

6 Essential Strategies

For Economizing Your Storage



Introduction

“ Difficult economic times require new strategies. Years of traditional IT procurement have left many organizations with underutilized and oversubscribed storage capacity. With today’s tightening budgets, many organizations are faced with demands to do more with less and tough decisions on where to invest available funds.

The good news is, there are technologies and strategies proven to reduce storage infrastructure costs – simply put, they make storage cheaper to own. The technologies and strategies discussed in this eBook can transform your data center into an economically superior storage environment. ”

David R. Merrill
Chief Economist, Hitachi Data Systems

6 Essential Strategies For Economizing Your Storage

Table of Contents

- 01 Virtualize your Multivendor Storage
- 02 Reclaim Unused Capacity
- 03 Right-size your Storage
- 04 Optimize your Applications
- 05 Eliminate Backup Redundancy
- 06 Discover Intelligent Archiving

Conclusion and Additional
Resources



Virtualize Your Multivendor Storage

01

Hitachi offers the only enterprise-proven solution for virtualizing heterogeneous storage. With more than 11,000 solutions shipped and over 30PB of virtualized storage under management, Hitachi can reduce TCO in any virtualized environment.

ACQUISITION COST ACCOUNTS FOR JUST 20-30 PERCENT OF TOTAL COST OF OWNERSHIP (TCO) OF STORAGE, AND THEN YOU'LL SPEND THREE TO FIVE TIMES THAT MANAGING AND MAINTAINING IT. WITH AN INVESTMENT THAT EXTENSIVE, YOU NEED TO MAXIMIZE YOUR RETURN ON EVERY STORAGE ASSET.

Storage virtualization presents physical disk as a common pool of storage so you can:

- Minimize storage management overhead by administering multivendor storage from a common interface
- Maximize utilization of heterogeneous storage assets, including legacy systems
- Increase application availability by breaking the application-storage system tie
- Achieve the lowest possible storage TCO



Related Products:

Basic Operating System V

Universal Storage Platform™ V

Universal Storage Platform VM

Adaptable Modular Storage
2000 family

Related Offers:

Switch IT On with FREE
virtualization of multivendor
storage.

ESG Lab Report Summary:
Hitachi Universal Storage Platform V

Analyst Videocast:
<title tbd>

“With the Hitachi USP V, we’re able to unite previously isolated storage environments to gain enterprise-wide virtualization and migration capabilities that meet even our most demanding workloads.”

Brian Cripps

Storage Architect, Sealed Air
(US-based Fortune 500 manufacturer)



Reclaim Unused Capacity

02

IT ORGANIZATIONS STRUGGLE TO KEEP UP WITH DATA GROWTH WITHOUT ADDING COST AND COMPLEXITY. AT THE SAME TIME, THEY TYPICALLY UTILIZE JUST 20-30% OF PURCHASED STORAGE CAPACITY. SMART IT DEPARTMENTS ARE RECLAIMING THIS CAPACITY WITH THIN PROVISIONING.

Traditional provisioning allocates a dedicated chunk of storage to each. Adding capacity after the fact is cumbersome, so most companies over-allocate storage up front; capacity that often goes unused. Thin provisioning allocates storage on a just-in-time basis, allowing storage administrators to:

- Increase storage utilization by an average of 30-40%
- Simplify capacity planning and provisioning
- Defer CAPEX by reclaiming up to 50% of already purchased storage capacity
- Reduce floor space and energy costs with fewer, better utilized systems



“...Virtualization-enabled dynamic provisioning allows storage utilization to exceed 85%, delivering unique economies to storage infrastructures.”

Carl Greiner
Ovum

Related Products:

Hitachi Dynamic Provisioning

Universal Storage Platform™ V

Universal Storage Platform VM

Adaptable Modular Storage
2000 family

Resources:

Case Study:
Fortune 50 Global Financial Institution

Case Study: United Airlines

“We can now provision storage across our network as and when we need it... We experienced absolutely no disruption to services, and users now benefit from better services and faster saving and retrieval of data.”

