

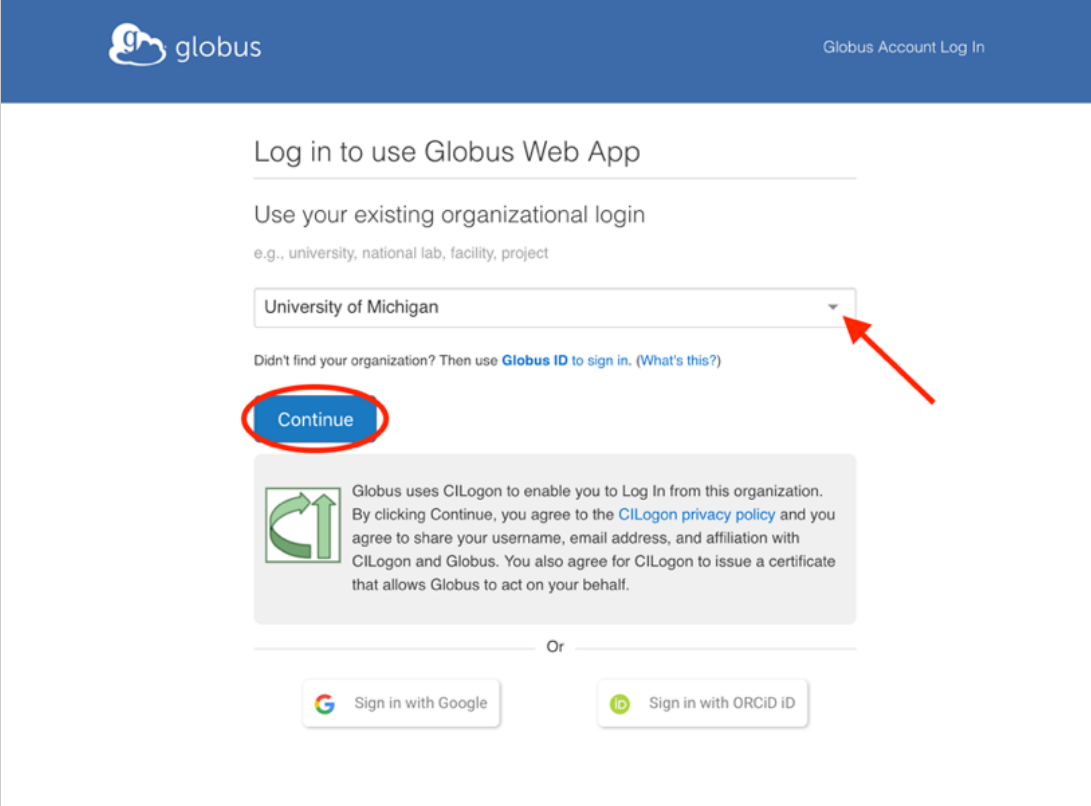
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How To Log In and Transfer Files with Globus

This step-by-step guide will show you how to log into Globus and use it to transfer files reliably and securely. You will become familiar with basic Globus concepts and interfaces, and begin to experience how Globus can help you spend more time on your research and less time on data management.

1. Log in with an existing identity

Visit www.globus.org and click "Login" at the top of the page. On the Globus login page, choose an organization you're already registered with, such as your school or your employer. (Try typing a few letters of your organization's name to narrow the list.) When you find it, click "Continue." If you can't find your organization in the list, you can use Google, ORCID, or Globus ID, all three of which allow you to create new accounts if you don't already have one.



You'll be redirected to your organization's login page. Use your credentials for that organization to login. (The example below shows the University of Michigan's login page.)

Guides

Tutorials 

└─ File Management

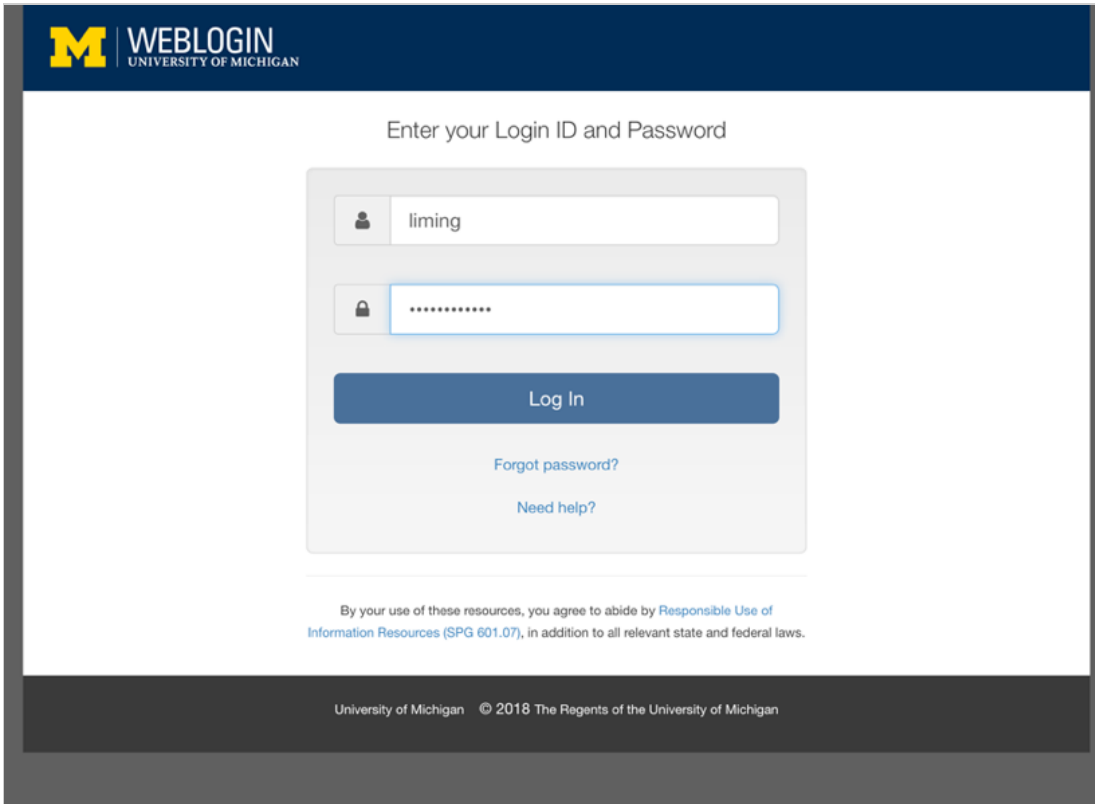
└─ [Manage Identities](#)

