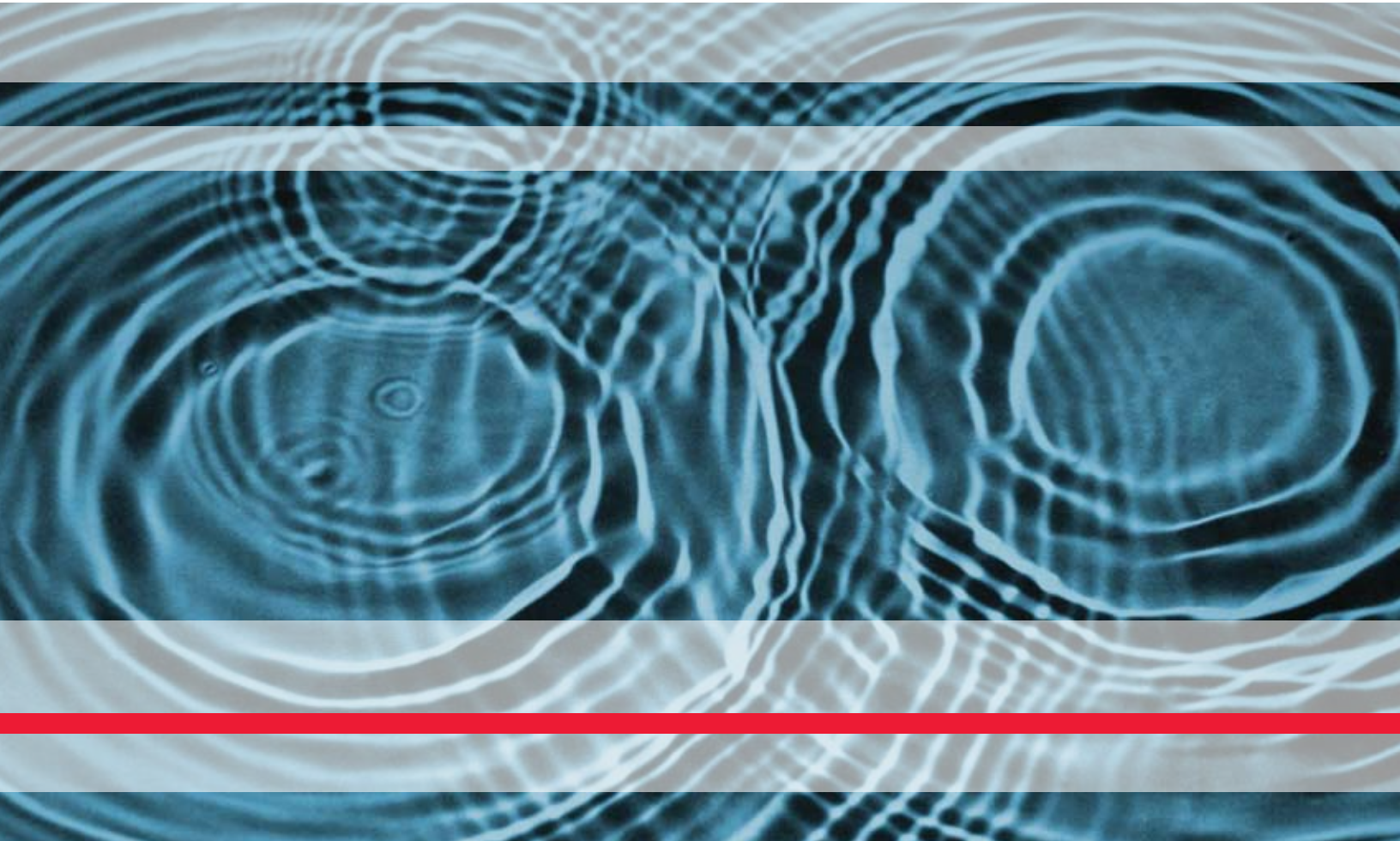


Hitachi Universal Storage Platform™ V and Hitachi Universal Storage Platform VM



Hitachi Universal Storage Platform™ V and Hitachi Universal Storage Platform VM

Reaching previously unattainable levels of consolidation and bringing to reality the virtualization of internal and external heterogeneous storage into one pool, the Hitachi Universal Storage Platform™ V and the Hitachi Universal Storage Platform VM redefine the storage industry.

Now companies from large business to the largest global enterprises can benefit from the industry's highest performing and most scalable storage solutions, backed by a set of storage and data services that includes thin provisioning with Hitachi Dynamic Provisioning software, application centric storage management and simplified, unified data replication across heterogeneous storage systems.

As integral components of Services Oriented Storage Solutions from Hitachi Data Systems, the Hitachi Universal Storage Platform V and the Hitachi Universal Storage Platform VM provide the architectural foundation for matching application requirements to different classes of storage. Services Oriented Storage Solutions have proven their ability to lower costs, extend lifetime value and simplify management activities. The Universal Storage Platform family enables you to deploy applications within a new framework, fully leverage — and add value to — current investments and more closely align IT and business objectives.

The Universal Storage Platform V and the Universal Storage Platform VM provide the high performance and resilience to meet the data storage requirements at the largest organizations. These models excel at meeting critical,

day-to-day needs for data storage, archiving and business continuity. They let you combine externally attached Hitachi and non-Hitachi storage systems to create large storage pools.

For Enterprises and Large Businesses: the Hitachi Universal Storage Platform Family

For large and small enterprises seeking a powerful and cost-effective storage solution for managing their growing data retention and business continuity needs, the Universal Storage Platform family is an ideal choice. It allows for virtualization and thin provisioning of internal and external storage, resource efficient thin provisioning with Hitachi Dynamic Provisioning software, logical resource partitioning and universal replication, all through a single management interface.

