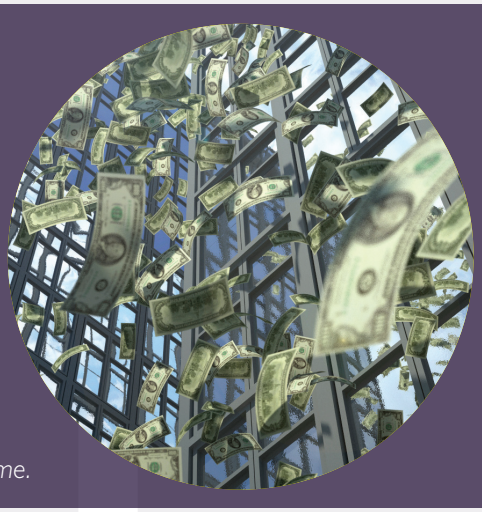
Silver Peak | customer profile

DENALI CREDIT UNION IMPROVES DISASTER RECOVERY STRATEGY WITH DELL COMPELLENT AND SILVER PEAK



Silver Peak VXOA software enables ten times more data to be replicated over distance in half the time.

A disaster recovery (DR) plan is always important. But when you're a financial institution in a state known for earthquakes, and where eighteen feet of snow can bury a whole town, a strong DR and business continuity strategy is a necessity.

For Denali Alaskan Federal Credit Union (Denali) to expand its online banking services, enhancing its business continuity plan was a given. However, Denali's wide area network (WAN) was insufficient for moving large amounts of data between the company's main site in Anchorage and DR facility in Fairbanks. It was taking over eleven hours to replicate more than fifty gigabytes (GB) of data over the WAN — far too long for Denali's IT team. Adding a new online banking system with up to ten-times the data of the existing system would be impossible.

Denali's IT team addressed part of the problem by storing the online banking system on Dell Compellent arrays, but a solution was needed to overcome the WAN bottleneck. Dell recommended Silver Peak, Dell's preferred partner for WAN optimization. Silver Peak's software deploys in minutes and automatically compensates for the network's limitations, accelerating the movement of large amounts of data over long distances.

Denali downloaded the Silver Peak software in minutes, and in just a few hours saw Compellent replication bandwidth reduced by over sixty-six percent, with a tenfold increase in replication throughput.

"Silver Peak's software is really simple to setup," says Travis Rupp, associate vice president of project management in IT for the credit union. "We met our Recovery Point Objectives without doing any special tweaks to the network or data sets, which really makes Silver Peak stand out from the competition."

IMPROVED BUSINESS CONTINUITY IS A MUST

Denali Alaskan is a federally chartered financial institution serving more than 58,000 Alaskans and former Alaskans. The credit union is headquartered in Anchorage, Alaska with nineteen branches primarily spread throughout the communities of Eagle River, Fairbanks, Juneau, and Wasilla. The DR facility is based 260 miles away in Fairbanks and is connected to the Anchorage headquarters via a three megabit-per-second (Mbps) Multi-protocol Label Switching (MPLS) network.

The credit union wanted to expand its online banking presence and knew that the business continuity plan it had in place would need to include a larger database, more assets, and an increased online presence. Alaska is, of course, known for its snowfalls, with towns being buried in as much as eighteen feet of precipitation. In addition, Alaska is known for earthquakes, with more than half of US earthquakes occurring in the state. With conditions like these, Denali Alaskan could not take chances with its business continuity plan.