Simon Clarke
Michelmores
ICT Manager

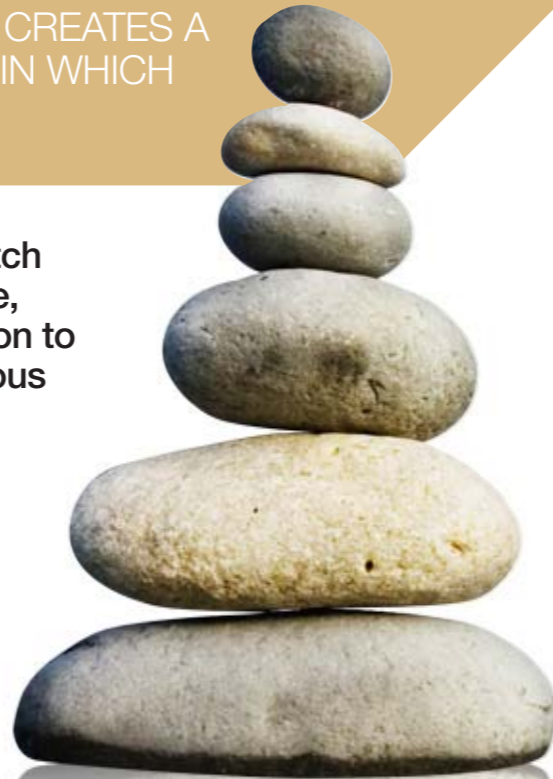


Right-size Your Storage

03

Hitachi Tiered Storage Manager software delivers dynamic data mobility, even in multivendor environments. Dynamically tiered storage enables IT to allocate the right storage resources to support data across its lifecycle.

PEOPLE BUY STORAGE SYSTEMS FOR TWO MAIN REASONS: THEY HAVE A NEW APPLICATION, OR A STORAGE SYSTEM IS RUNNING OUT OF CAPACITY. OVER TIME, THIS REACTIVE APPROACH CREATES A COMPLEX AND COSTLY ENVIRONMENT IN WHICH STORAGE IS UTILIZED INEFFICIENTLY.



By dynamically tiering storage, you can match storage systems to application performance, availability, and cost requirements. In addition to saving administrative headaches and precious financial resources, dynamic tiering also:

- Simplifies management to reduce OPEX
- Defers new storage purchases and CAPEX
- Improves availability of non-primary storage
- Allows seamless data migration
- Protects investment in legacy assets

Related Products:

- ▼ Tiered Storage Manager
- ▼ Universal Storage Platform™ V
- ▼ Universal Storage Platform VM
- ▼ Adaptable Modular Storage 2000 family
- ▼ Hitachi Content Archive Platform

“*University of Utah projects over \$1.6 million in savings over three years after implementing a three-tier storage infrastructure. Payback achieved in just 14 months!*”

Resources:

- ▼ Case Study:
Tiered Storage in the Real World at Fidelity National Information Systems
- ▼ Video Case Study:
University of Utah



Optimize Your Applications

04

DATA CENTERS ARE STRETCHED TO MEET AVAILABILITY AND PERFORMANCE REQUIREMENTS WITH FINITE RESOURCES. MIDRANGE STORAGE HELPS YOU BALANCE PERFORMANCE, AVAILABILITY, AND BUDGET DEMANDS TO OPTIMIZE YOUR APPLICATION ENVIRONMENT.

As an integral part of your tiered storage strategy, modular storage:

- Enhances performance of your mission-critical applications
- Reduces application bottlenecks with functionality such as automated load balancing
- Decreases applications downtime with up to 99.999% availability
- Scales to your needs, while enabling non-disruptive data migration



The Hitachi Adaptable Modular Storage 2000 family optimizes application performance with record breaking response times and dynamic load balancing. These operational advantages mean you can get the application performance you need at a price you'll love.

Related Products:

Adaptable Modular Storage 2000 family

Replication Solutions for Hitachi Modular Storage

Resources:

Application Solution Briefs for:

- Microsoft® Exchange Server 2007
- VMware
- Oracle
- Microsoft® SQL Server environments

ESG Lab Report Summary: Hitachi Adaptable Modular Storage 2000 Family

SPC-1™ Benchmark Results

“Hitachi Adaptable Modular Storage 2000 family achieves overall best-in-class Storage Performance Council (SPC-1™) benchmark results.”

Hitachi Press Release, March 2009

“ESG Lab has verified that the Hitachi Adaptable Modular Storage 2000 family can be deployed to cost-effectively provide easy-to-configure storage from mission-critical applications with exceptional performance.”