You can aggregate internal and external storage into one virtualized storage pool and logically partition storage resources — even resources from other storage vendors. Dynamic Provisioning software improves resource utilization and simplifies administration by allowing you to purchase only the storage you need, when you need it, while eliminating the costly service interruptions to install and deploy additional storage

capacity. Mature management software makes it easy for storage administrators to nondisruptively migrate data among storage tiers and to associate those tiers with specific business applications — without interrupting the application. The Universal Storage Platform V and Universal Storage Platform VM can also help you establish solid business continuity practices so you can confidently address governance issues by protecting one of your most valuable corporate assets — information.

With the majority of the top 100 companies in the FORTUNE 500® on its roster of customers, Hitachi Data Systems has the experience and technology to meet the storage challenges of large and small enterprises. When complemented by professional services from Hitachi Data Systems, the powerful Universal Storage Platform family can help you increase efficiency, simplify storage management practices, mitigate risk and better align IT resources with business objectives.

Designed for Scalability, Performance and Availability

The Hitachi Universal Storage Platform V and Universal Storage Platform VM leverage the unique and proven Hitachi Universal Star Network™ architecture, making the Universal Storage Platform V the industry's highest performing and most scalable storage system. The Universal Storage Platform V delivers over 4 million IOPS and unifies data and storage services across as much as 247 petabytes (PB) of storage (equivalent to the storage capacity of 1 million average laptops). The Universal Storage Platform VM delivers as many as 1.2 million IOPS and unifies data and storage services across as much as 96PB of storage. Both offer industrial strength virtualization, replication and migration capabilities and use a common management interface across heterogeneous storage systems, simplifying storage management and reducing management costs.

Are These Challenges Yours?

- Increasingly stringent application quality of service (QoS) requirements with no easy way to match changing business needs and varying application requirements to storage attributes



- Increasingly complex storage infrastructure management for different classes and brands of storage frustrated by different management utilities
 - Low levels of storage utilization and incompatibility among storage investments fueled by exponential or continued data growth
 - Complex replication tools/procedures placing protection of data assets and business continuity at risk
 - Users demanding 24/7 uptime; need to reduce backup window and speed recovery times aggravated by disruptive maintenance and disaster recovery testing
 - Data volume generated by applications such as Microsoft® Exchange overwhelming current storage system, slowing access to important information
 - Data center hot spots, pressure on the costs or limited availability of power, cooling and data center facility resources
- Meet these challenges and more by building a Services Oriented Storage Solution based on the Universal Storage Platform family. This flexible storage platform offers:
- *Aggregation.* Virtualize internal and externally attached storage and allocate resources to specific applications or tiers.
 - *Reduced total cost of ownership (TCO) and maximized resource utilization.* Allocate “virtual capacity” based on anticipated future needs, but with fewer disks required. Add capacity later with no application interruption.
 - *Business continuity and storage management.* Deliver business continuity through a single suite of software products that can be used to better protect data assets with a heterogeneous pool of storage.
 - *Quality of service (QoS).* Logically partition internal and externally attached storage, match application service levels to each type of storage and manage the associated resources accordingly.
 - *Scalability, performance and availability.* Support mission critical business applications with exceptional flexibility for managing capacity, performance, connectivity and availability.
 - *Investment protection.* Leverage your current storage investment on your terms.
 - *Reduced power and cooling requirements.* Dynamic Provisioning software enables you to allocate and use “virtual storage capacity” with far fewer disks required to meet your growth requirements.

Why Do the Hitachi Universal Storage Platform V and the Hitachi Universal Storage Platform VM Take the Lead over All Other Enterprise Storage Systems?

- Thin dynamic provisioning to increase utilization and simplify operation on internal or external virtual volumes
- Virtualization to enable heterogeneous storage pooling
- Logical partitioning of storage resources
- Any-to-any data replication including multiple site topologies
- World's most scalable enterprise storage platform

Consolidate Storage Resources, Simplify Storage Management

Are you still running your business critical applications on server-internal or direct attached storage? Are some of your storage systems maxed out while others are barely used — and hard to use where they are needed? Are your storage management costs growing faster than your budget? Are your backup windows exceeding the time you've allotted for them?

Are you unable to meet the availability and performance levels demanded by your business and applications?

Networked storage solutions from Hitachi Data Systems can help you consolidate, reduce management complexity and cut costs. The Universal Storage Platform family lets you create centralized storage pools that can be consistently managed and shared across applications and servers. Consolidating and aggregating storage resources in this way helps you reduce environmental costs while improving application availability and performance. Additionally, coupling consolidated, networked storage with robust Hitachi Storage Command Suite software greatly improves the amount of storage administrators can manage.

Aggregate Storage Resources into Tiers

With its exceptional capabilities for aggregating and virtualizing storage resources across both Hitachi and non-Hitachi storage systems, the Universal Storage Platform family can help you maximize the use of your IT assets even as you improve efficiency and reduce costs. With a Services Oriented Storage Solution, multiple

heterogeneous storage systems become part of the common storage pool, managed via a single software console for data migration, replication and other tasks.

Externally attached storage is managed as internal storage and inherits all of the rich-functionality software available for the Universal Storage Platform. All storage resources can be grouped into classes based on attributes of performance, availability, recoverability and cost, as shown in Figure 1.

Your storage administrators can assign different service levels to different types of data, and then segment the storage infrastructure into tiers. They can use Hitachi Tiered Storage Manager software to set different classes of service for each tier, so that each segment of the storage infrastructure is managed according to specific policies for availability, data recovery and other variables.

You can also implement tiered storage configurations at the application level for business processes such as e-mail archiving and compliance. For example, a production e-mail environment would most likely be considered mission critical, whereas a test or training environment might have less rigorous uptime requirements. Services Oriented Storage Solutions allow each of these environments to reside in distinct tiers and be managed accordingly, so you can apply specific storage policies to each business application.

