



nGENIUS | K2 SERVICE DELIVERY MANAGER

Assuring the availability and performance of business services with at-a-glance status and early warning of performance degradations of service traffic.

In this age of the modern IP network, the current state of troubleshooting remains as it was in the 1990s – predominantly reactive. End-user calls to the help desk continue to be the principal means for the IT organization to learn about performance problems. However, the IT organization is fast realizing the benefits of becoming more proactive in their approach to managing service delivery.

To maintain high service levels in the face of growing network complexities and interdependencies, IT operation teams need to deploy advanced technologies that provide more application and business services centric views of the network, as well as generate early warning of impending performance problems by automating the detection of anomalies and providing actionable context for faster, more accurate problem diagnosis.

Benefits

nGenius K2 Service Delivery Manager provides the IT organization with at-a-glance status of the health of critical application services along with early warning of anomalous performance conditions. These application-centric views of network performance facilitate:

- Earlier identification of potential performance issues through intelligent alerts and dashboard views
- Fewer, more meaningful alerts with evidentiary details
- Faster, more accurate diagnosis of root cause
- Streamlined processes for reduced mean time to resolution (MTTR)

nGenius K2 Service Delivery Manager Overview

nGenius K2 addresses the challenges of real-time service delivery management with a unique virtualized dashboard that provides an easy-to-use, comprehensive view of the end-to-end service health of the Modern IP Network.

nGenius K2 delivers a real-time unified service view that correlates network, application health and users' experiences, empowering network, data center and application managers to proactively monitor the status of all related service delivery elements.

Service health is determined by a unique combination of Key Performance Indicators (KPIs), which correlate service health with user experience, and anomaly detection that automatically identifies anomalous behavior with action-oriented alarms that provide powerful early warning of performance degradations and potential service delivery meltdowns before they become service affecting.

KPIs provide a view of overall network performance from the perspective of end-user experience. Because KPIs are based on packet data and is not simulated data, sampled, nor artificially skewed by data reduction, the top-level service health views are extremely precise and contextually linked to the true source of operational intelligence – the network packets themselves.

nGenius K2 resides on the same server as nGenius Performance Manager and makes use of the standard Performance Manager processes for storing and retrieving data from the nGenius Performance Manager database. Leveraging information collected by strategically deployed nGenius Probes and nGenius InfiniStreams Appliances, nGenius K2 uses the network's own packet-flow data to perform sophisticated problem detection and root cause analysis.

An additional advantage of this approach lies in the nGenius Performance Management System's highly efficient top-down workflow called KPI-to-Flow-to-Packet, which allows the user to effectively and seamlessly drill down from nGenius K2 to nGenius Performance Manager to gain the additional details needed to manage and resolve service performance issues.

For More information

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

FEATURES AND BENEFITS

Service Status Dashboard

The nGenius K2 Service Status dashboard provides a comprehensive display of the health of critical applications and services for quick and easy assessment of service health. A service is defined as an application, protocol or aggregated group of applications that perform a complete business function. The Service Status dashboard empowers network, datacenter, application and operation managers to easily monitor all related application services from a common vantage point and to quickly assess when an application service is experiencing performance problems.

Each business function is represented by an icon in the service status dashboard. The icon displays the number of alarms that were generated for the service during a user-definable timeframe and the severity. The color-coded dashboard icon state is driven by two different types of Key Performance Indicators (KPI) alarms:

- Instrumentation-based KPI alarms, an instantaneous alarm that is triggered when the threshold for the KPI is exceeded a specified number of times.
- Server-based Analytics alarms, which use predictive statistical modeling to identify anomalous situations without the need for setting thresholds (See Analytics Engine section below for additional details).

