

# Hitachi Storage Solutions at Work

## Large Financial Institution

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**INDUSTRY** Financial: Financial and Mortgage Services

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**SOLUTIONS** Tiered Storage/Virtualization

**Hardware**—Hitachi TagmaStore® Universal Storage Platform model USP1100; Hitachi Thunder 9585V™ ultra high-end modular storage, including systems with Fibre Channel drives and systems with the SATA Intermix Option

**Software**—Hitachi HiCommand® Storage Services Manager, Hitachi Remote Replication, Hitachi Universal Volume Manager, and Hitachi Volume Migration software

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*Assistant Vice President of Performance Management  
Large Financial Institution*

# Virtualization Solution from Hitachi Data Systems Streamlines Transactional Processes for Large Financial Institution

As a provider of U.S. real estate and financial services, a Large Financial Institution wanted to centralize and streamline transactional processes to better service customers and grow revenue. The institution called for a solution that would transcend their existing EMC infrastructure to achieve these goals as well as meet new storage and disaster recovery requirements. Hitachi Data Systems answered the challenge with a highly available, virtualized tiered-storage solution.

The recent U.S. real estate boom is a tale of two realities. While finding the perfect house might be accomplished in a day in targeted neighborhoods, closing on that home requires a volume of customized forms, processes, and transactions inside a matrix of lenders, title companies, local regulations, and filing requirements. As a result, many a buyer can be left waiting on the curb until the paperwork is faxed, filed, or located.

That scenario was simply not acceptable for a Large Financial Institution (LFI), which handles nearly one third—30.5 percent—of all U.S. residential real estate transactions. Moving forward from a decade of steady acquisitions and the increasing volume and complexity of transactions, the LFI sought a standardized, efficient way to meet its busi-

ness and customer demands and keep transactions flowing.

“Our institution does business in all 50 states, which means a 24/7 IT operation. And at a cost of US\$4 million an hour, downtime is not an option,” says the LFI’s Director of Information Technology. “We were looking to build a sustainable enterprise storage environment to provide assurances that the business would operate and scale efficiently.”

## Answering the Challenge of the Existing IT Architecture

The LFI’s IT environment housed hundreds of disparate legacy title, escrow, and accounting systems—accumulated during the company’s acquisition mode. To centralize

data and streamline transactions, the LFI built a massive production system to incrementally replace the legacy systems that collectively process 27 million loans valued at more than US\$7 billion annually.

The current EMC storage architecture could not accommodate the production system’s heavy storage and server capacity requirements, which IT projected would triple for the first year of the production system’s operation and continue to grow. Backups were already spilling into production hours. Replication between data centers had become problematic. And disaster recovery objectives were not attainable.

The ability to rapidly and consistently recover from potential outages was essential to meeting around-the-clock business demands. IT needed a solid business continuity plan with true flexibility at its foundation.

Hitachi Data Systems answered the challenge with a solution for virtualized, three-tiered storage based on the Hitachi TagmaStore® Universal Storage Platform and Hitachi Thunder 9585V™ high-end modular storage systems, with advanced remote replication and single console management—all at a lucrative price point for the LFI. The Hitachi Data Systems team presented a strong relationship model, with commitment to the LFI’s architectural blueprints and ongoing support.

“We needed an extraordinary level of stretch—the flexibility to morph and maneuver alongside our hallmark production system,” says the LFI’s Assistant Vice President of Performance Management. “We selected Hitachi Data Systems, which exceeded our expectations with next-generation hardware and software, plus a strategic partnership.”

## A Virtualized Storage Makeover

The IT team worked closely with Hitachi Data Systems and Datalink, a Hitachi TrueNorth™ Channel Partner, to implement a three-tiered storage design and evolve its custom production system. To supply the highest availability and stability of critical applications, the LFI created a Tier 1 storage class based on the Universal Storage Platform model

USP1100, with a RAID-1/RAID-5 combination for nondisruptive service and extensive flexibility. The platform provides external storage virtualization, logical resource partitioning, and universal replication—all from a single management interface—for seamless movement of data between tiers.