└─ [Storage Connectors](#)

└─ [Automation with Flows](#)

Overviews & Concepts 

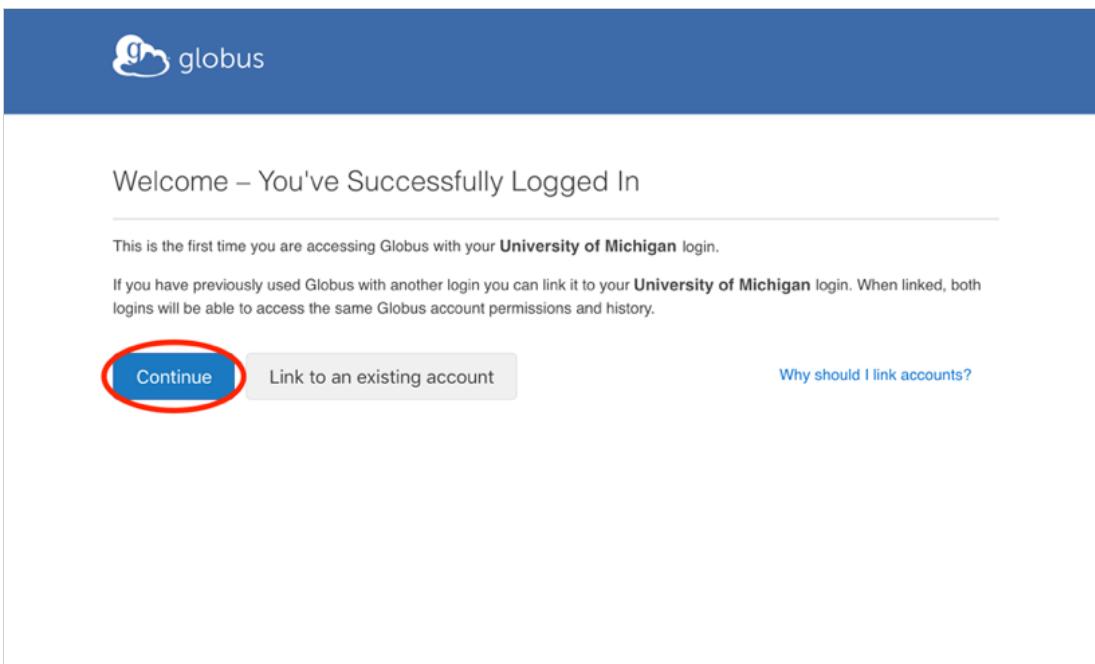
Recipes & Manuals 



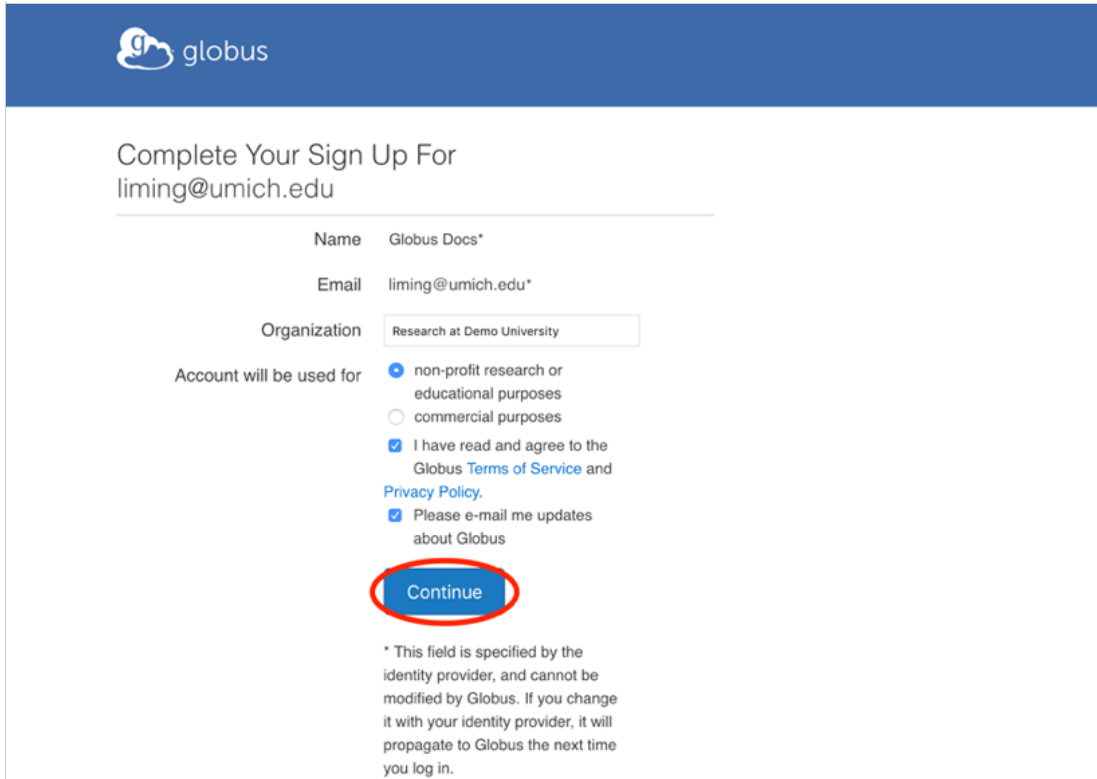
Some organizations will ask for your permission to release your account information to Globus.

Once you've logged in with your organization, Globus will ask if you'd like to link to an existing account. If this is your first time logging in to Globus, click "Continue."

If you've already used another account with Globus, you can choose "Link to an existing account." The [Identity Linking Tutorial](#) explains in detail how Identity Linking works.



