

# Constellation; Guide to Downloading Data for Non-ORNL Users

May 6, 2022

Constellation uses a data transfer service called Globus to handle the actual movement of data from one location to another. Those locations might be your personal computer, a hard drive in your lab, or a user facility here at ORNL. Globus calls these data locations “Endpoints”.

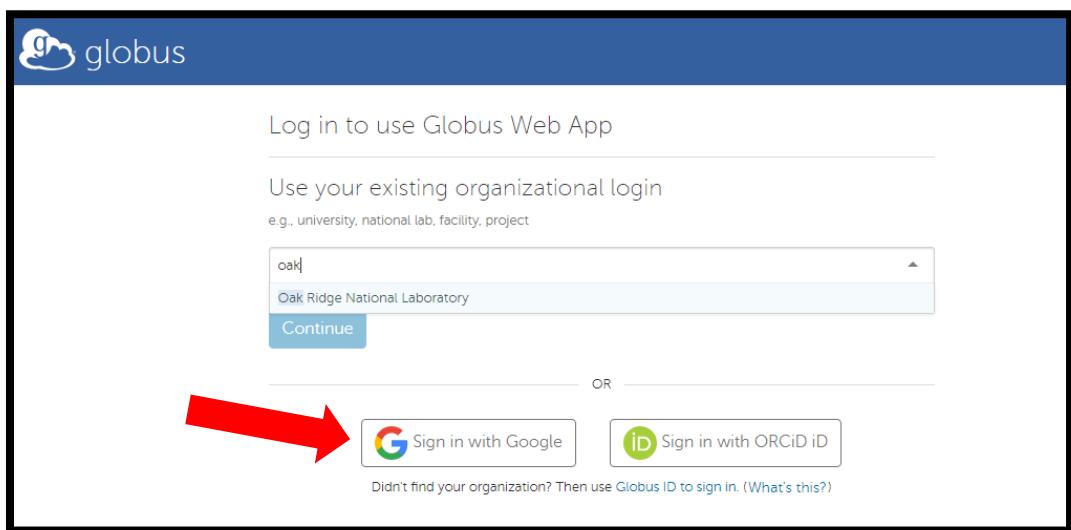
In short, these are the three main things you will need to do to get a DOI for your data:

1. [Create an account with Globus](#)
2. [Establish or Identify a Globus Endpoint](#)
3. [Use Constellation to download your desired data](#)

Globus is the tool you will use to move your data files. Constellation will provide the DOI. Endpoints are the link between Constellation and Globus. Please feel free to skip to the relevant section of this guide to address each of these steps in the DOI process.

## Establishing a new Globus account

1. You will need an account with Globus to download data from Constellation. You can use a Google or ORCID account to create an account with Globus. If your home institution is recognized by Globus you can also use your institutional account to create one. You can also create a Globus ID and use that to sign in.





## Welcome – You've Successfully Logged In

This is the first time you are accessing Globus with your **Google** login.

If you have previously used Globus with another login you can link it to your **Google** login. When linked, both logins will be able to access the same Globus account permissions and history.

[Continue](#)

[Link to an existing account](#)

[Why should I link accounts?](#)

Verify that your email and name are correct, and next to “Account will be used for” select the appropriate answer (most likely “non-profit research or educational purposes”). Check the box to agree to the Terms of Service and Privacy Policy, and if you wish to receive e-mail updates check that box as well. If everything looks appropriate, click “Continue”.



## Complete Your Sign Up For [REDACTED]@ornl.gov

Name [REDACTED]