The LFI externalized Tier 2 storage, using Thunder 9585V systems with Fibre Channel drives. Tier 3 was built as a virtual tape library on Thunder 9585V systems with the SATA InterMix Option, managed by Diligent™ VTF™ Open software. Cisco directors and routers, and more than 30 IBM® pSeries® servers completed the SAN solution.

## Optimizing Storage Resources and Replication

Hitachi HiCommand® Storage Services Manager software complemented the Hitachi storage with comprehensive, end-to-end capacity and performance management. Operating as the main console, Storage Services Manager software allows LFI IT to maximize its storage resources usage with SAN visualization and

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SAN Architect  
Large Financial Institution

reporting, asset management, performance and capacity monitoring and planning, and policy-driven event management.

Hitachi Universal Volume Manager software facilitates advanced virtualization between the storage tiers, plus storage performance visibility and pinpoint reporting capabilities, to provide predictive, responsive storage management, data migration, and lifecycle management on the Universal Storage Platform. IT administrators now have at-a-glance monitoring of the entire pool of storage. To seamlessly move data between tiers, Hitachi Volume Migration software analyzes, balances, and migrates—automatically or with fine-tuning administration recommendations—with no performance bottlenecks. And Hitachi

Remote Replication software bolsters business continuity by replacing sluggish and inefficient replication technology with resilient recovery automation processes and nondisruptive replication between storage systems.

## Realizing Return on Investment

With the move to the integrated tiered storage, LFI has been able to reduce costs and provide a strong investment payback on this investment. The virtualization and snap copy/replication capability has been proven, as it enables other activities for cost savings that were not expected within the initial business case. The estimated savings were projected to pay back in slightly over 12 months. Actual cost savings observed one year after the implementation proved the projected savings.

- Improved backup and recovery services resulted in faster recovery and significant labor time savings over the previous architecture.
- Reduced scheduled and unscheduled downtime related to the SAN and storage was the single largest contributor of savings, a conservative US\$3.9 million per year.

- Improved mean-time to provision enabled LFI to meet a variety of storage workloads and demands.
- Floor space and storage environmental costs were reduced.
- Cost of growth was reduced, with different price-points for different levels of capability and protection.

## Moving IT to a Better Storage Neighborhood

The Hitachi architecture helped lock in benefits for the LFI's business continuity plan. The LFI's IT group can now fulfill the promises and requirements of its data-intensive operations using Hitachi virtualization capabilities for resilient nondisruptive service, rapid

disaster recovery, and seamless data replication. Feature-rich tools and intuitive automation help IT proactively monitor the environment, while reducing time and complexity for remotely managing backups, upgrades, audit trails, and the perpetual growth environment. Coordination efficiencies have been improved now that the production system users can process data more quickly and have easy access to centralized accounting information.

“Our institution is providing the automation used to service approximately 50 percent of the outstanding mortgage loans in the United States. Without the Hitachi design, our system would never be able to satisfy those demands,” says LFI's Assistant Vice President of Performance Management.

The entire design was proven in a real recovery situation when a database upgrade failed. LFI's IT was able to orchestrate all the virtualization and operational tools in the Hitachi environment to successfully replicate, verify, and quickly recover, as well as complete the upgrade.

“The worry of flexibly managing a high-availability architecture of this magnitude is completely gone, thanks to Hitachi Data Systems,” says the LFI SAN Architect.

With a secure and efficient way to manage and grow the business, the LFI is able to stay focused on making dreams come true for American home buyers and sellers.

## About Datalink

Independent information storage architect company Datalink, based in Minneapolis, Minnesota, analyzes, designs, implements, and supports information storage infrastructures that store, protect, and provide continuous access to information. Datalink solutions include: data availability, data recovery, and storage management. For more information, visit [www.datalink.com](http://www.datalink.com).

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