Dynamically Provision Storage Resources

Hitachi Dynamic Provisioning software provides "Virtual Storage Capacity" to eliminate application service interruptions, simplify administration and reduce costs. For companies experiencing ongoing growth of their data storage requirements and expenses, Hitachi Dynamic Provisioning can greatly simplify the application storage provisioning process and help defer costs on storage capacity purchases.

Hitachi Dynamic Provisioning software allows disk capacity to be allocated to an application without actually being physically mapped and used until it is written. By decoupling the provisioning of storage to an application from

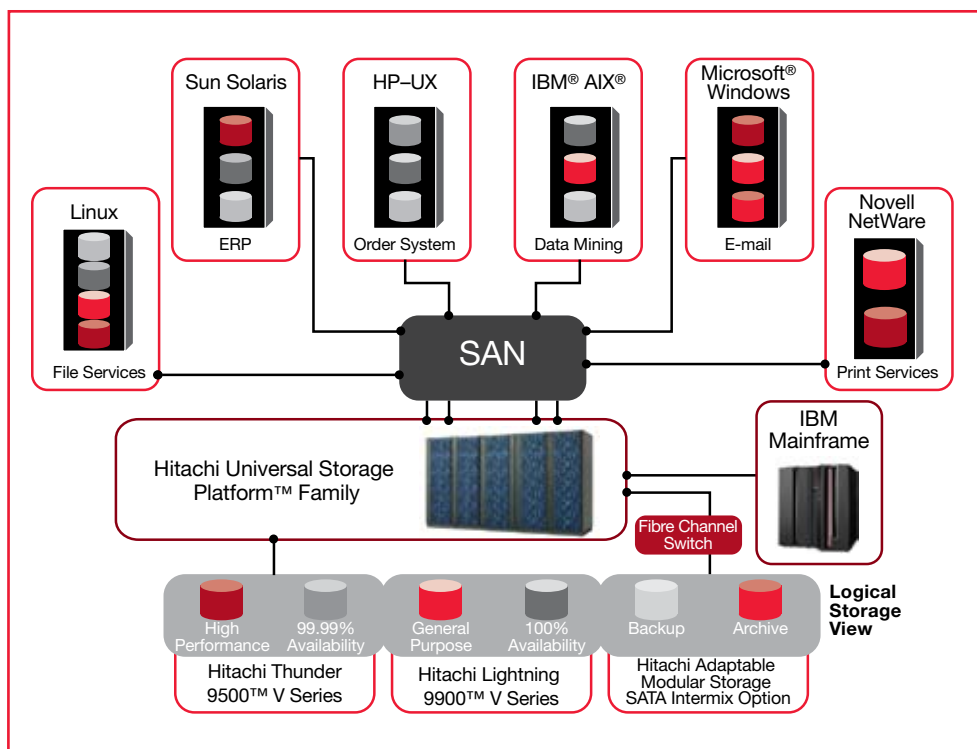


Figure 1. Multiple mainframe and open systems can be managed by Universal Storage Platform family software tools from a single management console.

the physical addition of storage, flexibility is introduced into the storage allocation process, eliminating the guesswork often involved in capacity planning. Hitachi Dynamic Provisioning monitors shared storage resources and alerts administrators as the need occurs for additional capacity, which can be added non-disruptively — with no application downtime.

Hitachi Dynamic Provisioning simplifies performance optimization by transparently spreading many hosts' individual I/O patterns across many physical disks, thereby reducing performance management concerns and optimizing performance and throughput. This feature available on internal or external virtual volumes.

Logically Partition Storage Resources

Hitachi extends its innovative port virtualization technology to entire platforms. With Hitachi Virtual Storage Machine technology, you can logically partition the Universal Storage Platform V to create as many as 32 Virtual Storage Machines (as many as 8 Virtual Storage Machines for the Universal Storage Platform VM) — each with dedicated internal and external capacity, as shown in Figure 2.

Virtual Storage Machines allow you to apply storage policies to specific applications, matching business requirements for performance, capacity and availability to designated storage resources. Because each Virtual Storage Machine has its own serial number, you can associate specific business applications with selected departments and business units, and then charge back accordingly. These unique capabilities allow you to create a utility model to deliver “metered” storage resources to select business entities. You can delegate management of Virtual Storage Machines to local administrators or manage them centrally, whichever you prefer.

Extend Existing Storage Investments

The Universal Storage Platform V and the Universal Storage Platform VM extend the useful life of existing storage resources, so your technology will not become obsolete

ahead of your depreciation schedule. Consolidating existing storage devices into one or more Hitachi storage platforms can improve resource utilization, lower costs and simplify data management activities. For example, such consolidation enables you to reduce your total number of software licenses, lower maintenance and environmental costs, and centralize management functions.

Move Data Easily Among Different Classes of Storage

The Universal Storage Platform V and the Universal Storage Platform VM move data across any distance, between any connected devices. To enable data movement across storage tiers, the platforms provide universal connectivity across operating environments, data types, networks and heterogeneous storage platforms with support for Fibre Channel SAN, NAS, and IBM® FICON® and ESCON®.

Create a Storage Utility

The Universal Storage Platform V and the Universal Storage Platform VM allow you to manage storage assets by using a utility mode — much like gas and electrical utilities do when they use a meter to monitor resource use. A utility model allows you to charge business units and applications for specific usage rather than assessing a flat rate.

By using the Universal Storage Platform to create a shared pool of storage resources, the entire enterprise can centralize its storage resources to economically serve a large number of users. Combining this model with Hitachi Storage Command Suite software allows you to implement path provisioning, chargeback and logical storage partitioning — creating a utility that is both practical and sophisticated.

