

# CASE STUDY: GOLDER ASSOCIATES

## IN BRIEF

### Industry

- Professional Services (Environmental Consulting)

### Challenges

- Improve client service and global collaboration by creating a centralized SharePoint Intranet
- Empower mobile workers with the same performance as users in the HQ and branch offices
- Achieve seamless integration of an acceleration system with Golder's Cisco-based routing infrastructure

### Solution

- Steelhead appliances were deployed in over 55 offices
- Steelhead appliances to be deployed in most of the remaining 100 offices
- Steelhead Mobile software deployed to accelerate mobile workers
- Central Management Console (CMC) deployed to simplify management of Steelhead appliances

### Benefits

- Centralized Intranet provides LAN-like performance in branch offices around the world
- Mobile workers get the same LAN-like experience as employees in branch office
- WAN backup traffic reduced by almost 40%

## Riverbed Steelhead® Appliances and Steelhead Mobile Provide Real-Time Collaboration Everywhere for Leading Environmental Planning Organization

Golder Associates is one of the most respected engineering and environmental services groups in the world. Founded in 1960, Golder now employs over 5,000 people who operate from more than 150 offices located throughout Africa, Asia, Australia, Europe, North America and South America. Golder's knowledge of local cultures, languages and regulatory requirements, combined with their global resources, makes it possible for them to help clients achieve their business objectives around the world and at home.

Through their network of local offices, Golder completed over 12,000 projects last year and has more than 6,000 clients. Services include air quality, environmental engineering, geophysics, cultural sciences, geosciences, and risk analysis. Golder is consistently ranked as one of the top engineering and environmental services firms by Engineering News Record magazine, and is considered "one of the best firms to work for" in Africa, Australia, Canada, and the US for the past 5 years.

### Challenge: Enabling Collaboration for a Global Workforce

As a global corporation with many large scale projects, Golder was attuned to the challenges that their employees face in worldwide projects. Alison Ramsley, Golder's Leader of Global IT Services noted, "We are a company of knowledge workers. For our business, the ability to put the right talent on the right project – regardless of where the person or the project might be – is exactly what helps us succeed. Our IT infrastructure is designed to support the way our engineers & scientists need to work.

**"Soon after we started addressing the problem of performance in the branch office, we thought we should start doing the same thing for users who are on the road."**

"Not long ago we decided that, in order to support collaboration better, we needed to deploy a centralized Intranet portal. Based on our discussion with the IT services firm Avanade, we decided to create the system based on Microsoft SharePoint. At the same time, we noticed an overall increase in our WAN data traffic as well. It wasn't just document collaboration, even though Office docs are the bulk of what we transfer. Exchange,

Veritas NetBackup, and AutoCAD files and data were demanding a tremendous amount of network resources, and slowing operations down for all our employees. We pretty quickly understood that, if we were to go to a centralized document management system, we had to do something out of the ordinary to ensure that application performance was where we needed it to be."

Alison added, "By the nature of our work, we travel a lot. Our colleagues are on the road all the time, at client or project sites. They can be onsite anywhere from weeks to months. Soon after we started addressing the problem of performance in the branch office, we thought we should start doing the same thing for users who are on the road. After all, they need to be just as productive as users who are in the branch office."

### Meeting the Needs of a Globally Distributed Network

Joe Potegal, Senior Network Engineer, also went into detail about Golder's network environment. "Well, we certainly are a global company. Given that we have offices in the US, Canada, Europe, Australia, Africa, Asia, and all over South America, you can imagine that maintaining consistency in connectivity and performance is difficult. It gets even harder when you think about all of the traveling workers and off-site projects we have.

"Some of our branches are just 2 – 3 employees in size, whereas others are 400 people or more. For our small offices we have T1 connectivity; our larger offices have up to DS3's. We're a full Cisco shop – all our core routing infrastructure is based on Cisco's Integrated Service Routers. We run all of this with Cisco's Dynamic Multi-Point VPN (DMVPN), so it's fully meshed across our 150-plus offices. Whatever wide-area data services solution we chose for acceleration would have to work seamlessly with Cisco infrastructure," noted Joe.