Denali's primary challenge involved replicating the company's core banking application. With over fifty GB of data, it was consuming most of the company's three Mbps WAN and taking over eleven hours — three hours too long for Rupp and his team. There was no way they could also replicate several hundreds-of-gigabytes of data for the online

Customer: DENALI CREDIT UNION

Business Challenges

- Expand Disaster Recovery plan to protect new online banking system
- Reduce replication time of existing core banking system
- Reduce business risk by replicating additional business applications

Network Background

- Headquartered in Anchorage, Alaska; Disaster recovery site in Fairbanks, Alaska.
- Sites connected via a 3 Mbps MPLS network.
- Core banking system replicated between sites using its own proprietary software

Silver Peak Results

- Reduced replication times from 11 hours to under 5 hours
- Increased replication capacity from 50 GB to 500 GB.
- Reduced bandwidth used for replication by over 66 percent.
- Silver Peak software delivered results within hours of deployment

banking system and still meet their eight hour Recovery Point Objective (RPO).

For Denali, buying additional bandwidth was not a viable option. Bandwidth pricing in Anchorage is high in part because of the limited competition, says Rupp who was already spending $350 a month on a three Mbps connection. In fact, Anchorage has the highest bandwidth prices of any US city at $65.50 per Mbps, according to Broadband.com.

Rupp and his team addressed part of the replication challenge by using Dell Compellent Remote Instant Replay™ to replicate data between the company's headquarters and their DR site. The Dell Compellent storage arrays efficiently protect enterprise storage by taking compressed snapshots called "Replays." With Remote Instant Replay, once a base snapshot of a volume is taken, only incremental changes in data need to be captured. This not only saves disk space, but speeds local recovery of data.

SILVER PEAK SIMPLIFIES DATA MOBILITY FOR REPLICATION

Despite the efficiencies of Dell's replication solution, Denali Alaskan was still missing its RPO due to network conditions. Rupp and team knew they needed an affordable, easily deployable solution to solve these network challenges, and thus shorten replication times. With Dell's recommendation, Rupp and team chose to test Silver Peak, Dell's preferred partner for WAN optimization. Silver Peak has helped hundreds of enterprises overcome replication challenges with the industry's premier software-based, data center class WAN optimization solution. Silver Peak's Virtualization Acceleration Open Architecture (VXOA) software enables companies of all sizes to overcome bandwidth, latency, and congestion issues in today's WANs. This makes nearly all applications, including storage replication, become more efficient over distance, sending more data in less time over existing low cost networks. This enables organizations to maintain or improve their RPOs, extend the distance between data centers, and lower the cost of disaster recovery. (See Figure 1 for more details on how Silver Peak delivers industry leading WAN optimization performance.)

The first thing Rupp noticed was how easy it was to deploy the Silver Peak software. Only a few hours were needed to go from downloading a virtual appliance from Silver Peak's Virtual Marketplace to seeing a tenfold increase in replication throughput.

"Ease of deployment really made Silver Peak stand out from Riverbed and the competition," says Rupp. "For Silver Peak's software to be up and running the day after we spoke with [the Silver Peak team], with quantitative data to prove the solution worked, was one of the biggest selling points."

Rupp also likes Silver Peak's flexibility and price point saying it is a "huge aspect" for them. With VXOA, Silver Peak is the only vendor to deliver enterprise scalability in virtual appliances (the VX and VRX series) or physical appliances (the NX series). Denali tested the Silver Peak virtual appliances on Dell PowerEdge servers, but Silver Peak virtual appliances can run on a wide range of hardware platforms including off-the-shelf x86 servers, network blades, routers, switches, and storage arrays.

