CASE STUDY: Global RF Systems Manufacturer

IN BRIEF

Industry

- Manufacturing

Challenges

- Improve collaboration with a new product lifecycle management (PLM) System
- Simplify IT infrastructure to reduce cost, complexity, and management

Solution

- One Steelhead appliance was deployed in each of 15 offices

Benefits

- Significantly shortened product development cycle
- Eliminated need to deploy additional IT staff, and 60 additional servers
- Savings of $15,000 in annual bandwidth costs alone
- Payback period of just 9 months

Riverbed Steelhead® Appliances Enable a Global Manufacturer to Deploy a Centralized SAP PLM System

This large global designer, manufacturer, and supplier of communications equipment, services, and systems is headquartered in Illinois. The company generated $2.1 billion in revenues in 2005, and has more than 11,000 employees around the world, in 60 locations. Design staff is distributed among 15 locations, including international offices.

Challenge: Deploying a Better PLM System

In 2005, the manufacturer was rolling out a new Product Lifecycle Management (PLM) system from SAP to support product development in 15 design centers around the world. The new system, mySAP PLM, involved deploying the SAP database to manage part numbers, SolidWorks® from Dassault Systems® for Computer Aided Design (CAD), and an additional "content server" in each site to store drawings locally to ensure high performance. Furthermore, each site was going to require a "translation server" to allow CAD drawings to be converted to PDF® format, as well as a local backup system to ensure that the work done each day was properly backed up.

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The IT manager in charge of the PLM system rollout recognized that achieving the benefits of this system was going to require considerable investment of time, money and management oversight. He thought there might be a better way to achieve the goals of the new PLM system, and recognized that the ideal system would be a single, centralized deployment of all the necessary system components. However, the bandwidth connecting the design centers was typically a T1 line, with latencies ranging from 30-40 ms in the US to 270-280 ms in China.

This combination of low bandwidth and high latency meant that, like most applications, mySAP PLM didn't perform at an acceptable level from a centralized location. This was forcing the IT staff to deploy complex infrastructure around the world. In addition to deploying and managing all those servers, the content needed to be replicated to all sites in order to ensure that all the teams involved in a project had the latest designs.

Solution: Riverbed Steelhead Appliances Enable a Centralized SAP PLM System

The IT manager deployed Steelhead appliances from Riverbed to improve the performance of mySAP PLM over the network. Sure enough, once the Steelhead appliances were deployed, engineers in China could quickly access the centralized content server in the Chicago, IL datacenter. The project manager noted, "We centralized all engineering design in one server without significantly increasing the bandwidth to each remote location."

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He had considered caching as an alternative, but determined that wouldn't work for his company. "A cache-based architecture presumes that you have a central site with spokes out to the edge, and that the origin server is the middle. In our case, the lead design team could be located anywhere there isn't really a main center. We needed a system that could optimize 'any to any' traffic, and that's what Riverbed gave us."

Benefits: Centralized Application, LAN-Like Performance Globally, and a More Competitive Company

The company has realized significant benefits from deployment of Steelhead appliances – ranging from immediate cost savings, to reduced management effort for the IT staff, and even strategic importance to the company. "The centralized deployment of mySAP PLM immediately eliminated the need for 15 to 20 other servers, distributed among global offices. If we had distributed these content servers, we would also have needed at least 2 additional servers to go on the local network," noted the IT manager.

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SUMMARY

A global manufacturer was deploying a new PLM system to enable its global design teams to work together more efficiently. However, the system required significant investment in additional IT infrastructure wherever design staff was located.

The company chose to deploy Riverbed Steelhead appliances in conjunction with the PLM system, enabling a single, centralized PLM deployment.

The company avoided significant capital expenditures, additional investments in IT staff, and also made collaboration among offices more effective.

"In addition, we would have had to buy software licenses for those servers at $10,000 per license, and we would have had to do backups and have at least one full-time person to take care of the entire infrastructure. We would have had to increase our network bandwidth as well, for at least $1,000 per month for each location. That's a lot, and that's just the bandwidth, not the cost of provisioning and maintaining the additional links."

IT Requirements to Deploy a 15-Office Global PLM System

	Without Riverbed	With Riverbed
Servers	45 to 60 servers	1 Riverbed Steelhead per location
Software	• Backup software • Content server • CAD software	None
Bandwidth	$15,000 annual increase	None
IT Management	One additional full-time employee	On average, an hour per week for the whole system

The payback on the Riverbed project was 9 months according to the IT manager. "It helped us use an integrated and centralized product development system so that engineers all over the world can work without compromising functionality or performance."

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In addition to enabling the company to centralize its infrastructure, Riverbed delivered other concrete benefits. "It plays a good part in making us more competitive," said the IT manager. "Eliminating the development cycle time that it takes engineers to collaborate reduces the time to develop our products. For example, download times went from 30 to 40 minutes on average to about 5 minutes, and we managed to centralize all our data. And that makes it easier to collaborate around the world. Teams no longer have to be local, and it's OK if there's a team in Chicago and a team in China collaborating."

By deploying Steelhead appliances, the manufacturer was able to roll out their new PLM system from SAP without being forced to deploy and manage dozens of distributed servers and the associated backup infrastructure around the world. The company has saved a great deal of money by avoiding WAN upgrades, and has reduced the IT staff required to manage the implementation, and improved the development cycle time for their product design

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About Riverbed

Riverbed Technology is the pioneer in wide area data services (WDS), a fast-growing product category that solves the problems of high latency and limited bandwidth that plague a wide variety of applications over distributed networks. Riverbed's Steelhead appliances provide the highest level of performance across the broadest range of applications over WANs, accelerating applications by up to 100 times, and reducing WAN traffic by up to 95%. By providing optimizations that are orders of magnitude greater than what users experience today, Riverbed is changing the way people work – and enabling, for the first time, a distributed workforce that connects as if they were local.

The Wall Street Journal named Riverbed the winner of its 2005 Technology Innovation Award in the Network/Broadband/Internet category. In addition, *InfoWorld* has named Steelhead a "Technology of the Year" in both 2005 and 2006, as the "Best WAN Accelerator". Riverbed's award-winning solutions are available worldwide from resellers who are members of the Riverbed Partner Network, from Riverbed OEM partners, or directly from Riverbed.

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