

Application-Aware Snapshot Management for Hitachi Virtual Storage Solutions

Take Data Protection to the Next Level

SOLUTION PROFILE

For most organizations, the volume of data has grown to the point where there isn't enough time in the day to back it all up. At the same time, businesses are asking IT to protect data more frequently to reduce risk and recovery times. Legacy or traditional approaches to data protection and backup can present challenges for organizations of all sizes, creating a need for new methodologies, solutions or tactics.

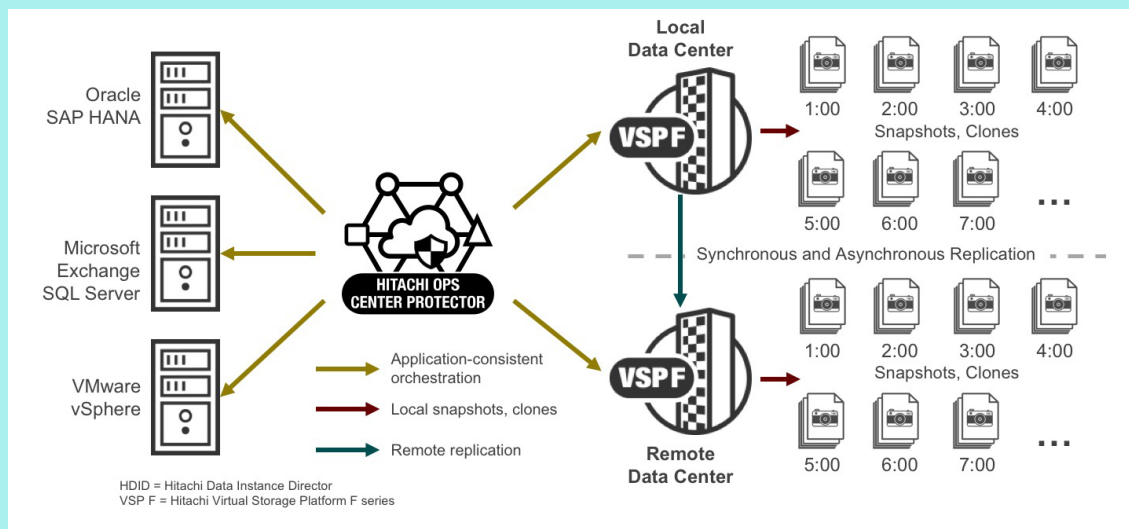
Storage-system-based snapshots and replication have become the modern methods for enhancing application availability, as measured by recovery point objectives (RPO), recovery time objectives (RTO) and backup windows. These snapshot and replication capabilities offer a range of advantages over traditional backup methodologies.

Hitachi In-System Replication software provides industry-leading levels of backup and recovery performance, scalability, reliability and functionality. It is available with the Hitachi Virtual Storage Platform (VSP) family systems.



The Challenge: Realize the Potential of Storage-System-Based Snapshots

Enterprises today increasingly turn to storage-system-based snapshots. They use the snapshots to augment or replace legacy data protection solutions. Solutions that are overwhelmed by exponential data growth can fail to keep up with increasing service level demands from the business. The challenge is that native storage system snapshot tools, as well as alternative third-party solutions, offer varying degrees of functionality, automation, scripting requirements, hardware support and application awareness.



A unified approach to modern data protection: Policy-based management of application-aware Hitachi Thin Image snapshots and Hitachi Shadow Image clones, linked to remote synchronous and asynchronous replication.

Modernize Data Protection With Hitachi Ops Center Protector and Hitachi In-System Replication

Ops Center Protector software merges storage system hardware snapshots directly into the data protection process. It integrates tightly with both host applications and Hitachi Storage Virtualization Operating System (SVOS). As the central orchestration point between the applications and storage services, Protector drives snapshot and clone creation based on business-defined policies and uses automated workflows designed via its unique, whiteboard-like interface.

Ops Center Protector discovers volume or disk configurations for the snapshot operations and coordinates these operations with the application to ensure a consistent snapshot or clone of the data is created. It thereby minimizes administrative configuration and eliminates scripting requirements.

Protector can instantly revert a snapshot or clone to recover from data corruption. It can automatically mount a copy to a proxy server to enable data repurposing for secondary operations, such as DevOps and off-line backups for longer-term retention.

Orchestration of Hitachi Thin Image Snapshots and Hitachi ShadowImage Clones

Maximize the Value of Storage Hardware Investments

Enterprises today use snapshots to augment or replace legacy data protection solutions that are overwhelmed by exponential data growth and increasing data availability requirements. However, native storage system snapshot tools offer varying degrees of functionality, automation and application awareness.