You may be prompted to provide additional information such as your organization and whether or not Globus will be used for commercial purposes. Complete the form and click "Continue."



Complete Your Sign Up For
liming@umich.edu

Name Globus Docs*

Email liming@umich.edu*

Organization

Account will be used for

- non-profit research or educational purposes
- commercial purposes

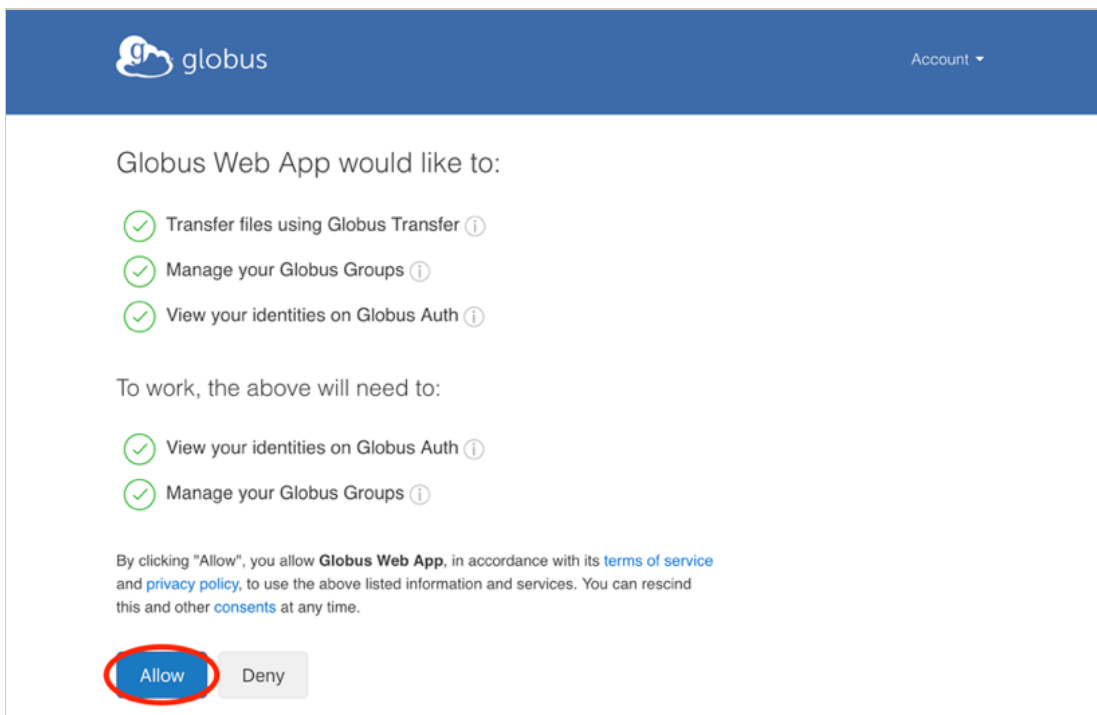
I have read and agree to the Globus [Terms of Service](#) and [Privacy Policy](#).

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 the next time you log in.

Finally, you need to give Globus permission to use your identity to access information and perform actions (like file transfers) on your behalf.



Account

Globus Web App would like to:

- Transfer files using Globus Transfer ⓘ
- Manage your Globus Groups ⓘ
- View your identities on Globus Auth ⓘ

To work, the above will need to:

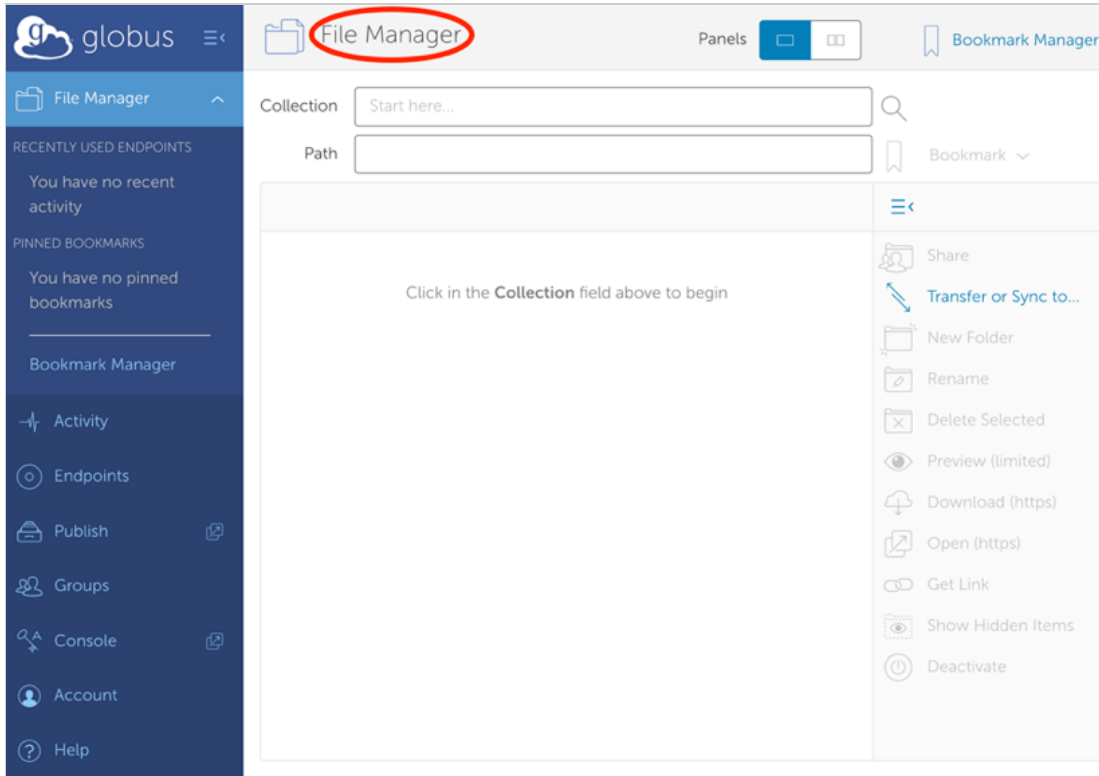
- View your identities on Globus Auth ⓘ
- Manage your Globus Groups ⓘ

By clicking "Allow", you allow **Globus Web App**, in accordance with its [terms of service](#) and [privacy policy](#), to use the above listed information and services. You can rescind this and other [consents](#) at any time.

