Cloudian HyperStore

CLOUDIAN®

Consolidate your unstructured data—both objects and files—to a single, limitlessly scalable storage pool with Cloudian® HyperStore®. Available as either standalone software or fully integrated appliances, HyperStore enterprise object storage provides unlimited capacity scalability, intuitive management tools, uncompromising data protection and the industry's most compatible S3 API implementation—all at 70% less cost than traditional disk-based storage systems.

Start Small and Grow

Start small with initial deployments of just a few HyperStore nodes. As demand grows, expand capacity non-disruptively by adding nodes to your cluster. Unlike some systems that require all nodes to be identical, HyperStore lets you add nodes of any size. Flexibly grow from terabytes to petabytes with no down time.

Works with Your Applications

Only HyperStore offers a 100% native S3 API for objects, plus SMB/NFS for files. Proven in over six years of deployments, HyperStore's S3 API offers guaranteed compatibility with your S3-enabled applications. For files, select the optional SMB/NFS interface. Deploy with your applications, or leverage our growing partner ecosystem.

Save 70% vs Conventional Storage

At costs down to ½ cent per GB per month, HyperStore's efficient architecture and industry-standard components save you 70% on CAPEX. Massive scalability and lights-out management result in 95% less overhead. And you'll save on rack space: up to 760TB in just 4U height.

Uncompromising Data Durability

Get up to 14 nines data durability and configurable data protection. Only HyperStore lets you customize data protection for various data types within a cluster. Select from multiple levels of data replication and erasure coding.

Integrated Disaster Recovery

Implement DR using HyperStore's integrated tools. Deploy across multiple data centers or regions to provide redundancy and resilience in the event of a data center failure. Configurable consistency levels let you select either synchronous or asynchronous replication.

FEATURES/BENEFITS

- Limitlessly scalable capacity
- Start with just three nodes and grow
- Non-disruptive capacity expansion
- 100% native S3 API for guaranteed compatibility
- Replication and erasure coding
- Bucket-level granularity for all storage policies
- Encryption for secure data storage
- Comprehensive multi-tenant services
- Quality of Service (QoS) controls
- Integrated billing, management, and software
- Geographically distributed replication

USE CASES

- Backup and disaster recovery
- File consolidation
- Media active archive
- Collaboration
- File lifecycle management
- AI / Machine Learning
- Storage-as-a-Service (STaaS)

Scalable Performance

Processes multiple requests in parallel, across all nodes in HyperStore's shared-nothing cluster. This eliminates bottlenecks and allows performance to grow as you add nodes. For large file transfers, multi-part upload lets you transfer files seamlessly between sites or to the public cloud.

Multi-Tenancy

Establish multiple user spaces with HyperStore's multi-tenancy capabilities. Provide individual management domains and namespaces within a shared cluster. Cloudian offers QoS controls and billing features that let you manage bandwidth and chargebacks.

Intuitive Management

Manage Cloudian via the intuitive web-based GUI or automate tasks using the RESTful API. Cluster management tasks are simple as well. Add or remove nodes and update system software without disruption.

Public Cloud Integration

Cloudian offers integration with all major public cloud services, including Amazon AWS, Google GCP, and Microsoft Azure Blob Storage. Use policy-based tiering to either migrate or replicate data from the Cloudian cluster. View both public cloud data and local data on a single screen. Bimodal access lets public cloud-based applications directly access cloud-resident data.

Variable-size Metadata Tags

Record metadata along with user data to facilitate data management and data search. Elastic Search integration provides near real-time search capability. Variable metadata tag sizes give you flexibility not found in other object storage systems.

Security

HyperStore AES-256 Server-Side Encryption enables enterprises and service providers to easily encrypt data stored at rest. SSL encryption ensures data confidentiality for data in transit (HTTPS). And with S3 compatible ACLs, bucket policies, and IAM, system administrators can better manage access to buckets and objects.

Software or Appliance—Your Choice

Available as either software or a fully-integrated appliance, Cloudian HyperStore lets you choose the deployment model that meets your business needs. Software can be deployed on either industry-standard servers or virtual machines.

