



CASE STUDY

Solution at-a-glance

Company

HDFC Bank, Mumbai, India

Industry

Financial

Business size

Enterprise

Employees

5,000

Customer application

Protecting data

StorageTek® solutions

- L700e tape library

Other vendor solutions

- HP LTO Ultrium Generation 2 tape drives
- Wintel servers
- Sun operating system
- VERITAS backup software solution

Business results

- Accelerated backups
- Streamlined and unified storage and backup operations
- Efficient and economical automated backup of mission-critical information
- Improvement in staff and IT department productivity
- Considerable savings in storage costs
- Lower seek times; backup time reduced by 80 percent

HDFC Bank

StorageTek enables efficient, consolidated data storage at HDFC Bank.

Storage, retrieval and backup are pivotal success determinants of HDFC Bank's business model. To meet statutory as well as operational requirements, it became imperative for the bank to deploy a robust and reliable storage solution at its data center. With downtimes not an option in a highly competitive business scenario, the storage solution and attendant technologies had to be the best of breed to cater to the geometric business volumes and vast data-handling requirements at HDFC Bank.

Irrecoverable data instantaneously triggers loss in productivity and revenues and erosion of brand equity. Therefore, data storage and backups are crucial components of HDFC Bank's myriad array of mission-critical operations that need to be addressed by advanced products and technological solutions.

Business issues

The banking industry operates on a tight efficiency bandwidth. HDFC Bank's data center is no different. Information at the data center used to be stored on about 200-plus digital audio tapes (DATs). These media were by their nature cumbersome and costly to operate and maintain. Their unreliability and the maintenance of a backup of 500 servers made it physically difficult for HDFC to rely only on DATs for its future needs.

As HDFC Bank expanded into multiple market segments and opened new delivery channels to its customers, processing and storing the voluminous information generated at every transactional stage made it increasingly difficult for the bank's IT team to continue with the legacy storage solution. Furthermore,

the bank deployed a range of applications that needed to be released to end users on an ongoing basis. It was just a matter of time before it began scouting for a "leaner" solution that was more economical, efficient and reliable.

The solution

Given the criticality of backing up applications and 3 terabytes of daily customer data, the company placed reliability, scalability and system robustness at the top of its list of requirements. Other parameters that were equally considered were global standards of the product and seamless interface with systems.

To meet HDFC Bank's backup requirements, Sun Microsystems® recommended a StorageTek storage area network (SAN)-based, local area network (LAN)-free backup solution comprising a StorageTek L700e tape library single-frame configuration, digital linear tape (DLT) drives and backup software from VERITAS, and event management integration using Unicenter TNG 3.0.

Business benefits

The storage solution helps HDFC to better manage its data in a highly dynamic environment. Downtimes are negligible, and backup and restore operations are seamless. Unlike in the past, when backups were executed manually, the storage solution implemented at HDFC greatly reduces manual intervention, thereby reducing the scope of operational glitches.

"Since implementation, we have progressively lowered our IT costs and increased our overall productivity metric.

StorageTek is a vital link in our value chain," according to Ram Sambasivan, assistant vice president — information technology, HDFC Bank.

Sambasivan stated, "StorageTek brings to HDFC Bank one of the most efficient tape libraries. Without doubt, there is a high degree of assurance in our backup and restore processes now. From a business standpoint, the storage solution sets in motion a higher degree of business continuity to HDFC Bank's operations."

Financial benefits

Deploying StorageTek L700e has unlocked HDFC Bank's manpower resources. This, coupled with a reduction in the number of DATs from 200 to 23, is a major post-implementation benefit gained by HDFC.

Emphasizes Sambasivan, "Strong tape management and library features facilitated manageability and seamless backup of mission-critical applications and data. This has paved the way for considerable savings in operational costs."

Technological benefits

The storage solution has facilitated higher levels of information and application access at HDFC Bank. The huge data volumes can be easily managed with a significantly higher data throughput. Seek times and backup times have been reduced by more than half, translating into precious savings for HDFC Bank. Today, backups have been centralized, and DAT backups have been eliminated on each and every server. Furthermore, the auto-naming functionality has done away with the cumbersome tape-labeling function, which has enabled faster and more reliable data recovery.

StorageTek performance metrics summary

| Goal | Before StorageTek Solution | After StorageTek Solution | Result |
|--|--|--|---|
| Backup of mission-critical information | Backups done on DATs and DLTs | Backups completed on linear tape open (LTO) drives | Reliable backups |
| Efficient backup and recovery | Mostly native backups with unreliable restores | Centralized backup with enhanced and faster restorations | Backup times reduced by 80% |
| Cost savings | 200 DATs and DLTs | 23 LTO drives with monetary savings | Freed manpower resources; reduced DATs from 200 to 23 |

About HDFC Bank

HDFC Bank, incorporated in August 1994 as HDFC Bank Limited, has its registered office in Mumbai, India. HDFC Bank operates in a highly automated environment in terms of information technology and communication systems. All the bank's branches have connectivity that enables the bank to offer speedy funds-transfer facilities to its customers. Multi-branch access is also provided to retail customers through the branch network and automated teller machines. The bank has made substantial efforts and investments to acquire the best technology available internationally to build the infrastructure for a world-class bank. In each of its businesses, the bank has succeeded in leveraging its market position, expertise and technology to create a competitive advantage and build market share.



ABOUT STORAGETEK

Storage Technology Corporation (NYSE: STK) is a \$2 billion global company that enables businesses, through its information lifecycle management strategy, to align the cost of storage with the value of information. The company's innovative storage solutions manage the complexity and growth of information, lower costs, improve efficiency and protect investments. For more information, visit www.storagetek.com, or call 1.800.275.4785 or 01.303.673.2800.

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Replacement parts provided under warranty or any service offering may be either new or equivalent-to-new, at StorageTek's option. Specifications/features may change without notice.

Case study company: **HDFC Bank**
www.hdfcbank.com

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Ram Sambasivan, Assistant Vice President, Information Technology, HDFC Bank

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