Huawei OceanProtect X6000, X8000, X9000 Backup Storage

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Overview

Huawei OceanProtect Backup Storage is a resilient storage system with the fastest recovery capability, which leads the dedicated backup storage industry into the flash-to-flash-to-anything (F2F2X) era. It helps you quickly and reliably back up and restore data at a low TCO, using E2E acceleration and an active-active architecture. It is also a trusted choice for demanding scenarios in government, finance, carrier, healthcare, and manufacturing sectors.

Highlights

Rapid Backup, Rapid Recovery

- **E2E acceleration:** The front-end Direct TCP/IP Offload Engine (DTOE) releases the CPU resources, whereas the back-end parallel scheduling of multiple CPU cores implements core grouping and task partitioning, to improve processing performance of nodes.

- **High bandwidth:** Using backup service features, multiple sequential data streams are aggregated to greatly improve the bandwidth, while source deduplication reduces the amount of data transmitted over the network and shortens the backup time.

- **Instant access:** The system provides high IOPS and works with mainstream backup software to offer instant access to data in backup images, enabling quick utilization of backup data.

Efficient Reduction

- **Multi-layer deduplication:** Higher logical capacity and lower TCO thanks to precise chunking of backup data streams, aggregation preprocessing of backup data, and multi-layer inline variable-length deduplication.

- **Feature-based reduction:** Identifies data stream features; Combining compression, high-performance predictive coding, and byte-level compaction increase the data reduction ratio.

- **E2E data reduction:** Source and replication link deduplication technologies help reduce network bandwidth costs.

Solid Resilience

- **Cyber resilience:** Link and array encryption, secure snapshots, WORM, and Air Gap technologies ensure secure and available copies.

- **System resilience:** The active-active hardware architecture ensures failover within seconds, without affecting backup services.The whole system can deliver up to 99.9999% reliability.

Technical Specifications

Model	OceanProtect X6000		OceanProtect X8000		OceanProtect X9000	
	All-Flash Form	HDD Form	All-Flash Form	HDD Form	All-Flash Form	HDD Form
Hardware specifications						
Data reduction ratio*	Up to 72:1					
Physical backup bandwidth of the system	Up to 19 TB/hour		Up to 55 TB/hour		Up to 155 TB/hour	
Logical backup bandwidth of the system	Up to 45 TB/hour		Up to 117 TB/hour		Up to 310 TB/hour	
Recovery bandwidth of the system	Up to 22 TB/hour	Up to 8 TB/hour	Up to 57 TB/hour	Up to 24 TB/hour	Up to 172 TB/hour	Up to 48 TB/hour
Number of controllers per node	2		2		4	
Max. number of nodes	1		2		2	
Usable capacity of the system	16 TB-300 TB		150 TB-2.0 PB		480 TB-3.6 PB	
Data disk types	3.84 TB/7.68 TB SAS SSD	4/6/8/10/14TB NL-SAS	3.84 TB/7.68 TB SAS SSD	4/6/8/10/14TB NL-SAS	7.68 TB SAS SSD	4/6/8/10/14TB NL-SAS
Front-end port types	8/16/32 Gbit/s FC, 10/25/40/100 GbE					
Front-end storage protocols	NFS, SMB, FC, iSCSI					
Software specifications						
RAID type	RAID 2.0+					
Supported RAID levels	RAID 6 (default), RAID 5 (optional)**, and RAID-TP (optional)					
Software functions	Inline deduplication and compression, multi-tenancy, quota management, snapshots, remote replication, audit logs, intelligent service quality control, data erase, source deduplication, secure snapshots, WORM, array encryption, ransomware detection, etc.					
System management	Device O&M (DeviceManager), Remote O&M (DME IQ)					
Electrical specifications						
Power supply	Node: 200 V to 240 V AC ±10%, 192 V to 288 V DC SSD enclosure: 100 V to 240 V AC ±10%, 192 V to 288 V DC HDD enclosure: 100 V to 240 V AC ±10%, 240 V DC ±20% (HDD form)					
Dimensions(H x W x D)	Node: 86.1 mm × 447 mm × 820 mm		Node: 86.1 mm × 447 mm × 820 mm		Node: 175 mm × 447 mm × 865 mm	
	SSD enclosure: 86.1 mm x 447 mm x 410 mm HDD enclosure: 175 mm x 447 mm x 488 mm（HDD form）					
Weight	Node: ≤ 45 kg		Node: ≤ 45 kg		Node: ≤ 89 kg	
	SSD enclosure: ≤ 20 kg, HDD enclosure: ≤ 44 kg (HDD form)					
Operating temperature	–60 m to +1800 m altitude: 5°C to 35°C (bay) or 40°C (enclosure); 1800 m to 3000 m altitude: The max. temperature threshold decreases by 1°C for every altitude increase of 220 m					
Operating humidity	10%～90%R.H.					

* The data reduction ratio depends on the application type and backup policy.

** For further details on the specifications, please contact Huawei sales.

For More Information

To learn more about Huawei storage, please contact your local Huawei office or visit the Huawei Enterprise website: http://e.huawei.com/en/.

Huawei Enterprise Business App

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