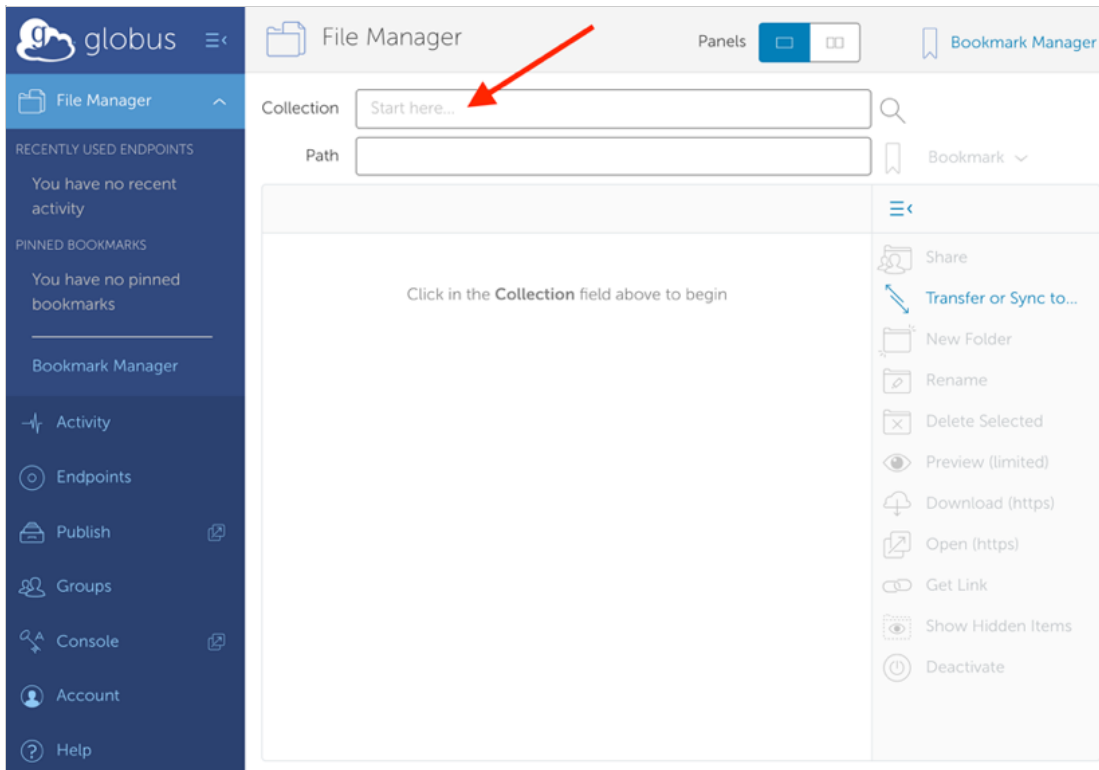
Allow Deny

2. The File Manager

After you've signed up and logged in to Globus, you'll begin at the File Manager.



The first time you use the File Manager, all fields will be blank.



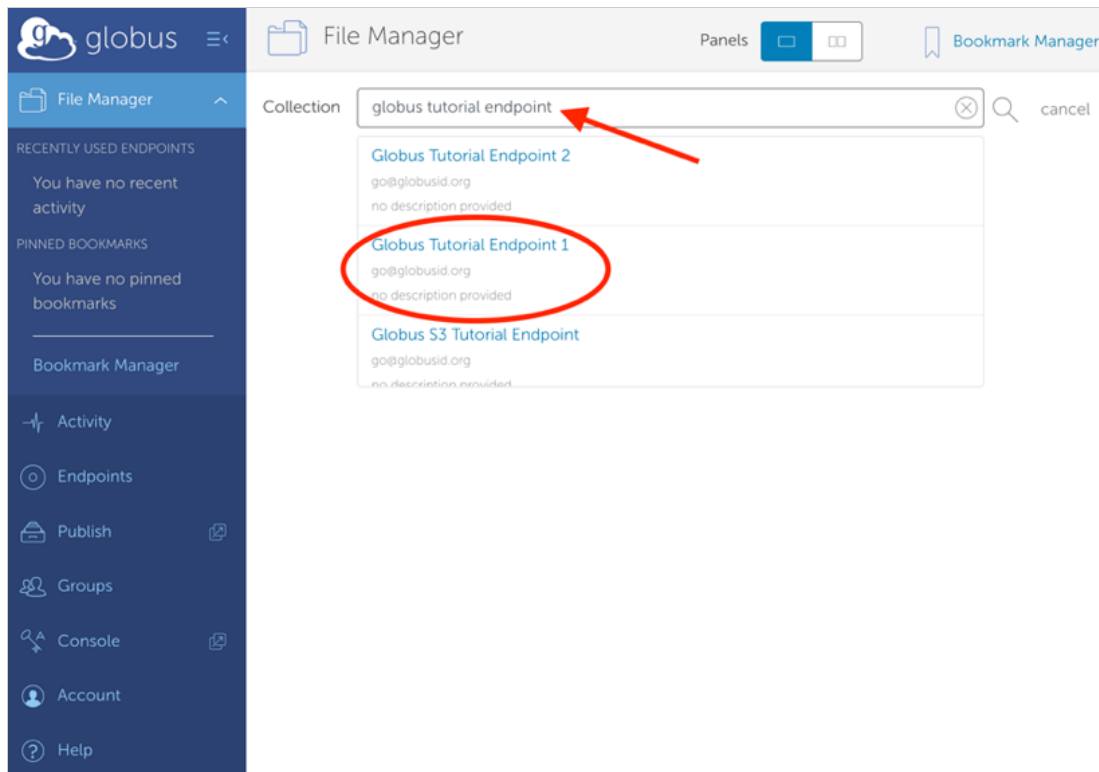
Tip

Key Concept: *Collection*

A collection is a named location containing data you can access with Globus. Collections can be hosted on many different kinds of systems, including campus storage, HPC clusters, laptops, Amazon S3 buckets, Google Drive, and scientific instruments. When you use Globus, you don't need to know a physical location or details about storage. You only need a collection name. A collection allows authorized Globus users to browse and transfer files. Collections can also be used for sharing data with others and for enabling discovery by other Globus users. [Globus Connect](#) is used to host collections.

