

EXHIBIT B

US 7,313,580 Vittorio
VS
Egnyte Storage Sync

US 7,313,580 Vittorio VS Egnyte Storage Sync

US7313580B2
United States

 Download PDF  Find Prior Art  Similar

Inventor: [Domenico Vellante](#), [Vittorio Luigi Brioschi](#)
Current Assignee : [Brioschi Vittorio Luigi Enrico Mr](#)

Worldwide applications
2005 • [US](#) 2006 • [CA EP WO](#) 2007 • [US US](#)

Application US11/052,198 events ⓘ
2005-02-08 • Application filed by Individual
2005-02-08 • Priority to US11/052,198
2005-09-08 • Publication of US20050198132A1
2006-02-07 • Priority to CA002596406A
2006-02-07 • Priority to EP06710374A
2006-02-07 • Priority to PCT/IB2006/000287
2007-10-10 • Priority to US11/907,274
2007-10-10 • Priority to US11/907,281
2007-12-25 • Application granted
2007-12-25 • Publication of US7313580B2
2025-08-27 • Assigned to BRIOSCHI, VITTORIO LUIGI ENRICO, MR. ⓘ
Status • Active
2026-03-26 • Adjusted expiration
Hide events ^

Info: [Patent citations \(17\)](#), [Cited by \(20\)](#), [Legal events](#), [Similar documents](#), [Priority and Related Applications](#)
External links: [USPTO](#), [USPTO PatentCenter](#), [USPTO Assignment](#), [Espacenet](#), [Global Dossier](#), [Discuss](#)

Related Products

- The following chart is based on the review of Egnyte Storage Sync in Egnyte's Web Site.



Total File Server Replacement

Speed, security, and governance without the sacrifice

<https://www.egnyte.com/file-server/cloud-based-server>

Related Products

- The following chart is based on the review of Egnyte's Web Site.

INTERNET ARCHIVE



Explore more than 1 trillion [web pages](#) saved over time

[DONATE](#)

<https://www.egnyte.com/>

Calendar

[Collections](#)

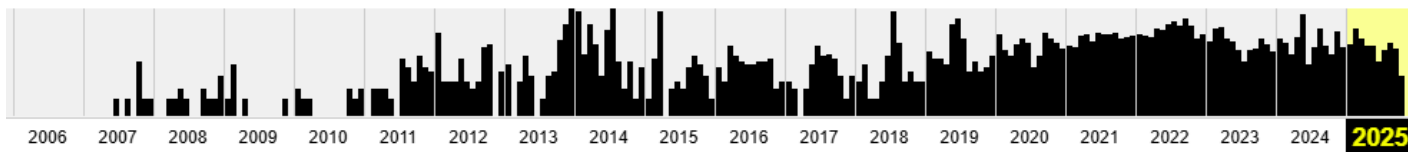
[Changes](#)

[Summary](#)

[Site Map](#)

[URLs](#)

Saved **2,697 times** between [June 17, 2007](#) and [October 17, 2025](#).



https://web.archive.org/web/20250000000000*/https://www.egnyte.com/

US7313580 Claim 1

1. A method for sharing information between a group of users, wherein decentralized storage of a shared electronic document is provided where each user has a copy of the document, in which each of the users may make changes by incorporating or modifying information, where the exchange of data for synchronizing the document belonging to a given user with the rest by making them co-sharers of such changes comprises the following stages:

an operation for saving the information in the local storage unit where only the new resources which are incorporated into the document, or those modified, are also stored in an information packet which is available in a spooler or waiting area for data to sent

a synchronization order is issued which consists of encoding, packaging and sequencing of the data to adapt it to the transport manager

sending to the rest of the users included in the list of users of all packets from the spooler encoded, with the dispatch being made from the computer which issues the synchronization order to each of the remaining computers

receipt of the packets by the rest of the computers with decoding of them taking place to transform them into packets of resources to be incorporated, according to the sending sequence, into the copies of the document of the users receiving them

generation of the resources which allow the document to be updated from the decoded packet

transfer of the new document to the information manager for processing where all users have an exact copy of the updated document when all users carry out the synchronization order.

