OceanStor N8500
Clustered NAS Storage System

Huawei OceanStor N8500 clustered NAS storage system is a leading higher performance NAS storage. It meets the service requirements of governmental, educational and scientific research, digital media and telecom carriers for high performance, high expansion, effective data management and unified storage.

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Highlights

High Performance

- **Leading performance:** The storage system provides top performance in the SPECsfs2008 benchmark. When the NFS protocol is used, performance reaches 3,064,602 OPS.
- **Cluster architecture:** Multi-node Active-Active cluster technology is used. In the cluster, all nodes work in a cooperative manner to implement concurrent data access.
- **Globally shared storage:** All nodes can access the same storage at the same time. Through the intelligent DNS it can balance load to each node, improving node resource utilization
- Highly reliable architecture: Redundant components prevent single points of failure. Software technologies such as data coffer and file system mirror further improve system reliability.

Scalability

- **Expansible engine node:** Engine nodes can be smoothly expanded online to 24 nodes. System performance improves with the addition of engine nodes.
- **Expansible storage capacity:** Storage capacity can be expanded to 15 PB.

Efficiency

- **Dynamic Storage Tiering (DST):** Bidirectional dynamic migration is implemented between different storage media based on file access frequency and time policy. It is transparent to applications and reduces enterprise CAPEX.
- **Smartcache:** By using flash drivers to extend the cache and cooperating with the dynamic data cache technology, improve the system performance
- **File system mirror:** In certain storage systems, a file system mirror can be set to store multiple data file systems and improve online data reliability.
- **Soft/hard quota management:** This implements flexible user space allocation and use.
- **Domain management:** AD/NIS/LDAP is supported.
- **Multiple protection technologies:** Provide multiple value-added features such as snapshot, copy, remote replication

Convergence

- **Unified protocols:** Unified storage refers to unified storage of the SAN or NAS storage protocol. Certain storage systems support structured and unstructured data storage. Multiple storage network protocols such as iSCSI, FC, FCoE, NFS, CIFS, HTTP, and FTP are supported.
- **Unified management:** A simple graphical interface provides a unified way to manage files and block data services. A wizard configuration mode helps complete configurations easily.
- **Device monitoring:** The graphical management interface provides real-time/historical performance measurement and supports multiple alarm modes such as audible alarms, visual alarms, and email alarms. A device's operating status can be monitored at any time.

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Technical Specifications

Model	N8500
Hardware Specifications	
Architecture	Multinode Active-Active cluster architecture
Number of nodes	2 – 24
Cache/node	Basic Version: 16 GB Standard Version: 24 GB Enterprise Version: 48 GB Enhanced Version: 96 GB/192 GB
GE ports/node	Standard configuration: 4 x GE, up to 16 x GE
10 GE ports/node	Up to 6 x 10 GE
Disk type	SAS, NL SAS, SSD
Physical storage capacity	Dynamically expandable up to 15 PB
Software Features	
RAID levels	0, 1, 3, 5, 6, 10, 50
File system size	Dynamically expandable up to 256 TB
Maximum number of snapshots	512 (per file system)
Storage network protocols	FC, FCoE, iSCSI, NFS, CIFS, FTP, HTTP
Access control	NIS, Microsoft Active Directory, LDAP
Other protocols	NDMP LAN-FREE, SNMP, NTP, SMI-S
Value-added functions	DST(dynamic storage tiering), Snapshot, Mirror, Quota, Replication, WORM, SmartCache (dynamic data cache technology), HyperThin (thin provisioning), HyperImage (snapshot), HyperCopy (LUN copy), HyperClone (split mirror), and HyperMirror (synchronous/asynchronous remote replication)
Quota	NFS/CIFS soft/hard quota management
Management mode	GUI, CLI
Compatible operating systems	Windows, Linux, Mac OS, Solaris, AIX, and HP-UX
Fault alarm modes	Email, SNMP, and Syslog
Physical Specifications		
Power supply		AC: 100 V to 127 V/ 200 V to 240V DC: –48 V to –60 V
Power consumption	Engine	≤ 830 W (dual-node cluster)
	Storage unit	Controller enclosure: ≤ 830 W; Disk enclosure: ≤ 550 W
Dimensions (H x W x D)	Engine	4U, 175 mm x 446 mm x 502 mm (dual-node cluster)
	Storage unit	2U, Controller enclosure: 86.1 mm x 446 mm x 582 mm 4U, Controller enclosure: 175 mm x 446 mm x 502 mm 2U, Disk enclosure: 86.1 mm x 446 mm x 412 mm 4U, Disk enclosure: 175 mm x 446 mm x 412 mm
	Cabinet	42U, 205 cm x 57.5 cm x 118 cm
Weight	Engine	Dual-node clustered NAS engine: ≤ 43.6 kg
	Storage unit (in full configuration)	2U, Controller enclosure ≤29.9 kg/enclosure 4U, Controller enclosure ≤43.6 kg/enclosure 2U, Disk enclosure ≤26.5 kg/ enclosure; 4U, Disk enclosure ≤42.64 kg/enclosure
Operating temperature		5°C to 40°C
Operating humidity		5% RH to 90% RH