenius InfiniStream appliances

**Network Visibility**

- LAN – Fast Ethernet, Gigabit Ethernet, 10-Gigabit Ethernet
- WAN – Frame Relay (T1/E1, T3 (DS3)/E3), ATM - (T3(DS3)/E3, OC-3c, OC-12c) and POS (OC-3c, OC-12c, OC- 48c)
- Virtual Channels – VLANs, DLCIs, PVCs, QoS (via DSCP), sites
- Encrypted Channels – MPLS, IP-enabled VPN, WAN optimized
- Virtualized Computing Environments - VMware™

**Supported Data Sources**

- Dedicated nGenius intelligent data sources
  - nGenius InfiniStream appliances
  - nGenius Probes
  - nGenius Virtual Agent
  - nGenius Collectors
- Routers, switches and other network devices supporting RMON/RMON2, Mini-RMON, NetFlow, sFlow, IP SLA, NAM, NAM2, NM NAM, SPAN, MIB2, Frame Relay MIB (RFC 2115), CPU and memory from Cisco devices

**Unified IP Service Assurance Solution**

nGenius Performance Manager is a core component of the nGenius Service Assurance Solution. Through full integration with other nGenius applications operators can support multiple work flow paths for faster detection, analysis and isolation of service and network problems. Other components of the nGenius Service Assurance Solution include:

**nGenius K2 Service Delivery Manager**

- Service-aware visibility
- Predicts and prevents service faults
- Service-aware dashboard with proactive alarming and alerting
- KPI driven

**Sniffer MultiSegment Analysis**

- Automates concurrent data capture and correlation across multiple network segments
- Provides transactional analysis to identify which business transactions are impacted by delays
- Furnishes comparative statistics for server and application response times, as well as network segment utilization

**Sniffer® Analysis/Intelligence**

- Troubleshoot intermittent and elusive network and application performance problems
- Analyze network-based security issues to determine how a virus spreads or where vulnerabilities are being exploited
- Evaluate root cause of Voice over IP (VoIP) quality problems in conjunction with sophisticated Sniffer Intelligence and call play-back analysis

**nGenius Intelligent Data Sources**

- Dedicated nGenius intelligent data sources
  - nGenius InfiniStream appliances
  - nGenius Probes
  - nGenius Virtual Agent
  - nGenius Collectors
- Routers, switches and other network devices supporting RMON/RMON2, Mini-RMON, NetFlow, sFlow, IP SLA, NAM, NAM2, NM NAM, SPAN, MIB2, Frame Relay MIB (RFC 2115), CPU and memory from Cisco devices

**nGenius Performance Manager Product Specifications**

Features	Minimum Requirement
<b>File system (Windows)</b>	<ul style="list-style-type: none"> <li>▪ Minimum 30 GB for the OS partition (if installing nGenius Performance Manager on a second partition).</li> <li>▪ Virtual memory page file set for System Managed Size.</li> <li>▪ NTFS-formatted hard disk is required.</li> </ul>
<b>File system (Linux platforms)</b>	<ul style="list-style-type: none"> <li>▪ Minimum 100 MB for the boot partition</li> <li>▪ Minimum 10 GB for the OS or / (root) partition</li> <li>▪ Remaining space allocated to the /opt partition for nGenius Performance Manager installation</li> </ul>
<b>RAID configuration</b>	<ul style="list-style-type: none"> <li>▪ RAID 5; Ultra 320 SCSI, SATA, or SAS</li> </ul>
<b>Hard drive configuration</b>	<ul style="list-style-type: none"> <li>▪ 5 x 300 GB or 6 x 250 GB</li> </ul>
<b>Media device</b>	<ul style="list-style-type: none"> <li>▪ DVD-ROM drive recommended</li> </ul>
<b>Network Adapter</b>	<ul style="list-style-type: none"> <li>▪ One 100/1000 Ethernet adapter</li> </ul>
<b>Power supply configuration</b>	<ul style="list-style-type: none"> <li>▪ Dual, redundant power supplies</li> </ul>
<b>Java version</b>	<ul style="list-style-type: none"> <li>▪ JRE v1.6.0_07 (32 or 64-bit); also referred to as Java SE 6, Update 7</li> </ul>

*Note: nGenius Performance Manager can also be purchased as a pre-loaded appliance running either Red Hat Linux or Windows 2003 Standard and Enterprise editions. nGenius Performance Manager cannot be installed on a virtual machine*



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