



Western Digital & Clouidian Deliver Secure, Scalable Storage



Highlights

- Clouidian HyperStore® and Western Digital JBODs together deliver cloud-like storage in your data center
- Cloud-native technology supports both modern and legacy workloads

Key Benefits

- Unified file and object storage
- Limitless scalability
- Multi-tenancy
- Extensive security
- Ransomware protection

Enterprise Storage Challenges

In capacity-intensive use cases such as AI/ML and data analytics, traditional enterprise storage solutions often fall short. Legacy technologies including Network Attached Storage (NAS) and Storage Area Network (SAN) lack the scalability, security, and cloud-native architecture required to support these next-gen applications.

Today's workloads require a storage platform that delivers cloud-like scalability, modern application support, and the ability to deliver storage services at scale for multiple workloads simultaneously. To ensure long-term economic viability, the solution should avoid vendor lock-in, and be able to seamlessly scale out while delivering consistent performance, excellent data durability, and extensive features.

Solution



Western Digital Ultrastar® Data60 with Clouidian HyperStore software offers a highly-scalable, highly-available storage solution for both legacy and modern workloads. The combined solution lets you start small and grow without interruption to support your dynamic storage needs. Compatible with industry-standard X86 servers, Clouidian will scale on the server platform of your choice.

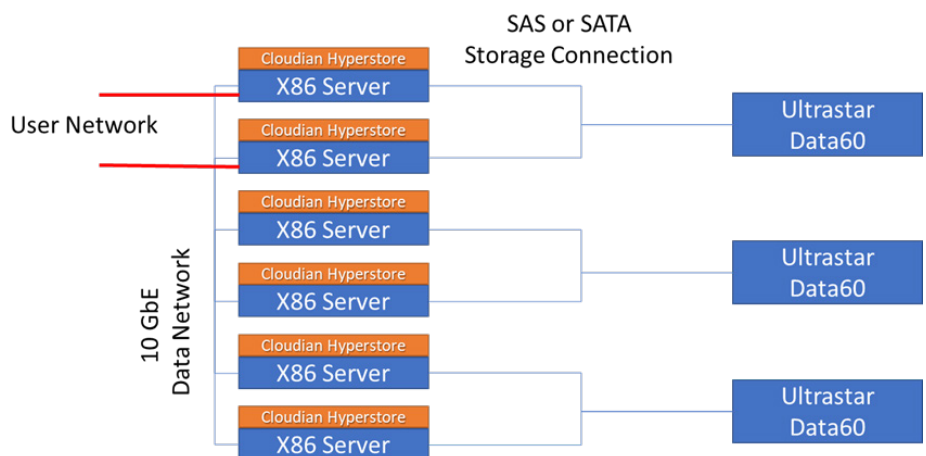
Clouidian's native S3 API implementation offers one of the highest level of S3 interoperability, ensuring trouble-free support for the growing ecosystem of S3-enabled applications. File service support provides SMB and NFS connectivity for legacy applications.

Configurable data protection lets Clouidian deliver up to 14 nines data durability with erasure coding and data replication options. Protect data at one site, or across multiple sites using geo-distribution capabilities. Clouidian HyperStore offers granular management that lets you customize data protection for various data types within a single cluster.

Configuration

This example configuration includes six x86 servers and three Ultrastar Data60 JBODs, with each JBOD connected to two of the servers. Each server includes two 10GbE ports for application and intra-node cluster communication. For fault tolerance, this configuration would typically employ erasure coding to provide uninterrupted operation with the failure of up to two servers or one JBOD.

This configuration supports S3 API storage access on all nodes. The solution can also support NFS and SMB file access with the addition of Clouidian HyperStore File Services running on a separate server or VM.



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Cloudian Hyperstore Features

Scalable

Scalable without interruption, Cloudian's modular architecture lets you meet growing data storage needs simply by adding Cloudian server nodes and the accompanying storage devices.

Hardware-Agnostic

Cloudian software is compatible with industry-standard servers, a flexible, hardware-agnostic model that lets you avoid vendor lock-in.

Configurable Data Resilience

Cloudian automates data protection with built-in features that provide robust protection automatically. Choose from erasure coding or policy-based data replication. Either way, configure your preferred level of data durability, up to 14 nines and beyond.

Versatile

Cloudian HyperStore offers native S3 compatibility across all the nodes. Add HyperStore File Services for NFS/SMB file support and bimodal data access that provides unified access to all data via both S3 API and NFS/SMB protocols.

Security

Features include an extensive set of security certifications in object storage, plus data immutability and Secure Shell for intrusion defense, encryption for data in transit and at rest, role-based access controls, audit trail logging and S3 Object Lock support for ransomware protection.

Multi-Tenancy

HyperStore's multi-tenancy capabilities lets users and/or teams establish multiple user spaces—and employ individual management domains and namespaces—within a shared cluster. Cloudian offers QoS controls and billing features that let you manage bandwidth and chargebacks.

Compliance and Data Residency

Cloudian software provides a private cloud storage system that allows the customers data to stay on-prem, behind their firewall, ideal for sensitive data and records that are regulated and have strict data residency, privacy and security requirements.

High-Density Storage Features

Ultrastar Data60

- Up to 60 Ultrastar HDDs (SAS or SATA)
- Up to 1.56 PB¹ of raw storage
- 4U form factor

Ultrastar Data102

- Up to 102 Ultrastar HDDs (SAS or SATA)
- Up to 2.65¹ PB of raw storage
- 4U form factor

Daisy-chaining for High Capacity

Up to 4 units may be daisy-chained for a total raw capacity of 6.24 PB (Data60) or 10.6 PB (Data102)

Innovations for Performance and Reliability

IsoVibe™: Patented technology improves isolation of vibration propagation both to and from each individual drive to help maximize performance even in heavy workloads.

ArcticFlow™: Improves cooling via discrete airflow channels that allow cool air to reach more components within the system, improving cooling effectiveness that can improve drive reliability.

Flexible

Choose dual-port SAS for high availability or single-port SATA for low cost.

Up to 12 x 12Gb/s SAS-3 host connections.

Designed for Serviceability

- Enterprise-grade redundant and hot swappable PSUs, IO Modules, and fans.
- Rack-mounted top cover for quick and easy service.
- Fan speed trigger for when chassis is pulled out to a point that needs higher fan speed



¹ One terabyte (TB) is equal to one trillion bytes and one petabyte (PB) is equal to one quadrillion bytes. Actual user capacity may be less due to operating environment.