Tony Palmer

Enterprise Strategy Group



Eliminate Redundancy Backup

05

WITH INTERNAL AND GOVERNMENT REGULATIONS MANDATING LONGER RETENTION PERIODS AND DATA GROWTH RATES CLIMBING, DATA PROTECTION IS CONSUMING MORE AND MORE OF THE IT DEPARTMENT'S HUMAN AND FINANCIAL RESOURCES.



High performance disk backup systems with data deduplication curb capacity expansion while delivering nearline data protection, rapid recovery, and simplified management. These systems allow users to:

- Reduce backup and recovery administration
- Accelerate backup and restore to meet RTOs and RPOs
- Slow the growth of the physical environment with archiving and deduplication
- Minimize floor space and energy costs by storing more data in less footprint

Hitachi Data Systems offers industry-best solutions for backing up, protecting and recovering enterprise data.

Related Products:

▼ Hitachi Data Protection Suite, powered by CommVault

▼ Backup Services Manager, powered by Aptare

▼ Hitachi Virtual Tape Library Solutions

▼ Deduplication appliances

Resources:

▼ White Paper: The New Metrics of Disk-based Data Protection

▼ Flash Tour: Hitachi Virtual Tape Library Solutions

▼ GlassHouse White Paper: Using Data Protection Suite to Address Evolving Data Protection Requirements

▼ White Paper: Determining ROI of Backup Services Manager, powered by APTARE

“Hitachi Data Systems offered the most attractive solution with great possibilities to add functionality, such as archiving. It’s a recently built and modern solution that’s very flexible and adaptable to current and future business needs...”

Major IT Services Company in Europe



Discover Intelligent Archiving

06

HOW MUCH OF THE DATA YOU MAINTAIN AND BACK UP OVER AND OVER AND OVER FROM PRIMARY DISK IS INACTIVE? HERE'S A HINT... OUR CUSTOMERS RECLAIM AN AVERAGE OF 37% PRIMARY STORAGE BY IMPLEMENTING INTELLIGENT ARCHIVING.

And that's not the only benefit! In addition to freeing up higher cost primary storage, intelligent archiving:

- Provides policy-based management which moves data based on pre-determined rules, making it a "set it and forget it" system
- Offers an open standards interface, meaning no expensive software is required
- Frees you from having to back up inactive data, allowing reduced backup media (tape or disk) costs and improved adherence to backup windows

“ A Global 500 energy and utilities company was able to move 60% of primary storage content to their Hitachi Content Archive Platform. ”

System Administrator
Global 500 Energy & Utilities Company



Related Products:

Hitachi Content Archive Platform

Resources:

Case Study:
ABN AMRO

Data Mobility Group
Research Study:
The Rise of Active Archiving



Conclusion

STORAGE VIRTUALIZATION, DYNAMIC PROVISIONING, TIERED STORAGE, APPLICATION OPTIMIZATION, DISK-BASED BACKUP WITH DEDUPLICATION, AND INTELLIGENT ARCHIVING ARE SIX WAYS YOU CAN ECONOMIZE YOUR STORAGE ENVIRONMENT NOW. HITACHI DATA SYSTEMS MAKES IT POSSIBLE FOR YOU TO IMPLEMENT ECONOMICALLY SUPERIOR STRATEGIES THAT CAN POSTPONE CAPITAL EXPENDITURES, CONTROL OPERATING COSTS, REDUCE COMPLEXITY, AND MANAGE DATA MORE EASILY.

Additional Resources for Economizing your Storage Environment

- Economize your Storage Resource Center on HDS.com
- David Merrill's The Storage Economist Blog
- Subscribe to Innovation newsletter
- Storage Economics live and online events
- Contact Sales



Did you Know?

Five fast facts about Hitachi Data Systems

- Hitachi has conducted over 600 Storage Economics engagements with IT organizations worldwide.
- Hitachi's Storage Economics methodology benchmarks 33 elements of storage cost to identify both CAPEX and OPEX savings.
- Hitachi is the undisputed leader in storage virtualization with more than 12,000 platforms shipped and 30PB+ under management.
- In SPC-1™ testing, Hitachi Adaptable Modular Storage achieved fastest throughput among all midrange storage systems for applications such as Microsoft Exchange, SQL, Oracle and SAP.
- A Hitachi virtualized, tiered storage environment can achieve up to 85% storage utilization.

Learn more about Hitachi's economically superior storage solutions at:



www.hds.com/economize

