



NetApp®

Success Story

Halkbank Serves Customers 24/7 Across Channels and Meets Business Continuity with NetApp



Another NetApp solution delivered by:



KEY HIGHLIGHTS

Industry

Financial services

The Challenge

Decrease overhead, speed time to market for new products, and safeguard customers' financial data, all while supporting data growth rates of 50% annually.

The Solution

Enable disaster recovery and provide continuous, multichannel customer service with NetApp, Cisco, and VMware.

Benefits

- Achieved 24/7 service availability for customers
- Enabled archiving of financial data for 10 years
- Accelerated time to market for new services
- Enabled business continuity and disaster recovery required for government compliance

Customer Profile

Halkbank or the “People’s Bank”, is a Turkish state-owned bank with successful national and international operations. Today, it is the sixth-largest bank in Turkey in terms of assets and the fourth-largest banking network in Turkey, with more than 850 branches and 2,000 ATM machines. The bank supports more than five million customers who enjoy access across a broad range of alternative channels. Source: www.halkbank.com.tr/e/index.asp

The Challenge

Exponential growth

Halkbank merged with Commerce Bank—both of which are large and rapidly expanding banks. Like most mergers, this spurred growth and management challenges. The merged banks, which operate under the Halkbank name, continued to grow exponentially, with data volumes expanding by 50% annually.

Halkbank suddenly faced issues sustaining its escalating growth. The bank was burdened by a heavily fragmented IT infrastructure that lacked standards for storage, business continuity, and disaster recovery (DR). Developing a

DR solution was especially important because Halkbank, located in Turkey, is at constant risk of earthquakes.

Both staff and customers needed continuous access, performance, and efficiency to support legal and business requirements. The bank relies on a mainframe for mission-critical core banking applications and a variety of Microsoft® Windows®-based servers and Microsoft SQL Server® databases to handle customer service, document management, and archiving. In addition, distribution channels such as point of sale, credit cards, and ATMs, as well as Internet, telephone, and TV banking, also run on the Microsoft SQL databases. SQL operations overall are supported on 190 physical and more than 250 virtual servers.

Unfortunately, the infrastructure relied on a variety of disparate storage, including direct-attached storage (DAS), which lacked several crucial capabilities. The bank needed easy scalability—especially for activities such as archiving sensitive customer documents—as well as reliable DR for data protection in the event of an earthquake or other disaster. DAS was also difficult to manage and maintain.

“With NetApp, we get standardization, ease of management, and tight integration with VMware. It all adds up to investment protection, as well as the ability to meet DR and legal requirements.”

Cenk Niksarli

Head of IT Infrastructure Management and Operations Department, Halkbank

Driving innovation and time to market

Halkbank prides itself on tailoring new products and channels to ever-changing client demands, and delivering them first to market to increase customer satisfaction and competitiveness. For instance, Halkbank is the only institution in Turkey to offer banking via Internet television. To sustain this level of innovation and agility, the bank must continually update its IT infrastructure to develop, test, and deploy new products and services and manage them with speed and efficiency.

Another point of pride for Halkbank is its ability to grow while minimizing overhead. This requires continuous adoption of new technologies that enable responsiveness to customers and adaptation to market demands. Efficient new product development and streamlined core operations are a must.

Comply with government regulations

The Banking Regulation and Supervision Agency of Turkey governs and audits Halkbank through a complex set of regulations pertaining to everything from accounting practices to procedures for determining qualification for loans. The bank also must comply with retention of documents, which includes storing customer information for 10 years, and follow standardized processes required by the International Organization for Standardization (ISO).

As the number of services and new channels and Halkbank's customer volumes continue to grow, so does the need for easily expanded storage and more flexible IT systems.

The Solution

NetApp provides ease of deployment, management, and scalability

Halkbank evaluated all leading storage vendors and selected NetApp because of its products' ease of deployment, management, as-needed scalability, and single operating system: the NetApp® Data ONTAP® operating system. The bank worked with DATACORE, a systems integrator specializing in consolidation, backup, archiving, DR, and virtualization, for design and implementation as well as ongoing day-to-day maintenance and support services. To help enable best practices to be followed, NetApp Professional Services meets with Halkbank once a quarter to optimize the infrastructure.

