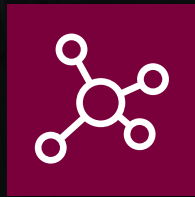


# Imaging Materials for a Brighter World

CANADIAN CENTRE FOR ELECTRON MICROSCOPY  
CCEM Data Setup Instructions

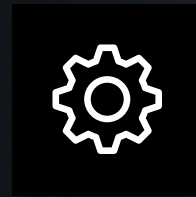
**BREAKTHROUGH  
MATERIALS  
RESEARCH**



**LEADING IN  
EDUCATION AND  
TRAINING**



**PROVIDING  
SPECIALIZED  
SERVICES**



## CCEM Data Server

The CCEM Data Server (commonly referred to as 'CCEMdata') is a temporary online data storage solution designed to facilitate the safe transfer and storage of scientific data generated at CCEM. It is managed by McMaster University's Research and High-Performance Computing Services (RHPCS) to ensure secure access and data integrity, and administered as described in the [CCEM Data Management & Cybersecurity Framework](#).

### Purpose of the CCEM Data Server

- **Data Transfer:** Users can move data from instrument computers to their personal storage devices securely.
- **Working Storage:** It provides temporary space for data processing and analysis using CCEM compute resources.
- **Central Repository:** Data generated as part of CCEM service requests and projects are stored centrally and can be accessed and shared among authorized staff and users.

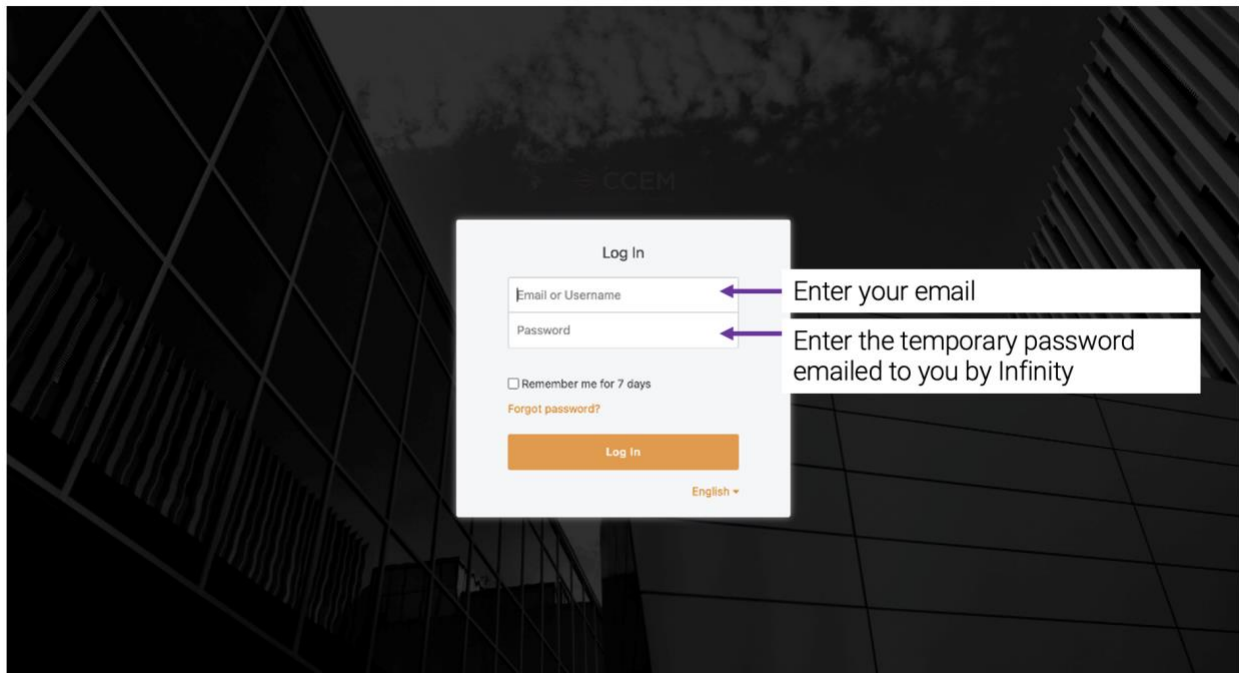
CCEMdata is managed using the open-source file sync and share software [Seafile](https://www.seafile.com/) (<https://www.seafile.com/>). It plays a critical role in ensuring secure, efficient, and compliant data storage and transfer for researchers using CCEM facilities.

