NETSCOUT

Healthcare Improves Telemedicine Patient Experience With NETSCOUT

Patients and Home-Based Employees Benefit From nGeniusONE Visibility Into Performance Problems

## OVERVIEW

The Challenge

- Lacked visibility at Equinix CNFs that were experiencing dramatic increases in home-based workforce traffic
- Issues reported on slowness experienced with telemedicine service and services through Microsoft Azure

The Solution

- nGeniusONE® Service Assurance platform
- InfiniStreamNG® appliances
- nGenius® 5100 Packet Flow Switches

The Results

- Improved user experience by pinpointing source of issues with services through Azure and with their telemedicine service
- Cost-effective, rapid deployment of visibility for overall service assurance of patient-impacting services
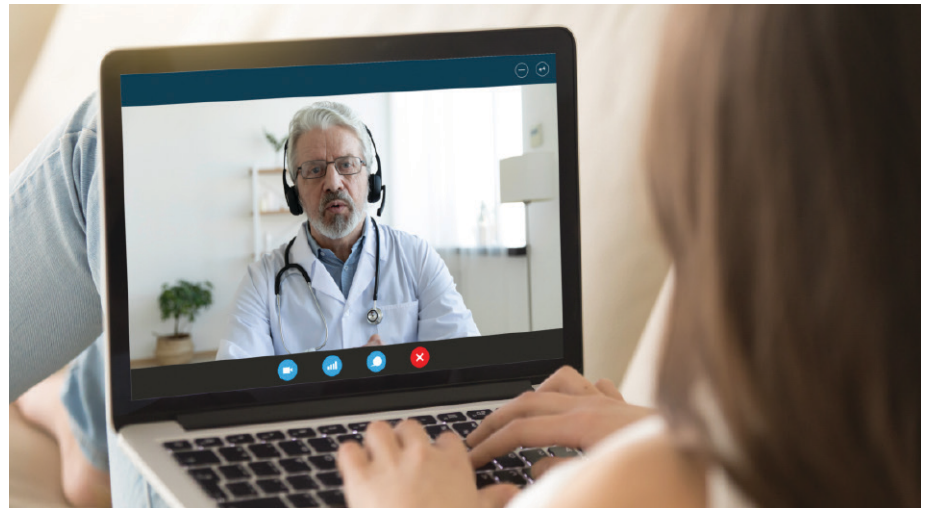
Customer Profile

This 75-year-old, leading U.S. healthcare network serves 10 million patients across more than a half dozen states with life-saving, health-related services. Whether it is family care, cancer or cardiac care, emergency services, or many other specialty care services, the hospital boasts tens of thousands of physicians and nurses, along with hundreds of thousands of employees throughout numerous hospitals and hundreds of medical and outpatient offices, all of whom are dedicated to providing safe, swift diagnoses and personalized treatment plans. Vitally important to these healthcare professionals is prompt, efficient, high-quality application performance throughout their multi-state enterprise network to enable them to deliver an exceptional patient experience.

The Challenge

Like many similar enterprises, part of the healthcare's data center transformation involved migrating services to carrier neutral facilities (CNF). As a result, the information technology (IT) team was operating a variety of healthcare and business services in three Equinix sites. With the full onset of COVID-19 in the states this healthcare supports, the IT staff saw overall traffic to the CNFs increased by as much as 30 to 40%, and some of the services were receiving reports of quality issues. In particular:

- Users were experiencing slowness with services through Azure
- Their telemedicine application, also delivered through Azure, was having issues with choppy voice and video, as well as losing calls in the middle of sessions

Although the healthcare was a long-time NETSCOUT® partner, they had not yet deployed visibility into the three new Equinix locations, which made troubleshooting the reported issues both challenging and time-consuming.

Solution in Action

To gain the visibility necessary to address the emerging problems presented by the increased traffic volume from their now home-based workforce to the CNF locations, the healthcare turned to NETSCOUT. In collaboration, their network, security, and capacity planning groups, along with the network engineering team selected a combination of nGenius 5100 series Packet Flow Switches to feed network packet traffic to several new, software-based InfiniStreamNG (ISNG) 9800 series appliances, as well as other security and monitoring tools. As the usage had increased since establishing the CNF sites, the ISNG appliances selected would support current interface requirements as well as projected growth to planned upgrades to 100 GB interfaces.

With the new nGenius packet flow switches and ISNGs in place, the healthcare and NETSCOUT teams worked together to quickly troubleshoot some of the issues that had emerged in the early days of the pandemic. Using nGeniusONE for analysis, they:

- Pinpointed a throttling setting in Azure that was limiting the bandwidth allowed in and out of this cloud instance
- Discovered a gateway speed that was not keeping up with the call volumes in the case of the telemedicine application

In both cases, configuration changes were quickly administered to remediate the problems and improve the quality of experience for the hospital staff, doctors, and patients.

The Results

Healthcare organizations have an obvious, simple goal to deliver swift, safe, and secure patient care. Although challenged by the hurdles presented by the COVID-19 pandemic, this healthcare was able to meet the needs of the patients while providing seamless access to at-home employees through its CNF facilities and newly deployed visibility from NETSCOUT. Speed of access to such services as Office 365 and Microsoft Teams through the Azure cloud was improved, with the ISNG appliances being leveraged for troubleshooting the reported slowdowns.

Further, as patients had become more comfortable with telehealth appointments and conversations with their doctors, discovering the source of the issues impacting the quality of experience was a welcomed improvement in those exchanges. Accuracy is important in healthcare diagnosis and treatment discussions, which choppy voice and video might otherwise have impaired. The visibility provided by nGeniusONE analysis of the ISNG metrics may help in avoiding such potential issues.

Overall, the continued collaboration between this healthcare and NETSCOUT is providing other benefits, as well. They were able to design, order, and implement their solution quickly due to the familiarity with the CNFs and services being delivered, resulting in obtaining the visibility as quickly as possible. Further, the engineering efforts on the part of NETSCOUT to create software-based models for both the nGenius Packet Flow Switches and ISNG appliances provided a cost-effective, lower overall cost of ownership option than otherwise available to the healthcare. NETSCOUT's visibility into the services through their CNFs has been welcomed by this IT staff, especially given that serving a patient community the size that this healthcare is responsible for, during a pandemic, is more than challenging enough!

LEARN MORE

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

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

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