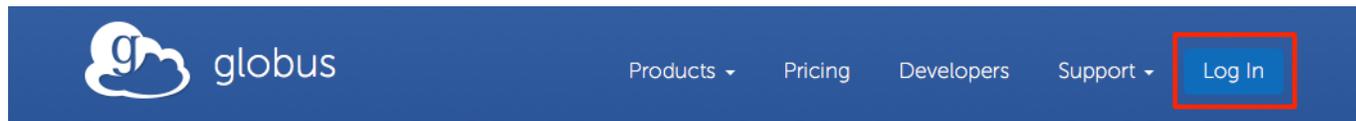
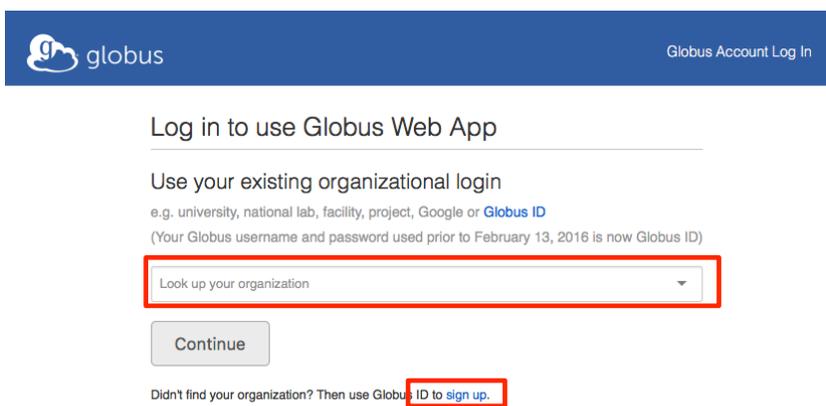


How To Use Globus for ESnet Performance Testing

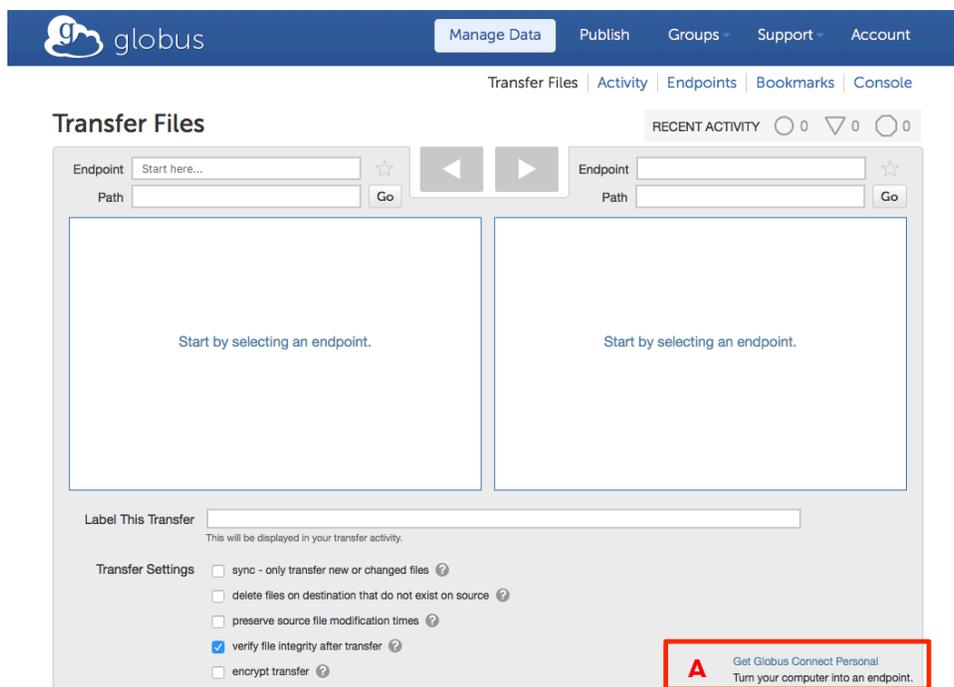
1. Go to <http://www.globus.org> and click “Log In”.

