



## Scale-out File Storage for the Cloud Era

### Solution Overview

To meet rapidly growing unstructured data volumes, businesses require an enterprise-class, scale-out NAS solution that not only supports common file and object protocols (NFS, SMB, S3) but guarantees data resilience and offers global storage efficiency. Furthermore, the solution needs to pave an easy pathway into the cloud. Cohesity provides a modern web-scale software-defined solution that eliminates complexities and higher management costs stemming from a fragmented and inefficient storage environment.

Cohesity DataPlatform is a hyperconverged secondary storage platform built upon Google-like web-scale principles that consolidate all file services workloads via multiprotocol access (NFS, SMB/CIFS and S3) on a single platform that spans from core, to edge, and into the cloud.

Cohesity guarantees data resiliency at scale with strict consistency and data efficiency with global variable block length deduplication and compression between different workloads, like VMs, physical machines, databases, NAS, file share, ect.

As a software-defined solution, DataPlatform natively integrates with AWS, Azure, and Google Cloud to leverage the economics and elasticity of the public cloud.

### Technical Overview

Cohesity DataPlatform provides the ability to create file shares that can be accessed via NFS or SMB/CIFS protocols, and are called DataPlatform “Views.” These Views are members of the DataPlatform “Storage Domain”, which are logical data pools with defined storage policies for efficiency (deduplication & compression), replication factor and/or erasure coding, encryption, and cloud tiering.

Cohesity SnapTree®, helps to make your data more productive by providing unlimited instant snapshots and zero-cost clones to accelerate application development (test/dev). Data security is maintained using protocol-specific permission and access controls. Active Directory and Kerberos authentication integration provide user and group directory and credential management. Additionally, QoS policies can be created that prioritize workloads across the cluster and advanced, integrated data protection can be enabled to protect NFS and SMB data.

## Key Benefits

### Hyperconverged

- Consolidate all file storage workloads on a single platform
- Easily and transparently scale both compute and capacity with building block “nodes”.
- Manage all your data through the protocol of your choice (NFS or SMB/CIFS)

### Web-scale

- Scale-out seamlessly to address data growth
- Expand easily with a pay-as-you-grow model
- Eliminate forklift upgrades with non-disruptive software and hardware upgrades
- Leverage commodity economics with software-defined storage that can be deployed on industry-standard hyperconverged nodes

### Cloud-Ready

- Deploy in your data center, private cloud, edge, or Microsoft Azure, AWS or Google Cloud
- Leverage on premises benefits in the cloud with native protocol access

### Storage Efficiency

- Gain unparalleled storage efficiency with true global dedupe, even across nodes
- Compress your cold or streaming data by 5x to 10x
- Make your storage environment elastic to address changing business requirements instantly

### Data Productivity

- Accelerate application development by instantly provisioning zero-cost clones
- Gain greater insight into your data with in-place analytics

## Key Features

Features	Description
NFSv3, CIFS, SMB2.x, SMB 3.0, and S3 APIs	Multiprotocol access to same data allows support of applications across all major enterprise operating systems including Microsoft Windows, Linux, and S3 API
Strict Consistency	Guaranteed data resiliency at scale
SnapTree® snapshots and clones	Limitless and fully-hydrated snapshots for granular Cohesity Views (file systems) as well as writable snapshot clones that provide instant creation, testing and development of view-based datasets
Web-scale File System	Limitless scalability, always-on availability, non-disruptive upgrades, pay-as-you-grow model
Hyperconverged Secondary Storage	Single platform for data protection, files, objects, test/dev, and analytics
Global deduplication and compression	Unparalleled storage efficiency with global deduplication and compression across all nodes of the cluster that significantly reduces data center footprint
Erasur coding	Data is protected against any individual node failure with erasure coding across nodes
Global indexing and search	File and object metadata is indexed upon ingest, enabling Google-like search across all files in a cluster
Mix-mode permission mapping	Cohesity manages the permission mapping and also natively integrates with Centrify. Centrify allows Cohesity to directly access the ID mapping information stored in Centrify's AD. This eliminates the need for LDAP proxy and simplifies the user experience.
Windows Active Directory and Kerberos Integration with Role-Based Access Control (RBAC)	Simplify user and group access to data utilizing credentials and permissions with Windows AD and Kerberos mechanisms. Create and manage custom Cohesity cluster administration roles for domain users and groups
External KMS integration	Snap-in for the Microsoft management console, which allows Cohesity file shares to be managed MMC
Quotas	Easily establish user and file system quotas with audit logs
Policy-based backup protection	Integrated data protection software and SnapTree technology is available to allow simplified data protection of objects with fully-hydrated snapshots
QoS	QoS policies are provided that optimize performance for different types of workloads
Encryption	Cohesity solution provides data-at-rest as well as data-in-flight encryption using industry standard 256-bit Advanced Encryption Standard (AES) algorithm. The platform is also FIPS 140-2 compliant
Write Once Read Many (WORM)	Enables long-term retention of data that have compliance controls mandating a policy that objects cannot be modified during the lock time
Replication for Disaster Recovery	Built-in, granular, and secure replication services for geo redundancy
Cloud integration (CloudArchive, CloudTier, CloudReplicate)	Archive into public cloud services for long-term retention. Utilize cloud tiering for transparent capacity expansion into the cloud. Replicate into the cloud for disaster recovery and test/dev

### Summary:

Cohesity's NFS and SMB/CIFS file services protocols provide advanced, enterprise-class data storage management that leverages Cohesity's DataPlatform to provide highly available, secure and efficient hyperconverged secondary storage.