



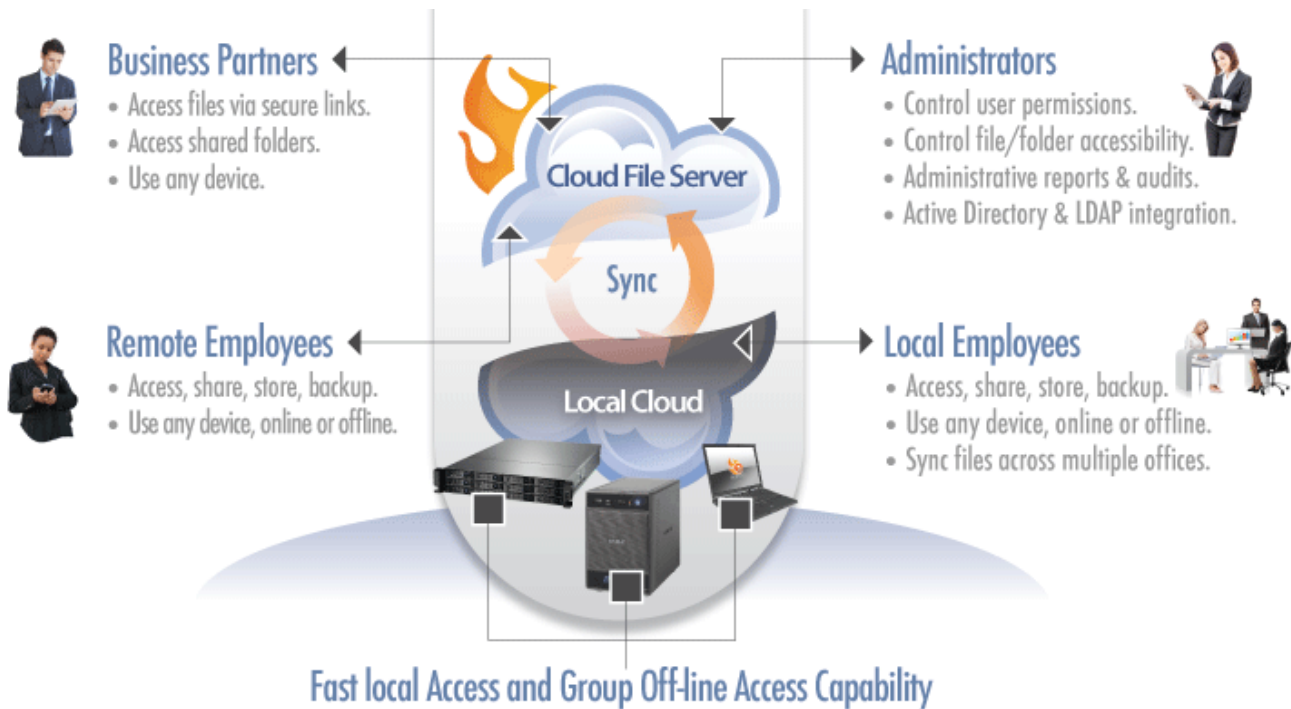
# Egnyte Cloud File Server

White Paper

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## Introduction

Egnyte Cloud File Server (CFS) is the software as a service layer that powers online file sharing and storage for businesses. Egnyte CFS paired with Egnyte Local Cloud creates a comprehensive **hybrid cloud solution**; combining the speed and security of local storage with the accessibility of the cloud.



Egnyte CFS is simple to deploy and provides a powerful file management interface for both IT administrators and end users. Once set up, administrators never have to worry about time-consuming maintenances or costly hardware upgrades. Egnyte CFS dramatically **reduces capital and operational expenses** for companies moving to the cloud.

Administrators are provided with all the necessary tools to set up, manage and audit every aspect of their deployment. Employees are provided with a wide range of file sharing and access methods, so they can stay productive **from anywhere, with any device**.

