mountOS: Help Guide and Documentation

Getting Started

mountOS (mount Object Storage) allows seamless integration of S3-compatible cloud storage, making it accessible and usable as a file system.

Key features include:

- Managed space can only be properly comprehended by mounting them on a local machine
- File metadata storage options: local (SQLite) or remote (PostgreSQL).
- File-level history tracking for detailed record-keeping.
- Offers time-based snapshots of the space, enabling access to any point in the past from the moment the file space was created.
- Encryption keys remain securely on your machine.
- View and manage deleted files with ease.
- Mount specific offset ranges within files as needed.
- Context-based mounting options tailored to the file type.
- Files are data-less and are downloaded on demand, either partially or fully, based on the needs of the calling application.

System Requirements

- macOS Sonoma (14.0) and above.
- A minimum of 16GB of RAM is assumed.
- 200MiB or more of available hard disk space required for installation. Additional space required for file operations.
- This app is built on Apple's File Provider framework which is inherently designed as a data-less file system. Only Pinned files and files being uploaded will occupy space (considered as used space); the rest are automatically evicted when the system requires additional storage.
- Internet access is necessary for accessing object store blobs and file metadata, and greater bandwidth improves the overall experience.

New Space
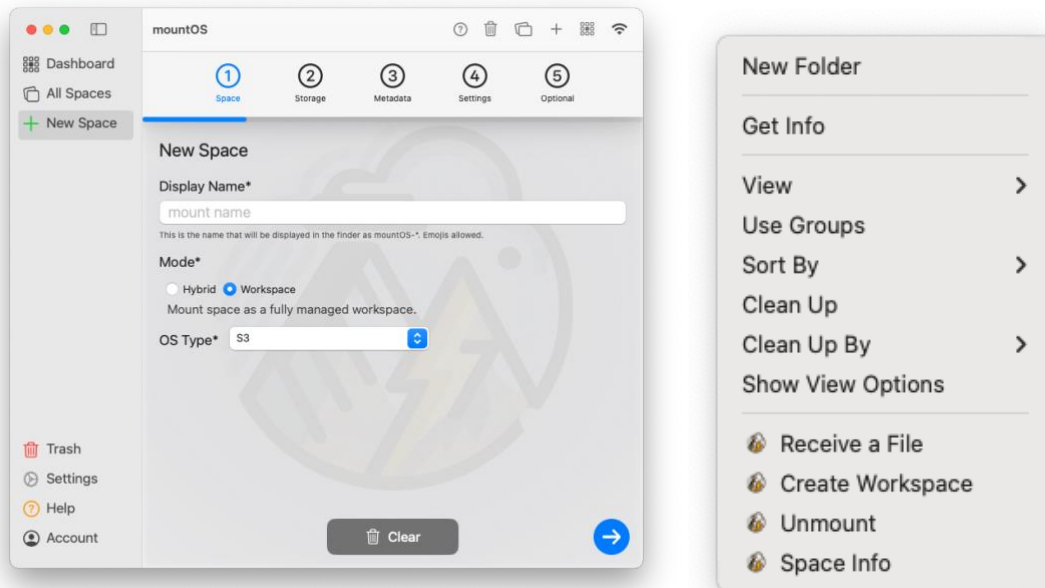
The display name can include any characters except : and /

Mode

Workspace

This is the recommended mode where all files are fully managed by the mountOS app.

Hybrid

This mode combines managed workspaces with existing S3 objects. Users can use this option to view existing S3 files and share workspace files after copying them into this location.

To use the workspace in hybrid mode, right-click in Finder and select the "Create Workspace" option from the context menu

Most of the features and views described in this document apply only to workspace items. They are not applicable to non-workspace items unless explicitly stated otherwise.
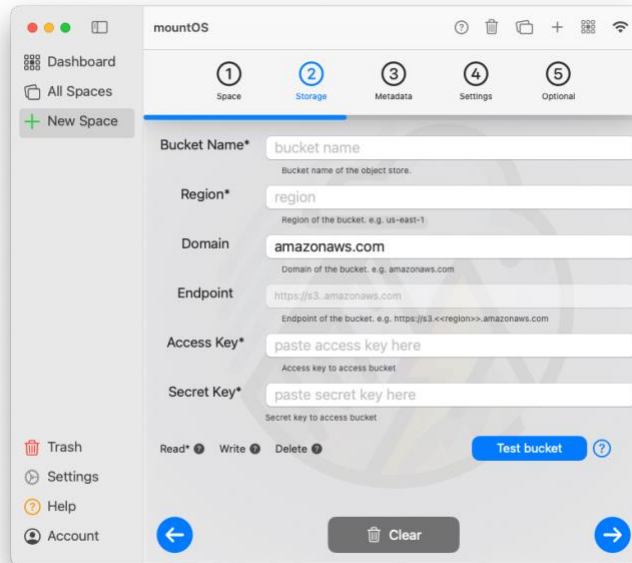
OS Type

