

Intro to Globus

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8 Dec, 2020

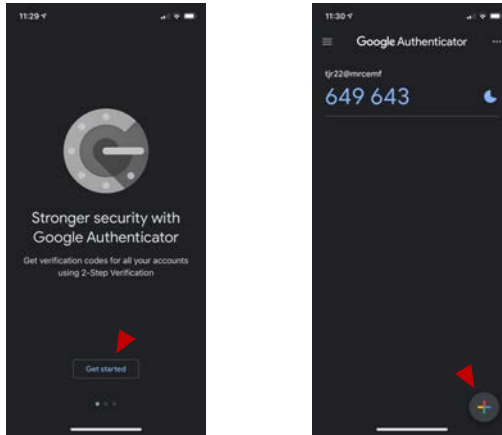
The Midlands Regional CryoEM Facility (MRCEMF) recommends that users move their data using Globus (www.globus.org). Details of this system are beyond this introduction, and are available on the Globus website.

In brief, Globus is a system for moving data from one 'endpoint' to another. Endpoints include our data processing cluster (where your raw data will be available in /net/krinos,) your local storage system, and even your personal computer. In order to setup your personal computer as a globus endpoint, install Globus Connect Personal (www.globus.org/globus-connect-personal).

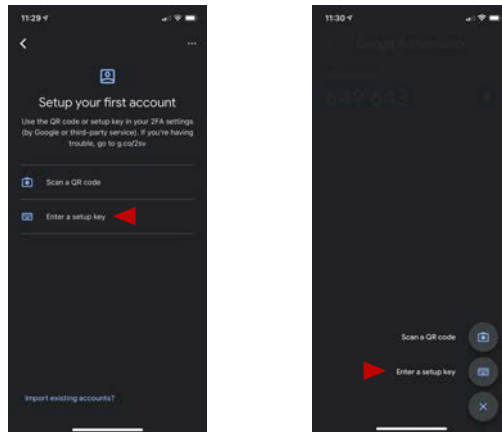
If you do not already have a Globus account, will need to create one. There are currently three ways to create an account: Create a Globus ID, link you Google account, or link your ORCID iD. The University of Leicester doesn't currently support organizational login for Globus. The account name you use does not have to match your cluster username.

The MRCEMF Globus endpoint also requires a time-based one-time password (OTP). You will need to put an app on your phone to generate these passwords. We have verified that Google Authenticator, Authy, LastPass Authenticator and Microsoft Authenticator all work for this function. Google Authenticator instructions can be found below. To make setting up and monitoring the transfers easy, Globus also provides a web-app.

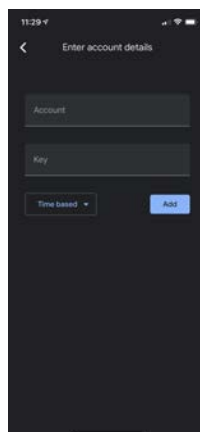
1. Install Google Authenticator onto your phone.
2. Open Authenticator, and either click 'Get started' or the plus in the bottom right-hand corner.



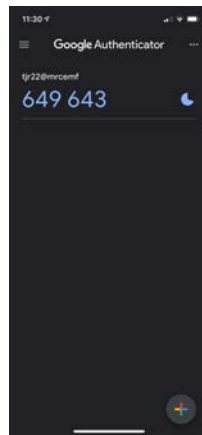
3. Choose 'Enter a setup key'



4. Enter the key exactly as provided (the key is case sensitive.) The 'Account' field can be whatever label you like. Make sure you use 'Time based'.



