

Using Globus at the ALCF

Robert Scott

Technical Support Analyst

Argonne Leadership Computing Facility



What is Globus?

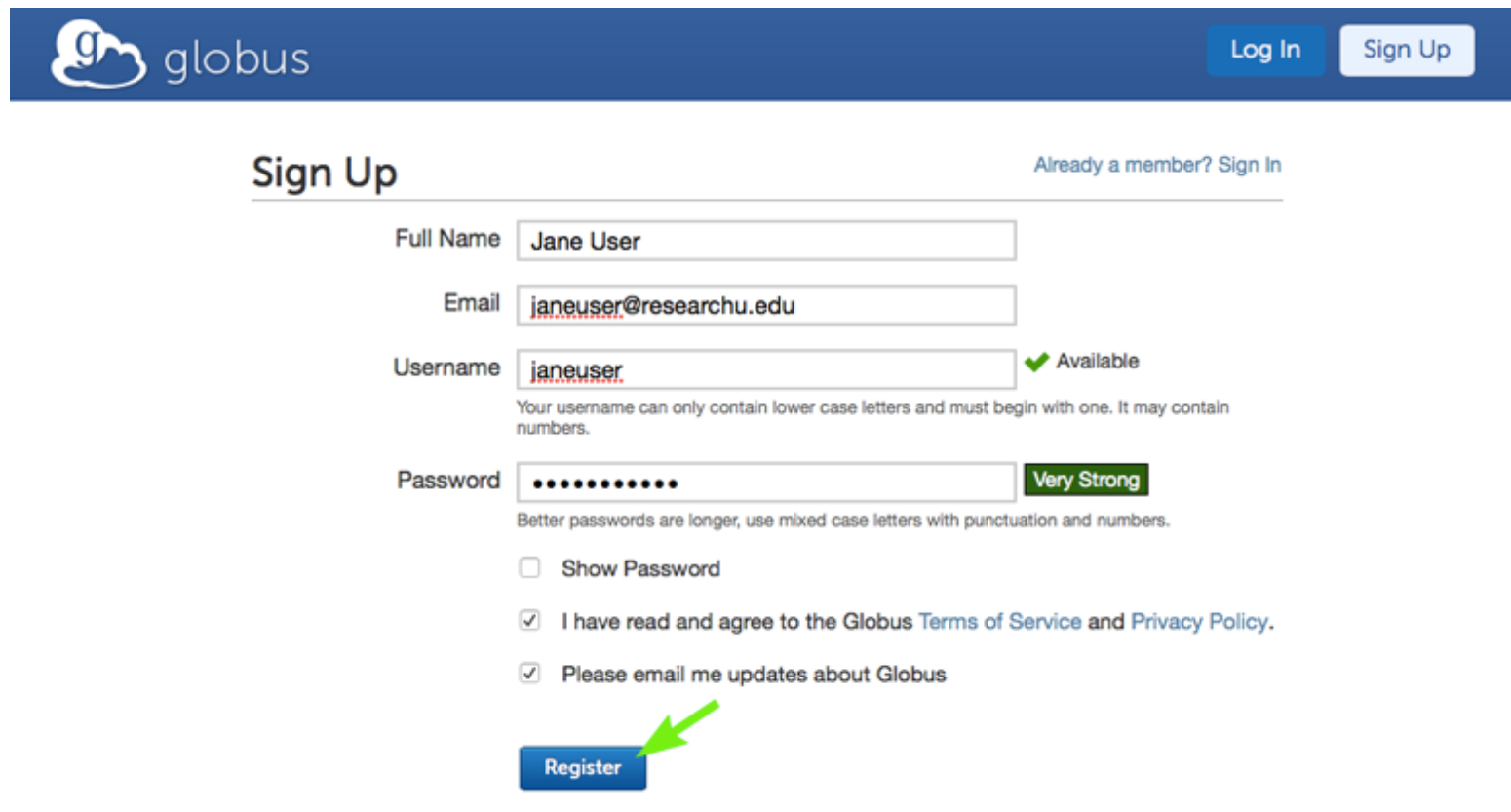


- Reliable File Transfer
 - **Easy:** Simple signup, login and use – and minimized intervention
 - **Fast:** Globus can move terabytes of data in hours
 - **Secure:** No need to worry about security configurations or certs, and one-time passwords work
 - **Research-focused:** The Globus services are purpose-built to meet the needs and requirements of the research community
- Gain Flexibility
 - Move any file to any location, whether you're at an HPC facility or in a coffee shop
 - Works with existing GridFTP servers
 - **Globus Connect Personal** solves “last mile problem” for local machines



