

Achieving a Healthy Boost in Data Replication Capabilities

EXECUTIVE SUMMARY

Challenge

Move more data, gain better protection, build in greater efficiency, and reduce costs by moving data replication from dark fiber connections to smaller WAN connections

Solution

- Brocade 7840 Extension Switches with Brocade Fabric Vision technology for data replication

Results

- Reduced costs by enabling high-capacity data replication over cost-effective IP WAN links
- Future-proofed business continuity to increase flexibility as the company grows
- Accelerated troubleshooting to optimize replication uptime and performance
- Increased efficiency and reduced administrative costs with proactive monitoring and pre-validation

Horizon Blue Cross Blue Shield of New Jersey

Since 1932, Horizon Blue Cross Blue Shield of New Jersey (BCBSNJ) has offered health insurance products and services to New Jersey families and businesses. Today, it serves more than 3.6 million members, collaborating with hospitals and physicians to deliver an outstanding patient experience and high-quality care. With a vast amount of data to store, replicate, and protect, Horizon BCBSNJ turned to Brocade for high-performance SAN replication.

Performance Today and Insurance for Tomorrow

Horizon BCBSNJ maintains three data centers, with 90 miles separating the primary and secondary sites. Its Brocade® Fibre Channel SAN is the backbone of the organization's storage environment, with its SAN extension switches carrying up to four petabytes of data replication traffic weekly. Recently, the company refreshed its extension switches to take advantage of new capabilities.

"We wanted to scale capacity from a mix of 4 and 8 Gbps Fibre Channel ports to a mix of 8 and 16 Gbps ports," said Phillip Townsend, Manager of Data Center Engineering Distributed Systems for Horizon BCBSNJ. "At the same time, we wanted to be sure that the decisions we made today didn't lock us out of new capabilities down the road."

Horizon BCBSNJ also wanted to reduce replication costs between its sites by moving replication traffic from dark fiber connections to IP WAN links. That goal required Fibre Channel over IP (FCIP) features. The team wanted more visibility into switches and WAN traffic to accelerate troubleshooting. New switches needed to easily work with existing IBM AIX, Linux, and other storage and backup technologies that the company uses—in addition to virtualization and a mixed private-public-hybrid cloud environment.



Mixing It Up for High Performance

Horizon BCBSNJ is highly satisfied with its current Brocade DCX® 8510 Backbones, so the team met with Brocade to evaluate its extension switches. The Brocade team shared its technology roadmap and identified areas where Horizon BCBSNJ could reuse existing solutions and avoid refreshing the entire SAN infrastructure.

Horizon BCBSNJ chose Brocade 7840 Extension Switches with Brocade Fabric Vision™ technology. The Brocade 7840 Switches deliver high-speed data transport for traffic from multiple types of storage arrays—Fibre Channel, FICON, and IP—with 99.9999 percent uptime. They also allowed Horizon BCBSNJ to move traffic from dark fiber to more cost-effective IP links. Brocade Fabric Vision technology gives the team the innovative monitoring, management, and diagnostic capabilities they need to prevent problems from affecting operations.

"Brocade is value-minded," said Townsend. "The Brocade 7840 Extension Switches meet all of our needs today while giving us a lot of flexibility for meeting future goals."

Brocade 7840 Extension Switches give Horizon BCBSNJ up to 24 16-Gbps Fibre Channel ports to handle growth while working with the existing 4 Gbps

and 8 Gbps switches, which can be moved to less-demanding areas of the infrastructure. Meanwhile, the Brocade 7840 switches provide up to 80 Gbps for FCIP traffic and more than 40 Gbps for IP traffic per platform. Interoperability between Fibre Channel and IP future-proofs their network as they scale from 16 Gbps to 32 Gbps transport over time.

Visibility Improves Troubleshooting

Better visibility into the replication environment was essential, but other monitoring utilities that Horizon BCBSNJ tried affected application performance. The team had to sever or reroute connections just to be able to troubleshoot. With Brocade Fabric Vision technology, they gained integrated monitoring, which enabled the team to troubleshoot slow-draining devices and other issues without taking a system or port down.

With Brocade Fabric Vision technology providing visibility into storage and WAN traffic, the team can accelerate problem identification and resolution—all from a single pane of glass. They can quickly drill down into the details of an issue to find the cause, which saves time and eliminates finger pointing. Network health data provides continuous insight for optimizing performance.

Moving More Data More Efficiently

Once replication traffic is moved over to FCIP, Townsend expects to see significant transport cost savings, which allows Horizon BCBSNJ to affordably increase bandwidth between data centers. Increased bandwidth helps Horizon BCBSNJ also improve Recovery Time Objectives (RTOs) and Recovery Point Objectives (RPOs). The Brocade 7840 Extension Switches also can move up to 50 times more traffic than Horizon BCBSNJ could move before.

"With Brocade 7840 Switches, we're protecting data better, faster, and more efficiently," said Townsend. "Not only are we maintaining or improving RTOs and RPOs, we have even more confidence in passing audits. And if we want to deploy IP storage, we can do it seamlessly with the same switch."

Future Thoughts

Townsend is already anticipating an upgrade to Horizon BCBSNJ's Fibre Channel backbones. "We're excited to see how the Brocade X6 with Gen 6 Fibre Channel can help us leverage new technologies like all-flash storage and Non-Volatile Memory Express (NVMe)," said Townsend. "With the ability to handle hundreds of millions of IOPS, it promises to accelerate application response times even more."

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