Key performance indicators provide a robust indication of end user experience. The KPIs that nGenius K2 tracks include:

- Slow responses — An application response that exceeds a preset threshold for acceptable responsiveness
- Timeouts — An application response that falls outside of a predefined timeout limit
- User Events — Application-specific client errors (varies by application, e.g. HTTP 4xx)
- Server Events — Application-specific server errors (varies per application, e.g. HTTP 5xx)
- Packet Loss — Dropped packets in VoIP protocols and IP Multicast applications



The nGenius K2 Service Status Dashboard shows the severity and number of alerts for a business service profile – in this case, the Critical Apps Service View. It also provides links to application-specific Service Maps, Summaries, Alert Lists and the relevant views within the nGenius Console.

From the nGenius K2 Service Status Dashboard, users can quickly and easily access more detailed, application-specific information, including:

- Services Map – Map or chart that graphically illustrates the application's flow across the enterprise network, through displays of probes, nGenius InfiniStream, and server groups that have automatically identified the specific application under scrutiny.
- Service Summaries — Relevant charts and tables summarizing the service on the selected interface that contain details about users, applications, network flows from the incident / time period in question
- Alert Lists — A list of alerts specific to the selected application / interface
- Console View — A link to context-based views within nGenius Performance Manager

Analytics K2 Service Delivery Manager Engine

nGenius K2 also contains an analytics engine that provides early warning of emerging problems. This predictive, statistical modeling tool automatically generates, monitors and continuously updates performance baselines, identifies abnormal changes in network and application behavior, and alerts on this information.

By comparing current network and application activities to its historical models, the analytics engine within nGenius K2 can detect – in real time – rising and falling patterns in

- Physical and virtual link utilization
- Application utilization
- Application responsiveness as monitored by KPI metrics
- VoIP jitter

The nGenius K2 Analytics engine enables IT staff to identify and address most problems before users are impacted and prevent help desk calls.

Intelligent, Actionable Alerting

Once anomalous behavior is detected, nGenius K2 generates an Alert that contains detailed root cause evidence. The evidentiary details include time, monitored interface/circuit, severity, and a description of the applications and the cause of the alert. Graphical charts views summarize the information captured when alarm was triggered. User can further click on the graphs to drill down into nGenius Performance Manager for additional interactive troubleshooting views.

nGenius K2 groups related incidences together into a cascading alert, which minimizing the number of alerts IT staff needs to investigate. Since nGenius K2's automated analytics alerts are based on sophisticated, statistical modeling and not a static threshold, it produces fewer, more meaningful alerts, allowing IT staff to spend more time to focusing on higher value activities rather than chasing false positives.

All alerts are posted to the nGenius K2 Alert List, which contains a summary panel and interactive filtering section, in addition to the list of alerts. The Alert List not only displays Analytics and KPI alerts, but can also display other alarm types collected by nGenius Performance Manager, such as Power, Device and basic threshold alarms for consolidated event management.

From the alert details, network staff can directly drill down into nGenius Performance Manager for any additional details necessary for troubleshooting the incident in question.

Streamlined troubleshooting workflow

Service Summaries are event-specific charts that provide relevant usage/trend information about what was actually happening on the network at the time of the event. Information typically displayed includes:

- Service State over Time
- KPIs over Time
- Application Usage over Time
- Response Time Distribution over Time
- Worst Performing Locations
- Worst Performing Servers

Service Summaries are typically a good starting point for analysis and often provide the launch point into NetScout System’s KPI-to-Flow-to-Packet workflow that streamlines the troubleshooting process. A right-click on any chart launches the same view in nGenius Performance Manager for additional analysis, and if needed, packet decodes can be launched from nGenius Performance Manager with a mouse click.

Anyplace, Anytime visibility

nGenius K2 mNOC Mobility extends the always-on visibility of nGenius K2 to enable anytime, anyplace access to real-time service delivery management data on browser-based mobile devices. With mNOC Mobility, users receive immediate event notification with single-click access into critical management views and reports showing the status of service health from most web-enabled mobile devices for faster triage.