Questions on CCEMdata can be directed to CCEM management ([ccem@mcmaster.ca](mailto:ccem@mcmaster.ca))

## Completing CCEMdata Account Creation

Once you have indicated that you need CCEMdata access in your Virtual Resource Access (VRA) form in Infinity, an account will be created for you on CCEM's data server when that access form is processed. An automated email from Infinity should be sent to you confirming your account. Setup of this account must be completed by following the following steps:

1. Access the data server by going to the following page: <https://ccebdata.mcmaster.ca/>
2. Login using your EMAIL (the one you used on the VRA form, which should be the same as the one you use for Infinity) and the temporary password given to you in the confirmation message.



3. After you have logged into CCEMdata you will see a two-factor authentication (2FA) QR code on the screen.



- The QR code can be scanned with an authentication app, such as Google Authenticator or Microsoft Authenticator (shown below). If you do not already have one of these apps downloaded on your phone, you will need to download the app now.

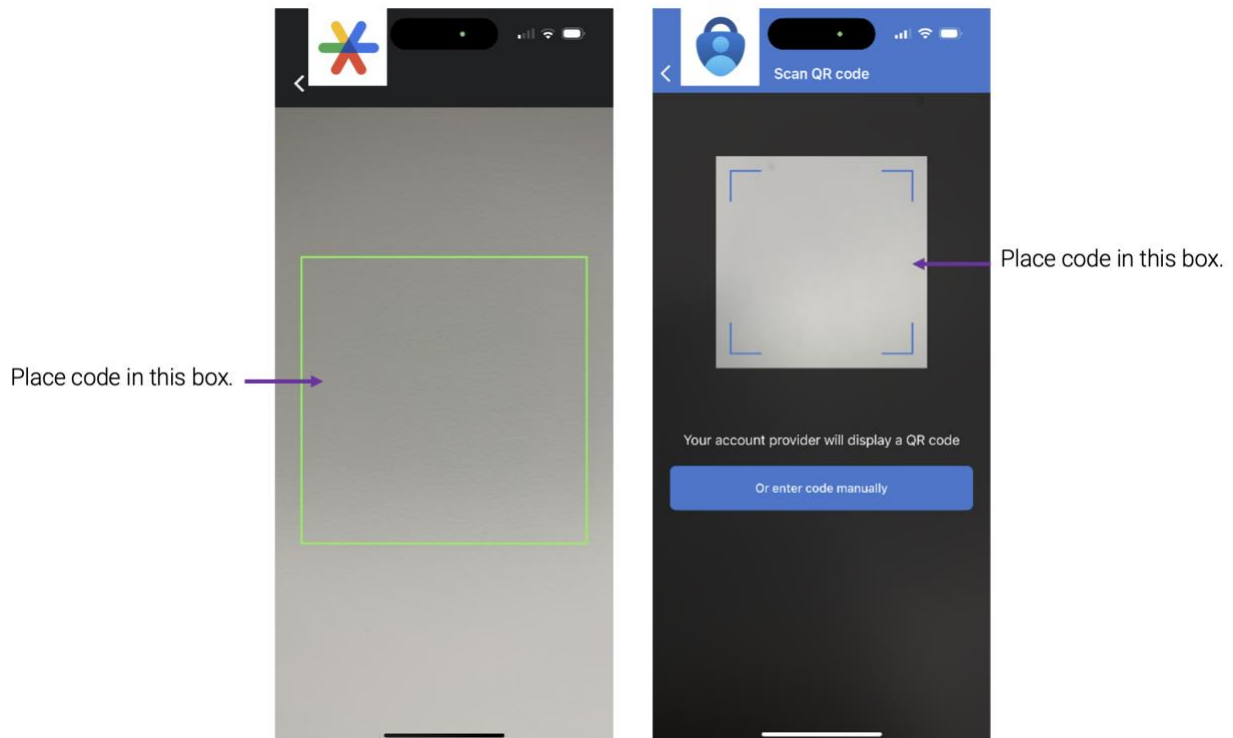
Google  
Authenticator



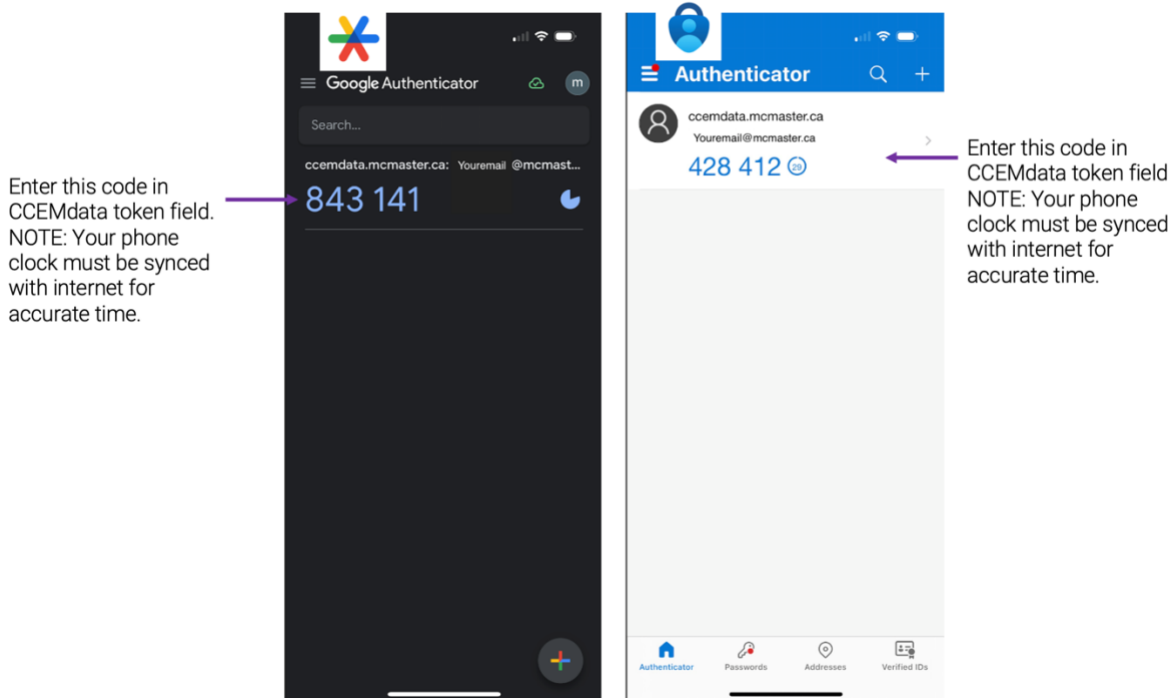
Microsoft  
Authenticator



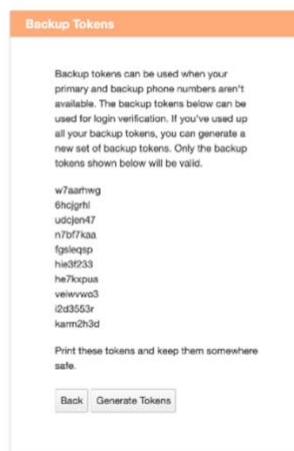
- After downloading one of the Authenticator apps, scan the QR code by holding your phone up to the QR code and ensuring the code is positioned in the box shown on the app.