Choose the type of S3-compatible object store you want to configure

Storage

Set up an S3-compatible object store by providing the necessary details. Once configured, click "Test Bucket" to validate read, write, and delete permissions.

For guidance on configuring S3 access, click the Help ⑦ button.

Delete Policy

Refer Retention Policy section

Block Size

The block size determines the size used internally to divide files into smaller chunks for processing or storage.

Encryption

Enable encryption to secure your data. The encryption key is securely stored in iCloud Apple Keychain for enhanced protection. You can either provide a custom key or use the key configured under Settings ➢ Workspaces
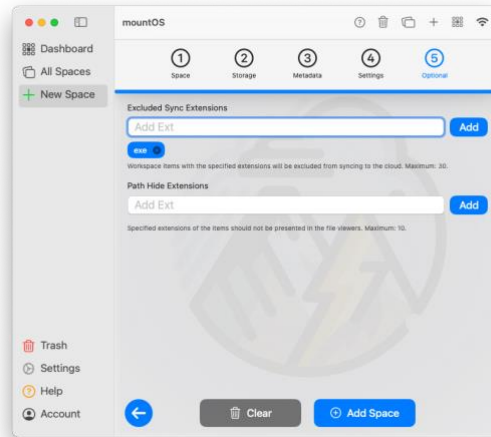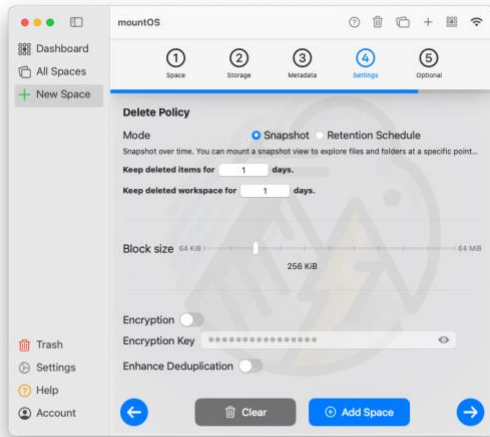
Enhance Deduplication

Refer Enhance Deduplication section in Settings.

Excluded Sync Extensions

Files with the specified extensions in the workspace will be excluded from syncing ☁ to the cloud.

Path Hide Extensions

Items with the specified extensions will have their extensions hidden in Finder. For example, if "txt" is excluded, a file named "info.txt" will appear as "info" in Finder.

All Spaces
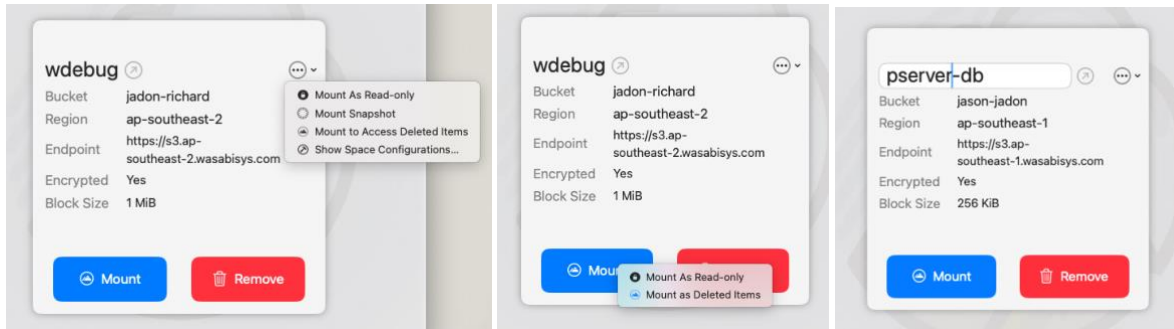
All spaces are presented in a card view layout.

