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DJO

SteelHead EX Technology Supports Growth-Through-Acquisition Strategy

DJO Global, Inc. is a leading provider of high-quality orthopedic devices. The company offers more than 1,000 devices that help people throughout the entire continuum of care, from injury prevention to rehabilitation.

Challenge: Develop an IT infrastructure that supports business growth

DJO Global (DJO) employs more than 5,000 people at 24 locations around the world, although that number is often changing as DJO opens new facilities and acquires other companies. DJO's strategy of growth through acquisition requires the IT team to integrate one to two companies each year into the enterprise infrastructure. One of their most critical tasks is providing the new employees with access to centralized data and applications over the corporate MPLS network or through site-to-site VPNs. On an ongoing basis, employees at all locations need to be productive and depend heavily on applications and data being delivered over the network.

With distributed operations around the globe, the company's data transfer across a WAN includes large design files sent from the US to manufacturing sites in Mexico and Tunisia.

Given the great distances between the sites and subpar network performance, it was taking hours to transfer the files.

The company was planning to buy more bandwidth in hopes of speeding the file transfers, when a reseller suggested SteelHead® WAN optimization appliances from Riverbed Technology. DJO installed appliances at three sites (the design office and the two manufacturing locations) and saw bandwidth use drop by 60% to 70%, resulting in users more than satisfied with the faster file transfers and minimizing the need for bandwidth upgrades.

SteelHead appliances became a standard component of all DJO offices, accelerating Oracle, Citrix, Microsoft Exchange and SharePoint traffic across the WAN. Overall, the appliances reduce bandwidth use by 70% to 90%, which represents a virtual bandwidth increase of adding 30 to 40 T1 lines, according to Mark Kelly, a DJO network engineer, along with the related cost savings.

The arrival of the SteelHead appliances also established the technological foundation for centralizing additional data and applications. For example, in one project, the company went from four ERP systems to one Oracle ERP system hosted in Boston. With 800 concurrent users, they expected to need an 80-Mbps circuit into Oracle hosting center. With SteelHead WAN optimization, they needed only a 10-Mbps.

In the other, they went from having 12 Exchange servers (serving 20 offices) to three. The 65% to 90% bandwidth reductions made possible by the SteelHead appliances reduced the amount of bandwidth needed to support that consolidation as well.

Since the original SteelHead deployment, DJO was purchased and combined with another company and now is in a period of growth through acquisition. When the original SteelHead appliances were reaching end-of-life, the IT team re-evaluated WAN optimization technology in light of their current needs,

which include integrating acquired companies quickly into the corporate IT environment and minimizing the hardware and administrative needs at remote sites.

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Mark Kelly
Network Engineer
DJO

Solution: SteelHead EX appliance with VSP and granite

Although they briefly considered other options, DJO's IT department decided to stay with Riverbed® for two reasons. The first was satisfaction with their SteelHead appliances. "We've been real happy with the SteelHead performance," says Bill Richardson, principal systems engineer at DJO. "We said, 'Why get rid of a good thing and try something we don't have a proven track record with?'"

The second reason was the introduction of SteelHead® EX appliances, and a trade-up program offered by Riverbed that would reduce the cost of upgrading the existing appliances to EX. SteelHead EX appliances combine virtualization and WAN optimization, and are designed for situations such as DJO's where it's important to get branch offices up and running quickly.

Two aspects of the SteelHead EX solution were particularly attractive to DJO. One is that they are designed to support VMware vSphere, with the Virtual Services Platform (VSP) that can run virtualized instances of their own services. DJO has begun running remote sites' domain controller servers on the VSPs and has plans to run print servers there as well.