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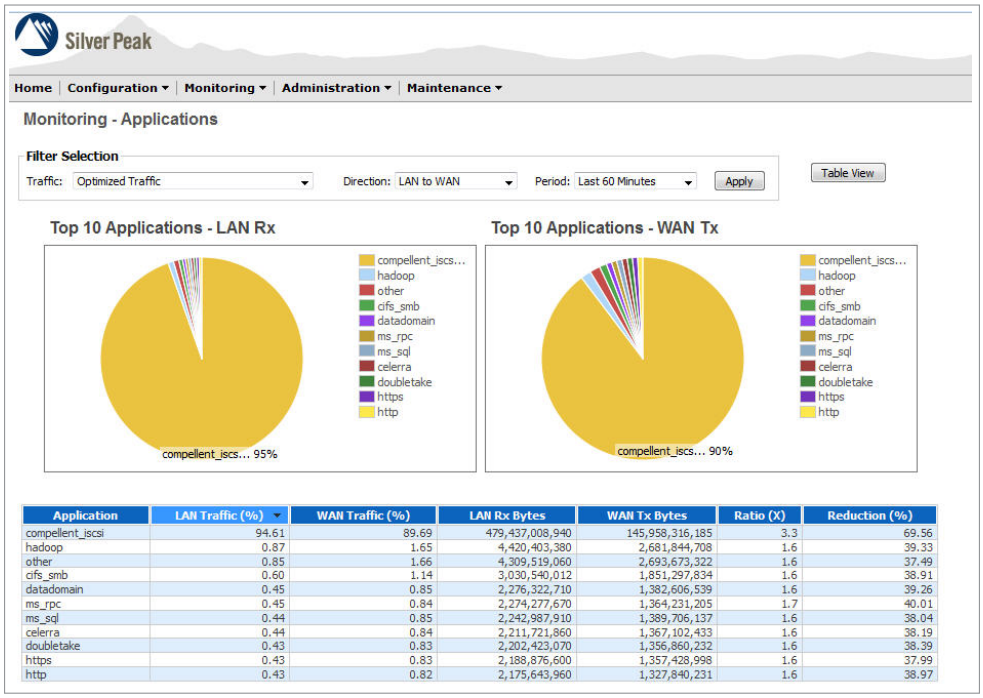
SILVER PEAK TRANSFORMS DENALI ALASKAN BUSINESS CONTINUITY

In the end, Silver Peak's combination of power, price and ease of deployment won over Denali Alaskan, enabling the credit union to expand its online business and reach its business continuity goals.

Denali's IT team deployed two Silver Peak appliances: a physical NX appliance in the Anchorage headquarters and a virtual VX appliance in the DR site (running on a Dell PowerEdge R710 Server and VMware vSphere 5). With Silver Peak and Dell Compellent in place, Denali now replicates about ten-times more data, or roughly 500 GB, over their three Mbps WAN. Replication is done in half the time as before, easily meeting an eight hour RPO.

Denali Alaskan is not alone. Thousands of customers have deployed Silver Peak's software to optimize data mobility over distance. The company's unique Virtual Acceleration Open Architecture delivers industry leading price, performance and flexibility, making it a key enabler for top IT projects.

For more information on the Silver Peak solution, please visit www.silver-peak.com



Application	LAN Traffic (%)	WAN Traffic (%)	LAN Rx Bytes	WAN Tx Bytes	Ratio (X)	Reduction (%)
compellent_iscsi	94.61	89.69	479,437,008,940	145,958,316,185	3.3	69.56
hadoop	0.87	1.65	4,420,403,380	2,681,844,708	1.6	39.33
other	0.85	1.66	4,309,519,060	2,693,673,322	1.6	37.49
cifs_smb	0.60	1.14	3,030,540,012	1,851,297,834	1.6	38.91
datadomain	0.45	0.85	2,276,322,710	1,382,606,539	1.6	39.26
ms_rpc	0.45	0.84	2,274,277,670	1,364,231,205	1.7	40.01
ms_sql	0.44	0.85	2,242,987,910	1,389,706,137	1.6	38.04
celerra	0.44	0.84	2,211,721,860	1,367,102,433	1.6	38.19
doubletake	0.43	0.83	2,202,423,070	1,356,860,232	1.6	38.39
https	0.43	0.83	2,188,876,600	1,357,428,998	1.6	37.99
http	0.43	0.82	2,175,643,960	1,327,840,231	1.6	38.97

Figure 1: Silver Peak reduces Compellent replication traffic by over 66 percent and delivers a 10x improvement in replication throughput.

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