Edit Space

To modify the display name, click on the label, start typing, and press **ENTER** to save the changes.

To adjust other properties, select "Show Space Configurations…" as shown above. Note that not all properties are editable.

Open Mounted Space

Click the   icon next to the space name to open the mounted space in Finder.

Mount Options

Read-Write Mount

This is the default mount option, allowing all operations, including reading, writing, and modifying files.

Read-only Mount

This mount option restricts operations to viewing and reading files only. No modifications or write actions are allowed.

Mount to Access Deleted Items
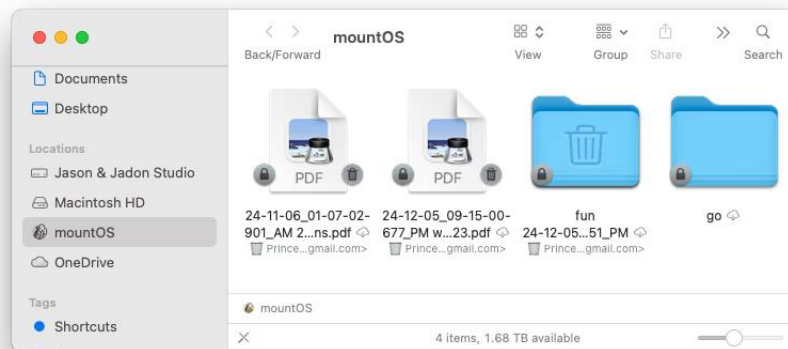
Use this option to mount the space in a deleted view, allowing you to navigate through folders and view deleted files while retaining the original folder structure. Edits or deletions are not permitted in this view.

Restore Deleted Items

Right-click on a file to open the context menu and select "Put Back to Workspace Base" to restore it or press SPACE on a selected file to trigger a download and use it directly.
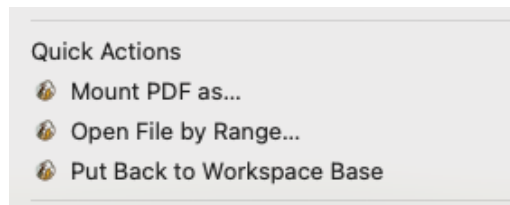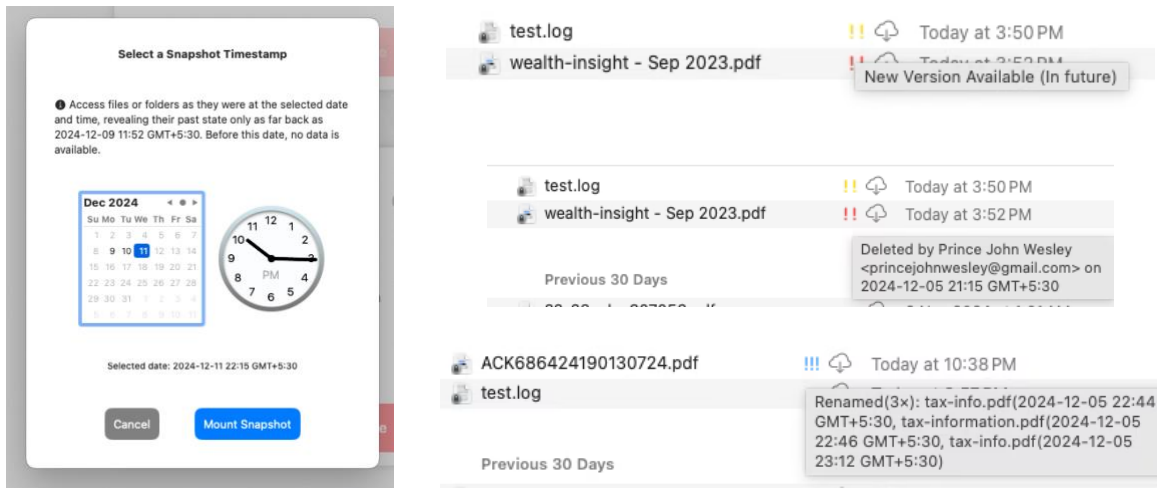

Deleted Item Identification

Deleted folders are visually distinguished from non-deleted ones. Deleted files may display a trash icon along with contextual notes, such as information about who deleted the file.

Snapshot Mount

Provides time-based snapshots of the space, allowing access to any point in the past from the moment the file space was created.

