



Cohesity® File Services - Solution Brief

Solution Overview

Many enterprises utilize network-attached file services (NAS) for their unstructured content. Such services require scalable, highly available and secure access via NFS and SMB protocols. Cohesity DataPlatform provides enterprise-class file services to address these needs and is a key element of Cohesity's hyperconverged secondary storage vision that also includes integrated data protection of virtual and physical hosts, test/dev use cases, object services and analytics.

Technical Features and Benefits

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 DataPlatform "View Boxes", which are logical data pools with defined storage policies for efficiency (deduplication & compression), replication factor and/or erasure coding, encryption and cloud tiering.

DataPlatform's native NFS and SMB protocols take full advantage of effectively limitless web-scale clustering and snapshot technologies. SnapTree® provides near limitless and instant snapshots and clones that enable common storage use cases for test/dev, compliance, discovery and recovery. 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

- Simplified integration with Microsoft Windows, Linux and other enterprise environments using industry standard CIFS/SMB and NFS protocols
- Secure access and monitoring of enterprise data through integration with Windows Active Directory and Kerberos Authentication and audit logging
- Operational availability and efficiency ensures uptime and reduces costs using Cohesity's DataPlatform clustered and highly available file system, SnapTree technology, integrated data protection and storage quotas

The screenshot displays the Cohesity DataPlatform web interface. At the top, the navigation menu includes 'Test & Dev', 'Analytics', 'Protection', 'Platform', and 'Monitoring'. The main content area is titled 'EngShare Details' and shows a 'View Box #0-001' created on 03/23/2017 at 11:29am. Below this, there are several configuration sections:

- Inherited:** Shows 'TestAndDev High' for Quota Policy.
- Data Protection:** Set to 'Yes'.
- Replication:** Set to 'No'.
- Access Based Enumeration:** Set to 'Yes'.

Two mount paths are listed:

- NFS Mount Path:** `tmp-cohesity-00-vip.tme-lab.eng.cohesity.com/EngShare`
- SMB Mount Path:** `\\tme-cohesity-00-vip.tme-lab.eng.cohesity.com/EngShare`

The 'View Protection' section is active, showing a 'Snapshots' tab. It includes a filter for 'File by' and a date range of '03/23/2017 - 03/23/2017'. A table below lists the protection jobs:

Snapshot Time	Protection Job	Stored	Actions
03/23/2017 11:30am	EngShareBackup	yes	[Actions]

At the bottom of the interface, there is a footer with copyright information: '© 2017 Cohesity | Support | Feedback | Help | Download | License Agreement | Contact Us'.

Feature	Benefit
NFSv3, SMB2.x & SMB 3.0	Both Pure Storage and Cohesity's appliances are designed to be up and running in under an hour, eliminating the need for timely and expensive professional services
SnapTree® snapshots and clones	Limitless and fully-hydrated snapshots for granular Cohesity Views (file systems) as well as writeable snapshot clones that provide instant creation, testing and development of view-based datasets
Windows Active Directory and Kerberos Integration	Simplify user and group access to data utilizing credentials and permissions with Windows AD and Kerberos mechanisms
Quotas	Easily establish policies for storage allocation to specific users and groups across the cluster.
Highly Available Clustered File System with Replication Factor (RF) and/or Erasure Coding (EC) protection options and optional encryption	Enterprise class system availability to ensure 24/7, always-on business operations that include transparent and non-disruptive upgrades and expansion. Software-based AES256 encryption provides enhanced data security as well as FIPS 140-2 compliance
Global Storage Efficiency Technologies (Deduplication & Compression)	Enhanced storage efficiency across the cluster significantly reduces physical storage footprint saving on power, cooling and datacenter footprint
Policy-based integrated backups	Integrated data protection software is available to allow simplified data protection of NFS and SMB data reducing the administrative overhead of storage and backup administrators
QoS	QoS policies are provided that optimize view performance for different types of workloads that optimize cluster performance for different workloads
WORM (Write-once-read-many)	Enables policy-based retention of data for compliance and other use cases
Replication for Disaster Recovery	Built-in, granular and secure replication services for individual views
Cloud integration (CloudArchive, CloudTier, CloudReplicate)	Archive Views into public cloud services for long-term retention. Utilize cloud tiering of View Boxes for transparent capacity expansion into the cloud. Replicate Views into the cloud for disaster recovery

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.