



Cloud Filer User Guide

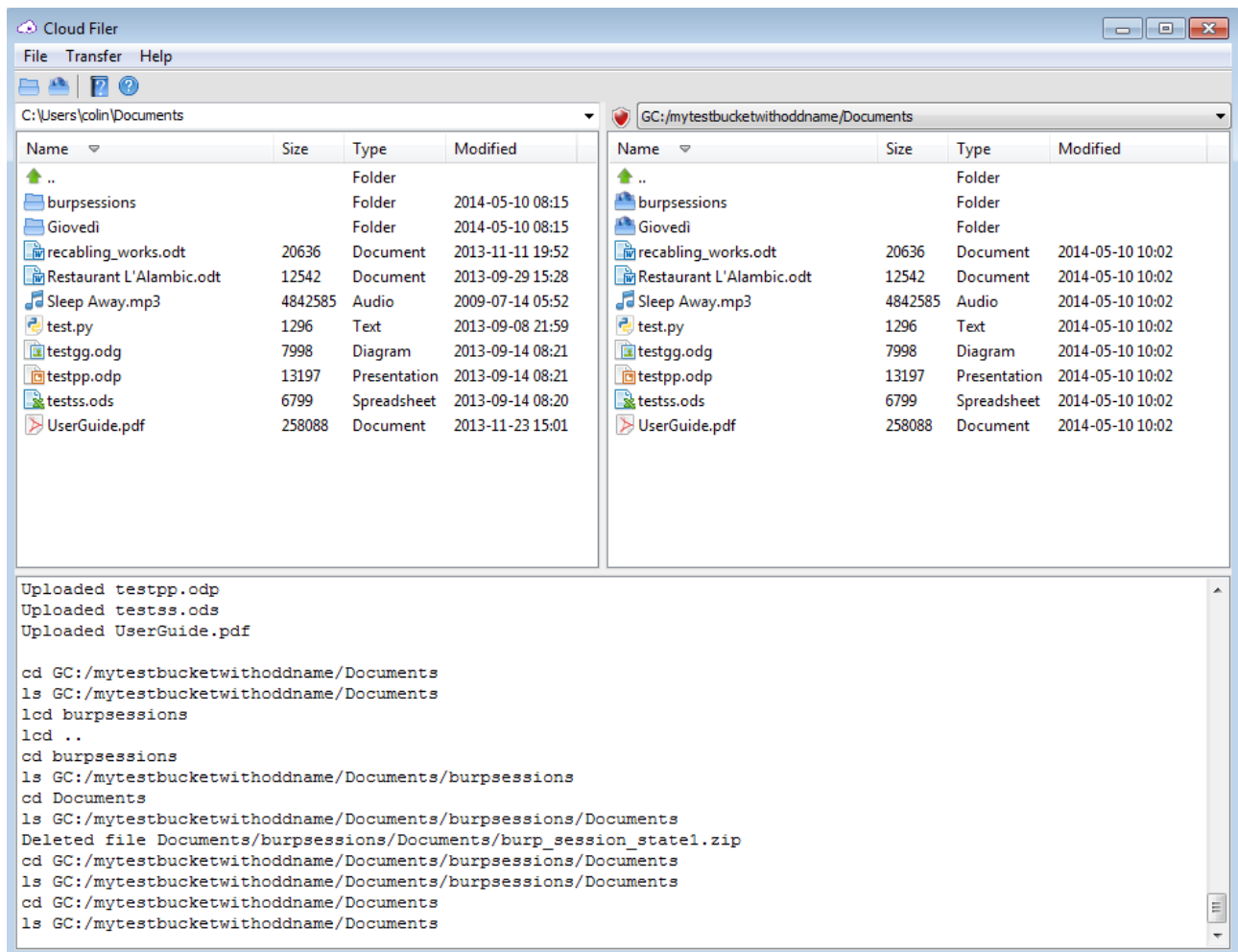
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Introduction

Cloud Filer is an S3 file storage GUI client. Cloud Filer allows you to upload and download files to cloud storage (e.g. Amazon or Google) and can be used as part of a backup strategy. Cloud Filer uses TNO, pre-internet encryption and file name obfuscation making access to your cloud data useless without the right password.



