

Interplex



Riverbed Helps Leading Precision Engineering and Manufacturing Company Automate Robotic Manufacturing and Accelerate Digital Transformation

When Interplex implemented ambitious plans to automate key business and manufacturing processes, operational efficiency and productivity went up. But over time, increasing bandwidth costs, slower application performance, and difficulty identifying and solving network issues hampered their transformation. Riverbed solutions modernized the underlying infrastructure, accelerating application performance and mean-time-to-resolution, and paved the way for future innovation.

Challenge: Bleeding bandwidth, lack of network visibility threaten progress

In late 2011, in order to counter the effect of rising wage costs in China and Southeast Asia, Interplex Holdings launched Industrial Automation and Industrial Engineering initiatives, which successfully boosted operational efficiency and productivity and drove strong growth for the company in an otherwise slowing sector. IT was a key contributor to the success of the initiative. Today, Interplex's IT team has become a driving force for the business, playing a pivotal role in the company's adoption of cutting-edge technologies, including the introduction of robotics on the manufacturing floor.

While the company had improved productivity and reduced costs by automating key organizational and business processes, rapid innovation and the introduction of new apps, services and connected devices began to take a toll on the network, causing poor application performance which eroded those productivity gains and cost savings.

"We were bleeding bandwidth costs," says Ken Khoo, Management Information Systems Manager, responsible for Global Infrastructure at Interplex Holdings. "The demand was literally more than what the bandwidth pricing could catch up with."

"The implementation of robotics for manufacturing automation has been huge for us in terms of productivity and cost-savings, but it has created more complexity in terms of IT. All production lines on which the robotics sit connect to the ERP system. It knows how much has been manufactured and how much has spoiled—it's amazing—but it's also created a lot more chatter over the network."

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Management Information Systems Manager, Interplex

Interplex centralizes management of its Global Infrastructure from its Singapore Data Centre, supporting a large global footprint of 40 plants spanning Europe, Asia/Pacific and the United States. Several of the plants are located in rural areas, where there's no stable Internet service linking back to Singapore. A large percentage of users sit in China, requiring all plants to use MPLS for WAN connectivity.

Over time, the speed of applications over the network came to a crawl, frustrating end users, and making it nearly impossible for the IT team to deploy new apps and services to sites efficiently. "The question from employees when we announced a new rollout was always, 'How slow will it be?'" says Khoo. "SharePoint is a great example. When we first deployed it, the feedback from end users was, 'My paper works faster!' And it was true. One form could literally take 30 minutes for an employee to complete."

"In a matter of minutes, SteelCentral identified an application performance problem in the US that had persisted for nearly a month. We had assumed that the application was running poorly because it was routing through Singapore, so we were trying to solve a latency issue. It turns out it the app hadn't been properly scrutinized for performance. Before, the infrastructure and app teams played the blame game when something went wrong. With SteelCentral, there's no need."

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Further, while Interplex's ambitious strides towards digital transformation introduced cutting-edge technologies from the back office to the shop floor, they had also introduced huge amounts of complexity onto the network.

With limited visibility into device-level performance, traffic patterns and application-level utilization, a lot of time was wasted on identifying and solving issues as well as finger-pointing amongst the infrastructure and apps teams.

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When a mandatory audit of Interplex's IT Infrastructure (a precursor towards ISO 27001 and other mandatory security-related regulatory compliances) reinforced the need to replace its existing mix of disparate diagnostic tools to gain greater visibility into network and application performance, the company turned to Riverbed.

In Brief

Challenges

- Strategic IT initiatives aimed at offsetting rising wage costs and a slowing economy boosted operational efficiency and productivity, but over time resulted in:
 - Dramatically increased bandwidth usage
 - Employee frustration resulting from poor app performance
 - Difficulty diagnosing and solving network issues due to increased network complexity/lack of visibility
- Limited monitoring/visibility capabilities hindering ability to adhere to security-related regulatory compliance.

