

BOYD**CAT****CATO** CASE STUDY
NETWORKS**VERTICAL:** Manufacturing
HEAD OFFICE: North America
FOOTPRINT: Kentucky, West Virginia, Ohio,
Louisville, Belle

Boyd CAT Doubles Network Performance, Boosts Agility with Cato

About Boyd CAT

The result of a merger of Wayne Supply and Walker Machinery, Boyd CAT is a major dealership of Caterpillar heavy equipment, parts and services used in construction, mining, and transportation. Before Cato, Boyd CAT relied on a carrier's 10 Mbps/s MPLS to connect its 20 retail locations across Kentucky, West Virginia and Ohio with its datacenters in Louisville, Kentucky and Belle, West Virginia. Its ERP application, Microsoft Dynamics AX, ran in the Louisville datacenter with other applications, notably Office 365, running in Microsoft Azure. Two firewall appliances handled security and the local firewall handled remote VPN access.

The Challenge: Slow Application Performance, Poor Visibility

Retail dealerships face unique challenges in an era of digital transformation. To run their businesses today, they need fast, secure WAN connections from dispersed retail locations to applications in the corporate datacenter and the cloud and to manufacturing partners. Such was the case with Boyd CAT, a Caterpillar heavy equipment dealer.

The company's 20 retail locations were spread across Kentucky, Southern Indiana, West Virginia and Southeastern Ohio. All were connected to datacenters in Louisville, Kentucky and Belle, West Virginia using 10 Mbps/s MPLS connections. Its ERP application, Microsoft Dynamics AX, ran in the datacenter. Security was provided by datacenter firewall appliances, which also handled mobile VPN access, and a second firewall from the company's MPLS carrier. With its expensive MPLS-based communications architecture, capacity was undersized and application performance often suffered, impacting customer service and other aspects of the business.

BOYD**CAT**

With 10 Mbps/s MPLS connections, our branches were always complaining about slow performance,” says Boyd CAT Communications Analyst, Matt Bays.

All of those expensive MPLS connections also relied on local last mile connections, which could be erratic. “Dealers in Kentucky and West Virginia suffered frequent dropouts,” says Bays. “If there was an interruption, we’d often have to contact the MPLS carrier which would then have to get us to the local last-mile provider.” Sometimes resolving performance and dropout issues could take days. When connections dropped, retailers could not access the company’s Azure based Microsoft Dynamics AX ERP application. Even when the connection was up, ERP performance could be painfully slow.

“All of our print servers are in Louisville, so if someone needed to print a customer invoice, the data would have to travel first to the MS Dynamics AX servers in the Louisville datacenter, and then all the way back to the retail branch,” says Bays. “At certain locations, the last mile provider might be running at only 3 or 6 Mbps/s, so it could take forever just to print a simple document.”

To add to performance issues, there was no easy way to manage bandwidth allocation, so application performance would degrade even more when Windows operating system updates hogged the already slow connection. “On the second Tuesday of every month, our Windows update server would update all the laptops and desktops and everything else would slow down to a crawl,” says Bays. Boyd CAT also had to limit or prohibit use of streaming applications such as music services and YouTube to keep things running smoothly.

Visibility with carrier MPLS was limited, so it was difficult to troubleshoot performance issues. “We often couldn’t figure out if the problem was the application or the data circuit,” says Bays. Firewall management was also cumbersome. “To allow secure access to a new location from Caterpillar and our numerous other providers we’d have to go through our system admins who would have to get online and submit a request to the carrier,” says Bays

BOYD CAT Investigates SD-WAN, Chooses Cato

Things changed when Boyd CAT’s head of IS attended a tech conference where he heard other attendees discussing their SD-WAN solutions. “After that conference, we were tasked with searching out SD-WAN providers and looking into the cost and implications of converting to SD-WAN,” says Bays.

“Boyd CAT considered Cato and two other SD-WAN providers in the telecom and network appliance spaces, according to Bays. “Immediately Cato seemed like the right fit. The cost was reasonable, the implementation seemed so easy and the visibility was so much better than with MPLS.”

Representatives from Cato and Cato’s local Kentucky and West Virginia last mile providers came to Boyd CAT’s offices for a meeting. “That was where we go the final approval to go with Cato.” Cato connects all enterprise network resources — including branch locations, mobile users, and physical and cloud datacenters — into a single secure, global, cloud-native network service. With all WAN and Internet traffic consolidated in the cloud, Cato applies a suite of robust security services to protect all traffic. Connecting a retail location to Cato is just a matter of installing a simple Cato Socket appliance, which connects to the nearest of Cato’s more than 55 globally dispersed points of presence (PoPs).

At the local PoP, Cato provides an onramp to its global backbone and security services. The backbone is not only privately managed for zero packet loss and 5 9’s uptime, but it also has built in WAN optimization to dramatically improve throughput. Cato monitors network traffic and selects the optimum path for each packet across the Cato backbone. Mobile users run across the same backbone benefiting from the same optimization features, improving remote access performance.

Fast Deployment, Double the Bandwidth

Deploying Cato’s Sockets to each location was incredibly easy.

“We ran around to each site, plugged them in, and assigned the license,” says Bays, “The actual cutover from MPLS took seconds.”

Thanks to the low cost of the Cato solution, Boyd CAT was able to more than double branch bandwidth, moving to from 10 to 25 Mbits/s. Together with Cato’s optimization and global private backbone, the additional bandwidth led to a dramatic improvement in application performance.

“The branches were just loving it,” says Bays, “They started fighting over who would transition to Cato next. We were able to discontinue all our MPLS connections.”

“Aside from sheer bandwidth, other performance improvements came from Cato’s improved visibility and bandwidth management capabilities. “With Cato we can limit the bandwidth used by Windows Update and streaming applications, so they don’t slow things down, and see who is doing what on each circuit,” says Bays. “That really excited us. We also have dual data circuits.”

The latter means no more of the dropouts suffered with the last mile MPLS providers. Now it’s no problem allowing users to take advantage of YouTube, which is important because Caterpillar does some of its training via YouTube videos. When there are rare performance issues, Cato’s visibility makes it easy to trace the cause. “We recently had an issue at our Evansville location. I just logged into the local Socket, did a speed test and traced the issue to the application,” says Bays. Boyd CAT’s Helpdesk can also log into Cato’s console to troubleshoot performance issues.

A Smooth-Running Business

Bays can configure and change network and firewall rules directly through the management console, rather than having to submit a request and wait. “It’s so easy to open up a connection for a partner or use Active Directory groups to determine who can access social media sites such as Twitter and Facebook,” says Bays.

Boyd CAT is also using Cato’s anti-malware and IPS capabilities. “They’re working great,” says Bays. “Support is always excellent,” says Bays. “We just click on the support tab and send a ticket and they respond very quickly. We don’t have to call in, go through all those options and not hear back for a few days. We get a quick response and they often follow up to make sure everything is good, which is really nice.” Bays has started rolling out some Cato mobile VPN clients as well.

“I love it. You just click a button to connect. When our licenses run out on our current VPN solution, we’ll look into switching all our end users to Cato VPN clients.”

The result: Smoother, more secure business processes and enhanced productivity, thanks to Cato. Says Bays, “It’s just been huge for Boyd CAT to be able to get everyone in the business more bandwidth and faster, more consistent performance.”

Matt Bays,
Communications Analyst, Boyd CAT