



“I see the enterprise storage platform being a game-changer for the bank. It helps IT move from being a support function to a business enabler, and a catalyst in redefining business strategy.”

*B. Murali Nair
Chief Technology Officer
Lakshmi Vilas Bank*

Lakshmi Vilas Bank

INDUSTRY Banking and Finance

SOLUTIONS [Enterprise Platform, Virtualization](#)
Hardware — Hitachi Universal Storage Platform® VM
Software — Hitachi Dynamic Link Manager, Hitachi Universal Replicator, Hitachi In-System Heterogeneous Replication, Hitachi Basic Operating System V

Lakshmi Vilas Bank Boosts Storage Performance with Enterprise Storage Solution from Hitachi Data Systems

Lakshmi Vilas Bank (LVB) has enjoyed consistent growth since its founding in 1926. With growth comes challenges. The bank needed to relook at the storage area network (SAN) and storage it had been using: a modular SAN for critical applications and internal storage for noncritical applications. To support the bank's increasing storage needs, as well as ensure performance, it chose to implement an enterprise storage-based solution from Hitachi Data Systems.

Lakshmi Vilas Bank Limited (LVB) currently has a network of 273 branches, a satellite branch and eight extension counters across 16 states and the Union Territory of Pondicherry. Over the last eight decades, LVB has been focusing on retail banking, corporate banking and bank assurance. Its business crossed ₹15,561.01 crores on

March 31, 2010, and posted a net profit of ₹30.66 crores.

The Problem: Growing Storage Requirement

LVB's SAN, however, had multiple issues affecting performance, backup and restoration. It took two to three hours for

backup during an end of day (EOD) window and 48 hours for restoration in User Acceptance Testing (UAT) setup. It gave no scope for creating shadow copies, besides having higher recovery time objective (RTO).

Allocating multiple setups for testing was difficult. It also faced limitations in disaster recovery replication.

Further, LVB required storage for various new applications. A SAN for each application would have resulted in distributed islands of modular storage without optimal utilization. Also, individual investment and recurring operational maintenance costs for different storage systems were high. The data security was also a cause for concern.

The Answer: Enterprise Storage Solution

LVB opted for enterprise-level storage for added advantages, such as highly available infrastructure, high performance,



"The improvement in operational efficiencies has been significant. Hitachi Universal Storage Platform VM's availability for mission critical applications is inline with the best practices of the BFSI* vertical. Its nondisruptive upgrades, maximized uptime and ability to provide seamless growth mean we can now focus our time and effort on other value added efforts rather than having to fix issues all the time. Virtualization enabled the management of all assets in one single, virtualized pool, while thin provisioning and business continuity services helped improve storage utilization. All this has helped Lakshmi Vilas Bank boost performance and cost benefits while ensuring scalability and high availability to support our growth plans."

*B.M. Nair
CTO
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scalable storage infrastructure, agility in creating test setups, simpler and faster backup and restore mechanism, and storage-based data replication. This choice also ensured readiness for adding compliance support infrastructure in the form of tamperproof storage. These benefits are in addition to long-term data retention, protection and shredding to meet regulatory compliance requirements.

On evaluating the capabilities of all enterprise storage in the market, LVB discovered that Hitachi Universal Storage Platform VM (USP VM) suited its requirements best. LVB sought storage virtualization, shadow copy, storage-level replication and enterprise-level backup. Unlike the modular SAN, the Hitachi USP VM simplified the management of a heterogeneous storage infrastructure by providing single enterprise storage, which avoided the multiple islands. It saved the cost of investment in old storage systems by enhancing their performance. The bank benefitted from the high availability, and the USP VM saved time by expediting the backup and restoration processes. Reports were generated (made possible by Hitachi In-System Heterogeneous Replication software bundle) on shadow copies. Month-end reports and data extractions started immediately after the end of each month using shadow copies. These features were complemented by the high performance of the USP VM.

Easy to Use

In a modular storage environment, maintenance is cumbersome, compared with the USP VM. Also, maintenance of shadow copies is easier. Storage virtualization improves the performance and reusability of

existing storage systems. Cache mirroring in the USP VM guarantees 100% availability of data, even during an abrupt data center or power failure.

The Hitachi team was involved in facilitating the implementation of this enterprise storage solution and virtualization of existing storage systems. LVB CTO B.M. Nair observes, "Virtualization enabled the management of all assets in one single, virtualized pool, while thin provisioning and business continuity services helped improve storage utilization."

Addressing Security Concerns

The USP VM was placed in the production zone. It was behind a two-layered firewall and hence operated from a well-secured zone. The financial industry is an easy target for any hackers – both internal and external. There is a need for a strong security infrastructure.

The implementation of the USP VM has helped the bank monitor such instances. It also helped investigate and take proactive measures during unusually heavy traffic on the bank's websites.

Boost in Business

The direct impact of implementing this Hitachi enterprise storage system includes the following benefits and capabilities: reduction in EOD time window and backup time window, high availability, storage-level replication between primary and disaster recovery sites, and performance improvement.

With the reduction in EOD time window, the branches could operate until late at night. The implementation of storage-level replication between primary and disaster recovery site reduced RTO and ensured business continuity. Because of storage replication, data recovery was made easier. RTO was reduced by one-third of what it took earlier, since replication has been carried out through Oracle Data Guard (ODG).

Report generation was also made possible 24/7, even during business hours.

Highlights

In summary, the benefits LVB gained from implementing the Hitachi Universal Storage Platform VM and enterprise storage software included:

- Single enterprise storage
- High availability
- Faster backup and restoration
- Availability of shadow copies
- Storage-level replication between data center and disaster recovery site
- Lower RTO
- Availability of storage virtualization
- High performance
- Reduction in EOD window
- Multiple test setups using multiple shadow copies
- Report generation in shadow copy
- Immediate month-end reports and data extractions using shadow copies

"All this has helped Lakshmi Vilas Bank boost performance and cost benefits while ensuring scalability and high availability to support our growth plans," Nair concludes.

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