## Provisioning

### Self-service

Egnyte’s architecture is built for intuitive point and click provisioning. Customers can easily set up their unique company domain (e.g. Acme corporation chooses to use acmeinc.egnyte.com) through the registration webpage. Egnyte will automatically create the Cloud File Server of that specific chosen domain (e.g. acmeinc.egnyte.com) within seconds, fully ready for use.

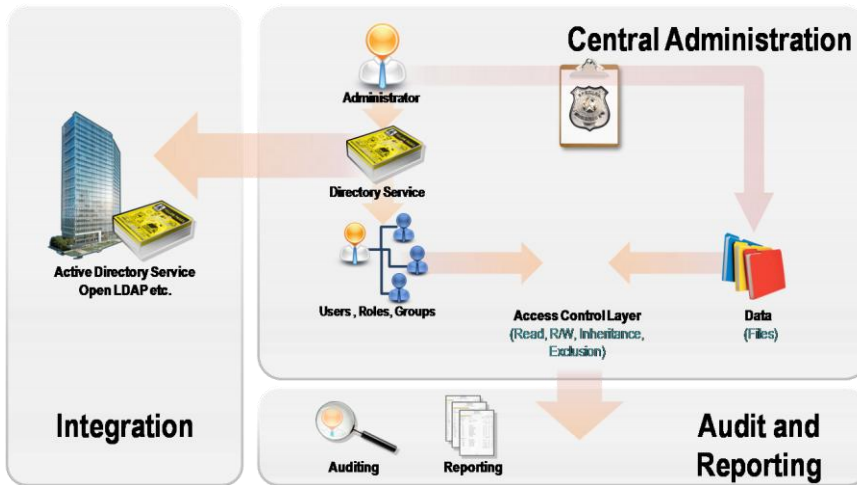
### Domain Segregation

Each company domain resides within an **independent storage silo**, specifically unique to that company. Each storage silo is completely independent and isolated from other silos, ensuring that the data of one customer is never cross-contaminated or de-duped with another.



This isolated storage model also keeps metadata, user information, and business policies strictly within each independent customer silo. This allows Egnyte to be deployed in any multi-tenant cloud infrastructure, while maintaining the **highest level of security and privacy** across all customers.

## Administration



## Central Administration

Egnyte **Central Administration** provides administrators with a powerful toolset to manage and monitor their Egnyte account. Administrators have the ability to create multi-tiered users and control folder/sub-folder permissions, ensuring that files are only accessible by authorized users. Administrators can also customize the web interface to present consistent branding for employees, customers and business partners.

## User Roles

Today’s business environment requires seamless collaboration across multiple teams, distributed offices and business partners, all within one central shared environment. Egnyte meets this collaboration need by offering multiple user roles to clearly distinguish administrators, employees and business partners.

	<b>Power Users</b>	<b>Power Users</b> are typically <b>employees</b> and have access to all capabilities of Egnyte
	<b>Standard Users</b>	<b>Standard Users</b> are typically <b>business partners</b> and are limited to web and mobile file access
	<b>Groups</b>	<b>Groups</b> are users assigned to specific <b>teams and projects</b>



Administrators have the ability to control and monitor user status, activity and permissions across the entire hybrid cloud environment. Creating new users, deactivating existing ones, and managing password policies are all easily done through the central administration interface.

## Authentication and AD Integration

IT administrators know that the first line of defense for data security is user authentication. Egnyte enables user authentication and permission enforcement at every access point, ensuring that **only users with the right credentials can access the domain**.

For large organizations with existing authentication systems, businesses can choose to integrate their Egnyte account directly with their Active Directory. This allows companies to embrace the cloud without decentralizing user management. As users are created and deleted from Active Directory, they can be automatically granted or denied access to Egnyte cloud services. The full range of password and lockout policies set in Active Directory are enforced throughout all Egnyte access points (e.g. after 3 failed login attempts within a 15 minute window, the user account is locked out).

Egnyte also supports Single Sign On (SSO) through SAML 2.0 and partner integrations with a host of leading identity management solutions. This allows businesses to seamlessly integrate Egnyte into their existing workflow.