Delete Items

Deleted items are removed according to the configured retention policy. Snapshot moments may not retain those deleted files once the delete cycle is executed. To manage this, configure "Keep deleted Items for 'n' days." based on your desired snapshot preservation window.

Future Change Highlights

Once mounted, mountOS tracks and highlights future changes to specific files or folders as you navigate. These changes may include content updates (new versions), renames, relocations, or deletions. Icons annotate these changes, and tooltips provide additional contextual information for clarity.

Snapshot View Availability

Snapshot view is enabled exclusively for spaces with a retention schedule policy configured as Snapshot.

Similar to the deleted view, edits and deletions are not permitted in this view.

File views

Users can right-click on a file to access a context menu with options tailored to that file's specific attributes. All file-based views are mounted in read-only mode. These views may automatically unmount when their parent space is unmounted, while keeping the downloaded files intact.

History / Revisions / Versions view
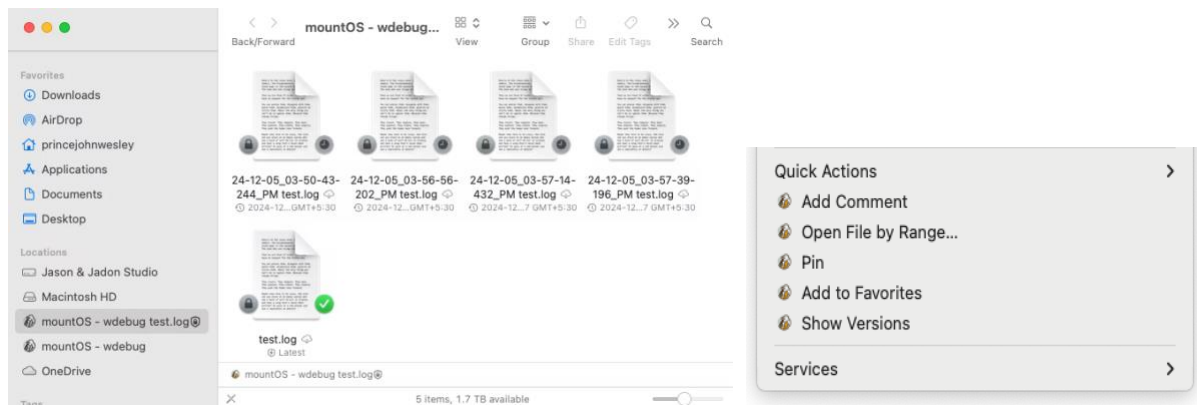
Select "Show Versions" from the context menu of a file. This allows you to access its latest version and explore all previous revisions, enabling easy retrieval and review of historical changes.

- ✅ icon indicates the latest version of the file.
- 🕐 icon indicates the old revision of the file.

Segment view

Select "Open File by Range…" to mount a file as a range of blocks or a specific subset, such as a particular offset range within the file. This option is available only for files that are at least 64 KiB in size.
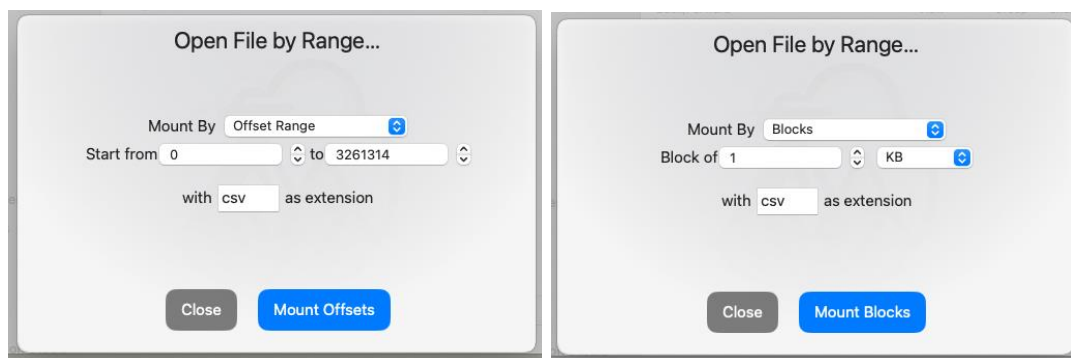
Document view
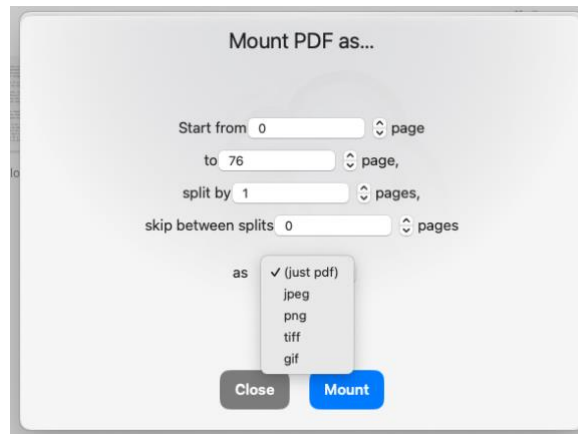
Select "Mount PDF as..." for a PDF file to access the PDF document view.

