How to set up Cloud storage for Odin

(MacOS instructions)

This document will guide you through the setup of your Cloud storage for your Odin time lapse camera. The process is fairly straightforward if you carefully follow the below instructions. You can also find a video tutorial for the **PC version** on our YouTube page which we would advise you watch, this can be found here:

A quick overview of Odin's Cloud storage feature.

Odin uses free cloud storage solutions to upload your images to, with either Google Drive, or DropBox being our preferred suggestions. Although other Cloud storage solutions are available, these have not been tested and we cannot guarantee their operation.

Although using a "free" Cloud storage service is slightly more difficult to setup than a "paid for" storage solution, we have chosen this solution for the below reasons:

- No monthly subscription for our customers (both Google Drive and DropBox offer free storage plans, 15GB and 2GB respectively, more than enough space to store 20,000 images, or more!)
- No GDPR issues as "your" images are stored on "your" Cloud account.
- Ease of adding additional cameras to your Cloud account. Each camera has its own name and folder.
- If you do need to increase your storage space it is very reasonable to do so. I.e Google only charges £16 / year for 100GB of storage, Dropbox has 1TB for approx £80 / year.

There are a few caveats to note if you are going to use Odin's image upload function, these being:

- Image uploads are limited to a 1920x1080 resolution. This is to prevent very large image files being uploaded each day
- To prevent too much power being used on each daily upload session.
- To help reduce SIM card costs if a 4G connection is being used. (150 images is roughly a 50MB upload per day. This would equate to around 1.5GB per month. Hence, a low-cost 4-5 GB SIM card would be ample for most users.)

We also recommend not uploading more than 300 images / day if using the standard 5W solar panel that comes with the system. This is so Odin should have plenty of power to run throughout winter months, especially in the Jan / Feb months in the western hemisphere.
Finally, Odin is very flexible, so if your requirements are different from the above we can modify the system to suit your needs, both in coding, or power solutions. Just call us to discuss your requirements.

Prerequisites before you start

1. A computer, or laptop. PC or Mac is fine.

You need to have an active account with either:

2. Google Drive

   If you have a gmail account, you already have 15GB of free storage space shared across all your photos, files and emails. To sign up for free google account, go here: https://www.google.com/intl/en-GB/account/about/

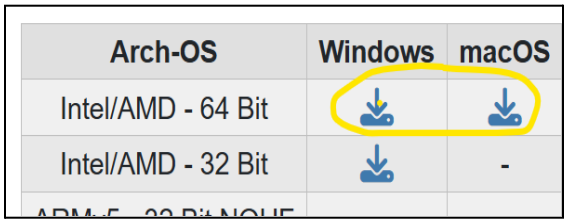
   -or-

   DropBox

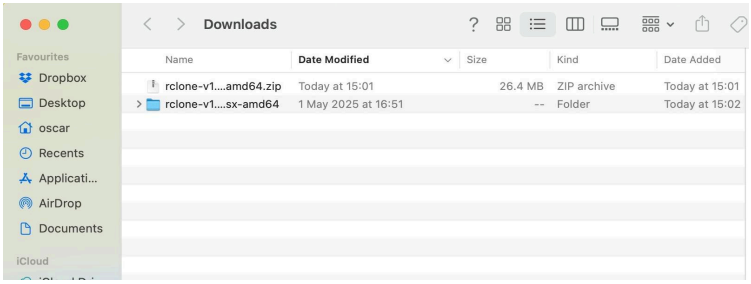
   A popular files and images storage service. Sign up for DropBox and get 2GB of storage space for free. To make an account, go to: https://www.dropbox.com/

3. An Odin time lapse camera with the battery adequately charged up. **Ideally, you should have already successfully connected your Odin to the internet using the "test connection" check**. If not, please see the manual on how to do this: Odin 4K time-lapse camera from Chronosys

4. Download the **Rclone** software. This free software is safe and will allow Odin to communicate with your Cloud storage provider. You can down it for either Windows or MacOS here : https://rclone.org/downloads/

