Restoring Microsoft Office 365 Service Quality for WFH Users With NETSCOUT Smart Edge Monitoring

One of the many new challenges facing enterprise information technology (IT) teams involves expanded reliance on Microsoft Office 365 Software as a Service (SaaS) solutions in work-from-home (WFH) and branch office environments.

Given the pervasive use of cloud-based Microsoft Office 365 SaaS solutions designed to support employee productivity in enterprises of all sizes, it is up to IT teams to shoulder the responsibility of assuring reliable access to business services, as well as identifying the root cause of any issues impacting user experience in the hybrid workplace, regardless of location.

This Use Case example details how one U.S. IT team was able to successfully troubleshoot Office 365 end-user experience issues by employing their newly deployed NETSCOUT Smart Edge Monitoring solution.

Degradation

This enterprise had thousands of employees dispersed across numerous U.S. regions, with the majority of workers remaining in WFH environments. Several employees in the Central U.S. began experiencing Office 365 SaaS responsiveness problems that quickly impacted their productivity. It wasn't long thereafter that associated Help Desk tickets found their way into IT Operations for response, troubleshooting, and, hopefully, quick resolution.

Since the Microsoft Office 365™ environment also incorporated the company's Microsoft SharePoint® and Microsoft Exchange™ services, the IT Operations team was fully aware that these responsiveness issues could also impact WFH employees' abilities to reliably access email, enterprise productivity tools, and strategic information critical to everyday business operations.

Impact

Since this business is focused on supplying business-critical enterprise technology solutions, it wasn't long until these issues reverberated at the Executive level.

In the perspective of this Executive team, if one of their Sales Managers was unable to access information regarding a purchase order, customer service concern, or high-level meeting, technology had become an obstacle to corporate success. As a result, this Office 365 technology issue needed quick resolution by IT leadership to avoid negative impact on customer perception and revenue, not to mention employee productivity.

Troubleshooting

IT Operations had earlier implemented the NETSCOUT® Smart Edge Monitoring solution, which had expanded visibility into the enterprise client edges of the network supporting both WFH and remote office users dependent upon reliably performing Office 365 services, as well as Virtual Private Network, Citrix Virtual Desktop Infrastructure, and Unified Communications as a Service, and other SaaS solutions. As an essential part of this solution, IT Operations had deployed nGenius®PULSE nPoint virtual sensors on WFH employee laptops, as well as hardware nPoints in remote offices operating in the Eastern and Western U.S. These nPoint sensors provided visibility into, and assessment of, the quality of end-user experience across the company's client edge by conducting synthetic tests into the performance of business services supporting remote users, including Office 365.

From their experience, the IT leadership team was well-apprised of Microsoft data center locations in the U.S., which came in handy as they consulted their nGeniusPULSE Service Dashboard's Sites Overview results to visualize the locations of impacted users in the

context of Office 365 service delivery hubs. As exhibited in Figure 1, this geographic view of enterprise users located in both WFH and corporate environments indicated that one of the company's remote offices in Des Moines was experiencing the highest instance of impacted performance. This nGeniusPULSE analysis corresponded to the origin of the Office 365 service tickets arriving at the Help Desk from employees in the Des Moines office.

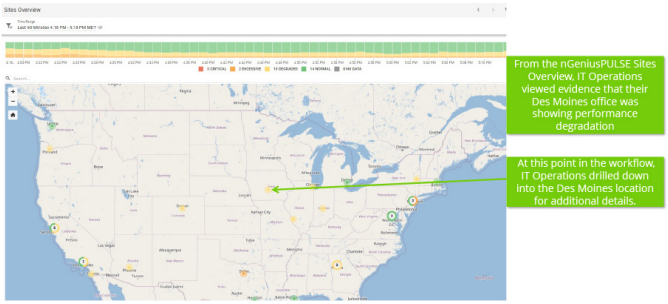

Figure 1: This nGeniusPULSE business transaction test showed degraded performance for employees in the Des Moines area, which was comprised of WFH users rather than remote office workers.

At this initial troubleshooting workflow phase, nGeniusPULSE provided context that the IT team utilized to narrow the scope of both impacted users and affected services. As a result, IT Operations quickly transitioned to the nGeniusPULSE Service Dashboard views exhibited in Figures 2 and 3. These views provided IT Operations with contextual drill-downs to nGeniusONE® Service Assurance analytics regarding how the company's business services were supporting their user base.

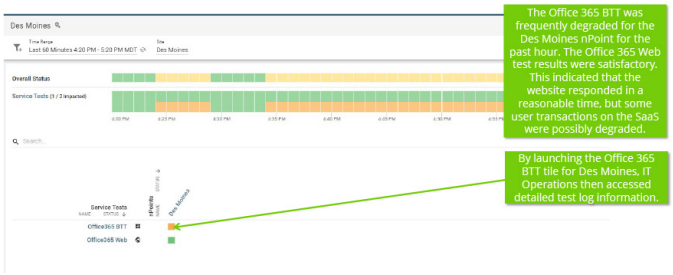

Figure 2: The nGeniusPULSE synthetic testing results into Office 365 performance narrowed the scope of IT investigations.

