

Performance Management with nGenius for Flows

As Enterprise environments continue to grow, it is increasingly important for IT teams to understand the traffic that is traversing their network. As digital transformation is expanding business services into cloud, BYOD, and mobile computing areas, IT teams need to evolve their network monitoring strategy to look beyond basic link utilization and packet loss.

NetFlow and other similar flow-based data sources provides a cost-effective way of collecting network and application performance details from remote and branch office locations where it might not be as feasible to collect full traffic data. This remote perspective is an essential component of a robust service assurance platform that incorporates packet-based, flow-based and IP SLA-based data for a comprehensive solution capable of isolating faults across multiple domains very quickly.

nGenius® for Flows provides real-time visibility into application performance by analyzing rich flow-based data across the network, on premises or in the cloud.

Powered by Adaptive Service Intelligence™ (ASI) technology, the highly scalable and patented deep packet inspection engine, nGenius for Flows provides IT organizations with a comprehensive view of service performance across the service delivery environment. nGenius for Flows leverages flow-based data such as NetFlow and others to generate “smart data” for smarter analytics to assure performance, manage risk, and facilitate superior decision-making regarding application and network services. With these smarter analytics, IT teams can quickly triage network performance issues even in complex multivendor environments, ultimately reducing Mean Time to Repair (MTTR).

Performance Issues Solved By nGenius for Flows

nGenius for Flows delivers end-to-end visibility into the performance of an integrated application environment including router and switch performance metrics, service enablers, end users, the application and web tiers, and the network. As a result,

nGenius for Flows uncovers the full context of service anomalies contributing to slow application response times and poor user experience including:

- QoS misconfiguration – Tracking QoS tagging can be valuable for application and voice performance over the backbone. Mismatched policies or stripped tags are one of the more common causes of performance issues
- Insufficient network bandwidth – nGenius for Flows uses specialized workflows to illustrate application usage over time on a per link basis, to help IT teams understand how much bandwidth each application is using, and whether some applications are being starved out by others
- Which are the most utilized applications and when – When performing traffic studies at a remote or branch office location, understanding the most utilized applications at the site is key to appropriately managing the provisioned bandwidth available

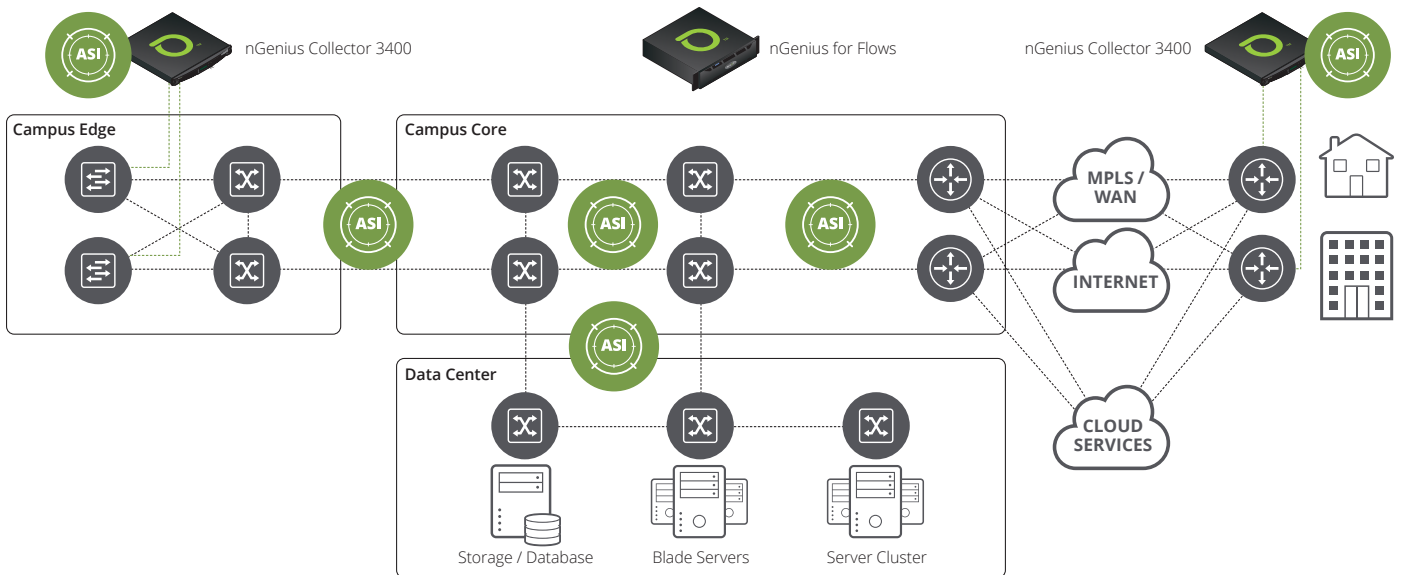


Figure 1: NetFlow traffic can be used to supplement traditional packet data to provide a comprehensive end-to-end performance monitoring solution.

