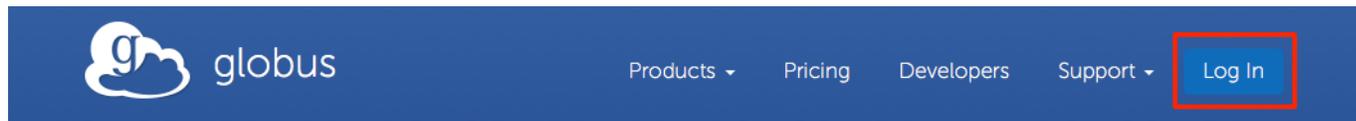
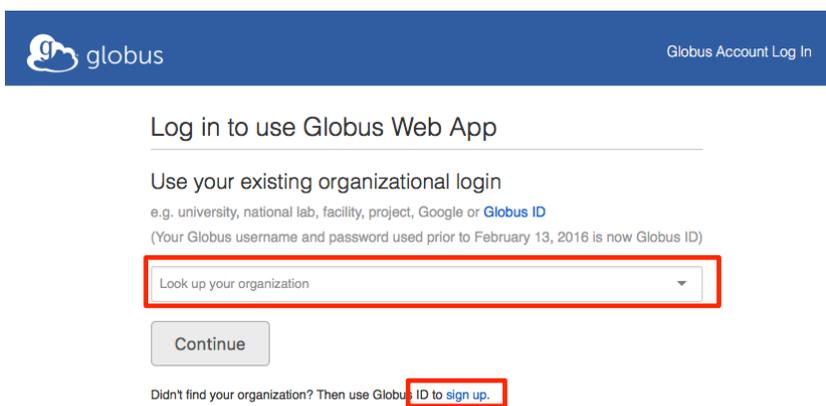


# How To Use Globus for ESnet Performance Testing

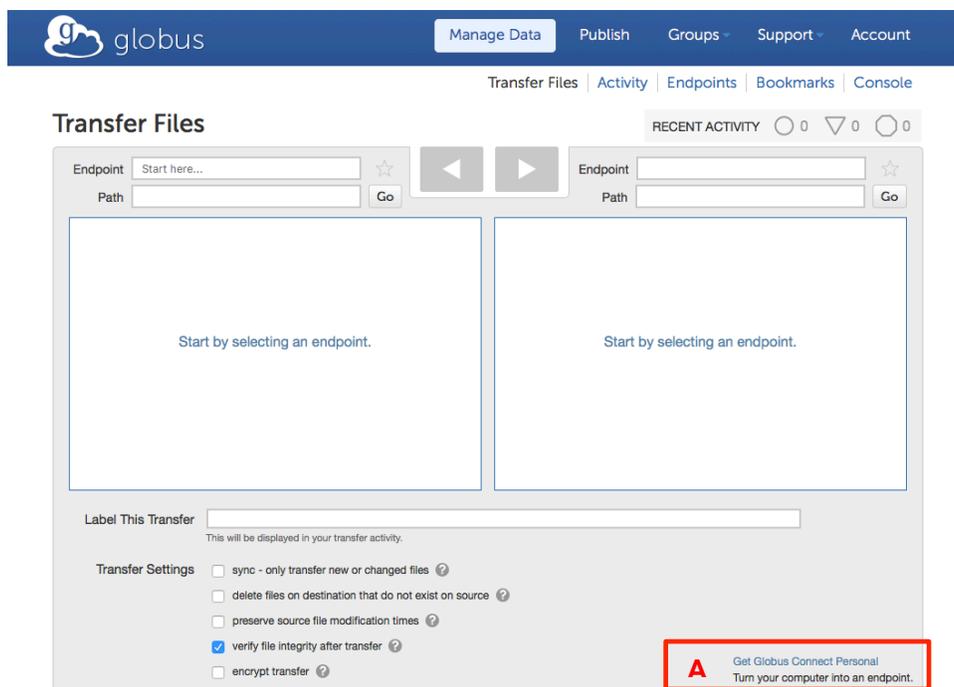
1. Go to <http://www.globus.org> and click “Log In”.



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.)



globus Manage Data Publish Groups Support Account  
Transfer Files Activity Endpoints Bookmarks Console

### Manage Endpoints

Endpoint List add Globus Connect Personal endpoint add Globus Connect Server endpoint

#### Add Globus Connect Personal Endpoint

**Step 1 Get Your Globus Connect Personal Setup Key**  
Please enter a human-friendly name for your Globus Connect Personal endpoint to help you identify it.

**B** Display Name \* My Laptop at ABC Labs

Generate Setup Key

**Step 2 Download & Install Globus Connect Personal**  
Click one of the buttons below to download and install Globus Connect Personal for your operating system.

for Mac OS X for Linux for Windows

Once downloaded, run the installer. When prompted, paste in the Setup Key to complete the installation.

- 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**.

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### Manage Endpoints

Endpoint List add Globus Connect Personal endpoint add Globus Connect Server endpoint

#### Add Globus Connect Personal Endpoint

**Step 1 Get Your Globus Connect Personal Setup Key**

MacBookPro created

Setup Key a3d7b5a8-37f8-45f5-b99b-daf3f060f247  
Copy the key above to your clipboard.

