Visibility for Optimizing Performance and Availability of Microsoft Teams Collaboration Services

Cloud-based collaboration and video conferencing Unified Communications as a Service (UCaaS) platforms have been key to promoting business continuity success throughout the COVID-19 pandemic. Governments around the world directed people to stay home, turning tens of thousands of people into work-from-home employees over night. Working together looked different. Instead of going to a conference room for a meeting, people went to their computers.

In many cases, enterprises were already using Web-based collaboration technologies and while in place, these platforms were perhaps not widely used. However, with COVID lockdowns impacting organizations on a global scale, virtually every employee working from home is using these collaboration tools to remain productive and maintain consistent business contributions.

Microsoft Teams (MS Teams) has seen dramatic growth during this period, growing 894% by June 14, 2020, according to research firm Aternity. Businesses and government agencies were finding MS Teams ideal for maintaining personalized communication among employees working from home.

Use of Microsoft Teams during the Coronavirus Pandemic has exploded nearly 900% by mid-June 2020.

Employees in Asia and Europe started going back to their offices, in limited numbers, in early summer 2020. Although to a lesser extent, some corporations in North America have begun that process, as well. But it is unlikely to look anything like it did prior to the pandemic; case in point, high-tech companies like Facebook and Square are indefinitely extending work-from-home. And for primary and secondary school systems, as well as colleges and universities, hybrid teaching models and remote learning seem to be the answers to educating students for the fall of the school year.

For enterprises, government agencies, and educational institutions that are using MS Teams for their collaboration and video conferencing with at-home employees, the quality of experience is a top concern. When issues occur, IT teams need evidence to share with their MS Teams counterparts to ensure quick resolution of problems to maintain a high-quality user experience. The complexity and variety of deployment scenarios involved in delivering cloud-based collaboration services combined with the potential impact on other services and infrastructure, such as ISP and VPNs, all help make the case for implementing visibility throughout the environment.

Our Approach

NETSCOUT's approach to end-user experience analysis, application performance, and service assurance monitoring is built on a foundation of high-quality data and real-time metrics. NETSCOUT® solutions monitor application packet data throughout the network to ensure services themselves, in this case, MS Teams, are available and operating efficiently.

Based on packet data, NETSCOUT's patented Adaptive Service Intelligence™ (ASI) technology provides the most robust data source available to ensure that critical MS Teams conference services are delivered from the cloud through to users in corporate facilities or home offices without delay or disruptions. By monitoring the actual application packets, as well as service dependencies (such as MS Teams, Microsoft Office 365, DNS, and HTTPS), NETSCOUT smart data fuels our nGeniusONE® Service Assurance solution to provide continuous visibility and automated analysis of performance issues across connected services.

NETSCOUT analytics are the industry-leading standard for scalability and ease-of-use, enabling proactive service triage to keep MS Teams, as well as the many other critical business services (e.g., E-commerce applications, individual applications servers, backend databases) and communications dependencies (e.g., SIP and RTP protocols) running smoothly, reliably, and unimpededly, end-to-end. Should an issue emerge in the quality, user experience, or performance of MS Teams collaboration services,

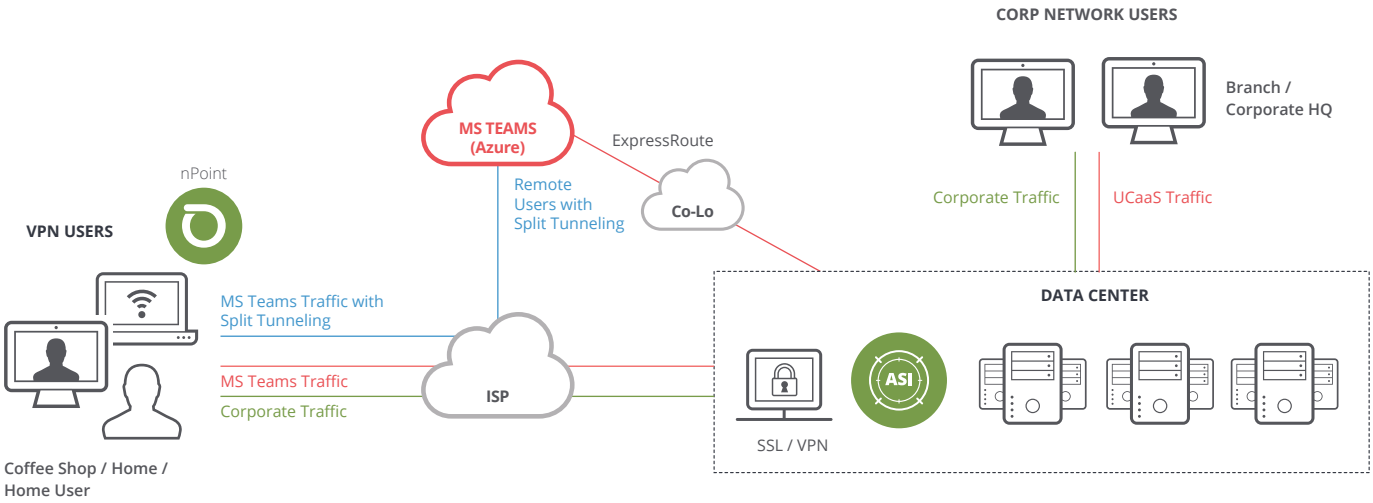

Figure 1: MS Teams traffic from users on the corporate network goes through the data center and over the internet (ISP) to Azure Cloud. For companies NOT using split tunneling, remote users' MS Teams traffic will come through the ISP, over the corporate VPN and data center, and then back out to Azure. It could also be through Express Route to Azure, or could go via a Co-Lo, then via Express Route to Azure. NETSCOUT provides visibility to the MS Teams traffic that traverses this corporate network. Companies that use split tunneling will not see remote users' MS Teams traffic, as it will not come through the data center. nGeniusPULSE can provide end-user experience analysis from MS Teams users' perspective, with consistent, scheduled synthetic tests.