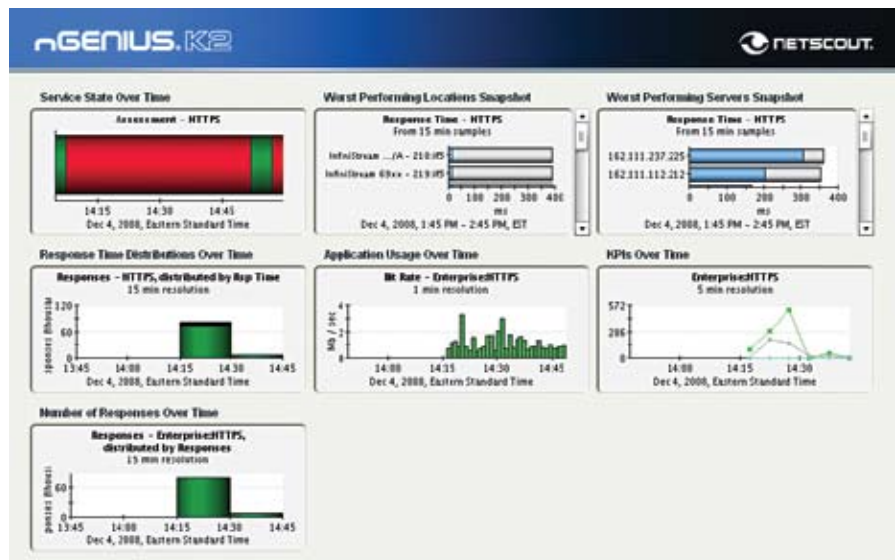
The nGenius K2 Alert List displays the time, location, severity, and the links and applications affect by anomalous behavior, as well as a description and links to supporting charts, providing the evidence necessary for fast problem resolution. It also provides rich filtering capabilities.

Self-Management

The Service Status dashboard contains icons for two specialized services that monitor and reports on problems within the nGenius Performance management environment itself: the nGenius Performance Network (nPN) and the physical network. The nPN icon displays current conditions for nGenius instrumentation – the nGenius Servers, Probes, InfiniStreams, Collectors –

and their associated processes. The PhysicalNetwork icon displays nGenius data source interface alarms. The status of these processes indicate the health of the nGenius server or data source device and provides the information necessary to quickly diagnose and resolve any issues with the nGenius Performance Management System itself.

To summarize the benefits achieved by using nGenius K2 within your nGenius



Service Summaries provide detailed information about what was happening during the incident in question and provides a good starting point in the KPI-to-Flow-to-Packet troubleshooting workflow that streamlines and accelerates problem resolution.

Performance Management environment, nGenius K2 helps network, data center and application managers respond to the challenges presented by the modern IP network by

- Enabling better alignment between the business goals and IT services
- Predicting and preventing performance degradations to minimize service disruptions
- Automating and speeding problem identification and diagnosis
- Accelerating problem resolution

KEY FEATURES

Service Status Dashboard

- Red, yellow, green indicators depicts the current state of defined application services
- Aggregate service profiles to create a Business Service View Indicates the number and severity of alerts for the last hour, last 6, 12 or 24 hours, Today, Yesterday, Last 7 days, or Last Week
- Provides drill-downs to service maps and filtered alert list
- Displays current conditions for nGenius instrumentation and processes, known as the nGenius Performance Network (nPN)
- Monitors the physical network via probe interface alarms
- Service profile drilldown displays all applications that belong to that service (defined by user)

Alert List

The nGenius K2 Alert List contains a summary panel, interactive filtering section, and the list of alerts. It can also display other alarm types collected by nGenius Performance Manager servers. Alert lists can be global in nature, specific to an application service, or specific to a device:

- Alert ID
- Time detected
- Monitored link/circuit affected
- Acknowledgment
- A problem description that may contain information about the applications

affected, whether it was a rising or falling pattern, and detection window.