US7313580 Claim 1

[1.P1] **A method for sharing information between a group of users**

Egnyte positions Storage Sync as collaborative file-sharing: many users access shared files on Storage Sync and in the cloud. This means there is a method for sharing information between a group of users when Storage Sync is used as intended in a team / office.

Egnyte describes a hybrid file server that supports collaboration among multiple users, for example, **“Egnyte provides the ability to store, share, access and back up files using an online file server ...”** and **“Storage Sync is Egnyte’s hybrid file-sharing and collaboration technology.”**

Egnyte provides the ability to store, share, access and back up files using an online file server that can be synchronized with local storage. This solution delivers speed and security as well as supporting data governance programs without the setup cost and administrative complexity of traditional file servers. Egnyte’s integrated, holistic approach is uniquely qualified to address all **key areas of data governance** from architecture and security to quality and management.

<https://www.egnyte.com/file-server/cloud-based-server>

Storage Sync is Egnyte’s hybrid file-sharing and collaboration technology. With Egnyte Storage Sync, files on any local storage device (direct-attached, Small Form Factor devices, or SAN) can be synced with Egnyte Cloud, thereby enabling users to store, share and access files seamlessly across storage systems and the cloud.

<https://helpdesk.egnyte.com/hc/en-us/articles/222368927-Storage-Sync-Installers>

US7313580 Claim 1

[1.P2] **wherein decentralized storage of a shared electronic document is provided where each user has a copy of the document,**

Storage Sync maintains a local copy on the Hyper-V VM and a cloud copy in Egnyte. Each user can access a copy of the shared document from their mapped drive or from the cloud. In practical deployments, multiple users at different endpoints hold synchronized copies of the same shared document—this is a decentralized storage model (local device copies + cloud superset). For Storage Sync / Hyper-V **“Business files can be stored either locally inside the virtual machine ...”** and **“On-premise users can map a network drive (CIFS) ... and access the local copy of files stored on the Storage Sync device. Remote users can access the cloud copy of these files.”** For Hybrid cloud **“Egnyte automatically syncs back with a centralized cloud repository so remote users can always access the latest version of their files anywhere.”**

Teams with predominantly Windows operating environments can enjoy a hybrid-cloud solution. This solution is intended for small teams in a remote office with limited IT resources. Business files can be stored either locally inside the virtual machine or can be mounted inside the virtual machine if there is an existing SAN disk. On-premise users can map a network drive (CIFS) from their computers and access the local copy of files stored on the Storage Sync device. Remote users can access the cloud copy of these files.

<https://helpdesk.egnyte.com/hc/en-us/articles/218994347-Storage-Sync-Overview>

With Egnyte, teams working on large files – or at remote job sites with slow or inconsistent connectivity – can dramatically increase productivity by using a local storage appliance as their primary point of access. Egnyte automatically syncs back with a centralized cloud repository so remote users can always access the latest version of their files anywhere.

<https://www.egnyte.com/cloud-deployment-solutions>

US7313580 Claim 1

[1.P3] **in which each of the users may make changes by incorporating or modifying information**

Storage Sync exposes files via CIFS/SMB shares so users open, edit, and save common documents. Those edits modify the shared files in the Storage Sync volume and ultimately the cloud. This corresponds to **each of the users may make changes by incorporating or modifying information** in a shared document. Egnyte emphasizes user editing and updates to shared files for example, **“Users can work on these files, make changes and save them ... and sync the files to the cloud so the files can be accessed from any location.”** (Storage Sync use case – construction; although from a partner page, it describes the same Storage Sync behavior.). For Cloud file server, Egnyte says, **“Egnyte provides powerful capabilities to enable employees and partners to collaborate. Egnyte cloud file server enables the company to set up a central scheme for sharing folders and files.”** and **“Users with folder admin rights have the ability to set up shared sub-folders and grant access permissions”**

Egnyte provides powerful capabilities to enable employees and partners to collaborate.
Egnyte cloud file server enables the company to set up a central scheme for sharing folders and files.

