

Assuring Remote Contact Center Agent Operations With NETSCOUT Observability

High-quality contact center and website services are essential elements of successful customer support operations across all business sectors. The importance of these platforms has been further magnified by the complexities of distributed workforces, when customers, prospects, and employees have heavily relied on remote communications to conduct everyday business.

For organizations with thousands of remote employees, this NETSCOUT use case underscores the need to remain vigilant when it comes to assessing how routine technology updates executed in one service edge environment can result in a ripple effect that impairs user experience along the transformed client edge of the network.

Issue

For years, this company's information technology (IT) team had supported a significant population of remote office employees, including thousands of remote Contact Center Agents (CCAs). Advanced preparation by the company leadership team in the formative stage of the pandemic, combined with earlier IT experience in remote workforce operations, enabled the business to successfully transition the near entirety of their employees to remote environments within two weeks, including a full complement of CCAs. As a result of that transition, contact center operations had quickly shifted from regional on-premises corporate locations to thousands of distributed remote offices.

In large part, IT's earlier experience in supporting remote workers informed their approach to use a thin client to connect CCAs to a Citrix virtual desktop infrastructure (VDI) that emulated the corporate network environment. For the IT team, this architectural choice offered policy-driven control over all remote users' computing environments and the ability to reduce CCA application environments to those essential for contact center communications with customers. This Citrix environment operated within the context of in-home digital subscriber line (DSL) broadband or internet service provider (ISP) connections.

This thin-client approach enabled CCAs to access a suite of applications over their Citrix VDIs, including:

- Unified Communications & Collaboration (UC&C) and Unified Communications as a Service (UCaaS) tools for voice, video, and messaging designed to support interactive, high-quality communications with customers.
- Company-specific applications supporting processing across several of the company's business lines.
- Multiple web services used to support a variety of the company's financial websites.
- Database services.

Nearly two years after this successful distributed workforce rollout, however, the IT team began receiving ServiceNow-generated Help Desk tickets from CCAs regarding the difficulties they experienced in servicing customer loans.

The arrival of this news coincided with a more-troubling series of ServiceNow Help Desk tickets reaching IT — some customers were calling the contact center regarding their inability to access a company website used for loan processing.

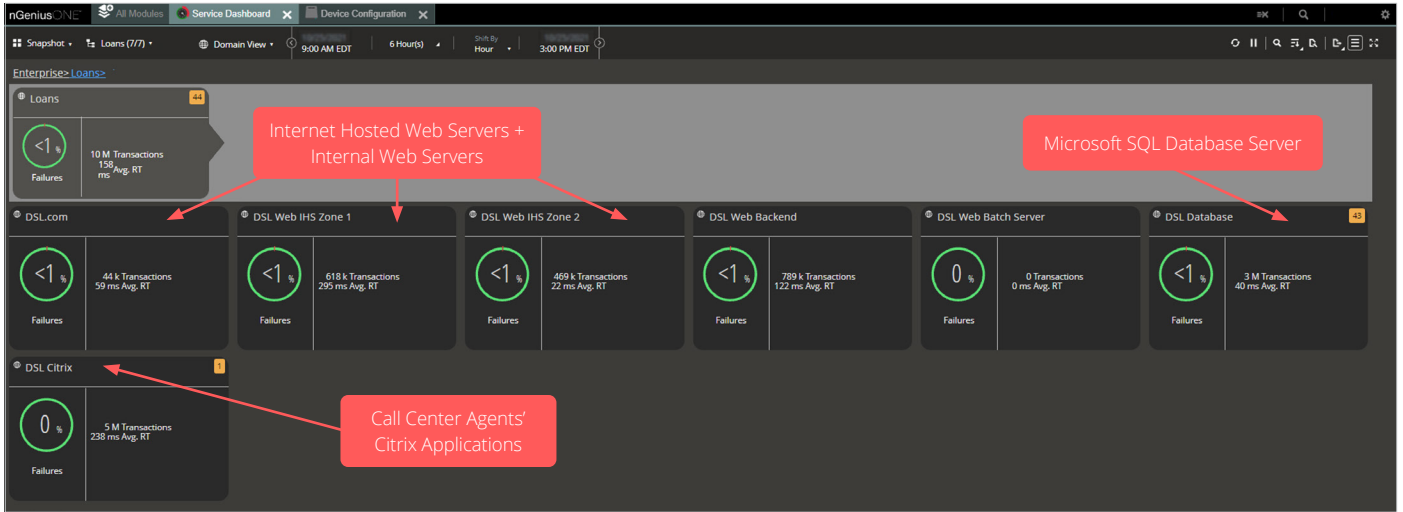


Figure 1: This nGeniusONE Service Dashboard view into critical application services ruled out Web, Microsoft SQL, and Citrix as the root cause of loan processing performance issues.

Impact

For a company whose business success is directly linked to their ability to successfully process wide-ranging, high-volume financial transactions in real-time, these represented the types of help desk tickets their IT team never wanted to see. If a potential customer has delays or issues researching and/or setting up a new loan on a financial services website, they will close that URL and move on to the next potential provider. That would represent a loss in business opportunity and ultimately revenue.

As a result, very quickly, these issues became executive leadership concerns.

Troubleshooting

The IT team quickly used their installed performance management solutions to troubleshoot these help desk tickets, in consultation with their contracted NETSCOUT® Premium Service Engineer (PSE). The IT team had long-established workflows in their installed nGeniusONE® solution that were used during their troubleshooting activities, which in this case commenced by establishing a Service Dashboard to visualize the loan processing website environment. As exhibited in Figure 1, there were few impairment issues in the cloud-based and on-premises web servers, the Microsoft SQL Database Server, or Citrix VDI performance.