- Accurately provision storage resources — where and when they are needed
- Bill for exact resources used

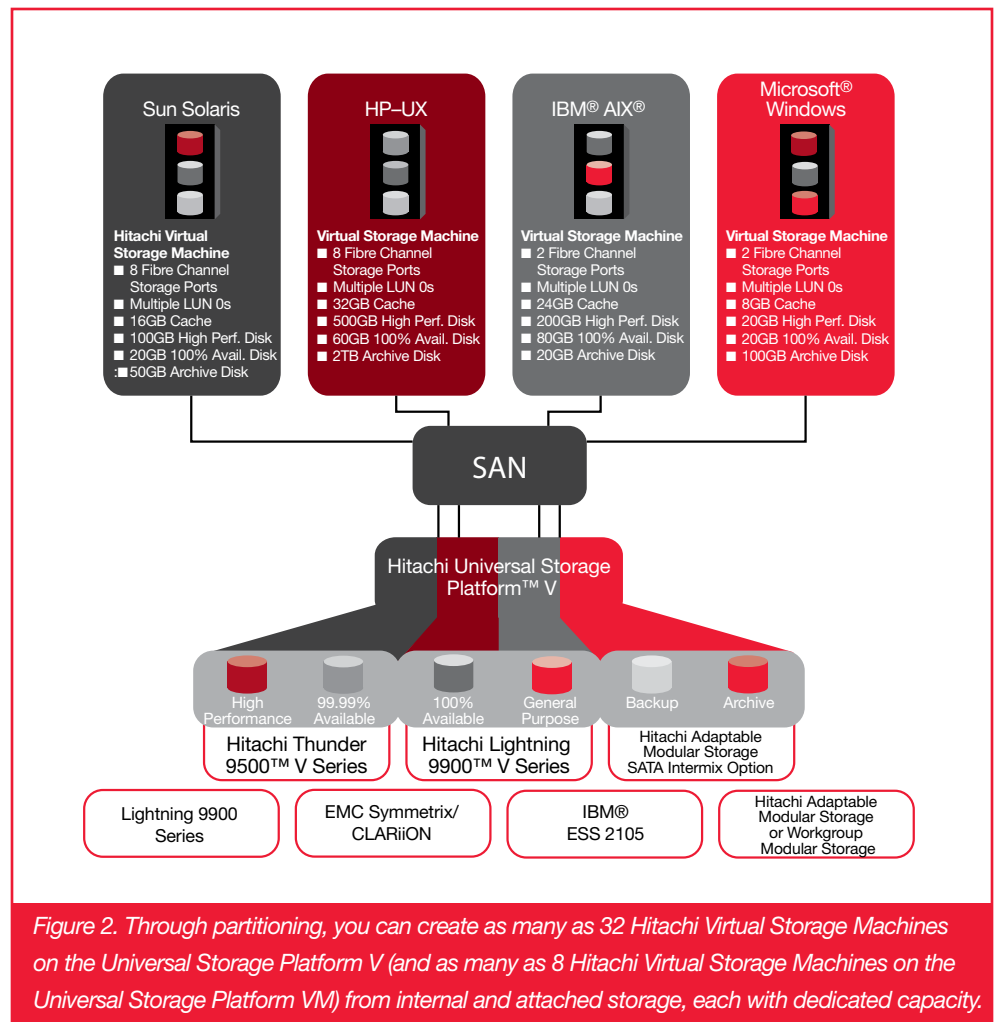


Figure 2. Through partitioning, you can create as many as 32 Hitachi Virtual Storage Machines on the Universal Storage Platform V (and as many as 8 Hitachi Virtual Storage Machines on the Universal Storage Platform VM) from internal and attached storage, each with dedicated capacity.

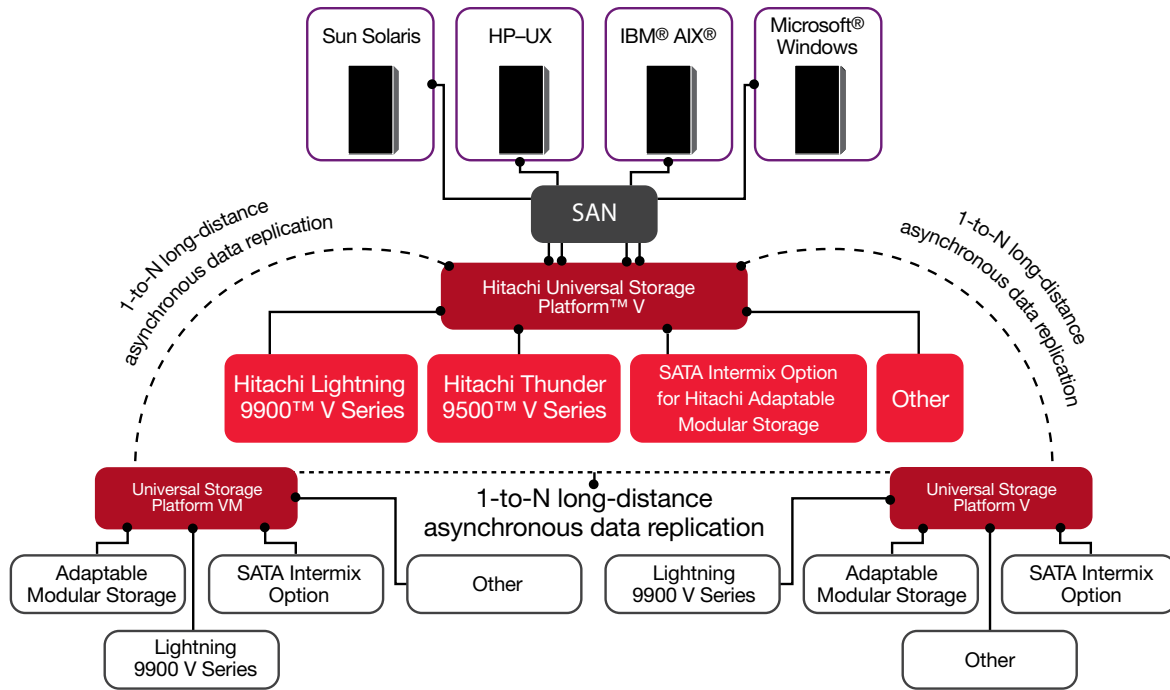


Figure 3. By maintaining up-to-date copies of data in geographically dispersed locations, the Universal Storage Platform family satisfies the most demanding disaster recovery and uptime requirements.