- Alert severity
- Alert type

Service Map

- Shows the topology mapping for a particular service by displaying the nGenius Probes and InfiniStreams that detected the application during the specified timeframe
- Red and yellow indicators pinpoint the segment where alarm occurred
- Optional grid view for large networks
- From the interface icon:
 - View a summary page for the application and interface
 - View a list of alerts for the application and interface
 - Drill down to the nGenius Performance Manager console

Service Summary Page

Displays related charts and tables for a selected application service and interface, including:

- Service State over Time
- KPIs over Time
- Application Usage over Time
- Response Time Distribution over Time
- Worst Performing Locations
- Worst Performing Servers
- Service Status Over Time

Configurable summary time range

- Last hour
- Last 6 hours
- Last 12 Hours
- Today
- Last 24 Hours
- Yesterday
- Last 7 Days
- Last Week

For More information

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

All Service Summary views are interactive

- Toggle between Graphical and Chart views
- Add Forecast lines
- Zoom in or out
- Toggling between logarithmic / linear views
- Mouse-over data display

nGenius Performance Network

Monitors the status of the nGenius Performance Management System:

- nGenius Probes
- nGenius InfiniStreams
- nGenius Collectors
- nGenius Performance Manager Servers
- nGenius Performance Manager processes, such as FlowLogger, Analytics, Watchdog, PresentServer, Warehouse, Logger, and Database

Automated Analytics

- nGenius K2 analyzes and generates alerts for anomalous behavior in:
 - Link utilization for monitored physical and virtual interfaces
 - Application utilization, including changes in undefined traffic
 - TCP connect time
 - VoIP jitter
- Key Performance Indicators (KPIs): Packet Loss, VoIP jitter, Slow Application Responsiveness, Application Timeouts, User Events, Server Events

Analytics Alert Presentation

- Issues alerts automatically when anomalies are detected
- Color codes and prioritizes alerts by severity
- Displays alert details and charts
- Ability to exclude non-business hour
- Ability to disable or suppress alerts that are not considered necessary

mNOC Mobility

- Thin-client support for Web-enabled mobile devices
- Anytime, anyplace access to event notification and historical or on-demand reports
- Single-click access into detailed summary incident views

Alert Filtering

- Ability to sort/filter alerts by
- Severity
- Alarm type (Analytics, Power, Basic, Device)
- Timeframe
- Username
- Interface
- Acknowledge/unacknowledged
- Full-text search of description field

HomeSpace

- A portal-like interface that can be customized with external RSS feeds or NetScout feeds, including Ad Hoc Reports, Performance Manager console views, and NetScout Systems blogs
- Up to 10 feeds supported

Third-Party Integrations

nGenius Alerts with evidentiary details have been integrated with, and can be forwarded to:

- HP Network Node Manager (NNM)
- HP Network Node Manager i-series (NNMi)
- HP Operations Center
- HP Business Availability Center (BAC)
- IBM Tivoli NetView
- IBM Tivoli Event Console (TEC)
- IBM Tivoli Netcool/OMNibus

Ordering Information

nGenius K2 is installed with nGenius Performance Manager but is enabled through a separate license. The number of licenses required on nGenius K2 must match the number of licenses installed for nGenius Performance Manager for each server instance.

For More information

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



Corporate Headquarters

310 Littleton Road
 Westford, MA 01886-4105
 Phone: 978-614-4000
 Toll Free: 888-999-5946
www.netscout.com

European Headquarters

NetScout Systems (UK) Ltd.
 100 Pall Mall
 London SW1Y 5HP
 United Kingdom
 Phone: +44 (0)20 7321 5660

Asia/Pacific Headquarters

Room 105, 17F/B, No. 167
 TunHwa N. Road
 Taipei, Taiwan
 Phone: +886 2 2717 1999
www.netscout.cn

©2010 NetScout Systems, Inc. All rights reserved.

NetScout, the NetScout logo, nGenius, Sniffer, InfiniStream are registered trademarks of NetScout Systems, Inc. Other brands, product names and trademarks are property of their respective owners. NetScout reserves the right, at its sole discretion, to make changes at any time in its technical information and specifications, and service and support programs.

DS_01_2010 RevB