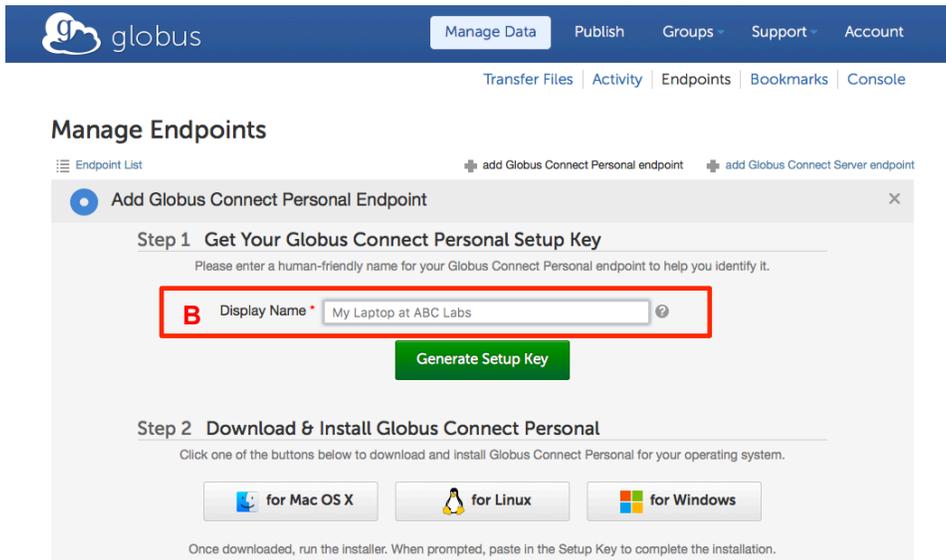


2. You can log in using existing credentials if your institution has an identity system that is trusted by Globus. Select your institution in the drop-down list and you will be redirected back to Globus after logging in. If your institution is not listed, you can create a Globus ID and log in with that.

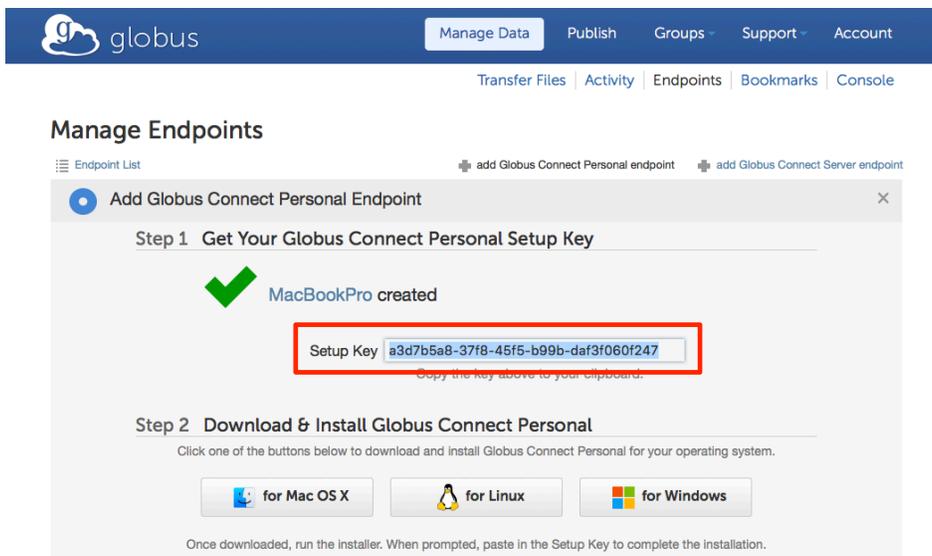


3. Once signed in, click **Get Globus Connect Personal** (A) and choose what you would like your computer to be called, as it will represent the destination for your data, also called an endpoint (B)—e.g., My Laptop. (Please note that your endpoint name only needs to be submitted once on this page. If you see a second prompt for this, you can ignore it.)

