

# Hitachi Data Systems Replication Solutions for VMware Site Recovery Manager

Hitachi Data Systems offers a complete family of local and remote replication software and storage hardware that integrates seamlessly with Site Recovery Manager from VMware to provide maximum uptime and rapid disaster recovery.

The world of IT and computing is going virtual. Today, thousands of businesses worldwide have moved to VMware virtual technology to enjoy higher server utilization, increased efficiencies and lower costs. Working closely with VMware, Hitachi Data Systems has developed the Hitachi Storage Replication Adapter, which connects its innovative synchronous and asynchronous replication solutions to the VMware virtual server environment.

## The Challenge

Every year, service interruptions at data centers cause major data and financial losses. Even normal hardware and software maintenance and data backup have become a major cause of downtime and expense. As businesses implement VMware server virtualization, they need to ensure data generated in this virtual server environment is properly backed up. Traditional approaches

to disaster recovery and business continuity do not work in this new virtual environment.

## The Solution

To meet the need for dependable disaster recovery in the virtual environment, VMware developed the Site Recovery Manager. This software integrates with Hitachi replication software to make recovery rapid, reliable and affordable. If a primary site goes down, the VMware Site Recovery Manager activates the Hitachi Storage Replication Adapter, which controls failover operations through powerful Hitachi replication software.

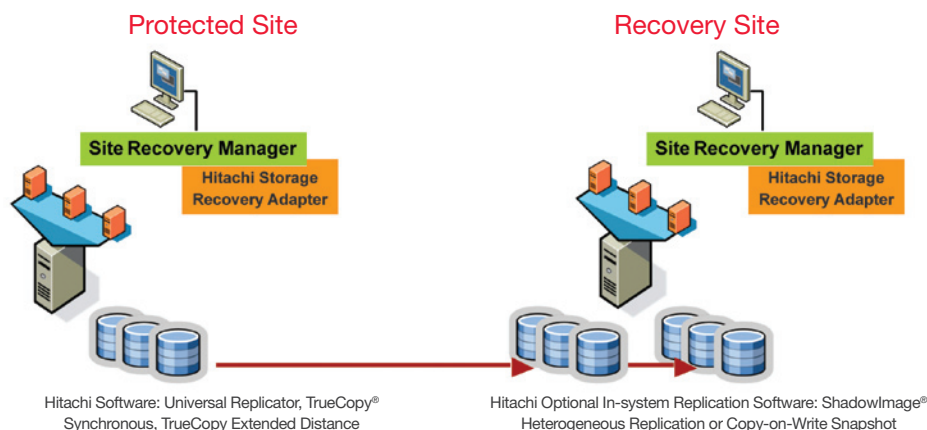
Using proven software technology and industry leading storage hardware, Hitachi Data Systems replication solutions automatically maintain duplicate copies of data at a remote site for failover testing and recovery; businesses can quickly, easily and cost-effectively perform data

## Technology Advantages

Hitachi Data Systems replication solutions feature innovations that give organizations greater reliability, higher performance and a lower total cost of ownership.

- **Universal core technology engine.** All Hitachi Data Systems replication solutions use the same core technology engine, continually refined over the last 25 years, which enables unprecedented reliability and interoperability.
- **Pull technology and journal volumes.** The asynchronous Hitachi Universal Replicator software uses journal volumes and a unique “pull” technology to overcome irregularities or short-term outages in the data path, and the performance and latency limitations of traditional asynchronous replication methods.
- **Storage platform deployment\*.** Solutions for VMware Site Recovery Manager, via the Hitachi-developed Storage Replication Adapter, are available for a broad range of business environments — from the midsize to large enterprise. Both the Hitachi Universal Storage Platform™ and Hitachi Adaptable Modular Storage families support implementations of VMware’s Site Recovery Manager.

\* Hitachi storage available for VMware Site Recovery Manager deployments includes all Universal Storage Platform models, Network Storage Controller and all Adaptable Modular Storage family systems.



center and site failover to ensure data integrity, automate disaster recovery and, in most configurations, nondisruptively test disaster recovery procedures. In addition, VMware Site Recovery Manager allows for site recovery testing at arbitrary frequency and for arbitrary duration.

## Synchronous or Asynchronous

Hitachi replication software allows businesses to design their VMware Site Recovery Manager implementation to precisely fit their unique replication needs. Synchronous replication ensures that a remote copy of the data, identical to the primary copy, is created at the same time the primary copy is updated. This approach is perfect for high-value applications where a missed transaction can cause major financial loss.

Asynchronous replication can span any distance, ensuring critical data is stored safely outside a disaster zone. Data is written at the primary site first and then separately at the remote site. This approach is best where the loss of a transaction due to the latency factor is not catastrophic.

### Hitachi TrueCopy® Synchronous Software

This remote replication software automates the data recovery process and enables normal business operations to resume in minutes after an outage at the primary site. Ideal for applications that have the most stringent recovery point objectives and cannot tolerate any data loss, it ensures data integrity by writing first to the remote and then to the primary storage system.

### Hitachi Universal Replicator Software

An advanced technology for asynchronously replicating data hosted on the Hitachi Universal Storage Platform™ family systems, this software provides a powerful data management and recovery solution. In a typical implementation, VMware Site Recovery Manager sends data to the primary storage system, which immediately writes the data to disk and sends an acknowledgement to VMware, eliminating any pending wait time. To ensure data integrity, Universal Replicator uses disk-based journaling and an optimized replication engine.

### Hitachi TrueCopy Extended Distance Software

This remote replication software, available on the Hitachi Adaptable Modular Storage

## Solution Highlights

### VMware Site Recovery Manager

- Manages failover from production data center to disaster recovery sites as well as failover between two sites with active workloads
- Enables arbitrary, nondisruptive site recovery and site failover testing
- Nondisruptive capability available with optional in-system replication (not available with TrueCopy Extended Distance software for Adaptable Modular Storage family systems)
- Leverages Hitachi in-system and remote replication software to provide a robust disaster recovery solution

### Hitachi Replication Components for VMware Site Recovery Manager

- Option for synchronous or asynchronous remote replication between sites, as appropriate to business needs via TrueCopy Synchronous/Extended Distance or Universal Replicator software
- Optional site-to-site replication maintained during any failover testing
- In-system replication for full-volume clone or partial point-in-time copy (Copy-on-Write Snapshot and ShadowImage software); used for testing and failover

### A Strong Partnership

Both individually and as solution partners, Hitachi Data Systems and VMware have a proven track record of technology innovation and market leadership. The combined solutions of these partners deliver superior performance, availability, cost savings and reliability. To see how Hitachi Data Systems solutions can give you the optimum in disaster recovery and business continuity, please contact your Hitachi Data Systems representative or authorized reseller, or visit [www.hds.com](http://www.hds.com).

systems, is an asynchronous solution that efficiently utilizes the associated system resources available on the midrange storage platforms.

## In-system Replication

### Hitachi ShadowImage® Heterogeneous Replication Software\*\*

This software provides a nondisruptive, host-independent data replication solution for creating full volume copies of business data for testing, backup or other purposes.

### Hitachi Copy-on-Write Snapshot Software

This software allows point-in-time virtual copies of business data volumes — without the requirements of physical disk capacity — for recovery to a “known good” or particular point in time.

\*\*ShadowImage Heterogeneous Replication software serves Universal Storage Platforms; ShadowImage Replication software serves Adaptable Modular Storage systems.

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