

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

Hitachi High-performance NAS Platform, powered by BlueArc®, delivers unprecedented levels of performance and scalability. It is optimized for enterprise storage consolidation and high-performance applications.

Advanced NAS Consolidation, Management Tools, Hardware- accelerated Architecture

Hitachi High-performance NAS Platform, powered by BlueArc®, is the first network attached storage (NAS) solution that consolidates and manages up to two petabytes (PB) of data in a single storage pool. It also supports a Cluster Name Space for a unified directory structure for Common Internet File System (CIFS) and Network File System (NFS) clients through any node within the cluster. Built on hardware-accelerated architecture, the High-performance NAS Platform offers enterprise-class management tools for data migration, replication and antivirus support.

Feature Highlights

- Hardware-accelerated network storage delivering a throughput of over 700MB/sec from a single node and 193K SpecSFS IOPS with a two-node cluster*
- Scalable file systems with up to 1PB** in a single storage pool
- Active-active clustering of up to eight nodes
- Unified NAS and SAN
- Cluster Read Caching for scalable read-intensive NFS workloads
- File System Module X (FSX) to boost performance in CIFS environment

- Cluster Name Space for unified directory structure
- Policy-based Hierarchical Storage Management (HSM) feature
- Transparent data migration
- Growth and Shrink virtual volumes
- Up to four million files per directory
- Up to 1024 snapshots, one per second per file system
- Dynamic file system and storage pool expansion
- Up to 64 virtual servers with unique AD, LDAP or NIS authentication

Hardware Specifications

- Number of slots: four-slot chassis
- Chassis backplane bandwidth: 40Gbit/sec (full-duplex)
- Modules: Network Interface Module with 6x1 or 4x1 Gigabit Ethernet (GbE) (NIM); Optional NIM update with 2x 10GbE; File System Module A (FSA); File System Module B (FSB); File System Module X (FSX) and optional FSA upgrade; Storage Interface Module (SIM)
- System memory: scalable up to 32GB
- Power supplies (PSU): dual (load sharing) hot-swappable power supplies
- Server diagnostics: server status, power LEDs

Business Solutions

Hitachi Data Systems and its 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.

Now, as an integrated, unified strategy for networked storage, High-performance NAS Platform hardware supports 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 (GSS) group understands the tremendous challenge of today's storage infrastructures. To ensure your solution is properly installed for your storage environment, GSS provides design, implementation and data migration services to support the High-performance NAS Platform and the entire suite of Hitachi storage products.

* SpecSFS Benchmark: <http://www.spec.org/sfs97r1/results/res2007q3/sfs97r1-20070614-00288.html>

** Support for 2PB capacity with LUN size greater than 2TB

Technical Specifications and Components

Network Interface Module (NIM)

User interface type	Gigabit Ethernet, IEEE 802.3z; Full-duplex support, IEEE 802.3x; Link aggregation (LAG), IEEE 802.3ad; Jumbo Frame support (up to 9,180 bytes); VLAN tagging IEEE 802.1Q; 10 Gbit/sec Ethernet, IEEE 802.3ae
Number of ports	2100 and 2200 models: 6GbE ports: Two 10GbE ports (optional NIM upgrade) 2000 models: 4GbE ports
Data interfaces	10GBASE-SR (300m Optical), XFP; 10GBASE-LR (10-25km Optical), XFP; 10GBASE-ER (40km Optical), XFP; 1000 Base-SX (500m Optical), SFP; 1000 Base-TX (100m Copper), SFP
Port configuration	Port-independent configuration; Multiple IP addresses per interface (up to 32 total)
Module diagnostics	Module status LEDs

NDMP Backup Attributes

NDMP support	NDMP v2, v3 and v4
Tape library system	Support for SAN and LAN connectivity
NDMP features	Direct access recovery (DAR), three-way backup and restore

System Management Attributes

Standard management features	Manage up to 10 entities (single node or cluster); replication management; automated system configuration and backup; role-based management
Management interfaces	GUI-based—HTTP, HTTPS; CLI-based—Telnet, Serial; Scripting—SiCtrl
Secure management access	SSL, SSH
Management access control	User/password authentication; management port definition; management access method; Access Control Lists (ACLs); NIS, Active Directory, and LDAP

Group File System Modules

File System Module A (FSA)	General-purpose file system module (Top Module)
File System Module X (FSX)	Accelerated file system module (Optional Top Module)
File System Module B (FSB)	File System NVRAM module (Bottom Module)

Protocols Supported

Network protocol support	Common Internet File System (CIFS); Network File System (NFS) with UDP v2 and v3, or TCP v2 and v3; NDMP v2, v3, and v4; File Transfer Protocol (FTP); iSCSI
Management and other protocols	HTTP, SSL, SSH and SNMP v1; v2c, NIS, DNS, WINS, NTP; e-mail alerts

Storage Interface Module (SIM)

User interface type	Fibre Channel, SFP connectors
Number of ports	Quad Fibre Channel ports
Fibre Channel port interfaces	1 Gbit/sec, 2 Gbit/sec or 4 Gbit/sec

File System Attributes

File system	Silicon File System (SiliconFS); hardware-accelerated file system
Multiprotocol support	Simultaneous CIFS and NFS
Maximum volume size	256TB, dynamically scalable
Maximum storage supported	Up to 2PB
Maximum files per directory	Up to 4 million or more files

- PSU diagnostics: AC, battery status LEDs
- Cooling: hot-swappable N+1 fan assembly
- Clustering: cluster interfaces—10GbE; high availability—active-active cluster of up to eight nodes; number of ports—dual ports for redundancy, XFP connectors
- Dimensions: height—4U (7 in., 17.8cm); width—19 in. IEC rack-compliant (48.4mm); depth—25 in. (63.6cm); weight—114lbs (52kg)
- Management interface: Ethernet interface—server status, power LEDs; serial interface—AC, battery status LEDs; Ethernet port diagnostics—port status, LEDs, port activity LEDs
- Mean Time Between Failure: system—500,000 hours
- Thermal rating: server BTU/hr—1467 BTU/hr (430 Watts) CSA
- Power attributes: 4.1A (max) @ 110VAC, 455 W (US) optional; 2.2A (max) @ 208VAC, 455 W (US); 2.0A (max) @ 230 VAC, 455 W (UK)

Compliments of:

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