

A scenic photograph of Morro Rock, a large, rounded, light-colored rock formation, standing prominently on a sandy beach. The foreground is filled with low-lying green coastal vegetation growing in sandy soil. The ocean is visible in the background with white waves breaking on the shore. The sky is a clear, deep blue with a few wispy clouds. The text 'Morro Data Overview' is overlaid in a large, white, sans-serif font, centered horizontally and partially covering the rock and the beach.

Morro Data Overview

CloudNAS 4.1 Update

Morro Data

From NAS to CloudNAS – Insight & Innovation

Track Record

Paul Tien - founder and CEO of ReadyNAS (#1 SMB NAS, merged with Netgear 2007)

Core team - experts in file system, server architecture, cloud computing

Vision

CloudNAS - High Performance Global File Services with Simple IT

Recognitions

Capterra - user review 4.5 out of 5

SearchStorage - Data Storage Vendor to Watch 2018

ChannelPro - Vendor to Watch 2018

Global Data at LAN Speed

Morro Architecture

Hybrid Cloud Data Architecture

- ✓ Master data in cloud
- ✓ Local CacheDrive with NAS interface, LAN-speed, unlimited capacity
- ✓ Local processing for deduplication, compression, and encryption

Global File System

- ✓ Multi-site file sync and file lock
- ✓ Instant DR and expansion of sites
- ✓ Single namespace with multi-cloud for primary/backup/archive

Want to use cloud for data, but...

Morro solves two problems

Multi-site Sync

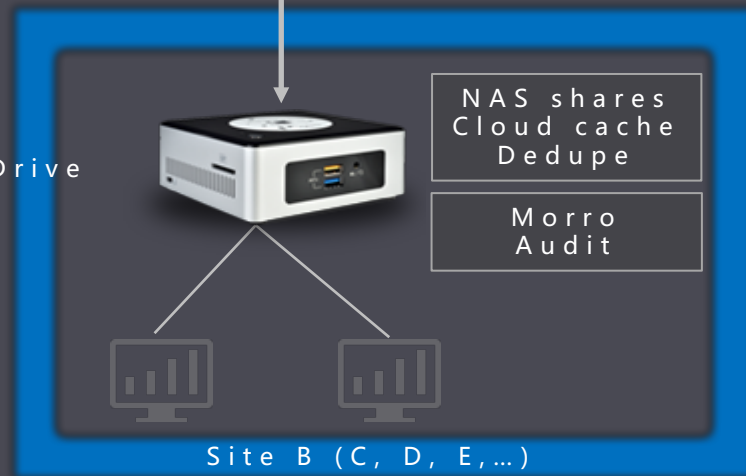
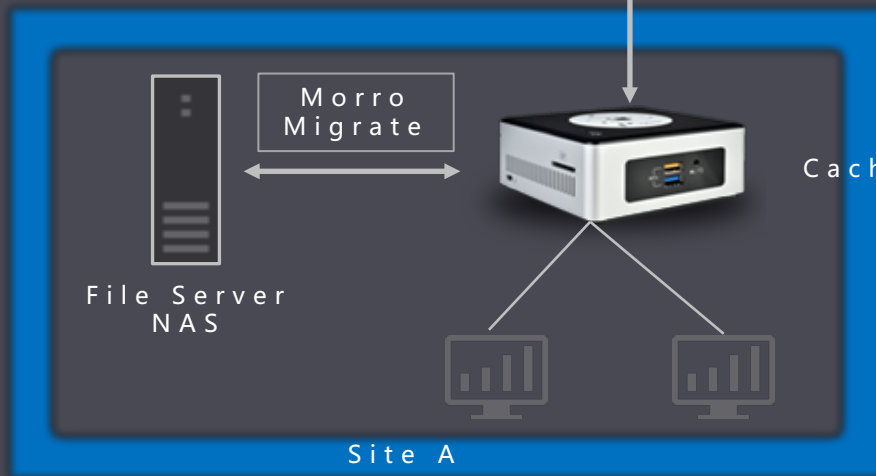
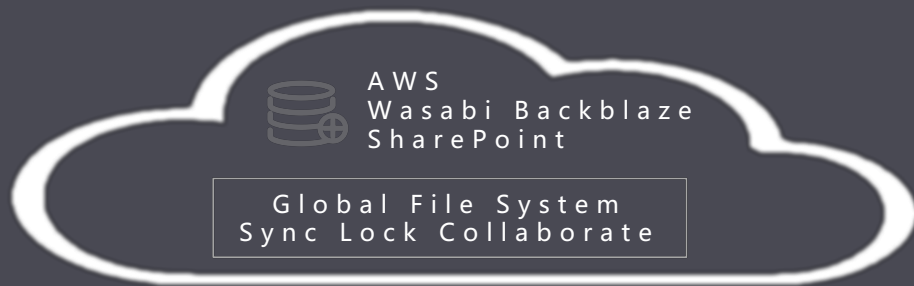
- Problem: want to keep the same file server interface, performance, Active Directory
- ✓ Morro: same file server interface from every office, and data safely stored in cloud

