Executive Summary

Company
Bremer Bank

Location
Headquarters: St. Paul, Minnesota
Serves multiple locations across Minnesota, North Dakota and Wisconsin

Key Applications
VOIP and videoconferencing

Challenge
Prevent branches from going down in the event of network failure with a more cost-effective solution

Solution
• Talari THINKING WAN
• Talari Aware

Results
• Fast failover ensures voice and data sessions go uninterrupted with circuit failure
• Gained ability to use backup circuits full time
• Significant savings by replacing costly MPLS links with inexpensive cable and DSL circuits
• Increased visibility to monitor circuit performance
• Improved network operations through continuous monitoring, quality of service and encryption ensure high performance and greater security

Bremer Bank Background
Bremer Financial Corporation (parent company of Bremer Bank) is a privately-held, $8.7 billion regional financial services company, jointly-owned by its employees and the Otto Bremer Foundation. Founded in 1943 by Otto Bremer, the company is headquartered in St. Paul, Minnesota and provides a comprehensive range of banking, investment, trust and insurance services to locations in Minnesota, North Dakota and Wisconsin. The Foundation uses its share of dividends to distribute charitable grants to Bremer Bank communities. In 2013, more than $38 million in charitable donations were given across the Bremer footprint and employees donated more than 100,000 volunteer hours to their communities.

Bremer Bank’s Challenge
Each of Bremer Bank’s branches was connected to the primary data center in St. Paul through a 1.544 Mbps Multi-Protocol Label Switching (MPLS) circuit. In larger branches where more bandwidth was required, additional MPLS circuits were bonded to the first, providing 3.088 or 4.632 Mbps in total. Although bonding delivered more throughput, it did not provide redundancy as all bonded MPLS circuits at a branch would fail together. Cut off from the data center, business at the affected branch could quickly come to a standstill.

To enable redundancy, Bremer Bank installed a separate, independent MPLS circuit in about 40 percent of the branches. Should the primary MPLS link fail for any reason, automatic failover to the second MPLS circuit would take place. This solution was not ideal, however. Before the transfer could be completed, any active sessions would terminate. This meant phone calls would be interrupted and employees would have to log back on to applications that resided in the data center.

“Bremer Bank Earns Big Return on Investment with Talari SD-WAN Solution

“We can leverage Talari’s capabilities to negotiate the highest bandwidth at the lowest cost without compromising reliability/availability in preparation for more rich content, video and streaming applications in the future.”

Cory Miller
Vice President of Engineering Services
Bremer Bank

There was another issue with that configuration. MPLS circuits were very expensive and the only time their bandwidth could be utilized was when a primary MPLS link went down. The ongoing expense of the existing backup circuits was sizable and the cost of deploying backup links at the remaining 60 percent of the branches was going to be huge.

Bremer Bank could have put off making a change, at least for a while, hoping that MPLS circuits didn’t fail and existing bandwidth sufficed. But new applications were planned, including desktop videoconferencing and collaboration, which demanded more bandwidth at every branch. These and other business-critical apps would only increase the need for more reliability. Bremer Bank had to do something sooner rather than later.

Cory Miller, Bremer Bank’s Vice President of Engineering Services, scoured the market, evaluating vendor solutions. Two capabilities were at the top of the list of must-haves.

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full-time, not just following a failover. Most of the solutions Miller looked at failed to complete the switch to backup rapidly enough to prevent interruption. Most were also unable to provide an effective way to aggregate primary and backup circuits without a complicated configuration.

**Talari to the Rescue**

After evaluating a number of vendors’ capabilities, Miller discovered Talari, which satisfied both primary requirements—and a lot more. Talari’s SD-WAN solution builds a detailed map of all paths through the WAN: the downtime, loss, latency and jitter on each path, and the bandwidth used by each application that traverses the WAN. It then uses this information to build a virtual network overlay on the physical WAN and directs traffic down the optimal path based on network conditions and organization policies. To make sure voice sessions are uninterrupted, Talari can optionally go one step farther, sending all voice packets simultaneously across all paths. Even if the MPLS connection is lost or packets are lost/delayed, the quality of the call does not suffer and there is no delay incurred in switching to the Internet circuit as the voice packets are already being transmitted over that link.

For the evaluation, the bank’s network operations team set up a test environment connecting the Talari solution to an MPLS and DSL circuit. They put Talari through its paces, demonstrating rapid failover without loss of sessions with every current application. “We disconnected and reconnected the circuits. We threw everything we could at it,” says Miller.

The team also employed an emulator to introduce latency, jitter and dropped or misaligned packets, creating what Miller referred to as a worst-case scenario. Talari includes management software to monitor network service providers and indicate how well they are performing according to their SLAs. The team was impressed when Talari immediately identified a problem with the test MPLS circuit performing according to their SLAs. Network operations staff doesn’t have to learn how to configure circuits from different providers. There is only one configuration to learn and manage. “With Talari, I’m assured granular QoS across every Talari-connected circuit,” says Miller.

Talari enabled the bank to create encrypted tunnels from the branch to the data center for all traffic across all circuits, no matter what providers or type of circuits (MPLS, DSL, broadband, or cable) were used. As a part of the evaluation, Miller determined that the encryption conformed to the bank’s internal compliance guidelines. Confident in Talari’s capabilities, Miller rolled out a pilot at three branches with an MPLS link and an inexpensive DSL circuit for backup. “Configuring Talari devices has been much, much easier than almost all of the other systems we looked at,” says Miller, “because it’s done from the management console.”

**Seamless Failover**

It didn’t take long for Talari’s failover feature to be put to the test. Just two days after the three pilot branch locations were deployed, the MPLS circuit at one of the branches went down. But Talari performed as expected, immediately transferring MPLS traffic to the DSL backup. “Our staff at the branch never knew that the circuit had failed,” remarks Miller. “Before Talari, it would have brought business to a halt.”

**Quality Assured**

While every application used by Bremer Bank is important, some are more critical and must take precedence over others, such as voice over email. Other solutions Miller looked at required QoS to be set up individually through each provider. Talari, in contrast, enforces QoS across all service providers and circuits. Network operations staff doesn’t have to learn how to configure circuits from different providers.

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**The Bottom Line**

Bremer Bank met a number of its goals with the deployment of Talari:

- **More bandwidth—less money** – By swapping costly MPLS backup links for inexpensive DSL circuits and adding DSL links to sites not currently backed up, Bremer Bank expects to save nearly $200,000 a year, while expanding redundancy to all branch locations.
- **Greater operational efficiencies** – Increased visibility into the network allows IT staff to manage the network more efficiently and proactively.
- **Happier users** – Seamless failover, combined with continuous monitoring, translates into less downtime. Bank staff and customers have uninterrupted access to the information they need.

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**About Talari**

Talari, the leading provider of Software Defined WAN (SD-WAN) solutions is changing the way companies think about, create and manage their WAN by giving the network brainwidth. Only Talari’s THINKING WAN proactively manages capacity, reliability and performance, packet by packet—to keep critical applications running, reduce costs, and liberate IT to innovate new ways for the company to be brilliant.

To learn more about Talari, visit [www.talari.com](http://www.talari.com).