

HALKBANK



DATA CENTER SAN

Building a SAN for the Next Decade

EXECUTIVE SUMMARY

Challenge

Replace an aging, slow storage infrastructure that could no longer keep pace with the bank's increasing I/O demands with a more energy-efficient, powerful infrastructure and a smaller footprint

Solution

- Brocade DCX 8510 Backbones for Gen 5 Fibre Channel switching of mission-critical storage applications
- Brocade 7800 Extension Switch for high-performance data replication connectivity
- Brocade Network Advisor for in-depth visibility and simplified management

Results

- Simplified overall infrastructure and reduced costs
- Accelerated deployment with easy integration and management
- Reduced congestion and significantly increased data availability through ISL deployment
- Gained industry-leading performance and scalability

As banking services become increasingly competitive, banks are looking for technology capabilities that help them efficiently support growth and deliver innovative services to increase competitive advantage. Halkbank, headquartered in Istanbul, Turkey, is no exception. Halkbank is one of the largest banks in Turkey with at least one branch in every city. It offers a broad range of retail, small business, commercial, corporate, international banking, Internet banking, insurance, loan, and investment products to its customers.

Halkbank knew that its current data center and storage infrastructure lacked the scalability, performance, and advanced capabilities that it would need to support rapid growth. The existing data center also was quickly exceeding local energy availability. With an eye toward the future, the bank outlined its requirements for a new, world-class data center.

HIGH EXPECTATIONS CREATE AMBITIOUS GOALS

For Halkbank, core banking, financial instrument, data warehouse, and customer relationship management applications reside on a SAN. It also supports customer-facing services including online, mobile, telephone, and TV banking, as well as credit card transaction processing—and all are mission-critical to the bank's activities. To accomplish this, the SAN must interact with Microsoft SQL, VMware, and Oracle databases running on IBM mainframes. This creates a demanding data center environment that requires the scalability and flexibility to dynamically support growth and the addition of new services.

Halkbank already stores large amounts of data—and expects continued growth. Depending on current bank projects, SAN demand can peak at three to four times normal traffic. Dynamic scalability was a non-negotiable requirement. Availability and high performance were also primary requirements.

The team wanted easy API integration with the storage and management networks to simplify management and gain efficiency. They needed to be able to add services and capabilities when required and without adding to the management burden. As power demands are projected to increase over time, energy efficiency was also highly important.

A NEW WAY OF BUILDING A SAN

Halkbank began evaluating SAN solutions for two mirrored, active-active environments separated by a distance of 50 meters.

“Brocade presented us with a different perspective on SAN architecture,” said Muhammet Haydar Ertek, Storage Systems Manager at Halkbank. “As we learned about the technical differences that Brocade offered, we realized that we could achieve our goals with less infrastructure, cabling, and complexity.”

The proposed Brocade® SAN solution, combined with the strong relationship between Brocade and IBM Global Services, made the decision easy for Halkbank. The bank chose Brocade DCX® 8510 Backbones with Gen 5 Fibre Channel for SAN switching and the Brocade 7800 Extension Switch to provide high-performance data replication between the two sites.

Identical SANs were built on Brocade DCX 8510 Backbones with Gen 5 Fibre Channel to deliver a new level of scalability while simplifying the overall SAN infrastructure. Each backbone switch includes three blades, which provide 128 16 Gbps Fibre Channel ports. Backbone switches are connected using InterSwitch Links to reduce congestion and optimize performance while simplifying management.

Halkbank achieved active-active connections for data replication using the Brocade 7800 Extension Switch. The Brocade 7800 includes up to 16 8 Gbps Fibre Channel ports and 6 1 GbE (GbE) ports for high bandwidth, port density, and throughput. Halkbank can further maximize data replication operations using the switch’s advanced Fibre Channel frame compression and disk and tape protocol acceleration.

EASY INTEGRATION AND MANAGEMENT

“We integrated our SAN and storage environments in less than a day,” said Cenk Niksarli, Director for IT Infrastructure Management at Halkbank. “The Brocade Network Advisor let us quickly converge Brocade zones with storage zones from another vendor, which greatly simplified management and migration to the new SAN platform.”

