NETSCOUT.

nGenius Collector Appliance

Scalable, High-Capacity Appliance for Collection of Cisco NetFlow and Other Flow Data

HIGHLIGHTS

- Measure service responsiveness across the network with up to 500 Cisco IP SLA synthetic transaction tests
- Scalable collection of up to 2 million Cisco NetFlow, IPFIX, Juniper J-Flow, Huawei® NetStream and sFlow flows per minute
- Captures and stores Flow datagrams for historical deep-dive analysis
- Collects Flow data from up to 5,000 flow-enabled router or switch interfaces per appliance
- Supports both IPv4 and IPv6 environments
- Purpose-built hardware and virtual appliance deployment options

Product Overview

Deployed at key traffic aggregation locations, nGenius® Collectors extend the reach of the nGeniusONE® Service Assurance solution and are used primarily to generate flow-based statistics (metadata) in memory for specific traffic types. This NETSCOUT data source collects metadata on IP SLA and IPPING protocols, flow data from NetFlow routers, link-level statistics, and utilization data from MIB-II routers.

Listening passively on an Ethernet wire, nGenius Collectors examine specific traffic collected from flow-enabled routers and switches (e.g., Cisco® NetFlow, Juniper® J-Flow, sFlow®, NetStream®) and from IP SLA test results to generate a variety of statistics. In addition, Collectors can be configured to capture datagrams from Flow-enabled routers and analyze them via datagram capture, which allows users to perform in-depth capture and filtering.

Metrics from nGenius Collectors are retrieved through a managing nGenius for Flows Server for analysis, enabling display of utilization metrics, quality of service (QoS) breakdowns, and application breakdowns in nGenius for Flows and other tools in the nGeniusONE Service Assurance Solution.

nGenius Collectors are offered in both hardware and virtual appliance options, with the following features:

- The purpose-built nGenius Collector 3400 hardware appliance is manufactured by NETSCOUT® with 4 terabytes of storage
- The Flow Collector Virtual Appliance is a virtual machine equivalent of the nGenius Collector hardware appliance, running on a VMware or KVM hypervisor.

N-03400-MSHAB | 100M/1G/10G Base-T Interface, 4 TB storage
V-03300-32-PA | 10/100/1000 virtual network adapter, 100 GB to 2 TB storage support
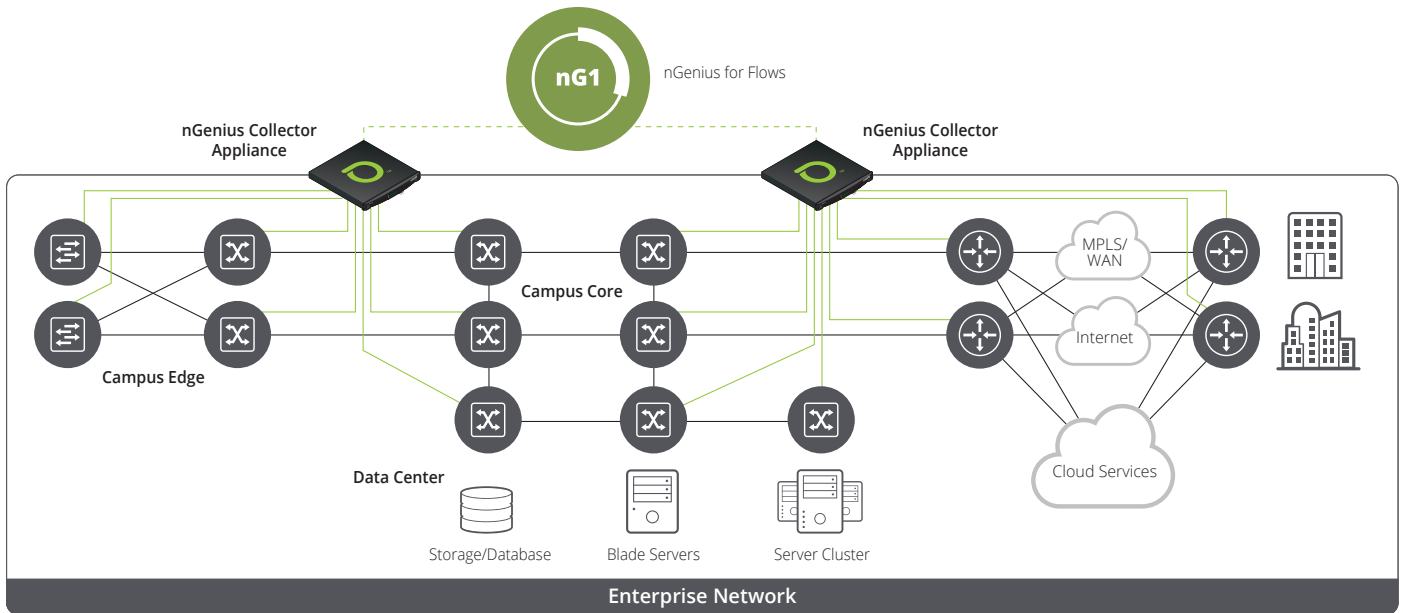
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Figure 1: nGenius Collector supports large-scale, high-capacity Flow collection from across the enterprise.