Solution

- Riverbed SteelHead
- Riverbed SteelCentral Network and Application Performance Management
- Riverbed Professional Services

Benefits

- Initial ROI realized in just 2.5 weeks after implementation
- Reduced bandwidth consumption by more than 50%, resulting in significant cost-savings
- Boosted employee satisfaction with faster application performance (reduced bar code scanning from 10 to 3 seconds)
- Reduced mean-time-to-resolution from days to hours
- Ability to spin up new apps and services to remote sites quickly

Solution: Application visibility and optimization for the win

Interplex's first priority was to stop bleeding bandwidth, but it had a long list of requirements for potential solutions. "As with all Interplex's IT initiatives, we need to think about how we design the end game," says Khoo. "We had to look beyond the immediate need for a WAN op solution to the bigger business challenge we were trying to solve."

Interplex evaluated a number of vendors as part of the selection process which came down to three core issues: 1) Cost-savings 2) the ability to deliver an integrated, end-to-end solution that could solve immediate challenges/meet regulatory compliance needs as well as help drive future goals and 3) a skilled support team that matched the company's global footprint. Riverbed was the only vendor able to deliver on all three.

Interplex implemented a solution that combined Riverbed SteelHead, the industry's #1 WAN optimization solution, across 13 sites and Riverbed SteelCentral network and application performance management for end-to-end visibility. Riverbed Professional Services managed implementation and provides support across global sites.

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Benefits: End-to-end visibility, faster apps, a strong foundation for the future

With Riverbed SteelHead, Interplex was able to start seeing an ROI within 2.5 weeks, reducing bandwidth by more than 50%, and simplifying management significantly. “We saw a significant data reduction after implementation. Our Hangzhou site is a great example. Before, we needed 10MB of bandwidth, we’re now running on just 4MB,” says Khoo. “The user experience was just totally different after the implementation because of caching. It’s as good as if the apps were run locally.” According to Khoo, the fact that he doesn’t have to set up or buy licenses to run another local cache server for the application translates into indirect cost-savings for the business.

Employees also noticed huge improvements in inventory tracking, a process done through a barcode scanner that feeds data into the company’s ERP system. SteelHead has helped reduce scanning time from 10 seconds to 3 seconds. Khoo also credits SteelHead for key improvements to user experience on SharePoint.

Leveraging the telemetric performance data collected by SteelHead, SteelCentral provides Interplex with real-time device status, link-level monitoring, uptime information and alerts as well as visibility on traffic patterns like application-level utilization, top talkers, etc. This has been particularly helpful in the management of IT at remote plants and offices with limited local IT support, equipping the CIO and his IT team to make real-time decisions about infrastructure, and enabling faster troubleshooting and reduced mean-time-to-respond for the entire production set-up—including machinery, like robotics, that is completely dependent on the network infrastructure.

Khoo credits SteelCentral with allowing his team to pinpoint issues immediately, at the code level in some cases, cutting resolution time instantly. “In a matter of minutes, SteelCentral identified an application performance problem in the US that had persisted for nearly a month. We had assumed that the application was running poorly because it was routing through Singapore, so we were trying to solve a latency issue. It turns out the app hadn’t been properly scrutinized for performance,” says Khoo. “Before, the infrastructure and app teams played the blame game when something went wrong. With SteelCentral, there’s no need.”

Having a strong backbone of application and network performance infrastructure in place, Interplex has its eye on expanding automation to customer and vendor-facing processes, and plans to move a greater share of its applications and services to the cloud.

“Riverbed solutions have allowed us to drive more applications out to our users more quickly, and helped us drive IT into the business. I’m proud to say we’re a tech-driven organization,” says Khoo. “At the end of the day, it’s all about cost. That dollar we save in IT-generated efficiencies? It translates into savings we can pass on to our customers indirectly, and into dollars we can invest back into the business towards future growth, development and innovation.”

About Riverbed

Riverbed, at more than \$1 billion in annual revenue, is the leader in application performance infrastructure, delivering the most complete platform for the hybrid enterprise to ensure applications perform as expected, data is always available when needed, and performance issues can be proactively detected and resolved before impacting business performance. Riverbed enables hybrid enterprises to transform application performance into a competitive advantage by maximizing employee productivity and leveraging IT to create new forms of operational agility. Riverbed’s 27,000+ customers include 97% of the *Fortune* 100 and 98% of the *Forbes* Global 100. Learn more at riverbed.com.

The Riverbed logo consists of the word "riverbed" in a lowercase, bold, orange sans-serif font.