

By simplifying tiered storage management, Hitachi Data Mobility software delivers the highest storage performance for the most frequently accessed data. At the same time, it lowers costs by automatically optimizing data placement.

DATASHEET

Hitachi Data Mobility

Automate Tiered Storage Management

Where business application data is stored and accessed can greatly impact its performance, efficiency and costs. However, determining what data to move and how to move it without affecting the business application can be challenging.

Hitachi Data Mobility software provides complete data movement capabilities. It combines two leading data mobility technologies with Hitachi Dynamic Tiering and Hitachi Tiered Storage Manager software. The combination enables intelligent placement of data within virtualized Hitachi storage environments while optimizing business application service levels.

Hitachi Dynamic Tiering¹ automates data placement and access in a tiered storage environment. It dynamically moves the most active data to the highest-performing storage tiers while moving less frequently accessed data to lower tiers. New Hitachi Dynamic Tiering active-flash mode moves suddenly active data via synchronous promotion to higher-performing tiers in real time. In seconds to subseconds, active flash responds to workload demands based on current I/O activity. Active flash proactively preserves flash endurance by monitoring and demoting pages that exceed thresholds for heavy write I/O.

Hitachi Tiered Storage Manager² enables administrators to proactively match business application price, performance and availability characteristics to storage resource attributes. Administrators can proactively create and pool different storage classes to maximize operational and cost efficiency and easily align them to specific business application needs. As storage service levels change over time, Tiered Storage Manager facilitates non-disruptive data migration between storage tiers and externally virtualized storage resources to match new application requirements. Through custom data management policies, Tiered Storage Manager helps you to properly monitor and control the automated and active behavior of Hitachi Dynamic Tiering.

Automated Tiered Storage

Hitachi Dynamic Tiering storage pools automate sub-LUN or page relocation, moving data pages up or down according to I/O activity. Self-managing and self-healing storage pools improve storage performance and utilization while eliminating the need for labor-intensive capacity provisioning and planning. This approach optimizes Hitachi Accelerated Flash as a data accelerator and maximizes return on high-performance storage tiers.

Hitachi
Dynamic
Tiering for
Mainframe

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Easily Align Data to Business Applications

Hitachi Tiered Storage Manager facilitates storage tier definitions and custom policies that help maximize performance of application workloads in shared storage pools. User-defined policies can automatically move application data to the optimal storage tier to align with business application needs and increase storage use.

Adjust Performance to Business Timing

With user-defined I/O monitoring profiles, Dynamic Tiering behavior can be customized to meet special performance requirements during expected periods of high demand. For example, a policy can be set for the accounting application workload: During the month-end accounting cycle, when performance demands peak, the workload can be automatically moved to a higher-performing storage tier. Afterward, the workload can be automatically moved back to its normal storage tier.

Simplify Data Migration

Streamline migration tasks with non-disruptive data migrations that can accelerate storage consolidation and technology refresh projects. Hitachi Tiered Storage Manager manages the complete migration process between storage tiers and virtualized storage assets. It reduces

¹ Hitachi Dynamic Tiering software is available for Hitachi Virtual Storage Platform family and other Hitachi storage systems; refer to product specifications for a complete list.

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the complexity and risks while eliminating business application downtime during data migration operations.

Cloud Optimized

With many enterprises now implementing both on-premises (private cloud) and off-premises (public cloud) services as part of their overall IT strategy, the ability to take advantage of this hybrid model is critical.

Hitachi enables organizations to take advantage of cloud economics via the data migrator to cloud feature, which allows lesser-used or older files to be moved to the cloud. The functionality migrates files from Hitachi Virtual Storage Platform (VSP) models (specifically VSP G400, VSP G600 and VSP G800 with NAS modules) or Hitachi NAS Platform 4x00 to private clouds, such as Hitachi Content Platform (HCP), and public clouds, such as Microsoft® Azure® and Amazon S3.

This approach effectively frees up primary Tier 1 storage resources, such as flash, for more frequently accessed and business-critical applications, thus reducing overall storage expenditures.

- **Automated policy-driven file migration.** Gain granular control of automated file migration, including file type (pdf, ppt, doc and so forth), folder names and access time points. Once these are defined, data migrator to cloud automatically migrates and retrieves files across storage tiers.
- **Amazon S3, Microsoft Azure and Hitachi Content Platform.** On- and off-premises: Take advantage of the elasticity of public cloud storage and the versatility of the HCP private cloud.
- **Reclaim primary storage and save on capital expenditure (capex).** Easily create rules, policies and schedules to start migrating files to reclaim valuable, primary, Tier 1 storage and reduce the need to acquire new storage.
- **Application transparency: no user impact.** The tiering of files to HCP or off-premises cloud services from companies such as Amazon or Microsoft does

HITACHI DATA MOBILITY FEATURE HIGHLIGHTS

- Automatically moves the most active data to the highest-performing storage tier.
- Shifts suddenly active data to top-performing tiers in real time with active flash mode.
- Moves data pages up or down for optimal data placement, based on I/O patterns.
- Automatically adjusts to dynamic workload requirements.
- Provides nondisruptive volume movement across storage tiers and virtualized storage resources that are transparent to the application.
- Provides extensive search functionality to easily identify source and target for migration tasks.
- Manages volume migration through the use of custom tiering.
- Utilizes Hitachi Dynamic Provisioning and its advantages, such as simplified provisioning, space efficiency and cost savings.
- Integrates with Hitachi Tuning Manager to provide performance data analysis for improved monitoring, decision-making and planning.
- Supports solid-state disk (SSD)-class performance for data stored largely on less-expensive tiers by automatically moving the most accessed data to the highest-performing storage tier.
- Uses custom policies to align data to business applications, directing a percentage of data to a storage tier.
- Provides repeatable data placement profiles to save user-defined settings, which can be used as templates to automate data placement.
- Enables automatic provisioning of volumes according to tier specifications.
- Provides an easy-to-use graphical user interface to enable a centralized view and control of the entire tiered storage environment.
- Simplifies tiered storage administration and operations.

not impact performance to users, and is administrator-free, once the policies have been defined.

Business Benefits

Optimize Performance and Availability

- Automatically optimizes data placement for performance using an I/O-based heat index.
- Provides highest granularity and efficiency through page-based data movement.
- Simplifies the task of optimizing storage infrastructures to satisfy specific application requirements.
- Eliminates business application interruption and downtime during data migrations.

Reduce Storage Costs

- Reduces costs via self-managed and self-optimized storage tiers.
- Automates optimal data placement to increase storage utilization by up to 50%.

- Maximizes the storage utilization and investment return for Hitachi Accelerated Flash.
- Eliminates the need for manual classification.

Simplify Management Efficiency

- Automates the movement of data based on storage attributes of costs, performance and data protection.
- Reduces the underlying complexity of tiered storage management.
- Enables data migrations using a graphical user interface with built-in migration controls to eliminate errors.
- Saves storage administrative time and effort.

Services and Training

Hitachi Data Systems Global Services offers market-leading storage consultants, proven methodologies and a comprehensive portfolio of services to help you align storage to your business requirements.



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