Getting Started

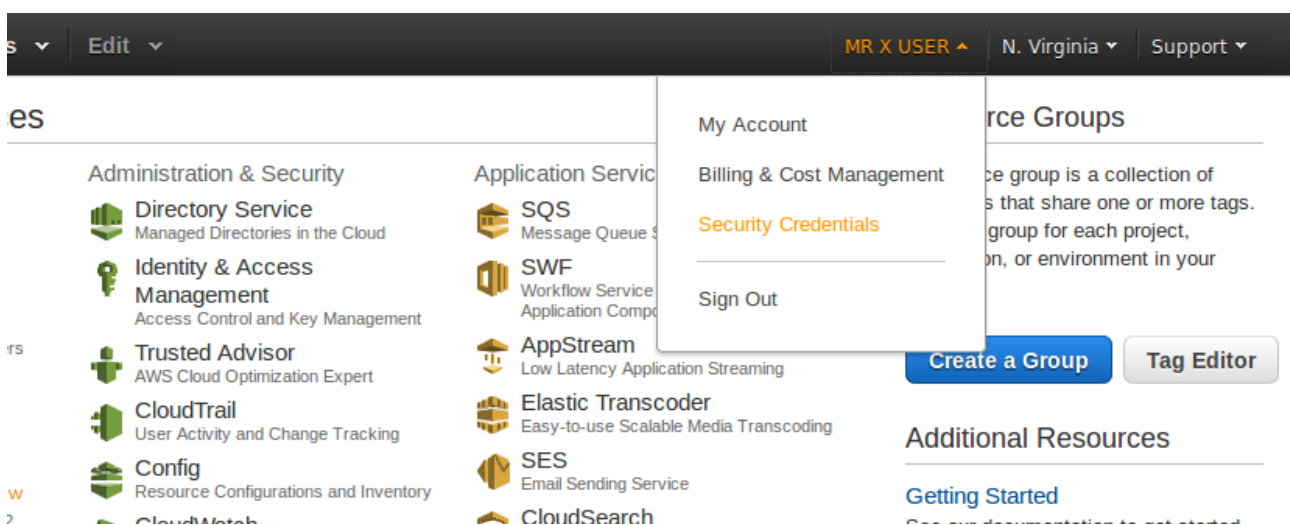
Cloud Filer can be used with any cloud storage service that supports the Amazon S3 interface such as:

- [Amazon AWS](#)
- [Google Cloud Storage](#)

Before you can use Cloud Filer you need to sign up for the use of a cloud storage service such as [Amazon AWS](#). S3 cloud storage services use two keys to authenticate your connection to the service: the Access Key and Secret Key and you need these keys to connect to a storage service with Cloud Filer.

Where are my Keys?

In **Amazon AWS** your keys can be found by logging in to the AWS cloud console, clicking on your user name to the top right and selecting **Security Credentials**:



A warning will appear because we are copying the keys for the whole AWS account, which is fine if you are using the account exclusively for S3 cloud storage.

Next expand the Access Keys section and copy and paste your keys somewhere safe on your machine e.g. using [KeePassX](#).

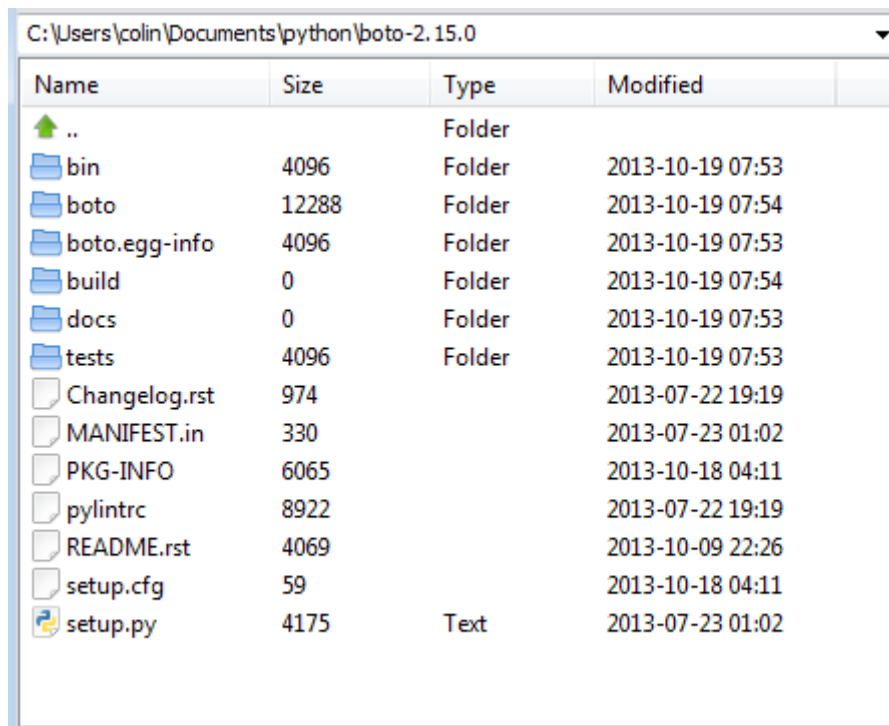
From the [Google Cloud console](#) your keys can be found under storage | Cloud Storage | Settings | Interoperability:

