

# Modern Data Center Software Solutions for AI-driven Operations

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## DATASHEET

## Base and Advanced Software Packages for Hitachi Virtual Storage Platform 5000 Series

### Improve Operational Efficiency through Advanced Administration, Analytics, Automation, and Protection

The 5000 series gives you options to select the level of modernized data center management, operations, and protection your organization needs. Choose the Base or the Advanced software package for Hitachi Virtual Storage Platform (VSP) 5000 series storage platform.

#### VSP 5000 Base Software Package

This base software package comes standard with the VSP 5000 series. It combines the core Hitachi Storage Virtualization Operating System RF (SVOS RF) with the Hitachi Vantara Ops Center management suite to maximize the return on your IT investments, while safeguarding against data loss and downtime.

#### SVOS RF: Improve Resilience, Efficiency and Agility

This flash-optimized, multithread storage operating system powers all Hitachi VSP storage systems. SVOS RF comprises key technologies for enterprise data management, including thin provisioning, adaptive data reduction, and Hitachi Dynamic Tiering (HDT) which integrates SVOS RF for superior flash performance and application availability.

#### Local Replication: Protect and Accelerate Business

Hitachi Local Replication provides snapshots and local mirroring to protect and accelerate copy creation and use. Snapshots create space-efficient, point-in-time backups to protect against data loss. Local mirroring increases protection by creating a secondary copy of data on the array. To accelerate business use, snapshots can be cloned for business reporting, dev/test, and rapid system roll-out.

#### Data Mobility: Optimize Performance and Efficiency

Hitachi Data Mobility with Hitachi Dynamic Tiering software can automatically and transparently move data across storage tiers, maximizing application performance while minimizing costs. Support for different storage media, configurations, and virtualized third-party arrays lets you meet a broad range of price-performance objectives and easily migrate off older, slower storage arrays. Non-disruptive migration enables the rapid transition from older to newer Hitachi storage without interrupting hosts.

#### Universal Volume Manager: Storage Virtualization

Hitachi Universal Volume Manager enables you to connect volumes in external storage systems to your storage system and manage those volumes as if they were one system. Using storage virtualization allows SVOS to consolidate and virtualize over 100 different types of storage arrays for superior IT efficiency.

## Hitachi Ops Center Administrator: Unified Storage Configuration Management

Ops Center Administrator provides comprehensive and customizable configuration and resource delivery across multiple

VSP storage systems. Ops Center Administrator is fully integrated with the Analytic, Automation, and Copy Data Management elements of Hitachi Ops Center.

## Hitachi Ops Center Analyzer: Monitor, Identify and Resolve IT Events

Ops Center Analyzer software enables IT monitoring and analysis of your data center at scale with machine learning insights. This software helps to optimize service levels, pinpoint problems, and aid in troubleshooting issues so that you can fix problems faster.

## Hitachi Ops Center Protector: Modern Data Protection

Ops Center Protector software automates and orchestrates a broad range of data copy and movement technologies to deliver enterprise-level copy data management services. Recovery copy services support local and remote recovery requirements using modern data protection techniques. Agile copy services automate and control the repurposing of data copies for secondary business efforts. And governance copy services enable the use of backup data for discovery and analytics operations.

## Mainframe Base Package

The mainframe base package for the VSP 5000 is also available that includes the respective Hitachi Storage Virtualization Operating System, Local Replication, Dynamic Tiering, and Mainframe Analytics Recorder software in support of specific mainframe deployments. For environments including both open systems and mainframes, an open/mainframe base package is also available that combines all the respective software products from both the open systems and mainframe base packages together.

TABLE 1: VSP 5000 Base Software Package<sup>1</sup>

BASE PACKAGE OPEN SYSTEMS	
<b>Storage Virtualization Operating System RF (SVOS RF)</b>	<ul style="list-style-type: none"><li>• Hitachi Universal Volume Manager for storage virtualization</li><li>• Hitachi Local Replication for snapshots and cloning</li><li>• Hitachi Data Mobility for tiering between storage arrays and media types.</li></ul>
<b>Hitachi Ops Center</b>	<ul style="list-style-type: none"><li>• Ops Center Administrator for simple, GUI system management</li><li>• Ops Center Analyzer for VM to storage insights</li><li>• Ops Center Protector for enterprise data copy management</li></ul>
BASE PACKAGE MAINFRAME SYSTEMS	
<b>Storage Virtualization Operating System RF (SVOS RF)</b>	<ul style="list-style-type: none"><li>• Hitachi Universal Volume Manager for storage virtualization</li><li>• Hitachi Local Replication for Mainframes providing snapshots and cloning</li><li>• Hitachi Data Mobility for tiering between storage arrays and media types.</li></ul>
<b>Mainframe Analytics Recorder</b>	<ul style="list-style-type: none"><li>• Hitachi Business Continuity Manager utility for automating local replication</li></ul>

## VSP 5000 Advanced Packages

Hitachi Vantara offers the advanced package for the VSP 5000 series for enterprise organizations with demanding uptime requirements, advanced scaling needs, and data center operations. Remote replication and metro-clustering software enable the delivery of continuous, scalable data access. Intelligent automation software enables orchestrated provisioning of resources that reduce operational overhead and risks of potential errors. The advanced package includes all base package software plus the following software modules:

## Remote Data Protection: Business Continuity

Hitachi Remote Replication includes asynchronous replication for long-distance, disaster recovery, and synchronous replication for metropolitan-area recovery with zero data loss. When combined in a 3 data center configuration, these technologies provide maximum business resiliency.

## Global Active Device: Nonstop, Scalable Data Access

The Global-Active device (GAD) feature creates an active-active metro cluster that spans up to 500km. All changes to data are mirrored in real-time for nonstop, uninterrupted data access. Unlike other solutions, GAD provides read and write access to both sides of the cluster for scalable application performance.