Backup to Cloud

- Problem: local backup storage is out of space, expensive, and unreliable
- ✓ Morro: unlimited backup target and cloud archive, fast restore

CloudNAS

Global Data
One
Virtual
Office



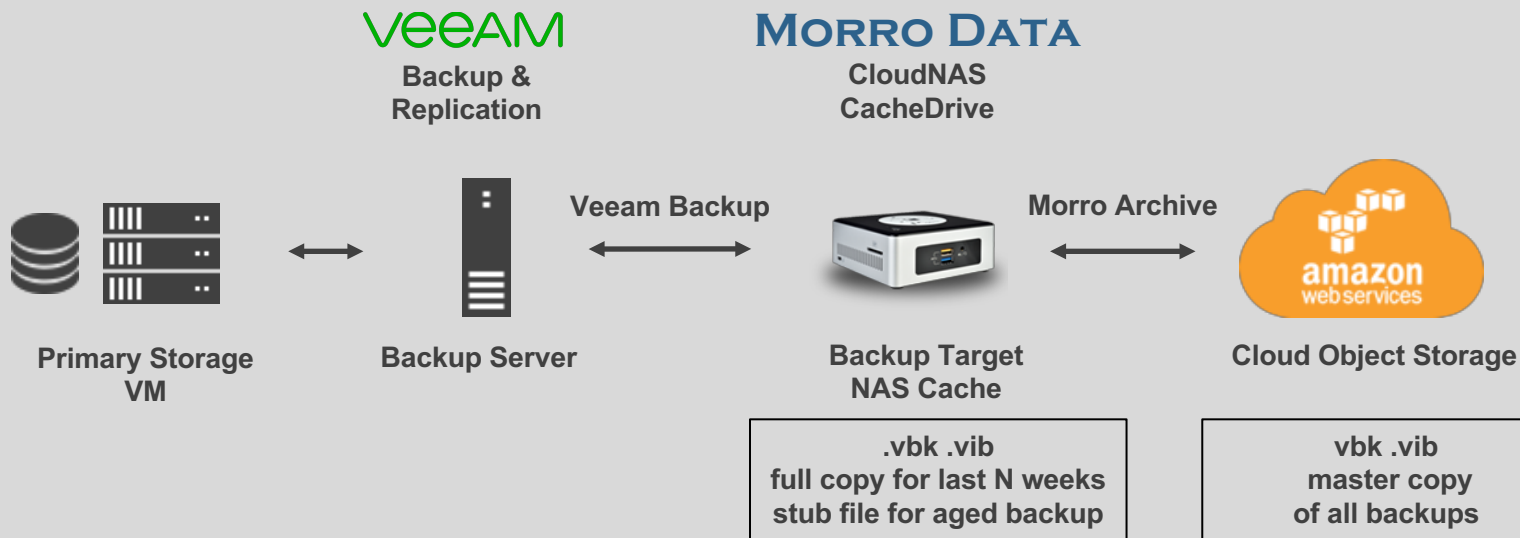
CloudNAS

Multi-site Sync

Customer Requirements	CloudNAS
<ul style="list-style-type: none">▪ Need to sync large files and many files for virtual office▪ NAS interface▪ Good performance▪ Active Directory▪ Need to add sites easily▪ Need Disaster Recovery in minutes <p>Optional Requirements</p> <ul style="list-style-type: none">▪ Need intelligent file locking for multiple users to work on the same design	<ul style="list-style-type: none">✓ Multi-site Sync large files and many files with Morro Global File System✓ NAS interface with unlimited capacity✓ LAN and SSD performance✓ AD, Azure AD, JumpCloud✓ Add sites easily by adding CacheDrive✓ Instant DR with new CacheDrive <ul style="list-style-type: none">✓ Sync and lock files for Autodesk Revit

