Regaining IT Control of the Client Edge With NETSCOUT

Enhancing Vendor-Independent Visualization Into User Experience Across Remote Office Network

OVERVIEW

The Challenge
- Help Desk ticket spikes related to management and "power user" experience in remote offices
- IT struggles in monitoring multi-vendor environments operating on the client edge

The Solution
- Virtual nGenius® PULSE server deployed in Azure
- NETSCOUT® nPoint hardware and virtual sensors

The Results
- Improved business service access and reliability for remote users
- Enhanced Microsoft and BPO SLA compliance with evidence-based assessment metrics

Customer Profile
This energy company employs more than 10,000 service specialists supporting delivery and storage solutions for commercial and individual customers across a multi-country service region.

Like many in the energy industry sector, this company continues to garner favorable media coverage for innovations related to lower-carbon and biofuel solutions, as well as renewable power plants.

The Challenge
The company’s technology infrastructure for assuring high-quality utility service delivery to millions of their customers depended on a multi-tier, multi-vendor environment that included:

- In-house information technology (IT) specialists tasked with overall infrastructure operations oversight.
- Business Process Outsourcer (BPO) resources contracted to manage wide area network (WAN) services and data center performance on the company’s behalf.
- Microsoft Azure Cloud (Azure) cloud services running in international Microsoft service locations.
- An Amazon Web Services (AWS) cloud solution.
The company’s workforce transition only served to add to IT’s increased reliance on multi-vendor solutions running in remote locations to assure employee access to critical business services, with this environment evolving to include:

- “As-a-service” platforms that included Microsoft Office 365® business application and email services, as well as Microsoft Teams workspaces that fostered employee collaboration and efficiency.
- Cisco Webex conferencing services.
- Managed Virtual Private Network (VPN) services.
- Voice over IP (VoIP) services.

In such multi-vendor business service delivery environments, end-through-end visibility and real-time analysis are essential for assuring 7x24 operations and successful troubleshooting when issues do occur, but this IT team did not enjoy those capabilities. As a result, the emergence of Help Desk tickets identifying user-reported issues with Office 365 business email access and MS Teams collaboration support services — which would normally be resolved with adequate visibility and analytics — instead became problematic.

Further complicating these types of everyday challenges for the IT team was the BPO’s reluctance to provide packet captures (PCAPs) generated from the network traffic traversing the data center environment they managed on the company’s behalf. Absent this PCAP-based data source for post-incident forensic analysis, the IT team had to rely on in-house tools to commence troubleshooting that could not provide a complete picture of the service delivery environment.

Facing these collective vendor-related challenges, IT knew an innovative, quickly deployable approach for addressing these types of client edge visibility and technology operations gaps would be required — especially since the first waves of Office 365 and MS Teams service tickets were being generated by executives and “power users” based in the company’s remote Contact Center and Customer Service facilities. These were the very locations that would generate future Help Desk complaints related to adversely impacted energy customers.

**Solution in Action**

After a comparative evaluation conducted shortly after COVID-19’s arrival, the IT oversight team gained the client edge visibility they required by deploying the NETSCOUT nGeniusPULSE infrastructure monitoring solution with nPoint sensors. They made this selection following critical review of several approaches, with the NETSCOUT solution differentiated by nGeniusPULSE and nPoints providing extensive flexibility to configure business-relevant and network health-related continuous synthetic testing to assess end-user experience in their remote office environments.

Using a “first things, first” approach, the IT team immediately took advantage nPoint synthetic testing into cloud-based MS Office 365 and Teams performance to generate quality of user experience assessments that were presented on high-level nGeniusPULSE Sites Overview and Business Services Overview dashboard views, which showed:

- The remote offices experiencing the highest instances of Microsoft-related performance issues.
- Contextual drilldowns from those nGeniusPULSE views that showed any Office 365 user experience issues involving login delays, upload/download transfer rate, and duration of file download and upload processes.
- The appearance of any MS Teams problems related to adversely performing voice, meet, or chat functionality.

IT’s assessment showed the issues that remote users were raising in Help Desk tickets were in fact related to Office 365 and Teams performance degradations that were suspected as being related to root cause. This evidence also show that these services were not being delivered in compliance with Microsoft SLAs, which equipped IT with the real-world assessments required to quantify the need for vendor improvements.

Taking advantage of nPoint hardware and virtual sensors, the IT team then used out-of-the-box nGeniusPULSE synthetic testing to assess user experience across a number of infrastructure services supporting their remote workforce, including:

- Azure, AWS, Webex, and BPO-managed network services, which proved essential for effective troubleshooting, and identifying responsible vendors.
- Ethernet and Wi-Fi network health, where nGeniusPULSE enabled IT to conduct application tests to assess end-user experience when located at “hot desks” designated for temporary use and differentiate quality of experience on Ethernet and wireless networks.
- VPN performance, capacity, and bandwidth availability supporting the remote user population.
- Status of remote user connectivity to the BPO’s WAN and data center services.
- Remote site availability monitoring to assess operations status for 30 geographically distributed branch offices and smaller corporate locations, including synthetic tests to measure application and network availability.

The IT team also used the nGeniusPULSE solution’s to assess quality of user experience in their VoIP environment, focusing on mean opinion scores for quantifying call quality, as well as advanced UC metrics related to any instances of call loss, latency, and jitter in their remote office voice environment.
The Results

For an IT team frustrated with vendor-related visibility issues and their perceived loss of control over service delivery in their remote workforce environment, the nGeniusPULSE solution offered quick returns on investment related to:

- Ease of deployment in their virtual environment.
- Portable nPoint hardware sensors that could be flexibly relocated, for analysis over Ethernet or Wi-Fi networks, as needed to assess emerging service delivery issues.
- Out-of-the-box synthetic tests that replicated user experience in remote environments that had previously lacked viable data sources.

By providing the IT team with granular assessments of vendor-related performance issues in their remote workforce environment, the company was equipped to share forensic evidence that compelled their partners to improve service delivery in compliance with their respective SLAs – in this case, Microsoft and their BPO.

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