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Potegal added that Golder is also in the process of a corporate-wide voice over IP (VoIP) rollout. “Our VoIP rollout is all based on Cisco IPT. Again, any system for application acceleration would need to inter-operate voice over IP.”

### Steelhead Appliances Enable Collaboration in the Branch

Working with Avanade, the Golder IT team decided that using Riverbed Steelhead products were the right solution for their organization. Joe recalled the evaluation process, “Well, of course we looked at Cisco because they are one of our main IT infrastructure providers. At the time, we didn’t feel that their products in this space were ready for large scale deployments. They were hard to configure and manage, and the acceleration performance wasn’t where we needed it. We also looked at F5’s solution in the space, but it had similar issues to Cisco’s solution.”

Joe also discussed the evaluation of Riverbed Steelhead appliances. “At the same time, we were evaluating Steelhead appliances. We knew that Riverbed had a more mature product in this space, and it really showed in the evaluation process. First of all, the performance gains were really impressive. Large files requested off of our SharePoint Intranet went from 10 minutes or more down to just a few seconds on a warm transfer. While Exchange emails aren’t quite as large as many of these files, we still saw these kinds of order-of-magnitude improvements. Finally, we saw really big gains with Veritas NetBackup. We

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were typically backing up many gigs per day, and that was reduced to just megabytes. That data reduction in and of itself helped shrink our backup window significantly.”

Joe also commented on VoIP. “The Steelhead appliances also handled interactive protocols very well. With their pass-through abilities we were able to ensure that VoIP could run properly while Steelhead appliances were accelerating files and applications.”

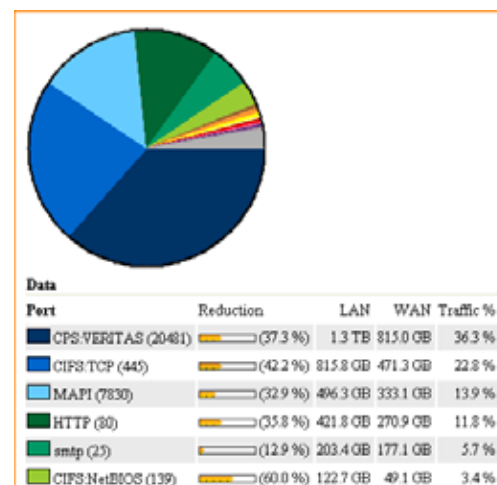
With the combination of consistently good data reduction across key applications, and acceleration based on the Steelhead appliances’ TCP and application protocol optimizations, Golder was able to move forward with its new Intranet portal. Joe concluded, “We could be assured that users, no matter what office they were in, could access the Intranet portal with LAN-like performance. Not only that, we saw great benefits across the rest of our key applications. And even with this centralization, we didn’t need to buy more bandwidth. The Steelhead appliances really provide us with tangible benefits.”

### The Central Management Console Effortlessly Scales System Management

Golder Associates also uses the Riverbed Central Management Console (CMC) to manage their global deployment of Steelhead appliances. The CMC provides Golder a single interface for monitoring, managing, and reporting on every Steelhead appliance in the network. Joe discussed the value of the CMC

in detail. “It’s really a useful tool. If you’ve only got 10 or so Steelhead appliances, it’s not too bad to log into each one as you need to make policy changes or configuration updates. But now that we are over 50 appliances in locations all over the world – and we’re still planning to deploy more – the CMC is a life saver. The biggest benefit to our organization is the ability to push down software updates and configuration changes to all the appliances at once. We can even schedule the changes to happen at any particular time. This makes managing the Steelhead appliances painless.”

Joe added, “We also get high-quality reports from the CMC. These reports allow us to look into the performance of the system from both a high level and a low level. They allow us to effectively manage the system without too much effort.”



