

nGenius Integrated Agent for HP

Intelligent data source for the nGenius Service Assurance Solution extends granular packet-flow technology to provide cost-effective visibility into network and application performance at the network edge

Highlights

- Virtualized probe for the NetScout nGeniusService Assurance Solution deployed on HP AllianceONE Advanced Services zl Module
- Leverages HP E8200 and E5400 Switch Series platforms
- Real-time application performance and response time metrics help predict and prevent service delivery degradations
- High value intelligent early warning provides immediate view into service delivery levels, user experience and potential security threats
- Significantly lowers cost of visibility by leveraging existing network equipment to reduce the cost and complexity of monitoring applications and IT services end-to-end
- Extends visibility from HP Networking switches to HP Software Management platforms to deliver real-time performance and threat alerts with two-way integration enables contextual, cross-platform drill-down into nGenius data

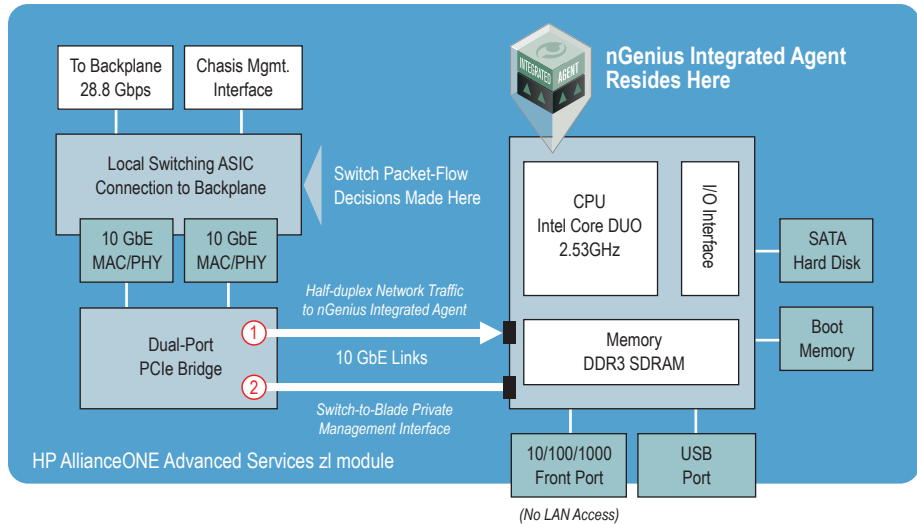


Figure 1: The backplane interface (Eth1) is used to continuously monitor traffic

Product Overview

The nGenius® Integrated Agent software is self-contained virtualized probe software integrated and deployed within a third-party network device. Optimized for deployment at the network edge and branch office, the nGenius Integrated Agent feeds valuable performance metrics into the nGenius Service Delivery Manager or the nGenius Performance Manager and dramatically reduces costs associated with monitoring at the branch and network edge by leveraging an existing third-party network platform as an intelligent instrumentation point. Delivering cost-effective and scalable analysis of all traffic traversing the network, this solution generates rich key performance metrics that include traffic, application and service utilization, conversations, error conditions, resource utilization, and response time.

The nGenius Integrated Agent software provides the IT organization with a highly scalable, predictive and preventative service delivery management approach that identifies and resolves issues before users are impacted.

Supporting both strategic and tactical requirements for managing the performance of applications, services and networks, the nGenius solution streamlines workflows and enables the IT organization to fully understand resource impact and all interdependencies across networks to optimize service delivery, protect against service outages, and assure the quality of the services delivered.

Product Description

The nGenius Integrated Agent for HP

The nGenius Integrated Agent for HP® is integrated and deployed within an HP E8200 or E5400 Switch Series to provide high-definition packet-flow visibility at logical network boundaries (see Figure 1). By leveraging an HP Networking switch as a host platform, the nGenius Integrated Agent eliminates the need for dedicated, stand-alone network monitoring hardware.