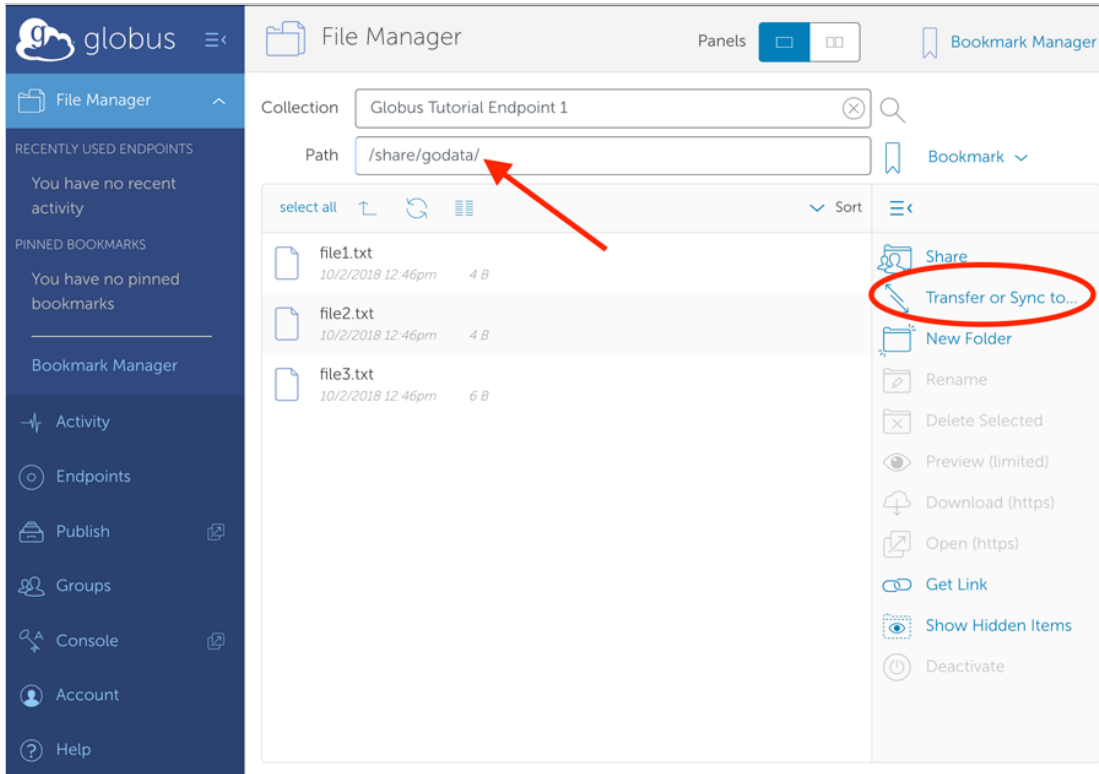
3. Access a collection

Click in the Collection field at the top of the File Manager page and type "globus tutorial end". Globus will list collections with matching names. The collections Globus Tutorial Endpoint 1 and Globus Tutorial Endpoint 2 are collections administered by the Globus team for demonstration purposes and are accessible to all Globus users without further authentication.



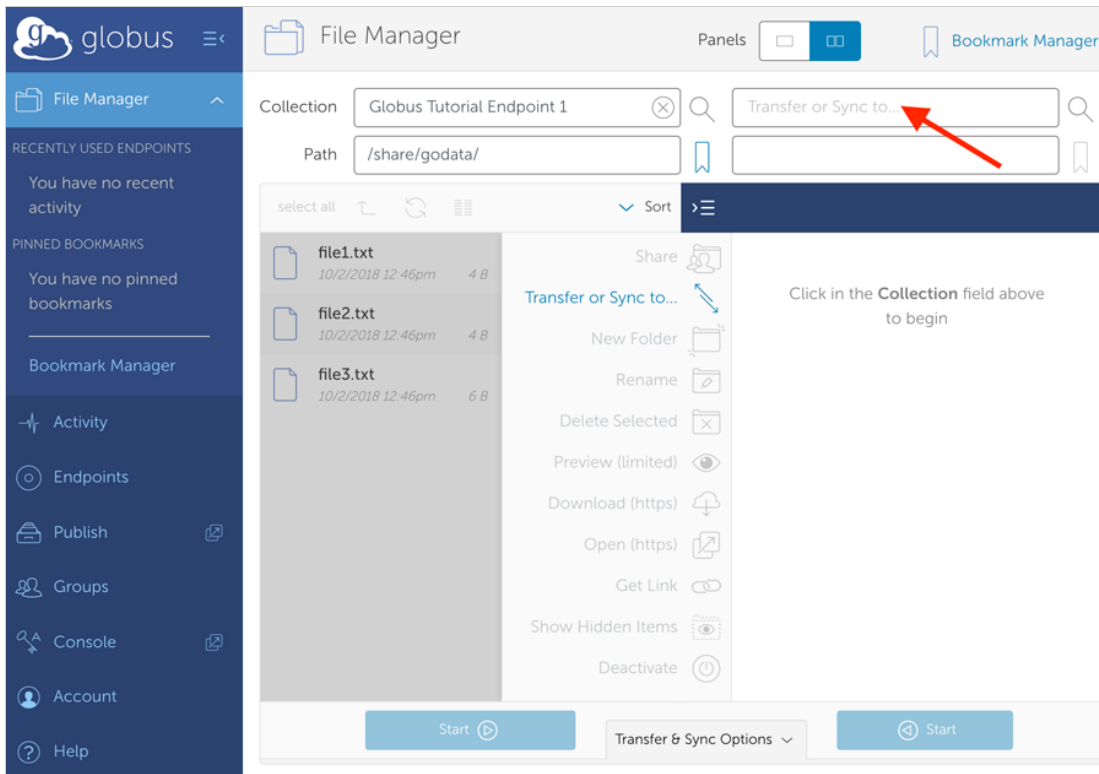
The screenshot shows the Globus File Manager interface. The search bar at the top contains the text "globus tutorial endpoint". Below the search bar, a list of search results is displayed. The first result is "Globus Tutorial Endpoint 2", the second is "Globus Tutorial Endpoint 1" (circled in red), and the third is "Globus S3 Tutorial Endpoint". A red arrow points to the search bar. The left sidebar shows navigation options like "File Manager", "RECENTLY USED ENDPOINTS", "PINNED BOOKMARKS", "Bookmark Manager", "Activity", "Endpoints", "Publish", "Groups", "Console", "Account", and "Help".