Users with folder admin rights have the ability to set up shared sub-folders and grant access permissions to teams and individuals. For example, the administrator can define a departmental folder for Finance, one for Sales and Marketing, etc.

<https://www.egnyte.com/file-server/cloud-based-server>

Common use case: A large construction company sets up a trailer on a work site, which provides limited bandwidth for these teams. Instead of printing large CAD drawings and designs, users can work on these files, make changes and save them on a NETGEAR box deployed at the work site. After business hours or when convenient to saves these large files to the cloud to not create bandwidth issues during peak work hours, admins can sync the files to the cloud so the files can be accessed from any location.

<https://kb.netgear.com/29781/Egnyte-Storage-Sync-for-NETGEAR>

US7313580 Claim 1

[1.P4] **where the exchange of data for synchronizing the document belonging to a given user with the rest by making them co-sharers of such changes comprises the following stages:**

Claim 1 requires that a synchronization order be issued in response to a user's modification of the document, but it does not require that all subsequent encoding, packaging, sequencing, transmission, and reception steps be performed by the user's local machine. The specification assigns these functions to software components such as the "transmission agent," "dispatch agent," and "transport manager," demonstrating that once the user initiates synchronization, the technical synchronization stages may be carried out automatically by system components. Nothing in Claim 1 limits the method to a peer-to-peer architecture or excludes server participation; the specification states only that the invention avoids the need for a "specific client-server structure," and it expressly identifies electronic mail as a transport manager, which inherently operates within a client-server infrastructure. Accordingly, in Egnyte Storage Sync, when a user edits a document, the modification constitutes the issuance of the synchronization order, and the Storage Sync appliance and Egnyte cloud services perform the encoding, packaging, sequencing, dispatch, and update operations as the transport manager. This allocation of roles is fully consistent with the functional architecture described in the '580 patent and satisfies Claim 1.

Egnyte's hybrid architecture syncs data between each local Storage Sync appliance (where a user's edits occur) and the cloud superset repository, which is then visible to other users. This is exactly **exchange of data for synchronizing the document belonging to a given user with the rest**, making others co-sharers of that user's changes. Storage Sync Overview explains "**Storage Sync keeps the most up-to-date copy of the data in the cloud. This ensures remote workers can seamlessly collaborate ... without having to worry about out-of-date files.**" Ask-an-Expert (hybrid cloud) explains, Cloud "**acts as an intermediary that maintains a super set of your data, with the local cloud acting as the primary storage.**" and Egnyte has "**precisely tuned sync algorithms ... capable of syncing the Local Cloud instances with the Egnyte cloud continuously, on demand, or periodically.**"

US7313580 Claim 1

Collaboration with Remote Employees

Storage Sync keeps the most up-to-date copy of the data in the cloud. This ensures remote workers can seamlessly collaborate with their colleagues without having to worry about out-of-date files.

<https://helpdesk.egnyte.com/hc/en-us/articles/218994347-Storage-Sync-Overview>

In a nutshell, a hybrid cloud storage solution, the cloud (#1 in the figure), acts as an intermediary that maintains a super set of your data, with the local cloud acting as the primary storage.

<https://www.egnyte.com/ask-an-expert/hybridcloud-storage-questions>

- Talking about what I know best, Egnyte has precisely tuned sync algorithms that are capable of syncing the Local Cloud instances with the Egnyte cloud continuously, on demand, or periodically.