Email [REDACTED]@ornl.gov

Organization Oak Ridge National Laboratory

Account will be used for

non-profit research or educational purposes  
 commercial purposes

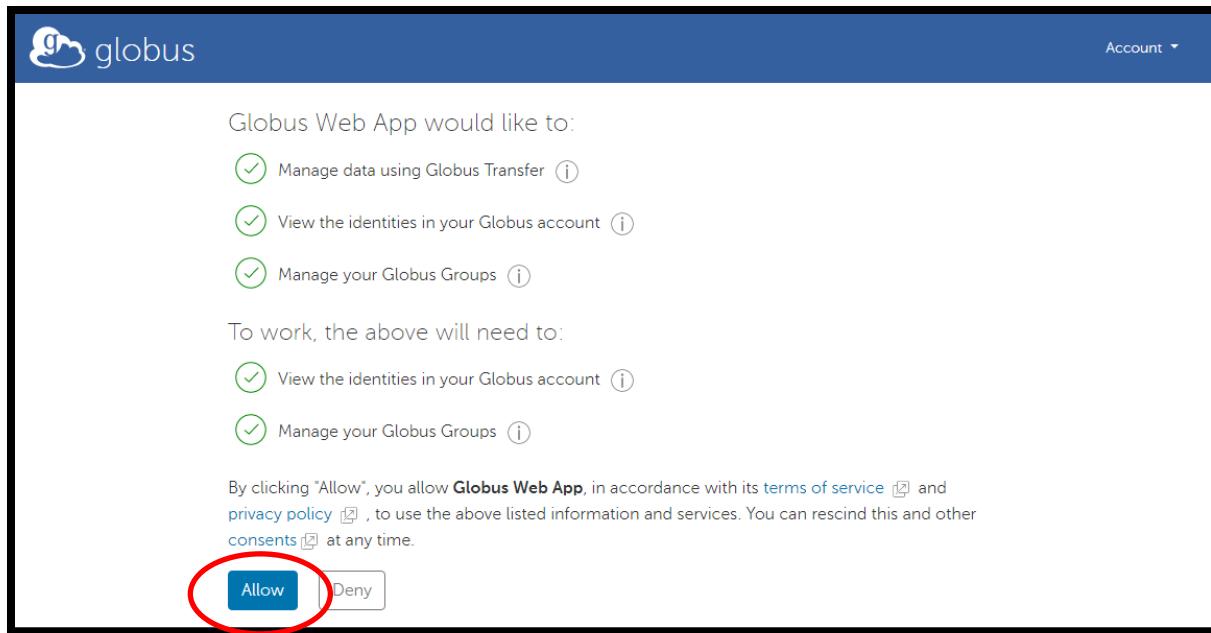
I have read and agree to the Globus [Terms of Service](#) and [Privacy Policy](#).

Please e-mail me updates about Globus

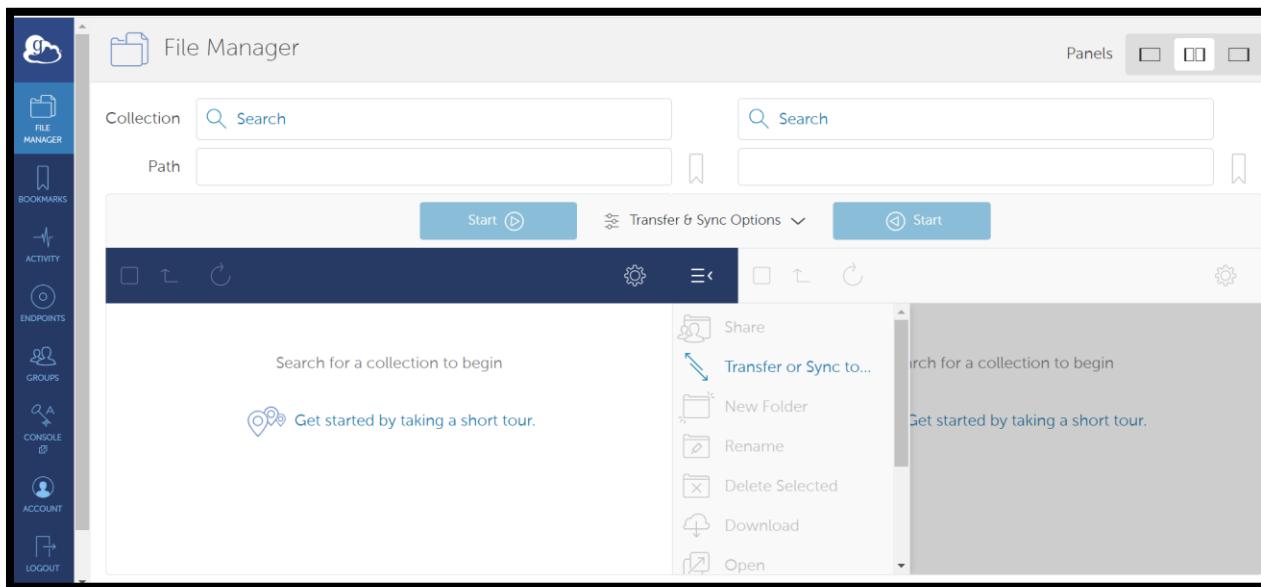
[Continue](#)

\* This field is specified by the identity provider, and cannot be modified by Globus. If you change it with your identity provider, it will propagate to Globus.

