

Datasheet

# Hitachi Thin Image Advanced for Hitachi Virtual Storage Platform (VSP)

**Powerful thin image snapshot software quickly creates copies for immediate use in decision support, software development and modern data protection operations.**

## Snapshot Software for Enterprise Storage

Today's prudent business-continuity and risk-mitigation strategies must support essential capabilities in an optimized manner. Requirements include the ability to quickly replicate data for critical application processing, testing and development of new applications, zero downtime recovery, data migration and more-frequent backup operations.

### Thin Image Advanced Snapshot Overview

- Thin Image Advanced snapshots rapidly creates up to 1,024 instant point-in-time copies for data protection or application testing.
- Saves up to 90% or more disk space by storing only changed data blocks.
- Speeds backups from hours to a few minutes, virtually eliminating traditional backup windows.
- Near-instant restoration of critical data to increase business continuity.
- Application- and OS-independent, but can be integrated with application backup triggers.
- Fast, simple and reliable snapshot software.

The high-speed, nondisruptive snapshot technology of Hitachi Thin Image Advanced snapshot software rapidly creates up to one million point-in-time copies of mission-critical information

within any Hitachi storage system or virtualized storage pool, without impacting host service or performance levels.

Because snapshots store only the changed data, the volume of storage capacity required for each snapshot copy volume is greatly reduced. As a result, Hitachi Thin Image Advanced can provide significant savings over full-volume cloning methods. These snapshot copies are fully read/write compatible with other hosts and can be used for system backups, application testing and data mining applications while the business continues to run at full capacity.

Application-consistent Thin Image Advanced snapshots can be orchestrated using Hitachi Ops Center Protector software. Ops Center Protector supports Oracle databases and VMware vSphere. Other applications can be supported with integrated scripting. These snapshots can be created easily as part of a complete data protection workflow, using the unique whiteboard-like Ops Center Protector user interface.

Ops Center Protector can also trigger a Thin Image Advanced snapshot on the remote side of a distance replication pair.

## Business Benefits

### Ensure Business Continuity With Ransomware

- Reduces recovery time considerably from data corruption or human error through an immediate restore from a disk-resident, point-in-time data snapshot.

- Deliver secure data protection against ransomware by orchestrating immutable snapshots and clones utilizing automated locking and encryption of critical data volumes. Enables normal backup operations on a copy of up-to-date production data while critical applications continue to run unaffected. May eliminate the backup window altogether by creating point-in-time data snapshot copies for data protection.
- Enables disaster recovery plan testing in conjunction with distance replication solutions like Hitachi Universal Replicator software.

### 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 by enabling immediate access to time-critical information for decision support, populating data warehouses, performing analysis, or executing other data mining operations.
- Improves operational efficiency by allowing multiple processes to run in parallel with access to the same information.

# Hitachi Thin Image Advanced for Hitachi Virtual Storage Platform

## Reduce Operational and Capital Costs

- Allows business to remain online during storage management and data protection activities, eliminating the need for 24/7 resources to perform these tasks.
- Maximizes the storage infrastructure investment by leveraging the virtualization capabilities of the Hitachi VSP family (see Table 1).
- Saves up to 75% or more disk space by storing only changed data blocks rather than full-volume copy clones, maximizing disk utilization.

## Features

- Redirect on-write operations greatly improve response times to host, enabling rapid point-in-time copy creation without impacting production systems.
- Hitachi Thin Image safe snaps are immutable snapshots with locks applied for specific retention periods that cannot be changed. The data is protected against host writes, array operations or any malicious attempts to change the data footprint. In case of a ransomware attack, Thin Image safe snaps are time-locked immutable snapshots required for recovery of clean data that provides true immutability as the volume locks cannot be removed prior to the specified retention period.
- Enhanced reliability and recoverability ensure snapshots are maintained when errors occur.
- Enhanced metadata table structure supports super-fast data recovery of just the data you need.

**Table 1. Hitachi Thin Image Advanced Leverages Hitachi VSP Capabilities**

Hitachi Thin Image Advanced Specifications	Hitachi Virtual Storage Platform (VSP)	
	VSP 5000 series	VSP E 1090 series
Maximum Number of Snapshot Copies per System	1,048,575	1,048,575
Maximum Number of Snapshot Copies per Source Volume	1,024	1,024
Maximum Pool Capacity per Source Volume	768TB	768TB
Maximum Capacity per Pool	5PB	5PB
Maximum Capacity per System	12.3PB	12.3PB
Maximum Number of Consistency Groups per System	2,048	2,048

- “Floating devices” eliminate the need to assign a logical device (LDEV) address for each snapshot generated. An LDEV address must be assigned only when the snapshot generation is mounted to the operating system.
- Maximum capacity up to 5PB enables support and protection of more virtual machines or larger data sets.
- Up to one million snapshots per system means snapshots can be maintained for longer periods of time and/or can be taken more frequently to meet stricter recovery point objectives (RPO).
- Hitachi Thin Image Advanced snapshots can be deduped and compressed, further reducing data storage requirements.
- Snapshot cleanup will occur automatically, reducing cleanup.

## Services

Hitachi Vantara Global Services Solutions provides the Hitachi Thin Image Advanced Implementation Service. This service helps organizations improve testing and application deployment operations with high-speed, problem-free data duplication. Consultants tailor the configuration and integration of Hitachi Thin Image Advanced software to serve an organization’s backup and recovery application requirements, whether in open systems or mainframe environments.

## Complementary and Optional Software

- Hitachi ShadowImage replication software.
- Hitachi’s global-active device feature.
- Hitachi TrueCopy replication software.
- Hitachi Universal Replicator software.
- Hitachi Ops Center Protector software.

Note: Thin Image Advanced requires the use of Hitachi Adaptive Data Reduction (ADR).



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