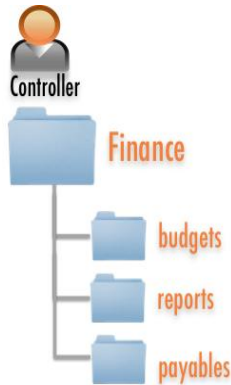
## Access Control Layer (permissions)

Egnyte provides the most advanced access controls for assigning and managing folder and sub-folder permissions. These access controls are a critical to the implementation and migration of existing data infrastructures. Administrators have the ability to **set granular folder and sub-folder permissions for each individual user** (none, read only, read/write, read/write/delete).

Inheritance

Folder permissions set at the parent levels in a hierarchy automatically inherit to sub-folders.

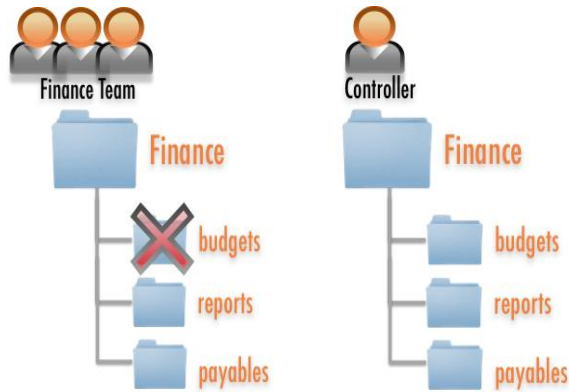
*Example: The Corporate Controller has access to the Finance parent folder, which also means access to the sub-folders within.*



Exclusion

Permissions can be excluded at any level of a deep folder hierarchy.

*Example: The Finance parent folder has 3 sub-folders: reports, budgets and payables. The entire finance team needs access to the Finance folder, with the exception of the budgets sub-folder. The budgets sub-folder should only be accessible by the Corporate Controller.*



### Group management

Egnyte provides group management functionality, allowing these permissions to be easily set for an entire team (e.g. the finance team) within a company. Groups can include any combination of employees and business partners to meet the collaboration needs of any department.








No matter what location or access method (web browser, mapped drive, secure FTP, desktop sync, mobile/tablet app) **permissions are always uniformly enforced**. Even when accessing shared data through local storage, permissions levels are still applied at all access points.

## Policy-based Retention

To ensure business continuity, regulatory and compliance needs, Egnyte offers administrators with configurable data retention policies. Administrators have the option to retain as many file versions as needed, to keep an ongoing file history as changes are made. When files are deleted by users (accidentally or intentionally), administrators can restore files and past versions of files from the trash folder. With Egnyte, administrators have full control over data retention, deletion and recovery settings, adhering to any business policy.

## Audit Reporting

Egnyte **Audit Reporting** helps businesses understand usage and monitor activity. Egnyte offers administrators a wide range of granular reporting tools to provide complete visibility of their domain.

Reports	
 <b>File Server Size Report</b>	- see how much storage is being used in each directory
 <b>Folder Size Report</b>	- see how much space is being used in each folder
 <b>Link Summary Report</b>	- view and manage all active and expired file links
 <b>Local Cloud Status Report</b> <span style="color: red;">beta</span>	- monitor Local Cloud usage of every user
 <b>Lock Summary Report</b>	- see what files and folders are actively locked
 <b>User Permission Report</b>	- view all users and corresponding folder permissions
 <b>Audit Report</b>	- generate complete audit trail of all file activities

Right: Sample User Permission Report, showing the list of users, and their folder permission level