- Maximize storage efficiency for a large number of users
- Allocate hardware, capacity and bandwidth on demand
- Create unique storage pools for designated users

Create a Cost-effective Archive Strategy

Today's businesses must store an ever-growing number of documents. While Microsoft Word files, PowerPoint presentations, engineering specifications and rich media documents constitute much of a corporation's intellectual property and financial records, many of these items are increasingly stored as file attachments and given context by e-mail messages. At the same time, government regulations and compliance initiatives are imposing new timelines on data archiving practices.

To comply with these regulations, you must be able to store data for longer periods and retrieve data at any time. A data lifecycle management archival solution, based on a tiered storage architecture, can provide a foundation for effectively administering and archiving e-mail and other data assets.

Although the value of enterprise data changes over time, it is important to consistently manage and archive business data throughout its life-cycle. Leveraging the virtualization capabilities of the Universal Storage Platform V, the Universal Storage Platform VM and Tiered Storage Manager software, you can dynamically and nondisruptively move data between storage tiers and manage it all from one interface.

Because the Universal Storage Platform V and Universal Storage Platform VM support mainframes; UNIX, Microsoft Windows, and Linux operating systems; VMware platforms and other types of open systems, you can use your high-end storage devices for activities that require top tier performance and availability, and attach low-cost storage resources for less critical tasks, as shown in Figure 3. These tasks may include archiving or replicating data — including older mainframe data — and replacing or complementing tape technology. For cost-effective second-tier storage, you can use SATA disks within the Hitachi Universal Storage Platform V, Hitachi Universal Storage Platform VM, Hitachi Adaptable Modular Storage, a SATA-based Hitachi Workgroup Modular Storage system or other vendors' externally attached storage.

Streamline Storage Management Activities

Burgeoning data storage requirements dictate that you simultaneously increase capacity, provide rapid access to enterprise information and maintain 24/7 operations — often without additional budget or head count. Hitachi Storage Command Suite software can help you effectively manage your entire storage infrastructure — from application to disk — and provide the quality of service your business needs.

Simplify the Infrastructure to Minimize Management Headaches

Created with growing business requirements in mind, the virtualization capabilities of the Universal Storage Platform V and the Universal Storage Platform VM mean that you have fewer elements to manage, reducing the complexity of heterogeneous environments.

Fewer elements to manage means less stress and higher utilization of resources, including staff. This provides direct monetary savings as well, since you have less equipment to buy, fewer licenses and maintenance agreements to worry about, and lower environmental costs. It

all adds up to greater investment protection: instituting common management practices helps you extend value to all of your storage assets and even makes it possible to redeploy older storage systems as part of a common fabric.

Storage-specific Hitachi management utilities facilitate fine-grained discovery and control of your entire storage environment, including attached storage systems that are virtualized into a storage pool. They support “any-to-any” local and remote copying, and they allow storage administrators to implement sustainable and repeatable management processes.

Universal Storage Platform Family Foundation for Data Lifecycle Management

Although the value of data to an enterprise changes over time, there is still a need to manage and store data throughout its lifecycle. For many types of enterprises, regulations are increasing that length of time. With the Universal Storage Platform V and the Universal Storage Platform VM, you can:

- Match data to the appropriate storage
- Create unique and appropriate storage pools
- Keep more data for longer periods of time
- Meet governmental compliance regulations and legal requirements to protect your enterprise
- Manage tiers of storage in pools with a single console
- Direct fluid and transparent movement of data between different classes of storage

Leverage Standards to Improve Interoperability

The Hitachi Storage Command Suite software is built on industry standards such as Common Information Model (CIM) and adheres to the Storage Networking Industry Association’s Storage Management Initiative (SMI-S). Compliance with these industry standards enables you to use complementary system management software from other vendors, in addition to Hitachi Storage Command Suite software.

Optimize Performance by Balancing Workloads Across Tiers

You can use Hitachi Tuning Manager software combined with Hitachi Tiered Storage Manager software to actively tune and balance workloads within a common storage pool. The software makes it possible to balance the load among internal storage and virtualized externally attached storage systems in real time — without disrupting the activities of users and applications. Frequently accessed volumes are carefully balanced with less frequently accessed volumes throughout the storage pool, reducing resource contention while improving asset utilization. The result is better availability, performance and response times — plus the assurance that your data is optimally stored for fast and efficient access.

Hitachi Storage Command Suite software provides SAN visualization and reporting, asset management, performance and capacity monitoring and planning, and policy-driven event management. Hitachi Tuning Manager software helps you pinpoint application performance and availability issues by locating the underlying cause of problems and issuing alerts when storage infrastructure changes might impact applications. This helps administrators satisfy service-level requirements, respond more efficiently to help desk calls, increase application uptime and plan effective disaster recovery scenarios.

“Virtualization breaks the boundaries of physical infrastructure and makes them boundless. The USP V* raises the level of play by supporting external and internal virtualization.... External virtualization creates a network of otherwise isolated storage systems in order to move and replicate data between them. Internal virtualization enables you to more fully optimize the storage systems you have and make them far easier to manage. Storage virtualization leverages storage assets to be greater than the sum of their parts.... It is important to look at solutions holistically and demand best-in-class systems. Hitachi truly understands this and the USP V embodies these goals.”

