



Unified Home folders migration

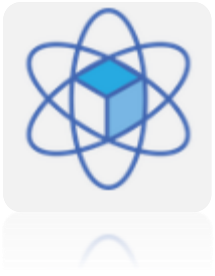
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CERN



Agenda

- Introduction and basics
- Landscape
- Migration
- Users' benefits

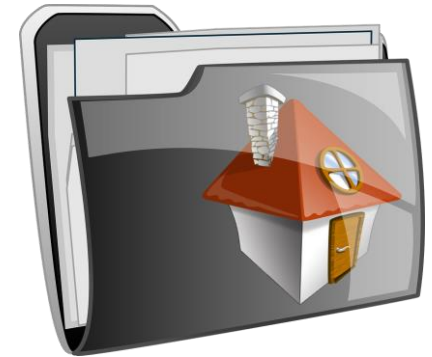
A large graphic element consisting of a white circle on the left and a dark blue horizontal bar on the right. The word "Introduction" is written in white text on the blue bar. Two thin blue lines extend from the top and bottom of the circle.

Introduction



Home folders

- Commonly called home directory, every user has a folder containing personal data and settings on all operating systems
- Home folders, are the subfolders containing the personal data: Desktop, Documents, Music, Pictures, Videos





CERN files storage

- AFS:Andrew File System
- DFS:Distributed File System
- Local HD:Hard Drive
- New comer:CERNBox using EOS file system

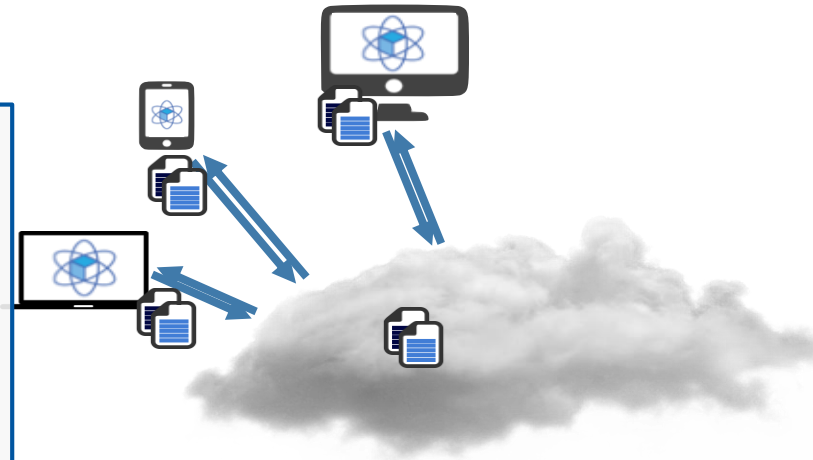




What is CERNBox?

CERNBox provides a cloud synchronization and sharing service

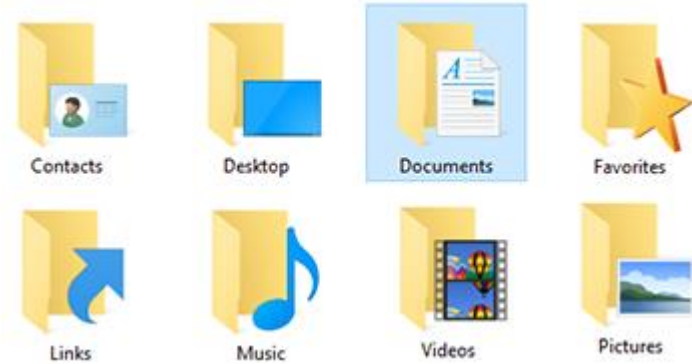
- Available for all CERN Users (1TB/user)
- Synchronize files (data at CERN) and offline data access
- Easy and convenient way to share data across users and groups
- All major platforms supported
- Based on **ownCloud** integrated with **CERN EOS**





What are we migrating?

