

# SharePoint® Sync

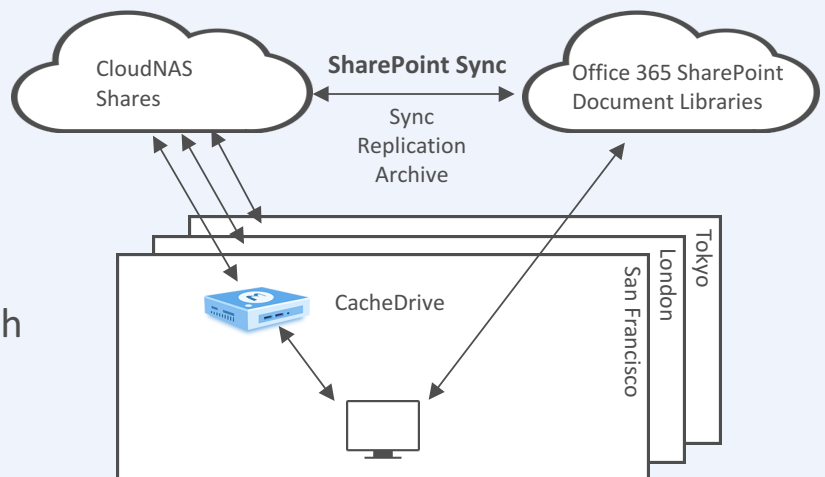
## Cloud-to-Cloud Sync between Office 365 SharePoint Document Library and CloudNAS Share

Morro Data CloudNAS modernizes enterprise storage with a scalable and distributed hybrid cloud architecture. Connected through a global file system, CacheDrive caching gateways are deployed on premises to store and sync office documents and design files while presenting the fast, secure, and familiar NAS interface to users. Applications for CloudNAS include multi-site sync, cloud backup and archive, and collaboration.

SharePoint Sync with CloudNAS enables SharePoint Online users to experience fast NAS access of SharePoint Document Library files with the added benefit of cloud-to-cloud (C2C) backup. Conversely by syncing with SharePoint, CloudNAS users can sync files with the Office 365 environment and its many applications.

### What It Does

Sync SharePoint Online Document Libraries with CloudNAS Shares



### Key Benefits

- ✓ **Cost Reduction** Reduce SharePoint storage cost with SharePoint-to-CloudNAS C2C archive
- ✓ **Business Continuity** Protect SharePoint files with SharePoint-to-CloudNAS C2C backup
- ✓ **Better Performance** Add NAS performance and mapped drive access to SharePoint with SharePoint-CloudNAS C2C sync
- ✓ **Rich Applications** Connect CloudNAS files to SharePoint in Office 365 and its many applications

## Office 365 Azure AD Authentication

CloudNAS supports Office 365 Azure AD user authentication. To use SharePoint Sync, CloudNAS must be configured with Azure AD authentication.

## SharePoint Document Library

Files are synced between CloudNAS shares and SharePoint Document Libraries. Shares and Document Libraries are mapped on a one-to-one basis. Both share and document library can pre-exist with separate sets of files before syncing as the files will be merged.

The screenshot shows the morro SharePoint Sync interface. On the left is a sidebar with navigation links: Dashboard, File System, Devices, Team, Apps (selected), Files, and Logs. The main content area is titled 'SharePoint' and 'SharePoint Sync'. It explains that Cloud-to-Cloud Sync between Office 365 SharePoint Document Library and CloudNAS Share is possible. It lists four steps to set up the sync: 1. Enable Azure AD in Team page. 2. Activate SharePoint with the admin's Azure AD account and consent for needed permissions. 3. Select SharePoint Team Site, Document Library, the mapped Share, and the syncing Gateway. 4. After mapping, read/write permission for the Team Site group will be added to the share's existing permissions. Below the steps is a table titled 'To set up:' showing the configuration for three syncs.

Team Site	Document Library	Gateway	Share	No Delete
PM-NJ-G1	Documents-PM	NJ-G40	PM-NJ-1	<input type="checkbox"/>
Dev-NJ-1	Documents-Dev	NJ-G40	Dev-NJ-2	<input type="checkbox"/>
HR-Fremont1	HR-Inside	Fremont-G80	HR-Fremont1	<input checked="" type="checkbox"/>

## Sync with No Delete

“No Delete” sync option is available to protect against inadvertent deletion of SharePoint files. When this option is selected, all SharePoint delete commands will be blocked when syncing to CloudNAS. This provides additional protection when SharePoint Sync is used to backup SharePoint files to CloudNAS.