Click on Globus Tutorial Endpoint 1. Globus will connect to the collection and display the default directory, `/~/`. (It will be empty.) Click the "Path" field and change it to `/share/godata/`. Globus will show the files in the new path: three small text files.

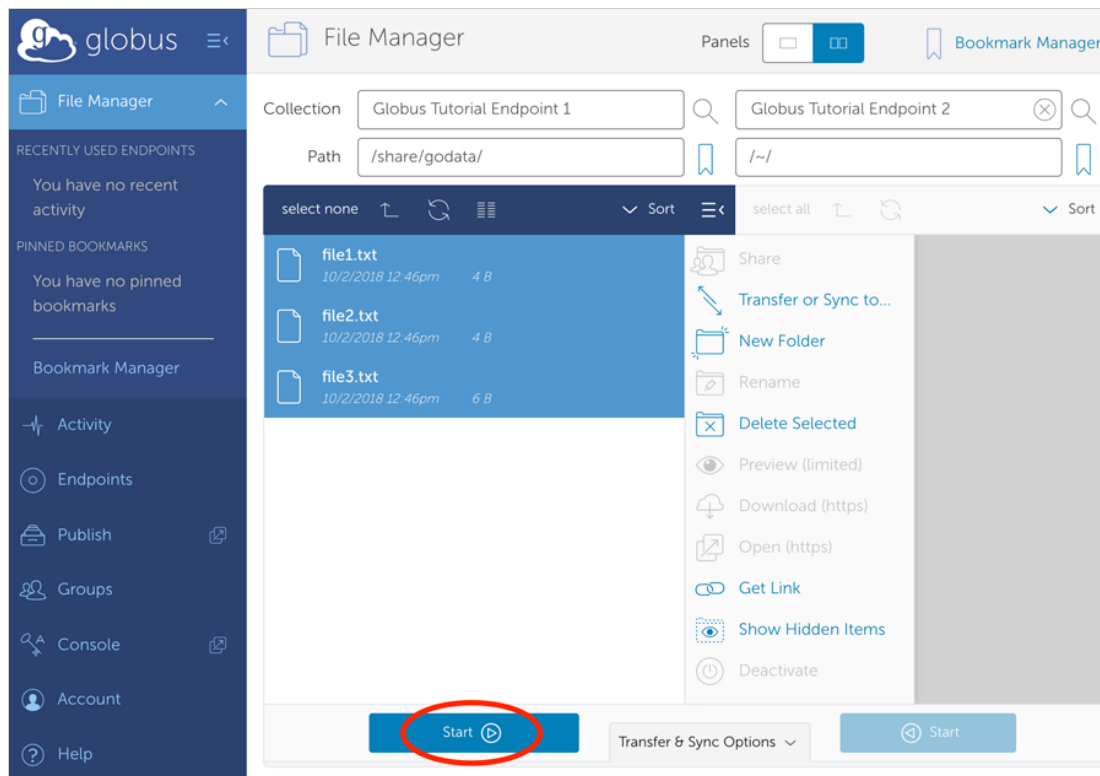


4. Request a file transfer

Click Transfer or Sync to... in the command panel on the right side of the page. A new collection panel will open, with a "Transfer or Sync to" field at the top of the panel.



Find the Globus Tutorial Endpoint 2 collection and connect to it as you did with the Globus Tutorial Endpoint 1 above. The default directory, /~/ will again be empty. Your goal is to transfer the sample files here. Click on the left collection, Globus Tutorial Endpoint 1, and select all three files. The Start> button at the bottom of the panel will activate.



Between the two Start buttons at the bottom of the page, the Transfer & Sync Options tab provides access to several options. By default, Globus verifies file integrity after transfer using checksums. Click the information icons for explanations of the other transfer settings. Globus gives you powerful control over the behavior of the transfer with a simple mouse click. Change the transfer settings if you'd like. You may also enter a label for the transfer, but this isn't required.

Click the Start> button to transfer the selected files to the collection in the right panel. Globus will display a green notification panel—confirming that the transfer request was submitted—and add a badge to the Activity item in the command menu on the left of the page.

The screenshot displays the Globus File Manager interface. At the top, the 'File Manager' title is visible. Below it, there are input fields for 'Collection' (Globus Tutorial Endpoint 1), 'Path' (/share/godata/), and another 'Collection' field (Globus Tutorial Endpoint 2). A green notification bar at the top of the main content area states: 'Transfer request submitted successfully. Task id: c387f4c8-d2ee-11e8-8c70-0a1d4c5c824a'. Below this, a list of files is shown: 'file1.txt' (4 B), 'file2.txt' (4 B), and 'file3.txt' (6 B). A context menu is open over the files, showing options like 'Share', 'Transfer or Sync to...', 'New Folder', 'Rename', 'Delete Selected', 'Preview (limited)', 'Download (https)', 'Open (https)', and 'Get Link'. The left sidebar contains navigation options: 'File Manager', 'RECENTLY USED ENDPOINTS', 'PINNED BOOKMARKS', 'Bookmark Manager', 'Activity', 'Endpoints', 'Publish', 'Groups', 'Console', 'Account', and 'Help'. Red arrows point to the 'Activity' menu item and the notification bar.

Tip

Key Concept: *Fire-And-Forget Data Transfer*

After you request a file transfer, Globus takes over and does the work on your behalf. You can navigate away from the File Manager, close the browser window, and even logout. Globus will optimize the transfer for performance, monitor the transfer for completion and correctness, and recover from network errors and collection downtime.