HyperStore 1500 Specifications

Form Factor	1U rack mount chassis
Metadata Drives	2x 960GB SSD
Data Drives	12 x 3.5" SAS HDD (7200RPM)
Drive Sizes	8TB, 10TB, 12TB, 14TB
Storage Capacity Raw	96TB, 120TB, 144TB, 168TB
Data Protection	Replication and erasure coding via storage policies
Redundancy	Hot swappable disk drives 2x hot swappable power supplies No single point of failure Non-disruptive online software upgrades
CPU	2x E5-2620 v4, 8 core
Memory	128GB
Network Interfaces	2x10GbE (10BaseT or SFP+); 25GbE option
Monitoring/Management	CLI, GUI, API, IPMI, JMX
Power Supply	700W Platinum PSU, 1+1 Redundancy, 100-240V AC
Cooling	(6) 40x56 dual rotor fans
Thermal Rating	2578 BTU/hr (max)
Dimensions	17.6" x 1.7" x 35" / 448.2mm x 43.2mm x 881mm
Weight	62.8 lbs / 28.5Kg
IO Ports	Front: (1) USB 2.0 port Rear: (2) USB 3.0 ports, (1) VGA port, (1) RS232 serial port (2) 1GbE RJ45 ports, (1) Gbe RJ45 management port
Operating Environment	Operating temperature: 5°C to 35°C (41°F to 95°F) Non-operating temperature: -40°C to 65°C (-40°F to 149°F) Operating relative humidity: 50% to 85%RH Non-operating relative humidity: 20% to 90%RH

HyperStore 4000 Specifications

Form Factor	2 nodes in a 4U rack mount chassis
Metadata Drives	4x 1.92TB SSD (2 per node)
Data Drives	70x SAS HDD (35 per node, 7200RPM)
Drive Sizes	8TB, 10TB, 12TB, 14TB
Storage Capacity Raw	560TB, 700TB, 840TB, 980TB
Data Protection	Replication and erasure coding via storage policies
Redundancy	Hot-swappable disk drives 4x hot swappable power supplies No single point of failure Non-disruptive online software upgrades
CPU	4x E5-2620 v4, 8 core (2 per node)
Memory	256GB (128GB per node)
Network Interfaces	4x 10GbE (10BaseT or SFP+, 2 per node); 25GbE/40GbE options
Monitoring/Management	CLI, GUI, API, IPMI, JMX
Power Supply	1200W Platinum PSU, 2+2 redundancy, 100-240V AC
Cooling	(4) 8056 + (1) 6056 dual-rotor fans
Thermal Rating	3794 BTU/hr (max)
Dimensions (W x H x D)	17.6" x 6.9" x 35.9" / 447mm x 175.3mm x 912.2mm With cable management arm: 17.6" x 6.9" x 45.9" / 447mm x 175.3mm x 1166mm
Weight	220 lbs / 99.8Kg
IO Ports	Rear per node: (2) USB 3.0 ports; (1) VGA port; (2) RS232 serial ports; (2) GbE RJ45 ports; (1) GbE RJ45 management
Operating Environment	Operating temperature: 5°C to 35°C (41°F to 95°F) Non-operating temperature: -40°C to 65°C (-40°F to 149°F) Operating relative humidity: 50% to 85%RH Non-operating relative humidity: 20% to 90%RH

HyperStore Appliances

HyperStore appliances are built for simplicity, density and cost-effectiveness. Each model is fully integrated with Cloudian HyperStore software. Appliances are available with end-to-end support packages, including options for on-site support.

HyperStore 1500 Appliance

- Ultra-dense 1U platform
- 12x hot-swappable 3.5" disk drives
- Up to 4x hot-swappable 2.5" SSDs
- 10GbE or 25GbE networking

HyperStore 4000 Appliance

- Ultra-dense 4U platform
- 2 nodes in 1 chassis
- 70x hot-swappable 3.5" disk drives (35 per node)
- Up to 4x hot-swappable 2.5" SSDs
- 10GbE, 25GbE, or 40GbE networking

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