

# Starz

## EXECUTIVE SUMMARY

### Challenge

Deploy a new storage network environment that improves uptime, accelerates editing productivity, simplifies management, supports rapid growth, and meets the looming capacity demands of 4K media requirements

### Solution

- Brocade DCX 8510 Backbones for SAN
- Brocade Fabric Vision technology
- Brocade Network Advisor

### Results

- Improved agility, helping avoid outages and increase uptime significantly
- Gained proactive monitoring, management and diagnostic capabilities to maximize mission-critical application availability and performance
- Deployed highly expandable foundation for keeping pace with rapid growth
- Simplified management of combined physical and virtual environment with comprehensive visibility across both infrastructures

## Gen 5 Director-Class Storage Network Takes Starz from Terabytes to Petabytes

Storage is foundational for Starz content development teams, and it has grown from 100 terabytes (TBs) to five petabytes (PBs) in the past seven years. Keeping pace with rapid data growth and demands for around-the-clock access places extra pressure on the organization. Starz receives content over the Internet using fast transport protocols, and the content is then buffered to broadcast storage systems. The Starz Central Equipment Room (CER) houses the data center for broadcast equipment, media transcoders, and physical and virtual content storage. There are also thirty Mac computers fiber connected into the CER for editing. After editing, files are stored, managed, accessed, and archived from a high-performance, massively scalable Data Direct Network (DDN) storage architecture.

Content files are multiple TBs in size—just one day’s edits consume at least three TBs of storage. Previously, editors had to wait hours for content to download, and they often had to move large files between storage environments and their Mac workstations on physical hard drives. Starz wanted to be able to accelerate both downloads and file transfer with storage network connections.

In addition to supporting critical content editing, the Brocade infrastructure also supports a Virtual Desktop Infrastructure (VDI) environment for all Starz users and more than 700 Virtual Machines (VMs). These VMs support a vast array of critical business and Broadcast applications.

Previous SAN switches that ran at 4 Gbps were no longer able to keep up with increased production. Slow connections

created a bottleneck, and the Mac editing workstations would become slow and manageability features were limited.

“We needed the ability to keep pace with rapid growth and improve SAN performance and manageability,” said Randy Stowell, Senior Manager of IT Services at Starz. “We also will have to support future storage demands that will emerge as the industry converts from HDTV to 4K.”

With a resolution of 4096x2160 pixels, 4K formats require far more data storage capacity and transfer bandwidth. Content will have four times the total number of pixels on a Full HD 1080p screen, and



## WHY BROCADE

*“We were able to immediately remedy SAN bottlenecks and easily move to 16 Gbps technology as needed. We also wanted the best tools available for the job, and with Brocade Network Advisor and Gen 5 Fibre Channel technology, we gained the ability to automate, simplify, and optimize our SAN performance today and for the future.”*

— Randy Stowell, Senior Manager of IT Services at Starz

this means that Starz will have to flawlessly deliver at least a terabyte (TB) of video data per movie. Starz needed a director-class SAN switch that would enable high performance and resiliency needed for commercial video editing, video delivery and accommodate easy, rapid expansion to support a growing stream of 4K content.

### Fast, Flexible, and Future-Proof

After evaluating SAN switches from different vendors, Starz chose Brocade® DCX® 8510 Backbones with Gen 5 Fibre Channel technology. The Brocade DCX 8510 Backbone is the industry’s most reliable, scalable and high-performance Gen 5 Fibre Channel storage infrastructure. It is designed to enable customers to build incredibly fast and incredibly simple SANs.

“We chose Brocade for its innovation in providing a solid storage foundation,” said Stowell. “We wanted the best technology available, and with the Gen 5 Fibre Channel technology and 16 Gbps performance, we gained the ability to automate, simplify, and optimize our SAN performance for our most demanding applications and to meet future 4K performance requirements.”

Starz deployed redundant Brocade DCX 8510 systems across all production facilities. In the CER, the Brocade DCX 8510 in its current configuration provides a total of 384 active ports. The systems segment virtual fabrics across several vendor storage environments used by the Starz graphic design teams.