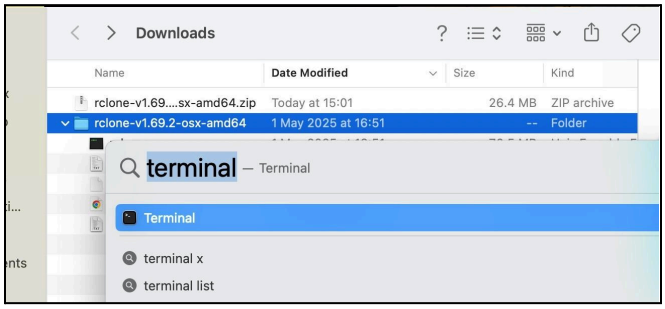


Once downloaded, Unzip the contents, like below :



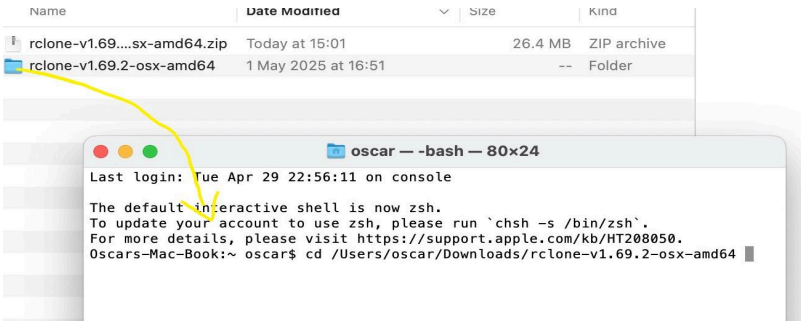
Opening the “Command Prompt (Terminal)”

1. Open **Terminal** in Mac OS. Go to your **LaunchPad** and type **terminal**, then click <enter> to open it:



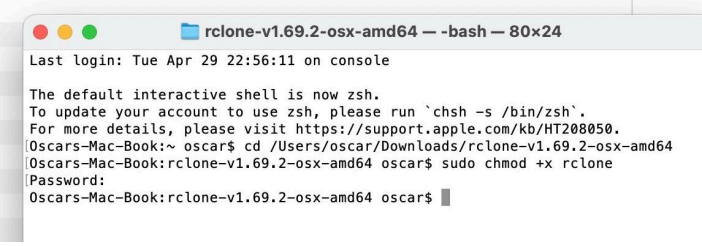
You should now have a window like this:

2. Now type in **CD** and a **space**, then drag and drop your unzipped folder into the terminal window, like below:



3. Hit <enter> to change to folder path. You should now have a path something like this **Oscar-Mac-Book: rclone-v1.69.2-osx–amd64 oscar$**
4. To allow changes to this file, please now type : **sudo chmod +x rclone** then hit <enter>

5. You will be asked to enter your system password to allow changes to be made to the file. You should have a screen like this now:



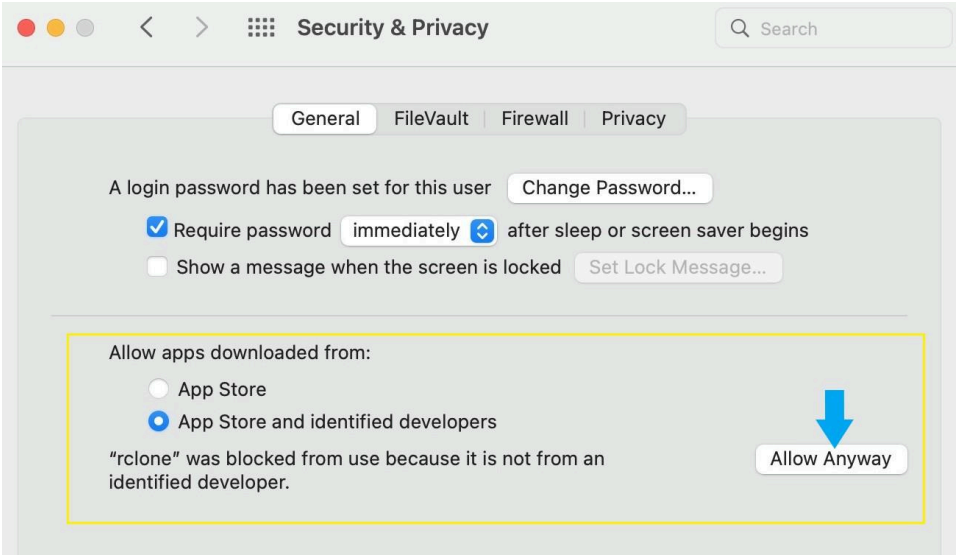
6. Now type in **./rclone config paths** and hit <enter>