Protector combines application awareness with tight Thin Image and ShadowImage integration.

- Employs incremental-forever data capture to eliminate the high levels of data duplication created by legacy backup software.
- Combines local snapshots with remote replication to enable integrated operational recovery and disaster recovery.

Improve Application Availability by Eliminating Backup Windows

Hitachi Thin Image snapshots provide near-instant logical point-in-time copies of VSP data volumes. Snapshots are created with no impact on production applications, enabling their continuous operations. Snapshots can be crash-consistent, or application-consistent with Ops Center Protector integration.

Never stop your critical applications for backup again. Increased availability equals increased productivity.

Recover Applications in Seconds Instead of Hours or Days

The process of performing a restore from tapes or the cloud can take hours, and is susceptible to complexity and risk. With Ops Center Protector and Thin Image, restoring from an application-consistent snapshot requires just a few mouse clicks and takes just a couple of minutes to complete.

Eliminate extended periods of downtime and avoid the lost productivity that a long RTO implies.

- Orchestrates global-active device storage clustering over distance to support high availability.
- Creates snapshots and clones in remote sites to support secondary data usage operations.

Reduce the Amount of New Data at Risk by 95% or More

Traditional nightly backup leaves up to 24 hours of new data at risk. That data must be recreated following a data loss, further impacting the business following a recovery. With Ops Center Protector you can create snapshots as needed; once-per-hour reduces new data at risk by 95.4%.

Meet stringent recovery point objectives for critical applications automatically, with no impact on production application performance.

Eliminate Snapshot-Related Scripting and Management Complexity

Hitachi Ops Center Protector can orchestrate application-consistent snapshots and clones for Oracle databases and VMware vSphere virtualized environments. Protector can also create crash-consistent snapshots and clones for any application.

Align data protection operations: Meet stringent service level agreements (SLAs) for higher application availability and reduced risk.

Instantly Create Virtual Copies

Ops Center Protector also orchestrates the advanced “snap-on-snap” functionality of Hitachi storage arrays. This approach creates thin, fully writable virtual copies for secondary business functions, without impacting the original backup copy and again without impacting the availability or performance of the production systems.

Increase the agility of your organization with easily accessible up-to-date information.

Reduce IT Costs by Eliminating Multiple Point Products

Ops Center Protector can simplify operational recovery, disaster recovery and copy data management operations, across applications and operating environments. It creates policy-based, application-consistent snapshots for local recovery, and clones for secondary data use cases, including application development and test operations.

Ops Center Protector automates a broad range of technologies to provide end-to-end copy data services.

95%

With Hitachi Ops Center Protector, you can reduce the amount of new data at risk of loss by 95% or more.

When You Modernize the Data Center, You Must Modernize Data Protection

As the overall data center is modernized, the methods for protecting data must also be modernized. Many organizations are transitioning data protection away from the traditional full-plus-incremental backup model, which just cannot keep up with data growth and tighter service level requirements.

Instead, they are moving toward Hitachi Vantara's more modern approach, using advanced technologies such as hardware- and software-based snapshots and replication, to achieve improved RPO, RTO, backup window and total cost of ownership (TCO) levels.

These innovative technologies can help to improve service levels, reduce costs and mitigate risks, while simplifying operations. Hitachi Ops Center Protector with Hitachi In-System Replication is a single solution that can manage all types of data, automate processes and provide peace of mind through reporting and auditability.



Next Steps

Modern snapshot, replication and automation technologies can ensure that critical application availability meets business service level requirements, now and in the future. Hitachi Vantara stands ready to show you how to deploy the right technologies, at the right price, to maximize data availability, dramatically improve recoverability, make greater use of copy data, and minimize costs.



Modern replication and management capabilities are equally needed by small and medium-sized enterprises. [Download](#) the solution profile.

[Learn](#) more about snapshot and replication orchestration from our Modern Data Protection and Copy Data Management overview brochure.

Dig deeper into how downtime introduced by backup and recovery operations can cost an organization money and reputation. [Read](#) our white paper.

See how easy it is to set up and manage Oracle Database protection with Hitachi Ops Center Protector. [Watch](#) the video series.

[Visit the Hitachi Vantara data protection website](#) to learn about all the modern approaches available to protect Oracle databases and other application and filesystem environments.



We Are Hitachi Vantara

We guide our customers from what's now to what's next by solving their digital challenges. Working alongside each customer, we apply our unmatched industrial and digital capabilities to their data and applications to benefit both business and society.

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