Today, the NetApp deployment includes NetApp FAS6240, NetApp FAS3270, and NetApp FAS6220 storage systems in production for Microsoft Exchange Server and all distribution channels, including branch operations and credit- and debit-card transactions. In this environment, continuous NetApp Snapshot™ copies provide up-to-date backups while consuming minimal space.

NetApp MetroCluster™ software provides continuous uptime and replicates data using NetApp SnapMirror® software for off-site DR on a NetApp FAS3160HA system. A NetApp FAS3240 system with MetroCluster reliably archives documents for compliance purposes. NetApp deduplication software helps reclaim a significant amount of storage space to avoid storage overprovisioning and to allow the bank to purchase new storage only on an as-needed basis.

The environment also includes two FlexPod® systems, the prevalidated configuration from Cisco and NetApp that delivers an optimized data center platform in a rack and is composed of leading compute, network, storage, and software components. Both systems use VMware® vSphere® built on FlexPod and rely on NetApp FAS3240HA storage systems, Cisco® Unified Computing System™ (UCS®) B200 M3 blade servers, and Cisco Nexus® 5000 series switches.

One FlexPod system is used for test and development and supports 250 virtual machines (VMs). The other FlexPod environment supports a shared private cloud for Internet Information Services, Microsoft SQL servers, and standard server platforms. In the future, it will also support production operations such as e-mail and customer distribution and service channels. Currently, approximately 60% of the servers in the

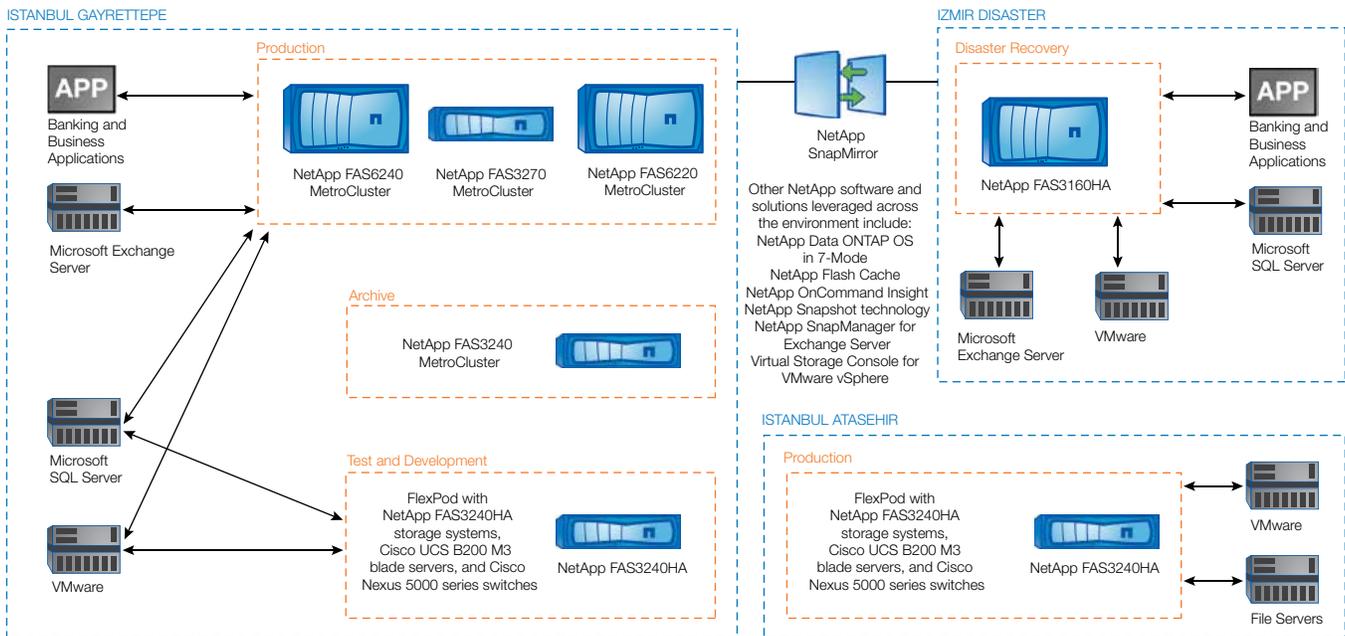


Figure 1) Halkbank storage infrastructure

data center are virtualized, with the goal of virtualizing about 80% of the servers in the production environment. Desktop virtualization, such as systems for contact center agents, is also underway.