- As a start point Windows users' home folders
 - Desktop
 - Documents
 - Music
 - Pictures
 - Videos
 - + Windows specific folders: Favorites, Links, Contacts





Landscape



Landscape

Most common use cases:

17%: Windows only

13%: macOS only

11%: Windows and Android only

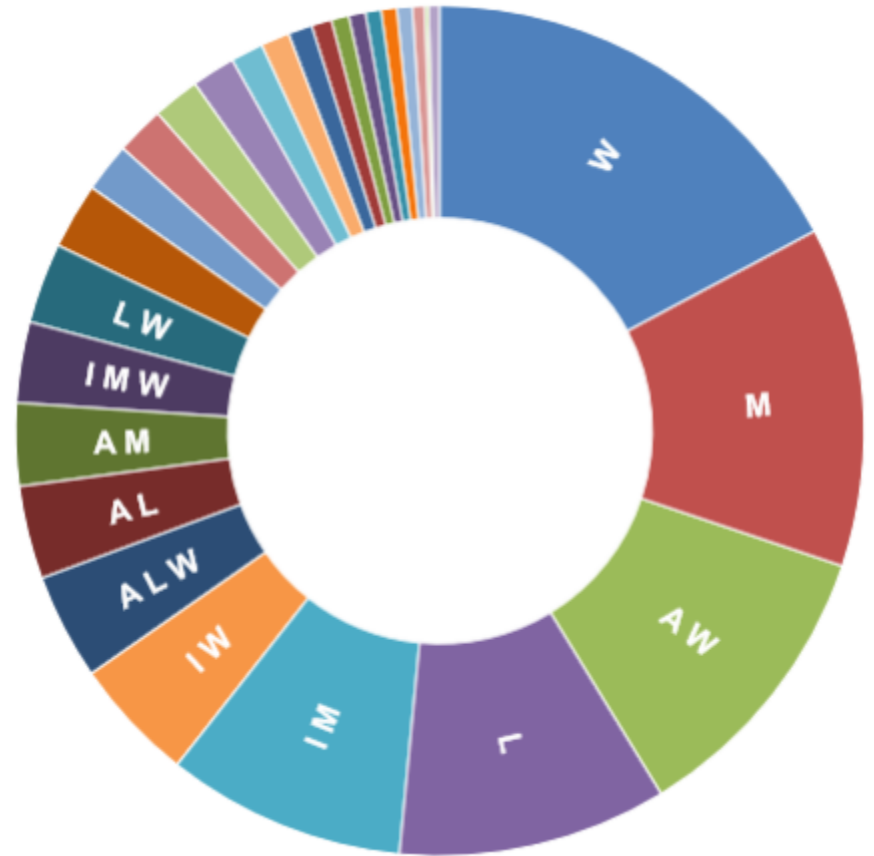
10%: Linux only

9%: macOS and iOS only

5%: Windows and iOS only

4%: Windows, Linux and Android only

OS	Abbreviation
Windows	W
macOS	M
Linux	L
iOS	I
Android	A



* Based on CERN e-mail logs. Unknown POP/IMAP users have been inferred based on the recognised POP/IMAP OS share ratios.



Landscape

- 15 000+ active users
- 37 000+ enabled users
- 59 000+ existing homefolders
- 40 000 000 of files



A large graphic element consisting of a white circle on the left and a dark blue horizontal bar extending to the right. The word "Migration" is written in white, sans-serif font on the blue bar. Two thin blue lines extend from the top and bottom of the white circle, curving outwards.

