CASE STUDY

Measuring Skype for Business "Pre-Actively"

Industry	*Company Size*	*Locations*
Consumer Packaged Goods	40,000 Employees	200 Globally

Overview

For over 100 years a global enterprise has been producing consumer personal care products through some of the most well-known brands in the world. Throughout their long history, the company has had to innovate constantly in both their products and the way they conduct business. With 40,000 employees spread over almost 200 offices in over 150 different countries, this company is affected by scale in everything they do.

As with many companies, the distributed nature of employees poses a challenge. The company has long had their administrative offices scattered across the Midwest, requiring frequent travel for meetings. Business at the company today still requires in-person meetings. But thanks to the prevalence of software tools like voice and video conferencing that connect employees in real-time, inter-office travel has been vastly reduced. Phones and email over corporate networks replaced flights, but as the company scaled, good call performance became essential for work. Subsequently, the IT team made the move to Microsoft's Skype for Business. However, their heavy reliance on voice and video conferencing required constant vigilance by their network operations team. With over 180 offices, the team has no first-hand feedback mechanism for quality and has to rely on incident tickets to locate and identify underlying quality issues. The bottom line is that all monitoring, until they started working with AppNeta, has been reactive.

A New Approach

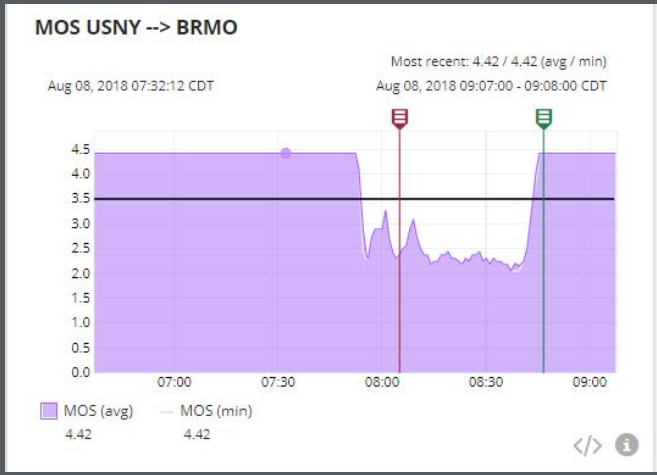
In 2016 the Unified Communications (UC) team established a global Skype deployment to cover their offices around the world. They spread 6 IaaS-hosted Skype locations across 3 continents as regional operations centers that served nearby offices. In theory, this would provide the optimal experience for all users. What the UC team discovered, however, was that employees, in general, don't take the time to report tickets unless the situation is dire. While their distributed deployment worked most of the time, when issues did arise, employees only complained about Skype calls to leaders and executives days after their experience. As a result, any analysis that the network team could do was only after a serious issue occurred. This reactive approach was not one that the UC team enjoyed.

The UC Architect and his team decided to move to a "pre-active" approach and reevaluate his use of the AppNeta Performance Manager. This particular enterprise has been a customer of AppNeta for many years, but the use case has changed over time from monitoring office-to-office connections to determining cloud readiness. In the past, team members sought to identify where the root cause of issues were after tickets had been filed. Faced with monitoring the global Skype deployment, the UC team investigated performance monitoring options. What they found was that AppNeta could offer end-to-end visibility of their end-user experience and that they had not previously tapped into the full capabilities of the AppNeta platform. After further investigation they began implementing the voice and video monitoring which led to the expansion of the platform across all of their locations. "Our mission was to take this tool from a reactive tool for a few users to a 'pre-active' tool that will alert us that something bad is happening," says the Unified Communications Architect.

Solving Voice Issues in Global Deployment

To provide that "pre-active" data, the UC team deployed AppNeta Monitoring Points to their 6 Skype regional operations centers and in their global offices to monitor the flow of traffic and simulate continuous voice performance. Initially, the focus was simply to improve call performance and call reliability. By looking at the 0-5 scale of the Mean Opinion Score (MOS), The UC team was able to see the general quality of calls between all points. The UC Architect on the team states that "to that end, we were very proactive, or 'pre-active', and we have upgraded class of service configurations and improved voice performance at multiple locations." Tools already in place to collect SNMP data can tell the team about packet discards and traffic loads, but no other tool was able to give them end-to-end visibility around their voice performance.

At other offices, what the UC team found was worrying. While performance was generally good, there were times where the MOS would appear as if someone took a "bite out of the apple" showing sharp degradation of the metric for a short period of time. The steady-state performance was great at 4.5 while the "bite" could drop the score to a horrible 2.8 on the MOS scale. As the UC Architect puts it, "that was my indicator that things weren't as healthy as we thought they were." By analyzing the traffic in and out of the offices, the team was able to determine that, "sure enough, somebody had a meeting and we've got 10 people all listening at the same time on a meeting at a site that has 5-6 voice concurrencies. The only way I could see that though was because AppNeta was able to point this out to me." In this case, the UC team increased the class of service from 15% of bandwidth at the location to 30% and complaints stopped immediately.



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Results & Discovery

The Unified Communications team worked its way through the top priority offices and problems but soon found that in some cases behavioral issues conspired against them. “In one office we could increase the class of service of the connection, but at another there is not enough bandwidth to increase the class of service without violating some of our core principles, so we’ve got to increase the bandwidth or we’ve got to tell these people to gang up in a conference room reduce concurrent connections.” The trend of more and more employees taking calls or conferences from their desk is a real challenge at the scale the company has to manage.

The Future of Work

Managing voice and video conferencing across globally-distributed offices still provides the team with things to do, but because of their efforts with AppNeta’s proactive monitoring, the team can focus on the larger company initiatives. The UC team is now consulting with internal Facilities teams to deliver 100% wireless-only access for employees (except printers, access points, etc.). Matching culture and behavior with network performance is an evolving challenge that the team seems ready to tackle with the help of AppNeta.