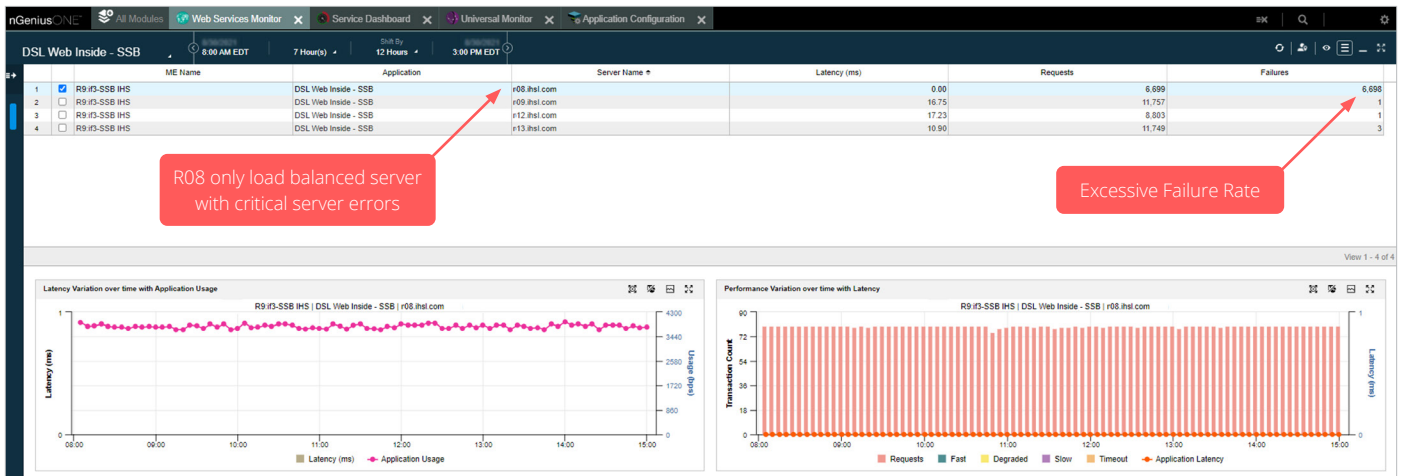


Figure 2: The nGeniusONE Web Services Monitor showed an internal webserver application experiencing a high number of application errors – in this case, approximately 7,000 of them.

While this initial troubleshooting was inconclusive, the workflow next transitioned to the Citrix VDI environment supporting remote CCAs, as IT was aware that NETSCOUT nGenius® Enterprise Performance Management solutions would enable them to visualize user experience in the context of business service performance. In wanting to get a complete view of remote CCA thin client operations, IT and the NETSCOUT PSE used the nGeniusONE Global Settings administrator feature to discover all Citrix applications, which enabled all VDI apps to be visualized and monitored. By contextually drilling down from this expanded Citrix-centric Service Dashboard into a corresponding Web Service Monitor, nGeniusONE showed one of the company's internal webservers experiencing a high rate of application errors in the Citrix service delivery environment, as exhibited in Figure 2.

Convinced that they had identified the root cause of the website loan processing issue, it was time to visualize whether CCAs' end-user experience was being impacted by that same webserver. In this context, IT's abilities were enhanced by quickly leveraging business transaction tests (BTTs) to visualize the quality of user experience — in this case, focusing on whether CCA access issues related to the same webserver identified as the root cause of customers' loan process complaints. Synthetic tests showed degraded Web access for a cross-section of regional CCAs. This provided IT with a proxy of the full remote Contact Center Agent experience challenges using the loan processing website.

Remediation

With nGenius Enterprise Performance Management solutions showing the performance impairment from both business service and user experience perspectives, the IT team took advantage of NETSCOUT's strategic integration with the ServiceNow technology platform to forward related nGeniusONE Alerts to the Webservices Support Team to use in their troubleshooting. As part of their troubleshooting process, the Webservices Support Team contacted the responsible application owner that NETSCOUT had identified a webserver performance issue. As a result, the application owner checked the configuration and determined that a manual change had been made during a recent migration to cause the webserver to be misconfigured.

Once the webserver was properly reconfigured, the IT team again used nGeniusONE to determine whether that addressed loan processing website performance for both customers and CCAs. As evidenced in Figure 4, the moment the change was applied, the application errors dropped from 7,000+ to zero.

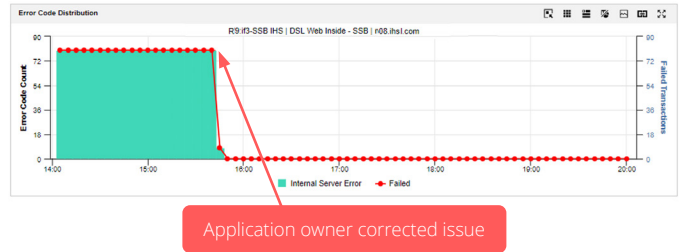


Figure 3: Reconfiguring the internal webserver immediately resolved the error condition.

Summary

As evidenced in this use case, the process of applying technology upgrades in the modern workforce environment is not a one-time “set-and-forget” IT Operations exercise.

In this company's extended distributed workforce era, with thousands of on-the-move employees accessing essential services across remote client, cloud, network, and other business edges, nGenius Enterprise Performance Management solutions provided IT Operations with packet-based performance monitoring as well as synthetic testing for user experience assurance necessary to quickly troubleshoot and resolve this customer and revenue-impacting service issue without extended downtime. This comprehensive observability helped the company restore loan processing performance for both customers and users, which stopped frustrated prospects from taking their financial business elsewhere.

In reviewing the remediation activities with NETSCOUT PSE resources, IT Operations summarized the issue, saying:

“It was an issue with the last migration. Someone did something manually, and this caught it... which is awesome.”



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