The screenshot shows the Google Developers Console interface. At the top, there's a header with "Google Developers Console" and a dropdown menu set to "Cloud Filer". On the left is a navigation sidebar with categories: Overview, Permissions, APIs & auth, Monitoring, Source Code, Deploy & Manage, Compute, Networking, Storage, and Big Data. The "Storage" category is expanded, showing sub-items: Cloud Bigtable, Cloud Datastore, Cloud SQL, Cloud Storage, Browser, Transfer, Settings (highlighted in blue), and Big Data. The main content area is titled "Interoperability" and contains the following sections:

- Project Access** | **On-Demand I/O** | **Interoperability** (active tab)
- The Interoperability API** lets you use HMAC authentication and lets Cloud Storage interoperate with tools written for other cloud storage systems. Turn on this API only if you require interoperable access for the current user. This API is enabled per project member, not per project. Each member can set a default project and maintain their own access keys. [Learn more.](#)
- Default project for interoperable access**
The default project is used with the Interoperability API for all create bucket and list bucket requests.
A green checkmark icon is followed by a blacked-out project ID, indicating it is the default project for interoperable access.
- Interoperable storage access keys**
Use an access key to authenticate yourself when making requests to Cloud Storage. The key is linked to your Google user account. [Learn more.](#)
- A table with two columns: **Access Key** and **Secret**. Both columns contain blacked-out text. A trash icon is visible at the end of the row.
- A button labeled "Create a new key".

Navigating Local Folders

The top left area of the Cloud Filer GUI shows the name of a local folder on your PC and a list of the directories and files in that local folder:



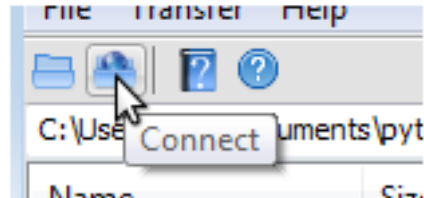
You can navigate your local machine by double-clicking on folders or by typing directory names in the input field above the file list. If you click on the down arrow at the right-hand end of the input field you can select from the history of visited directories.

You can also open a directory selection dialog box using the **File | Open** menu or the Open toolbar button:



Connecting to Cloud Storage

To connect to your cloud storage provider you can use the **File | Connect** menu or the Connect toolbar button:

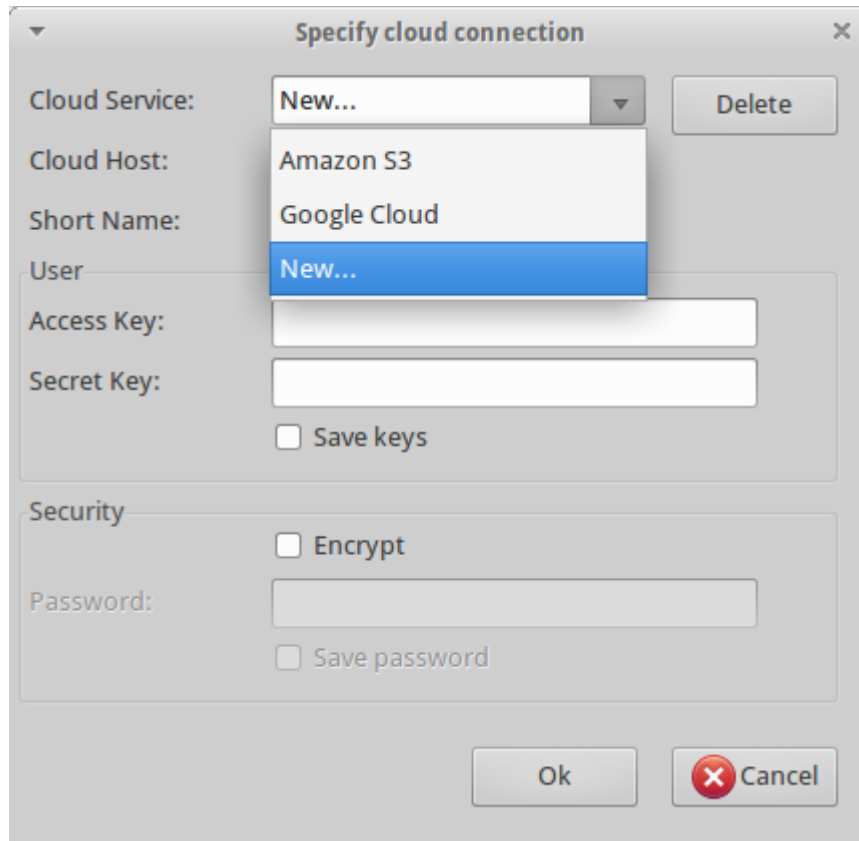


Cloud Filer comes with the Amazon S3 and Google Cloud Storage services pre-configured. To connect to Amazon or Google you just need to enter your Access Key and Secret Key (see *Where are my Keys* under *Getting Started* above):

A screenshot of the 'Specify cloud connection' dialog box. The dialog has a title bar with a close button. It contains the following fields and controls:

- Cloud Service:** A dropdown menu with 'Google Cloud' selected. To its right is a 'Delete' button.
- Cloud Host:** A text field containing 'storage.googleapis.com'.
- Short Name:** A text field containing 'GC:'.
- User** section:
 - Access Key:** A text input field.
 - Secret Key:** A text input field.
 - ☐ Save keys
- Security** section:
 - ☐ Encrypt
 - Password:** A text input field.
 - ☐ Save password
- At the bottom are 'Ok' and 'Cancel' buttons.

To connect to any other S3 cloud provider select **New...** as the Cloud Service:



The 'Specify cloud connection' dialog box is shown. It has a title bar with a close button. The 'Cloud Service' dropdown menu is open, showing options: 'Amazon S3', 'Google Cloud', and 'New...'. The 'New...' option is highlighted. Other fields include 'Cloud Host', 'Short Name', 'User', 'Access Key', 'Secret Key', 'Save keys' checkbox, 'Security' section with 'Encrypt' checkbox, 'Password', and 'Save password' checkbox. 'Ok' and 'Cancel' buttons are at the bottom right.

