NATIONAL INSTRUMENTS™

Industry	Company Size	Location
Software	7,500 Employees with over 115 Locations	Austin, TX

Company Background

National Instruments (NI) is a supplier of test, measurement and control solutions. NI makes it possible for engineers and scientists to solve the world's greatest engineering challenges. A global company, headquartered in Austin, TX, NI sells to 35,000 companies globally with annual revenues of $1.23B USD.

The Challenge

National Instruments relies heavily on their IT teams to ensure their employees and company are able to conduct business. Part of that effort belongs to the network team, which ensures the network paths are optimized and can handle the traffic between offices and the outside world. Increasingly, the company realized that they were experiencing performance issues with the applications running on their networks and that traditional network monitoring and WAN optimization tools were not giving them the comprehensive visibility they needed.

Application and network "fires"

"Initially, we wanted an application to pinpoint the source of our internal application and network 'fires,' including VoIP, but as we conducted our vendor and tool evaluations, SaaS was rapidly expanding across our enterprise," explains Joe Smitka, National Instruments' first-ever Application Performance Engineer. Their initial challenge was to find the right tools to tackle these issues. Traditional network tools only showed them the health of the network paths and basic metrics, including response time, availability, uptime and latency. The previous tools were broken or not maintained. The previous data was skewed by WAN accelerators and sampling data was averaged out, rendering the data useless for making actionable business decisions. With their previous solution, National Instruments "spent more time applying patches to existing tools than actually solving problems," said Smitka.

Critical and strategic business services

Additionally, big business-critical SaaS services were in the works. They were already running a supply chain management SaaS application, conducting a big implementation of a market leading CRM SaaS app, and planning to migrate their productivity and collaboration tools to the application provider's cloud version. They required tools that were application-focused with actionable end-user experience data that would help them quickly get to the root cause of problems and keep their business in business.

The Solution

National Instruments needed a monitoring solution to address both immediate application and network 'fires' as well as long-term strategic SaaS investments with critical impacts to the end-user experience and business productivity. AppNeta came in with end-to-end path and user experience monitoring specifically designed for these applications.

With immediate fires extinguished, the next step was to strategically shift the IT mentality and thinking beyond the network, specifically to give more focus and emphasis on the applications, the user experience and the network paths the applications traverse. This new focus would help them pave the way for how to monitor business-critical applications. "The first step to paving the new SaaS monitoring road ahead was to ensure there was a resource involved in bridging the gap between the application and network teams. And that's how I went from my previous roles of both programmer and systems analyst to carving out a new Application Performance Engineer role on the Global Network team," explains Joe. Tasked with bridging the gap between the two teams, Joe also needed to fully define and develop the role within the organization.

In his new role, Joe supports staff across global offices, providing insights for hundreds of internal applications and ensuring WAN connectivity within offices for application and network teams. Initially, as Joe stepped into the new role, he began sourcing the tools needed to provide the necessary application and user experience insights. Research was done with Gartner and it was clear that they needed to engage with more than one vendor to cover all their needs. The outlined needs met by AppNeta included:

Problem	Needs
Lack of insights on cloud application viability	Big SaaS services were in the works and they needed a understand performance for business-critical apps for supply chain management, client relationship management as well as apps used across the entire organization for collaboration and productivity.
Network performance issues across locations	Visibility into network with multiple QoS classes and amongst multiple hops. Metrics: latency, jitter, QoS scores. Ability to simulate more than one case
No visibility into congestion areas	Understanding what apps are running, when, and where

