

Hitachi Data Systems Software

| | | Hitachi Virtual Storage Platform | Hitachi Universal Storage Platform V | Hitachi Universal Storage Platform VM | Hitachi Adaptable Modular Storage 2000 | Mainframe/Open | Execute on Server or Frame |
|---|---|----------------------------------|--------------------------------------|---------------------------------------|--|----------------|---|
| Storage and Data Management | | | | | | | |
| Hitachi Basic Operating System | Foundation set of storage management software products for Hitachi storage. On the Virtual Storage Platform these include: Hitachi Device Manager software, Hitachi Dynamic Provisioning software, Hitachi Data Link Manager Advanced software (50 server license), Hitachi Resource Manager™ utility package, cache partitioning software (4 partitions) and Hitachi Server Priority Manager software. On the Universal Storage Platform V, the Universal Storage Platform VM, the StorEdge 9990V and the StorEdge 9990VM these include: Hitachi Device Manager software, Hitachi Resource Manager™ utility package, Hitachi Virtual Partition Manager software (4 partitions) and Hitachi Server Priority Manager software. | Y | Y | Y | N | Both | Hitachi Device Manager, Hitachi Storage Navigator Modular, Java API and SNMP agent - Server. The rest is Frame (microcode-based). |
| Hitachi Dynamic Provisioning | Enables thin provisioning, the creation of logical, virtual volumes. De-couples the provisioning of storage to an application, from the physical addition of storage capacity to the storage system. Allows overprovisioning. Self optimizes and improves performance and capacity utilization. | Y | Y | Y | Y | Open | Frame |
| Hitachi Dynamic Tiering | Hitachi Dynamic Tiering software simplifies storage administration. Through automation, it eliminates the complexity of using tiered storage efficiently and delivers top tier performance to information stored largely on less expensive tiers. | Y | N | N | N | Open | Frame |
| Hitachi Compatible PAV for IBM® z/OS® | Enables the host system to start multiple I/O requests simultaneously, for faster host access | Y | Y | Y | N | MF | Frame |
| Hitachi Compatible HyperPAV for IBM® z/OS® | Compatible HyperPAV is an extension of PAV that provides the management of multiple I/O requests after every I/O simultaneously, enabling quicker reaction with massive workload changes. | Y | Y | Y | N | MF | Frame |
| Hitachi Cross-OS File Exchange | Exchanges data between open and mainframe systems | Y | Y | Y | N | Both | Server |
| Hitachi Chargeback | Enables utility management model and lower costs by implementing asset- or utility-based accounting; requires Hitachi Storage Services Manager software | N | Y | Y | Y | Open | Server |
| Hitachi Device Manager | Configuration GUI and CLI for Hitachi storage provisioning and management | Y | (1) | (1) | Y | Both | Server |
| Hitachi Dynamic Link Manager Advanced | Combined offering of corresponding Hitachi Dynamic Link Manager and Hitachi Global Link Manager server licenses. Hitachi Dynamic Link Manager provides path failover and load balancing capabilities with versions to support IBM® AIX®, Sun Solaris, HP-UX, Microsoft® Windows 2000, Windows 2003, and Linux operating systems. Hitachi Global Link Manager provides aggregated management of Hitachi Dynamic Link Manager instances into a centralized management console. | Y | Y | Y | Y | Open | Server |
| Hitachi Path Provisioning | Automates heterogeneous provisioning of the entire data path at the host, fabric and storage system level; requires Hitachi Storage Services Manager software | Y | Y | Y | Y | Open | Server |
| Hitachi Performance Monitor feature | Monitors performance attributes of Hitachi storage systems | Y | (1) | (1) | (5) | Both | Frame – Bundled on Hitachi Workgroup Modular Storage 100 |
| Hitachi QoS for File Servers | File-server-based SRM management and reporting; requires Hitachi Storage Services Manager software | N | Y | Y | Y | Open | Server |
| Hitachi QoS for Microsoft® Exchange | Application-based topology and capacity management; requires Hitachi Storage Services Manager software | N | Y | Y | Y | Open | Server |
| Hitachi QoS for Microsoft® SQL Server® | Application-based topology and capacity management; requires Hitachi Storage Services Manager software | N | Y | Y | Y | Open | Server |