<https://www.egnyte.com/ask-an-expert/hybridcloud-storage-questions>

US7313580 Claim 1

[1.1] **an operation for saving the information in the local storage unit where only the new resources which are incorporated into the document, or those modified, are also stored in an information packet which is available in a spooler or waiting area for data to sent**

Helpdesk Egnyte article shows the two-step behavior the claim is aiming at: (1) edits are saved to a local Storage Sync volume; (2) only after that, Storage Sync uploads an updated version. Functionally, the locally saved updates (deltas or changed file version) are the **new resources ... stored in an information packet** waiting for upload. The Storage Sync device is a local storage unit; the period between saving locally and actual upload functions as a waiting area / spooler. Storage Sync FAQ – upload behavior article explains “**When users edit their files, the updates are first saved to the Storage Sync device. Subsequently, when the users close the file ... the updates from Storage Sync are uploaded as a new file version to Egnyte cloud.**”

When users edit their files, the updates are first saved to the Storage Sync device. Subsequently, when the users close the file or the application (e.g. MS Word), the updates from Storage Sync are uploaded as a new file version to Egnyte cloud. In other words, the updated files are only uploaded to Egnyte after the users close the files.

<https://helpdesk.egnyte.com/hc/en-us/articles/5026228871437-When-does-a-file-get-uploaded-to-Egnyte-through-Storage-Sync>

US7313580 Claim 1

[1.2] a synchronization order is issued which consists of encoding, packaging and sequencing of the data to adapt it to the transport manager

Any network sync from Storage Sync to the Egnyte cloud necessarily involves encoding data into network packets, sequencing them, and adapting them to HTTPS/TLS or the proprietary sync protocol (**transport manager**). Egnyte's references to "**encryption**" "**while in transit**" and "**sync algorithms**" support that Storage Sync issues a **sync operation** that prepares data for transport. Egnyte describe sync logic and encrypted transport for example, "**Data is encrypted at the storage level on Egnyte cloud servers and while in transit.**" and Egnyte has "**precisely tuned sync algorithms ... syncing the Local Cloud instances with the Egnyte cloud continuously, on demand, or periodically.**"

Storage Sync is Egnyte's hybrid file-sharing and collaboration technology. With Egnyte Storage Sync, files on any local storage device (direct attached, NAS, or SAN) can be synced with Egnyte Cloud, thereby enabling users to store, share, and access files seamlessly across storage systems and the cloud. The data is encrypted at the storage level on Egnyte cloud servers and while in transit. Storage Sync is currently supported with VMware, Hyper-V and Amazon AWS and Azure through the Public Cloud Connector. Download the latest version from Storage Sync Installers page.

<https://helpdesk.egnyte.com/hc/en-us/articles/218994347-Storage-Sync-Overview>

- Talking about what I know best, Egnyte has precisely tuned sync algorithms that are capable of syncing the Local Cloud instances with the Egnyte cloud continuously, on demand, or periodically.

<https://www.egnyte.com/ask-an-expert/hybridcloud-storage-questions>

US7313580 Claim 1

[1.3] sending to the rest of the users included in the list of users of all packets from the spooler encoded, with the dispatch being made from the computer which issues the synchronization order to each of the remaining computers

In Egnyte's architecture, a given Storage Sync appliance uploads the changed file/version to the Egnyte cloud. From there, other users (and other Storage Sync appliances) receive the updated file when they sync. Functionally, Storage Sync + cloud combine to **send** the updated **packets** from the originating node to **each of the remaining** user environments. The multi-office sync positioning, supports, changes propagate from one node to all others. The Cloud File Server page says, "**Egnyte supports a hybrid file server deployment ... [that] can also sync between the Egnyte cloud file server and on-premises repositories.**" and Ask-an-Expert explains, "**The local cloud /NAS boxes ... would be accessed by mapping drives. Users also have access to the directories they need ... As the cloud syncs all the files, there is no need to send files via e-mails...**"

Egnyte supports a hybrid file server deployment that works great as a cloud-only solution, but can also sync between the Egnyte cloud file server and on-premises repositories. The Egnyte hybrid approach can scale to meet the needs of individual users and remote offices of any size while enforcing governance for data regardless of its location.

<https://www.egnyte.com/file-server/cloud-based-server>

- The local cloud /NAS boxes residing in the head and branch offices would be accessed by mapping drives. Users also have access to the directories they need, in any office and on the road. As the cloud syncs all the files, there is no need to send files via e-mails, or old fashioned "Sneaker-net".