CloudNAS

Backup to Cloud



CloudNAS

Backup to Cloud

Customer Requirements	CloudNAS
<ul style="list-style-type: none">• Need to backup large files and many files• NAS interface backup repository• Need to restore recent backups in minutes <p>VM Backup Requirements</p> <ul style="list-style-type: none">• Need to work with backup applications	<ul style="list-style-type: none">✓ Designed to backup large files and many files✓ Unlimited NAS backup target with automatic archive to cloud✓ Store recent backups in cache for quick restore <ul style="list-style-type: none">✓ Veeam✓ Many others

CloudNAS cloud-based management

Simple IT for Global Data

Morro
Cloud Manager



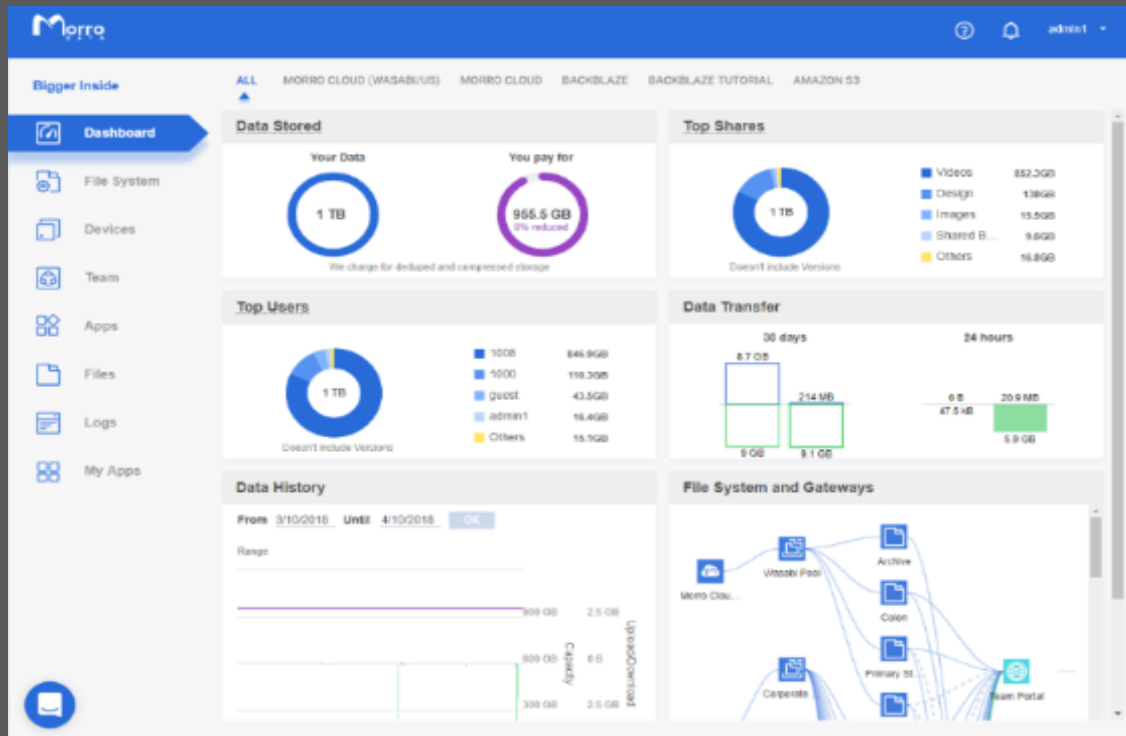
DEPLOY
CacheDrives



MANAGE
users
file system



ANALYZE
usage



CloudNAS Global File Services

Share types

Sync	Replicate	Archive
<ul style="list-style-type: none">✓ Multi-source, multi-destination✓ Master copy in cloud✓ Unlimited cache✓ For multi-site collaboration	<ul style="list-style-type: none">✓ Single-source, multi-destinations✓ Master copy in cloud✓ Unlimited cache✓ For offsite replication✓ Can convert to Sync share	<ul style="list-style-type: none">✓ Single-source, cloud (BYOS) destination✓ Master copy in cloud✓ Unlimited cache✓ For VM and files backup / archive