— Enterprise Strategy Group

Ensure Effective and Efficient Business Continuity

Safeguarding data is one of the fundamental components of keeping your systems online. But there are many other aspects to business continuity. Today's business managers must pay close attention to risk exposure and regulatory compliance, which necessitate best practices for data management, backup and archiving. To ensure continuous business operations, companies require robust, application focused storage solutions that enhance their operational efficiency and resilience.

How do you ensure you have an infrastructure in place that can run the business continuously, with the right levels of service and proven capabilities to recover systems and data if necessary? At a tactical level, the storage management options can be overwhelming — ranging from local disk-to-disk backup to out-of-region data replication, to establishing a practical recovery methodology that maximizes recovery point and recovery time objectives.

Hitachi Business Continuity Software

- Hitachi Universal Replicator
- Hitachi TrueCopy® Synchronous and Hitachi TrueCopy Asynchronous
- Hitachi ShadowImage® Heterogeneous Replication
- Hitachi Copy-on-Write Snapshot
- Hitachi Data Protection Suite, powered by CommVault®
- Hitachi Backup Services Manager, powered by APTARE®
- Symantec Veritas NetBackup
- Remote Replication Agent for Symantec Veritas Cluster Server (for synchronous remote replication)
- Virtual Tape Library Solutions by Hitachi Data Systems

Out-of-region and Metropolitan Replication

For extra protection, some businesses combine synchronous and asynchronous remote replication into a “three data center”

configuration. For example, they might establish a local or metropolitan site within 10 to 20 miles of the primary site, along with a remote site hundreds or even thousands of miles from the primary site. With Hitachi disk journaling and data replication software, you can achieve no data loss replication over any distance and guarantee the integrity of your data. This type of innovative strategy ensures data availability in nearly any business scenario.

Services Oriented Storage Solutions

Services Oriented Storage Solutions apply service oriented architecture (SOA) concepts to enterprise storage to deliver a platform that offers sets of automated functions delivered as services, which can be invoked as the business needs them. Companies now have the means to replace inefficient capacity-based chargeback models with models that apply more relevant metrics and better “monetize” all of the storage-based services they provide across the enterprise, delivering substantial breakthroughs in efficiency and

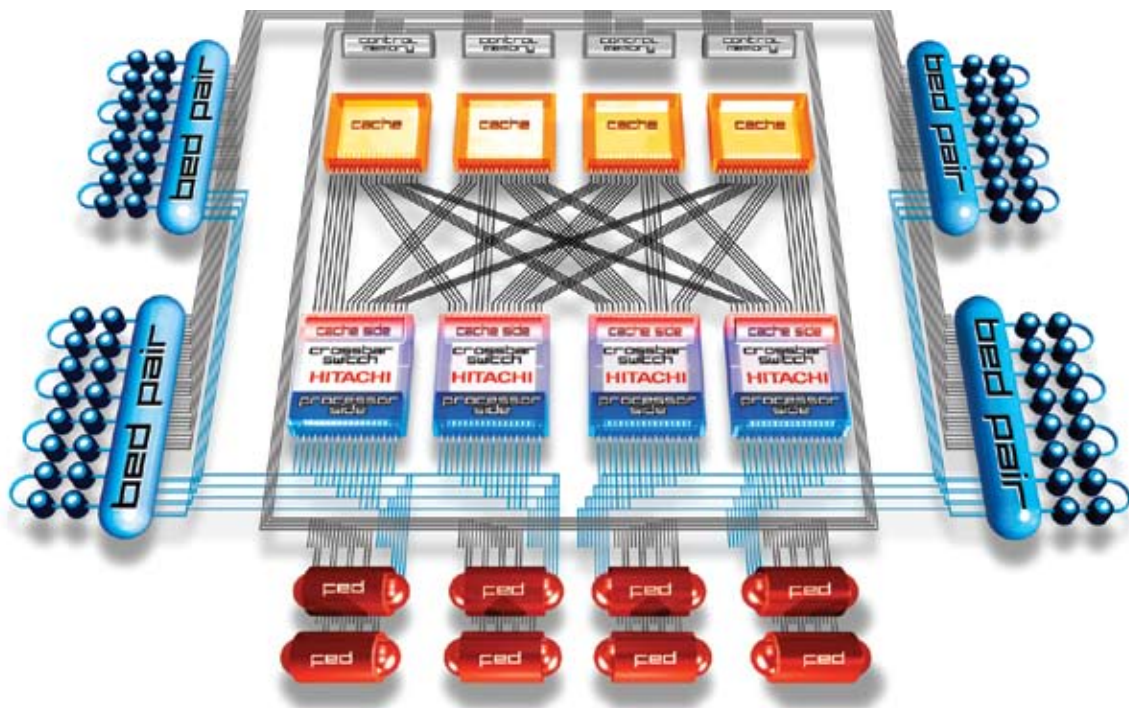


Figure 4. The architecture of the Universal Star Network supports top speed — 106GB/sec internal bandwidth and over 4 million IOPS; top connectivity — 224 ports; and top flexibility — 4Gb/sec Fibre Channel back-end loops on the Universal Storage Platform V. The architecture of the Universal Star Network supports great speed — 13.3GB/sec internal bandwidth and 1.2 million IOPS; great connectivity — 48 ports; and great flexibility — 4Gb/sec Fibre Channel back-end connectivity on the Universal Storage Platform VM.

business agility. Services Oriented Storage Solutions from Hitachi Data Systems offer the ability to present business clients with a menu of storage attributes, such as performance, availability, cost and security, and charge for those services based on the client's selection.

The Hitachi Universal Storage Platform V and the Hitachi Universal Storage Platform VM, the industry's most powerful storage services platforms, provide the horsepower for Services Oriented Storage Solutions. By virtue of its powerful controller-based virtualization engine, Hitachi is in a unique position to package and deliver storage services across heterogeneous storage assets, whether file, object or block based. Offered with the robust Hitachi software portfolio, these capabilities mark the beginning of a new era in storage service delivery.