Note - on some Mac systems you might now get a warning about an "unidentified developer" which will prevent you from moving forward. If you do not, just ignore this boxed out section.

In order to remove the unidentified developers warning, follow the below:

Go to : **System Preferences**
Then select : **Security and Privacy**
Then select the tab : **General**

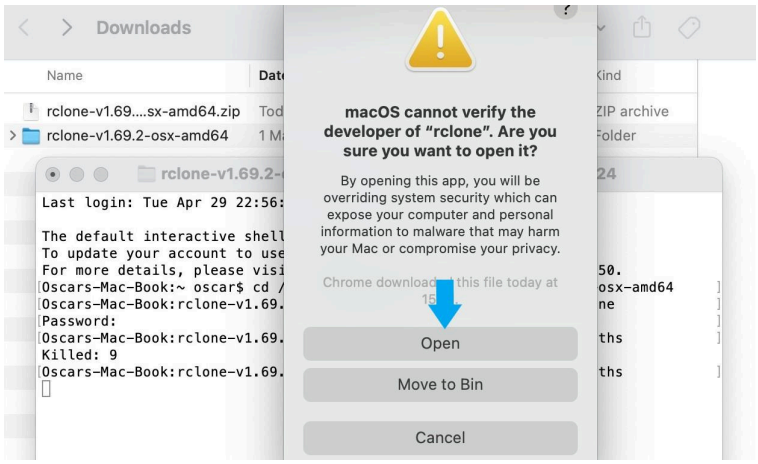
On this screen , click **"allow anyway"** , like below:



When prompted, enter your **system password** to allow changes.

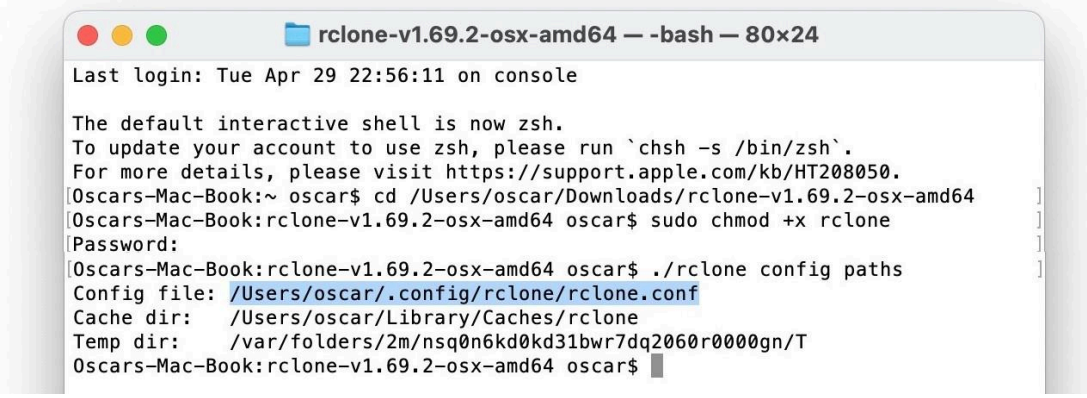
Now go back to your terminal window and try opening the file again.
Type in **./rclone config paths** and hit <enter>

