

# Monsoon and Globus

Utilizing Globus tools for fast, easy, & powerful data sharing

# Globus' capabilities and benefits



- Huge file sizes or huge number of files? NO PROBLEM!
- Web-based interface
  - CLI tools also available, as alternative to web
- Direct transfers between Monsoon ↔ *other institutions'* filesystems
  - Networked-filesystem to networked-filesystem!
  - Simple copies, or (schedulable!) sync tasks
- Also between Monsoon ↔ personal PCs, G-Drive, OneDrive...
- Secure collaboration!
  - Highly customizable, granular permissions
  - Share as read-only or full-access

File Manager | Globus

app.globus.org...

# File Manager

Panels

Collection: **NAU HPC Filesystems** | **NAU OneDrive**

Path: **/home/jtb49/demo/** | **/My files/Documents/**

Start | Transfer & Timer Options | Start

File Name	Size	Modified
big-project-2021	-	2/14/2024, 02:06 PM
create-shared-collection.mov	43.52 MB	2/14/2024, 03:14 PM
Globus workshop (branded v2).pptx	7.44 MB	2/14/2024, 03:21 PM
<b>globus-a-short-tour.mov</b>	<b>14.36 MB</b>	<b>2/14/2024, 03:14 PM</b>
small-project-2023	-	2/14/2024, 02:36 PM
xfers-between-onedrive-monsoon-gdrive2.mov	46.75 MB	2/14/2024, 03:14 PM

File Name	Size	Modified
Custom Office Templates	-	3/24/2025, 01:55 PM
Default.rdp	2.38 KB	5/6/2025, 04:43 PM
globus-a-short-tour.mov	14.36 MB	9/18/2025, 06:05 PM
MATLAB	-	2/13/2023, 06:50 PM
nau-marketing-template-cloudTitles.potx	2.61 MB	9/18/2025, 11:53 AM

# Architecture of a Globus transfer



**Monsoon storage ('A')**  
/home, /scratch, /projects  
...running Globus SW



**Network**



...also using Globus SW

**Remote system ('B')**

Your PC, OneDrive, other HPC,...



# Globus use-cases



Globus is well suited for transferring data sets to and from HPC resources, without the need for a command line or extensive technical knowledge.

Quickly orchestrate file transfers: only a web browser is needed in most cases, no matter how large the dataset.

Globus is great for remote collaborators, and great for your everyday use too: move data to/from your OneDrive or PC.

- ✦ Remote collaborator(s) ↔ Monsoon
  - NAU-affiliated, or not
  - Different /projects groups
- ✦ Your monsoon files
  - ↔ other HPCs/Edu's\*
  - ↔ your PCs\*\*
  - ↔ *my* Monsoon files
  - ↔ Your OneDrive/G-Drive
- ✦ Time consuming & complex xfers
- ✦ CLI tools and APIs

# Share (only) what you want



~ — root@alula2:~ — ssh jtb49@wind.hpc.nau.edu — 81x14

```
[jtb49@wind demo1]$ pwd
/scratch/jtb49/demo1
[jtb49@wind demo1]$ ls
0000136910.pdf
bigdata
BIOS_72VRD_WN64_2.21.2.EXE
Chipset_Driver_K69PV_WN64_10.1.18807.8279...
CPLD_Firmware_9N4DH_WN64_1.0.6_A00_02...
Express-Flash-PCIe-SSD_Firmware
Express-Flash-PCIe-SSD_Firmware
Firmware_VV85D_WN64_4.35_A00_08...
Firmware_X4K6X_WN64_2.0_A06.EXE
iDRAC-with-Lifecycle-Controller
[jtb49@wind demo1]$
```

app.globus.org/fil...

