D A T A   S H E E T

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. In fact, this comprehensive network attached storage (NAS) solution leads the industry in performance and scalability, and it complements powerful Hitachi solutions.

Virtualizing Storage—Key to Flexibility and Resource Utilization

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.

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. 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. They can also create up to 32 virtual servers per node or cluster within the same management framework, easily coordinating throughput by dedicating ports and separate IP addresses to virtual servers.

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 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

Business Solutions
Hitachi Data Systems and its 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 to networked storage, High-performance NAS Platform software uses a multitiered approach that provides different levels of data protection, data management, or virtualization depending on the needs of the business.

Complementary Solutions
The Hitachi Data Systems Global Solution Services (GSS) team offers design, implementation, and data migration services that support the High-performance NAS Platform and the entire suite of Hitachi storage products.

Complete File- and Block-based Virtualization Framework

The High-performance NAS Platform complements powerful Hitachi HiCommand® Tiered Storage 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 TagmaStore® Universal Storage Platform and Network Storage Controller.

Multilayered Approach to Data Protection

Local and Remote Replication

Hitachi Data Systems offers asynchronous data replication functionality at both the block and file level. Using rule-based policies, storage administrators can create one or more duplicate copies of their data for backup or sharing with multiple users.

Support for Anti-virus Scanning

In network data-sharing environments, protection against virus attacks is essential. Core software from Hitachi Data Systems offers full integration and support for Trend Micro, Symantec, McAfee, and Sophos.

Data Management—Keeping the Right Data on the Right Type of Storage

Snapshots and Quotas

The High-performance NAS Platform's snapshot feature enables high-speed snapshot or point-in-time copy technologies. It allows rapid data backup so there's no need to save multiple duplicates or copies of data. Quotas limiting available capacity or number of files stored can be set for individual users, virtual volumes, or directories.

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. Users can automatically align the performance and price point of each storage tier to accommodate each user or application. Use of this functionality can improve storage utilization, further simplifying data management.

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, 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 512TB in a single pool), policy-based management and transparent data migration

Hardware Accelerated Protocols
- NFS, CIFS, iSCSI, NDMP, TCP/IP, UDP

Data Protection Services
- Active-active clustering up to four nodes with Cluster Read Caching for scalable, read-intensive workload, Incremental Block Replication (IBR), role-based security and virus scanning, block- and file-level replication

Comprehensive System Management Extends the Architecture

High-performance NAS Platform management tools let storage administrators create powerful data protection 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.

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