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| Hitachi QoS for Oracle | Application-based topology and capacity management; requires Hitachi Storage Services Manager software | N | Y | Y | Y | Open | Server |
| Hitachi QoS for Sybase | Application-based topology and capacity management; requires Hitachi Storage Services Manager software | N | Y | Y | Y | Open | Server |
| Hitachi Resource Manager™ utility package for enterprise systems | Low-level tools for storage system setup and management; some performance reporting and data security. Includes host (server)-based Hitachi Storage Navigator, SNMP agent, Sun Java API software. Also includes storage system microcode-based performance monitor feature, cache residency manager feature (formerly FlashAccess), LUN manager, logical unit size expansion (LUSE), cache manager utility feature (formerly Cache Management Host Agent), VLVI (CVS), SAN Security feature (includes software formerly known as Hitachi SANtinel and Hitachi Volume Security Port Option), volume security for IBM® S/390®, Hitachi Volume Retention software (formerly LDEV Guard), Open Customized Volume Size (OCVS), Microsoft® Volume Shadow Copy Service (VSS), Database Validator, Data Retention Utility, and Volume Shredder software | (1) | (1) | (1) | N | Both | Storage Navigator, SNMP agent and Java Agent — Server, The Rest — Frame |
| Hitachi Resource Manager™ utility package for modular storage systems | Tools for storage system setup and management, including host-based Storage Navigator Modular (GUI, Web and CLI) B21as well as controller-based applications: volume migrator, SNMP agent, password protection, logical unit size expansion (LUSE), cache residency manager feature (formerly FlashAccess), cache partition manager feature and LUN management. | N | N | N | N | Open | Storage Navigator Modular Server/The Rest — Frame |
| Hitachi Server Priority Manager | Assigns priorities to storage system ports for performance optimization | (1) | (1) | (1) | N | Open | Frame |
| Hitachi Storage Capacity Reporter, powered by APTARE® | Provides end-to-end storage capacity reporting from applications and hosts to heterogeneous storage systems for improved capacity planning, increased storage utilization and reduced infrastructure costs. | Y | Y | Y | Y | Open | Server |
| Hitachi Virtual Server Reporter, powered by APTARE® | Provides end-to-end storage capacity reporting from VMware virtual servers to heterogeneous storage systems; recommended to be used with Hitachi Storage Capacity Reporter. | Y | Y | Y | Y | Open | Server |
| Hitachi Command Director (formerly Hitachi Storage Command Portal) | Consolidates and centralizes reporting of storage configuration, capacity and performance data contained within the Hitachi Command Suite of products; enables customers to view Hitachi storage assets based on business applications, monitor storage service level objectives and provide policy-based management. | Y | Y | Y | N | Both | Server |
| Hitachi Storage Navigator Modular 2 | Enables essential functions for the management and optimization of individual Hitachi storage systems | N | N | N | Y | Open | Server or Laptop |
| Hitachi Storage Services Manager | SMI-S standards-based platform for heterogeneous storage resource management that is composed of multiple add-on modules | N | Y | Y | Y | Open | Server |
| Hitachi Storage Services Manager for NetApp | Extends the full range of Hitachi Storage Services Manager capabilities to all NetApp storage solutions; requires Hitachi Storage Services Manager software | N | Y | Y | Y | Open | Server |
| Hitachi Tuning Manager | Performance monitoring, reporting and troubleshooting; deep storage system tuning; premier tool for optimizing performance from the application to the spindle in a Hitachi storage environment | Y | Y | Y | Y | Both | Server |
| Hitachi Virtual Partition Manager | Enables the logical partitioning of ports, cache and disk (parity groups) into virtual storage machines on Hitachi Universal Storage Platform® or Network Storage Controller | (6) | (2) | (2) | N | Both | Frame |
| Hitachi Volume Migration | Improves storage system performance by enabling the movement of volumes | N | N | N | N | Both | Frame |