PDF documents can be mounted with various options, such as splitting by pages or converting to images. The file will be auto downloaded first to extract metadata before presenting these options in the modal.
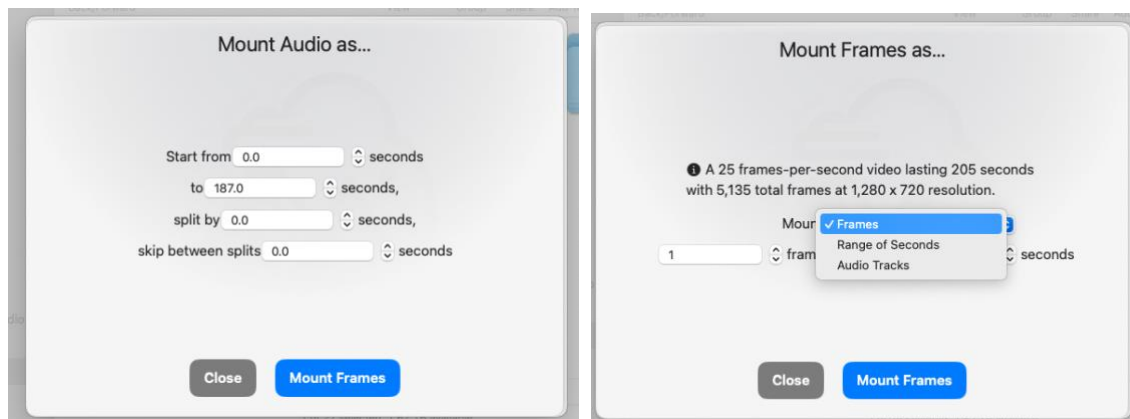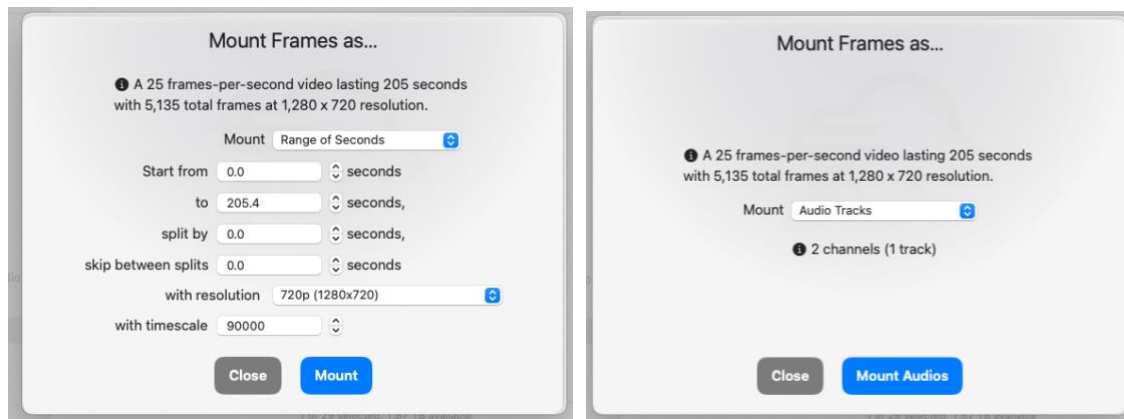
Zip view

Select "Mount Zip file" for zip view.

This view allows you to extract zip file details and download files selectively without downloading the entire source zip file.

Media view

Select "Mount Audio/Video as..." for media view.

Media files are downloaded partially to extract metadata.