5. You should then have a six-digit password (OTP) that changes every 30 seconds.

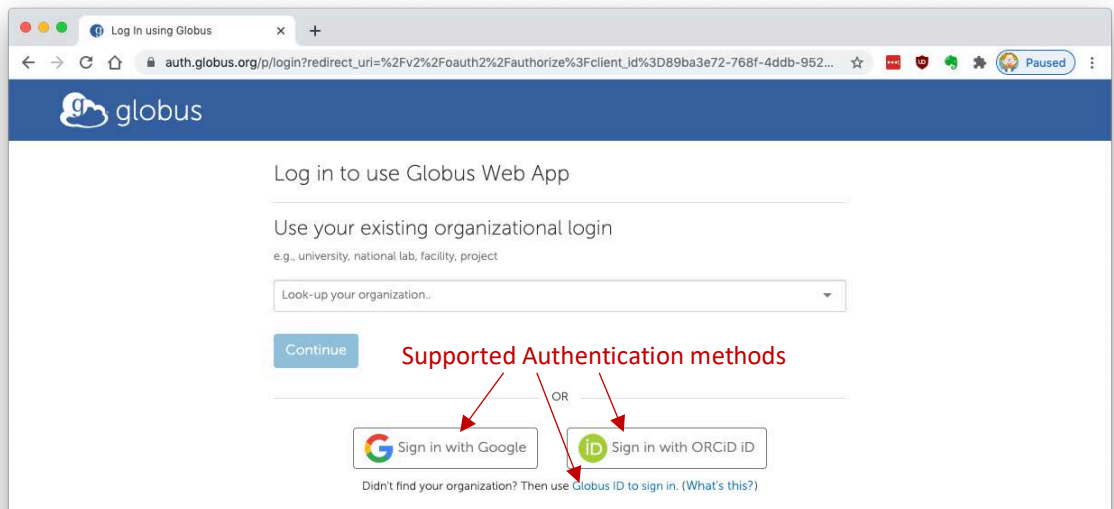


6. Go to www.globus.org.

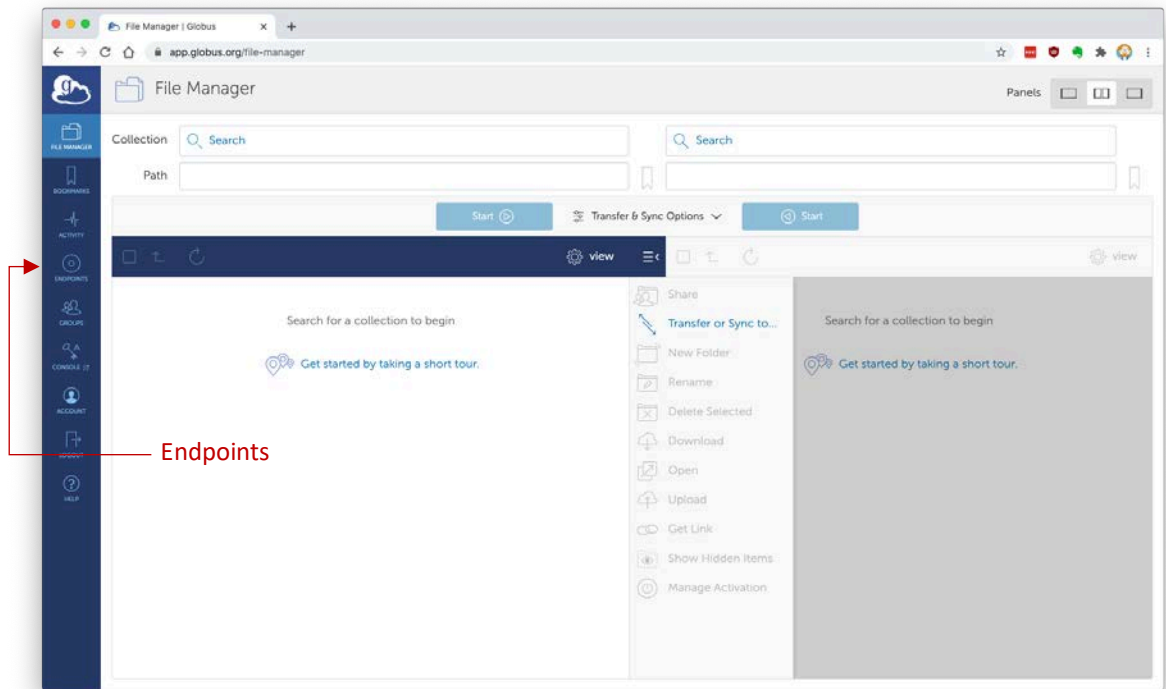
Click here to log in



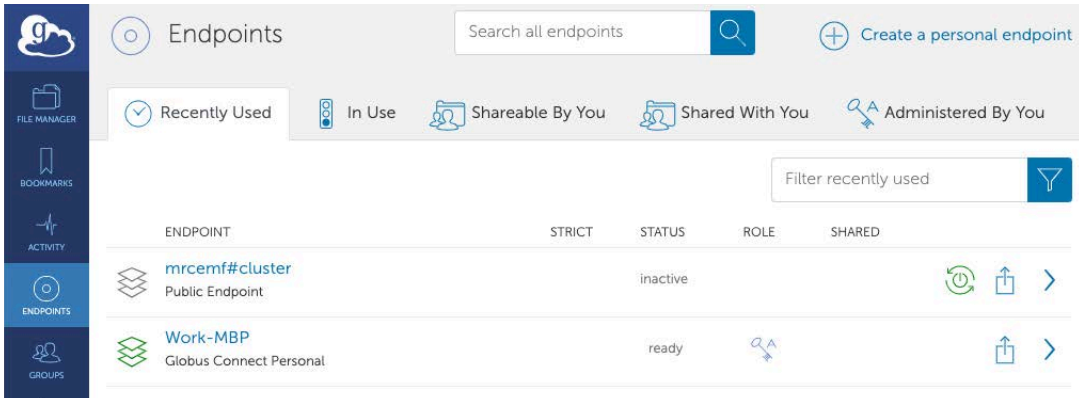
7. Login using your preferred method.



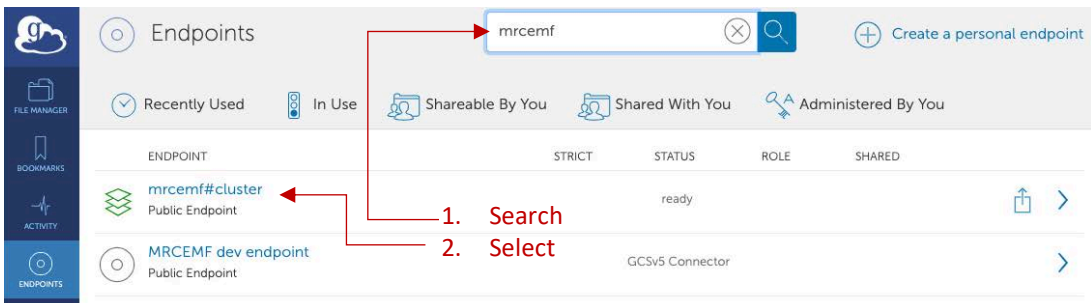
