

Children's Hospital Gains Visibility to Assure Telemedicine Performance

Year-End CapEx Spending Enabled by NETSCOUT Supply Chain Reliability

OVERVIEW

The Challenge

- Telemedicine application performance visibility gaps coinciding with increased usage
- Wanted to make performance management a capital expense and reduce steep add-on costs every time IT needed to support new applications

The Solution

- nGeniusONE® Service Assurance platform
- InfiniStreamNG® software appliances
- nGenius® Packet Flow Operating System (PFOS) for Certified 5100 Series Packet Brokers

The Results

- Protected quality performance of EMR and telemedicine applications
- Ensured visibility into all healthcare services, including voice, video, and data applications
- Able to take advantage of end-of-year capital budget dollars, reducing monthly expenses



Customer Profile

This academic hospital regularly places in the Top 10 U.S. News & World Report rankings of best children's hospitals in the country. Offering a dozen pediatric sub-specialties throughout its facilities and clinics, they are known for their expertise in cardiology, orthopedics, oncology, and trauma care. From their main hospital campus and local outreach clinics, physicians and staff support hundreds of thousands of outpatient visits, inpatient care, and emergency / urgent care visits annually from its multi-state region. This provider also serves as a teaching facility for pediatric interns associated with one of the country's most renowned schools of medicine.

Infrastructure networking services and clinical applications are the priority for the healthcare's IT staff. Essential for prompt patient care are their electronic medical records, telemedicine, and voice over IP (VoIP) applications. Slowdowns or outages with these services need to be quickly addressed by the IT staff.

The Challenge

The IT staff of this healthcare organization had invested in several digital and data center transformations that included new software defined networking with Cisco equipment, virtualized server technology with VMware, as well as new patient-impacting services like Telemedicine. Completing these implementations before the COVID-19 pandemic hit proved to be fortuitous for this healthcare.

Non-essential hospital personnel transitioned to work from home status at the start of the pandemic. Over time, the IT staff recognized that many of the fundamental problems being reported from their employee community lacked the visibility necessary to quickly troubleshoot and isolate. This was not due to lack of effort. They had invested in a performance management tool that provided limited visibility, but which required add-ons to gain visibility into some of the new services, including their telemedicine application.

This existing tool was an expensive, subscription-based product that was proving incomplete and cumbersome to add on to. For the IT team to maintain the quality, availability, and reliability of their clinical applications and services, especially for their Epic electronic medical records and their telemedicine platform, it was going to require that they implement a different solution that could scale to the needs of the organization.

Another issue they hoped to address was to change the financial model, moving from monthly expenses to a capital expenditure. They were able to confirm the availability of some end-of-year capital equipment money that they could use if they could prioritize the evaluation and purchase cycle.

Solution in Action

Evaluation of the NETSCOUT capabilities to monitor and analyze all their applications in real time, including more than 1,000 preconfigured voice, video, and data services, led the networking team to select the nGeniusONE Service Assurance solution. They concluded that the dashboards, logical workflows, and contextual drill downs solution would help them achieve the reductions in time to troubleshoot and resolve (MTTR) complex issues with their critical patientcare-impacting applications. Using their end-of-year capital equipment allocation, they moved forward with the nGeniusONE solution and developed a strategic visibility plan that included:

- Deploying InfiniStreamNG (ISNG) appliances in the data center and at several of their hospital locations for visibility into the internet links (the WAN network edge) for analysis of traffic coming into and leaving each of those locations. They are tapping the traffic inside the firewall and outside of the WAN edge.

- Working with the security operations team, the networking team designed a targeted implementation strategy for the nGenius 5010 Packet Flow Switches. They are tapping the network in strategic segments throughout the data centers, hospitals, and medical buildings to simultaneously feed the appropriate packet data downstream. The flexible configuration and filtering capabilities of the nGenius 5010 are invaluable in ensuring the right data from each location is forwarded to the service assurance ISNGs, as well as to security devices.
- Analyzing collected data from the ISNGs, nGeniusONE is centrally located in the primary data center. Dashboards and workflows are used for troubleshooting performance issues with their Epic medical records application, the telemedicine application, and VoIP, including Unified Communications as a Service (UCaaS) collaboration services. They are also tracking and trending data from the ISNG appliances at the different hospital campuses to ensure Internet bandwidth is meeting the needs at each location based on balancing traffic utilization changes brought on by non-essential employees moving to work from home status.

The Results

The network team, with support and consultation from their security operations team, has worked strategically and collaboratively to meet the unique, critical demands that emerged during the pandemic and the ongoing requirements for these essential services. There has never been a busier or more critical time in healthcare than during this COVID-19 pandemic. Availability and quality performance are absolute necessities for doctors, nurses, and staff accessing children's healthcare records and taking telemedicine appointments to avoid risky, unnecessary in-person visits. The nGeniusONE solution is reducing MTTR for troubleshooting when issues do arise, as well as providing trended information to right-size their WAN links to avoid bottlenecks.

As NETSCOUT was able to ship and implement the equipment before the end of the calendar year, the IT team was able to take advantage of end-of-year capital budget dollars to make this purchase and meet other budgeting goals for the department and hospital.

A children's hospital is a twenty-four hours a day, seven days a week, 365 days a year operation. There simply is NO room for down time! NETSCOUT is providing the visibility to help maintain goals for high quality, performance, and consistent availability.

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For more information about NETSCOUT solutions for Healthcare organizations, please visit:

www.netscout.com/solutions/service-assurance-healthcare



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