

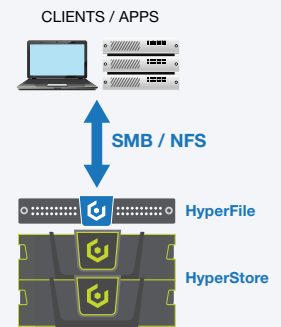
## Scale-out File Services from Clouidian HyperStore

Clouidian<sup>®</sup> HyperFile<sup>®</sup> overcomes the limitations of traditional NAS and supports your cloud initiatives with infinitely scalable file storage and multiple data management options. Maintain storage entirely on-prem, or span your on-premises and cloud storage environments. HyperFile enables innovative solutions to store, share, and leverage information.

Clouidian HyperFile is a scale-out NAS controller that delivers enterprise file services from Clouidian HyperStore<sup>®</sup> object storage systems. The HyperFile NAS Controller delivers limitlessly scalable, highly available on-premises file services with all the functionality you expect from enterprise NAS—and more.

### Clouidian HyperFile NAS Controller

Scale-out file services from Clouidian HyperStore. Get SMB/NFS support, limitless scalability, plus enterprise NAS features such as snapshot, WORM, and global namespace.



The HyperFile NAS Controller delivers unified support for file and object storage plus the full range of enterprise NAS features—such as SMB/NFS support, POSIX-compliance, snapshots, and WORM—all in a fault-tolerant, highly available platform. With next-generation capabilities like multi-cloud integration and converged data access support, HyperFile is a solution that goes far beyond traditional NAS.

## KEY BENEFITS

### Full Suite of Enterprise File Services

Supports users and applications with SMB/NFS/FTP, plus Active Directory and LDAP integration. snapshot and WORM capabilities.

### Limitlessly Scalable Infrastructure Consolidation

Unified storage for both files and objects with limitless capacity scalability and multi-controller support.

### New Options for Cloud Integration

Three features combine to open new data management options: Multi-cloud support, converged data access, and data migration/replication.

### Maximum Uptime

Multiple levels of redundancy, up to 14 nines data durability, and integrated DR options.

### Superior Value

Scale capacity at cloud-like costs. Leverage the latest server and storage technology with pre-configured HA appliances or deploy on the industry-standard servers you choose.

## USE CASES

- Media and Entertainment
- Home Directory
- Collaboration
- Video Surveillance
- Engineering
- Legal
- Healthcare
- Storage-as-a-Service



# HyperFile Capabilities

## Enterprise File Services Platform

POSIX-compliant file system provides multi-protocol access that is fully compatible with NFS and SMB (CIFS) clients. User authentication via Active Directory and LDAP.

## Multi-Controller and High-Availability

Each HyperFile NAS Controller includes high-availability support, with dual nodes operating in an active-passive mode. Non-disruptive failover ensures uptime. Multiple NAS Controllers can access the same namespace.

## Snapshot Support

Create file system snapshots for each namespace on a schedule you set. Generate point-in-time copies for data protection.

## WORM for Data Immutability

Create non-rewritable, non-erasable data to prevent files from being altered or deleted until a predetermined or default retention date. Multi-tenancy lets you create WORM-enabled storage within a shared environment.

## Converged Data Access

Directly access file data from object storage without traversing the HyperFile controller. S3-enabled applications can directly read and write file data to object storage—on-prem or in the cloud. Write file data with S3 and read with HyperFile, or the reverse.\* Access S3-compatible storage via both file-based apps and S3-compatible apps.

## Multi-Cloud Support

Integrated support for Amazon AWS, Microsoft Azure, and Google GCP. Store data on-prem, then replicate or migrate to the cloud platform of your choice.

## Global Namespace

Employ a single namespace across multiple NAS controllers to enable shared access by multiple workgroups. Users and applications globally can read and write to a common data set.

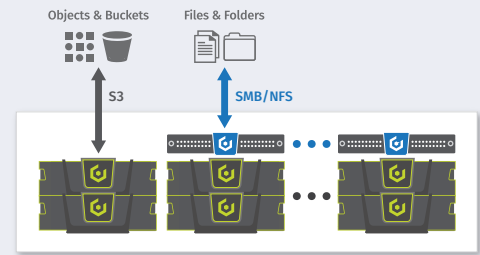
## Multi-Tenancy

When a single cluster is shared by multiple groups or clients, multi-tenancy lets you assign separate namespaces to each group for isolation and segregated management. QoS at the storage level lets you guarantee performance to each group.

\* A manual scan and rebuild of database is required to discover new objects in HyperStore.