Simplify Data Replication Practices

Organizations needing to replicate heterogeneous data sources will find Universal Replicator software delivers enterprise-class performance associated with storage system-based replication. Unlike server- or appliance-based replication products, Universal Replicator software satisfies business continuity objectives without employing redundant servers or replication appliances.

Just how much can you simplify your storage environment? Universal Replicator software streamlines and unifies data replication policies and procedures across as much as 247PB of storage (Universal Storage Platform V) and as much as 96PB of storage (Universal Storage Platform VM). This powers a business continuity framework that can satisfy the most demanding uptime requirements, regardless of the model of the Universal Storage Platform family you select to host your business critical data.

Hitachi Universal Replicator software fully leverages the Universal Storage Platform family to create a complete business continuity framework. It builds on the heritage of the Hitachi TrueCopy Synchronous/Asynchronous remote replication software to create "three data center" configurations. Hitachi Replication Manager and Hitachi Business Continuity Manager software simplify many of the management tasks associated with data replication scenarios.



Universal Replicator capabilities include:

- Disk-based journaling and flexible recovery point objectives
- Advanced bandwidth control for communications links
- Link-failure mitigation to protect data consistency
- Workload management to reduce resource usage on production/primary systems
- Support for multiple data centers

Optimize control over recovery time and recovery point objectives as you balance both the risk and the cost of your business continuity solutions.

Exceptional Performance Powered by Universal Star Network Architecture

The Universal Storage Platform V and the Universal Storage Platform VM are built on the industry's fastest storage architecture, as shown in Figure 4.

- Enhanced, massively parallel design

- Up to 106GB/sec internal bandwidth (Universal Storage Platform V); up to 13.3GB/sec internal bandwidth (Universal Storage Platform VM)
- Up to over 4 million IOPS (Universal Storage Platform V); up to 1.2 million IOPS (Universal Storage Platform VM)
- Up to 512GB of cache memory (Universal Storage Platform V); up to 128GB of cache memory (Universal Storage Platform VM) — both with improved algorithms
- Separate control and memory paths
- 4Gb/sec Fibre Channel back-end loops

Heterogeneous Storage Pooling with Multiprotocol Connectivity

- Up to 224 host connections (Universal Storage Platform V); up to 48 host connections (Universal Storage Platform VM)
- High-performance Fibre Channel architecture for mission critical applications
- ESCON and FICON for mainframe environments
- High-performance NAS option

Hitachi In-System Heterogeneous Replication bundle (Hitachi ShadowImage Heterogeneous Replication software and Hitachi Copy-on-Write Snapshot software) provides a nondisruptive, host-independent data replication solution for creating copies of any customer-accessible data within a single Hitachi storage system. Tight integration with ShadowImage Heterogeneous Replication software expands Universal Replicator capabilities as well. This solution helps companies overcome the obstacles of maintaining business continuity while performing routine tasks that would traditionally be impossible, without having an impact on information availability. ShadowImage Heterogeneous Replication software disk-based copies can provide nearly instant recovery from data corruption.

Solutions for Microsoft Exchange

Is the volume of data generated by Microsoft Exchange slowing down your storage environment? With large volumes of data overwhelming systems, it may be becoming cost-prohibitive to keep all your data on fast primary storage.

Services Oriented Storage Solutions for Microsoft Exchange allow e-mail data to be placed on a fast-response Hitachi storage system and then automatically migrated to lower-cost SATA storage as it moves through

the information lifecycle. This helps you to reduce e-mail server and storage costs, improve e-mail server performance, satisfy compliance regulations, protect intellectual property and mitigate the costs of legal discovery for e-mail content that is currently available only on backup tape.

Enterprise Capabilities for Companies that Depend on Exchange

As pressure from government and regulatory agencies for long-term data protection and retention intensifies, many companies are confronted with issues like limited budget, staff and data center space. E-mail assets within Microsoft Exchange are often at the heart of these issues, which makes e-mail availability, security and archiving absolute priorities. Using the Universal Storage Platform V and Universal Storage Platform VM, companies can manage escalating growth of their Exchange assets with attention to application performance, availability and business continuity.

A Powerful Solution for All Your Storage Needs

As part of the growing portfolio of Services Oriented Storage Solutions from Hitachi Data Systems, the Universal Storage Platform family constitutes a powerful foundation for enterprise