CloudNAS Security

Managing users, shares, gateways

Identity Management	Share Security	Gateway Permissions
<ul style="list-style-type: none">✓ Morro Users mode✓ Microsoft AD✓ Azure AD✓ JumpCloud (LDAP)	<ul style="list-style-type: none">✓ Extensive share permissions✓ ACL support✓ Versioning✓ File / folder recovery✓ Ransomware recovery	<ul style="list-style-type: none">✓ Location-based share mapping✓ RW / Ready-only / No-access per share per CacheDrive✓ Disable web access

SharePoint Sync

Office 365 Acceleration

What does it do?

Sync SharePoint Online document libraries with CloudNAS shares

Why?

For existing document libraries	For existing CloudNAS shares
<ul style="list-style-type: none">✓ Provide fast access from CacheDrive✓ Save cost by offloading inactive document libraries to Morro cloud storage	<ul style="list-style-type: none">✓ Sync CloudNAS files with SharePoint, and use OneDrive and other Office 365 apps

Morro Audit

What does it do?

CacheDrive logs access activities and uploads to cloud database. Admin can query in cloud portal for compliance and retroactive investigation.

Query Types	Database and Reports
By combination of <ul style="list-style-type: none">✓ date range✓ user✓ access (create, read, write, rename, delete)✓ gateway✓ file path✓ session	<ul style="list-style-type: none">✓ Dashboard view✓ Heat-map for frequency of activities✓ Query results stored in cloud or download

Data Migration to Cloud

How to migrate server data to cloud seamlessly?

Requirements	Morro Migrate
<ul style="list-style-type: none">▪ Want to keep the same file server interface and same performance after migration▪ Need to keep Active Directory▪ Want single namespace with unlimited capacity▪ Want to minimize downtime	<ul style="list-style-type: none">✓ NAS interface✓ Gigabit LAN performance✓ Active Directory, Azure AD, JumpCloud LDAP✓ Single namespace for primary/backup/archive✓ Allow file access during migration

Morro Migrate

What does it do?