Product Capabilities

nGenius Collector appliances offer the following core functionality:

- Uses NETSCOUT's patented Adaptive Service Intelligence® (ASI) architecture to ensure that a common set of statistics and metrics are created across multiple data sources
- Collects NetFlow, J-Flow, sFlow, and NetStream metrics from network switches and routers, providing insight into the hosts and traffic conversations
- Measures network performance and availability between IP SLA-enabled devices and application server end points
- Supports IP SLA Testing on DHCP, DNS, ICMP Echo, UDP Jitter, Web Page Retrieval
- Supports IPPING – Tracks how long it takes to execute an ICMP ping from the nGenius Collector to as many as 20 different IPv4 addresses

The nGenius Collector supports the following:

- SNMP v1, v2, and v3 (for communication)
- MIB-II
- An extended MIB-II table is also supported

Leverage Existing Investments

nGenius Collector appliances are commonly deployed in data centers or other core locations and configured to receive data from Flow-enabled routers or switches located anywhere in the network. The appliance does not need to be physically deployed in the same location as a targeted switch or router. This flexibility enables Flow coverage for very large or distributed environments with just a few strategically placed appliances to collect data from thousands of remote router and switch interfaces.

Troubleshoot NetFlow Deployments with Continuous Datagram Capture

Built-in capture mechanisms in the nGenius Collector enable the appliance to continuously capture and store NetFlow datagrams. Both nGeniusONE and nGenius for Flows can decode and analyze captured datagrams. Decodes are supported for NetFlow versions 5 and 9. This decode support is most commonly used by information technology (IT) operators to troubleshoot NetFlow deployments to validate that the configurations on their routers and switches are set to export the correct information and level of detail.

Measure Responsiveness of Network Services with IP SLA

nGenius Collector dynamically discovers IP SLA tests configured on Cisco routers or switches and then polls those devices for the test results. IP SLA provides embedded Cisco IOS® functionality, allowing the router or switch to measure application responsiveness using synthetic transactions. These tests measure network performance and availability across the network, enabling IT personnel to detect problems before they affect user experience.

Comprehensive Flow-Based Support

By supporting large traffic volumes, the nGenius Collector appliance enables IT administrators to incorporate Cisco IP SLA, Cisco NetFlow, IPFIX, Juniper J-Flow, sFlow and NetStream metrics into a global monitoring strategy. The appliance collects the data used by nGenius for Flows to compile high-level metrics (e.g., top hosts, top talkers, application utilization, and QoS usage) across the entire organization in a cost-effective manner.

By consolidating information from all deployed nGenius Collector appliances, nGenius for Flows obtains a comprehensive view to provide advanced alarming, trending and analysis, capacity planning, troubleshooting and QoS validation in unified views.