Bottom: Sample Link Summary Report, showing all active file links

User Permission Report		
Name	Folder	Permission
Lars Christensen	/Shared/Customer Projects	Read/Write
Janice Wong	/Shared/Customer Projects/Fishnet Gaming	Read/Write
Don David	/Shared/Customer Projects/Fishnet Gaming	Read/Write
John Smith	/Shared/Documents/Q1 Results	Read/Write/Delete
John Smith	/Shared/Finance	Read/Write/Delete
John Smith	/Shared/Documents/Q2 Tracking	Read/Write/Delete
John Smith	/Shared/Customer Projects	Read/Write/Delete
Atticus Tysen	/Shared/Customer Projects/Fishnet Gaming	Read/Write/Delete

Reports » Link Summary Report					
Created By	Item Name	Type	Creation Date	Expires	Link
John Smith	Zodiac Solution Overview.ppt	File	7/28/11	Never	<a href="https://acme.egnyte.com/h-s/20090521/00...">https://acme.egnyte.com/h-s/20090521/00...</a>
John Smith	Fishnet Solution Architecture.ppt	File	7/28/11	Never	<a href="https://acme.egnyte.com/h-s/20090715/00...">https://acme.egnyte.com/h-s/20090715/00...</a>
John Smith	Fishnet Solution Architecture.ppt	File	7/28/11	Never	<a href="https://acme.egnyte.com/h-s/20090520/00...">https://acme.egnyte.com/h-s/20090520/00...</a>
John Smith		File	7/28/11	Never	<a href="https://acme.egnyte.com/h-s/20090715/01...">https://acme.egnyte.com/h-s/20090715/01...</a>
John Smith	Design Architecture.ppt	File	7/28/11	Never	<a href="https://acme.egnyte.com/h-s/20090520/02...">https://acme.egnyte.com/h-s/20090520/02...</a>
John Smith	Hydrangeas.jpg	File	12/4/11	1 click	<a href="https://acme.egnyte.com/h-s/20111204/03...">https://acme.egnyte.com/h-s/20111204/03...</a>
John Smith	/Shared/Quotes	Folder	7/28/11	Never	<a href="https://acme.egnyte.com/publicController.d...">https://acme.egnyte.com/publicController.d...</a>
John Smith	Zodiac Solution Overview.ppt	File	7/28/11	Never	<a href="https://acme.egnyte.com/h-s/20090520/03...">https://acme.egnyte.com/h-s/20090520/03...</a>
John Smith	Acme Solution for Fishnet gamin...	File	8/19/11	1 click	<a href="https://acme.egnyte.com/h-s/20110819/04...">https://acme.egnyte.com/h-s/20110819/04...</a>

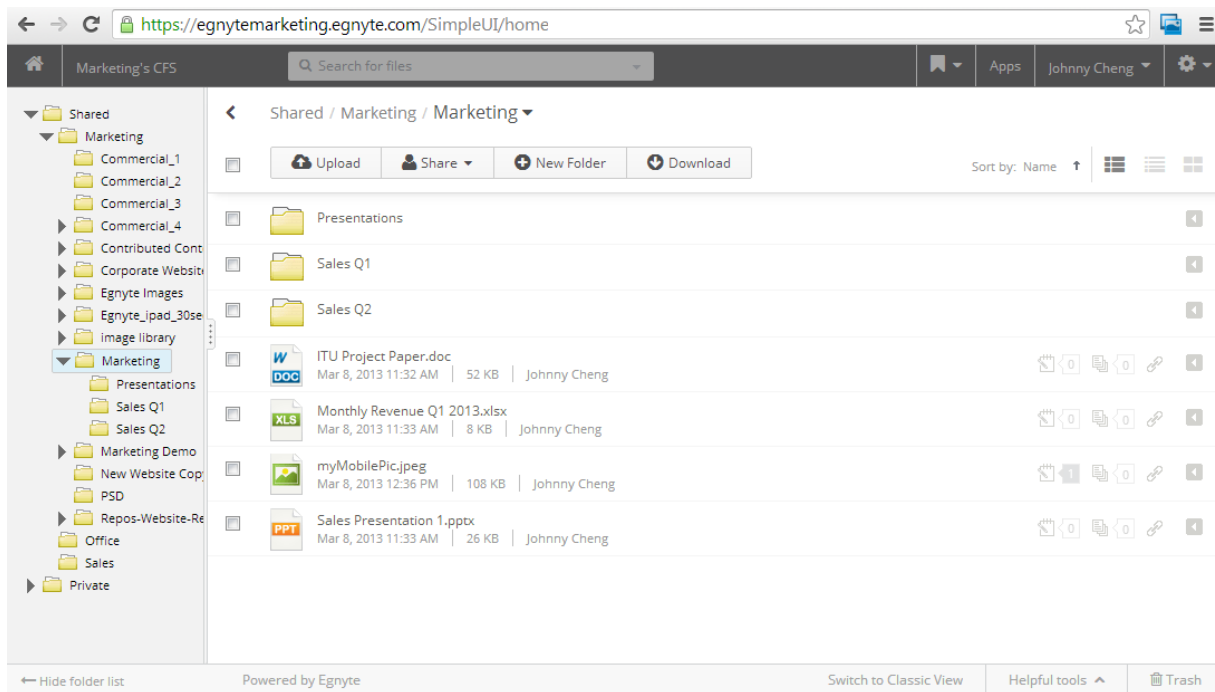
These auditing capabilities combined with EgnYTE's central administration, provides administrators with over a hundred controls and options to customize the domain to meet their business needs. This level of control and visibility is critical to the compliance and regulatory requirements of stringent industries such as healthcare and financial services.