Some general additional requirements included flexibility and scalability, particularly with large data sets. Joe was looking for a tool that was plug and play, SaaS-based, with little to no management. He did not want to worry about database servers and maintenance. He wanted to focus on using the tools and the data.
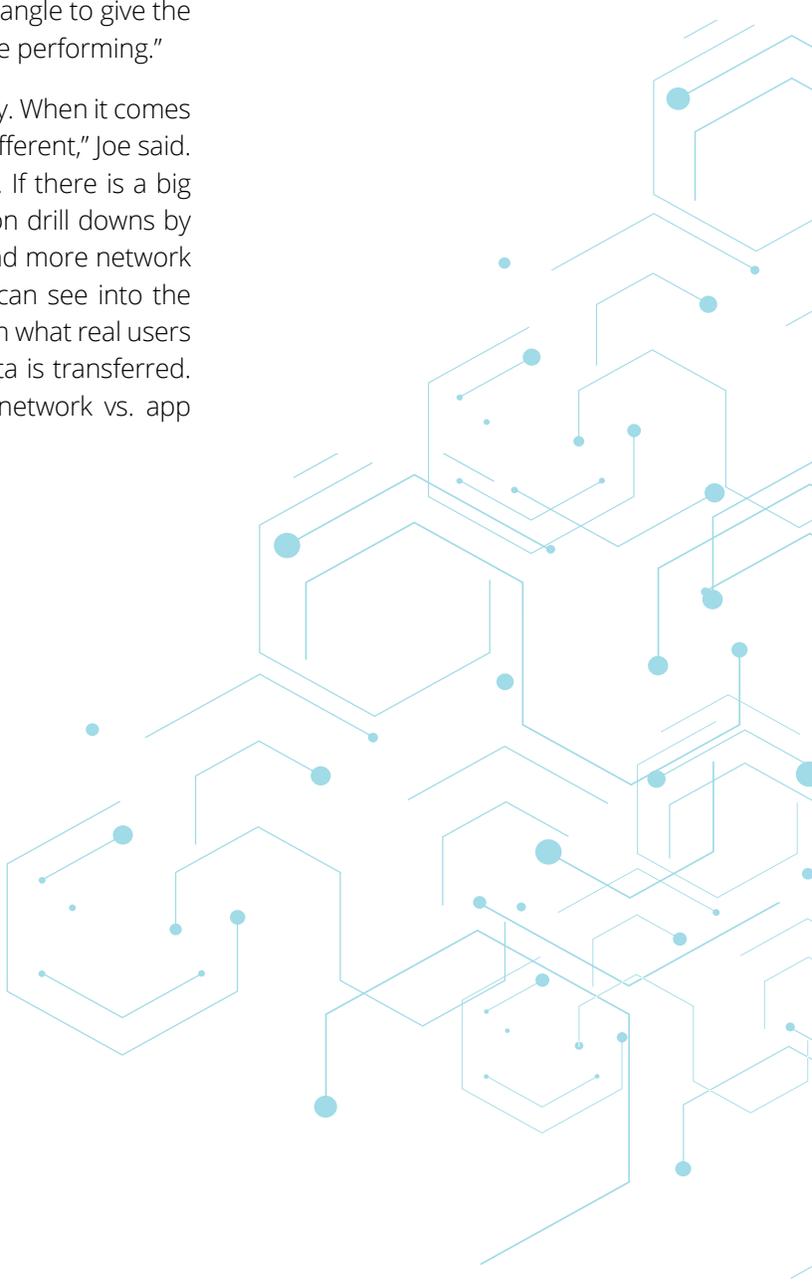
AppNeta delivers a comprehensive solution that meets all of NI's needs. AppNeta's reports and data help Joe bridge the gap between infrastructure and application teams by showing what's going on with the network as well as what's happening from the user's perspective. AppNeta keeps Joe "completely armed with application and infrastructure metrics from every angle to give the application and infrastructure teams a sense of how things are performing."

Joe and the NI operations team are in AppNeta every single day. When it comes to app and network performance issues, "every day may be different," Joe said. As a result there are multiple ways teams leverage AppNeta. If there is a big production issue going on, he turns to graphs with application drill downs by location and category. He shares the graphs more broadly and more network engineers use AppNeta's data for insights as a result. They can see into the network and look at actual packets and URLs to give insights on what real users are doing, including what apps are in use and how much data is transferred. Additionally, Joe gets vital packet data with key metrics of network vs. app latency and percentage of packets retransmitted. These key metrics help narrow down scope for troubleshooting.

Finally, AppNeta closes the monitoring loop with data on specific applications and visibility into user experience. "AppNeta helps provide SaaS clients with visibility into application performance at all branches," Joe said, which no other solution can do. It also gives him the ability to completely test integrations with SaaS providers, as well as the authentication servers at their location and the backend databases that are being hit with their data.

"Before AppNeta we would not be able to get nearly as much data," Joe said. Legacy network and competitor tools would become corrupted, stop running and would not provide dependable data. When it comes to SaaS application issues, the question becomes, is it the network or not? But no matter what the issue, AppNeta's solution enables Joe to "come into meetings with all angles and visibility for all teams," arming him with the detailed data to help the business make strategic technical leaps.