

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. Not only that, even normal hardware and software maintenance and data backup have become a major cause of downtime and expense. As more and more businesses implement VMware server virtualization, they need to ensure that the data generated in this virtual server environment is

properly backed up. At the same time, businesses are discovering that the traditional approaches to disaster recovery and business continuity do not work in this new virtual environment.

The Solution

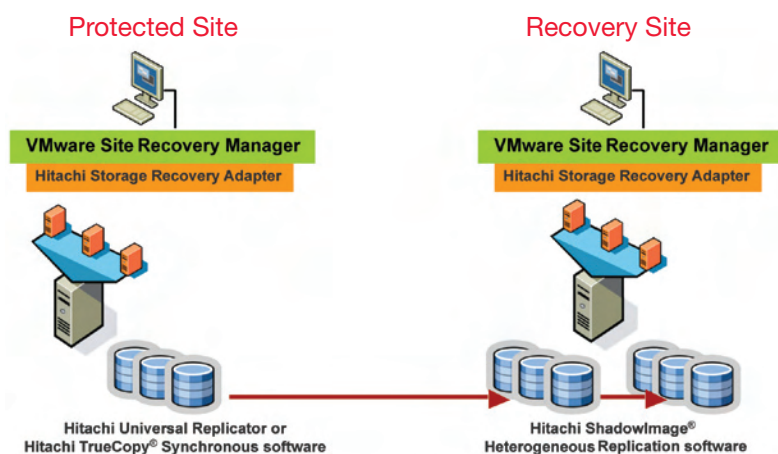
To meet the need for dependable disaster recovery in the virtual environment, VMware developed the Site Recovery Manager. This software integrates with Hitachi replication solutions to make recovery rapid, reliable and affordable. If a primary site goes down, the VMware Site Recovery Manager activates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

Using proven software technology and industry leading storage hardware, Hitachi replication solutions automatically maintain duplicate copies of data at a remote site for failover testing and

Technology Advantages

Hitachi 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. Know one Hitachi replication solution and you know them all.
- **Pull technology and journal volumes.** The asynchronous solution, 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.
- **Dual cache areas.** Hitachi enterprise storage systems feature two separate cache memories for increased reliability and performance. One cache is for system memory; the other is for user information. This ensures that the memory you purchase will be exclusively used by the applications running on that platform.



recovery. With Hitachi replication solutions, businesses can quickly, easily and cost-effectively perform data center and site failover to ensure data integrity, automate disaster recovery and 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 Data Systems allows businesses to design their VMware Site Recovery Manager implementation to precisely fit their unique needs using synchronous or asynchronous replication. Hitachi TrueCopy® Synchronous replication software 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. On the other hand, 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. The asynchronous approach delivered via Hitachi Universal Replicator software is best for applications where the loss of a transaction due to the latency factor is not catastrophic.

Hitachi TrueCopy® Synchronous Software

Hitachi TrueCopy Synchronous remote replication software automates the data recovery process and enables normal business operations to resume in minutes instead of hours or days after an outage at the primary site. TrueCopy Synchronous is ideal for applications that have the most stringent recovery point objectives (RPOs) and cannot tolerate any data loss. To ensure data integrity, it writes to the remote storage system first, 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, Universal Replicator software provides a powerful data management and recovery solution. In a typi-

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
- Leverages in-system and remote replication software from Hitachi Data Systems 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: Hitachi TrueCopy or Hitachi Universal Replicator
- Site-to-site replication maintained during any failover testing
- In-system replication for full-volume clone, used for testing and failover: Hitachi ShadowImage

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.

cal 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 that delivers outstanding performance and operational efficiencies.

Hitachi ShadowImage® Heterogeneous Replication Software

The in-system Hitachi ShadowImage Heterogeneous Replication software provides a nondisruptive, host-independent data replication solution for creating full volume copies of business data. ShadowImage copies can provide immediate and nondisruptive access to data for testing, backup, failover or development purposes.

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