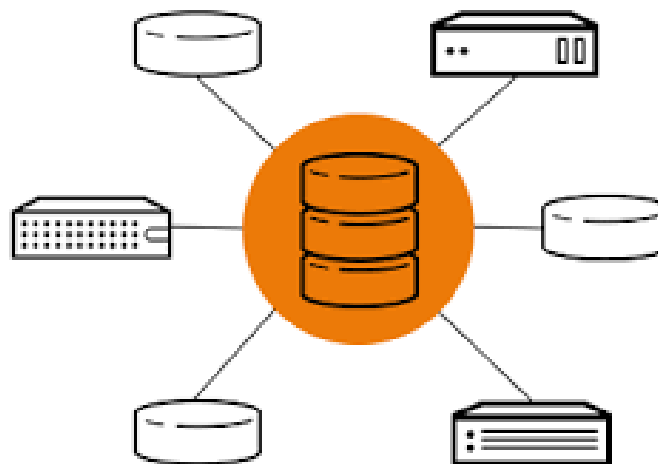


HyperStore

Introducing the future of scale-out storage

Super high-performing storage appliances

HyperStore is an industry-leading, cost-efficient, scalable software-defined storage solution powered by Ceph technology. Enterprise Storage provides unified object, block and file storage designed with unlimited scalability from terabytes to petabytes, with no single points of failure on the data path. HyperStore provides all Flash and Hybrid Disk configurations to deliver low-latency performance and cost optimization.



- Scalable wire-speed solutions
- Category defining management system
- Double your data density
- Total Ceph interoperability
- Radically reduced data center costs
- Hardware and software support
- FASTER and MORE EFFICIENT
- EASIER TO MANAGE
- Highly Available, Scalable, Self-Manage and Self-Healing
- Unified Storage with Block, Object and File
- Software Defined Storage solution based on the Ceph Technology
- Streamlined installation process
- Reliable and production-read

HyperStore® Storage

HyperStore Storage Node is our custom designed, dedicated Ceph appliance, purpose built for software-defined storage.

Ceph is widely considered to be the leading open-source software that underpins enterprise level software-defined storage (SDS) solutions, because it's designed to provide highly scalable object, block and file-based storage under a unified system. It will endure because of its accessibility, unparalleled flexibility, rich features, impressive roster of enterprise ambassadors and an already deep and devoted user community.

It takes more than generic hardware to get outstanding performance for storage, and because HyperStore is custom built for Ceph, all components integrate with, and exploit Ceph's outstanding functionality. The result is a scale-out storage solution that runs at wire-speed

Storage Hardware

- » Task-specific, scale-out ready
- » Wire speed throughput performance front-side and back-side networking
- » Solid state disks for journal
- » Preconfigured and tuned for balanced read and write performance
- » Low wattage power design

Storage Management Networking

- » Configurable cluster-level resiliency
- » Health monitoring
- » Full hardware configuration and management
- » Workflow-based Ceph management

Operating system

- » Compatible with clusters running Ceph
- » Interfaces for file, block, and object storage
- » A single volume, single namespace, and single filesystem
- » Virtualization support for Proxmox, VMware, or HyperV

Networking

- » Wire speed on all ports at all times
- » Simplified, core networking functionality
- » Optimized for hyperscale data center performance (1GbE-100GbE)




Performance and Agility at Wire Speed

The software defined data center must move beyond application/ storage silos to offer a new virtual data store that is accessible to all applications. To accomplish this, it's important that the distributed storage pool have plenty of performance to simultaneously handle storage requests from many applications. All HyperStore products are engineered to operate at wire speed. HyperStore, backed by object storage at its core, increases overall data store performance as additional storage nodes are added. This feature allows many machines to attach to the distributed storage pool without compromising the performance required by the applications.

The HyperStore storage portfolio is built to work together seamlessly. You can bring additional storage capacity online by connecting a new HyperStore to the storage pool and running a simple set of commands confirming the newly added capacity. Data resilience and physical location are configurable and self-managing.