Migration



Migration pre-checks

- Quota check on CERNBox
- Files / folders clashes check
- User's profile exotic configuration path
- Local hard disk space



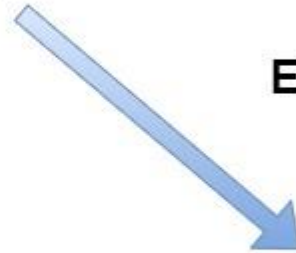
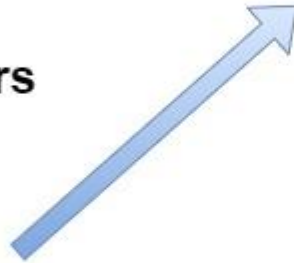
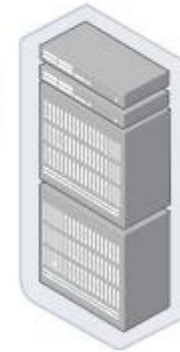
Overnight copy



DFS servers

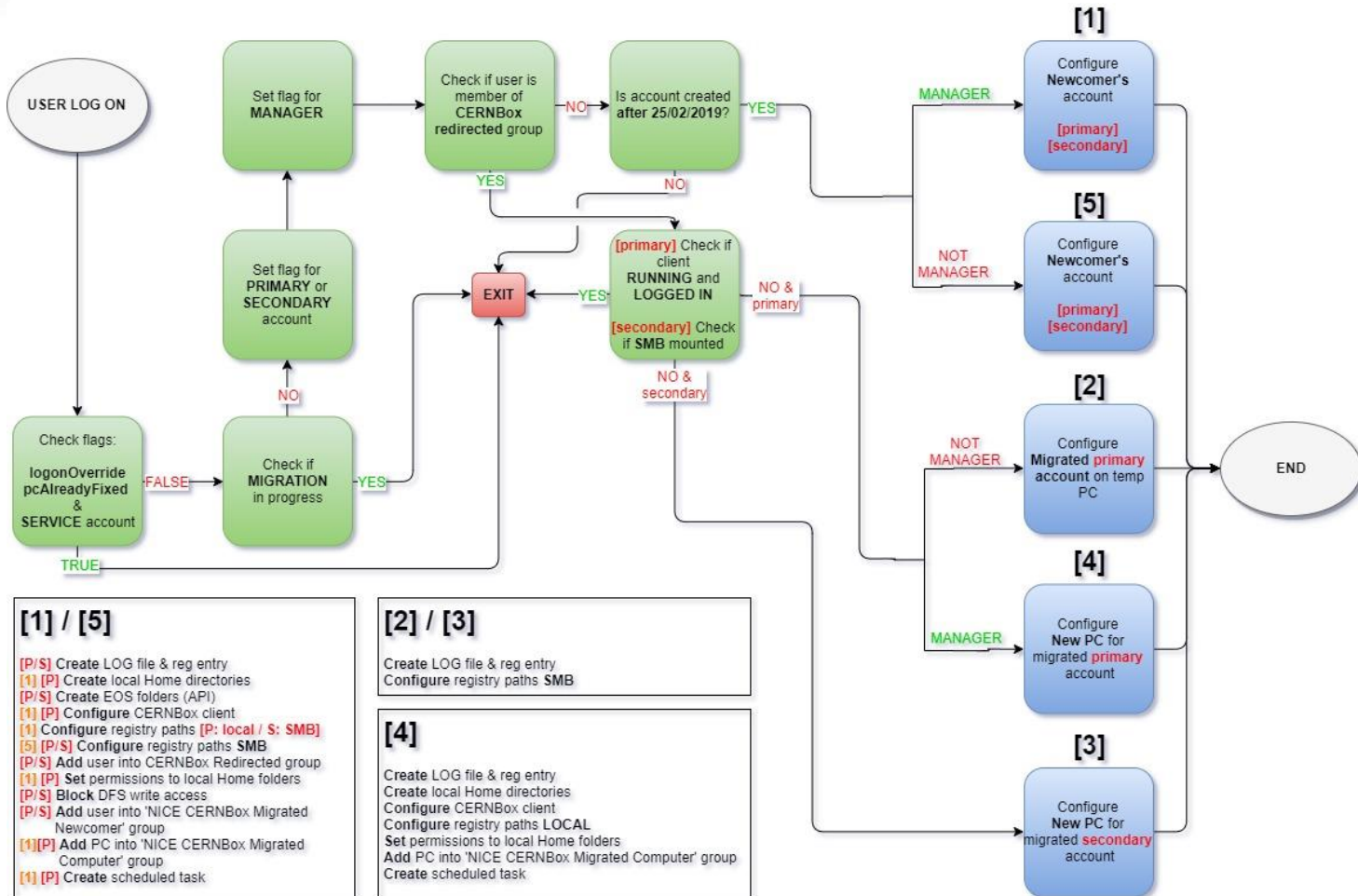


EOS servers





Client configuration





Client configuration with sync client

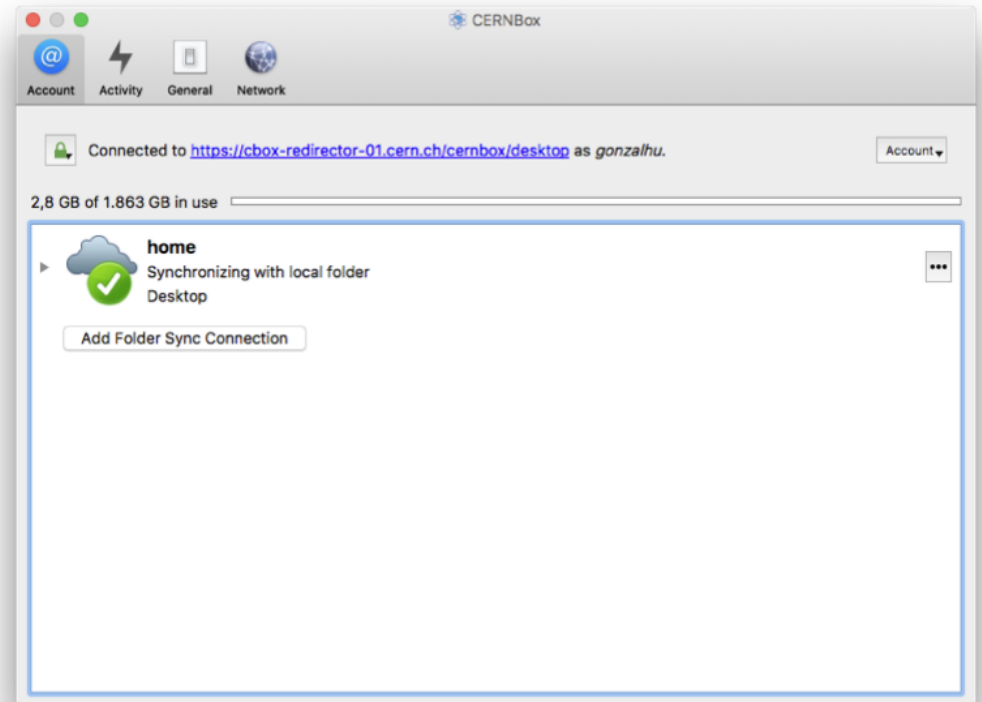
- Create local directories - set permissions
- Configure CERNBox client
- Edit registry paths
- Deny redirection to DFS





