

Economize Your Storage with Hitachi Data Systems File and Content Solutions for Government and Education



Intelligently Manage Data, Reduce File Management Costs

Governmental and educational organizations are facing relentless data storage growth driven by many different factors. Perhaps foremost among these are regulatory issues: the growth in digital imaging of public documents to ease compliance with the Freedom of Information Act (FOIA) in the United States, European Union Regulation 1049/2001 and similar public-access legislation; and compliance with regulations on data retention, privacy and e-discovery [e.g., Department of Defense (DoD) 5015.2-STD and National Archives 36 CFR Part 1222 in the United States, European Union Data Protection Directive (EUDPD) and Japan Personal Information Protection Act (JPIPA)].

The difficulty of determining what data can be disposed in accordance with data retention regulations can lead to a “keep everything, delete nothing” attitude that further accelerates data storage growth. Other factors include the rise of video surveillance and the growing importance of e-learning and e-books in education.

Most of this data is unstructured, such as public document images or emails. But regardless of the type of data, it is ending up scattered across multiple storage “silos,” which increases management complexity and the inefficient use of storage assets. Hitachi Data Systems offers a uniquely integrated approach to intelligently manage your data across these silos and reduce your file management costs by 10 to 40 percent.

Governmental and educational organizations must maintain an increasing amount of static data, such as public document images, emails and video. They can’t afford to leave this data sitting on Fibre Channel drives: it must be backed up to lower cost storage. This poses the following challenges:

- Increasing management complexity and cost hampering IT’s ability to respond quickly to business needs

Hitachi Data Systems offers the only data management solution with the ability to transparently move data across tiers, on storage systems, at both file and object levels, from NAS to archive devices, triggered by policies on both file content and metadata.

- Inefficient storage utilization and the inability to manage active versus inactive data on appropriate storage tiers
- Backup storage growing larger than primary storage and becoming unmanageable

Overview

The integrated Hitachi Data Systems File and Content portfolio provides intelligent tiered storage, consolidation, active archiving and search capabilities to simplify data management, migrate data to the appropriate tier and reduce backup to decrease storage costs.

- Consolidate disparate storage islands with industry leading NAS solutions.
- Dynamically move static data from Fibre Channel to SATA tier, or to the Hitachi Content Platform repository.
- Compress and de-dupe static data in the Content Platform repository to reduce data size.
- Replicate the Content Platform to reduce the need for backup.

Key Components

The Hitachi Data Systems File and Content Solutions portfolio integrates the following products:

Hitachi NAS Platform, powered by BlueArc®

Hitachi NAS Platform offers best-in-class performance and scalability, Intelligent File Tiering software, single cluster namespace, high speed pointer-based snapshots, remote replication, large 256TB volumes and up to 4PB of usable capacity.

Hitachi Content Platform

Hitachi Content Platform provides virtualized object level storage, which delivers active archiving, backup reduction and cloud capabilities, with a single platform.

Hitachi Data Discovery Suite

Hitachi Data Discovery Suite provides federated search across disparate file servers and file systems. The search results can be used to trigger automatic data movement across tiers.



Key Capabilities

Step 1: Consolidate Disparate Storage to Contain Costs

Use Hitachi NAS Platform for best-in-class performance and scalability, single namespace for ease of data manageability, Intelligent File Tiering software and integration with Hitachi SAN storage and management products for optimized multiprotocol file sharing, data protection, replication and backup.

Do this with at most half the number of devices and cost of the nearest Hitachi Data Systems competitors to gain more capacity, save on rack space, save on power and cooling costs, and have fewer points to manage.

- Create larger storage pools with better utilization.
- Leverage end-to-end virtualization.
- Reduce power and rack space.
- Reduce points of management.
- Reinvigorate and extend the useful life of existing assets.

Step 2: Implement Intelligent Storage Tiering to Increase IT Agility, Improve Regulatory Compliance

Hitachi Data Systems offers the only data management solution with the ability to transparently move data across tiers, on storage systems, at both file and object levels, from NAS to archive devices, triggered by policies on both file content and metadata. With Hitachi Data Discovery Suite, federated search across silos with a single query is possible. The search results can also trigger migration among different tiers.

Hitachi Data Systems provides the ability to purchase less expensive tiers of disks and can dynamically move less active, less important data to a lower tier ("demotion"). Hitachi also provides the ability to promote data to higher tiers.