Getting Started with Globus

- You'll need a Globus account
 - Go here to signup: <https://www.globus.org/SignIn>



The screenshot shows the Globus website's sign-up page. At the top, there is a dark blue header with the Globus logo on the left and "Log In" and "Sign Up" buttons on the right. The main content area is white and titled "Sign Up" on the left, with a link "Already a member? Sign In" on the right. The form contains the following fields and options:

- Full Name:** A text input field containing "Jane User".
- Email:** A text input field containing "janeuser@researchu.edu".
- Username:** A text input field containing "janeuser". To the right of the field is a green checkmark and the text "Available". Below the field is a note: "Your username can only contain lower case letters and must begin with one. It may contain numbers."
- Password:** A text input field with masked characters (dots). To the right is a green box with the text "Very Strong". Below the field is a note: "Better passwords are longer, use mixed case letters with punctuation and numbers."
- Options:** Three checkboxes are listed below the password field:
 - Show Password
 - I have read and agree to the Globus [Terms of Service](#) and [Privacy Policy](#).
 - Please email me updates about Globus
- Register:** A blue button with the text "Register" is located at the bottom of the form. A green arrow points to this button.



Getting Started with Globus

- Crypto card to access an ALCF endpoint
- **Globus Connect Personal**: to transfer files to and from your local machine (laptop)
- Go here to initiate your transfer:
<https://www.globus.org/xfer/StartTransfer>
- For a step by step Getting started guide:
<https://www.globus.org/researchers/getting-started>



Transferring Data To/From ALCF using Globus

- **Globus** (for large transfers)
 - *Globus* addresses the challenges faced by researchers in moving, sharing, and archiving large volumes of data among distributed sites.
 - A Globus endpoint is a data transfer location, there are two primary classes of endpoints: server endpoints and personal endpoints
 - ALCF BG/Q endpoints: [alcf#dtn_mira](#), [alcf#dtn_vesta](#)
 - Check if your laboratory, university or research center has already an endpoint.
 - *Globus Connect Personal* is used to set up server and personal endpoints to transfer files to and from your local machine.
 - <http://www.alcf.anl.gov/user-guides/data-transfer>



Transferring Data To/From ALCF

globus

Manage Data Groups Support janeuser

Transfer Files Activity Manage Endpoints Dashboard

Transfer Files

Get Globus Connect Personal
Turn your computer into an endpoint.

Endpoint enter endpoint name ... Go

Path Go

Please select an endpoint above.

Endpoint enter endpoint name ... Go

Path Go

Please select an endpoint above.

more options Label This Transfer

This will be displayed in your transfer activity.