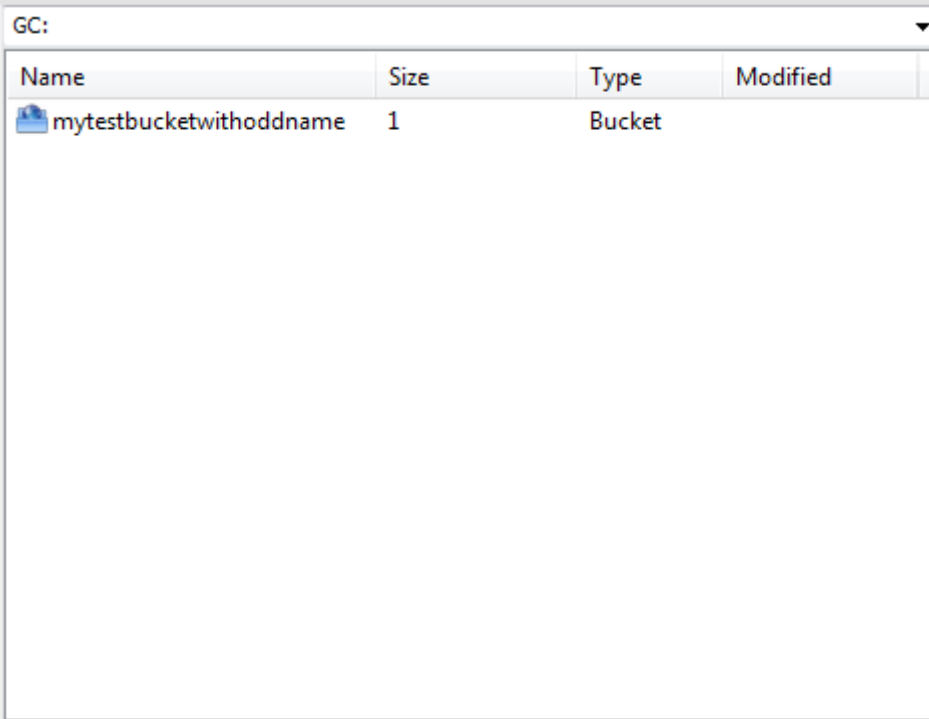
Then enter the service name, the service's cloud host URL and a two character short code to distinguish the service from other cloud services. For example to connect to the environmentally friendly GreenQloud storage service use:




The 'Add new cloud' dialog box is shown. It has a title bar with a close button. The 'Cloud Service' field contains 'GreenQloud'. The 'Cloud Host' field contains 's.greenqloud.com'. The 'Short Name' field contains 'GQ'. 'Ok' and 'Cancel' buttons are at the bottom right.

Navigating the Remote Cloud Storage

When you first connect the top right area of the Cloud Filer GUI shows the Short Name of the remote cloud service and a list of the S3 buckets in your cloud storage account.



The screenshot shows a window titled 'GC:' with a dropdown arrow. Inside is a table with four columns: 'Name', 'Size', 'Type', and 'Modified'. The first row contains a bucket icon, the name 'mytestbucketwithodddname', the size '1', and the type 'Bucket'.

Name	Size	Type	Modified
 mytestbucketwithodddname	1	Bucket	

Before you can upload any files to the cloud if you don't have any buckets you need to create an S3 bucket using the cloud storage provider's GUI. For example see <https://aws.amazon.com/s3/getting-started/>

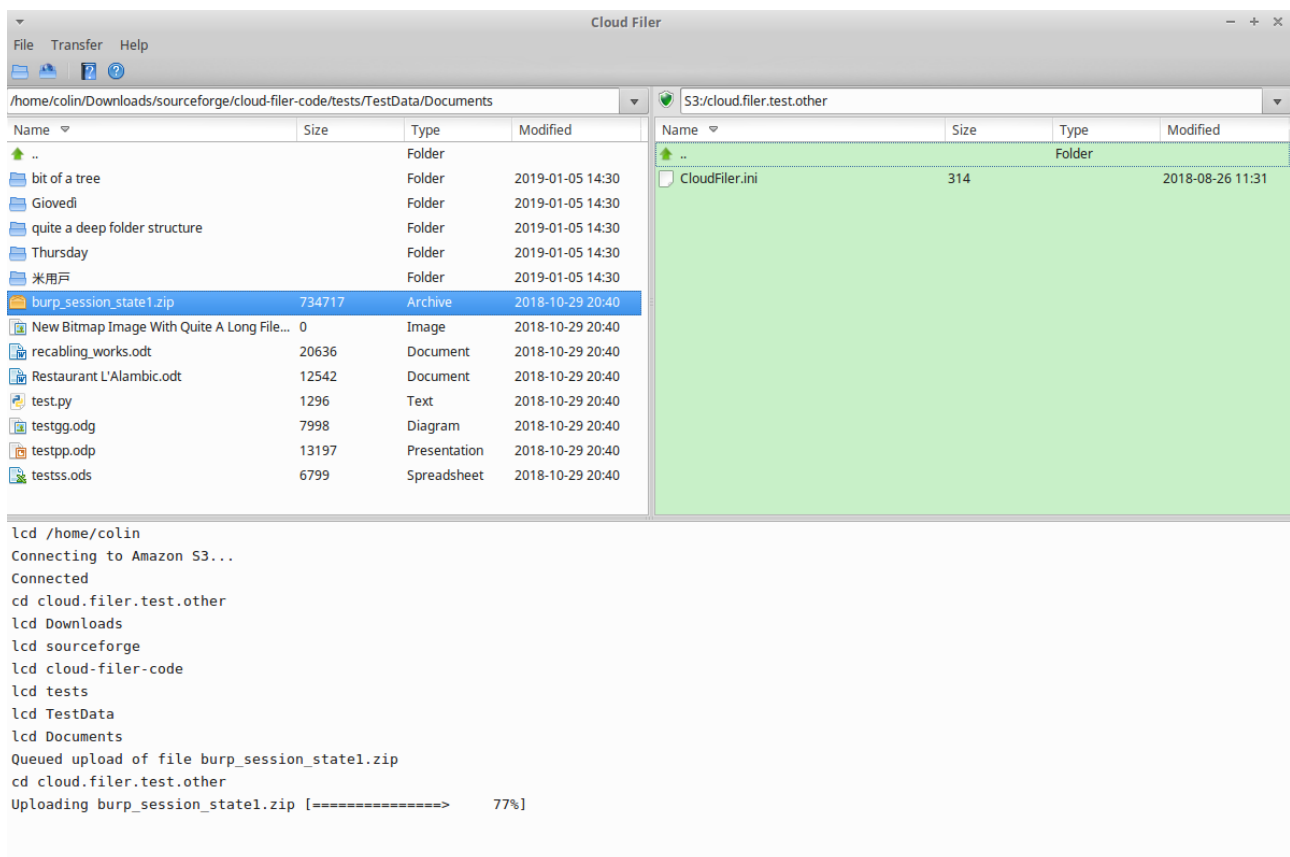
Creating a new remote folder can be done using Cloud Filer by using the right-click action on the remote file list. You can also delete files and folders using the `Delete` right-click action.