8. Once logged in, you'll be presented with the File Manager. In order to connect the cluster endpoint, click on the ENDPOINTS link on the left-hand side.



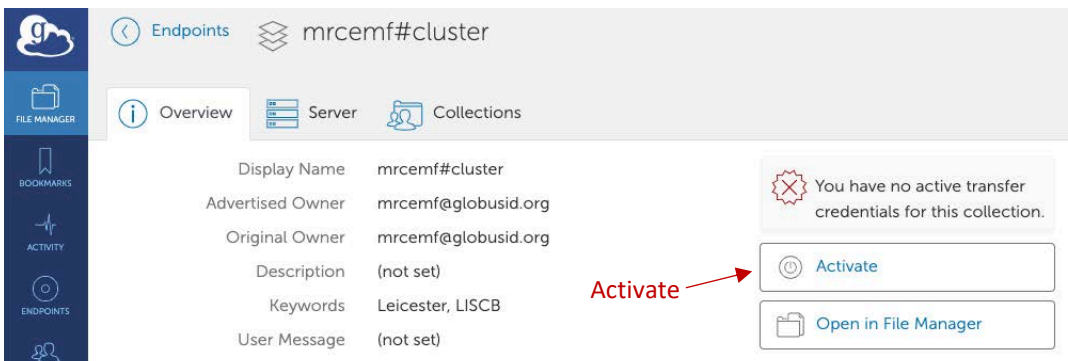
9. If you have setup Globus Connect Personal and/or used any endpoints recently, they'll be listed.