- Video Frame View: Provides options to display video content by frames, specific time ranges (in seconds), or audio tracks.
- Audio View: Allows splitting audio files by specific time intervals (in seconds).

File Options

Pin File 📌

Pinning file means keep files offline by auto download it when its mounted

Favorites ♥

Mark a file as a favorite to quickly access it. All favorite, pinned, and recently accessed files are included in the working set, which is indexed in the device's Spotlight database for seamless search and retrieval.

Comment 💬

Users can add, remove, and view comments directly from Finder.

Unmount

To unmount a space without using the main window, right-click on an empty space in Finder and select the "Unmount" option.
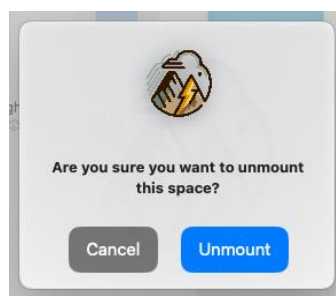
Right-clicking on the mounted space name in the sidebar allows you to select the "Unmount" option directly. However, this may result in a force unmount as the system does not permit the app to display a confirmation prompt.

Space Info

Similar to the Unmount option, Space Info provides detailed information about the currently mounted space.

Right-clicking on the mounted space name in the sidebar allows you to select this option. However, the system prevents the application from displaying a prompt, so no action will occur.

Share File

This option is available exclusively for direct S3 files in hybrid mode. It allows you to share your file with others. Drag and drop your file in hybrid space to share it. You can set restrictions by specifying an access duration for added security.
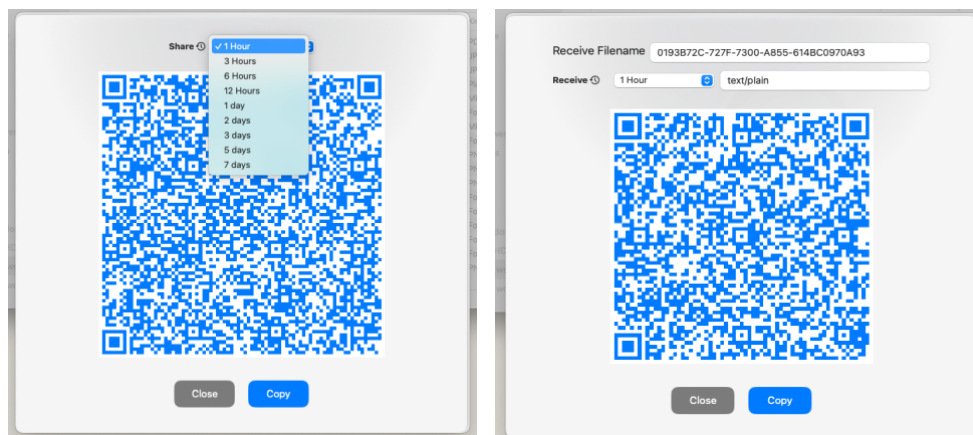
Receive File

Similar to Share File, this option, available only in hybrid mode, allows you to generate a URL for direct file uploads to S3. To use this feature, select "Receive File" from the context menu in Finder.