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| Business Continuity | | | | | | | |
| Hitachi Business Continuity Manager | Automates Hitachi ShadowImage® Heterogeneous Replication, Hitachi TrueCopy® Synchronous/Asynchronous and Hitachi Universal Replicator operations for mainframe environments; is a requisite for Universal Replicator implementations; optionally, requires Universal Replicator 4x4 Extended Consistency Group to configure 4x4 Universal Replicator configuration | Y | Y | Y | N | MF | Server |
| Hitachi Compatible Mirroring for IBM® FlashCopy® | Provides Hitachi ShadowImage® Heterogeneous Replication in-system software compatibility with IBM FlashCopy commands; now shipping v2; v2 target as Hitachi Universal Replicator primary is supported in 2DC or 3DC configurations | Y | Y | Y | N | MF | Server |
| Hitachi Compatible Replication for IBM® XRC | Compatibility with IBM Extended Remote Copy (Asynchronous) – S/390® only | Y | | | N | MF | Server |
| Hitachi Copy-on-Write Snapshot (formerly QuickShadow; now part of the Hitachi In-System Heterogeneous Replication software bundle) | Point-in-time snapshots of LUs within a modular storage system | | | | Y | Open | Frame |
| Hitachi Data Protection Suite, powered by CommVault® – Hitachi Data Archiver – Hitachi Data Migrator – Hitachi Backup and Recovery – Hitachi Quick Recovery – Hitachi Data Protection Monitor – Hitachi De-duplication – Hitachi Virtual Server Protection – Hitachi SnapProtect | Hitachi Data Protection Suite is for customers considering a new backup solution. The Hitachi Data Protection Suite offers a single, integrated solution to not just block data recovery but also enable quick recovery, based on snapshots, and migration and archiving of Microsoft® Exchange files. – Data Archiver offers unmatched data management and accessibility by preserving email messages and attachments for regulatory data retention compliance. – Data Migrator moves file system data to less expensive secondary storage while retaining transparent access to the migrated data. – Backup and Recovery is the best-in-class backup and recovery solution. – Quick Recovery significantly raises availability of business-critical applications by leveraging snapshot technology to create point-in-time recovery volumes on magnetic disk. – Data Protection Monitor monitors storage resource utilization and successful delivery of data protection, migration, archiving and replication services. – De-duplication enables customers to reduce the amount of data being sent to the backup environment, thereby reducing the overall storage requirements and costs. Virtual server protection enables customers to back up and recover virtual servers. Recovery options include image-, server- and file-level granularity. – SnapProtect enables data replication to allow faster restore and backup capabilities to improve customer service levels. | Y | Y | Y | Y | Open | Server |
| Hitachi Database Replication for IBM® z/OS® | IBM DB2® database ... allows copying within the same DB2 instance | Y | | | N | MF | Server |
| Hitachi Dataset Replication for IBM® z/OS® | Automates MVS UserCatalog housekeeping functions when splitting Hitachi ShadowImage® Heterogeneous Replication software volumes — IBM S/390® only | Y | | | N | MF | Server |
| Hitachi Disaster Recovery software bundle | Synchronous remote copy (with Hitachi TrueCopy® Synchronous) and asynchronous remote copy over any distance with Hitachi Universal Replicator; includes separately orderable options and integration/agents for Microsoft® Cluster Server (MSCS) and VERITAS Cluster Server (VCS), which provide TrueCopy integration and automation of failover | Y | Y | Y | N | Both | Frame |
| Hitachi Disaster Recovery Extended software bundle | Hitachi Universal Replicator with advanced function: 3DC for open systems and IBM® z/OS® with and without Delte resync; Universal Replicator 4x4 along with extended consistency group support for z/OS | Y | Y | Y | N | Both | Frame |
| Hitachi Replication Manager | Simplifies configuration and management of replication performed by Hitachi ShadowImage® Heterogeneous Replication, TrueCopy Synchronous/Asynchronous remote replication and Universal Replicator; now monitors mainframe environments | Y | Y | Y | Y | Open | Server |