Just like the local directory input field above the local file list the remote folder input field shows the current remote path and provides a history of visited remote folder locations. You can use the remote folder input field to navigate the remote buckets and folders or double-click on bucket or folder names.

Cloud File Transfer

Once you have navigated to a bucket or a folder within a bucket you can upload files or directories from your local machine to the currently shown remote location. You can do this by selecting the files or directories to upload in the left-hand local file list and using the **Transfer | Upload** menu.

Alternatively you can right-click on the locally selected items and use the **Upload** pop-up menu action. For each file uploaded lower event list panel will show the upload progress:

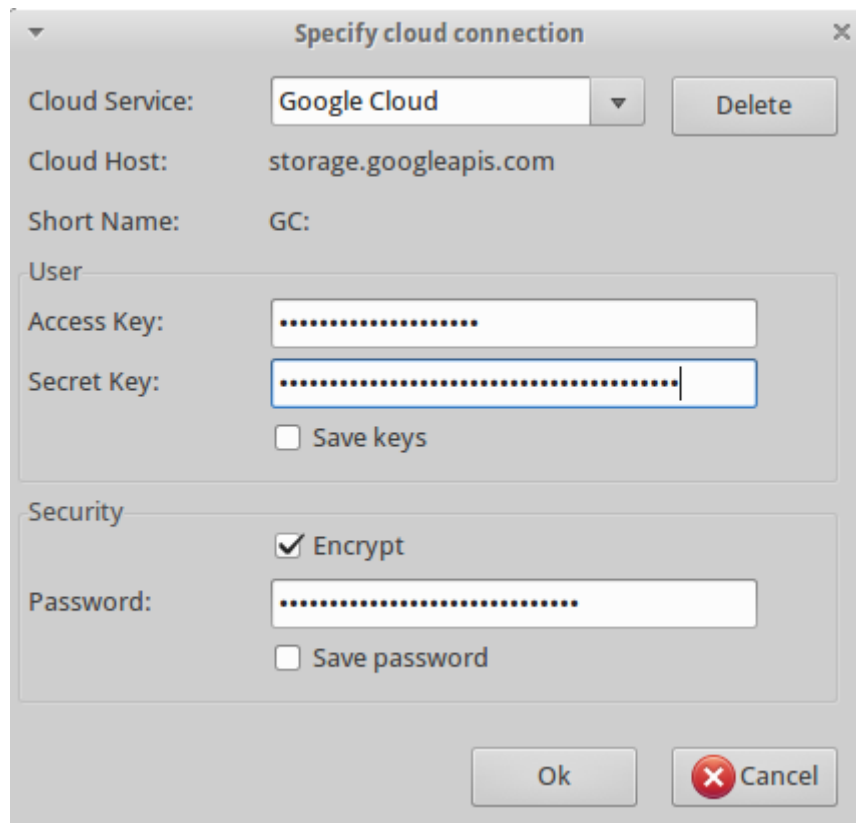


You can cancel a file transfer while it is progress by clicking on the **Transfer | Cancel** menu.

To download files or folders from the cloud navigate to the target local directory, select the remote item or items to download and either use the **Transfer | Download** menu or the right-click **Download** action.