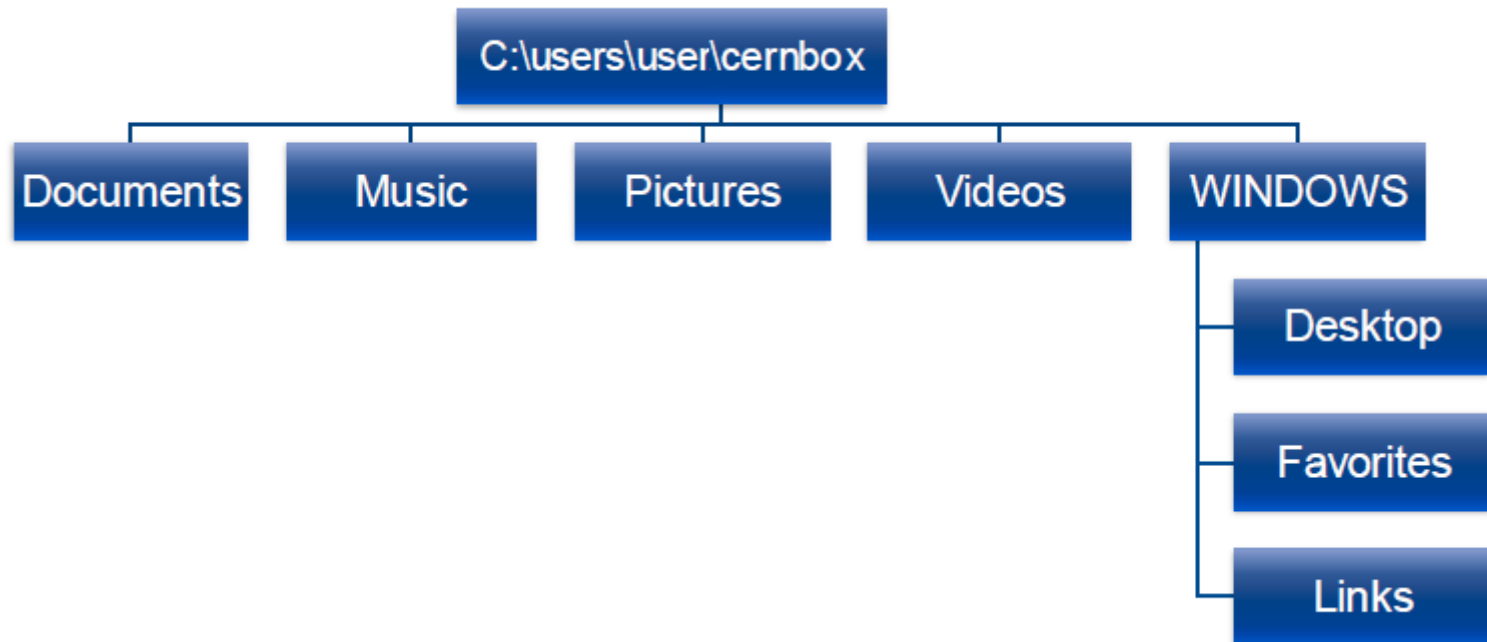
Sync client

- Available on
 - Linux
 - Mac OS
 - Windows
 - Android
 - iOS



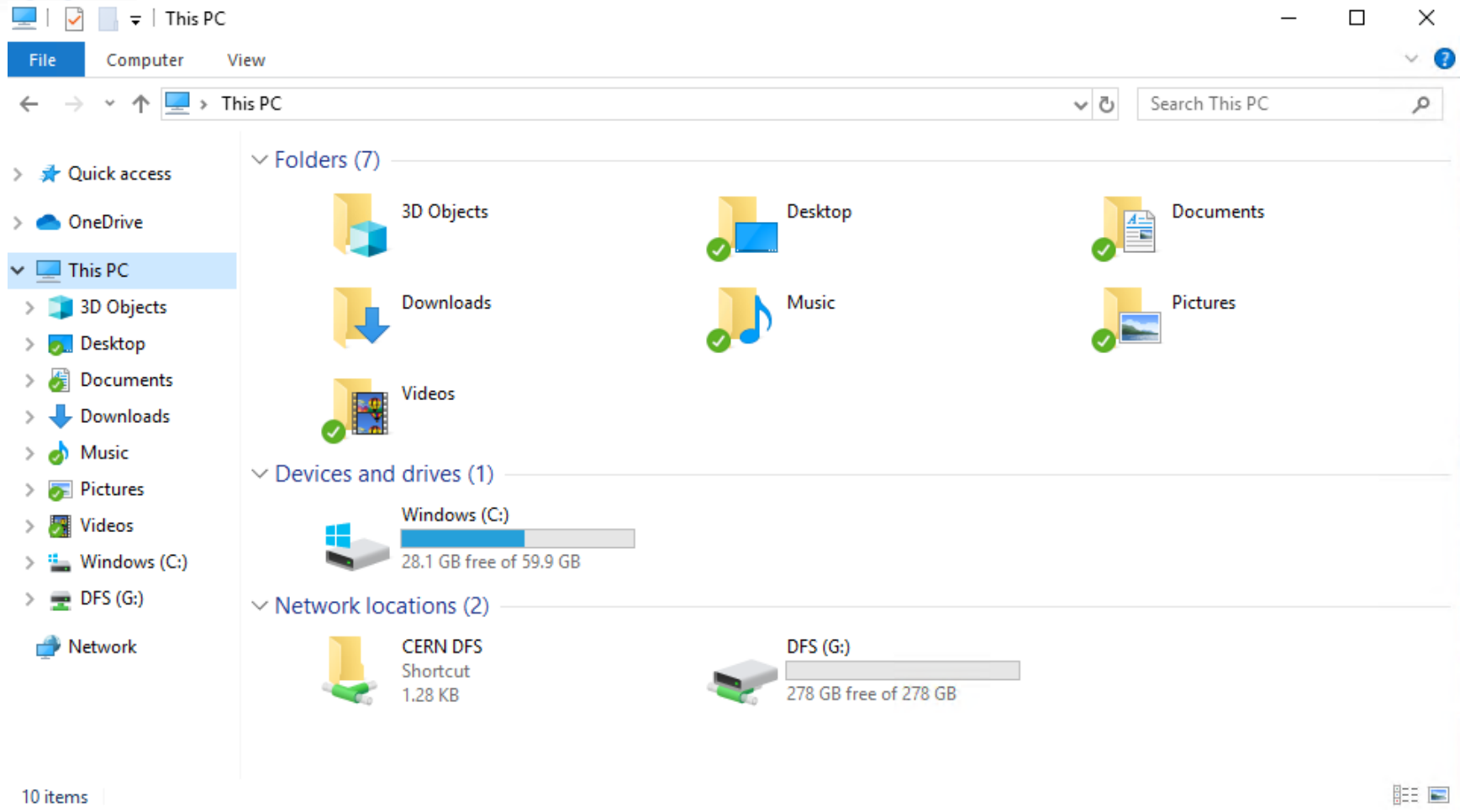


Defined tree





User's point of view





Client configuration SMB redirection

- Edit registry paths to use SMB redirection
- Deny redirection to DFS





User's point of view

The screenshot shows a Windows File Explorer window titled 'This PC'. The address bar shows the path 'This PC'. The left sidebar shows 'Quick access' with Desktop, Downloads, Documents, and Pictures, and 'This PC' with Desktop, Documents, Downloads, Music, Pictures, Videos, Windows (C:), dfs (\\cern.ch) (G:), EOS (H:), vbippus (\\cernhomev.cern.ch\v), and Network. The main area shows 'Folders (6)' (Desktop, Documents, Downloads, Music, Pictures, Videos), 'Devices and drives (1)' (Windows (C:) with 124 GB free of 159 GB), and 'Network locations (4)' (CERN DFS Shortcut with 1.28 KB, dfs (\\cern.ch) (G:) with 278 GB free of 278 GB, vbippus (\\cernhomev.cern.ch\v) (Z:), and EOS (H:) with 1.00 TB free of 1.00 TB). The bottom left shows '11 items' and the bottom right shows view icons.