## User Access and Applications

### Web Browser Access

Egnyte's web interface allows users to download, upload and share files from any standard web browser. The web interface is also the primary tool for folder/file management, collaboration and user permission control.

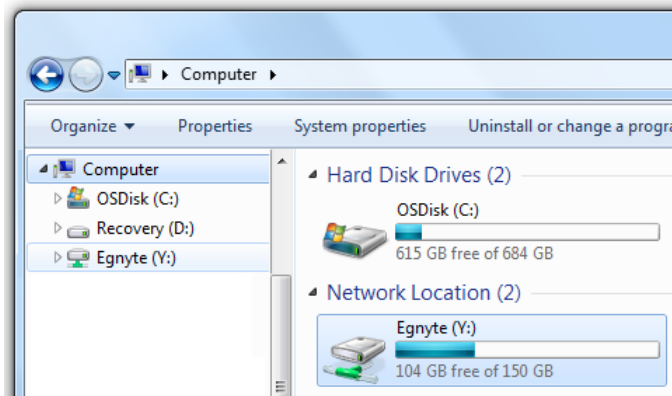


From the Web Browser interface, users are able to:

- **Upload** files of any size using the single file uploader or Java multi-file uploader
- **Download** and access any file directly from the Egnyte account
- **Share** files and folders using file links or email attachments
- **Manage** and view folders and sub-folders
- **Search** for files and folders
- **Lock** and unlock files for editing and collaboration
- **Control** folder permissions where users have been granted admin rights

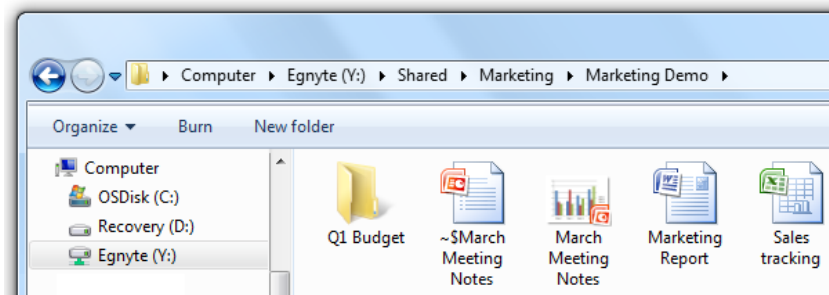
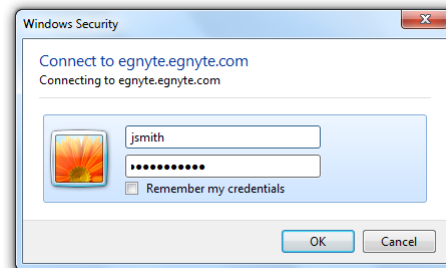
## Desktop Access (map drive)

Egnyte offers users a simple and familiar tool for accessing files. By mapping a drive to their Egnyte domain, users can open and manage their files/folders just like any other local drive on their PC or Mac. Mapped drive also promotes collaboration through real-time editing, automatic file versioning and file locking. User permissions are enforced at all times, ensuring that only the right users have access to the right files.