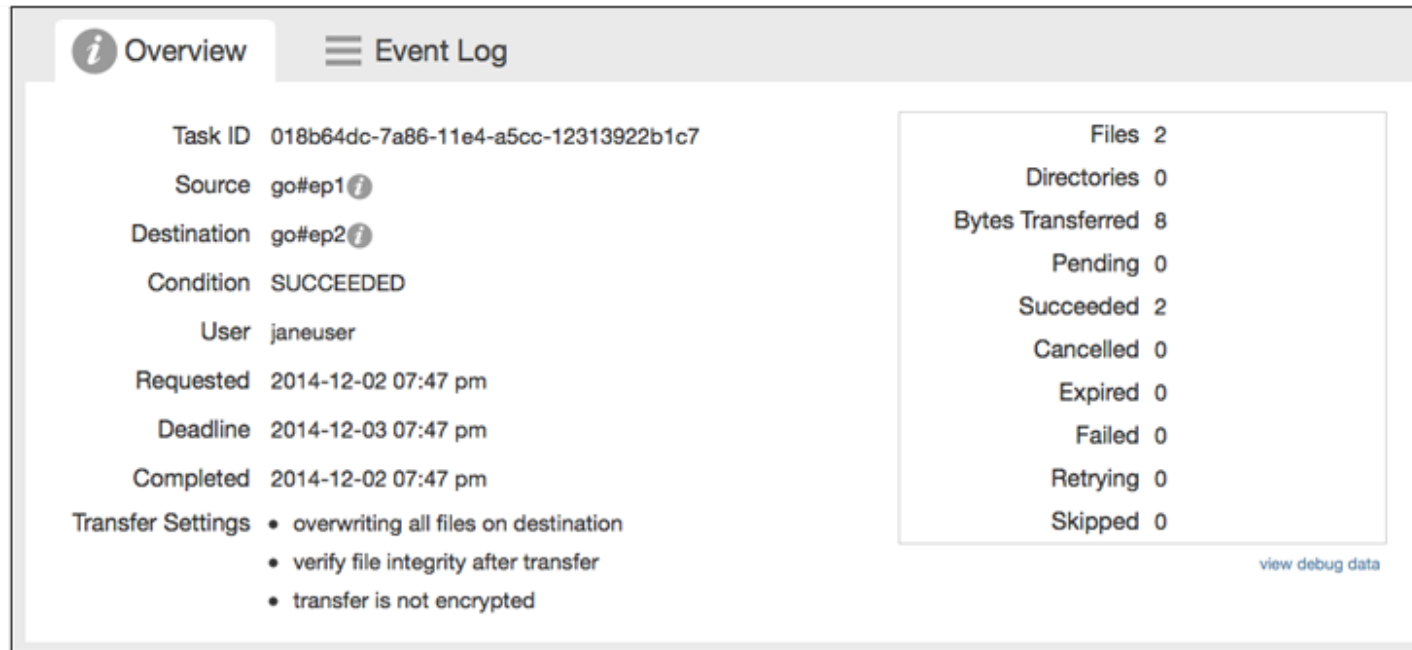
Fire and forget data transfer

- After you request a file transfer, **Globus** takes over and does the work on your behalf
- You can navigate away from the Transfer Files page, close the browser window, and even logout
<http://www.alcf.anl.gov/user-guides/using-gridftp>
- **Globus** will optimize the transfer for performance, monitor the transfer for completion and correctness, and recover from network errors and endpoint resource downtime
- **Globus** can handle extremely large data transfers, even those that do not complete within the authentication expiration period of an endpoint (which is controlled by the resource administrator). If the credentials expire before the transfer completes, **Globus** will notify you to re-authenticate on the endpoint so that **Globus** can continue the transfer.



Confirm transfer completion

- In my sample demo I'll transfer one small file, so the transfer will complete quickly. When it does, you will see an activity notice at the bottom of the Transfer Files page similar to this.



The screenshot displays a user interface for a transfer task. It features two tabs: 'Overview' (selected) and 'Event Log'. The 'Overview' tab shows the following details:

- Task ID: 018b64dc-7a86-11e4-a5cc-12313922b1c7
- Source: go#ep1
- Destination: go#ep2
- Condition: SUCCEEDED
- User: janeuser
- Requested: 2014-12-02 07:47 pm
- Deadline: 2014-12-03 07:47 pm
- Completed: 2014-12-02 07:47 pm

Transfer Settings:

- overwriting all files on destination
- verify file integrity after transfer
- transfer is not encrypted

Statistics:

- Files: 2
- Directories: 0
- Bytes Transferred: 8
- Pending: 0
- Succeeded: 2
- Cancelled: 0
- Expired: 0
- Failed: 0
- Retrying: 0
- Skipped: 0

A 'view debug data' link is located at the bottom right of the statistics box.





Globus Online Demo

- Let's start the Demo....



Thank You!

- Questions?