In the Starz corporate Management Information Systems (MIS) data center, dual Brocade DCX 8510 systems support all of the company’s servers, as well as a mix of storage arrays. A separate disaster recovery deployment mirrors the MIS deployment and also synchronizes and replicates DDN traffic.

The Starz SAN team uses Brocade Network Advisor to manage the SAN infrastructure. As a unified network management solution, it helps simplify SAN operations with customizable dashboards that enable administrators to identify network problems quickly, allowing them to spot issues and trends over time so they can proactively manage network resources and maintain network availability.

### Gen 5 Fibre Channel Technology Changed Everything

The Brocade Gen 5 Fibre Channel technology dramatically enhanced SAN performance, uptime, and management for Starz. A key component of Gen 5 Fibre Channel technology is Brocade Fabric Vision™ technology, which provides powerful built-in monitoring, management, and diagnostic tools for unprecedented insight and visibility across the storage network.

The storage team quickly adopted the Monitoring and Alerting Policy Suite (MAPS) to proactively monitor SAN health and performance. MAPS enables them to apply pre-built, customizable rules and policies in a single click and instantly visualize health and performance statistics of the SAN infrastructure in dashboard, topology, and event views. The Flow Vision tool enables administrators to automatically configure application flows from a network topology view on specific application data flows. The team can see flows specific to each business unit or group of users and set rules and policies to maximize performance, avoid congestion, and optimize resources. The Starz team combines these tools with Brocade Network Advisor to manage all fabrics—physical and virtual—through one interface.

"Brocade Network Advisor, MAPS, and Flow Vision automation greatly simplify control and setup in our storage environment," said George Maldonado, Storage Administrator at Starz. "We segment multiple virtual fabrics through the same switch. Segmentation allows the broadcast team to manage its respective segments, while we can see the entire fabric and identify potential bottlenecks. I had no Brocade experience when I joined Starz, but within a few weeks I could easily monitor, manage, and troubleshoot the entire virtual and physical SAN environment."

When Starz encountered critical port errors on one of their SAN systems, the Brocade team arrived within an hour and using Brocade Network Advisor and MAPS, Maldonado and the Brocade team quickly traced the problem to a port on the storage array. The port was isolated and the data configured to another storage port while they waited for the storage vendor to respond.

### Uptime All the Time

Data-center-proven, highly reliable Brocade DCX 8510 systems with Gen 5 Fibre Channel technology have enabled the team to avoid outages and dramatically increase SAN uptime. In addition to MAPS, pre-built templates make it easy to apply thresholds and alerts to ports and switches. Brocade ClearLink Diagnostics—part of Fabric Vision technology—includes a port sensing feature to ensure optical and signal integrity for Gen 5 Fibre Channel optics and cables and is used to reduce deployment time.

### Faster for Everyone

Delivering unmatched reliability, simplicity, and low latency 16 Gbps performance, Gen 5 Fibre Channel eliminated I/O bottlenecks and unleashed the full performance of the Starz storage environment. Today, editors download files in minutes instead of hours. SAN management takes far less time than in the past. And time to resolution for all issues is significantly accelerated.

Starz also receives additional benefits from its subscription to Brocade Premier Support and the Brocade Network Monitoring Service. Brocade Premier Support offers priority access to Brocade Technical Support expertise and a comprehensive range of premier services. Brocade Network Monitoring Service proactively monitors the Starz SAN around the clock to help maximize network availability and performance, optimize resources, and avoid downtime.

### Continued Growth with Confidence

Stowell predicts that the Starz SAN will continue to grow and plans to add new storage capacity to the CER, disaster recovery, and DDN infrastructure. As 4K content emerges, the team can easily change ports from 8 Gbps ports to 16 Gbps ports as needed or add a blade to increase total chassis bandwidth. Starz now faces the future with a SAN that ensures it will continue to shine.

For more information, visit [www.brocade.com](http://www.brocade.com).

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