



HITACHI
DATA SYSTEMS



Hitachi ShadowImage™
Heterogeneous In-System
Replication Software
for the Hitachi TagmaStore™
Universal Storage Platform and
Network Storage Controller

Partner Beyond Technology



Hitachi ShadowImage™ Heterogeneous In-System Replication Software for the Hitachi TagmaStore™ Universal Storage Platform and Network Storage Controller

By providing nondisruptive, high-speed data replication within any Hitachi storage system or within the virtualized storage pool, Hitachi ShadowImage software enables immediate use of data in decision support, software testing and development, and data protection operations.

Hitachi ShadowImage Software—Data Protection “In the Box” or “Within the Virtualized Storage Pool”

Hitachi Data Systems provides innovative, storage-based technology solutions for enabling continuous business operations for all companies. Enabling business continuity means partnering with you to understand your key business challenges and requirements and providing robust, application-focused storage solutions that enhance operational efficiency and resilience.

An essential component of today’s prudent business continuity and risk mitigation strategies and optimized IT operations is the ability to quickly replicate data for critical application processing, testing and development of new applications, zero-downtime recovery, data migration, and necessary backup operations. The high-speed nondisruptive local mirroring technology of Hitachi ShadowImage™ Heterogeneous In-System Replication software rapidly creates multiple copies of mission-critical information within all Hitachi storage systems in mainframe and open systems environments. ShadowImage software keeps data RAID-protected and fully recoverable—without affecting service or performance levels. Replicated data volumes can then be split from the host applications and used for system backups, application testing, and data mining applications while business continues to run at full capacity.

ShadowImage software provides heterogeneous replication between any storage systems within a virtualized storage pool managed by the Hitachi TagmaStore™ Universal Storage Platform or Network Storage Controller. Data can reside on an externally attached storage system* and be moved from the source to a target data volume anywhere in the storage pool, including to another externally attached system. With ShadowImage software, you can migrate data volumes from one platform to another through the Universal Storage Platform or Network Storage Controller and maximize the use of your storage infrastructure.

* Please contact Hitachi Data Systems regarding currently supported systems.

Business Benefits

Ensure Business Continuity

- ∴ Shortens restart and recovery times with the consistency-group function, which provides multivolume, point-in-time copies for applications and databases that share or span multiple volumes
- ∴ Reduces recovery from data corruption time dramatically through the ShadowImage QuickRestore feature, which allows an immediate restore to a disk-resident, point-in-time data copy
- ∴ Replicates large data volumes without having an impact on service levels, timing out, or affecting performance levels

Improve Productivity and Processes

- ∴ Reduces testing and deployment time and increases the accuracy of application development by providing always-available copies of current production data
- ∴ Increases competitive advantage through the ShadowImage QuickSplit function by facilitating the sharing of and immediate access to time-critical information for decision support, populating data warehouses, performing analysis, or other data-mining operations
- ∴ Enables normal backup operations on a copy of up-to-date production data while critical applications continue to run unaffected
- ∴ Simplifies data migration between storage systems

Reduce Operational and Capital Costs

- ∴ Allows business to remain online during data center activities, eliminating the need for 24/7 resources to perform these tasks
- ∴ Maximizes the storage infrastructure by leveraging the virtualization capabilities of the Universal Storage Platform and Network Storage Controller
- ∴ Allows the use of cost-effective storage for enhanced data protection purposes

Feature Highlights

Consistency Groups

For Universal Storage Platform, Network Storage Controller, and Hitachi Lightning 9900™ V Series enterprise storage systems, the ShadowImage software consistency-group function allows a user-defined group of ShadowImage volume pairs to be split simultaneously, at a precise moment in time, with a single command. This copy method creates a consistent point-in-time copy of an entire system, database, or any related sets of volumes—a technique that can replicate data between a primary system and secondary systems anywhere in the world, with full data integrity. (For information about ShadowImage capabilities for Hitachi TagmaStore Adaptable Modular Storage and Workgroup Modular Storage and Hitachi Thunder 9500™ V Series modular storage systems, see the separate data sheet on www.hds.com.)

Optional Features

Hitachi ShadowImage Compatible Mirroring for IBM® FlashCopy®

ShadowImage Compatible Mirroring for FlashCopy is functionally compatible with the IBM FlashCopy feature and supports data set-level copy. With support for both IBM DFSMSdss commands and TSO Peer-to-Peer Remote

Copy (PPRC) commands, ShadowImage Compatible Mirroring for FlashCopy operations can be performed for the IBM z/OS® host system, and additional copies can be made (see table).

Prerequisites

Quick Start Service for Hitachi ShadowImage In-System Replication Software

This required service is available for both open systems and mainframe environments to help you with project planning for and installation and configuration of ShadowImage software. Hitachi Data Systems storage consultants help your technical personnel roll out the software across your enterprise storage environment. For mainframe data centers, this Quick Start Service includes conversion to the management capabilities of Hitachi Business Continuity Manager software for IBM z/OS.