Encryption

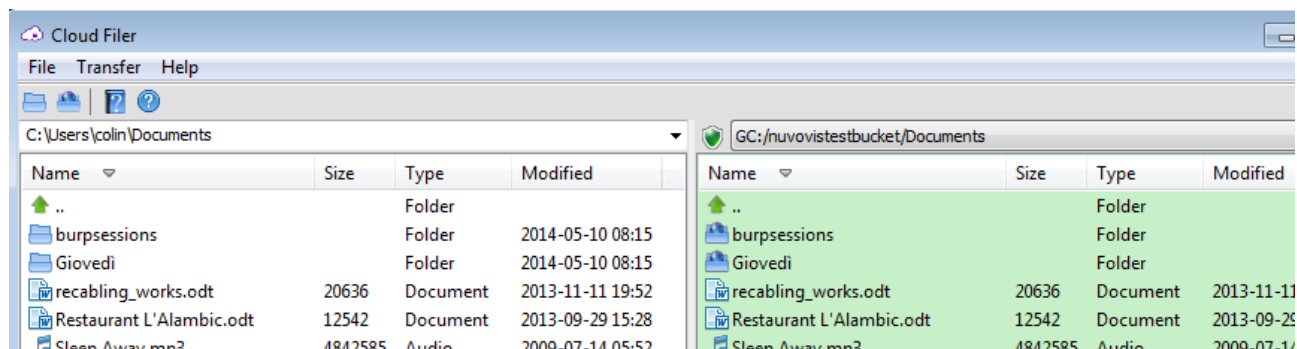
When you connect to the remote cloud service you can specify that secure encryption mode should be used by checking the `Encrypt` check box in the connection dialog:



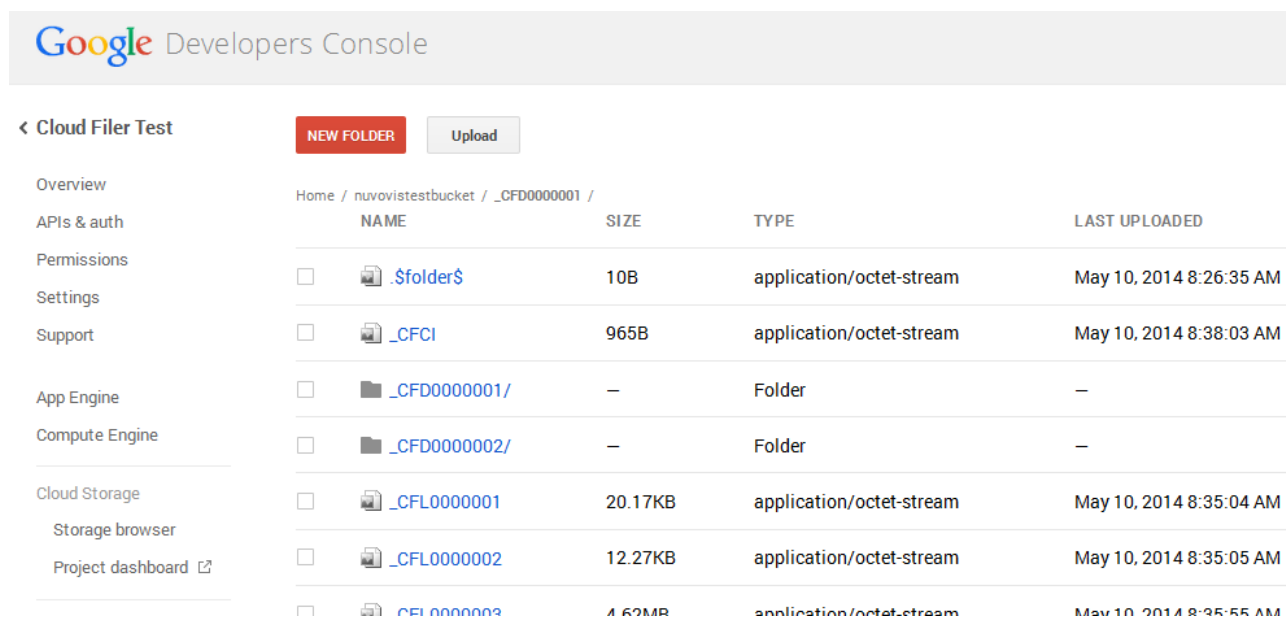
The image shows a 'Specify cloud connection' dialog box. It has a title bar with a close button (X). The dialog is divided into several sections. The first section contains 'Cloud Service' (a dropdown menu set to 'Google Cloud' with a 'Delete' button next to it), 'Cloud Host' (text field with 'storage.googleapis.com'), and 'Short Name' (text field with 'GC:'). The second section, titled 'User', contains 'Access Key' and 'Secret Key' (both masked with dots), a 'Save keys' checkbox (unchecked), and a 'Security' section. The 'Security' section contains an 'Encrypt' checkbox (checked) and a 'Password' field (masked with dots). There is also a 'Save password' checkbox (unchecked). At the bottom are 'Ok' and 'Cancel' buttons.