On the next screen, you will be presented with permissions to accept to use Globus. Please review and click “Allow”.



To confirm that you have successfully created your Globus account, you should be viewing a screen that looks like this now:



That's it! Now you have a Globus account.

Here is where you can see your 'official' Globus ID:

The screenshot shows the Globus Account interface. On the left is a sidebar with icons for FILE MANAGER, BOOKMARKS, ACTIVITY, COLLECTIONS, GROUPS, CONSOLE, FLOWS, and ACCOUNT. The ACCOUNT icon is highlighted with a red circle. The main area is titled "Account" and shows a list of identities. The first identity is marked as "PRIMARY" and has a blue crown icon. The email address "@gmail.com" is shown next to it and is also circled in red. Other tabs in the header include "Identities", "Consents", and "Globus Plus".

FILE MANAGER

BOOKMARKS

ACTIVITY

COLLECTIONS

GROUPS

CONSOLE

FLOWS

ACCOUNT

Account

Identities

Consents

Globus Plus

A list of identities linked to your Globus account

PRIMARY

IDENTITY

@gmail.com

## Setting up an Endpoint in Globus

You will be moving data from a **Source** Globus Endpoint to a **Destination** Endpoint. The **Source** Endpoint when downloading data will be Constellation. The **Destination** Endpoint will likely either be your personal computer or an established Endpoint, which may be in your lab or at a user facility.

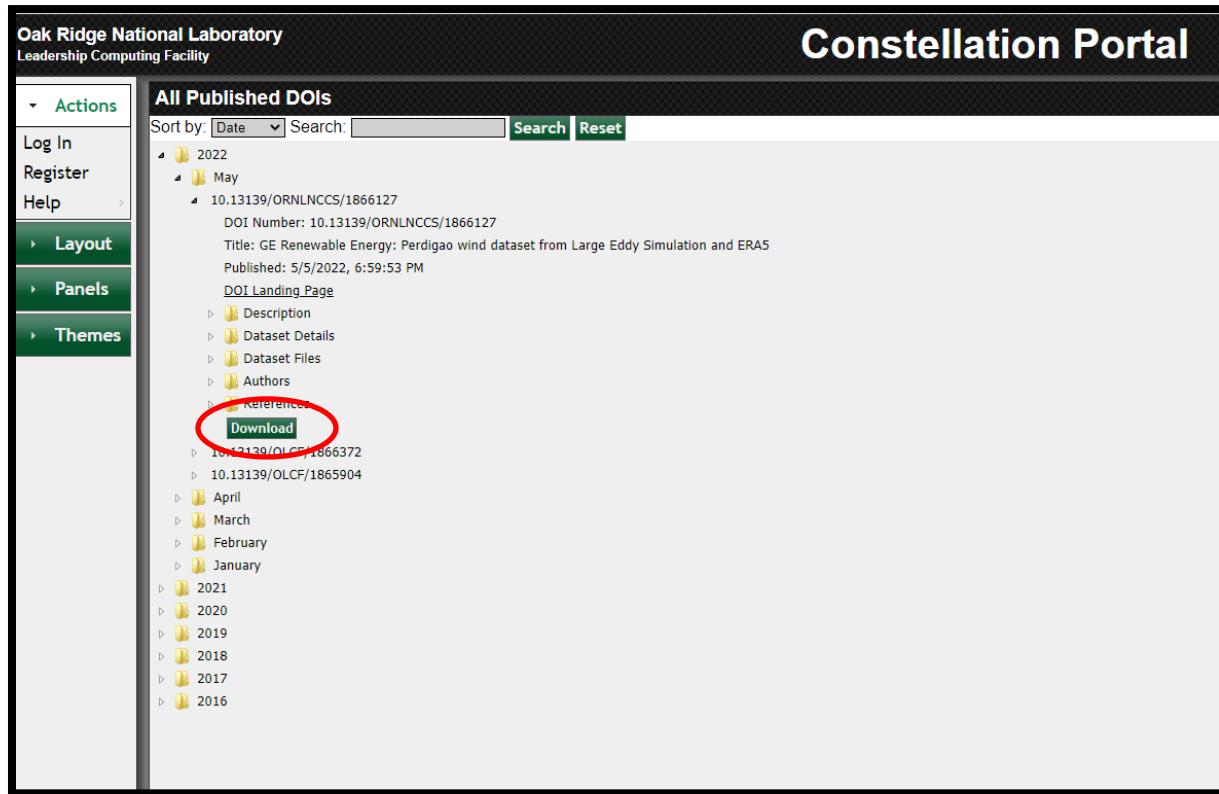
In the case that you want to download Constellation data currently to your personal computer, OLCF has put together a guide for helping users establish their personal computer as a Globus Endpoint. That guide can be found here: <https://docs.olcf.ornl.gov/data/transferring.html#using-globus-from-your-local-machine>.