Settings
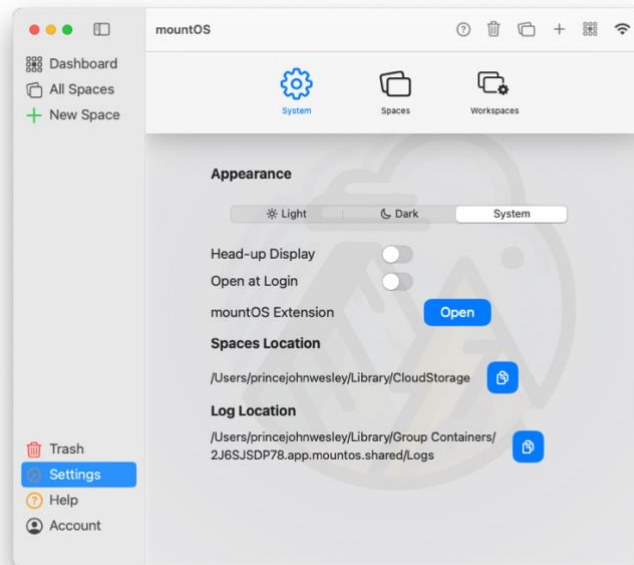
mountOS Extension

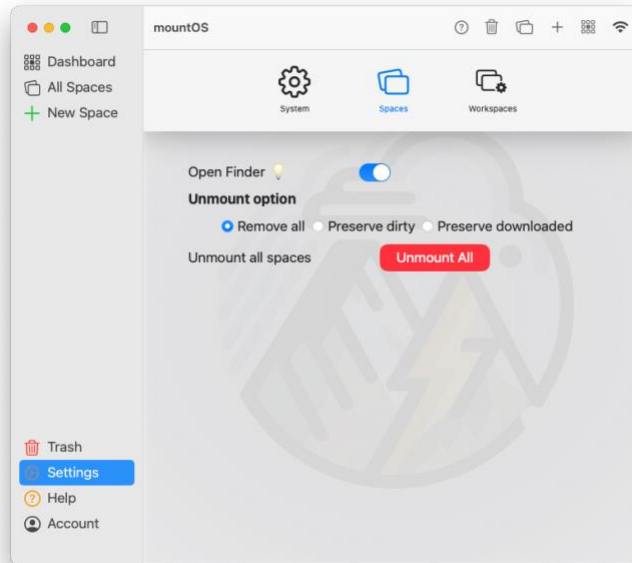Open file provider settings to enable mountOS.

Settings ➢ General ➢ Logins & Extensions ➢ File Provider

Space Location

All spaces are mounted inside this location.

Log Location

All logs are stored in this location.

Unmount option

While unmounting, the user can select one of the following options as the default behavior:

- **Remove all**: Deletes all files without retaining any data.
- **Preserve dirty:** Retains only the dirty user data.
- **Preserve downloaded:** Retains all downloaded data.

All derived views are unmounted with the "Preserve Downloaded" option, regardless of the selected unmount preference.

Unmount all spaces

Force to unmount all spaces.

Open Finder

By default, all derived views are opened in Finder upon mounting. You can choose to enable or disable this option, which will apply specifically to the Mount button in the Spaces section
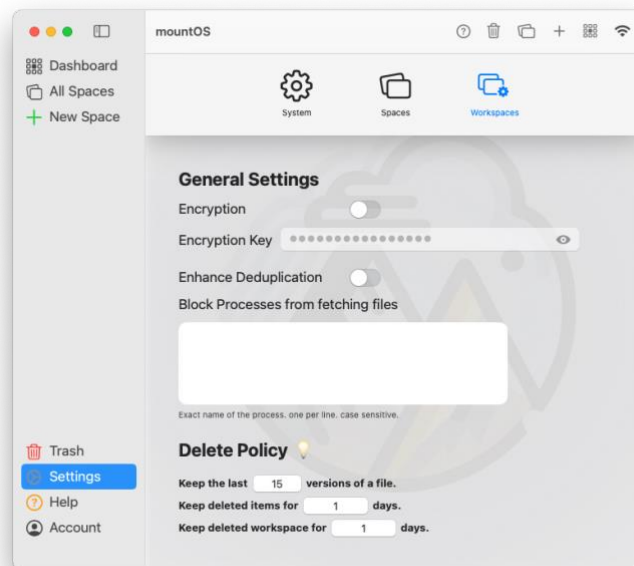
General Settings and Delete Policy serve as default values when creating new spaces; however, users can choose to apply different settings if needed

Enhance Deduplication

Enable the content-based chunking option to enhance deduplication efficiency, though it may slightly impact performance. All workspace items are configured with block-size-level deduplication by default. However, enabling this option may not always yield better results.

Delete Policy

Refer Retention Policy section

Common Icons

	Already synced, online-only file until it's opened (🍎)
	Queued for syncing (🍎)
	Sync in progress (🍎)
	Sync error (apple icon)
	Excluded from syncing (🍎)
	If there is no icon next to a file, it indicates that the file is available locally but may be removed by the operating system if additional disk space is required
	Read-only file (🍎)
	Old version of a file (history)
	Deleted file
	Latest version of a file (history)
	File is being uploaded
	File is being uploaded from different machine
!!	Exists here, deleted in the future (snapshot)
!!	New version of the file is available in the future (snapshot)
!!!	Renamed or moved to different location in the future (snapshot)
	Pinned file for offline access (🍎)
	Recently accessed file (🍎)
	Marked as favorite file (🍎)
	File has comments (🍎)