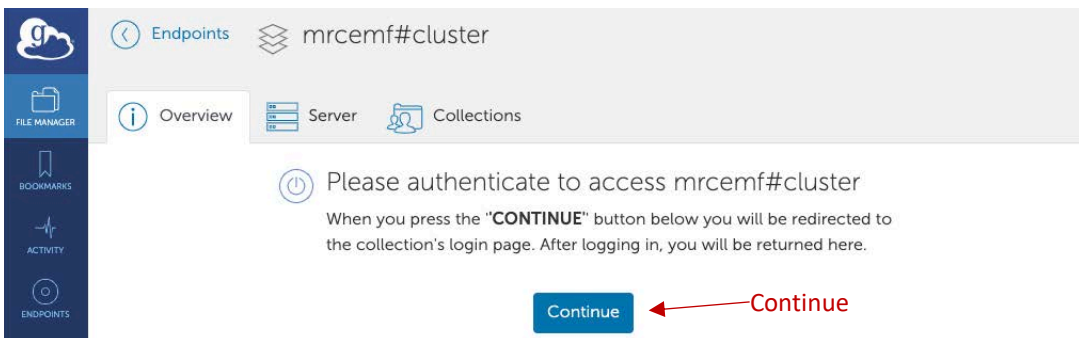
10. If you don't have the mrcefmf#cluster endpoint listed, search for mrcefmf, and choose the mrcefmf#cluster endpoint.



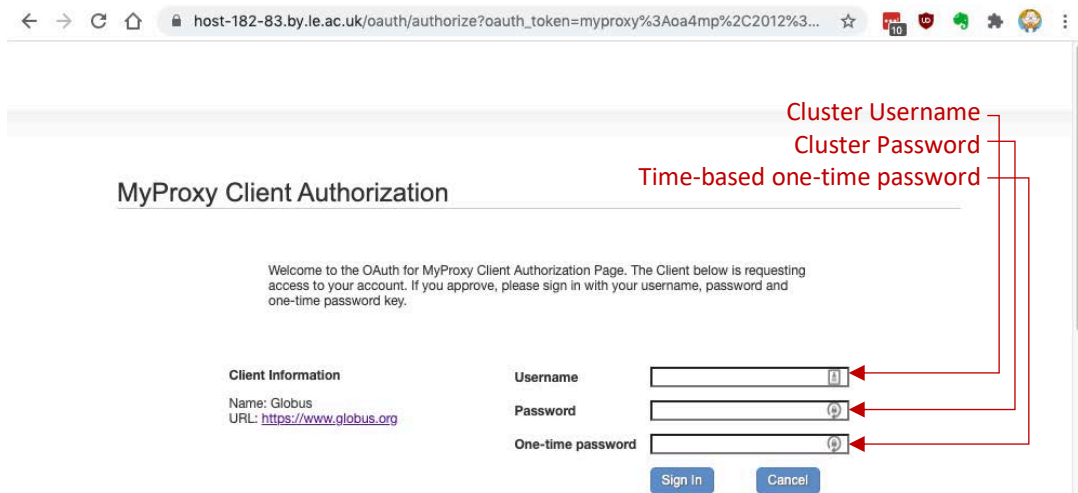
11. Click on 'Activate'



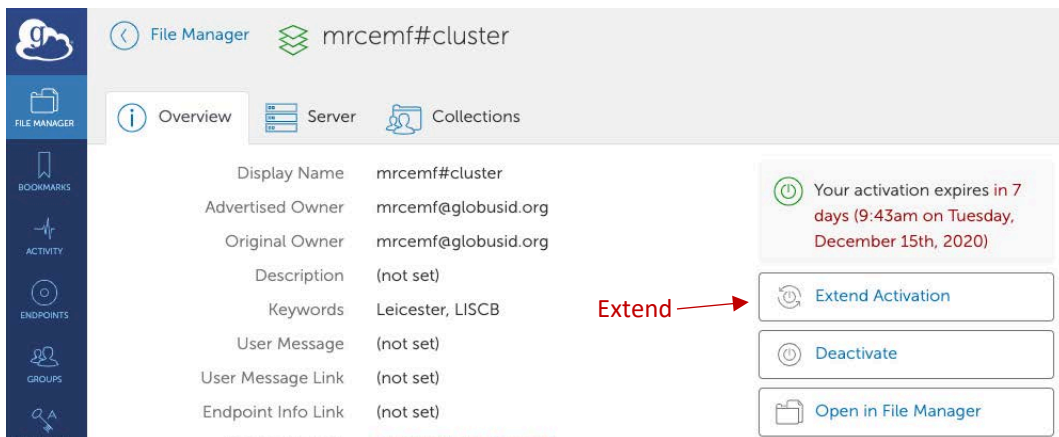
12. You will be asked to authenticate – click 'Continue'