If you wish to move Constellation data to a location that is somewhere other than your personal computer, you will need to establish that location as an Endpoint or you will need to move your data to an already-established Endpoint. Once your desired location is recognized as a Globus Endpoint, you will simply need to point your **Destination** Endpoint to your data's location.

## Downloading Data from Constellation

Once you have a Globus account and your destination is a location that is recognized as a Globus Endpoint, you are ready to register with Constellation. We are going to use your newly created Globus account to do that.

Starting at the Constellation home page (<https://doi.ccs.ornl.gov/>), navigate to a dataset you wish to download, for example:



The screenshot shows the Constellation Portal interface. The top navigation bar includes the Oak Ridge National Laboratory logo and the text "Leadership Computing Facility". The main title "Constellation Portal" is on the right. On the left, a vertical sidebar menu is visible with sections: "Actions" (Log In, Register, Help), "Layout", "Panels", and "Themes". The "Actions" section is currently active. The main content area is titled "All Published DOIs". It features a search bar with "Sort by: Date" and "Search: [input field]" buttons. Below the search bar is a list of DOIs. One specific entry is highlighted: "10.13139/OLCF/1866127" with the subtext "DOI Number: 10.13139/OLCFNCCS/1866127", "Title: GE Renewable Energy: Perdigao wind dataset from Large Eddy Simulation and ERA5", "Published: 5/5/2022, 6:59:53 PM", and "DOI Landing Page". Below this entry are links for "Description", "Dataset Details", "Dataset Files", "Authors", and "References". A prominent "Download" button is located just below the "DOI Landing Page" link, and it is circled in red. The list continues with other DOIs for months like May, April, March, February, January, and years like 2021, 2020, 2019, 2018, 2017, and 2016.

Click the **Download** button to be taken to the Globus File Transfer page with that dataset pre-loaded as the Source Endpoint. You should see the data files for that dataset in the File Manager view:



File Manager

Collection: OLCF DOI-DOWNLOADS

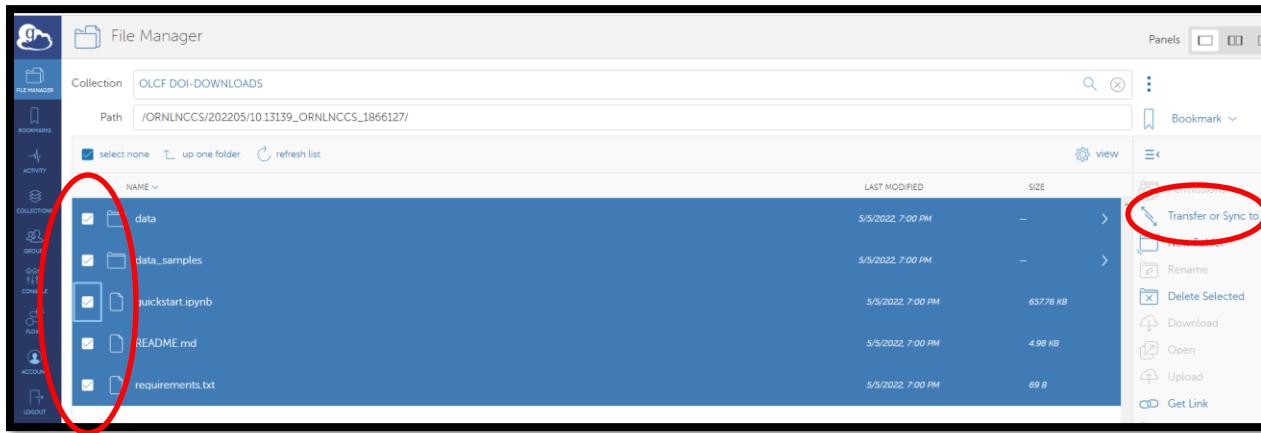
Path: /ORNLNCCS/202205/1013139\_ORNLNCCS\_1866127/

