

Hitachi High-performance NAS Platform, Powered by BlueArc®: Software

The software for the Hitachi High-performance NAS Platform, powered by BlueArc®, works seamlessly with the platform's powerful, hardware accelerated architecture. This comprehensive network attached storage (NAS) solution leads the industry in performance and scalability, and it complements powerful Hitachi solutions.

Virtualizing Storage—Key to Resource Utilization and Data Protection

Cluster Name Space

Cluster Name Space creates a unified directory structure across storage pools and servers. Multiple file systems can be linked and appear under a single common root, and both Common Internet File System (CIFS) and Network File System (NFS) clients can obtain global access through any node in the cluster. This feature enables simpler provisioning, faster performance and more consistent data protection.

Virtual File System

Supporting CIFS and NFS protocols, this file system delivers flexibility and power to handle very large files and millions of small files, as well as several concurrent file system operations, with no performance impact. Automatic File System expansion is also available.

Virtual Volumes

Administrators can quickly allocate storage required for different applications or users. Virtual volumes mask complexity of underlying physical disks while automatically reflecting capacity changes from clients, allowing an automatic growth and the ability to shrink

those volumes based on pre-defined thresholds and growth rates. More than 4 million files are supported per directory and up to 1,024 snapshots per file system.

Virtual Servers

Virtual servers enable partitioning of storage resources, allow server consolidation and provide multiprotocol support. When use patterns change or spikes in I/O demand occur, IT can balance workloads and rapidly respond.

The new feature provides multidomain support across up to 64 virtual servers per node or cluster. Organizations that converge multiple network, user and departmental requirements on the same node can ensure that resources are securely isolated and provisioned safely.

Multiprotocol Support

Support both block- and file-level application data within a single system. This extends to standards-based data transfer protocols, such as:

- CIFS, NFS and File Transfer Protocol (FTP), which support the file-level data access needs of Microsoft® Windows and UNIX client environments
- User Datagram Protocol (UDP) and Transmission Control Protocol (TCP), which provide support for UDP versions

Business Solutions

Hitachi Data Systems and Hitachi TrueNorth™ Channel Partners offer industry-leading technology to help organizations of all sizes meet their unique requirements for business continuity, regulatory compliance, and data recovery. Together, we provide cost-effective storage products and solutions that leverage world-renowned Hitachi global R&D resources to deliver performance, availability, and scalability—supporting business critical applications and strengthening competitive advantage.

As an integrated, unified strategy for networked storage, High-performance NAS Platform software uses a multi-tiered approach that provides different levels of data protection, data management or virtualization depending on the needs of the business.

Complementary Solutions

Hitachi Data Systems Global Solution Services provides design, implementation and data migration services to support the High-performance NAS Platform and the entire suite of Hitachi storage products.

2 and 3 and TCP versions 2 and 3 over IP for data transport

- Network Data Management Protocol (NDMP), which supports industry standard data migration, tape backup and archiving functions performed using NDMP versions 2, 3 and 4, enabling backup and data replication
- iSCSI, which supports up to 8,192 logical unit numbers (LUNs) on each system, allowing both block- and file-level storage on the same system

Virtualization Framework

The High-performance NAS Platform is fully integrated with powerful Hitachi HiCommand® Tiered Storage Manager and HiCommand Device Manager software. This integration allows organizations to combine the advanced file-based virtualization framework with the industry-leading block-based virtualization provided by the Hitachi Universal Storage Platform™ family.

Multi-Layered Approach to Data Protection

Local, Remote Replication and MetroCluster

Synchronous data replication with Hitachi TrueCopy® Synchronous software and support of local clones with Hitachi ShadowImage® In-system Replication software are available for improved data protection and backup. Also offered is MetroCluster support with Active/Active GeoCluster up to 100km distance.

Support for Antivirus Scanning

Core software from Hitachi Data Systems offers full integration and support for Trend Micro, Symantec, McAfee and Computer Associates antivirus products.

Optimal Data Management

- Snapshots and Quotas—The High-performance NAS Platform's snapshot feature enables high-speed snapshot or point-in-time copy technologies—one per second. It allows rapid data backup, so there's no need to save multiple duplicates or copies of data.

Feature Highlights and Summary

- **System Management Framework**—Comprehensive, centralized management with GUI interfaces: CLI, SNMP, LDAP, Active Directory and NIS
- **Tiered Storage**—Policy-based Hierarchical Storage Management feature
- **Virtualization Services**—Virtual Volumes (VVols), Virtual Servers and Cluster Name Space for unified directory structure
- **Data Management Services**—Centralized GUI management, snapshots and quick file restore, Accelerated Data Copy (ADC), hard and soft quotas (volume, group, or user), NAS Data Migrator feature, scalable file systems, storage pools (with up to 2PB in a single pool), policy-based management and transparent data migration and relocation
- **Hardware Accelerated Protocols**—NFS, CIFS, iSCSI, NDMP, TCP/IP and UDP
- **Data Protection Services**—Active-active clustering up to eight nodes with Cluster Read Caching for scalable, read intensive NFS workload, Incremental Block Replication (IBR), TrueCopy synchronous replication, ShadowImage in-system replication, MetroCluster, role-based security and virus scanning, block- and file-level replication

- **NAS Data Migrator Feature**—The platform's own NAS Data Migrator feature allows automated NAS data migration from one storage tier to another, based on pre-defined policies.

and management policies with an easy-to-use graphical user interface (GUI) and an online documentation library. The Hierarchical Storage Management feature identifies and migrates data across storage tiers by moving data files to other tiers based on defined file policies and leaving behind file pointers in the original file systems.

System Management

High-performance NAS Platform management tools enable powerful data protection

Compliments of:

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