Retention Policy

Two modes are available for managing retention:

Snapshot

This mode allows users to mount the space in snapshot mode with the following settings:

- **Keep deleted items for N days**: Specifies how long deleted items are retained.
- **Keep deleted workspace for N days**: Specifies how long deleted workspaces are retained

Retention Schedule

In addition to the snapshot policy, this mode enables restricting the number of file revisions maintained:

- **Keep the last N versions of a file**: Retains only the most recent N versions of a file.
- **Keep deleted items for N days**: Specifies how long deleted items are retained.
- **Keep deleted workspace for N days**: Specifies how long deleted workspaces are retained
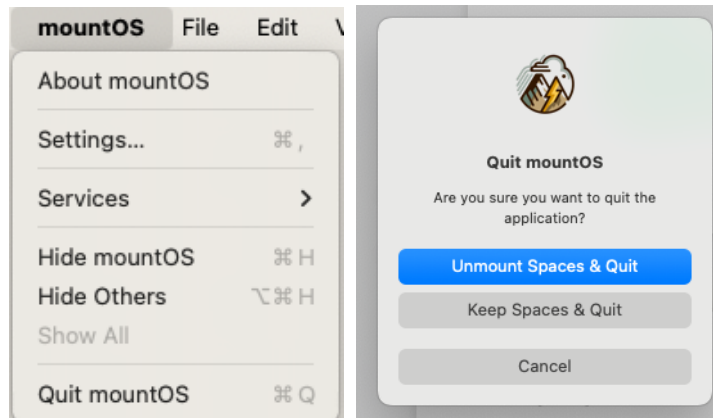
Privacy Policy

Read from mountOS ➢ Help ➢ Privacy Policy
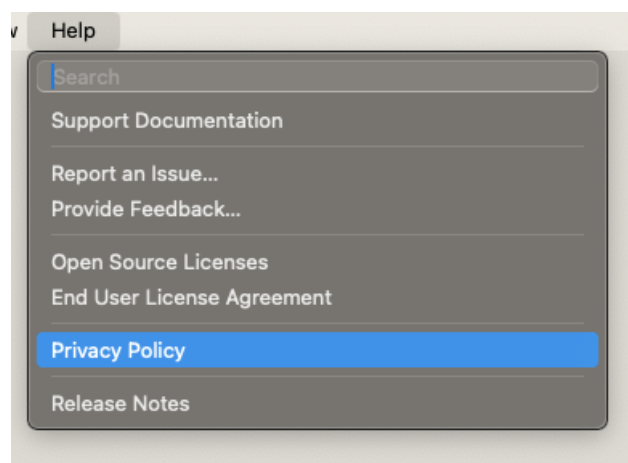
End User Agreement

Read from mountOS ➢ Help ➢ End User License Agreement

Quit Application

Quit mountOS is selected from the application menu or activated using the shortcut **Cmd + Q**.

Check for Active Mounts:

- If no spaces are mounted, the application will quit immediately.
- If there are active mounts, display the following options for the user to choose from:
    - Unmount Spaces & Quit: Automatically unmount all active spaces and then exit the application.
    - Keep Spaces & Quit: Leave the active spaces mounted and close only the application interface.
    - Cancel: Abort the quit action and return to the application.

Uninstall Application

Before uninstalling mountOS, ensure all spaces are unmounted. Failing to do so may result in stale mounted items appearing in Finder.

Support

If you need assistance or want to share your feedback, the following options are available to help you get the support you need:

Go Through the Documentation

Begin by reviewing the documentation provided within the app. It contains detailed information about features, functionalities.

Report an Issue

If you encounter a bug or problem while using the app, you can report it directly from the app by navigating to:

mountOS ➢ Help ➢ Report an Issue...

This allows you to describe the issue and provide any necessary details through email to help me resolve it quickly.

Provide Feedback

We value your feedback and use it to improve the app. To share your thoughts or suggestions, go to:

mountOS ➢ Help ➢ Provide Feedback...

Share what's working well and suggest areas for improvement. Your feedback is greatly appreciated!

Logs

To troubleshoot any issues, you can locate the logs by navigating to:

Select ⊕ icon from menu bar,

⊡ Settings ➢ ⚙ System ➢ Log Location

Contact

Refer to the Contact section for detailed information.

Contact

For inquiries, assistance, or project collaborations, please contact
princejohnwesley@gmail.com