**Step 2 Download & Install Globus Connect Personal**  
Click one of the buttons below to download and install Globus Connect Personal for your operating system.

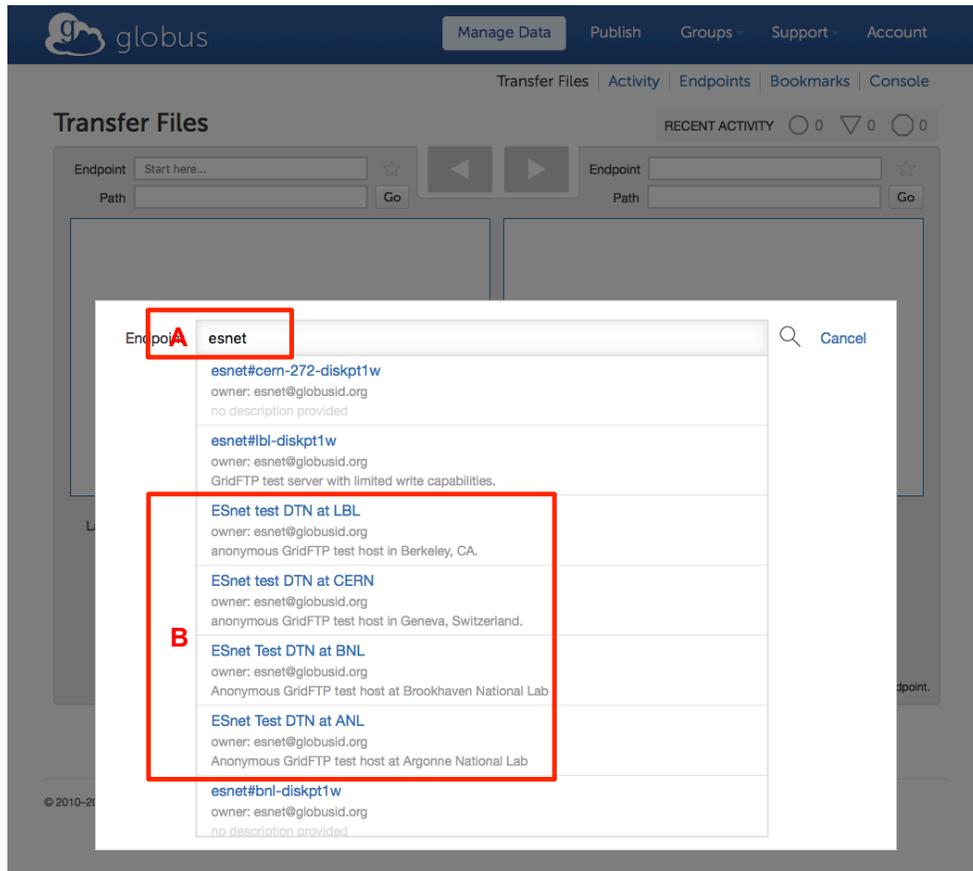
for Mac OS X for Linux for Windows

Once downloaded, run the installer. When prompted, paste in the Setup Key to complete the installation.

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

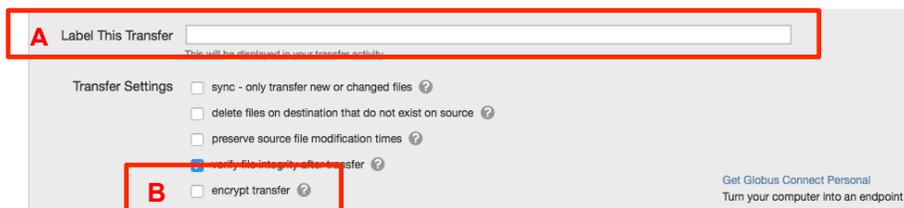
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- Click in the “Endpoint” field in the left-hand column and type **esnet** into the search box (A) that is displayed. A list of endpoints will appear and you can select one of three ESnet endpoints at Argonne National Lab, Brookhaven National Lab, 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 the Globus logo and buttons for '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 features two endpoint selection boxes. The left box is for 'ESnet test DTN at LBL' with a path of '/data/'. The right box is for 'MacBook' with a path of '/~/'. A red box highlights the right arrow button between the two endpoint boxes. Below the endpoint boxes, there are two file lists. The left list shows folders like '500GB-in-large-files' and files like '100G.dat'. The right list shows folders like 'Applications' and files like 'ucmpcs.csr'. At the bottom, there is a 'Label This Transfer' field with the text 'Test ESnet transfer' and several 'Transfer Settings' checkboxes, including 'verify file integrity after transfer' and 'encrypt transfer'.

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 the Globus logo and buttons for '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 features a task list. The first task is 'ESnet Test DTN at BNL to UChicago RCC Midway' with a progress bar. Below the task title, there are tabs for 'Overview' and 'Event Log'. The 'Overview' tab is selected, displaying task details such as 'Task ID', 'Source', 'Destination', 'Condition', 'Owner', 'Requested', 'Deadline', and 'Transfer Settings'. A summary table on the right shows statistics like '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', and 'Skipped 0'. A 'view debug data' link is visible at the bottom right.

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](mailto:engage@es.net).
16. To perform future data transfers, repeat steps 5–13.