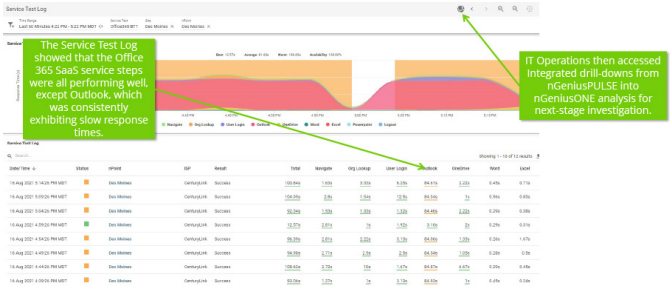

Figure 3: The initial Office 365 synthetic tests also yielded the analytics seen in this Service Test Log, which informed IT Operations that root cause instead related to Microsoft Outlook email services, which were providing slow responsiveness for impacted WFH users.

At this point in the workflow, IT Operations accessed the broader NETSCOUT Smart Edge Monitoring solution to transition troubleshooting from "what" WFH users were experiencing to "why" these issues were occurring.

For this IT team, an essential element of the next-stage troubleshooting workflow directly accessed the Smart Edge Monitoring solution's ability to integrate packet captures and analysis from both nPoint sensors and InfiniStreamNG® (ISNG) appliances with NETSCOUT Cloud Adaptors deployed across the company's data center and office locations. By accessing NETSCOUT smart data generated by patented Adaptive Service Intelligence® (ASI) technology generated from this network packet traffic, IT then had a true, end-to-end view into WFH user experience, including employee interactions with Microsoft's Office 365 data centers.

By contextually drilling down from the nGeniusPULSE Service Dashboard to a Universal Monitor view that incorporated NETSCOUT Smart Edge Monitoring metrics derived from both nPoint synthetic testing and network packet traffic, IT Operations used long-established, intuitive nGeniusONE analytics workflows to quickly determine Office 365 application round-trip times were high, as were numbers of requests and transactions.

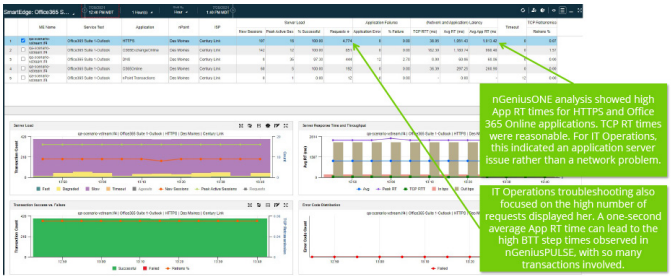

Figure 4: The NETSCOUT Smart Edge Monitoring analysis seen in this nGeniusONE view invited next-stage analysis for IT Operations root cause analysis and resolution.

At this stage of the workflow, IT Operations knew that fully accessing nGeniusONE Universal Monitor analytics and corresponding Session Analysis views would soon reveal root cause to them. As exhibited in Figure 5, the analysis showed root cause related to specific application servers at a Microsoft Office 365 data center located in close geographic proximity to the impacted WFH users.

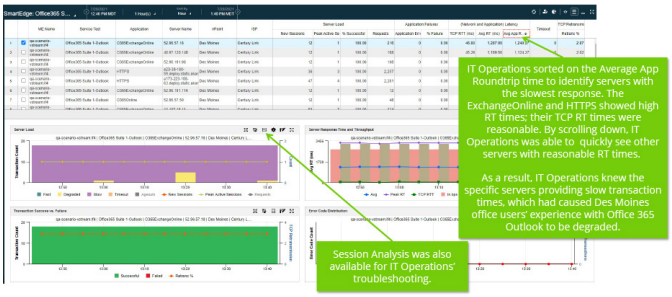

Figure 5: This nGeniusONE Universal Monitor view showed Outlook-related delay in the Office 365 service as being associated with application servers operating at a regional Microsoft data center facility.

Remediation

Based on IT Operations' assessment of the issue in the context of their Service Level Agreement (SLA) and their highly collaborative business partnership with Microsoft, associated nGeniusONE analytics views and packet captures were presented as evidentiary data related to the Office 365 and Outlook performance issues being experience by the company's WFH users.

With this data in hand, Microsoft was equipped with information that assisted in their efforts to modify the application server environment in the local data center.

Summary

Rather than expending hours and IT cycles that would otherwise be spent troubleshooting difficult-to-visualize Microsoft Office 365 performance in a WFH environment, with the infinite number of paths the transactions could take complicating the investigation process, this IT Operations team was able to quickly monitor and troubleshoot this employee digital experience issue with NETSCOUT.

Should an IT organization be faced with these challenges, using the end-through-end visibility provided by the NETSCOUT Smart Edge Monitoring solution enables rapid troubleshooting and restoration of Office 365 services.

As seen in this Use Case, IT Operations restored the Executive team's confidence in the quality of user experience in the WFH environment, returned employees to reliably performing Office 365 services, and appropriately communicated this issue to an important strategic technology partner for collaborative resolution. In the process, the IT staff protected both customer service and employee productivity.

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