Again, you might get a warning like the below, just click “**open**”



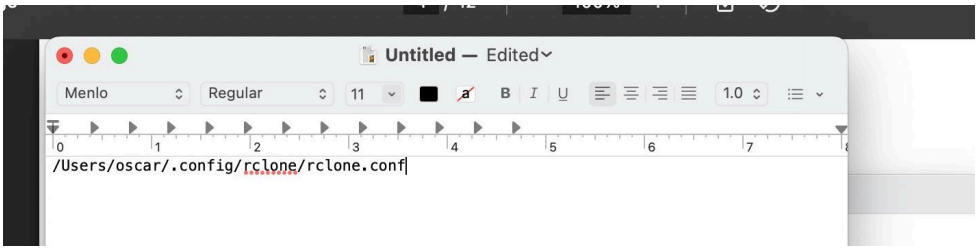
Copying your token’s save location

1. You should have been returned with some location paths, like below. Copy the config path line (in blue) and save it to a new text file, or simply write this path down. (This is the location where your token will be saved later)



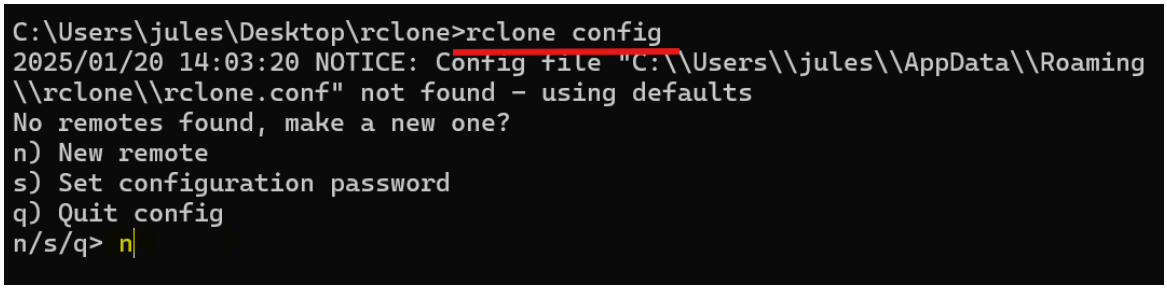
***Tip** - to copy text from the command prompt **highlight the text** you want to copy, then hit “**Command**” and “**C**” together to copy it. To paste what you’ve copied, hit “**Command**” and “**V**” into a text file (.txt file)*

You should now have a text file with your copied location, like this:

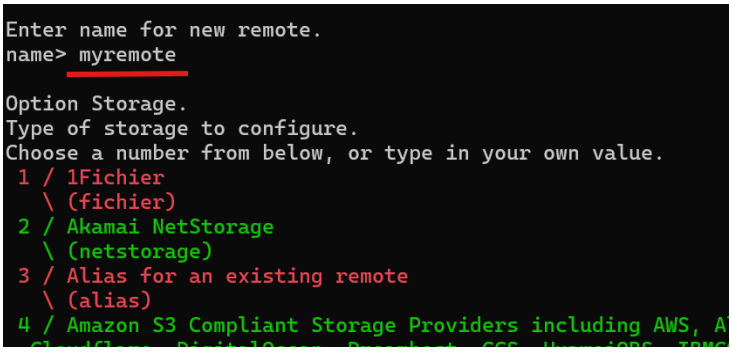


Configuring your Cloud storage token

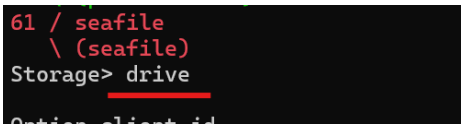
1. Go back to your terminal window and type **./rclone config** into your terminal and hit <enter>. You will be asked if you want to start a new config. Type "**n**" to add a new config and press <enter>. As shown below:



2. You will be asked to enter a new name for your config. Enter **myremote** and hit <enter>, as shown below. You will be returned with a list of all the Cloud storage providers available. (note - we will only be using either Google Drive, or Dropbox for Odin.)