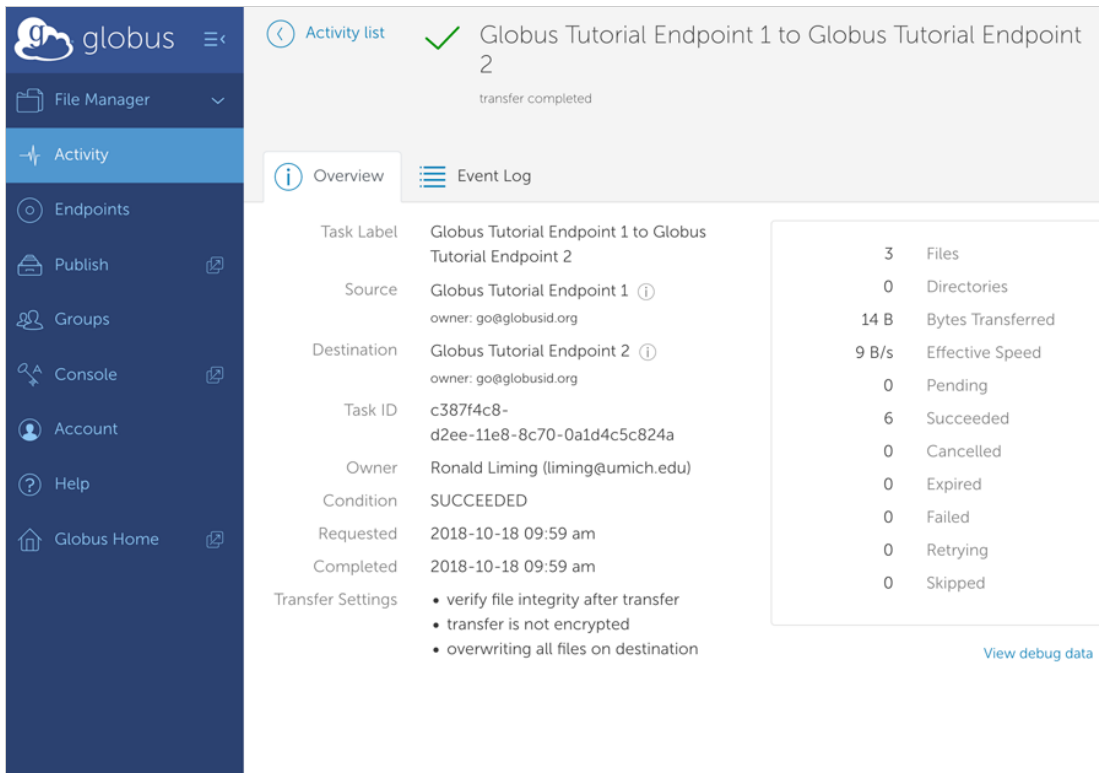
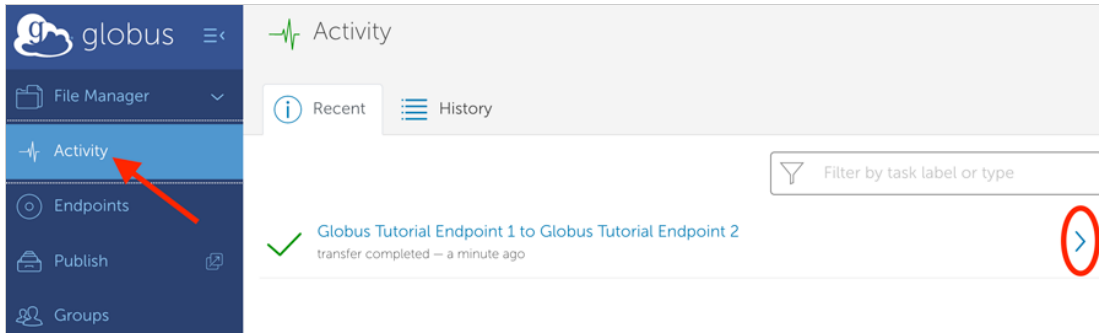
The Globus service routinely achieves high availability, providing nearly uninterrupted oversight of data transfers taking place on much less reliable networks and collection hosts. When a problem is encountered part-way through the transfer, Globus resumes from the point of failure and does not retransmit all of the data specified in the original request.

Globus can handle extremely large data transfers, even those that don't complete within the authentication expiration period of a collection (which is controlled by the collection administrator). If your credentials expire before the transfer completes, Globus will notify you to re-authenticate on the collection, after which Globus will continue the transfer from where it was paused.

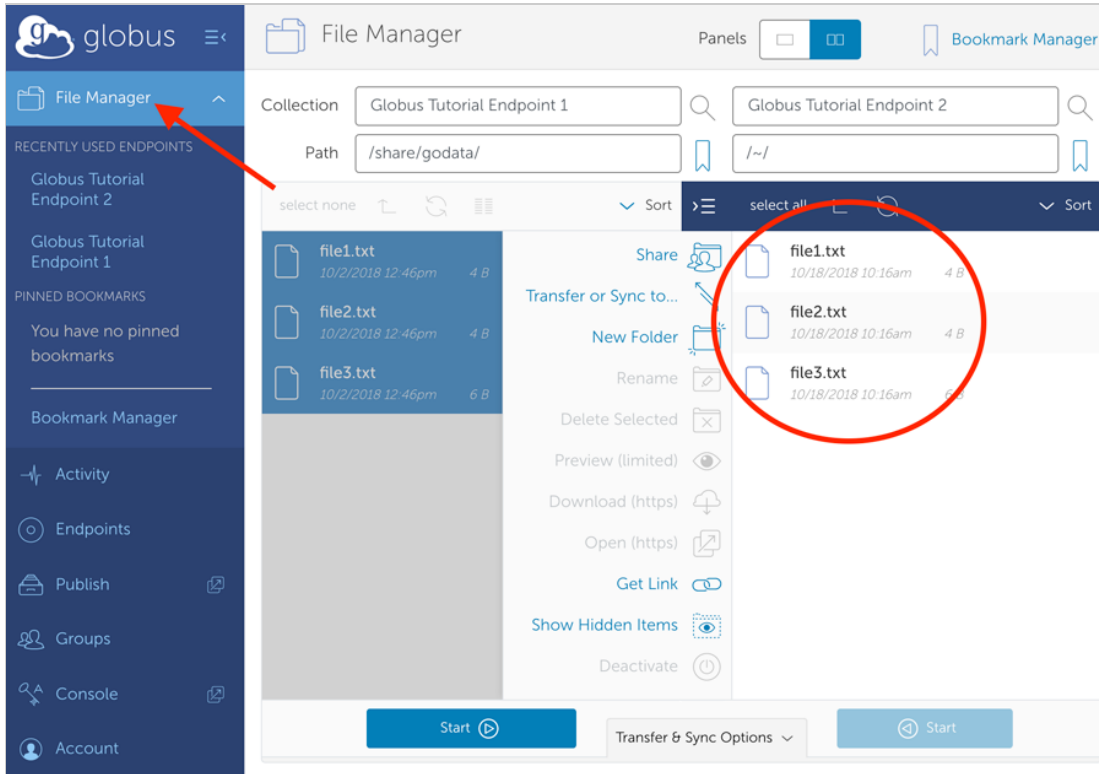
These wide-ranging capabilities make data transfer with Globus truly "fire-and-forget."