“We have approximately 1,000 client systems virtualized,” says Hakan Dizman, Open Systems director for Halkbank. “In the future, those numbers will likely reach desktops used by 15,000 employees.”

Easier management, better performance

Key to the solution is NetApp OnCommand® Insight, providing “single-pane-of-glass” visibility and management into the entire NetApp storage environment. OnCommand Insight software automates many of the bank’s storage management processes across both physical and virtual storage systems and clusters. “We can set policies and monitor thresholds from a single dashboard to deliver efficiencies across our storage environment,” says Muhammet Haydar Ertek, manager of storage and backup systems at Halkbank. “As a result, we can implement standard processes and more easily manage our 50% annual data growth.” NetApp Flash Cache™ intelligent caching is used throughout the bank to speed data access through intelligent caching of recently read user data or NetApp metadata. No setup or ongoing administration is needed, and operations

can be fine-tuned. Flash Cache works with all NetApp storage protocols, including Fibre Channel, iSCSI, and NAS, as well as software used at Halkbank.

Business Benefits Enhanced customer service through continuous operations

With FlexPod and NetApp storage systems with MetroCluster software, Halkbank can achieve continuous access to data for nondisruptive operations. For instance, the bank can conduct planned maintenance without service interruption, thus supporting its initiative to provide services to customers around the clock and across multiple channels. Previously, IT teams had to take applications off line when they wanted to upgrade versions of software or introduce new applications or services into production.

More recently, Halkbank moved its entire production data center with zero downtime due to the NetApp architecture. Current plans include building a new data center and, once again, the bank expects to incur no downtime.

Faster time to market

With NetApp and VMware, IT supports the business in staying ahead of the competition through rapid introduction of new products. IT can efficiently develop and test new products and services before introducing them into

the production environment. They can also conduct upgrades with ease. For instance, they can take snapshot copies of a production VM, complete an upgrade, test it, and then, if things work properly, put it back into production. “Among the distinct benefits of NetApp is flexibility,” says Dizman. “With NetApp, we can get products to market faster and easier, with flawless availability.”

Reduced cost and complexity

By using the streamlined NetApp Data ONTAP operating system, and efficient management software such as OnCommand Insight, the IT team can provide services to the business with greater flexibility and lower overhead. In the near future, Halkbank plans to implement FlexPod for tier 1 systems, including a new data center, as well as expand its private cloud and increase desktop and server virtualization.

“With NetApp, we get standardization, ease of management, and tight integration with VMware,” says Cenk Niksarli, head of IT Infrastructure Management and Operations Department for Halkbank. “It all adds up to investment protection and the ability to meet DR and legal requirements. NetApp is more than just a vendor. We see them as a trusted business partner and ally who helps us operate more efficiently and support sustained growth.”

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SOLUTION COMPONENTS

FlexPod Components

NetApp FAS3240HA storage systems
Cisco UCS B200 M3 blade servers
Cisco Nexus 5000 series switches

Virtualization

VMware vSphere 5
VMware View™ 5

NetApp Products

NetApp FAS6240A, FAS6220A, FAS3270A, FAS3240HA, and FAS3160HA storage systems
NetApp Data ONTAP 8.1 operating in 7-Mode
NetApp deduplication
NetApp Flash Cache
NetApp MetroCluster software
NetApp OnCommand Insight
NetApp SnapManager® for Exchange
Virtual Storage Console for VMware vSphere

NetApp SnapMirror

NetApp Snapshot technology

NetApp Professional Services
Quarterly audits for optimization

Third-Party Products

BankSoft for ATM and credit-card transactions

Custom applications for core banking and customer service delivery

IBM mainframe

Intel®-based servers

Microsoft Exchange Server 2010

Microsoft SQL Server 2005 and 2008

Microsoft Windows Server® 2003

Protocols

FC, NFS, iSCSI

Partner

DATACORE

www.datacore.com.tr

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