Global Manufacturer Resolves a Weeks-long Application Disruption in Under Two Hours

With NETSCOUT Remote ISNG in Remote Engineering Offices

OVERVIEW

The Challenge

- Lack of visibility at remote locations to effectively troubleshoot application problem at the remote business edge
- Complex mix of infrastructure environments and the use of many applications, resulting from multiple acquisitions, further complicated problem discovery and resolution

The Solution

- nGeniusONE® solution
- InfiniStreamNG® (ISNG)appliances
- Remote InfiniStreamNG 600 Series Appliances
- nGenius® Flow Collector
- nGenius 5000 series Packet Flow Switches

The Results

- Improved troubleshooting and mean time to resolution (MTTR) by increasing observability at business edges
- Covered blind spots to user experience issues with packet-level granularity to manage the complex interdependencies among their networks and applications

Customer Profile

This global technology manufacturer is a leader in developing cutting-edge solutions for various industries, serving both consumer and enterprise markets. They employ tens of thousands of professionals in over two dozen development locations worldwide from North America to Asia-Pacific. Known for its commitment to innovation and technological advancement, the company has tied the importance of a high performing enterprise network to its business success.

Over the years, the company has grown through both its strong focus on research and development as well as through its partnerships and multiple acquisitions. One of the byproducts of this growth was a complex mix of IT infrastructure distributed across global sites. This complexity was highlighted when IT was unable to quickly resolve an issue recently in one of their remote engineering sites.

The Challenge

Availability and performance of their network and applications are key to business success for this manufacturer. As a long-term user of NETSCOUT® nGenius Enterprise Performance Management, the IT team had successfully reduced troubleshooting time in their corporate infrastructure and operations areas when issues in their engineering division emerged following digital transformations.

Recently, the manufacturer faced a significant challenge when the engineering group in one of their remote sites came to them with a problem. The performance of an application used in product reliability and quality testing was experiencing intermittent slowdowns and appeared to be getting worse over time. The problem caused system reliability issues, reducing the number of jobs they could complete on time, an inability to meet key target delivery dates, and ultimately impacting shipping and revenue for the company.

Of the three distinct groups in the IT department for this organization--supporting Manufacturing, Engineering, and Corporate Infrastructure & Operations (I&O)--only Engineering did not have access to network, application, and user experience performance with the NETSCOUT solution in their environment. Further, due to the small number of employees at the engineering remote offices, there weren't any IT staff on site to help troubleshoot this issue. Basically, IT was flying blind when the problems with this app originally surfaced at the remote office.

To better troubleshoot the issue impacting their remote engineering teams, the IT group responsible for the engineering department turned to NETSCOUT and their new Remote ISNG solutions.

Solution in Action

To address the challenges posed by their complex IT infrastructure, the global manufacturer deployed the NETSCOUT nGenius Enterprise Performance Management solution. The solution included implementing nGeniusONE in the data center to support their global engineering offices, where it provided centralized monitoring and analytics capabilities. This system was crucial for delivering comprehensive dashboards and reports on application performance, enabling IT to gain insights into critical engineering applications and services effectively.

Remote InfiniStreamNG units were strategically placed at important remote sites, including the office reporting the problem and the site of the engineering product testing application. Monitoring before and after the firewalls provided packet-level visibility into the traffic flows between these locations. The team implemented two essential monitoring features in the Remote ISNG. Customized Business Transaction Tests were configured to provide automatic, consistent, scheduled testing of critical applications to track and trend performance and user experience. Additionally, they leveraged real-time monitoring with Deep Packet Inspection (DPI) to help in troubleshooting this and future degradations. Armed with the metrics from nGenius, the IT organization and NETSCOUT premium services engineer (PSE) were able to identify the source of the problem.

Analysis in nGeniusONE Traffic Monitor showed the top applications, hosts, and conversations between the sites, which conclusively showed Citrix ICA as the top application in use by around three times the next highest volume of transactions. The company was using Citrix ICA as their virtual desktop interface (VDI) between the remote offices and location where the testing application was hosted. Using Traffic Monitor Burst Advisor, they discovered excessive micro-bursts in the Citrix ICA app, which it was unable to keep up with, creating a congestion problem. Micro-bursts were affecting performance, causing additional latency and retransmissions, which was delaying access to the product testing application. This information helped IT recognize the limitations in VDI resources and the need to increase capacity in their Citrix ICA environment.

The Results

A problem that had persisted for more than a month, required initiating an expensive, time-consuming war room, was identified in under a couple of hours of implementing the nGenius Enterprise Performance Management solution. With enhanced observability, the global technology manufacturer significantly improved its ability to manage its complex, distributed IT environment across dozens of locations worldwide. This greater visibility enabled the IT team to swiftly identify and resolve issues being experienced by remote users, reducing downtime and avoiding potential disruptions that could have led to further production delays or impacted sales. By quickly diagnosing and addressing problems, the company protected critical revenue streams, engineering productivity, and enhanced overall operational efficiency.

The improved monitoring capabilities also enabled the company to better understand application interdependencies, which was crucial for maintaining seamless integration and performance across various global sites. This proactive management of IT infrastructure helped mitigate risks, ensured reliable service delivery, and supported the company's ongoing digital transformation efforts, reinforcing its standing as a leader in innovation and technology. Further, as they have established a process of regular reporting for senior management and their engineering leadership team, they are able to track trends based on both synthetic tests, traffic, and application utilization of their critical services to proactively address issues in their earliest stages. This is helping to ensure quality user experience at the remote offices and avoid protracted performance problems in the future.

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