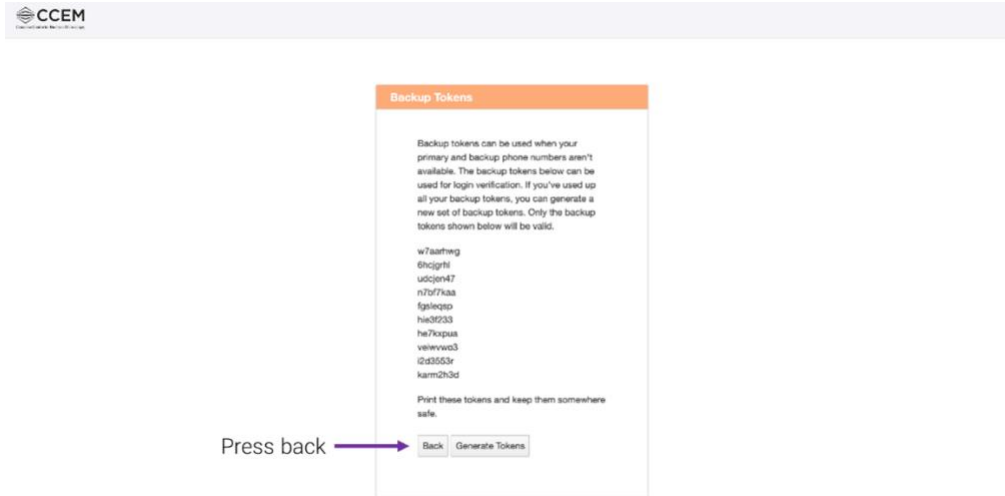
6. After scanning the QR code, a new numerical code will show up on your phone screen (as shown below), use this code and type it in the “Token” FIELD under the QR Code in CCEMdata.



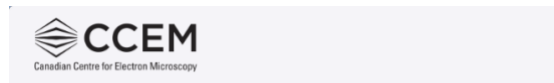
7. Once the code is entered, click “Next”. From here you will be given a set of tokens. These can be used for login verification when your Authenticator app is not available. These can be re-generated if all have been used. Save these tokens somewhere safe.





8. After saving your list of tokens press “Back”. This will bring you to the CCEMdata home screen, where you can upload your data from a CCEM instrument and download the data to your personal data storage.



- Note that libraries you create for upload/transfer of your data will appear under “My Libraries”. Libraries that are part of CCEM staff service requests will appear under “Shared with me”. By default, user access to shared libraries is “Read-only”. This can be modified on request if read-write access is required.



## Files

-  My Libraries
-  Shared with me

## Using the Seafile Desktop Syncing Client with CCEMdata

Many operations involving CCEMdata can be done using the web client, and using the desktop syncing client is optional / not required. However, it is helpful (and sometimes necessary) for operations such as:

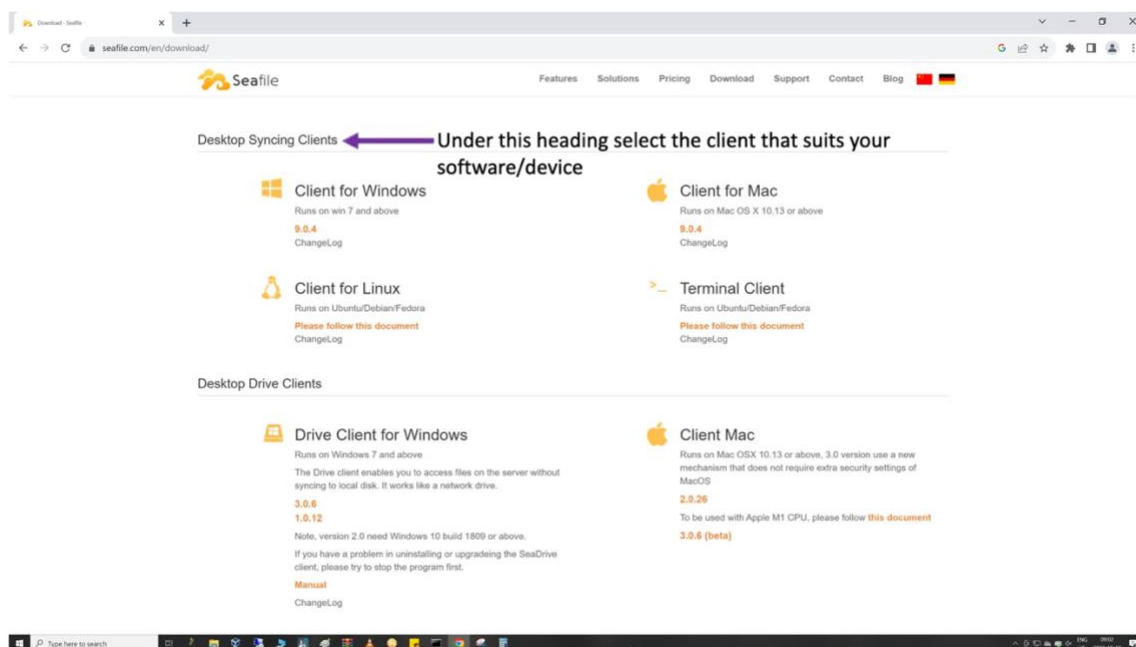
- Downloading large libraries of data
- Keeping the microscope data that you are working on / post-processing up to date as you analyze and process it