Brocade Network Advisor helps Halkbank reduce operations costs by simplifying SAN management. Halkbank can now manage fabrics, switches, and ports as groups. Customizable dashboards graphically display key indicators, accelerate troubleshooting, and highlight the most relevant data to save management time and effort.

LOW LATENCY, HIGH PERFORMANCE

When all applications are completely migrated to the new data center, the bank will gain unmatched performance to improve application availability. The Brocade DCX 8510 Backbone’s 16 Gbps line-speed performance and 10.2 Tbps of chassis

bandwidth will handle even the most demanding workloads and applications.

SCALABILITY WITH SAVINGS

Halkbank will avoid significant costs for cabling and extra ports because of the Brocade DCX 8510 Backbone's built-in high performance features. High port density and local switching capabilities support dynamic scaling, enabling the bank to handle peak loads without affecting the performance of mission-critical applications.

INDUSTRY-LEADING ENERGY EFFICIENCY

The Brocade DCX 8510 Backbones have lower power consumption and cooling requirements than other SAN switches in their class. They use less than one watt per

Gbps, making them highly efficient as well as high-performing.

READY FOR THE NEXT DECADE

"We are looking forward to completing our migration to the new data centers soon and enjoying the benefits of our new SANs," said Niksarli. "As we look forward, we are delighted that our SAN choice will play a critical role in helping the bank achieve its strategic goals."

For more information, visit www.brocade.com.

WHY BROCADE

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—Muhammet Haydar Ertek, Storage Systems Manager at Halkbank

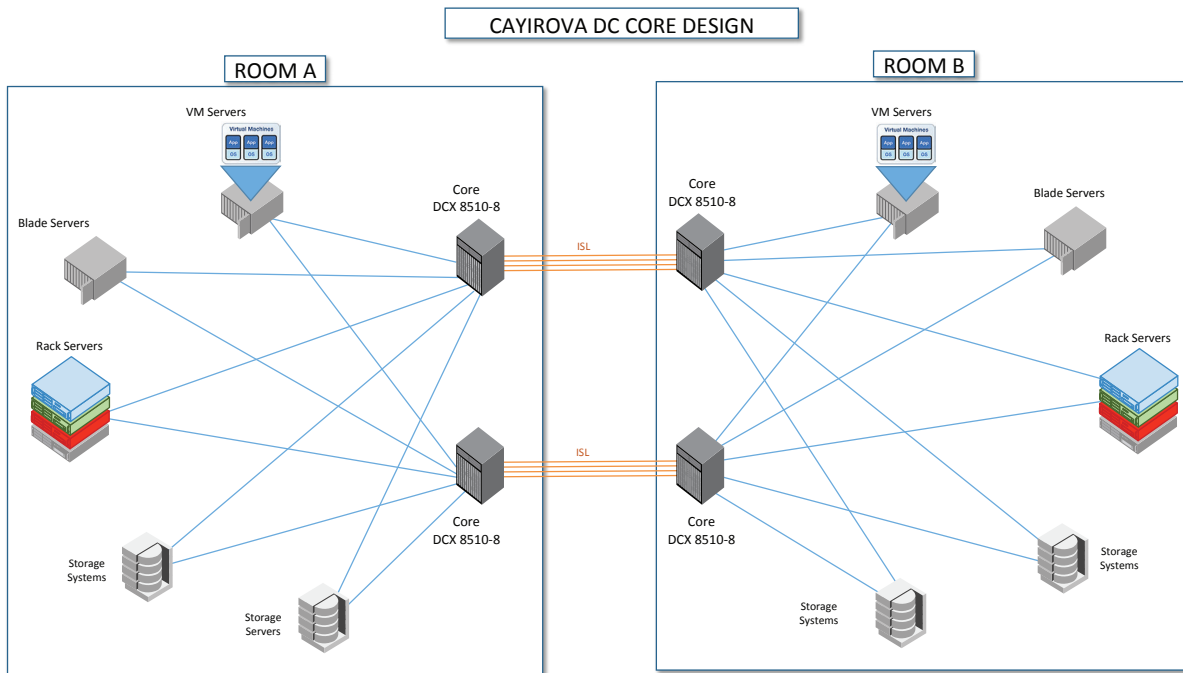


Figure 1:
Halkbank's Core SAN Design.

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