Note that if you forget the password you use you will not be able to access any of the files which were stored using the forgotten password. Ensure you have a fail-safe way of remembering your password. For example you could generate and store a strong password using [KeepPassX](#) and back up the KeepPassX database.

When you connect to a cloud service in encrypted mode you get visual confirmation that you are connected securely from the green shield and green background for the remote file and folder list on the right.



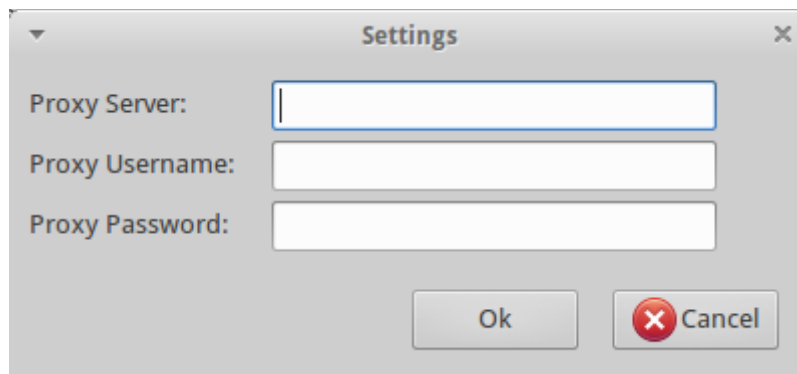
When you upload files or folders in secure mode each remote folder contains an encrypted file called `_CFCI` which holds the folder contents information, a folder called `_CFDn` for each sub-folder and a file called `_CFLn` for each file. Without the password the remote files and their names are just useless random noise. When you download files in encrypted mode Cloud Filer decrypts the files and uses the original file name for your local copy of the files. Your password and decrypted files never leave your local machine.



When you browse the remote folder Cloud Filer decodes the `_CFCI` file and you only see the cleartext representation of the obfuscated encrypted remote folders and files. You can see the cryptographic details [here](#).

Proxy Settings

If you are behind a proxy server you can set the proxy settings using File | Settings:



The image shows a 'Settings' dialog box with a title bar containing a dropdown arrow, the text 'Settings', and a close button (X). Inside the dialog, there are three labels with corresponding text input fields: 'Proxy Server:', 'Proxy Username:', and 'Proxy Password:'. The 'Proxy Server' field is currently selected with a blue border. At the bottom right of the dialog, there are two buttons: 'Ok' and 'Cancel'. The 'Cancel' button features a red circular icon with a white 'X' to its left.