5. Confirm transfer completion

Only three small files were transferred in our simple example, so the transfer will complete quickly. Click Activity in the command menu on the left of the page to go to the Activity page. On the Activity page, click the arrow icon on the right to view details about the transfer. You will also receive an email with the transfer details.



Click File Manager in the command menu on the left of the Activity page to return to the File Manager. The collections you were viewing before will reappear. You may notice that the transferred files are not listed in the right panel with the Globus Tutorial Endpoint 2 collection and the /~/ path, even though the transfer has completed. Click the refresh icon (circular arrows) at the top of the collection panel to see the updated contents.



Warning

Files are periodically deleted from the user paths on the Globus Tutorial Endpoint 1 and Globus Tutorial Endpoint 2 demonstration collections, so if you return later these files may be gone.

6. Move beyond getting started

At this point you've mastered the basic Globus data transfer capabilities by copying files between two collections accessible to all Globus users. You know how to specify additional transfer options (such as encryption), understand how Globus manages the transfer on your behalf, and are familiar with Activity notices that let you find out about transfer task progress. You are well on your way to letting Globus simplify your research data management.

Follow the next steps suggested here or explore globus.org on your own to understand and experience more of what Globus has to offer.

Before proceeding, there's one final concept you should learn: the endpoint.

Tip

Key Concept: *Endpoint*

An endpoint is a server that hosts collections. If you want to be able to access, share, transfer, or manage data using Globus, the first step is to create an endpoint on the system where the data is (or will be) stored.

[Globus Connect](#) is used to create endpoints. An endpoint can be a laptop, a personal desktop system, a laboratory server, a campus data storage service, a cloud service, or an HPC cluster. As explained below, it's easy to set up your own Globus endpoint on a laptop or other personal system using Globus Connect Personal. Administrators of shared services (like campus storage servers) can set up multi-user endpoints using Globus Connect Server. You can use endpoints set up by others as long as you're authorized by the endpoint administrator or by a collection manager.

• Set up and use Globus Connect Personal.

- [Follow these instructions](#) to download Globus Connect Personal and set up an endpoint and collection on your own Mac, Linux, or Windows system.
- Navigate to the File Manager page and request a transfer between your new collection and Globus Tutorial Endpoint 1 or Globus Tutorial Endpoint 2.
- Navigate to the Activity page and review your transfers.

You don't need administrative privileges on your system to install Globus Connect Personal. Transfers to and from your system won't fail if you shut your system down or disconnect from the network. Instead, transfers will be suspended and they'll automatically resume when your system comes back online. Try it!

• Discover and access endpoints and collections on your campus computing systems.

Many campuses, research labs, and cross-site projects have set up Globus endpoints on their shared servers to enable reliable, secure, high-performance data transfer and sharing via Globus.

- Search your campus computing organization's information to find out about local Globus endpoints. Or, search for endpoints and collections in the Globus File Manager. Enter a likely endpoint name in the Collection field and scan the search results. For example, try "umich," "harvard," "NERSC," or "XSEDE." When you find an endpoint or collection, authenticate using the username and password you use for the organization when prompted.
- If your organization doesn't have any Globus endpoints, direct your system administrator to the [Globus Connect Server Installation Guide](#) or [ask us](#) to contact them on your behalf.

• Learn about sharing data.

Globus lets you share your data with others, even if they don't have accounts on the endpoint where the data is stored. This can be a huge benefit in terms of both time and money because the data need not be copied to cloud storage (e.g., to Box or DropBox) in order to be accessible.

- [Follow this link](#) to find out how Globus lets you share files with others.

- **Learn more about activity reporting and transfer retries.**

- Using the File Manager, transfer one of the files from **Globus Tutorial Endpoint 2 /~/** (entered in right panel) to **Globus Tutorial Endpoint 1 /share/godata/** (entered in the left panel).
 - If necessary, refresh the list in the left panel to deselect the two files that were selected previously.
 - Select the file you want to transfer in the right panel.
 - Use the left-pointing **<Start** button to request the transfer.
 - Observe the green notification panel informing you the transfer has been successfully submitted.
- Open the Activity page.
 - Monitor the task status and observe the caution icon and the warning message "permission denied".
 - Expand the notice and look at the Overview and the Event Log tabs.
 - In the Event Log, notice multiple instances of "started" and "permission denied" events.

Globus, on your behalf, continues to retry the transfer when a problem is encountered. The problem could be permissions (as is the case in this exercise), the endpoint might become unavailable (perhaps you closed your laptop while copying data to it), or any number of other issues preventing the transfer from progressing. Globus will continue to retry the transfer until (1) the problem is fixed (permissions changed, resource becomes available), (2) you cancel the transfer task (click **Cancel Task** on the Overview tab), or (3) no progress has been made in three days, at which point Globus will notify you the transfer has failed.