Instructions for setting up the desktop syncing client are as follows:

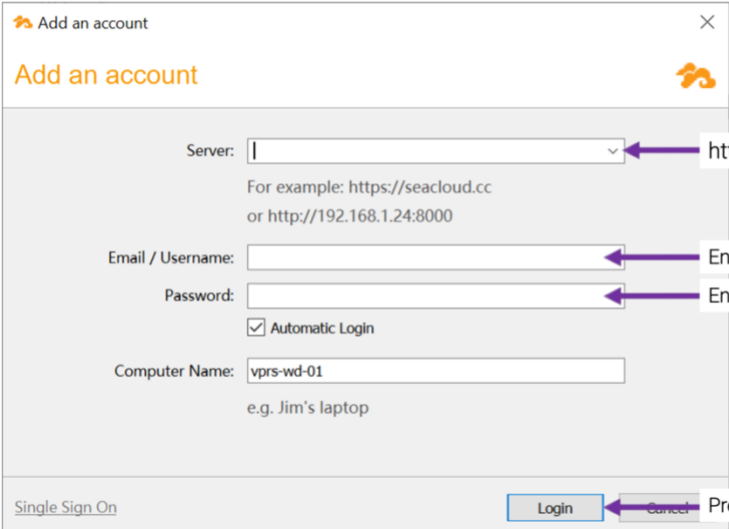
### 1. Download and Setup of the Client

1.1 Use a web browser, and navigate to the 'Download' section of the Seafile website (<https://www.seafile.com/en/download/>)

1.2 Under "Desktop Syncing Clients" you will see clients for many different software/devices, select the one that suits the software/device you are wanting to sync to. (Note: Drive Clients are also available, and will work with CCEMdata, but their use is not covered here).



- 1.3 After downloading and opening Seafile, use your CCEMdata credentials to sign in, making sure you select CCEM under server.



