

nGeniusPULSE

Business users depend on IT to ensure they have access to the network and applications they need to do their jobs. For IT, the network has expanded from the data center to the edge to include users on Wi-Fi connections at remote or home office locations - accessing services hosted in the cloud or in multi-cloud environments.

The infrastructure supporting the delivery of critical business services has also become more complex, with combinations of physical and virtual servers and wired and wireless networks, Wi-Fi infrastructure and an ever-expanding number of devices. All of this means that IT must have visibility to ensure the availability, reliability, and performance of both the critical business services and the underlying infrastructures supporting those services.

nGenius®PULSE uses synthetic testing to measure the availability and performance of applications over wired or Wi-Fi connections, giving IT essential visibility to the edge of

the network. The synthetic tests run even when no one is on the system, providing early detection of potential issues. For business service availability and performance, nGeniusPULSE uses hardware and software-based active agents, called nPoints, to simulate user actions; giving proactive awareness from anywhere in the Enterprise. All performance information is sent to the nGeniusPULSE Server where it is displayed in easy-to-read dashboards and drill-downs.

When deployed as part of NETSCOUT® Smart Edge Monitoring, nGeniusPULSE nPoints capture packet data from the synthetic tests and sends it to InfiniStreamNG® or vSTREAM® appliances. With the use of advanced Adaptive Service Intelligence® - ASI technology to combine passive, packet-based monitoring and synthetic business transaction testing intelligence in a single data source, IT extends their visibility into the end-user experience along the client edge (e.g., work-from-home and remote locations).

Challenges Solved by nGeniusPULSE

IT is expected to assure service delivery in increasingly hybrid environments that consist of on-premise and cloud applications, infrastructure – both physical and virtual – and access via wired and Wi-Fi on a variety of devices. nGeniusPULSE helps you successfully overcome the challenges of monitoring this complex network and provide the quality service your business users demand.

Business Service Monitoring: With users accessing business critical apps, including SaaS and VoIP, IT needs visibility throughout the Enterprise to understand how the apps are performing from the users' perspective. When apps are delivered as a SaaS, IT is dependent on 3rd-party vendor support and often forced into a reactive mode when availability or performance issues are reported by business users. Moreover, with users working from many disparate locations, it is difficult to isolate problems and determine root cause. Finally, when monitoring services over Wi-Fi, you need to "be there" in order to measure performance. IT needs visibility to identify who owns the issue and the data to report actual performance to their SaaS vendor(s) for faster resolution.

nGeniusPULSE Empowers IT With Actionable Insight Derived From:

- **Business Transaction Testing:** Monitor the performance of steps or actions within an application from login-to-logout.
- **Wi-Fi Testing:** Monitor accessibility and latency of applications through the Wi-Fi network.
- **Web Application Testing:** Measure service availability and delay in web applications broken down into DNS, SSL, client, application, network, and server components of the response time.
- **VoIP Testing:** Make actual phone calls between two nPoints, or from an nPoint to a phone number to measure MOS, loss, latency, and jitter and other key VoIP-centric metrics.

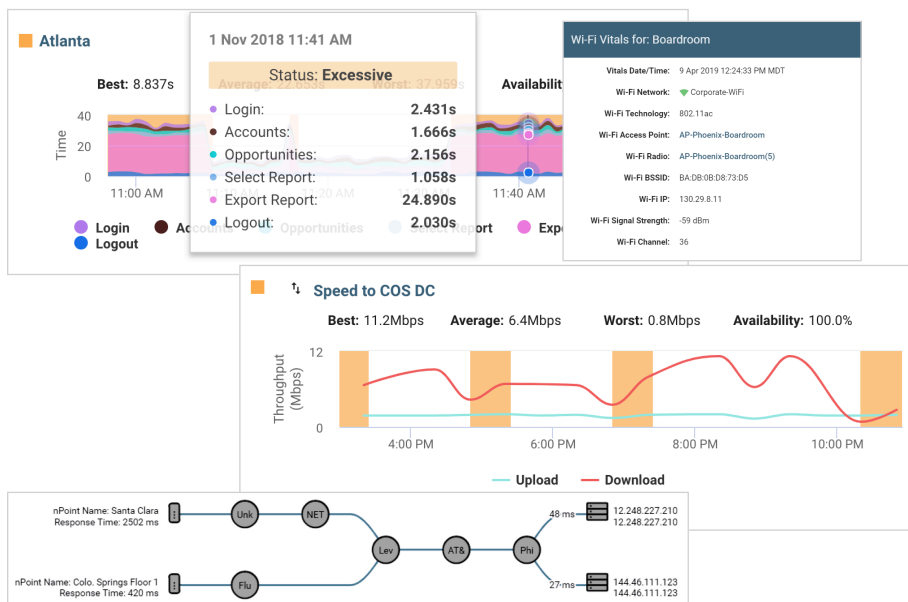


Figure 1: nGeniusPULSE delivers actionable insight for managing SaaS applications.



