OceanStor T Series Unified Storage System

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Huawei OceanStor T series unified storage system is a new-generation storage product for mid-range and high-end storage applications. It boasts integration of block-level and file-level data storage, support for a variety of storage protocols, and GUI-based central storage management. Delivering leading performance, enhanced efficiency, maximized return on investment, and all-in-one solutions, the T series is ideally applicable to scenarios such as large-database OLTP/OLAP, high-performance computing, digital media, Internet applications, central storage, backup, disaster recovery, and data migration.

Highlights

Unification

- Unified SAN and NAS: Supports SAN and NAS storage protocols, structured and non-structured data within one storage system
- Unified protocols: Compatible with various storage networks and protocols, including iSCSI, FC, NFS, CIFS, HTTP, and FTP
- GUI-based central storage management: Provides a graphical user interface for central management of files and data blocks. The wizards guide users through every configuration

Flexibility and Reliability

- Upgrade: Users can easily upgrade block-level storage to unified storage
- Hot swapping modules: Users can hot-swap controllers, fans, power supplies, I/O modules, and hard disks without compromising ongoing user services
- Diversified disk types: Supports SAS, NL SAS, SATA, FC and SSD disks, fitting into various scenarios
- Reliable architecture: Full component redundancy prevents single points of failure. Data coffer and file system mirror improve system reliability
- Advanced I/O port scalability and flexibility: Supports up to 12 I/O modules with a maximum of 48 I/O ports. Supported I/O port types include 4 Gbps or 8 Gbps FC, 1 Gbps iSCSI, 10 Gbps iSCSI(TOE),10Gbps FCoE and 6 Gbps SAS ports
- Data protection: Provides seamless integration with Enterprise Vault and NetBackup to achieve disaster recovery through remote replication
- Application optimization: HostAgent implements application-level fast backup/recovery and DR verification for mainstream operating systems, such as Oracle, DB2, Exchange Server, and SQL Server

Economy and Efficiency

- Multi-node clustering: Active-active nodes achieve simultaneous operating among nodes and provide parallel access to data
- SmartCache acceleration: Improves performance by using SSD as secondary cache. The IOPS could be improved multiple times in mixed workload environment.
- Automatic thin provisioning: HyperThin supports automatic capacity expansion for improved disk utilization so that customers can buy storage devices on demand, reducing the total cost of ownership
- DST: Dynamic storage tiering (DST) implements transparent bidirectional dynamic data migration between various storage media based on file access frequency or a time policy. It maximizes return on investment
- Proactive remote service: The up-to-date Cloud Service provides functions of system health check, warning, and alarm notification. The robust troubleshooting expert background minimizes adverse impacts on a system and slashes system downtimes

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Technical Specifications

Model	S2600T	S5500T	S5600T	S5800T
Block Storage Component				
Storage processor	Multi-core processors			
Cache size	8GB/16GB	8GB/16GB/32GB	24GB/48GB	96GB/192GB
Extended cache	1.2TB	1.2TB	2.4TB	3.6TB
Number of controllers	2			
Front-end port types	8Gbps FC, 1Gbps iSCSI, 10Gbps Iscsi(TOE)	8Gbps FC, 1Gbps iSCSI, 10Gbps iSCSI (TOE), 10Gbps FCoE		
Back-end port types	6Gbps SAS 2.0 wide port	6Gbps SAS 2.0 wide port	4Gbps FC, 6Gbps SAS 2.0 wide port	4Gbps FC, 6Gbps SAS 2.0 wide port
Number of onboard I/O ports	Front end: 12 x 1 Gbps iSCSI ports; Back end: 4 x SAS 2.0 wide ports	Front end: 8 x 8 Gbps Fibre Channel ports; Back end: 4 x SAS 2.0 wide ports	0	0
Maximum. number of I/O modules	2	2	10	12
Maximum number of disk slots	276	528	1152	1440
Supported disk types	SAS, NL SAS, SATA, SSD	SAS, NL SAS, SATA, SSD	SAS, NL SAS, SATA, SSD,FC	SAS, NL SAS, SATA, SSD,FC
RAID levels	0,1, 3, 5, 6, 10, 50			
Maximum number of snapshots	256	1024	2048	2048
Maximum number of LUNs	2048	4096	4096	8192
Mobile Management	Supported.	N/A	N/A	N/A
TurboModule	Supported.			
Functional software	HyperImage (snapshot),HyperCopy (LUN copy), HyperClone (split mirror), HyperMirror (synchronous/asynchronous remote replication), HyperThin (thin provisioning), UltraPath (multipathing), DiskGuard (host-side data protection), SmartCache (dynamic data caching in TurboBoost)			
File Storage Component				
Number of file engine nodes	2	2, 4	2, 4, 6	2, 4, 6, 8
Cache size per node	16GB	16GB	24GB	24GB
File software	DST (dynamic storage tiering), Snapshot (file system snapshot), Mirror (file system mirror), Replication (file system remote replication), Symantec NetBackup Client (embedded Symantec network backup client)			
Protocol	FC, iSCSI, NFS, CIFS, FTP, HTTP			
Compatible operating system	Including AIX, HP-UX, Solaris, Linux, Windows			
Virtual Environment				
Virtual machine	VMware, Citrix, Hyper-V			
Value-added feature	VMware VAAI support for VSphere and VCenter integration			
Physical Specifications				
Power supply	AC: 100 V to 127 V, or 200 V to 240 V DC: –60 V to –48 V			
Array power consumption	2 U controller enclosure: ≤380W 4 U controller enclosure: ≤527W	2 U controller enclosure: ≤ 539W 2 U disk enclosure: ≤307W 4 U disk enclosure: ≤ 527W	4 U controller enclosure: ≤598W 2 U disk enclosure: ≤307W 4 U disk enclosure: ≤527W	
File engine power consumption	4 U file engine: ≤ 800W			
Array dimensions (H x W x D)	2 U controller enclosure: 86.1mm x 446mm x 582mm		4 U controller enclosure: 175mm x 446mm x 502mm	
	4 U disk enclosure: 175mm%446mm%412mm	2 U disk enclosure: 86.1mm x 446mm x 412mm 4 U disk enclosure: 175mm x 446mm x 412mm		
File engine dimensions (H x W x D)	4 U, 175mm x 446mm x 502mm			
Weight	2U Controller enclosure ≤ 22.98kg 4U Disk enclosure ≤ 25.2kg	Controller enclosure ≤ 23.9kg 2 U SAS disk enclosure ≤ 14.9kg 4 U SAS disk enclosure≤ 25.2kg	Controller enclosure ≤ 43.6kg 2 U SAS disk enclosure ≤ 14.9kg 4 U SAS disk enclosure ≤ 25.2kg 4 U FC disk enclosure ≤ 24.9kg	

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