Specifications

nGenius Collector Monitoring Specifications

nGenius Collector Monitoring Capabilities	Description
Application Recognition	• Well-known TCP- and UDP-based applications • User-defined, custom-developed applications • Custom application port / server associations • Complex applications using port-ranging and port-hopping
Flow-Based Record Packet Capture and Decode	• Built-in capture mechanism in the nGenius Collector captures datagrams from Flow-enabled routers • Decodes for NetFlow v1, 5, 7, 9
Flow-Based Data Sources Supported	• NetFlow v5, 9 • J-Flow v9 (based on NetFlow v9) • sFlow v2, 3, 4, 5 • NetStream (based on NetFlow v5 or 9)
Monitored Objects	• Flow-enabled router interfaces • QoS class monitoring • Site monitoring supports remote site analysis
Data Collection	• Processes up to 2 million flows per minute • Receives Flows from up to 5,000 Flow-based interfaces • Polls up to 500 IP SLA tests
Alarming and Event Identification	• Supports router interface alarming on Flow-based Router Interface, QoS and Site • Supports rising, falling and time-over-threshold parameters
Data Granularity	• One-minute Flow-based increments (dependent on router configuration) • Five-minute IP SLA increments • Database supports historically logged data for applications, hosts and conversation flows • Hourly, daily, weekly, monthly, and custom time range view selections

nGenius Collector 3400 Hardware Appliance
Physical and Environmental Specifications

Physical Dimensions: 1U Rack-mountable chassis	**Height:** 1.7 in (4.3 cm) **Width:** 17.2 in (43.7 cm) **Depth:** 25.6 in (65 cm) **Weight (Maximum Configuration):** 38 lbs (17.24 kg)
Operating Environment	**Vibration (Operating):** 0.25 G from 5–200 Hz for 15 minutes **Temperature (Operating):** 41° to 95°F (5° to 35°C) **Humidity (Operating):** 8% to 90% (non-condensing) **Altitude:** -50 to 10,000 ft (-16 to 3,048 m) **Mechanical Shock (Operating):** 1 shock pulse of 20G for up to 2.5 ms
Power	**Rating:** 700W/750W redundant, auto-ranging: 700W: 100-140 VAC, 50-60 Hz, 8.0-6.0 Amp 750W: 200-240 VAC, 50-60 Hz, 4.5-3.8 Amp **Maximum Consumption:** 5.9A, 281W, 959 BTU/Hr

LEARN MORE

For more information about nGenius Collector Appliance options for the enterprise, please visit:

https://www.netscout.com/product/ngenius-collector

nGenius Collector 3400 Hardware Appliance
Configuration Specifications

System Storage	One 240 GB solid-state drive (SSD)
Storage Drives	One 4 TB SATA drive configured in RAID 0
LAN Ports	10 Gigabit / 1 Gigabit RJ45
Remote Management	• Local console connection via RS-232 Console port • Remote Web-based management via RMM/IPMI port • Remote console via nGenius for Flows (Agent Configuration Utility menus) • Remote console via SSH connection

Flow Collector Virtual Appliance
Configuration Specifications

The table below summarizes the resources allocated with the Virtual Collector virtual machine image. Note: The nGenius Virtual Collector Appliance requires nGenius for Flows.

System Storage	One 50 GB system drive allocated in virtual machine image
Storage Drives	• Supports 100 GB to 2 TB • Not allocated in virtual machine image. Must be provisioned manually after installation, per NETSCOUT documentation
vCPUs	• Supports 4-32 vCPUs • Provisioned with 8 vCPUs in virtual machine image on installation
Memory	• Supports 8-32 GB • Provisioned with 8 GB in virtual machine image on installation
LAN Ports	One 10/100/1000 virtual network adapter included in the virtual machine image: • VMware installations use the E1000 driver • Ubuntu/KVM installations use the virtio driver

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