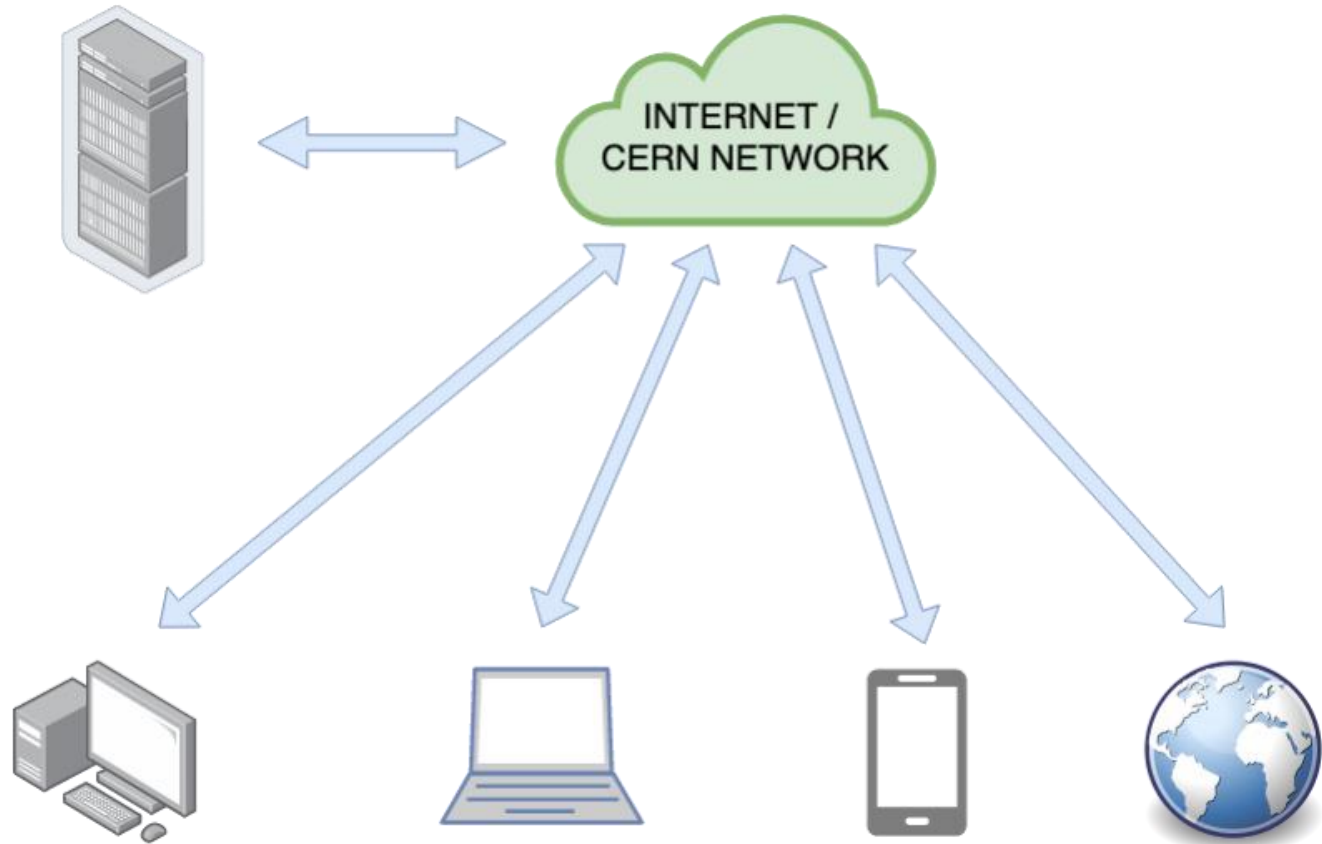
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Benefits