3. As we are using Google Drive for your storage, write **drive** into the field as shown below and hit <enter>. (If you wanted to use Dropbox instead, you would type Dropbox and hit <enter>)



4. There now follows a few options to choose (shown in purple). Most of these can be skipped. (Note the below setup is for Google Drive, but Dropbox will have similar, but less, options to choose from.)

   Option client_id.
   Google Application Client Id
   Setting your own is recommended.
   See https://rclone.org/drive/#making-your-own-client-id for how to create your own.
   If you leave this blank, it will use an internal key which is low performance.
   Enter a value. Press Enter to leave empty.
   client_id> **(see below Client ID table)**

After entering your choice hit <enter>

   Option client_secret.
   OAuth Client Secret.
   Leave blank normally.
   Enter a value. Press Enter to leave empty.
   client_secret> **(see below table)**

After entering your choice hit <enter>

Google Drive	Copy and paste red text: **Client ID** 558111807627-rsoh6gajqroqav54dra3mr9dja960llt.apps.googleusercontent.com **Client Secret** 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 (Note - Our own Client ID uploads images **much** faster than using the standard shared client.)
DropBox, and all other cloud storage services	Leave both Client ID and Client secret empty (basically, skipping these options)

```
Option scope.
Comma separated list of scopes that rclone should use when requesting access
from drive.
Choose a number from below, or type in your own value.
Press Enter to leave empty.
 1 / Full access all files, excluding Application Data Folder.
   \ (drive)
 2 / Read-only access to file metadata and file contents.
   \ (drive.readonly)
   / Access to files created by rclone only.
 3 | These are visible in the drive website.
   | File authorization is revoked when the user deauthorizes the app.
   \ (drive.file)
   / Allows read and write access to the Application Data folder.
 4 | This is not visible in the drive website.
   \ (drive.appfolder)
   / Allows read-only access to file metadata but
 5 | does not allow any access to read or download file content.
   \ (drive.metadata.readonly)
scope>1
```

Select option “1” and hit <enter>

```
Option service_account_file.
Service Account Credentials JSON file path.
Leave blank normally.
Needed only if you want use SA instead of interactive login.
Leading `~` will be expanded in the file name as will environment variables such as
`${RCLONE_CONFIG_DIR}`.
Enter a value. Press Enter to leave empty.
service_account_file>
```

Hit <enter> to skip this option

```
Edit advanced config?
y) Yes
n) No (default)
y/n>n
```

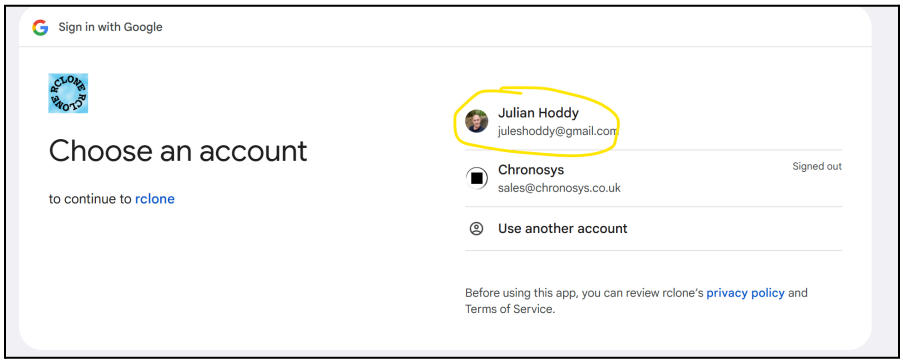
Type “**n**” and <enter> to skip the advanced config.