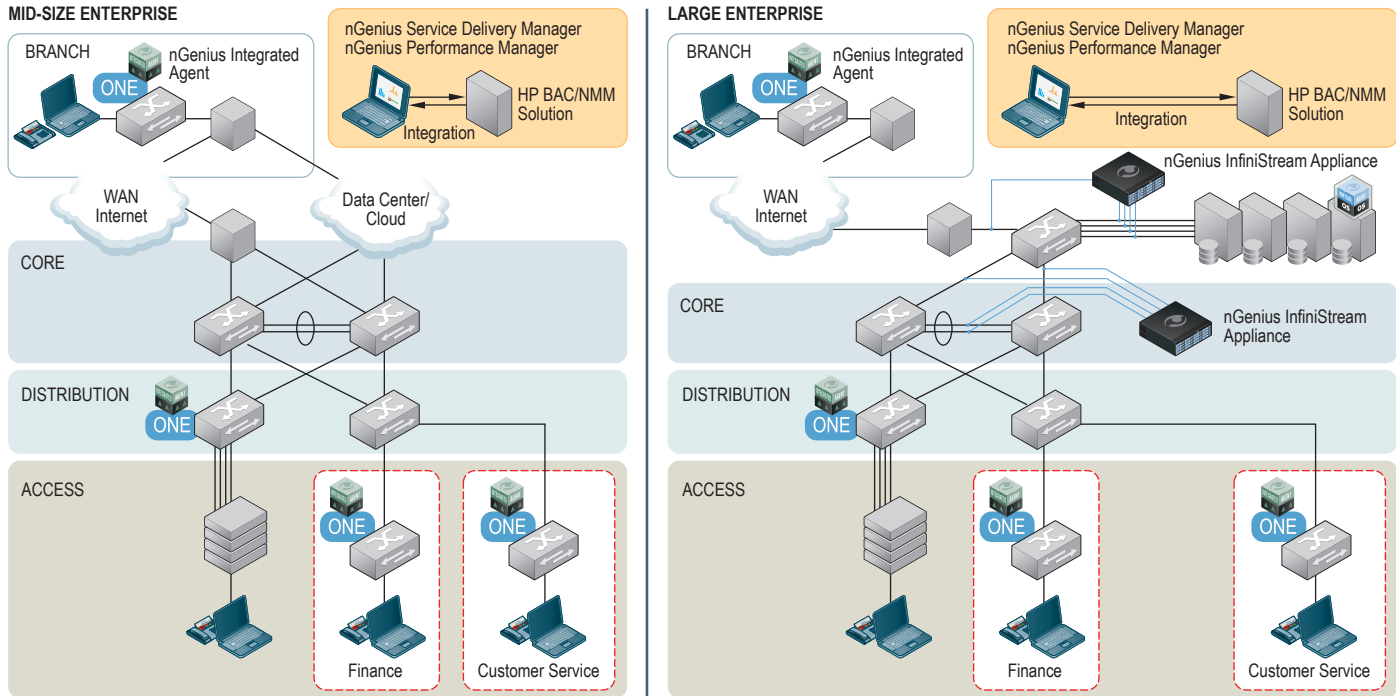


Figure 2: The combined HP Networking and NetScout solution can be deployed as an edge only solution for mid-size enterprise environments, or as an end-to-end solution covering the high performance data center for large enterprise environments

Integration with HP Networking Switches

As shown in Figure 2, the nGenius Integrated Agent runs as an application on the HP AllianceONE Advanced Services zl Module and does not co-exist with other applications on the same module. The metadata derived from the packet-flows is used by the nGenius Service Assurance Solution for real-time analysis and reporting. The nGenius Integrated Agent for HP delivers the same functionality, metadata and metrics as other strategically deployed nGenius Intelligent Data Sources to enable pervasive and consistent visibility across the enterprise. Flexible on-demand packet capture enables short-term historical analysis capabilities from any equipped network device. While only one HP AllianceONE Advanced Services zl Module with the nGenius Integrated Agent can be deployed on a single switch, additional modules may be used to run other applications.

Powerful Packet-Flow Metadata

All nGenius intelligent data sources leverage a common metadata framework called Common Data Model (CDM) architecture. CDM is a NetScout technology innovation that creates a common set of statistics and metrics across multiple data sources to derive seamless traffic intelligence regardless of interface type. The CDM architecture allows packet-flow data from disparate network technologies, regardless of the location to be integrated into a common repository for consistent analysis, views and reports. CDM provides detailed information for emerging technologies, such as virtualized environments, and policy-based configurations, including VoIP, MPLS, QoS, VPNs, NetFlow and sFlow.

