

Hitachi ShadowImage® Heterogeneous Replication Software

By providing nondisruptive, high speed data replication within any Hitachi storage system or virtualized storage pool, Hitachi ShadowImage® Heterogeneous Replication software enables immediate use of data in decision support, software testing and development, and data protection operations. ShadowImage cloning operations are independent of operating system, application or device, allowing efficient and centralized replicated storage volume management.

Data Replication for Enterprise Storage

Hitachi Data Systems provides innovative, storage-based technology solutions for enabling continuous business operations for companies of all sizes. 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 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 is part of the Hitachi In-System Heterogeneous Replication bundle, which also includes Hitachi Copy-on-Write Snapshot software.

ShadowImage software provides heterogeneous replication between any storage systems within a virtualized storage pool managed by the Hitachi Universal Storage Platform® V or the Universal Storage Platform VM. Leveraging the storage virtualization capabilities of the platform, administrators can move data that resides on an externally attached storage system from the source to a target data volume anywhere in the storage pool, including to another externally attached system. With ShadowImage software, IT can migrate data volumes from one platform to another through the Universal Storage Platform V or Universal Storage Platform VM and maximize the use of the storage infrastructure.

ShadowImage software can create virtual volumes of thin provisioned volumes created with Hitachi Dynamic Provisioning software. The ShadowImage virtual volumes only consume the actually mapped physical storage, and they are defined for the desired capacity of the volume regardless of the physical disk capacity, avoiding the need for LUSE.

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

- Enables disaster recovery plan testing; in conjunction with distance replication solutions like Hitachi Universal Replicator software, replicas of the data volume can be created through the ShadowImage At-Time Split capability, without interrupting the distance replication process
- Allows virtual volume to virtual volume replication via Dynamic Provisioning software, which requires the disk space actually used, not the virtual volume size

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 V and Universal Storage Platform VM

SOLUTION HIGHLIGHTS

Storage Platform	ShadowImage Maximum Number of Clones
Hitachi Simple Modular Storage 100	1:8
Hitachi Adaptable Modular Storage 500	1:3
Hitachi Adaptable Modular Storage 1000	1:3
Hitachi Adaptable Modular Storage 2000 family	1:8
Hitachi Universal Storage Platform V and Universal Storage Platform VM	1:9

- Allows the use of cost effective storage for enhanced data protection purposes
- Hitachi Dynamic Provisioning thin provisioned volumes with ShadowImage software provide operational flexibility and savings in the physical storage required for replication and ongoing operations

ShadowImage Features

- For the Hitachi Universal Storage Platform family, 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 Adaptable Modular Storage and Workgroup Modular Storage, see the separate data sheet on www.hds.com).

Services

Hitachi Data Systems Global Solution Services provides the Implementation Service for Hitachi ShadowImage® Heterogeneous Replication software to help organizations improve testing and application deployment operations with high speed, problem free data duplication. Consultants tailor the configuration and integration of ShadowImage software to serve an organization’s backup and recovery application requirements, whether in open systems or mainframe environments.

Complementary/Optional Software

- Hitachi Copy-on-Write Snapshot software
- Hitachi TrueCopy® Synchronous/Asynchronous software
- Hitachi Universal Replicator software
- Hitachi Replication Manager software
- Hitachi Protection Manager software

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