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| Business Continuity | | | | | | | |
| Hitachi Backup Services Manager, powered by APTARE® | Offers integrated enterprise-level reporting and control for VERITAS NetBackup; VMware Consolidated Backup for Netbackup; Symantec Backup Exec; Tivoli Storage Manager; EMC Legato NetWorker; HP Data Protector; Sun StorageTek ACSLS Manager, Oracle Recovery Manager (RMAN) | NA | NA | NA | NA | Open | Server |
| Hitachi Protection Manager | Performs rapid backup and recovery management, supporting databases for Microsoft® Exchange, Microsoft SQL Server®, and Oracle | Y | Y | Y | Y | Open | Server |
| Hitachi In-System Heterogeneous Replication software bundle | Includes Hitachi ShadowImage® Heterogeneous Replication and Hitachi Copy-on-Write Snapshot software; for mainframes | Y | Y | Y | Y | Both | Frame |
| Hitachi In-System Replication software bundle | Volume-level mirrors for open systems and mainframes; includes Hitachi ShadowImage Replication and Copy-on-Write Snapshot; for open systems only | Y | Y | Y | N | Open | Frame |
| Hitachi Multiplatform Backup | Backup utility; for mainframes | Y | | | N | MF | Server |
| Hitachi ShadowImage® Heterogeneous Replication software (for enterprise systems) or Hitachi ShadowImage Replication software (for modular systems) | Volume level mirrors for open systems, mainframes | Y | Y | Y | Y | Both | Frame |
| Hitachi TrueCopy® Synchronous remote replication software in Disaster Recovery bundle | Synchronous remote copy; includes separately orderable options and integration/agents for Microsoft® Cluster Server (MSCS) and for VERITAS Cluster Server (VCS), which provide TrueCopy integration and automation of failover | | Y | Y | Y | Both | Frame |
| Hitachi TrueCopy® Remote Replication software bundle | Synchronous and asynchronous remote copy; includes separately orderable options and integration/agents for Microsoft® Cluster Server (MSCS) and VERITAS Cluster Server (VCS), which provide TrueCopy integration and automation of failover | Y | N | N | Y | Both | Frame |
| Hitachi TrueCopy® Synchronous or Hitachi TrueCopy Extended Distance replication software | TrueCopy Synchronous for remote copy or TrueCopy Extended Distance for asynchronous replication; modules cannot run concurrently (choose one or the other); TrueCopy Synchronous available on all Hitachi Adaptable Modular Storage and Workgroup Modular Storage systems; TrueCopy Extended Distance available on the Adaptable Modular Storage 2000 family and Adaptable Modular Storage 500 and 1000 systems only | N | N | N | Y | Open | Frame |
| Hitachi Universal Replicator | Provides asynchronous remote copy over any distance, with Hitachi Universal Storage Platform® or Network Storage Controller | Y | Y | Y | N | Both | Frame |
| Hitachi Dynamic Replicator | Leverages the advantages of disk-based data protection to provide application-aware recovery that can meet remote and/or local requirements; continually captures changes to data in real time as they occur; offers flexible recovery to any previous point in time a feature which ensures fast, reliable recovery even when data is corrupted, while requiring very little network bandwidth. Data can be replicated to a local repository while at the same time it is replicated to a remote repository for disaster recovery purposes. | Y | Y | Y | Y | Open | Server |
| ProtecTIER® | Part of our "Virtual Tape Library Solutions by Hitachi Data Systems;" Linux server-based virtual tape application emulates a tape library unit, including drives, cartridges and robotics; uses Fibre Channel-attached disk storage as the backup medium; filters data already stored to eliminate duplication and save capacity | Y | Y | Y | Y | Open | Server |