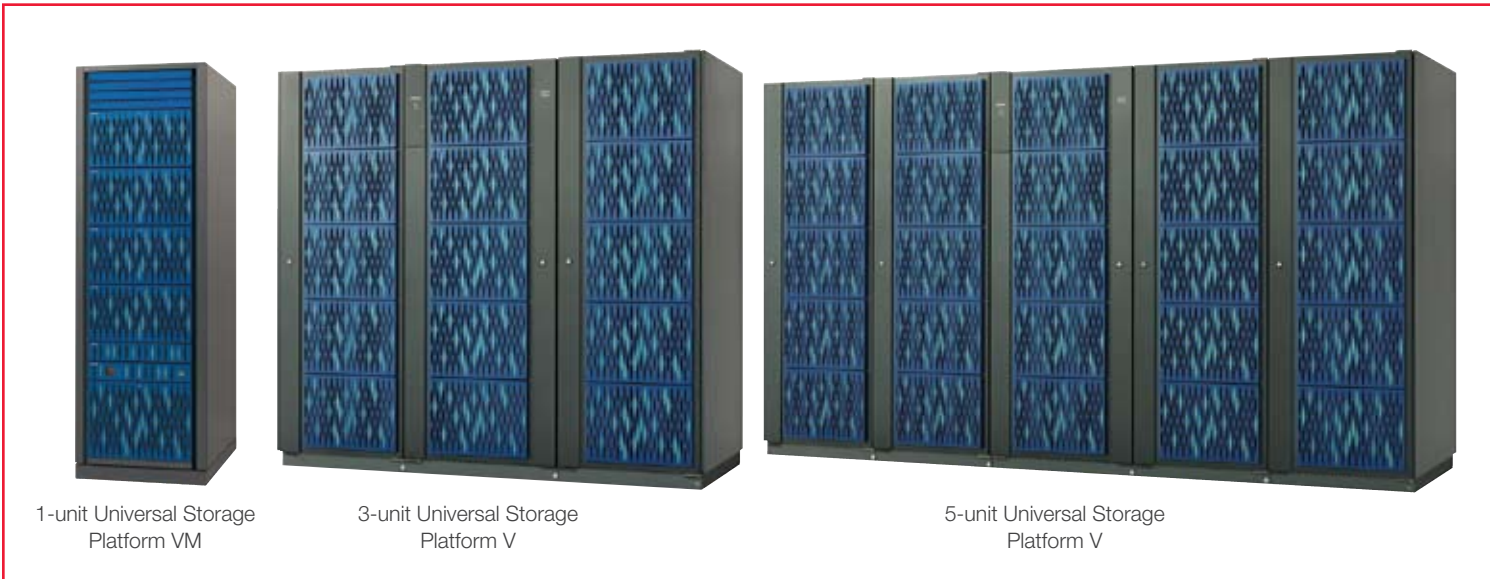


Figure 5. The Universal Storage Platform family spans from a single rack (Universal Storage Platform VM) to the maximum configuration (Universal Storage Platform V) with five frames in various increments.

content archival, data lifecycle management and business continuity — all with easier management and lower operational expenses (see Figure 5). These solutions are designed to improve information access through an integrated hardware, software and services platform; reduce management complexity through pooling multivendor storage; and increase efficiency by consolidating storage across different storage types — without sacrificing performance and availability.

Virtualization: Solving the Environmental Problem

When it comes to accommodating the rapid growth of data management, storage and archiving, environmental issues are now everyone's concern as organizations struggle to keep pace in matching their storage needs with business requirements.

- *Controller-based virtualization*: Consolidation and virtualization can help relieve data center hot spots and reduce floor space requirements in heterogeneous environments without disrupting applications.
- *Dynamic provisioning* can be applied to internal and external disk for reduced administration costs and improved utilization, resulting in lower carbon footprints and improved application availability. Hitachi Dynamic Provisioning saves power and money, and provides the economic benefit that will make Hitachi systems preferable.

Investment Protection and Your Return on Investment (ROI)

- Aggregate and pool your existing storage hardware instead of replacing it
- Extend the life of and add value to existing storage assets
- Reduce the costs associated with multiple software licenses
- Increase storage and server utilization
- Enhance quality of service to users and customers
- Reduce storage management costs; improve administrative productivity

Meeting Storage Requirements for Data-intensive Industries

The enterprise-class Universal Storage Platform V and Universal Storage Platform VM have the capacity, redundancy and flexibility demanded by today's data intensive industries. The Universal Storage Platform family can seamlessly scale from a single small business configuration to the largest enterprise configuration.

Consider the financial services industry. Banks, brokers and insurance companies require maximum uptime and performance for their online services, even as they reduce the costs associated with storage and long-term data retention. Likewise, life sciences firms have intensive demands for capacity and performance with respect to database management, visualization and analytics. Meanwhile, health care industries rely on rapid, secure access to patient records, billing information and medical images — along with their own strict requirements for privacy and data retention. Media applications process massive audio/video files, now stored in digital formats, not to mention intensive editing and data lifecycle management for archiving their creative assets. Hitachi storage solutions provide enterprise-strength storage along with simplified management and ease of use to industries with even the most demanding storage requirements.

Hitachi Data Systems Global Solution Services

Fully exploit the unparalleled capabilities of the Universal Storage Platform V and the Universal Storage Platform VM. Consolidate and aggregate multivendor systems for simplified management. Control your entire storage universe through a single management console. Hitachi Data Systems Global Solution Services (GSS) incorporates the industry's best people, products, tools and methodologies to help you implement Services Oriented Storage Solutions so you can reach your critical enterprise milestones and maximize your ROI.

GSS helps you address IT challenges by applying targeted services to leverage tiered storage pools, multiprotocol aggregation and single point-of-management capabilities.

GSS consultants can help you plan, design, implement, integrate, optimize and manage storage infrastructure solutions that meet your needs.

Services for the Hitachi Universal Storage Platform V and Hitachi Universal Storage Platform VM include:

- Storage Economics Strategy Service
- Risk Analysis Workshop
- Storage Virtualization/Tiered Storage Services
- Backup Assessment Services
- Implementation Services for Storage Management Products
- Implementation Services for Hitachi Replication Products
- Data Migration Services
- Storage Consolidation Services

We Anticipate Your Business Needs

At Hitachi Data Systems, we believe a company's information is a strategic asset. That's why we continue to develop and improve storage solutions with the performance, availability and scalability you need to maximize ROI and minimize risk. We always consider your perspective and business needs while applying the best hardware, software and services to satisfy your requirements.

Our commitment to being a partner beyond technology sets us apart from other vendors in the industry. It means we're prepared to help you envision your future and accomplish your business goals. We offer you an open and collaborative storage management framework, policy-based automation tools, virtualization capabilities and the world's finest storage systems.

Corporate Headquarters 750 Central Expressway, Santa Clara, California 95050-2627 USA
Contact Information: + 1 408 970 1000 www.hds.com / info@hds.com

Asia Pacific and Americas 750 Central Expressway, Santa Clara, California 95050-2627 USA
Contact Information: + 1 408 970 1000 www.hds.com / info@hds.com

Europe Headquarters Sefton Park, Stoke Poges, Buckinghamshire SL2 4HD United Kingdom
Contact Information: + 44 (0) 1753 618000 www.hds.com / info.uk@hds.com

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