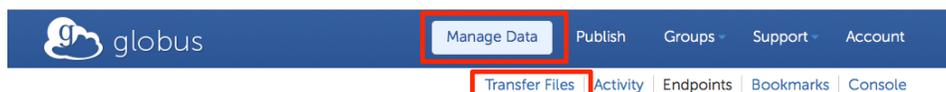




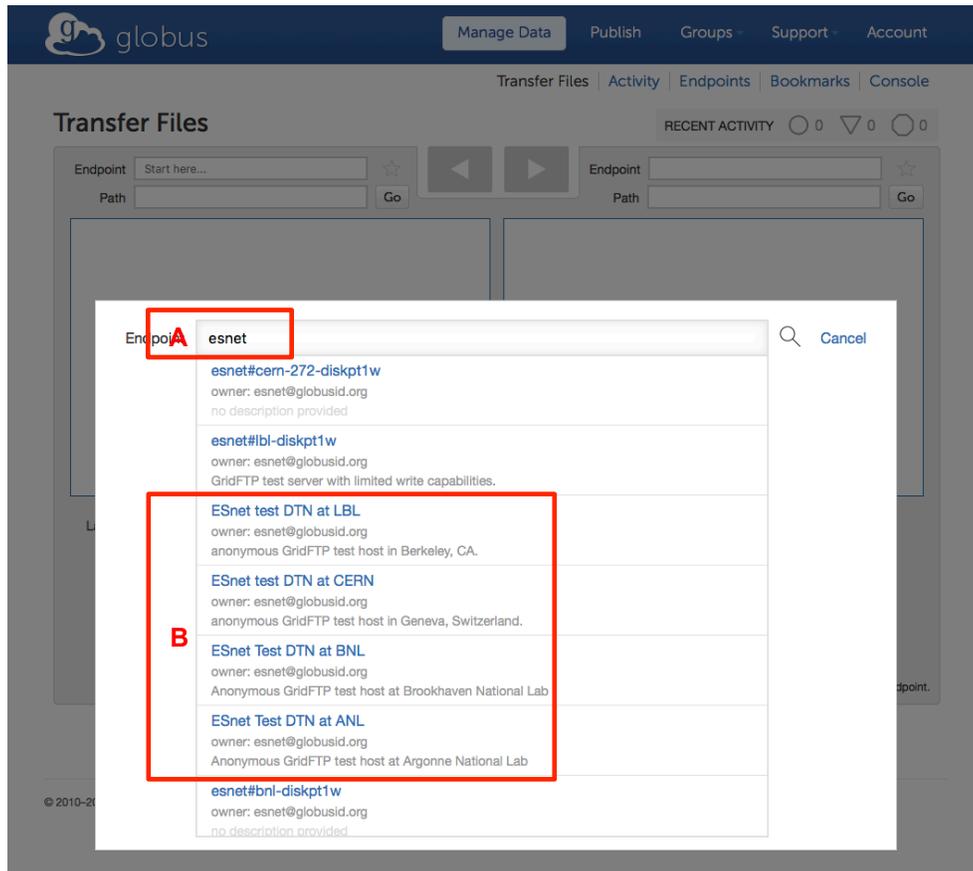
4. Once you create your endpoint name, click **Generate Setup Key**. **Copy** this generated key. Continue to download and install the appropriate software for your operating system: Windows, Mac, or Linux. When prompted, paste the **setup key from your computer**.