- Save more data on less expensive disks.
- Separate active and inactive data.
- Enable cost-effective data copies.
- Employ price-to-performance matching.
- Leverage existing assets.



HITACHI DATA SYSTEMS FILE AND CONTENT SOLUTIONS MAKE THE DIFFERENCE

Business Benefits

- Offload migration management burden from IT, to increase agility and improve compliance with public access and data retention regulations, by moving data dynamically across tiers based on predefined policies with intelligent tiered storage.
- Stretch government and educational budgets further.
 - Reduce file management costs by 10 to 40 percent.
 - Reduce or defer storage hardware purchases by raising utilization, reducing overhead and getting back allocated but empty space.
 - Do more with less hardware by consolidating existing file servers or NAS into fewer Hitachi NAS Platform heads.
 - Save significantly on tapes, tape drives and library upgrades while improving recovery time by reducing backup through archiving and replication.
- Save space by moving inactive files out of primary NAS or file server storage with active archiving. Then compress and de-dupe them to save even more space.

Technical Benefits

- Hierarchical storage management (HSM) and intelligent lifecycle management (ILM), active archiving and search technologies to help organizations reduce or avoid storage capital and operating expenses (CAPEX and OPEX)
- Best-in-class NAS performance and scalability
- Active archiving with compression and de-duplication
- Data retention and regulatory compliance
- Reduced backup capacity and time
- Federated search across disparate filer servers and NAS

Step 3: Maximize Capacity Utilization to Defer Storage Purposes and Contain Costs

The debate between “raw” capacity and “usable” capacity is over. What’s more important is available “Data Capacity.” Hitachi NAS Platform reserves less storage capacity for operating system, logging and RAID needs than others in its class, sometimes by as much as 10 times less.

This efficiency translates into more data capacity for user and application data, reduces administrative concerns over reaching capacity limits too soon, enables on-demand capacity scalability, and lowers costs per usable terabyte.

- Reclaim allocated but unused disk space.
- Leverage data dispersion technology to enable consistent performance.
- Reduce the waste of system overhead.

Step 4: Archive Unused Data to Ensure Regulatory Compliance and Protect Against Litigation

For data archiving, Hitachi Content Platform provides an open and scalable solution for the long term retention and protection of fixed content required by regulations, such as DoD 5015.2-STD, 36 CFR Part 1222, EUDPD and JPIPA.

The benefit of moving static data from active to inactive storage devices reduces the working set of data from more expensive storage tiers, improves data access performance and saves on capacity due to data compression and de-duplication capabilities. Additionally, with the Hitachi content versioning feature, the need for traditional backup is reduced significantly.

- Employ policy-based dynamic movement of objects between NAS and archive.
- Reduce active working data sets and reduce required backups.
- Use file “versioning” for backupless environments.

Step 5: Protect and Back Up Data to Ensure Safety of Critical Data and Improve Disaster Recovery

With the implementation of steps 1 through 4 above, the backup business benefits are tremendous. Through storage tiering, applying intelligent and dynamic policies to manage data, and compression and de-duplication technology, IT has less data to back up, which means less time is required for backups and overall storage archiving costs are lower. Further, IT gains the ability to restore lost data faster and with higher granularity.

- Reduce the active data set (data on NAS) to reduce the amount of backup required.
- Back up archived data through replication.
- Decrease backup windows; increase reliability and reduce backup pains!

Summary

The Hitachi Data Systems File and Content Solutions portfolio provides NAS consolidation, intelligent tiered storage, active archiving (with regulatory compliance), simple replication and backup reduction to help governmental and educational organizations reduce their file management costs by 10 to 40 percent.

For More Information

To learn more about how Hitachi Data Systems can help you with your plans to economize your storage and to read more about our solutions and the components described in this paper, please visit www.hds.com. Explore an engagement that will result in the optimal solution for intelligently managing your data and reduce your file management costs.

Hitachi Data Systems Corporation

Corporate Headquarters
750 Central Expressway
Santa Clara, California 95050-2627 USA
www.hds.com

Regional Contact Information
Americas: +1 408 970 1000 or info@hds.com
Europe, Middle East and Africa: +44 (0) 1753 618000 or info.emea@hds.com
Asia Pacific: +852 3189 7900 or hds.marketing.apac@hds.com

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