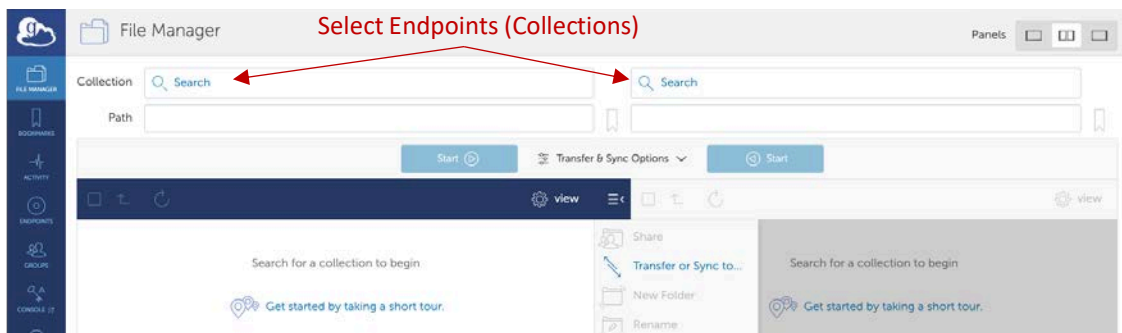
13. Enter your cluster username, password, and OTP (6 digits, no space).

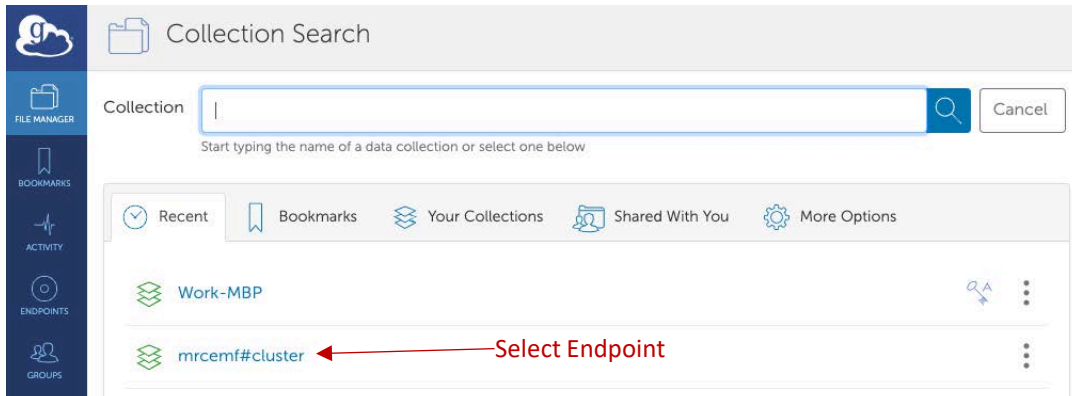


14. Assuming the authentication was successful, you should see that your activation needs to be renewed every 7 days. If you have a transfer in progress and your authentication expires, your transfer will stop. Globus provides the option to extend your authentication so that it won't expire before you transfer finishes. You can extend as many times as you like.



15. Return to File Manager and select which endpoints (Collections) you want to use.





16. Once both Collections have been chosen, you can access your home directory at Path `/~/` and your raw data at `/net/krios/#####-##-##`
17. To transfer files, simply click-and drag them from one location to another.
18. Globus provides a number of useful transfer settings. If you are transferring raw data as it's coming off the microscope, turning on the 'sync' option is strongly recommended.