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| Tiered Storage | | | | | | | |
| Hitachi Basic Operating System V | Virtualizes external storage with Hitachi Universal Volume Manager when attached to the Hitachi Virtual Storage Platform and Hitachi Universal Storage Platform®; expands virtual cache partitions on the VSP to 32, and virtual partitions on the USP V and USP VM to 32 | Y | Y | Y | N | Both | Frame |
| Hitachi Tiered Storage Manager | Holds storage tier definitions and directs migration of storage assets between those storage tiers | Y | Y | Y | N | Both | Server |
| Hitachi Universal Volume Manager | Virtualizes external storage attached to the Hitachi Virtual Storage Platform, Hitachi Universal Storage Platform® or Network Storage Controller | Y | (3) | (3) | N | Both | Frame |
| Intelligent File Tiering Software Feature (available for Hitachi NAS Platforms) | Policy-based file tiering capability consisting of a policy manager (built into OS) and data migrator with cross volume link (CVL/XVL) software modules sold separately from platform; enables automatic policy-based file and content movement within internal and external storage systems | Y | Y | Y | Y | Both | Frame |
| File Services: Network Attached Storage | | | | | | | |
| Hitachi NAS Platform 3100 and 3200, powered by BlueArc® | High-end NAS platform offering best-in-class enterprise performance and scalability, used as a gateway into Hitachi Virtual Storage Platform with Hitachi Dynamic Tiering, Universal Storage Platform® (USP), USP V, USP VM, or Hitachi Adaptable Modular Storage systems; provides up to 8-node clustering, 16PB capacity, intelligent file tiering, cluster namespace; integrates with Hitachi Data Discovery Suite and Hitachi Content Platform, as well as Hitachi data management products. Ideally matched with VSP and USP V storage systems in high performance environments. | Y | Y | Y | Y | Both | NAS Frame |
| Hitachi NAS Platform 3080 and 3090, powered by BlueArc® | Enterprise midrange NAS platform offering best-in-class performance and scalability, used as a gateway into Hitachi Virtual Storage Platform with Hitachi Dynamic Tiering, Universal Storage Platform® or Hitachi Adaptable Modular Storage systems; provides up to 4-node clustering, 8PB capacity, intelligent file tiering, cluster namespace; integrates with Hitachi Data Discovery Suite and Hitachi Content Platform, as well as Hitachi data management products. Ideally matched with AMS storage systems for commercial application environments (for example, VMware, Microsoft Exchange, Oracle, SAP and others). | Y | Y | Y | Y | Both | NAS Frame |
| File Services: Data Discovery | | | | | | | |
| Hitachi Data Discovery Suite (HDDS) | Provides powerful indexing and search capabilities across all Hitachi NAS Platforms, powered by BlueArc®, the Hitachi Content Platform, and NetApp devices; enables the policy-based movement of content between NAS and archive storage tiers; enables e-discovery for legal environments | Y | Y | Y | Y | Open | Server |
| Hitachi Data Discovery for Microsoft® SharePoint® | Provides the ability for MS SharePoint environments to overcome storage pre-allocation limitations of MS SQL Server® by allowing dynamic expansion of capacity for unstructured data; provides the ability to manage migrated BLOBs by setting retention, shredding and litigation hold | Y | Y | Y | Y | Open | Server |
| File Services: Archive | | | | | | | |
| Hitachi Content Platform (HCP) | Digital content storage and archiving for data preservation, protection and retention as well as regulatory compliance of unstructured content. Key capabilities include multiple tenants and namespaces, compression and data deduplication. Integrates with Hitachi NAS Platform, Hitachi Data Discovery Suite and Hitachi Data Discovery for Microsoft® SharePoint® for a comprehensive tiered storage architecture with ability to set retention and other archive features when moving BLOBs. | Y | Y | Y | Y | Open | Server |

Notes: (1) Included in Hitachi Basic Operating System

(2) 1-4 partitions included in Hitachi Basic Operating System; 5+ partitions included in Hitachi Basic Operating System V

(3) Included in Hitachi Basic Operating System V

(4) Included in Hitachi Resource Manager™ utility package and Hitachi Device Manager software bundles

(5) Bundled with Frame on Adaptable Modular Storage 2000 family and Workgroup Modular Storage 100 systems

(6) Only includes cache partitions on the VSP, no storage partitions

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