The other attractive feature of SteelHead EX is the possibility of adding storage consolidation with a Riverbed Granite® appliance upgrade. "We use EMC's VNX storage platform, and ideally, I want the ability to 'vacuum up' servers located at remote offices into the data center to control them, and then optimize the WAN connection," explains John Iraci, vice president of enterprise infrastructure at DJO. "The direction and premise that Riverbed Since the original SteelHead deployment, DJO was purchased and combined with another company and now is in a period of growth through acquisition. When the original SteelHead appliances were reaching end-of-life, the IT team re-evaluated WAN optimization technology in light of their current needs, which include integrating acquired companies quickly into the corporate IT environment and minimizing the hardware and administrative needs at remote sites. delivers with Granite is simple: if my WAN is interrupted, then my remote sites can continue to operate. Granite with EMC VMAX and VPLEX provides the ultimate platform for consolidation, and ensures high-availability should the data center fail."

The SteelHead appliances have now been upgraded to EX at nearly all of DJO's remote sites. The deployment went as easily as it did with the original appliances. "We have a basic configuration that we have standardized on, so we basically just name the appliances, put IP addresses on them, ship them to the remote offices with pictures about where to plug things in," says Richardson.

"Once an appliance is up and running, I can bring up VSP and get a virtual machine going," Richardson adds. "With SteelHead EX, my life is a lot easier from the virtual machine standpoint. The Riverbed Services Platform (RSP) on the older SteelHeads supported a different virtual machine format.

VSP is directly in line with what I'm already doing with my virtual machine hosts from VMware. VSP is more straightforward for me to use."

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Benefits: EX functionality integates new sites faster; bandwidth reductions support consolidation

IT team relies on the SteelHead EX appliances to integrate acquired companies quickly into the enterprise infrastructure. "The SteelHeads do a really excellent job of WAN acceleration, so as soon as we have a connection up and running, people have a good user experience," says Richardson. "They can be more productive since connection speed isn't slowing them down."

SteelHead EX is also allowing the IT department to streamline the infrastructure at the remote sites. "SteelHead EX appliances will be a big portion of a new branch installation," says Richardson. "Because we can run some services on VSP, there will be a lot less work because we'll be deploying fewer servers at that site. And with Granite, we'll be able to do away with tape backup systems."

Richardson gives the example of a new DJO location in China where a SteelHead EX appliance is the only server on-site. Larger offices, especially acquired ones, involve a more complex migration process, he cautions, but where possible, the branch-in-a-box approach using SteelHead EX appliances will be used to speed the integration of new sites into the enterprise infrastructure. Other advantages of this approach include reduced power utilization and smaller racks at those sites.

Riverbed solutions help the IT team on an on-going basis by reducing the amount of administrative support for the remote sites. As an example, Richardson compares upgrading the domain controller operating system at sites with and without SteelHead EX appliances. "This upgrade involved a wipe-out and redo, and when you're not there, you can have lots of issues," he explains.

Without travel budget for many routine IT processes, a lot of administrative work must be done remotely. Richardson had a number of headaches when dealing with sites that hadn't yet been upgraded to SteelHead EX. "But with the domain controllers running on Riverbed's VSP, it took me a day to a day and a half less time to rebuild each machine," he says. "It still took some time to do it, but it wasn't nearly as painful as it would have been without SteelHead EX."

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Mark Kelly
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Summary

DJO was a very satisfied SteelHead customer when, about the time the appliances reached end-of-life, the corporation had moved into an aggressive growth-through-acquisition strategy. This gave the IT team the opportunity to reevaluate Riverbed WAN optimization technology in light of the need to quickly incorporate new businesses into the corporate IT infrastructure.

DJO opted to stay with Riverbed and use the trade-up program to upgrade to SteelHead EX appliances. SteelHead EX technology, which includes the ability to run services virtually on VSP, helps streamline the infrastructure at the remote sites, bringing them on-line more quickly.

Granite converged branch infrastructure will eliminate the need for tape backup systems at new sites. And SteelHead EX appliances deliver the 70% to 90% bandwidth reductions DJO had grown used to with the original appliances, allowing many critical applications such as Oracle ERP and Microsoft Exchange to be consolidated and delivered over the WAN.

About Riverbed

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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 26,000+ customers include 97% of the *Fortune* 100 and 98% of the *Forbes* Global 100. Learn more at riverbed.com.