

U.S. Medical Center Improves Healthcare Delivery and Critical Application Performance With NETSCOUT

Gains Real-Time Intelligence Into EHR, Radiology Reporting, and UC&C Performance, Consolidates IT Tools

OVERVIEW

The Challenge

- Lack of visibility into Epic EHR and Nuance PowerScribe radiology reporting solutions impacted patient care, staff efficiencies
- Tool consolidation, multi-vendor management, and operating expense challenges

The Solution

- nGeniusONE® Service Assurance platform
- InfiniStreamNG® software appliances and vSTREAM® virtual appliance
- NETSCOUT® Visibility as a Service

The Results

- Improved patient experience and staff efficiency
 - Real-time intelligence into critical healthcare application, remote service delivery, and VMware and UC&C environments
 - Consolidated IT tools, with fewer vendors and support agreements
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Customer Profile

The medical center has been actively involved in addressing the COVID-19 medical crisis on several fronts, including providing primary healthcare delivery services in the region, as well as conducting research & development (R&D) efforts on innovative treatment options.

As the medical center leads these critical efforts, their day-to-day healthcare delivery network factors more than 1,000 patient beds across several hospitals, outpatient centers, clinics, and specialty institutes responsible for supporting 1+ million annual patient visits.

The Challenge

Accompanying a change in organizational oversight, the medical center's information technology (IT) team was responsible for an increasing number of complex digital clinical applications, including:

- A comprehensive Epic Electronic Health Record (EHR) system, whose implementation was designed to better connect clinical data access and ownership to workflow for nearly 20,000 employees. Epic also supports patient use of a dedicated Web-based healthcare portal and mobile app, offering access to appointments, prescriptions, and medical providers.
- A voice-based Nuance PowerScribe application offering voice-to-text support for radiology reporting. With the PowerScribe application offering integrated Nuance Dragon Medical speech recognition technology, the solution improved accuracy of radiology reporting and reduced editing, thereby enhancing productivity. In the medical center's deployment, the PowerScribe application involved unified communications (UC) and media technology, also incorporating application-to-database backend communications.

- A virtual private network (VPN) and VMware Horizon virtual desktop infrastructure (VDI) environment that had become more critical in helping remote employees access to applications across the hybrid cloud.

While these services were recognized as business-critical to improving healthcare delivery efficiencies to patients in need, there were consistent difficulties in monitoring them. For example, while PowerScribe issues were intermittent and brief in duration, IT had no visibility into the UC technology or service dependencies necessary for identifying root cause and reducing mean-time-to-remediation (MTTR) activities. Similar visibility challenges were seen in the highly complex Epic deployment – while the solution was highly valued across numerous departments, it needs real-time monitoring to assure uninterrupted service delivery.

These frustrations served to shine a brighter light on another technology issue – there were too many IT tools creating overlap in some cases, conflict in others, and gaps where visibility was still required. The associated support contracts to manage the disparate tools, without the value of visibility and monitoring results that were needed, made the situation unacceptable. As a result, IT leadership wanted to quickly operationalize any new service assurance solution that would be deployed to provide broad visibility and intelligence into Epic, PowerScribe, VPN/VDI, and all applications moving forward.

Solution in Action

After scrutinizing alternative tools that might possibly address their collective visibility and technology challenges, IT leadership deployed a NETSCOUT solution that included:

- nGeniusONE for real-time intelligence and troubleshooting of their voice, video, and data applications, including Epic, PowerScribe, and VPN/VDI services.
- NETSCOUT Certified InfiniStreamNG (ISNG) Software Appliances installed at primary and backup data centers supporting 40G network speeds.
- vSTREAM virtual appliances are implemented to provide visibility into the VMware and virtual server environment.
- NETSCOUT Visibility as a Service (VaaS), which combines NETSCOUT subject matter expertise on nGeniusONE operations with staff augmentation resources well-versed in the healthcare IT ecosystem.

“You cannot see my face at the moment, but my jaw is on the floor.”

– IT Database Administrator response, after seeing how NETSCOUT extended UC visibility without installing intrusive agents across the network.

IT’s decision to standardize on NETSCOUT was validated by several early nGeniusONE troubleshooting and deployment revelations, including:

- **Identifying root cause of intermittent PowerScribe downtime instances:** Within minutes of NETSCOUT VaaS resources joining an in-progress War Room, an initial Service Dashboard view was used, leveraging vSTREAM-generated smart data in the VMware environment to provide IT leadership with root cause analysis. The true source was not associated with voice performance as anticipated, but rather with the app server not communicating with the database server. In turn, this NETSCOUT intelligence was shared with the medical center’s Application Development team for corrective action.
- **Troubleshooting Epic performance issues:** With nGeniusONE providing the visibility into Epic that had been lacking, NETSCOUT resources quickly were able to troubleshoot performance issues.
- **VPN/VDI monitoring:** nGeniusONE’s integrated ability to monitor the remote business service environment was seen as a value-add, especially in response to workforce transitions that had occurred in the shadow of the recent pandemic.
- **Accelerated deployment:** The IT team gained accelerated access to NETSCOUT smart visibility into, and real-time intelligence about, their healthcare clinical applications and business service environment, with VaaS subject matter experts configuring the initial NETSCOUT solution deployment.

The NETSCOUT passive monitoring approach – which transformed network traffic into smart data used by nGeniusONE’s application and UC performance analytics – was seen as another solution differentiator.

The Results

With NETSCOUT, the IT team was able to provide reliable healthcare application performance to those doctors and specialists depending on Epic, PowerScribe, and other clinical application services to do their jobs, as well as at-home employees counting on VPN and VDI for uninterrupted business service access. NETSCOUT's troubleshooting capitalized on the full benefits of smart visibility, providing on-the-fly differentiation between performance issues occurring in the voice, virtualized servers running on VMware, Web front-end, application server, and database server.

The medical center realized sustained value from its NETSCOUT investment by using VaaS to assure nGeniusONE was consistently used and operationalized across the business, allowing IT teams to dramatically reduce MTTR with smart visibility and real intelligence to meet their healthcare application and business service performance challenges.

The consolidation of several tools into one with nGeniusONE was a significant differentiator for this medical center. Beyond reduced operating expenses, nGeniusONE improved collaboration within the IT team and with vendors, removing time lost in rationalizing disparate, often-inconclusive data. As a result, the medical center was better equipped to provide efficient service delivery to patients during this challenging pandemic period, leveraging the full power of its healthcare application environment, thanks in part to NETSCOUT Service Assurance.

LEARN MORE

For more information about NETSCOUT Healthcare Service Assurance solutions, visit:

<https://www.netscout.com/solutions/service-assurance-healthcare>



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