In addition, to address your overall business continuity needs, including backup and recovery, the Hitachi Data Systems Global Solution Services team delivers services designed to integrate Hitachi ShadowImage software and Hitachi distance replication solutions such as Hitachi TrueCopy Heterogeneous Replication Software or Hitachi Universal Replicator.

Hitachi ShadowImage™ Heterogeneous In-System Replication Software Features	Hitachi Lightning 9900™ V Series Systems (IBM® z/OS® and open systems)	Hitachi TagmaStore™ Universal Storage Platform and Network Storage Controller
Heterogeneous replication between any storage systems attached externally	No	Yes
Data migration between any storage systems	No	Yes
Operating systems supported	All systems supported by the Lightning 9900 V Series systems	All systems supported by the Universal Storage Platform and Network Storage Controller
Maximum number of copies per source volume	3 for mainframe, 16 for FlashCopy V2, 9 for open systems	3 for mainframe, 16 for FlashCopy V2, 9 for open systems
Maximum number of copy pairs per system	Mainframe: 4,096 Open systems: 4,095	Mainframe: 16,384 Open systems: 16,383
Built-in additional RAID protection	Yes	Yes
Effect of dynamic sparing or auto-correction copy	None; recovery is transparent to ShadowImage software	None; recovery is transparent to ShadowImage software
All volumes customer configurable	Yes	Yes
Support for IBM PPRC host software functions	Yes (N/A for open systems)	Yes (N/A for open systems)
Support for IBM DFSMSdss host software functions	Yes (N/A for open systems)	Yes (N/A for open systems)
Support for IBM FlashCopy functions	Yes (N/A for open systems)	Yes (N/A for open systems)

Complementary Solutions

Hitachi Universal Replicator Software

Designed to asynchronously replicate data hosted on Universal Storage Platforms and Network Storage Controllers, Universal Replicator software can copy data over any distance for outstanding business continuity.

Hitachi HiCommand® Replication Monitor Software

Replication Monitor software simplifies configuration and management of all replication performed by Hitachi storage systems.

Hitachi Business Continuity Manager Software

Business Continuity Manager software dramatically reduces recovery times from outages through the automation of complex disaster recovery and planned outage routines.

Hitachi TrueCopy Remote Replication Software

Available for both open systems and z/OS environments, TrueCopy software is the industry's first storage hardware-based, serverless, asynchronous remote copy solution that replicates data over any distance.

Hitachi SplitSecond™ Solutions for Rapid Recovery

Built on the foundation of ShadowImage software, SplitSecond Solutions are designed to accelerate backup and restore capabilities within complex database applications. Backup and restore time is reduced from hours to only minutes.

Business Continuity Consulting Services

Hitachi Data Systems offers three business continuity services to help you ensure continuous access to information across your enterprise. The services assess your current disaster recovery capabilities and business needs, analyze your areas of risk, and then help you develop the strategy and technical plans you need to achieve nonstop operations.

 Hitachi Data Systems Corporation

Corporate Headquarters

750 Central Expressway
Santa Clara, California 95050-2627
U.S.A.
Phone: 1 408 970 1000
www.hds.com
info@hds.com

Asia Pacific and Americas

750 Central Expressway
Santa Clara, California 95050-2627
U.S.A.
Phone: 1 408 970 1000
info@hds.com

Europe Headquarters

Sefton Park
Stoke Poges
Buckinghamshire SL2 4HD
United Kingdom
Phone: + 44 (0)1753 618000
info.eu@hds.com

Hitachi Data Systems is registered with the U.S. Patent and Trademark Office as a trademark and service mark of Hitachi, Ltd. The Hitachi Data Systems logotype is a trademark and service mark of Hitachi, Ltd. HiCommand is a registered trademark of Hitachi, Ltd.

ShadowImage, Lightning 9900, TagmaStore, TrueCopy, Thunder 9500, and SplitSecond are trademarks of Hitachi Data Systems Corporation.

All other product and company names are, or may be, trademarks or service marks of their respective owners.

Notice: This document is for informational purposes only, and does not set forth any warranty, express or implied, concerning any equipment or service offered or to be offered by Hitachi Data Systems. This document describes some capabilities that are conditioned on a maintenance contract with Hitachi Data Systems being in effect, and that may be configuration-dependent, and features that may not be currently available. Contact your local Hitachi Data Systems sales office for information on feature and product availability.

Hitachi Data Systems sells and licenses its products subject to certain terms and conditions, including limited warranties. To see a copy of these terms and conditions prior to purchase or license, please go to http://www.hds.com/products_services/support/license.html or call your local sales representative to obtain a printed copy. If you purchase or license the product, you are deemed to have accepted these terms and conditions.

©2005, Hitachi Data Systems Corporation. All Rights Reserved.
DISK-552-00 June 2005