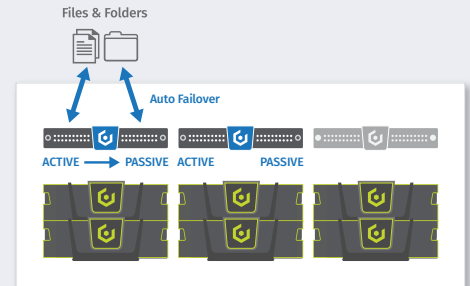
## SCALE-OUT FILE SERVICES

Independently scale performance and capacity with multiple NAS Controllers.



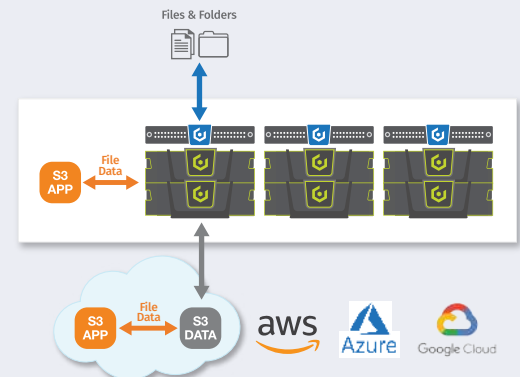
## HIGH AVAILABILITY

Multiple levels of redundancy for continuous uptime. Active-passive failover, plus multi-controller capability.



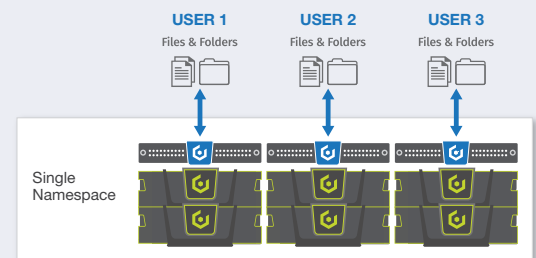
## CONVERGED DATA ACCESS & MULTI-CLOUD SUPPORT

Cloud-based and on-premises apps have direct access to file data.



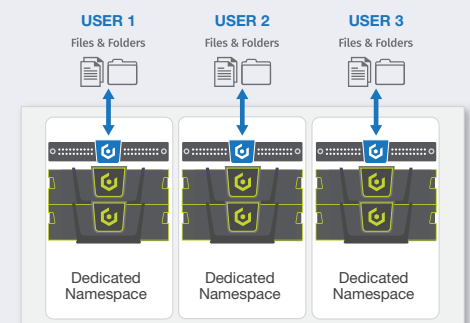
## GLOBAL NAMESPACE

Access a single namespace from multiple NAS Controllers to share information across multiple workgroups.



## MULTI-TENANCY

A single cluster can include multiple namespaces for isolation. QoS ensures storage performance for each user group.



CLOUDIAN CLUSTER

## HyperFile Capabilities

### Geo-Distribution

Replicate data to multiple locations for global content distribution. HyperFile can be deployed at remote sites, connected via WAN to a central HyperStore cluster.

### Data Migration Engine for Non-Disruptive Implementation

Integrated data migration capabilities help you execute non-disruptive data migration from conventional NAS to Cloudian HyperFile. All migration occurs as a background task, allowing continuous file access during the process.

### Local Caching

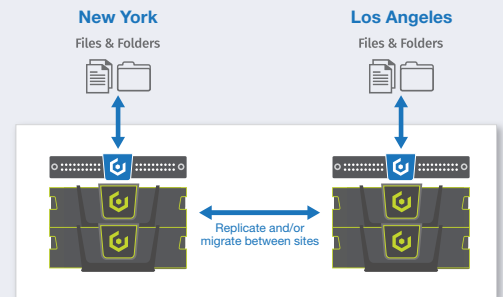
Each HyperFile NAS Controller includes local caching to accelerate read/write performance. You may select the appropriate cache size for your usage profile to optimise cost vs performance.

### Appliance or Virtual Machine

Cloudian HyperFile is available either as a pre-configured, fully-supported appliance, or as a virtual machine.

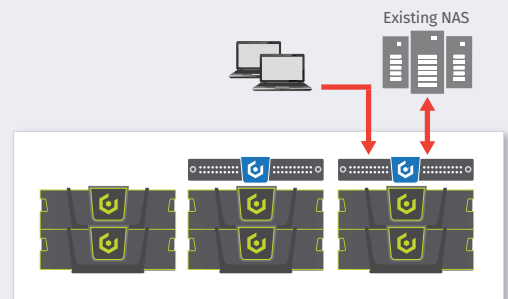
### GEO DISTRIBUTION

For content distribution or collaboration, local HyperFile NAS Controllers plus local storage ensure fast access. Integrated data management tools provide data replication and migration options.