Use web browser to automatically authenticate rclone with remote?
 * Say Y if the machine running rclone has a web browser you can use
 * Say N if running rclone on a (remote) machine without web browser access
If not sure try Y. If Y failed, try N.

y) Yes (default)
n) No
y/n>y

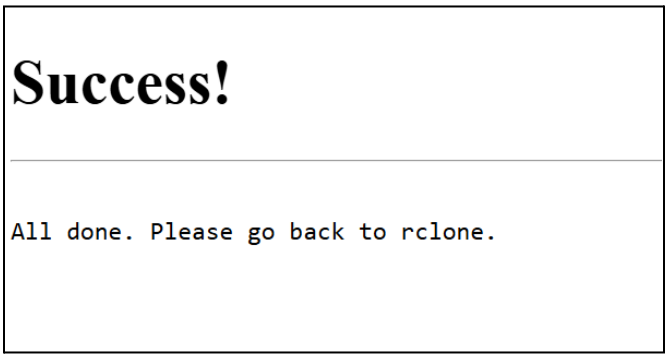
Type "**y**" and <enter> to automatically authenticate your config with your storage provider. (Note your laptop or PC must be connected to the internet for this to complete.)

You should have a web browser page appear which is asking for you to confirm if you want rclone to grant access to your cloud storage provider. If you have multiple Google accounts (like shown) you will need to select the Google account you want to use.



You may also be taken to more screens to confirm you want rclone to talk to your cloud account. Additionally, you may receive emails from your storage provider about activity on your cloud account. Please confirm this is OK if requested.

If all is good, you'll receive a page saying the below:



Now, go back to your terminal window to finalise your config token.

```
Configure this as a Shared Drive (Team Drive)?

y) Yes
n) No (default)
y/n>
```

Hit <enter> to skip this option

```
Configuration complete.
Options:
- type: drive
- scope: drive
- token:
{"access_token":"ya29.a0ARW5m74gvyA0175","token_type":"Bearer","refresh_toke
n":"1//03ywcjR6gBfbdRYrCgYIARAAGAMSNwF-L9IriRiKfSUTqP6oCSLrc3_poo7yH
dpTkttY0SNcS1L_X3b8MeEdCFweZU1NGlQw","expiry":"2025-01-20T15:57:25.358
8395Z"}
- team_drive:
Keep this "myremote" remote?
y) Yes this is OK (default)
e) Edit this remote
d) Delete this remote
y/e/d>
```

Type “**y**” and <enter> to confirm this is OK

```
Current remotes:

Name                 Type
====                 ====
myremote             drive

e) Edit existing remote
n) New remote
d) Delete remote
r) Rename remote
c) Copy remote
s) Set configuration password
q) Quit config
e/n/d/r/c/s/q>q
```

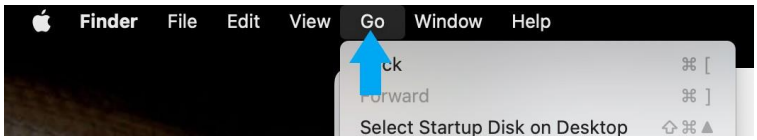
Type “**q**” and <enter> to quit and exit the token config.

Finding your token on your computer

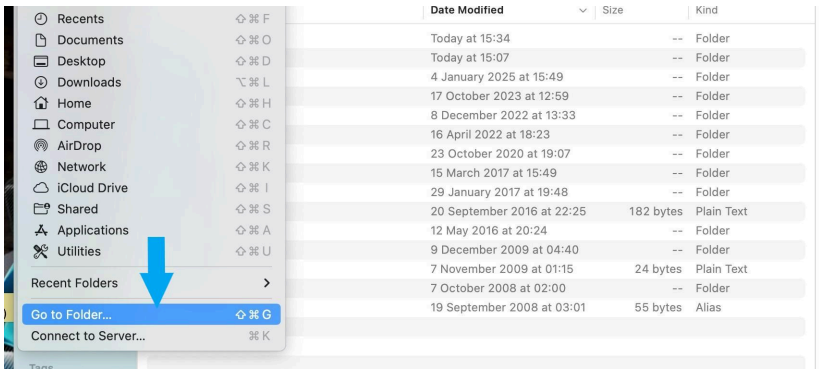
The token you have just created has been stored in a folder. Depending on what type of computer you use, Mac or PC, it will be saved in different locations.