NAME	LAST MODIFIED	SIZE
data	5/5/2022, 7:00 PM	—
data_samples	5/5/2022, 7:00 PM	—
quickstart.ipynb	5/5/2022, 7:00 PM	657.76 KB
README.md	5/5/2022, 7:00 PM	4.98 KB
requirements.txt	5/5/2022, 7:00 PM	69 B

Permissions

- Transfer or Sync
- New Folder
- Rename
- Delete Selected
- Download
- Open
- Upload
- Get Link
- Show Hidden
- Manage Active

Select the data you wish to transfer and click the Transfer or Sync to button....:



File Manager

Collection: OLCF DOI-DOWNLOADS

Path: /ORNLNCCS/202205/1013139\_ORNLNCCS\_1866127/

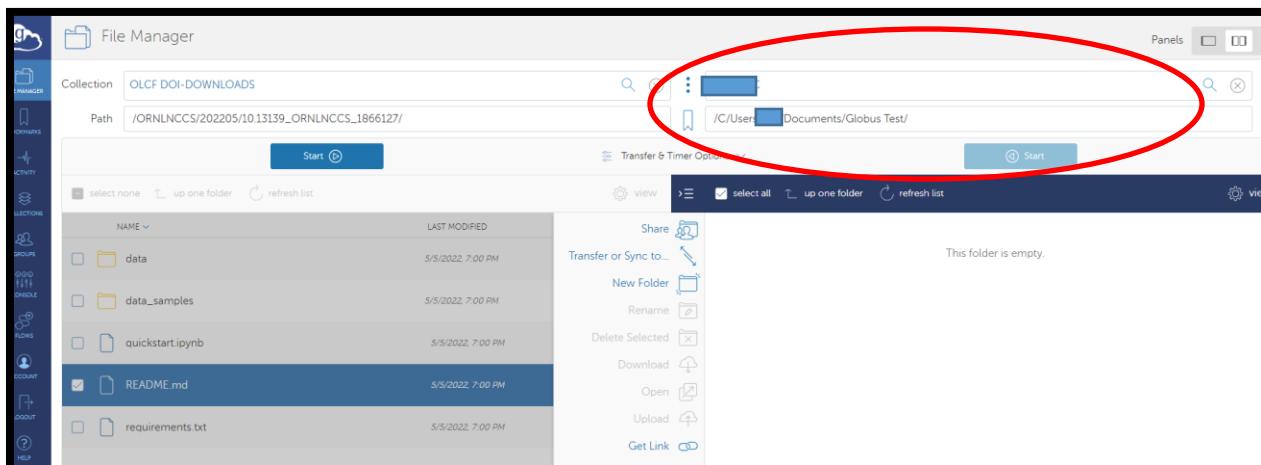
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Transfer or Sync to...

Permissions

- Transfer or Sync
- New Folder
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- Get Link

...to reveal the Destination Endpoint screen where you will select the location to which you wish to move the data:



File Manager

Collection: OLCF DOI-DOWNLOADS

Path: /ORNLNCCS/202205/1013139\_ORNLNCCS\_1866127/

Transfer or Sync to...

Transfer or Sync to...