**Simplicity:** Egnyte mapped drive shows up just like any local drive. Simple access and usability with zero learning curve.

**Security:** Permission settings from the Egnyte account are always enforced. All users must log in and authenticate.



**Collaboration:** Folder structure and file changes are automatically reflected on the Egnyte account in real time.

## FTP

Despite the advent of cloud storage solutions, traditional file transfer protocols (FTP) and secure variations (FTPS, FTPES) continue to be widely used for large data transfer within enterprises. Numerous workplace applications and businesses processes still support FTP for sending and receiving files. By providing a unified FTP service, Egnyte offers enterprises a solution to integrate legacy applications and processes into their cloud storage. Any standard FTP client can be used to directly interface with the Egnyte Cloud File Server, allowing fast large file transfers. All user access permissions and authentication policies are enforced through the FTP client.

## Storage Sync (on-premise access)

Egnyte Storage provides businesses with fast offline file access and cross-office collaboration. Egnyte's hybrid technology synchronizes data between on-premise systems and the cloud file server, providing file access, storage, sharing and backup. This scalable solution provides businesses of any size with one centralized access point for all employees.

With Egnyte Storage Sync, files on any local storage device (SAN or NAS) can be synced online, allowing users to store, share and access from anywhere, with any device. Storage Sync utilizes the Cloud File Server to combine the accessibility of cloud with "in-the-office" performance of local storage.

## Mobile Access

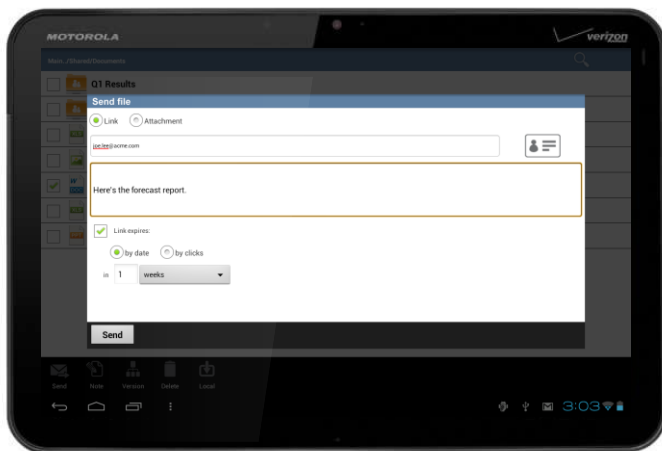
The Egnyte mobile app provides all the benefits of Egnyte on any tablet or mobile devices. Access, share, upload and manage files from any **iOS** (iPhone, iPad), **webOS** (Touchpad), **Android** (Nook, Kindle, Xoom, Galaxy, Thinkpad) and **Windows** mobile; files can even be downloaded and saved for offline access.



Access, search, bookmark, and manage files/folders directly from mobile devices. Any file creations, edits and permissions are automatically synced to Egnyte Cloud File Server.



Download and view any Word, PowerPoint, Excel, PDF, and Picture. Downloaded documents can be stored locally for offline access, printing, projecting and editing.



Easily share files with team members and business partners using file links or email attachments. For extra file security, file link expirations can be set (by date or clicks).

## File Sharing and Collaboration Services

Whether it's project managers, contractors or the sales team, everyone needs a fast and reliable way to collaborate. Egnyte's unique file sharing solution connects multiple offices and remote teams making them feel like **they're working from one location**. Automatic file versioning ensures that when a change is made to a file, a newer version is automatically created and added to the folder containing previous versions. All file versions are time-stamped and include the name of the user who made changes to the file. Administrators can also control how many versions are retained at any time.

