

## IN BRIEF

### Industry

- » Government

### Challenges

- » To overcome bandwidth limitations in remote offices
- » To centralise management and backup processes
- » To uncover more bandwidth for future applications

### Solution

- » A range of Steelhead appliances (200, 520 and 1020) deployed across DOC's 60 remote offices
- » Steelhead 5010 installed at three data centres
- » A Steelhead 8000 Central Management Console installed at headquarters in Wellington

### Benefits

- » 500 per cent improvement in network bandwidth utilisation across remote sites
- » Halving DOC's potential spend on telecommunications services
- » Visibility of network performance



## NZ Department of Conservation

### NZ Department of Conservation boosts application performance over the WAN using Riverbed® Steelhead® WAN optimisation appliances; eliminates the use of Citrix

#### Overview

The New Zealand Department of Conservation (DOC) is a central government agency reporting to the Minister of Conservation. It is responsible for protecting the natural and historic heritage of New Zealand, as well as providing recreational opportunities for locals and tourists. With around 3,000 employees, the Department is divided into 13 conservancies, or regions, across the north and south islands, each of which has between one and four area offices, depending on the size of the conservancy.

#### Challenge: Overcoming bandwidth constraints at remote sites

Ken Walker, manager, technology and outsourced services, DOC, said the geographical layout of New Zealand, and the remote locations of the majority of the organisation's 60 offices, meant the sites outside of the main city centres were severely constrained by low bandwidth connectivity. The low speeds resulted in poor application performance and user dissatisfaction at those regional sites.

"The challenge in New Zealand is that you can really only access high-speed Internet from the bigger cities," he explained. "Of our 60 sites, only seven are located in city centres and some are as remote as Aoraki/Mount Cook. This meant our remote offices were typically operating on bandwidth levels of 2MB, whereas in the city you can get 10MB or 100MB Ethernet connections."

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When DOC began rolling out a new document management system to centralise management and backup processes, the Department took the opportunity to address the bandwidth constraints being experienced at its remote sites by deploying Riverbed Steelhead appliances. Previously, corporate documents had been distributed across servers at 43 sites, in part due to concerns the organisation had about the performance of their WAN.

"The document management system is used for all the Department's collateral including permits, concessions, financial reports and other corporate documents," Walker explained. "When we looked at centralising this data, we knew this process would need to include overcoming the bandwidth constraints of our regional offices and speeding up application performance at those sites. We also had to find more bandwidth for future applications such as web/video conferencing. We came across Riverbed at the Gartner conference in Sydney and that's where it all started."

#### Solution: Steelhead appliances accelerate web-based applications

DOC chose Riverbed based largely on Gartner's positioning of Riverbed in the 'WAN Optimisation Controller Magic Quadrant' and the breadth of features its WAN optimization technology offered. The Department then engaged local technology partner, Datacraft, which, together with Riverbed, conducted a trial to prove the bandwidth saving capability of the solution.

Recalling the demonstration, Walker said, "We tested a file that used to take over two minutes to download across the WAN. With the Riverbed Steelhead appliances installed, the first download took only 10 seconds; we then downloaded it again and it was there in an instant."

The deployment was equally straightforward for DOC. The units were pre-configured before dispatch to DOC's remote sites and, once installed, the remainder of the configuration was managed centrally from the control centre.

"Riverbed's demonstrated ability to save bandwidth and speed up application performance across our network really made the solution stand out for us," Walker said. "Another appealing factor was the simple deployment of the products - we did not require any changes to the network or applications."

DOC has a 24x7 support agreement with Datacraft, which handles escalations to Riverbed technical support. Walker said the response has been reliable, with a trouble ticket and update issued on the same day, and the assigned engineer doing follow up with DOC for extra information.

### **Benefits: 500 per cent improvement in network bandwidth utilisation and increased visibility of network traffic**

Since deployment began in late 2005, DOC has seen a 500 per cent improvement in network bandwidth utilisation across the organisation. This includes a significant saving in the Department's most bandwidth-hungry area - the backup traffic travelling between DOC's data centre and disaster recovery site. Bandwidth utilisation here has been reduced by 85 per cent. Other optimised traffic

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types include Doubletake backup, CIFS file sharing, HTTP (web/webcache) and MAPI (Exchange).

"Users are generally happy and most of them are blissfully unaware the Steelhead appliances are even there," said Walker.

"Even when we do complicated things on the

network, the Riverbed technology just lets it happen; it's smart enough not to create problems for us. The Steelhead appliances speed up response times, and the maths certainly stands up as far as value for money goes.

"There was no comparable option for us to increase bandwidth because high-speed Internet services were not available at the remote sites," Walker explained. "We spend \$60K each month on bandwidth services from our telecommunications provider; without the Riverbed solution in place, we may have had to double that.

"In addition, since the overall WAN performance was so much better after deploying the Steelhead appliances, we have been able to essentially remove all our legacy Citrix infrastructure.

"The only alternative for us would be to deploy a distributed document management solution. However, this would have negated all the benefits of a centralised management approach such as reduced hardware, licensing and support costs."

One area that delivered unexpected benefits for DOC was the Riverbed Central Management Console (CMC). It gives DOC visibility of network performance that the Department never had before and Walker said his team uses it to measure and plan for application usage.

"I use the CMC to monitor the status of the environment and the impact our various business applications are having on the network," said Walker. "The reports generated by the CMC also provide critical information to support the Department's planning decisions, such as the impact of a new application rollout.

"Another indirect benefit of the management console is that we now have a central view of the temperature of the computer rooms at all our sites which, in some regions, is no more than a cupboard in the branch office. We've been able to pick up on some heating issues before they caused damage to the equipment."

DOC plans to use Riverbed technology to accelerate additional applications down the track including GIS, a centralised image repository and web conferencing.

"The Steelhead appliances are very resilient, we now have the bandwidth we need, when we need it, and we now understand what makes up our network traffic," Walker concluded.

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## SUMMARY

The New Zealand Department of Conservation (DOC) needed a solution that would speed up the performance of centralised applications in its widely dispersed offices, and overcome the severe bandwidth constraints experienced by the sites located in remote regions. DOC chose to deploy the Riverbed Steelhead WAN optimisation solution as it was the only way the Department could save on bandwidth while taking a centralised network management approach.

The Steelhead appliances have improved DOC's network bandwidth utilisation by 500 per cent, giving users in all locations the ability to collaborate in real-time and halving DOC's potential spend on telecommunications services.



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About Riverbed

Riverbed Technology is the IT infrastructure performance company. The Riverbed family of wide area network (WAN) optimization solutions liberates businesses from common IT constraints by increasing application performance, enabling consolidation, and providing enterprise-wide network and application visibility – all while eliminating the need to increase bandwidth, storage or servers. Thousands of companies with distributed operations use Riverbed to make their IT infrastructure faster, less expensive and more responsive. Additional information about Riverbed (NASDAQ: RVBD) is available at www.riverbed.com



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