- Which clients and servers are consuming the most network bandwidth – Top hosts and conversations are key indicators for IT staff looking to understand their network performance. Trended data over time can provide organizations with information that may point to seasonal changes in utilization which in turn can help better plan and budget necessary capacity

A common complaint of IT organizations is that the tools at their disposal look at the different components of their service delivery chain in a vacuum. nGenius for Flows looks at performance metrics in context with the other service components, to rapidly identify problems and determine the root cause.

Support for xFlow, MIB-II and IP SLA

In order to help IT resolve performance degradation issues, nGenius for Flows relies on the power of ASI. Through continuous monitoring of network and application traffic flows, ASI data enables nGenius for Flows to provide a holistic view into the impact of each component that could potentially cause performance problems. This highly structured data provides operational insights and visibility into the potential sources for service degradation including mismatched QoS tags, link congestion, and application slowness.

nGenius for Flows leverages the power of NetFlow, sFlow, cFlowd, J-Flow, Huawei NetStream®, IPFIX, IP SLA, and MIB-II data to provide IT teams with an efficient top-down approach to problem identification, service triage, and resolution. This ultimately improves service assurance and reduces MTTR by allowing IT to:

- Plan capacity for their applications and services
- Increase visibility to service activity at remote and branch office locations from a centralized vantage point
- Improve troubleshooting of issues occurring across the enterprise environment to meet user experience goals and objectives

World Class Platform Supporting Even the Largest Enterprises

nGenius for Flows provides a consistent set of service-oriented workflows to enable seamless, contextual transitioning across multiple layers of analysis. This allows the platform to facilitate efficient and informed hand-off of incident response tasks across different groups fostering IT team collaboration.

This platform simplifies the challenge for IT in delivering high quality, consistent user experience for network services by providing the following key analysis layers:

- **Service Dashboard** – The dashboard delivers real-time health status, metrics, alarms, and intelligent early warning of problems with infrastructure performance. IT teams can use it to quickly spot any performance issues related to a composite service including the web components, key middleware and service enablers, and the database servers in a single view.
- **Service Monitors** – Enables IT teams to quickly triage and isolate the sources contributing to application performance degradation across the network environment. These customizable views deliver insights into network and application performance to facilitate rapid triage and root cause analysis.
- **Host Analysis** – Search on individual host addresses to understand individual user performance issues
- **xFlow Decodes** – Troubleshoot xFlow configuration by decoding the actual flow datagrams to verify the settings configured
- **Reporting** – Use flexible templates or custom reports to deliver regular status updates to key stakeholders. IT teams can tailor views to individual needs to ensure the right information is always at their fingertips

nGenius for Flows provides highly scalable coverage for complex service delivery environments. The Enterprise-wide site license allows IT teams to run the application from as many local servers as they want at no additional cost. These servers are centrally managed by the nGeniusONE® Global Server,

consolidating all collected data into a single view. By using this distributed, scalable architecture, local processing of analytics and metadata takes place on the individual local servers, speeding analysis and reducing network overhead while still providing centralized management and a single unified view into all network and application performance data.

Benefits of NetFlow with the nGenius Solution

- **Quickly and Efficiently Triage Issues** – Comprehensive service delivery platform covers all tiers including the load balancers, web, application, and database tiers enabling IT teams to efficiently research performance issues and quickly identify the root cause and reduce MTTR.
- **Capacity Planning** – Manage available network capacity and analyze application performance to ensure sufficient bandwidth is available and QoS policies are tuned correctly for optimum end-user experience
- **Improve IT Team Collaboration** – Using common workflows across all application tiers, the platform improves time to knowledge by enabling collaboration between network, application, security and database teams
- **Find problems before they become user affecting** – IP SLA monitoring measures the responsiveness of applications to identify performance degradations before users are impaired
- **Enterprise Class Scalability** – Expand visibility to flexibly address a range of xFlow environments, even the largest enterprises, from a single pane of glass
- **Part of a Broad Service Assurance Solution with nGeniusONE** – Use nGenius for Flows standalone to monitor xFlow, MIB-II and IP SLA, or combine with packet data in the nGeniusONE platform for a truly world class Enterprise solution

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