Server:  <https://csemdata.mcmaster.ca/>

For example: <https://seacloud.cc>  
or <http://192.168.1.24:8000>

Email / Username:  Enter your email

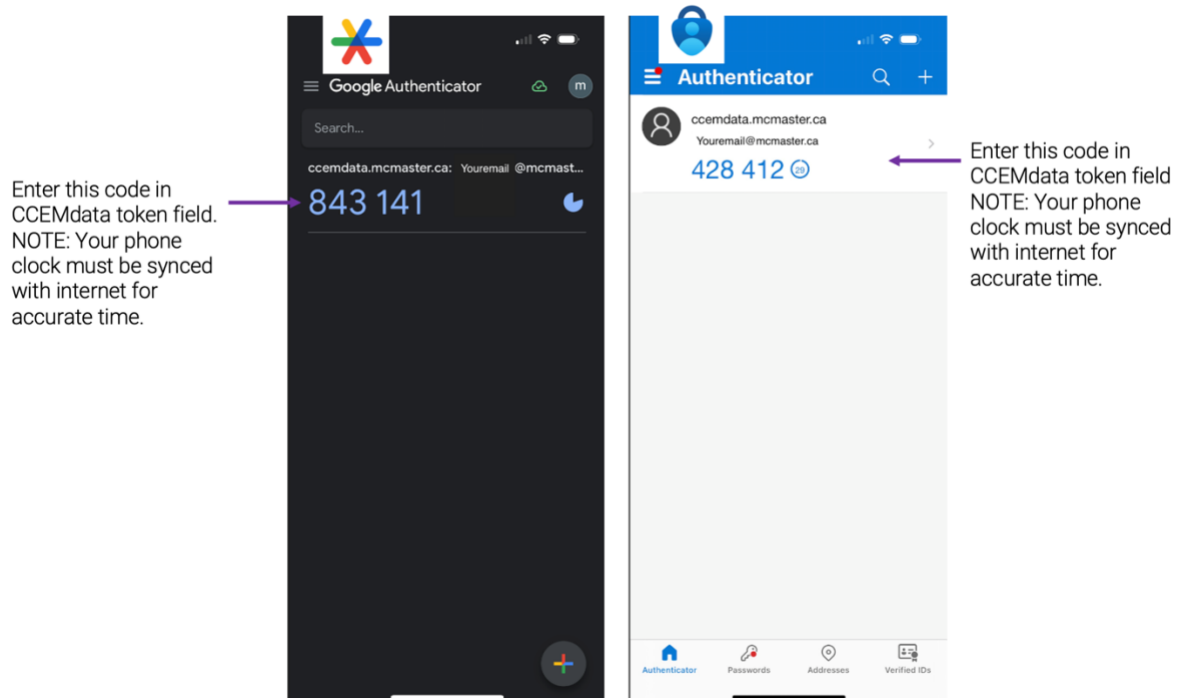
Password:  Enter your CCEMdata password

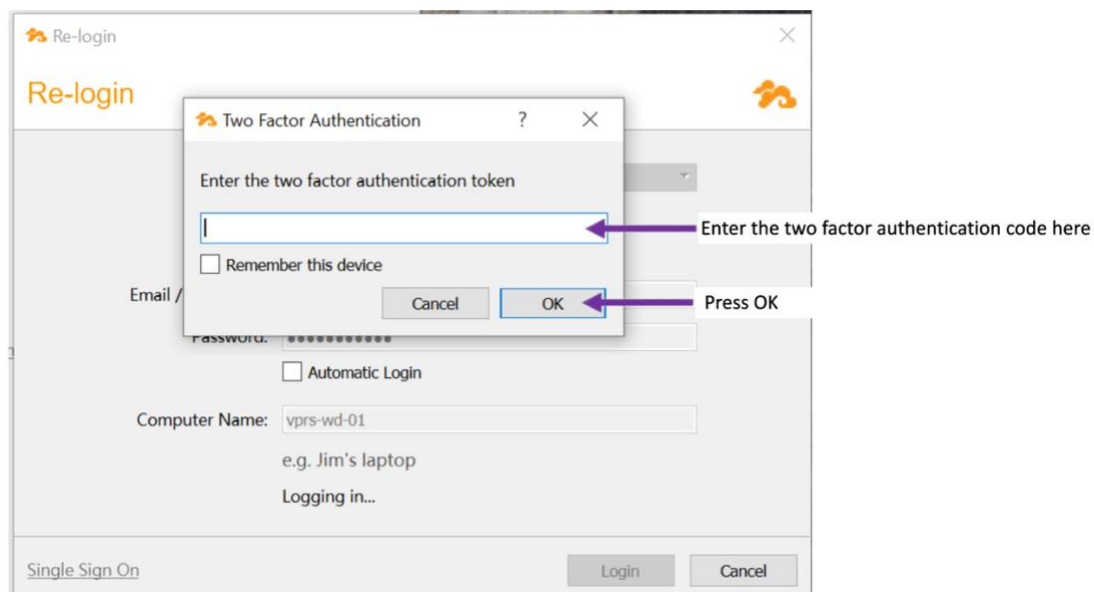
Automatic Login

Computer Name:  vprs-wd-01  
e.g. Jim's laptop

Single Sign On   Press Login

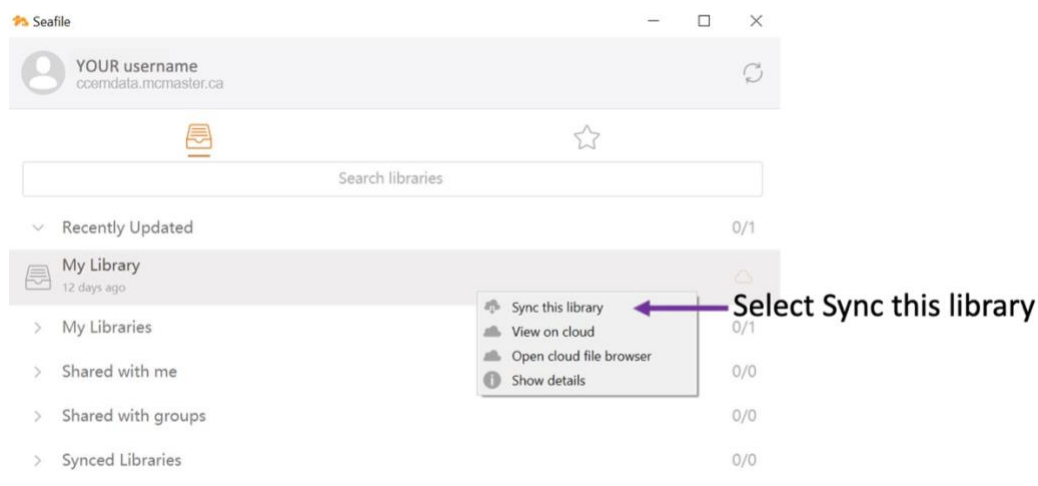
- 1.4 After the Login button is pressed you must enter a 2FA code. This