- **Network Performance Testing:** Ensure your network is performing with continuous monitoring of key metrics such as bandwidth, loss, latency, and jitter.
- **Packet Capture of the Synthetic Tests To Use in nGeniusONE:** Requires license in InfiniStreamNG or vSTREAM appliances with NETSCOUT Cloud Adaptor.
- **Comparison of Wired vs Wi-Fi:** Run tests on wired and Wi-Fi connections to compare performance and isolate Wi-Fi issues.
- **Dashboards:** Drilldown to individual test results and performance over various lengths of time and see results in easy-to-read graphs and trend analysis.
- **Shared Results:** Inform stakeholders of issues and trends via scheduled reports, .csv exports, custom dashboards and an API for performance data extraction to use in other reporting tools.
- **Custom Scripts Platform:** Create custom tests with Python-enabled scripting platform to test customer-specific metrics and KPIs.

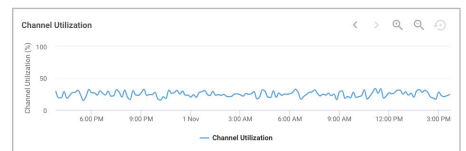
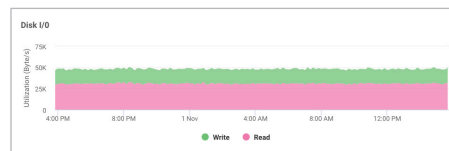
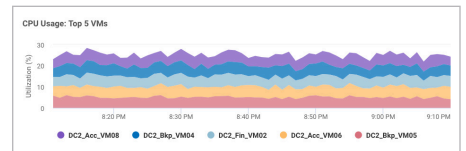
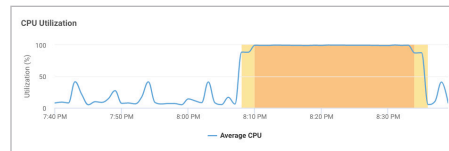
Tests can be written to verify the availability of VPN for users at remote or home locations, within your enterprise, and from worldwide cloud locations, as well as to monitor the number of concurrent VPN users.

Server and Network Device Monitoring:

Once an infrastructure element problem has been identified, IT usually must move to a separate component management tool to perform the final step of troubleshooting. This requires using multiple tools from different vendors with little-to-no workflow between them. IT needs a “top-down” view, starting at the business service, with efficient monitoring configuration and smooth operational workflows to show correlating infrastructure components to quickly diagnose and resolve issues. nGeniusPULSE provides this holistic view of the Enterprise correlating both services and supporting infrastructure to proactively detect problems and resolve issues quickly.

nGeniusPULSE Delivers Infrastructure Monitoring

- **Health Monitoring:** Easily see server, network device, and Wi-Fi infrastructure health.
- **Discovery:** Automatically discover and categorize infrastructure elements throughout the Enterprise.
- **Key Performance Metrics:** Monitor and alert on KPIs such as CPU utilization, memory, disk usage and I/O, and syslog, which are displayed in easy-to-read graphs.
- **Contextual workflows:** Drill directly from nGeniusONE in context and timeframe when triage determines an infrastructure element at issue.
- **Polling:** Server and network device health is polled via SNMP and WinRM (for Windows servers).
- **Virtual Environment Monitoring:** Understand Hypervisor and Virtual Machine health with VMware APIs and contextual parlance.



Benefits of Using nGeniusPULSE

- Improve end-user and customer support by testing from remote locations, even when no one is online.
- Streamline workflows and reduce complexity with Smart Edge Monitoring to get packet level analysis of transactions from anywhere.
- Reduce Mean Time to Know (MTTR) with early warning of issues and ability to identify problem domain, including isolating to Wi-Fi, and assign to appropriate IT team.
- Gain accountability for 3rd party, SaaS SLA compliance by sharing verifiable performance data.
- Enhance business user experience, increasing overall efficiency and productivity.



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