A snapshot from Golder’s Central Management Console (CMC) shows point-in time results for data reduction in the organization’s Steelhead appliance deployment.



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### SUMMARY

Golder Associates wanted to create a new, centralized Intranet, but was concerned about the performance of this system when accessed over the WAN. At the same time the firm wanted to accelerate other key applications such as email and CAD document sharing.

After reviewing competitive products and bandwidth upgrades, Golder deployed the Riverbed Steelhead appliance solution not only because of its superior application acceleration, but also because of its easy integration with Golder's Cisco-based network.

In addition, Golder has beta tested Steelhead Mobile for use with its mobile workforce and found it significantly improved performance.

### Steelhead Mobile Extends Collaboration to the Mobile Worker

With the success of the Steelhead appliance and the CMC, Golder Associates decided it was time to turn their attention to the mobile worker. Alison recalled, "We knew that our colleagues on the road were having the exact same problem that our branch offices faced before we deployed the Steelhead appliance. After all, they need to access the same files and data that everyone else does."

Joe added, "So when Riverbed told us that they were releasing a software version of the Steelhead appliance designed specifically for mobile workers, we jumped at the chance to get it in our environment. Steelhead Mobile could meet multiple needs for us: We clearly saw the benefit for workers on the

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road, but we also thought it could be a benefit to our really small offices. With just 2 people in some offices, we couldn't justify buying an appliance for them. But Steelhead Mobile software could provide them the acceleration benefits that they needed."

Joe also discussed the performance of Steelhead Mobile. "Based on our work with Riverbed to date, we had pretty high expectations. Still, we expected Steelhead Mobile wouldn't give us the same performance that we've come to expect in our branch offices. Because the software is now running on a laptop instead of on a dedicated appliance, we assumed that Riverbed's acceleration technology couldn't perform as well. We were pleasantly surprised when we ran our tests: Steelhead Mobile performance was comparable to Steelhead appliances. For example, in one test, accessing an 8MB non-compressed GIF on our Intranet without Steelhead Mobile took 46 seconds. First access with Steelhead Mobile took 3 seconds, while subsequent access took just 1 second."

Management of Steelhead Mobile clients is also easy. "We can use the reports on the Steelhead Mobile Controller to get the same kind of data as what the CMC gives us. In fact, the two consoles look very similar, so it was simple for us to get up to speed with the Steelhead Mobile Controller."

Joe concluded, "With Steelhead Mobile, we can empower our mobile workers with huge productivity gains. Now if they are working at a hotel or at a job site, they can get LAN-like access to all of the important data they need to get the job done properly. Steelhead Mobile will be a great extension to our Steelhead appliance deployment."

### Next Steps: Extending the Steelhead Deployment Further

When asked what Golder Associates planned to do next regarding their deployment of Steelhead products, Joe noted that they were planning to go in multiple directions. "From an application standpoint," Joe began, "we're planning to deploy Microsoft SMS soon. We know there will be massive benefits using SMS with Steelhead appliances for software deployment, both in terms of data reduction and increased speed of software delivery."

"On the product side, we're going to continue deploying Steelhead appliances to all our offices around the world. We currently have over 55 appliances deployed, and I expect that over the coming months we will expand that to include most of our 150+ offices. In addition, we are now working out our strategy for deploying Steelhead Mobile software to our colleagues that travel the most. Over time we suspect that we'll deploy Steelhead Mobile to the vast majority of our executives, engineers, and scientists, which number in the thousands."

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### About Riverbed

Riverbed Technology is the performance leader in wide-area data services (WDS) solutions for companies worldwide. By enabling application performance over the wide area network (WAN) that is orders of magnitude faster than what users experience today, Riverbed is changing the way people work, and enabling a distributed workforce that can collaborate as if they were local. Additional information about Riverbed (Nasdaq: RVBD) is available at [www.riverbed.com](http://www.riverbed.com).

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