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NOTICE:
New Product Names

The contents of this asset do not reflect our recent product name changes. Here are the new Riverbed® names:

Old Names	New Names
Steelhead	SteelHead™
RPM, OPNET, Cascade	SteelCentral™
Stingray	SteelApp™
Granite	SteelFusion™
Flyscript	SteelScript™
Whitewater	SteelStore™

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CASE STUDY

Minnwest Bank

Riverbed® Powers Disaster Recovery for Minnwest Bank

IN BRIEF

Industry

- Banking, Financial Services

Challenges

- Design and deploy a viable disaster recovery strategy
- Reduce IT environment complexity
- Comprehensively protect financial and other data

Solution

- Steelhead 5050-M appliances configured in each data center

Benefits

- Successfully protecting over 8 TB, all company data, every day
- Meeting recovery point objective of 1 hour or less
- "Turn key" operations with minimal administration

Minnwest Bank was officially founded in 1987, although some branches have over 125 years of helping the people and business owners of southwest Minnesota build their dreams. Minnwest's primary customers include families and family-owned businesses such as farms, retailers, residential construction, small manufacturing, distributors, and commercial builders.

Today, Minnwest Corporation continues to be a family-owned banking operation. With over $1 billion in assets and 25 offices in 19 communities throughout Minnesota and South Dakota, the Corporation has grown into one of Minnesota's largest bank holding companies. Minnwest is the 6th largest bank in Minnesota and the 4th largest bank headquartered in the state.

Minnwest Corporation's financial companies include Minnwest Bank, Minnwest Finance, Minnwest Mortgage, Minnwest Capital, Minnwest Insurance Montevideo, Minnwest Investment & Insurance Center and MinnData.

Challenge: Enabling Collaboration for Inter-Office Client Teams

As a financial institution focused on local retail customers and small businesses, Minnwest knows how important it is to build trust with customers and be a responsible part of the community. They take great pains to reliably deliver a broad range of financial services for their clients, handling over 8,000 Internet banking customers, including more than 300 businesses online. Minnwest processes more than 35,000 telephone banking transactions per month, and has more than 15,000 debit and ATM card users. Many of these activities don't immediately generate a printed record, so a site disaster affecting their data centers could have caused real difficulties for many people and businesses, with the possible loss of thousands of direct data transactions going back to 4 p.m. the previous day.

> "We now have true DR, predicated on the assumption of an event destroying the production data center."

As a result, MinnData, the IT operations group within Minnwest, set out to improve the situation and minimize the risk of lost data in the event of a disaster. Jonathan Schiller, the MinnData CEO, and Scott Olafson, their network engineer, began to evaluate the business and technical merits of new approaches to comprehensive data replication over the WAN to their remote recovery data center. They quickly realized that replacing their existing cobble of tape backup and off-siting, which required multiple data protection tools, with a standardized methodology for all systems, would greatly simplify administration and improve data protection operations and effectiveness.

One additional challenge was the high volume of data churn, which was generating on average over 13 GB per hour of new data. That rate periodically climbed to almost 200 GB per hour, causing them to fall behind on their jobs. A final consideration was to find a solution that would perform well in a totally virtualized VMware environment.

Solution: Steelhead® Appliances Deliver High Throughput for Replication

A first step was to find a standard data protection product for their environment, which ended up being Dell EqualLogic replication of VMware on their HP servers. The next move was improving the WAN connectivity from a very limited 5 Mbps link to a 30 Mbps DS-3 dedicated to DR traffic. Network latency wasn't much of a problem at a minimal 4ms, but the overall throughput was critical. They needed to consistently shift an average of 13 GB per hour across the WAN, and accommodate the potential for 200 GB per-hour spikes and up to 22 GB per hour sustained loads in the future.

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Minnwest evaluated Cisco WAAS which has been touted as purpose-built for their requirements and environment, but the testing of the WAAS replication determined that it would not increase performance. As a result they missed multiple jobs, causing them to fall increasingly behind in protecting their customer financial and ancillary systems.

At this point, Minnwest deployed Riverbed Steelhead 5050-M appliances, tuned with Scalable Data Reduction in memory (SDR-M) for fastest WAN optimization throughput and Maximum TCP (MX-TCP) to ramp up and sustain extremely high utilization of all available bandwidth, accompanied by quality of service (QoS) to control data flows. "With Riverbed and EqualLogic, both systems stepped up to the plate, and we're protecting all 8 TB of data in a day now," said Schiller. "We now have true DR, predicated on the assumption of an event destroying the production data center."

Benefits: Better Disaster Recovery, Minimal Supervision Required

Riverbed Steelhead appliances have enabled Minnwest to circumvent the possibility of significant amounts of lost financial data, moving them from relying on just nightly backups to replication with WAN optimization. According to Schiller, this reduces the RPO to one hour or less, and in most cases about 15 minutes.

Olafson adds, "The data protection jobs run much more efficiently. The harder you push, the better they work. An added benefit is that since the change, it's turnkey operational. We just check on it, spending maybe 10 minutes a day to verify then move on, and that's exactly what our goal was,. We have hugely simplified administration, and true DR for the smoking black hole scenario."

Minnwest has solved the immediate data center DR need, and they know that Riverbed can also tie in their many branch offices and mobile workers. They're considering these complementary solutions, as the branches may soon max out the T-1 connections, delivering comprehensive WAN optimization for added value and return on investment.

SUMMARY

Minnwest Corporation needed a fresh approach to disaster recovery, and in the summer of 2007 started down a path of establishing new capabilities. The risk of data loss and the accompanying costs, both immediate and reputational, demanded an improvement on the legacy approaches. They defined new target objectives for their recovery point (RPO) and recovery time (RTO) of all data, specifically less than one hour of exposure and less than 24 hours to resume operations with all data intact.

Minnwest carefully examined their options, including new data protection products, wide area network (WAN) bandwidth upgrades, and WAN optimization solutions. After testing and evaluating alternatives, they choose Riverbed Steelhead appliances to deliver the high-speed enhancements and meet their stringent throughput requirements.

About Riverbed

Riverbed Technology is the IT 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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Riverbed Technology
199 Fremont Street
San Francisco, CA 94105
Tel: +1 415 247 8800
Fax: +1 415 247 8801
www.riverbed.com

Riverbed Technology Ltd.
Farley Hall, London Road
Binfield
Bracknell
Berks RG42 4EU
Tel: +44 (0) 1344 401900

Riverbed Technology Pte. Ltd.
391A Orchard Road #22-06/10
Ngee Ann City Tower A
Singapore 238873
Tel: +65 6508-7400

Riverbed Technology K.K.
Shiba-Koen Plaza Building 9F
3-6-9, Shiba, Minato-ku
Tokyo, Japan 105-0014
Tel: +81 3 5419 1990

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