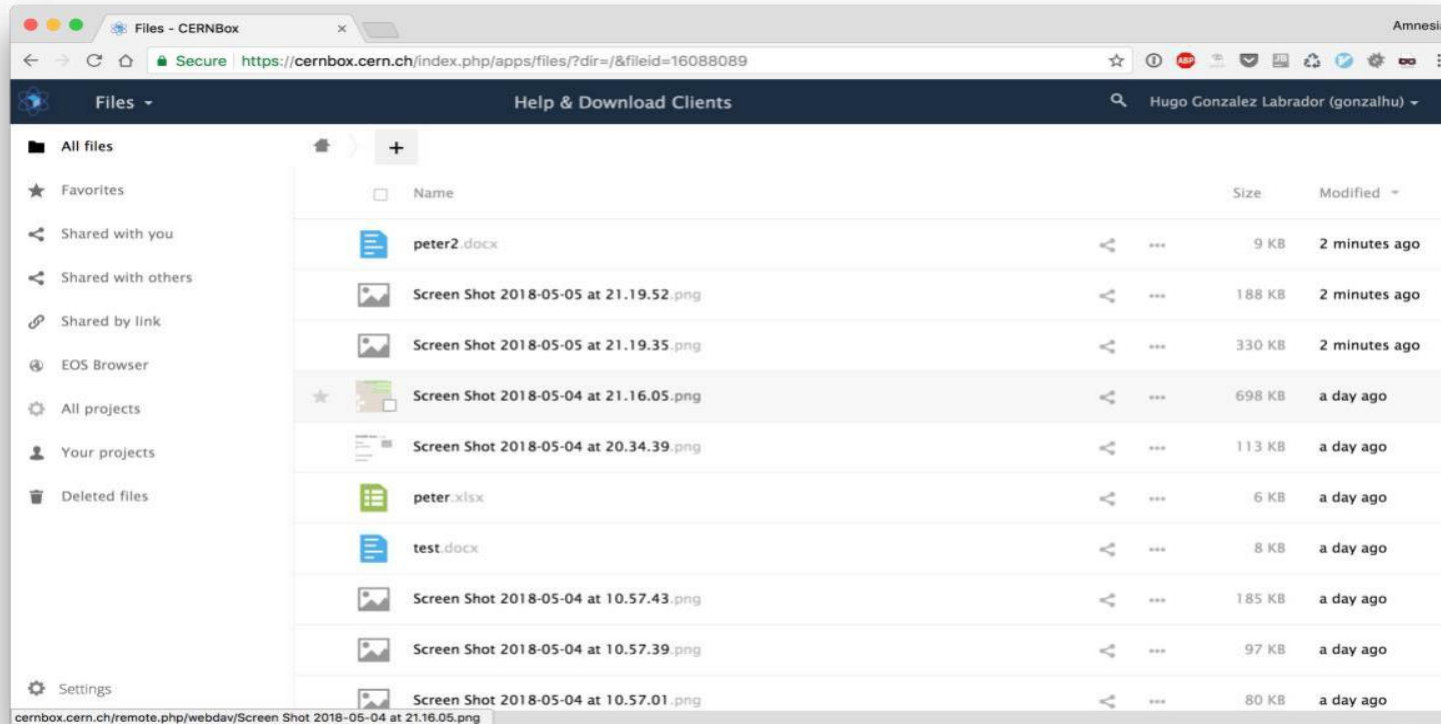
Global access

EOS servers





Web access



- Access data within any modern web browser



Online editing

- Edit data within the browser



Easy sharing

The screenshot shows the EOS browser interface. At the top, there is a navigation bar with 'Fichiers' and 'Help & Download Clients'. The main area is divided into three sections: a left sidebar with navigation options, a central file list, and a right-hand sharing panel.

Left Sidebar:

- Tous les fichiers
- Favoris
- Partagés avec vous
- Partagés avec d'autres
- Partagés par lien
- EOS Browser
- All projects
- Your projects
- Deleted files

Central File List:

- Documents
- Presentations
- University
- Salut.pptx

3 dossiers et 1 fichier

Right-hand Sharing Panel:

Documents (0 KB, il y a une heure)

EOS Information **Partage**

Partager avec des utilisateurs ou d

Partager par lien public

<https://cernbox.cern.ch/index.php/s/b\>

Permettre la modification

Protéger par un mot de passe

Spécifier une date d'expiration

03-05-2019

Easy share with colleagues and external partners



Next steps

- End of Pilot and Production phase
- Continuous improvement
- Other DFS use cases
 - Workspaces
 - Projects spaces



Conclusion

- Many arguments in the equation
- Productivity improvement through mobility
- Limit dependency on Microsoft



Questions