Earlier (on page 6) you saved the location path of the token, so find that path text now. It should be something similar to the below line :
/Users/oscar/.config/rclone/rclone.conf

Select "**Go**" from your homepage bar, like below:



Then select "**Go to folder**" , like below :

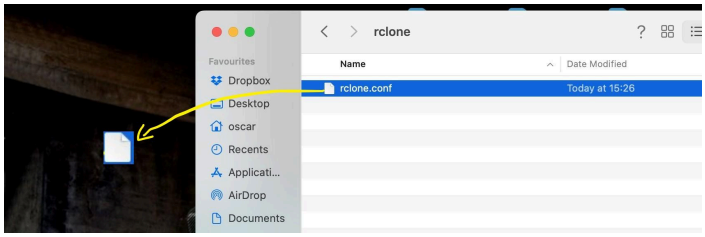


Copy your token file path into your computer's search field without the **rclone.conf** on the end, something similar to this : **/Users/oscar/.config/rclone/**

Your path should look something like below:

Hit <enter>

Your file should appear in the search field. Once found, simply move (drag and drop) the file to your desktop for easy access, as shown below:

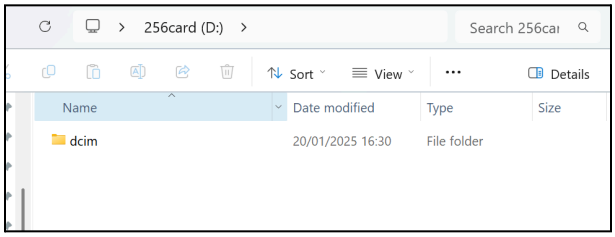


Copying your config token to Odin

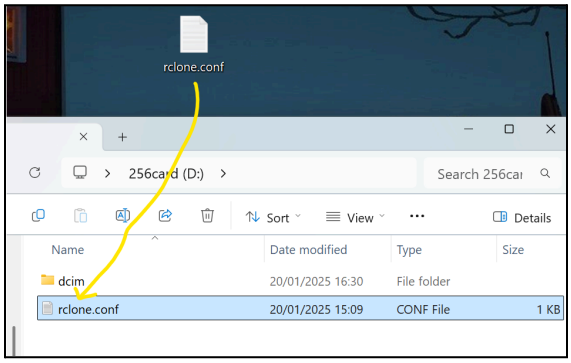
Your Odin should be turned off. Just remove the lead from the battery if it's not.

Remove your Odin's SD card and plug it into your computer's USB port.

The SD card should appear in your computer's device list. Click into the SD card so you open it. It should look something like this:

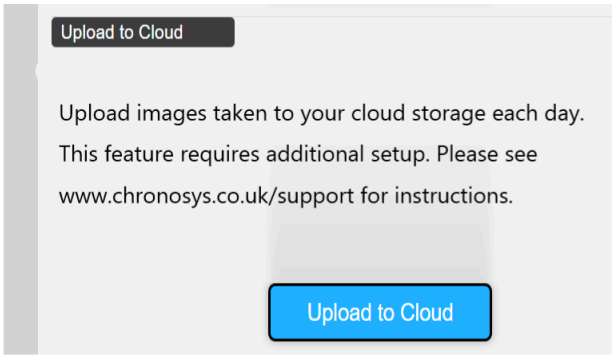


Now drag and drop the **rclone.conf** file from your desktop to your Odin's SD card.
The file MUST be placed in the root on the SD card, NOT inside the DCIM folder. It should look like this:

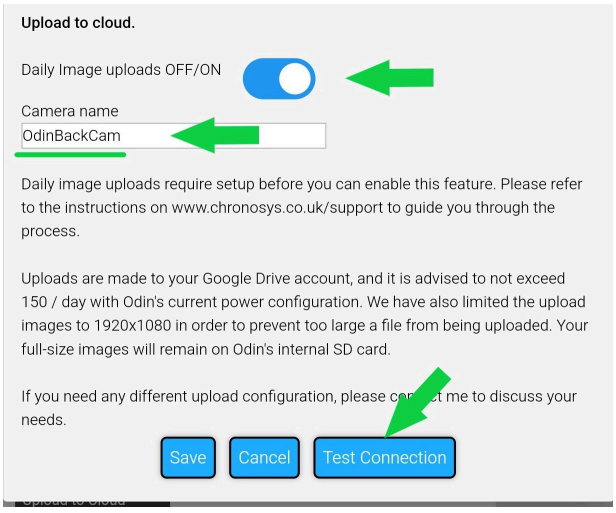


Place the SD card back into your Odin and switch it to “setup” mode. Now plug the power lead back into the battery and Odin will boot up.

Wait 20 seconds then log into Odin’s user interface, as normal. (This procedure is explained in the Odin quickstart guide, or the manual.)



Go to the “Upload to Cloud” section in the user interface.



Toggle daily image uploads to ON (toggled to right)

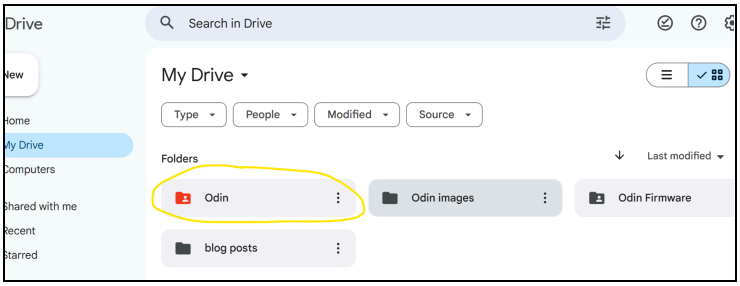
Add a name for the camera. (This will be the name of the folder your images are saved to in the Cloud.)

Hit “test connection”

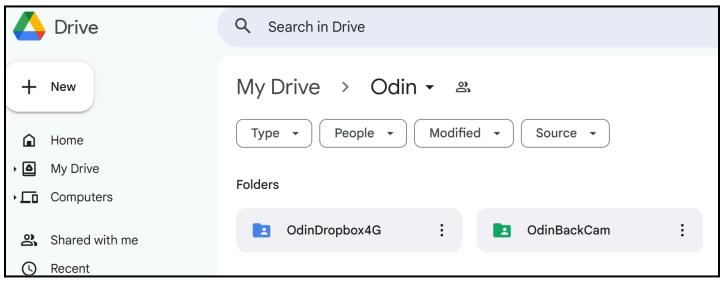
Now wait about 3 to 4 minutes for Odin to test its connection.

Check Odin has connected to your Cloud Storage

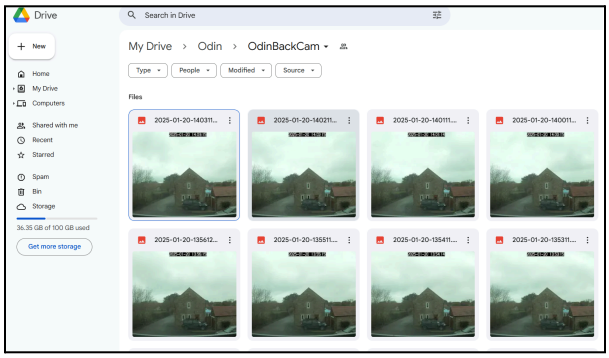
You can now log into your Cloud storage (Google Drive or DropBox) to see if the Odin has created its folders. If successful, you should see something like this:



If you click the “Odin” folder you will be taken to a “sub” folder. Each of your Odin camera named folders can been seen here, like this:



Clicking on your camera folder will take you to your images, like this



And that’s it!! Well done if you got this far and it’s working as it should!

Remember to keep your token safe somewhere as you will be able to use that on another camera, or if you ever need to update your camera.