## Automation: Reduce IT Delivery Time and Risk

Hitachi Ops Center Automator orchestrates automated provisioning workflows and operations for consistent, error-free delivery of IT resources to business applications. With application-specific templates and intelligence to optimize flash resource delivery, Ops Center Automator reduces operational overhead by 70%, improves resource utilization, and prevents errors to speed new application resource deployments.

## Hitachi Ops Center Analyzer Predictive Analytics

Forecasts future resource capacity and performance requirements using ML-based data analytics for improved planning and budgeting. Predict when and where upgrades are needed. Evaluate a proposed resource configuration to assess its potential impact and verify effectiveness prior to implementation.

## Mainframe Advanced Package

The mainframe advanced package for the VSP 5000 includes everything in the Mainframe Base package plus the respective Remote Data Protection and Non-Disruptive migration support of specific mainframe deployments. Also included is the Hitachi Business Continuity Manager utility that automates Local and Remote Data Protection. An open/mainframe advanced package is also available with all the respective software products from both open systems and mainframe advanced packages.

TABLE 2: VSP 5000 Advanced Packages<sup>1</sup>

ADVANCED PACKAGE OPEN SYSTEMS	
All Open Base package features plus:	
<b>Storage Virtualization Operating System RF (SVOS RF)</b>	<ul style="list-style-type: none"><li>• Remote Data Protection for replication and disaster recovery</li><li>• Global Active Device for business continuity and metro clustering</li><li>• Non-Disruptive Migration</li></ul>
<b>Hitachi Ops Center</b>	<ul style="list-style-type: none"><li>• Ops Center Automator workflow automation and orchestration</li><li>• Ops Center Analyzer Predictive Analytics</li></ul>
ADVANCED PACKAGE MAINFRAME SYSTEMS	
All Mainframe Base package features plus:	
<b>Mainframe Essentials Package</b>	<ul style="list-style-type: none"><li>• Hitachi Business Continuity Manager Extended for automating Remote Data Protection</li></ul>
<b>Storage Virtualization Operating System RF (SVOS RF)</b>	<ul style="list-style-type: none"><li>• Remote Data Protection (MF) for replication and disaster recovery</li><li>• Non-Disruptive Migration</li></ul>
<b>Mainframe Analytics Recorder</b>	<ul style="list-style-type: none"><li>• Hitachi Business Continuity Manager utility for automating local replication</li></ul>

## VSP 5000 Additional Software Purchase Options

There are multiple software options for both Open Systems and Mainframe. These options are either incremental capabilities, such as Analyzer Viewpoint, or provide extended infrastructure support as with Automator and Analyzer Node Licenses.

### Hitachi Ops Center Analyzer Viewpoint

Hitachi Ops Center Analyzer viewpoint delivers a central IT operations dashboard across multiple data centers, enabling new enterprise-wide insights of capacity, performance, and system health for the Hitachi Virtual Storage Platform (VSP).

### Hitachi Ops Center Analyzer Third-Party Storage

In addition to monitoring and collecting data from Hitachi Enterprise storage, you can also install probes for third-party storage systems such as those from EMC, HPE, IBM NetApp, and Pure.

## Hitachi Ops Center Protector Application Protection

Enables application-consistent recovery, in any location, orchestrating non-disruptive snapshots and clones; support built-in for Oracle database, VMware, and VSphere. Support for other databases and applications through scripting.

### Hitachi Ops Center Protector Backup

Provides host-based backup for Microsoft Windows, IBM® AIX®, Oracle Solaris, and RedHat, SUSE and Oracle Linux operating systems

### Hitachi Ops Center Analyzer Nodes

With the Ops Center Analyzer Node packs, data collection and predictive analytics are expanded to include physical servers, Hypervisors, OS instances, and switches. The inclusion of these resources enables Analyzer to deliver end-to-end resource optimization, improved utilization, and automation.

### Hitachi Ops Center Automator Direct and Proxy Nodes Packs

With the Ops Center Automator Node packs, licensing is extended to allow for beyond storage automated workflows, including resources such as physical servers, Hypervisors, OS instances, and switches.

TABLE 3: VSP 5000 Additional Software Purchase Options<sup>1</sup>

ADDITIONAL SOFTWARE OPTIONS OPEN SYSTEMS	
<b>Purchased Separately</b>	<ul style="list-style-type: none"> <li>• Hitachi Ops Center Analyzer Viewpoint</li> <li>• Hitachi Ops Center Analyzer Third-Party Storage</li> <li>• Hitachi Ops Center Application Protection</li> <li>• Hitachi Ops Center Protector Backup</li> </ul>
<b>Nodes Licenses</b>	<ul style="list-style-type: none"> <li>• Ops Center Automator Direct and Proxy Nodes Packs</li> <li>• Ops Center Analyzer Nodes Packs</li> </ul>
ADDITIONAL SOFTWARE OPTIONS MAINFRAME	
<b>Purchased Separately</b>	<ul style="list-style-type: none"> <li>• Hitachi Ops Center Analyzer Viewpoint</li> <li>• Hitachi Ops Center Analyzer Predictive Analytics</li> <li>• Hitachi Ops Center Analyzer Third-Party Storage</li> <li>• Hitachi Ops Center Application Protection</li> <li>• Hitachi Ops Center Protector Backup</li> </ul>
<b>Nodes Licenses</b>	<ul style="list-style-type: none"> <li>• Ops Center Automator Direct and Proxy Nodes Packs</li> <li>• Ops Center Analyzer Nodes</li> </ul>

<sup>1</sup> Combined open systems and mainframe base, advanced and additional options are available for mixed open and mainframe VSP 5000 environments

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