

Based in Birmingham, Alabama, Brasfield & Gorrie is one of the largest privately held construction firms in the U.S. With more than 3,000 employees, 12 offices, and annual revenues of \$2.8 billion, the company provides general contracting, design-build, and construction management services.

Executive Summary

As part of a successful business strategy, the company relies on its IT network to: 1) connect colleagues throughout the country, 2) enable the highest levels of employee productivity by providing fast and secure access to tools and applications on premise and via the cloud, and

3) support customers across a variety of industries with the expertise required to complete construction projects on time and on budget.

However, Brasfield & Gorrie struggled with a lack of network visibility. The IT team would often have to reactively identify and troubleshoot network problems following issues with quality of service (QoS) or decreased performance.



Brasfield & Gorrie relies on IT to:

1 Connect Colleagues

2 Enable Employee Productivity

3 Support Customers

Brasfield & Gorrie Builds Success with

For example, with a popular online file sharing service, one employee attempted to upload 40 gigabits of data across an 80 megabit pipe. It overloaded the circuits on the network.

Without complete visibility into the network and the source of the issue, the uploading of a single, albeit large file, nearly took the entire office offline. A senior network engineer had to spend hours searching for the source of the problem.

LiveNX Industry Leading Capabilities:

Simplify Network Management



Business and Technical Challenges

This lack of visibility was one clear example among others that led Brasfield & Gorrie to take a closer look at its network performance monitoring and diagnostic (NPMD) solution and evaluate how well it mapped to the company's long-term business goals.

The company found it needed a more comprehensive and efficient solution. One that would:

- Support its corporate network, including MPLS, to connect field offices to corporate headquarters and enable all internet connections to be routed through headquarters.
- Clearly see all traffic being routed through the network.
- Perform deep packet inspections to quickly spot potential issues and uncover the source of slowdowns and failed connections.
- Provide analytics and insights for more efficient circuit utilization and ongoing planning.

Network Visualization



Human-in-the-loop Insight



End-to-End Control



The Solution

After testing and comparing LiveAction's LiveNX platform against its existing solution, as well as other NPMD offerings, Brasfield & Gorrie purchased LiveNX.

For Brasfield & Gorrie, LiveNX is primarily used for monitoring and custom reporting on capacity, circuits, and interface utilization. The platform provides insights on circuit

utilization and deep packet inspection to determine the type of applications that are being allowed on the network, which ones to block at the firewall level, and how to effectively right-size circuits across the network based on user needs and traffic flow. Being able to quickly resolve issues by knowing what's bogging down the network in any office allows the company to take immediate action with troubleshooting.

The Results

Having relied on LiveNX for several years, the platform has exceeded Brasfield & Gorrie's expectations. It allows the networking team to optimize circuit utilization across the entire network, ensure better quality of service for users, and properly plan for future upgrades. It also delivers deep analytics into network performance that enable the engineers to precisely pinpoint actions that are slowing the network.

For example, a certain file sharing application recently started syncing 240 gigabits of data in a 24 hour period across a single 80 megabit MPLS connection at a remote site. With LiveNX the team was able to recognize the problem in real-time, and throttle the application so it didn't monopolize the entire circuit. There was also another recent instance where a cloud service was pushing down a major update to all desktops at

a single location. Using LiveNX the team was able to quickly identity the issue and proactively address it before it impacted users.

"Being able to have my director stand over my shoulder while I show him a traffic spike, how it's impacting the network, and where exactly it's coming from is a huge advantage. It helps eliminate finger pointing, and allows others to understand how the network is performing so the team can make more informed decisions," said Gerald Ennis, Senior Network Engineer at Brasfield & Gorrie.

Instead of having to backtrack to find the source of an issue, LiveNX spots potential issues before they happen so the network team can either throttle down traffic, add more circuits, or reroute traffic. According to Ennis, "LiveNX gives us a lot of depth, especially when it comes to deep packet inspection. With our previous solution, we were limited in how much we could see on the network, but with LiveNX, we can see exactly where things are, including every flow, where it's going and how it works with Cisco routers and NBAR. LiveNX is truly an integrated platform that gives us both visibility and reporting. And that's significant."

Additionally, Ennis has accelerated the company's QoS implementation by taking advantage of LiveNX's QoS templates and deploying directly from LiveNX, which is faster and easier than deploying at the router level. His team also uses regular 30- and 60-day reports for ongoing site-specific circuit utilization planning. As the company prepares to roll out SD-WAN, LiveNX will continue to play a critical role in managing the network and providing analytics on its performance.

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