5. Now, from the Globus website go to **Manage Data** → **Transfer Files**.

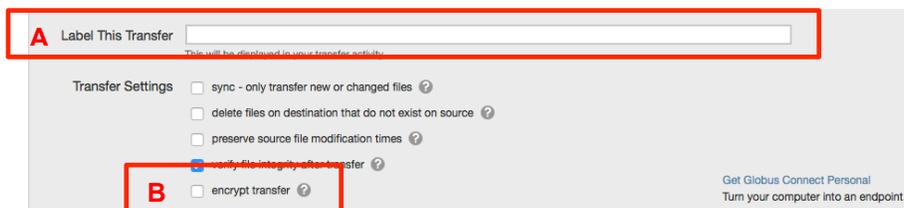


6. Click in the “Endpoint” field in the left-hand column and type **esnet** into the search box (A) that is displayed. A list of endpoints will appear and you can select one of three ESnet endpoints at Argonne National Lab, Brookhaven National Lab, CERN, or Lawrence Berkeley National Lab: ESnet test DTN at ANL, ESnet test DTN at BNL, ESnet test DTN at CERN, or ESnet test DTN at LBL. Click on one of these to select it (B).



a. NOTE: The ESnet hosts are configured to only transfer data to routes that are available via the ***R&E internet routing table***, e.g. locations that are reachable via Internet2, ESnet, and other R&E networks. If you are transferring on a commercial network (home connections, hotel WiFi, etc.) the connection will not complete.

7. Select the data files or folders you wish to transfer. Double click on the folders to expand them. You can transfer .dat files or folders of various sizes up to hundreds of gigabytes.
8. Now, click in the “Endpoint” field in the right-side column and find the name of the personal endpoint that you created in step 3.
9. Select which file (e.g., your Desktop folder) you would like the data to be placed in.
10. OPTIONAL: Choose a name for your transfer and enter it into **Label This Transfer** (A) to help track your data activity, otherwise a default label will be given to your transfer (e.g., b62e4498-deb7-11e2-9843-123139404f2e).



11. OPTIONAL: If you wish to encrypt your files in transport, check the **encrypt transfer** (B) box under Transfer Settings.

12. Click the right arrow to transfer to your computer.

The screenshot shows the Globus Transfer Files interface. At the top, there is a navigation bar with 'Manage Data', 'Publish', 'Groups', 'Support', and 'Account'. Below this, there are links for 'Transfer Files', 'Activity', 'Endpoints', 'Bookmarks', and 'Console'. The main area is titled 'Transfer Files' and shows two endpoints: 'ESnet test DTN at LBL' and 'MacBook'. The 'MacBook' endpoint is selected, and its file list is displayed. A blue right-pointing arrow button is highlighted with a red box. Below the file lists, there are transfer settings and a label field.

13. The data transfer progress can be found under **Manage Data** → **Activity**. (You will receive an email when the data transfer is complete.) Transfer performance can be found here for total transfer time, bytes transferred, any failed/skipped transfers, etc.

The screenshot shows the Globus Activity page. At the top, there is a navigation bar with 'Manage Data', 'Publish', 'Groups', 'Support', and 'Account'. Below this, there are links for 'Transfer Files', 'Activity', 'Endpoints', 'Bookmarks', and 'Console'. The main area is titled 'Activity' and shows a task titled 'ESnet Test DTN at BNL to UChicago RCC Midway'. The task has a progress bar and a close button. Below the task, there are tabs for 'Overview' and 'Event Log'. The 'Overview' tab is active, showing details about the task, including Task ID, Source, Destination, Condition, Owner, Requested, Deadline, and Transfer Settings. A summary table on the right shows statistics for the transfer.

Category	Count
Files	1875
Directories	651
Bytes Transferred	3.59 MB
Effective Speed	144.05 KB/s
Pending	526
Succeeded	2001
Cancelled	0
Expired	0
Failed	0
Retrying	0
Skipped	0

14. FOR BEST RESULTS: While the data is transferring to your computer, please turn off your sleep mode. Also, if you are using a pop-up blocker like Ghostery, please turn this off. It may cause problems while downloading the software.
15. If you have any problems, please submit a request via the **Support → Contact Us** link located at the top navigation on the globus.org pages or email: engage@es.net.
16. To perform future data transfers, repeat steps 5–13.