## Share Permissions

A SharePoint Document Library is associated with a Team Site which is a user group with members. When a CloudNAS share is synced with a Document Library, the Team Site group members are given read/write permissions for the share by default. If the purpose of sync is to replicate or archive SharePoint files, it is suggested that permissions for members are modified to read only or no access.

## NAS Acceleration

Users can access SharePoint files through the CacheDrive NAS interface at LAN speed with network share name or by mapped network drive letter.

## Extend CloudNAS with Office 365

By connecting CloudNAS shares to SharePoint, CloudNAS users can now take advantage of the many applications available in the Office 365 environment. For example, once a CloudNAS share is synced with a SharePoint Document Library and the Document Library is mapped to the user's OneDrive for Business desktop or mobile app, file changes in either OneDrive or CloudNAS can appear on the other in seconds. This provides additional online and offline access options for CloudNAS users.

## Limitations

SharePoint Sync is designed to sync files between CloudNAS and Office 365 and does not provide seamless collaboration such as file locking and real-time document editing by multiple users between CloudNAS and Office 365.

# Did You Know

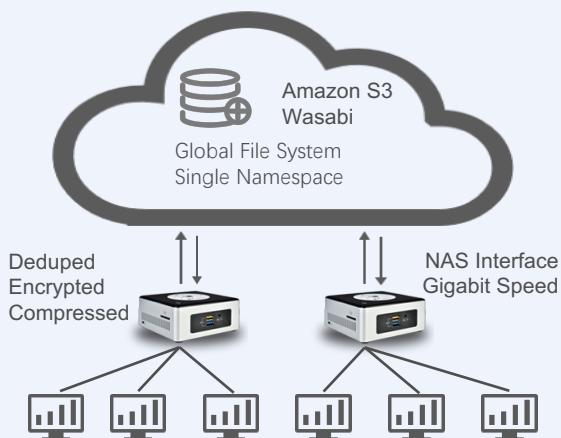
## Morro Global File System

The Morro global file system provides multi-site collaborative file services for sync, lock, transfer, and caching. Interfaces supported include SMB (Windows, Mac, Linux) and Web with ACL. At each CacheDrive, users complete unlimited file system is presented as a single namespace.

## CloudNAS Object Storage

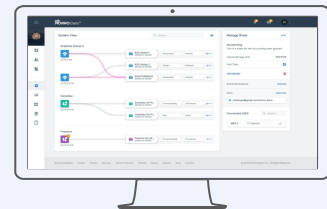
CloudNAS supports S3 compatible object storage including AWS S3 and Wasabi. CloudNAS enables a single interface to different storage tiers and cloud providers for collaboration/sync (primary), transfer/replication, backup, and archive.

### CloudNAS Multi-Site Sync



### Morro Cloud Manager

✓ Deploy	⚙ Manage	📊 Analyze
CacheDrives VM	storage shares users	usage cost Audit



## CloudNAS File Services

### Consolidated Data Management

- Unlimited cloud capacity
- Primary + Backup in one global namespace
- Multiple cloud providers to save cost
- Deduped and Encrypted

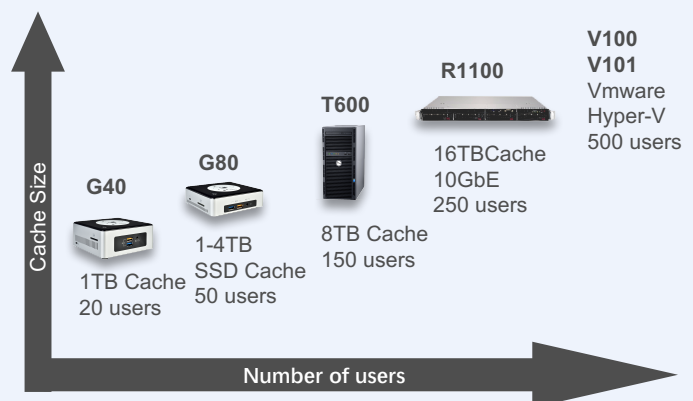
### Multi-Site File Sync and Lock

- NAS Interface for cloud data. No VPN.
- Global file locking
- Add CacheDrive for fast Disaster Recovery
- Large File Transfer

### Cloud-to-Cloud Sync

- Sync with SharePoint
- Backup to economic cloud storage
- Business Continuity
- User error recovery