<https://www.egnyte.com/ask-an-expert/hybridcloud-storage-questions>

US7313580 Claim 1

[1.4] receipt of the packets by the rest of the computers with decoding of them taking place to transform them into packets of resources to be incorporated, according to the sending sequence, into the copies of the document of the users receiving them

When another Storage Sync appliance or user workstation syncs, it necessarily receives the updated file version, decodes it from the encrypted transport, and writes it into the local copy of the document. Egnyte explicitly talks about local servers “**continuously synchronizing**” and remote users always seeing “**the latest version.**” That is exactly the result of receiving and applying remote changes **according to the sending sequence.** This means Egnyte’s encrypted network sync, **decode network packets.** Egnyte Hybrid architecture page explains, “**Egnyte automatically syncs back with a centralized cloud repository so remote users can always access the latest version of their files anywhere.**” Egnyte Cloud file server page explains, “**Larger locations can deploy local file servers ... to cache files locally while continuously synchronizing to cloud-based storage.**”

With Egnyte, teams working on large files – or at remote job sites with slow or inconsistent connectivity – can dramatically increase productivity by using a local storage appliance as their primary point of access. Egnyte automatically syncs back with a centralized cloud repository so remote users can always access the latest version of their files anywhere.

<https://www.egnyte.com/cloud-deployment-solutions>

Individual users can install the **Egnyte Desktop App** on a PC or Mac to enable continuous file backup with online access to their content. Larger locations can deploy local file servers, as network attached storage devices to cache files locally while continuously synchronizing to cloud-based storage. This provides a fast, on-premises storage repositories for any business scenario.

<https://www.egnyte.com/file-server/cloud-based-server>

US7313580 Claim 1

[1.5] **generation of the resources which allow the document to be updated from the decoded packet.**

When a remote change arrives, Egnyte generates a new file version (and associated metadata) on the destination side. That is, the platform **creates resources** (new version, metadata, ACL updates, etc.) that allow the local copy of the shared document to be updated using the received data. This tracks closely with **generation of the resources which allow the document to be updated from the decoded packet**. Egnyte Cloud file server feature list article explains, “**File Versions – File versions are automatically created as users make changes, enabling a complete audit trail of file changes.**”

- **File Versions** - File versions are automatically created as users make changes, enabling a complete audit trail of file changes.

<https://www.egnyte.com/file-server/cloud-based-server>

US7313580 Claim 1

[1.6] **transfer of the new document to the information manager for processing where all users have an exact copy of the updated document when all users carry out the synchronization order.**

In Egnyte's architecture, the cloud file server acts as the **information manager**. The **new document** (updated file version) is stored and managed centrally in the cloud and then synchronized to all Storage Sync devices and user endpoints that sync. Egnyte repeatedly emphasizes that remote users see the latest version and that local / remote copies are synchronized. Thus, when each user's endpoint runs its sync, everyone converges to the same updated version. This means **all users have an exact copy of the updated document when all users carry out the synchronization order**. Egnyte's Storage Sync Overview – collaboration article, explains, **"Storage Sync keeps the most up-to-date copy of the data in the cloud. This ensures remote workers can seamlessly collaborate ... without having to worry about out-of-date files."** Egnyte's Cloud file server article explains, **"Egnyte supports a hybrid file server deployment that works great as a cloud-only solution, but can also sync between the Egnyte cloud file server and on-premises repositories."**

Storage Sync keeps the most up-to-date copy of the data in the cloud. This ensures remote workers can seamlessly collaborate with their colleagues without having to worry about out-of-date files.

<https://helpdesk.egnyte.com/hc/en-us/articles/218994347-Storage-Sync-Overview>

Egnyte supports a hybrid file server deployment that works great as a cloud-only solution, but can also sync between the Egnyte cloud file server and on-premises repositories. The Egnyte hybrid approach can scale to meet the needs of individual users and remote offices of any size while enforcing governance for data regardless of its location.

<https://www.egnyte.com/file-server/cloud-based-server>