troubleshooting capabilities leveraging the logical, intuitive workflows in NETSCOUT solutions have the effect of reducing Mean-Time-To-Resolution (MTTR) to quickly pinpoint the source of the problem and restore service to optimal performance.

From a proactive perspective, monitoring the internet access links and VPN activity for all services coming into data centers provides details on activity and trends for managing bandwidth and capacity for the benefit of all the application services, not just MS Teams. This helps to avoid service-impacting bottlenecks and slowdowns that could impact performance of all those applications, including MS Teams.

Our Solutions

NETSCOUT delivers solutions that support both the wired and wireless infrastructures in enterprises, government agencies, and educational institutions, including visibility to support quality end user experience with MS Teams. The nGeniusONE platform provides real-time visibility into both IP-based business services, along with contextual workflows to speed problem resolution, making it easy for Level 1 responders to use while still being powerful for experts to operate. nGeniusONE leverages rich packet data for extracting performance metrics. With scalability to support up to 100 Gbps speeds, the nGeniusONE platform is designed for use in both physical and virtual, as well as public and private environments.

Rather than looking at individual elements in isolation, nGeniusONE provides an over arching view into the performance characteristics of the components associated with service delivery both on premises and in the cloud. This exposes underlying service dependencies between unified communications and collaboration services, as well as other critical business services. Specifically, for MS Teams, media, voice, and video quality can be monitored with smart data in the Data Center, HQ, branch, contact center, co-lo. Additionally, because it supports the TEAMS voice/video protocols, SRTP, and the CODECS in use such as Opus, G722, H264, nGeniusONE can really troubleshoot quality issues, if there are any, within the environment. It even identifies important configuration details, such as the quality of service (QoS) class assigned to MS Teams and other services, to ensure priority delivery of latency-intolerant applications.

MS Teams is part of today's ever-evolving IT ecosystem, which means visibility is needed into end-user experience to ensure the availability, reliability, and performance of this mission-critical collaboration service across your multi-cloud environment, over Ethernet or Wi-Fi, from wherever employees, partners, instructors, or students need access. To address the challenge of managing user experience when it also depends on remote locations, dorms, and home networks, nGeniusPULSE provides the ability to run synthetic tests using instrumentation called nPoints deployed at the user sites, even when users are not active. Options include a small, purpose-built hardware device or virtual instrumentation that can be deployed on a remote-user's laptop (Windows or Linux support), for Ethernet and/or Wi-Fi analysis – ideal for branch office and home-based users of MS Teams.

Depending on how your network is architected and how your users connect to MS Teams will dictate the best ways nGeniusONE and nGenius®PULSE can be helpful in your environment.

The Value of Service Assurance for MS Teams

NETSCOUT solutions are designed to ensure IT services supporting business and collaboration services, like MS Teams and Office 365, run smoothly through proactive end-user experience monitoring and service assurance. As problems arise, NETSCOUT solutions deliver the details and metrics necessary to troubleshoot them quickly and keep communications flowing. With NETSCOUT, enterprises can:

- Improve end-user experience, with the ability to troubleshoot capacity and performance issues across the corporate VPN, for MS Teams, Office 365, and other critical business services. nGeniusONE helps organizations see who is using the VPN and what they are consuming to make decisions on whether capacity changes are necessary, if traffic can be shifted to non-business hours, or redeployed to a virtual desktop interface (VDI).
- Dramatically reduce the mean time to resolve (MTTR) degradations, errors, and performance issues with evidence from the environment to share with MS Teams counterparts to ensure quick resolution of problems before they become an issue to the business.
- Improve collaboration and reduce complexity with third-party ISP vendors when troubleshooting performance and availability issues at headquarters and data center locations. MS Teams is only one of many services utilizing ISP links for secure data center communications, all of which can be monitored with nGeniusONE.
- Minimize the time to pinpoint misconfigurations, such as QoS class assignments in the data center, headquarters, or an ISP.
- Ensure efficient operation of not only MS Teams, but also other business-critical applications, such as CRM and ERP, whether used locally or distributed across the infrastructure.
- More quickly identify whether the local Wi-Fi networks or the ISP links are the source of a performance issue using nGeniusPULSE.

NETSCOUT

Corporate Headquarters
NETSCOUT Systems, Inc.
Westford, MA 01886-4105
Phone: +1 978-614-4000
www.netscout.com

Sales Information
Toll Free US: 800-309-4804
(International numbers below)

Product Support
Toll Free US: 888-357-7667
(International numbers below)

NETSCOUT offers sales, support, and services in over 32 countries. Global addresses, and international numbers are listed on the NETSCOUT website at: www.netscout.com/company/contact-us

EFS_021_EN-2001 08/2020