### CloudNAS Gateways



## Morro Data CloudNAS Features

<b>File Services</b>	
Consolidated Data Management	NAS access with cloud reliability for primary and secondary data
Multi-Site Sync	Store files in cloud and sync files locally with cache. Add CacheDrive for easy expansion and instant disaster recovery.
Cloud-to-Cloud Sync	Sync and backup SharePoint and other cloud files
<b>Global File System</b>	
Single Namespace	Data in cloud and synced across gateways in a single namespace. Gateway cache enables high performance access to unlimited file system.
Unlimited Storage	Choice of Cloud Storage providers for primary and secondary data.
Storage Pool	Pool specifies where and how data is stored and synced. A pool contains multiple shares. Pool types include Sync, Replicate, and Gateway.
Share Access	Network share with user access and gateway access controls
Global File Locking	Lock Office and other application files across gateways for remote collaboration.
Disaster Recovery	Fast metadata sync for replacement gateway for full file system access.
File Versioning	Version control of 1, 30, 300, or unlimited versions.
Prefetch	Automatic download to destination gateway vs. on-demand download.
Deduplication	Files are de-duplicated to save cloud storage and upload bandwidth
Compression	Files are compressed to save cloud storage and upload bandwidth
Bandwidth Limiting	Control sync window and sync bandwidth per share
Share Mapping	Shares can be optionally mapped to gateways for security
Advanced SMB Share Controls	Options to enable oplocks and to use Extended Attributes to save streams
<b>Security</b>	
Encryption	Files are encrypted both in transit and at rest in cloud
Location Based Access	File access based on location and on/off premises
Web Access Security	File access permission replicated from Samba access
<b>User Management</b>	
Users and Groups	User and Group access permissions
Active Directory	Supports Microsoft Active Directory and Azure AD
User Permissions	Access permission per user/group/location (read only / RW / no access)
Location Based Permissions	File access based on Gateway (location) and on/off premises
Share Folder Security	Manage shared folder's ownership and access control list
<b>System Interface</b>	
NAS Interface	Present shares the same as NAS, with unlimited capacity.
Local Network Interface	Support SMB protocol version 2.0/2.1/3.0/3.1 working with Windows, Mac, and Linux clients
Client OS Support	Windows, MAC OSX, Linux, Major Browser
Web Interface	Team Portal for ACL-based file access and management Upload files and create folders to shares. Manage file versions, download, rename, copy, move, delete, purge files, create share link for files.
<b>Morro Cloud Manager</b>	
Gateway Management	Globally manage all gateways on MCM
File System Management	Globally manage all shares in a Single Namespace
Dashboard	Usage analytics and system diagram
Analytics	Storage usage, User activities, and Data transfer activities
Role Based Management	Business Admin, Global Admin, Regular User
Users and Groups	Users, Primary Group, Secondary Groups
Logs	By category – team/device/file system By severity – information/warning/error

<b>Apps</b>	
Cloud-to-Cloud Sync	Sync CloudNAS shares with SharePoint document library, Dropbox or OneDrive
Audit	Access history for retrospective investigation
<b>Gateway</b>	
CacheDrive Models	Desktop - G80 G40 Tower – T600 Rackmount – R1100 VM – V100 (Vmware) V101 (Hyper-V)
Device Information	CacheDrive Model number, serial number, firmware version, IP address, UUID and Cache Size
Cloud Caching	Files are uploaded to cloud through cache, presenting access window to unlimited file system size
Backup Target	Unlimited backup target through cache
NAS Interface	SMB network share interface same as NAS
Deduplication	Files are de-duplicated on gateway to save upload bandwidth
Compression	Files are compressed on gateway to save upload bandwidth
Encryption	Files are encrypted on gateway before upload
Upload Status	Monitor upload status, speed, remaining upload and files
Prefetch Status	Monitoring prefetch files, status, speed etc.
Advanced Device Option	Hostname and SMB version selection
Device Clock	Global time zone based device clock
Device Management	Shutdown, reboot, and firmware update from centralized cloud management UI
Green Computing	Low power consumption gateway replacing traditional NAS or file server
<b>Cloud Storage</b>	
Amazon S3 Regions	US (Oregon), UK (London), Germany (Frankfurt), Australia, Japan (Tokyo), Singapore, China (Beijing), China (Ningxia)
Wasabi (S3 Compatible)	US (East), US (West)
<b>Morro Connect Desktop App</b>	
Supported OS	Windows, MAC OS
Simple Connect	Auto start and login for persistent network share connection

## Contact and Copyright Information

[www.morrodata.com](http://www.morrodata.com)  
[sales@morrodata.com](mailto:sales@morrodata.com)

Morro Data, Morro logo, CloudNAS, CacheDrive and Cache and Sync are trademarks of Morro Data. Other names, brands, and logos may be claimed as the properties of others. Specifications are subjected to change without notice.  
V1.01 10042018 Copyright 2018© Morro Data All rights reserved.