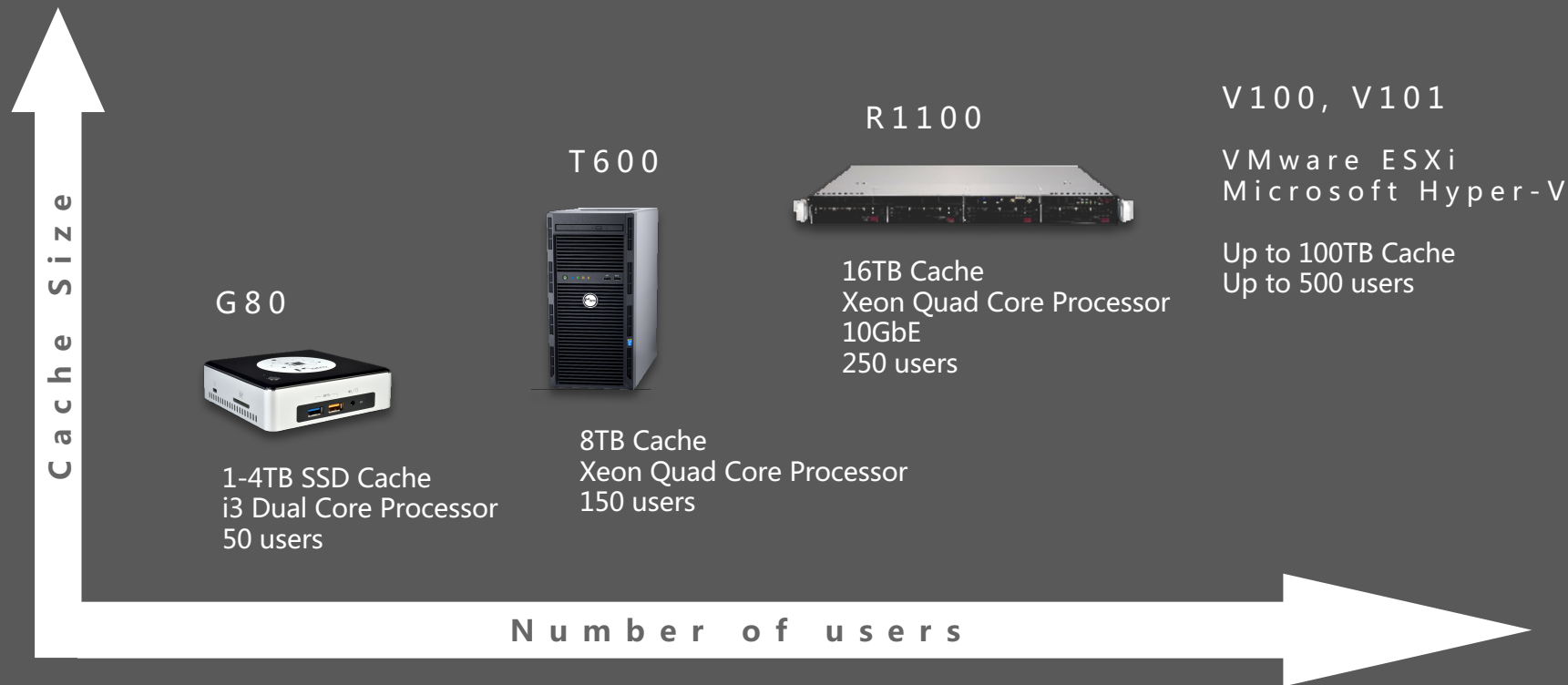
CacheDrive manages the migration of data from on premises source file server to its unlimited cache and upload to cloud.

How?

SCAN Phase
Traverse source file server, check permissions. Source file server can still be in normal use.
SEED Phase
Copy source metadata to CacheDrive. Source file server and CacheDrive share cannot be accessed.
UPLOAD Phase
Upload files to cloud. All file access is switched to CacheDrive which acts as proxy for files in the cloud, the source file server, and the cache.

CloudNAS CacheDrive

Enabling business of all sizes



User Story 1

Need to sync 5TB of files at 8 offices

Customer tried

- Windows server DFS Replication does not sync well
- Site-to-site replication with traditional NAS: only up to 2 sites
- Cloud-only solution – slow and expensive, no Active Directory

Chose Morro for

- Multi-site file sync
- NAS interface and Active Directory
- Ease of use

User Story 2

Replacing multiple file servers

Customer had issues with

- File Server out of capacity
- Hard drive and RAID maintenance, hidden errors
- 3-2-1 backup effort and offsite backup cost

Chose Morro for

- Unlimited capacity of CacheDrive, 11 9's durability of cloud storage
- Simple IT
- Instant disaster recovery

Industry Trend

Hybrid Cloud Storage is growing fast

Panzura, Nasuni, SoftNAS, Ctera

- Same technology segment: high-end enterprise market
- Less integration
- High deployment cost

Morro Data

- Pricing plans for small, medium, and large enterprises
- Multiple cloud providers: Amazon, Wasabi, Backblaze
- Integrated functions - SharePoint Sync, Morro Audit, Morro Migrate
- #1 User feedback: Ease of use

To Get Started

1) Purchase CacheDrive

- Physical – choose cache size and form factor, starting from \$499
- Virtual Machine – choose from VMware or Hyper-V, starting from \$499

2) Sign up for CloudNAS services

- Plan Tiers - Business / Enterprise / Design Collaboration
- Monthly or Annual pricing - by #gateways, #TB (no per user fee)

A scenic view of a beach with a large rock formation in the background and green coastal plants in the foreground. The text "Thank You" is overlaid in the center.

Thank You