### DATA MIGRATION ENGINE

Non-disruptive migration from existing NAS is managed as a background task. Selected files are migrated with uninterrupted user access.



## Features

### HyperFile Basic NAS Controller

#### Multi-Protocol Access

- SMB/NFS/FTP
- POSIX compliant

#### High Availability

- Active/passive HA
- Non-disruptive failover
- Asynchronous mirroring for DR

#### User Authentication

- Active Directory and LDAP

#### Acceleration Caching

- Read and write file caching

#### Converged Data Access Support

- Access files directly to/from object storage
- Allows S3-enabled applications to directly read/write file data

#### Data Migration to S3 Object Storage

- Legacy NAS/file server to HyperFile

#### Scalability

- Up to 64 namespaces per controller

### HyperFile Enterprise NAS Controller

All HyperFile Basic features, plus:

#### Snapshots

- Point-in-time copies of file systems
- For data protection of single files or entire file systems

#### Geo-Distribution

- Allows NAS Controllers to be located across multiple sites with access to a common namespace
- Global namespace
- Multi-controller access
- File versioning

### Additional Features

#### WORM

- Provides secure data retention
- Data immutability for regulatory compliance

## HyperFile 1000 Specifications

<b>Storage Protocols</b>	SMB v2.x, 3.0; NFS v3.x, 4.0
<b>Form Factor</b>	1 node in 1U rack mount chassis
<b>OS/Metadata Drives</b>	2x 960GB SSD
<b>Data Drives</b>	12 x 3.5" SAS HDD (7200RPM)
<b>ZIL/SLOG Drives</b>	2x 200GB SSD (25 DWPD)
<b>Data (Cache) Drives</b>	4TB, 8TB, 10TB, 12TB; up to 12 x 3.5" SAS HDD (7200RPM)
<b>Storage Capacity Raw</b>	48TB, 96TB, 120TB, 144TB
<b>Drive Sizes</b>	4TB
<b>Redundancy</b>	Hot swappable data drives 2x hot swappable power supplies
<b>CPU</b>	2x E5-2620 v4, 8 core
<b>Memory</b>	128GB
<b>Network Interfaces</b>	2x10Gbe (10BaseT or SFP+)
<b>Monitoring/Management</b>	CLI, GUI, API, IPMI
<b>Power Supply</b>	700W Platinum PSU, 1+1 redundancy, 100-240V AC
<b>Cooling</b>	(6) 40x56 dual rotor fans
<b>Dimensions</b>	17.6" x 1.7" x 35" / 448.2mm x 43.2mm x 881mm
<b>IO Ports</b>	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
<b>Operating Environment</b>	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



- Single node 1U chassis
- Up to 12x hot-swappable 3.5" disk drives
- Up to 4x hot-swappable 2.5" disk drives
- 10Gbe networking

## HyperFile 2000 Specifications

<b>Storage Protocols</b>	SMB v2.x, 3.0; NFS v3.x, 4.0
<b>Form Factor</b>	2 nodes in a 2U rack mount chassis
<b>OS Drives</b>	4x 128GB SATADOM (2 per node)
<b>Database Drives</b>	4x 960GB SAS SSD (2 per node)
<b>SLOG Drives</b>	2x 200GB SSD (25 DWPD)
<b>Data (Cache) Drives</b>	Up to 18x 2.5" SAS HDD
<b>Drive Sizes</b>	1TB, 2TB
<b>Redundancy</b>	Hot-swappable data drives; 2x hot swappable power supplies; no single point of failure; non-disruptive online software upgrades
<b>CPU</b>	4x E5-2620 v4 (2 per node)
<b>Memory</b>	256GB (128GB per node)
<b>Network Interfaces</b>	8x 10Gbe (10BaseT or SFP+, 4 per node)
<b>Monitoring/Management</b>	CLI, GUI, API, IPMI
<b>Power Supply</b>	1200W/1000W Titanium PSU, 1+1 redundancy, 100-240V AC
<b>Cooling</b>	(4) hot-swap 8cm midplane fans (2) counter-rotating 4cm fans per node
<b>Thermal Rating</b>	3794 BTU/hr (max)
<b>Dimensions</b>	17.2" x 3.5" x 25.25" / 437mm x 89mm x 641mm
<b>Weight</b>	30.4 Kg / 67 lbs
<b>IO Ports</b>	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
<b>Operating Environment</b>	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



- 2 nodes in single 2U chassis
- 24x hot-swappable 2.5" disk drives
- 10Gbe networking



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