code can be found on the authentication app used when creating your CCEMdata account.



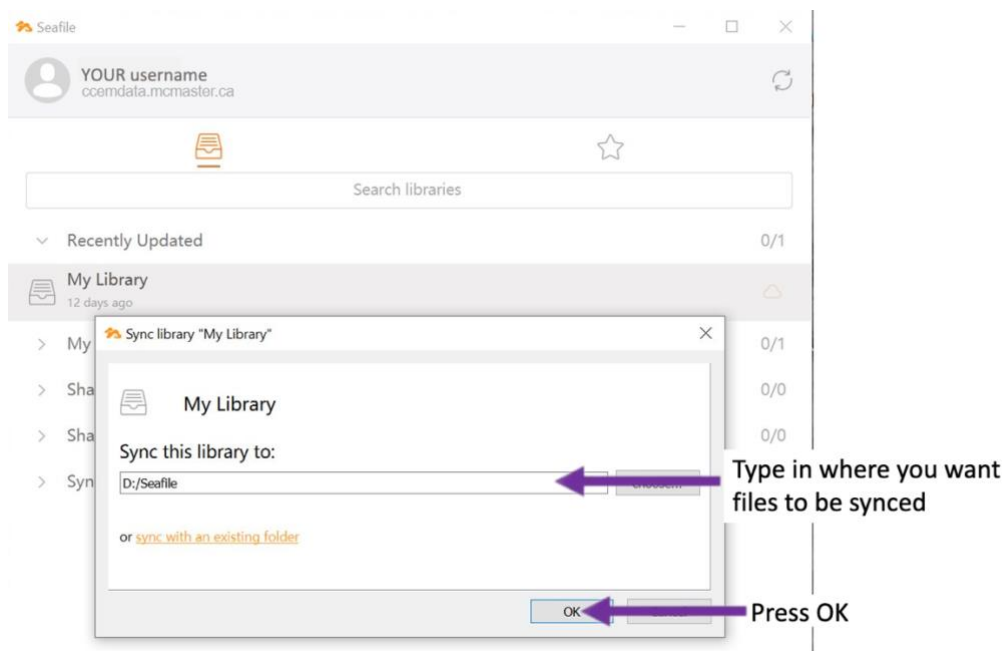


## 2. Downloading / Syncing Libraries

2.1 After logging in to CCEMdata through the desktop syncing client, you will be brought to the Seafiler main window. Here, right-click the library with the data you wish to sync/work with. A drop-down menu will then show up, select “Sync this library” (in the example below “My Library” will be synced).