PRODUCT ATTRIBUTES	
SCALE-OUT ARCHITECTURE	Distributed, fully symmetric clustered architecture that combines Node storage with intelligent software
OPERATING SYSTEM	Distributed file system: creates a cluster with a single file system and single namespace; single volume
HIGH AVAILABILITY	No single point of failure; self-healing design protects against disk or node failure; includes back-end intra-cluster failover
SCALABILITY	4 to 252 nodes in a single cluster. Add an additional node to scale performance and capacity in about a minute.
DATA PROTECTION	File-level striping with support for N+1 through N+4 and mirroring data protection schemes
DATA REPLICATION	Fast and flexible file-based asynchronous replication
DATA RETENTION	Policy-based retention and protection against accidental deletion
DATA REBALANCING	Spread data evenly across storage nodes to optimize cluster resource utilization
SECURITY	File system audit capability to improve security and control of your storage infrastructure and address regulatory compliance requirements
NETWORK PROTOCOL	NFSv3, NFSv4, SMB2, SMB3, LDAP, HDFS, ADS

HyperStore Family

Model Node	HyperStore MON/MNGT	HyperStore ODS20	HyperStore ODS40
Model Type	Monitor Node	Store Performance Node	Store Large Node
	 1U - 4 Bay	 2U - 12 Bay	 4U - 36 Bay
Core Function	Manages authentication to Ceph and keeps track of changes to the cluster to ensure accurate visibility on cluster states for scalable management.	A broad selection of storage configurations to suit every use case, able to deliver multiple tiered or differentiated storage service levels, managed as a single cluster.	A broad selection of storage configurations to suit every use case, able to deliver multiple tiered or differentiated storage service levels, managed as a single cluster.
Disk Configuration	1 x 960GB NVME M.2 SSD (OS) 4 x 2.5-inch SATA SSD max 15.36TB (Data)	2 x 2.5-inch SATA SSD (OS) 12 x 3.5-inch SAS/SATA HDD max 192 TB (Data) 4 x 2.5-inch NVMe SSD PCI-E max 15.36TB (Cache)	2 x 2.5-inch SATA SSD (OS) 30 x 3.5-inch SAS/SATA HDD max 540 TB (Data) 6 x 2.5-inch NVMe SSD PCI-E max 23.04TB (Cache)

Disk Support	2.5-inch SATA SSD: 960GB; 1.92TB; 3.84TB	3.5-inch SAS/SATA HDD: 10TB; 12TB; 14TB; 16TB 2.5-inch NVMe SSD: 960GB; 1.92TB; 3.84TB	3.5-inch SAS/SATA HDD: 10TB; 12TB; 14TB; 16TB 2.5-inch NVMe SSD: 960GB; 1.92TB; 3.84TB
CPU	1 x Intel Xeon processors, with up to 40 cores per processor	2 x Intel Xeon processors, with up to 40 cores per processor	2 x Intel Xeon processors, with up to 40 cores per processor
GPU	-	1 x NVidia RTX - 6 GB GDDR6	1 x NVidia RTX - 12 GB GDDR6
RAM	8 DDR4 DIMM slots, supports RDIMM 1 TB max Supports registered ECC DDR4	16 DDR4 DIMM slots, supports RDIMM 1 TB max Supports registered ECC DDR4	16 DDR5 DIMM slots, supports RDIMM 1 TB max Supports registered ECC DDR5
Network	2 x 10/25 GbE Ports	4 x 10/25 GbE Ports	4 x 10/25 GbE Ports
Management	1x 1GbE, IPMI	1x 1GbE, IPMI	1x 1GbE, IPMI
Power Supplies	Dual redundant power supplies 120v-240v 50Hz-60Hz	Dual redundant power supplies 120v-240v 50Hz-60Hz	Dual redundant power supplies 120v-240v 50Hz-60Hz
Operating System and SDS	Linux OS Ceph Software Defined storage Enterprise	Linux OS Ceph Software Defined storage Enterprise	Linux OS Ceph Software Defined storage Enterprise
Data Resiliency	-	Configurable Erasure Coding / Replication	Configurable Erasure Coding / Replication

Storage Access Protocols	NFSv3, NFSv4, SMB2, SMB3, LDAP, HDFS, ADS	NFSv3, NFSv4, SMB2, SMB3, LDAP, HDFS, ADS	NFSv3, NFSv4, SMB2, SMB3, LDAP, HDFS, ADS
Virtualization Option	-	Virtualization deployment with VMs and Container	Virtualization deployment with VMs and Container
Media Processing Option	-	H264/mp4 media proxy generator with multi-threaded and multi-Node processing	H264/mp4 media proxy generator with multi-threaded and multi-Node processing
Accessories	2 x 10/25 GbE Transceivers SFP28 2 x C13 to C14 Power Cable	4 x 10/25 GbE Transceivers SFP28 2 x C13 to C14 Power Cable	4 x 10/25 GbE Transceivers SFP28 2 x C13 to C14 Power Cable
Technical Support and Warranty	12/24/36 Months	12/24/36 Months	12/24/36 Months

Optional Services	
Migration	Migrate your current hardware infrastructure to HyperStore specific range of Ceph appliances.
Integration	Integration with MAM 3rd party system and Playout system
Support	technical, knowledge sharing with its expert community, RMA and warranty services.