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U.S. University Hospital Improves Visibility for Quality Application Assurance With NETSCOUT

Achieved Quick-Time-to-Value With NETSCOUT Visibility as a Service Consultative Approach

OVERVIEW

The Challenge

- Unreliable data source performance limited IT service monitoring and troubleshooting
- Hospital acquisitions required new data sources for healthcare app visibility and monitoring

The Solution

- nGeniusONE® Service Assurance platform
- NETSCOUT® software-based InfiniStreamNG® appliances
- NETSCOUT® Visibility as a Service

The Results

- Enhanced views into GE MUSE NX Cardiac information management, Cerner PowerChart, and HL7 solutions
- Expanded visibility and proactive monitoring of WAN & SD-WAN, VPN, and Citrix services improved reliability and delivery for care providers

Customer Profile

This university-affiliated U.S. hospital functions as the primary tertiary care and Level 1 Trauma Center in its service region, while also engaged in numerous, high-profile COVID-19 research projects.

Its main campus hosts cancer, neurosciences, heart, ambulatory surgical, and children's care services. As a teaching hospital, the main campus also includes schools for nursing, health technology management, dental medicine, and social welfare programs.

A strategy of increasing their alliances with other regional hospitals has expanded their scope of operations to nearly 1,000 beds.

The Challenge

The hospital had for years relied on one vendor's tools for network troubleshooting and trend reporting, with many of their Network Managers trained as certified engineers on this technology. That organizational commitment notwithstanding, unreliable performance provided by that vendor's installed data sources was becoming difficult for the information technology (IT) team to ignore, even rising to the attention of Chief Information Officer.

Over time, the data source appliances had become oversubscribed, with performance issues and hardware failures resulting. Absent reliable data source performance, the IT team could not access packet-level forensic data they relied on for troubleshooting and reporting. This was exacerbating the challenges to stay ahead of disruptions and effectively extending the time to troubleshoot patient care-impacting issues.

ENTERPRISE

These issues became more pronounced just as the hospital began adding new healthcare entities and applications. As it was, early application and Wi-Fi network issues at one remote location had already been reported to IT. Facing these collective technology issues and their impact on healthcare delivery, IT leadership began examining other vendor approaches available to organization.

Solution in Action

After a deliberate organizational review, leadership made the decision to transition to the NETSCOUT nGeniusONE Service Assurance platform, including software-based InfiniStreamNG (ISNG) smart data sources that improved real-time visibility across its main campus and remote facilities. With these ISNG appliances generating smart data in real-time from the hospital's network traffic for consumption by nGeniusONE, IT resources for the first time had access to:

- Real-time views required for monitoring wide area network (WAN), software-defined WAN (SD-WAN), and virtual private network (VPN) performance
- Easy-to-use application performance monitoring workflows to assure performance of clinical healthcare applications, including GE MUSE NX Cardiac information management, Cerner PowerChart, and other apps used by doctors and hospital staff for care delivery
- Deeper views into performance of business services, including Voice over IP, Unified Communications voice & video, and Microsoft Office 365 apps
- Granular visibility into how the Citrix environment was supporting remote applications, with monitoring of NetScaler gateways, XenApp server, and External Citrix gateway infrastructure
- An improved understanding of how service enabler performance impacts overall service delivery, with nGeniusONE monitoring DNS, DHCP, Health Layer 7 (HL7), and digital imaging and communication (Dicom) services

For their veteran IT team, these expanded visibility and monitoring capabilities were well-received advancements but only served as part of the rationale for making the move to NETSCOUT. For many, it was NETSCOUT's Visibility as a Service (VaaS) consultative approach to operationalizing nGeniusONE across the hospital's IT environment that convinced even the staunchest vendor tool loyalists that it was time to make the change.

Beyond "wowing them" during the review phase, NETSCOUT VaaS resources engaged local IT teams in a way the previous vendor never had. That meant, these NETSCOUT VaaS consultants:

- Customized nGeniusONE Service Dashboard and Service Monitor workflows to first replicate, then improve upon the network troubleshooting and reporting that IT had used for years. With use of nGeniusONE's standard TCP Reporting, Web Services Monitor and Host Analysis views, IT had real-time views that were important to bandwidth management activities that had formerly been undertaken as manual processes. This worked to provide the Network IT team with assurance that network operations would be unchanged with the move to NETSCOUT, which was critically important to them.
- Built dashboards and workflows specific to some of their clinical and business application services for quick health status and intuitive troubleshooting workflow.
- Demonstrated how the nGeniusONE workflow provided easy contextual drill-downs into on-board packet evidence, session analysis, and multi-hop views that increased the value of their forensic activities – all without the need to export packet captures.

The Results

Making technology changes can be difficult in healthcare enterprise environments, especially when there are long-standing financial and IT commitments to maximize return on investment from an installed vendor's toolset.

NETSCOUT's software-based ISNG smart data sources, in combination with the nGeniusONE platform, delivered greater processing capacity to accommodate the hospital's traffic growth in their data center and remote site operations. The software-based appliances also helped achieve conformity to the hospital's well-defined cost containment guidelines. Given the experienced operators of the previous toolsets, the use of NETSCOUT VaaS consultative services offered a bridge to quickly configure nGeniusONE to monitor and analyze their clinical and business services for rapid triage in the event of degradations or issues. This helped the healthcare realize a rapid time to value with the new NETSCOUT deployment.

Of additional relevance, the IT team can use the NETSCOUT nGeniusONE analytics and ISNG smart data sources as a technology baseline to support the hospital's initiatives in expanding visibility across a wider network and application footprint.

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For more information about NETSCOUT solutions for healthcare, visit:

https://www.netscout.com/solutions/healthcare/application-performance

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