Key Benefits

By using the HP Networking E8200 and E5400 Switch Series devices as intelligent instrumentation points, IT organizations achieve cost-effective pervasive visibility at the network edge and in remote offices. The nGenius Integrated Agent for HP integrates service delivery performance metrics gleaned from HP Networking platforms into HP Enterprise Management platforms. This unique and compelling approach is not available from other networking vendors. The nGenius Integrated Agent from HP allows the IT organization to:

- Leverage best practice network design architectures to provide pervasive, always-on visibility across the enterprise network environment
- Significantly lower cost of instrumentation at the network edge by using existing network equipment

to host an intelligent data source – this eliminates the need for separate monitoring hardware and reduces the cost and complexity of end-to-end monitoring of applications and IT services, frees up valuable rack space, reduces management complexity, simplifies asset management, and reduces overall power consumption

- Optimize the service delivery environment to achieve consistent and optimal performance and utilization at all service delivery points and better leverage existing Infrastructure
- Assure business service continuity and achieve optimal user experience
- Predict and prevent service delivery performance issues
- Rapidly identify and resolve application and network performance issues
- Minimize the impact of performance degradations by accelerating identification of root cause at edge and branch locations to greatly improve problem resolution capabilities
- Increase operational efficiency by reducing time for tasks with streamlined and logical workflows

Figure 2 shows typical deployment scenarios for this solution. The first deployment scenario is a mid-size enterprise or an environment where only edge and branch office visibility is sufficient. Getting as close to the user as possible improves visibility into valuable performance metrics such as application response times. The second deployment scenario is a large enterprise environment that provides coverage of the network core, data center, and the edge.

To achieve end-to-end visibility, the network core, data center, and locations that require higher performance with long term packet storage and forensics capabilities, are typically instrumented with nGenius InfiniStream® appliances that combine deep packet analysis with continuous packet capture capabilities.

Integration with HP Software

The integration of the nGenius Service Assurance Solution into the market leading HP network and application management platforms from HP Software enables IT organizations to cross-leverage investments in HP Networking, HP management, and NetScout technology. This highly scalable, cost-effective out-of-the-box solution provides an unmatched level of integration into enterprise-class management platforms that empowers IT operations with unprecedented visibility into IT service delivery from the data center to the network edge.

Key Capabilities

Automatic Recognition and Monitoring of Applications

- Support for a variety of application types, including well-known and children of well-known applications
- User-defined, custom-developed applications
- Peer-to-peer applications
- Web-based applications and URLs

On-Demand Packet Analysis

- On-demand short-term packet capture (up to 1 GMB of data)
- Packet capture may be triggered manually or based upon a specific event or alarm

Response Time Analysis and Key Performance Indicators

- Generates key performance indicators based upon including packet loss, inter-packet delay, client and server errors, and timeouts
- Passive application responsiveness measurements for virtually all application types
- One-minute granularity for average response time, number. of active sessions, number of successful transactions, and number. of server error types
- 15-minute granularity for maximum and average response time per client/ server pair, total number of transactions, number of successful transactions, TCP connect time, number. of active sessions, total packet loss, responses time distribution, number of timeouts, number of retries, and application payload

Convergence Management Metrics

- 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
- IP addresses, phone extensions and connect times
- Packet-level visibility and decode of voice protocols
- 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

Alarming and Event Identification

- Define alarms for link utilization, application utilization, application response time, application availability
- 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

Data Granularity

- 15-second, real-time views with 1-second peaks

System Requirements

NetScout Requirements

nGenius Integrated Agent requires nGenius Performance Manager Workgroup or Enterprise for reporting and viewing.

- nGenius Integrated Agent for HP (1 agent per chassis/module)
- nGenius Performance Manager v4.7 or higher (workgroup or enterprise license required)
- nGenius Service Delivery Manager (recommended)
- nGenius InfiniStream Appliance (recommended)

HP Networking Requirements

- HP E8200 or E5400 Series Switch Platform
- Switch software must be version K.14.60
- HP AllianceONE Advanced Services zl Module (J9483A)

Notes

- Performance levels will vary depending host network equipment environment and performance characteristic
- For complete compatibility and system requirements, refer to related HP documentation



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