### File Locking

Users can manually lock files for modification (file check-out) through the web browser or automatically through mapped drive. Once a file is locked (checked out), other users can view the file, but cannot edit or upload changes until the file has been unlocked (file check-in).

### Automatic File Versioning

Egnyte automatically versions files as they change. Files are never overwritten, providing a complete audit trail of who made a change and when it was made. File versions carry full audit information including authorship and time of modification.

### File Change Notifications

As new files are added or existing ones changed, Egnyte automatically notifies users that have access to those files. Each user can specify the notification frequency indicating how often they would like to be informed of file changes.

### Sending File and Folder Links

Sending files through email attachments is cumbersome and limiting. Egnyte provides users with easy alternative to send files of any type and size using URL links. Users have the option to set file expiration

dates and recipient open notifications, while administrators have the ability to monitor and wipe any outstanding file links.

## Full Indexing and Search

Egnyte indexes all file metadata and textual content, enabling file search throughout the entire folder hierarchy. Users not only have the ability to search their own uploaded files, but also files uploaded by peers that they have access to.



## API and Integrations

### API Library

By providing a rich set of REST API's, Egnyte lets customers access and control their cloud file storage from other workplace applications. Customers can directly upload or download files to their Egnyte domain from third-party applications or customer portals. They can also provision or manage users using the API.

The API's cover a range of functions:

1. User provisioning and management
2. File/folder browsing
3. File upload and download
4. File/folder management (move, copy, delete, rename)
5. File/folder sharing and collaboration

The REST API's honor authentication policies and folder permissions set within the cloud storage (e.g. if the API authenticates as an employee within the sales organization, they will not have access to folders outside of their department, such as the finance directory).

### Technology Integrations

Egnyte is privileged to work and integrate with industry technology leaders, to provide comprehensive and trusted solutions to SMBs and large organizations.



Egnyte **Office Local Cloud** transforms any **NETGEAR ReadyNAS** device into a full-featured file server



Egnyte **Enterprise Local Cloud** is deployed as a virtual appliance on any **VMware server**.



**QuickOffice** and Egnyte provides users with the power to **Access, Edit, and Share** Microsoft Office documents from anywhere on their iPad or Android devices.



Apple

Egnyte **Enterprise Mobile App** lets users access, share, store and manage files from any iPhone and iPad.



Android

Egnyte **Enterprise Mobile App** lets users access, share, store and manage files from any Android mobile device.



Egnyte **Enterprise Mobile App** lets users access, share, store and manage files from any Windows mobile device.



Google Docs

Users can access their **Google Docs** in their Egnyte account, as well as **view/edit** documents using Google Docs.



Microsoft Outlook

Enable **file sharing** directly into the **Microsoft Outlook** client. Send files and folders as links or attachments within Outlook.



Simple **file access, sharing and storage** within **Salesforce** accounts with no limits to capacity or file size.



Enhanced **data encryption**, providing comprehensive data protection for Sophos and Egnyte users.



Windows Active Directory

Egnyte integrates with existing **Active Directory** services to provide in-house **user authentication**.



Egnyte integrates with **VMware Horizon** Application Manager to provide users with **single sign-on authentication**.



Egnyte integrates with **Citrix CloudGateway** to provide users with **single sign-on authentication**.

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## About Egnyte

Over 1 billion files are shared daily by businesses using Egnyte's unique technology, which provides the speed and security of local storage with the accessibility of the cloud. Users can easily store, share, access and backup files, while IT has the centralized administration and control to enforce business policies. Founded in 2007, Egnyte is based in Mountain View, California and is a privately held company backed by venture capital firms Google Ventures, Kleiner Perkins Caufield & Byers, Floodgate Fund, and Polaris Venture Partners. For more information, please visit <http://www.egnyte.com> or call **1-877-7EGNYTE**.