New Folder

Rename

Delete Selected

Download

Open

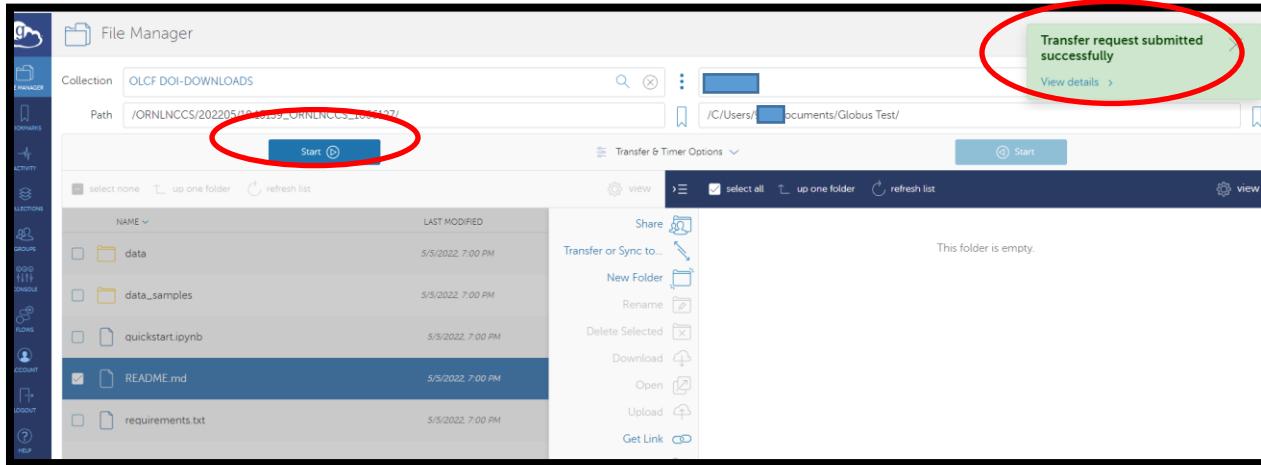
Upload

Get Link

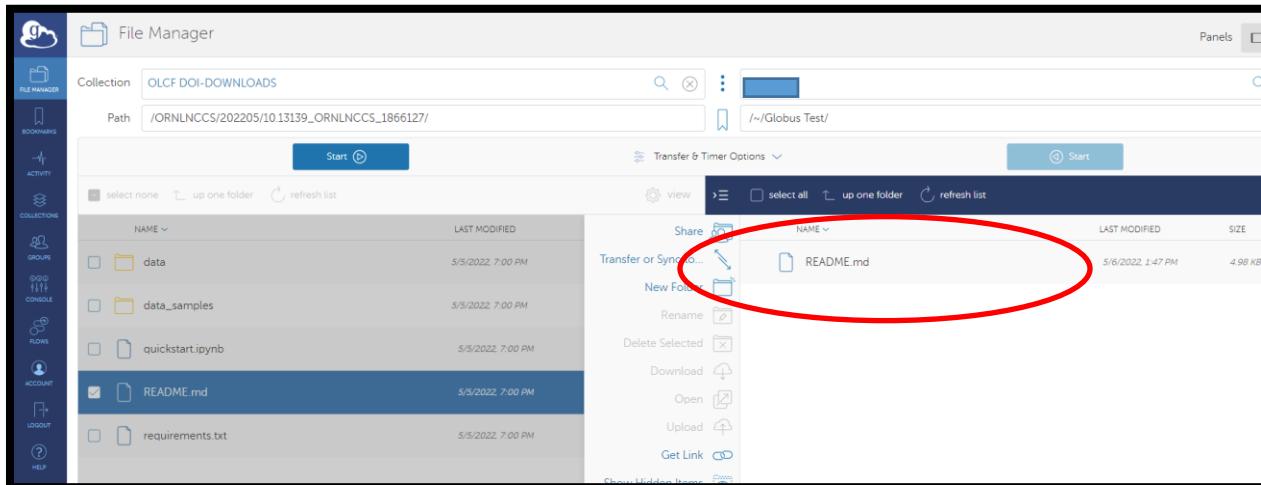
This folder is empty.

Start

Then, click the **Start** button underneath the Source Endpoint to initiate the transfer (you will see a pop up notification that the Transfer Request has been submitted successfully):



After the transfer is complete, you should see the downloaded file(s) in your Endpoint directory:



You can now confirm that the downloaded file(s) are on your local machine, if you are using Globus Personal to move data to your personal computer.