2.2 After pressing ‘Sync this library’, another pop-up screen will show up asking where you want to ‘Sync this library to.’ this is where you must enter where you want the library and files to be synced on your workstation (in this example “D:/Seafiler” will be where the files will be synced – however, **if using the CCEM Virtual Machine (VM) workstations, you should sync to the Desktop, Documents, or Downloads folders** to ensure your data is private and linked across different VM workstations). Once you have entered where you want to sync to, press OK.



2.3 The data are now syncing, this will be indicated through the syncing icons shown below (yellow = in the process of syncing, green = synced). Once the green icon appears the data is ready to be processed and analyzed with the software of your choice.



Syncing Icon



Synced Icon

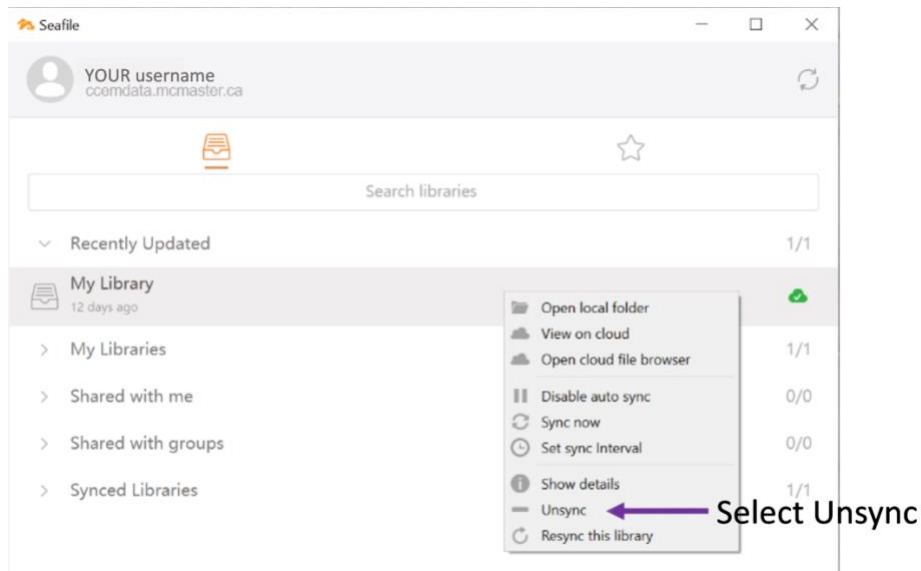
Syncing allows all changes made to the data to be made on your local computer and on CCEMdata.

### 3. Unsyncing / Removing Libraries

The following steps are how to remove local files to free up storage. Note: If you are on a CCEM workstation, you must follow these steps to delete all local files off of the PC when your session is over.

3.1 After you are done processing and analyzing your data you must unsync your library. To do this right-click the synced library, a drop-down menu will show up, select Unsync, here you will get a pop-up screen asking if you are sure you want to unsync the library, press Yes. The library is now no longer synced, this is shown when the green icon no longer appears next to your previously synced folder.

**NOTE:** Seafiler will continue to sync to your workstation until you unsync the library.



3.2 Your data remains on CCEMdata after unsyncing, and can be found under the library and/or folder you selected. At this point, your data are also still on your workstation's local drive.

3.3 To remove the data from the local drive, simply delete the folder that was created when the library was first synced.

NOTE: before deleting from the local drive ensure files are no longer synced on Seafiler!

3.4 If you are on a public workstation, you should also log out of Seafiler. To do this click the profile picture icon in the top left corner, here you will get a list of users, select your own and hover the mouse over your name, here you will select logout.