File Manager

Collection jtb49 demo1 collection

Path /

select all up one folder refresh list filter view

NAME	LAST MODIFIED	SIZE
0000136910.pdf	4/5/2024, 03:13 PM	77.58 KB
bigdata	4/3/2024, 03:25 PM	—
BIOS_72VRD_WN64_2.21.2.EXE	4/5/2024, 05:22 PM	29.84 MB
Chipset_Driver_K69PV_WN64_10.1.18807.8279...	4/5/2024, 05:22 PM	8.58 MB
CPLD_Firmware_9N4DH_WN64_1.0.6_A00_02...	4/5/2024, 05:22 PM	8.48 MB

FILE MANAGER

ACTIVITY

COLLECTIONS

GROUPS

FLows



# Transfer options (1/2)



- ☒ sync - only transfer new or changed files ⓘ

Selecting this option gives the ability to choose how files will be overwritten on the destination file system.

where  
the

- checksum is different
- checksum is different
- file does not exist on destination
- file size is different
- modification time is newer

- ☐ delete files on destination that do not exist on source ⓘ

Files which do not exist on the source endpoint, but do exist on the destination endpoint will be deleted from the destination endpoint.

- ☐ preserve source file modification times ⓘ

After transfer of a file, the modification time on the destination will reflect the modification time on the source instead of the time the transfer completed.

- ☐ do NOT verify file integrity after transfer ⓘ

After transfer, verify that the source and destination file checksums match. If they don't, retransfer the entire file and keep trying until it succeeds. If a collection is configured to disable verification of file integrity, this option is ignored.

- ☐ encrypt transfer ⓘ

Encrypt the data while it is being transferred. If encryption is requested but is not supported by an endpoint, Globus will signal an error. Please visit <https://docs.globus.org/faq/security/> for more information on our encryption approach.

- ☐ Skip files on source with errors ⓘ

Files on source with "file not found" and "permission denied" errors will be skipped rather than cause the transfer to fail.

# Transfer options (2/2)



☐ Fail on quota errors ⓘ

If the storage quota is exceeded during the transfer, the transfer will fail rather than retry.

☐ Disable success notification ⓘ

An email will not be sent when this transfer succeeds.

☐ Disable failure notification ⓘ

An email will not be sent when this transfer fails.

☐ Disable inactive notification ⓘ

An email will not be sent when this transfer becomes inactive.

Schedule Start

mm/dd/yyyy --:-- --



🕒 Repeat

does not repeat

does not repeat

days

hours

minutes



# Globus sign-in options



The screenshot shows the Globus sign-in interface. At the top is the Globus logo. Below it, the text "Log in to use Globus Web App" is displayed. The main section is titled "Use your existing organizational login" with a subtext "e.g., university, national lab, facility, project". There is a search box labeled "Look-up your organization..". Below the search box, a message states: "By selecting Continue, you agree to Globus [terms of service](#) and [privacy policy](#)." A blue "Continue" button is present. Below this, an "OR" separator is shown. There are two buttons: "Sign in with Google" (with a Google G logo) and "Sign in with ORCID iD" (with an ORCID iD logo). Below these buttons, a link reads: "Didn't find your organization? Then use [Globus ID to sign in](#). ([What's this?](#))".

Annotations on the image include:

- A red arrow pointing to the "Sign in with Google" button.
- A red arrow pointing to the "Didn't find your organization? Then use Globus ID to sign in. (What's this?)" link.
- A brown arrow pointing from the "Continue" button to a dropdown menu.

The dropdown menu shows the search results for "arizona":

- arizona
- The University of Arizona
- Arizona State University
- Northern Arizona University

# Browser-only (minimal) transfers



File Manager

Collection: Beekman proj collection

Path: /bulk\_data/

Bookmarks

NAME	LAST MODIFIED	SIZE
cluster_workshop_ondemand_jb.pdf	11/17/2022, 05...	1.58 MB
cluster_workshop_ondemand_jb.pptx	11/17/2022, 05...	7.17 MB
cluster_workshop_ondemand.orig.p...	11/17/2022, 05...	6.79 MB
cluster_workshop_ondemand.pdf	11/17/2022, 05...	4.32 MB
ondemand-editor.png	11/17/2022, 05...	212.67 KB

view

Permissions

Transfer or Sync to...

New Folder

Rename

Delete Selected

Download

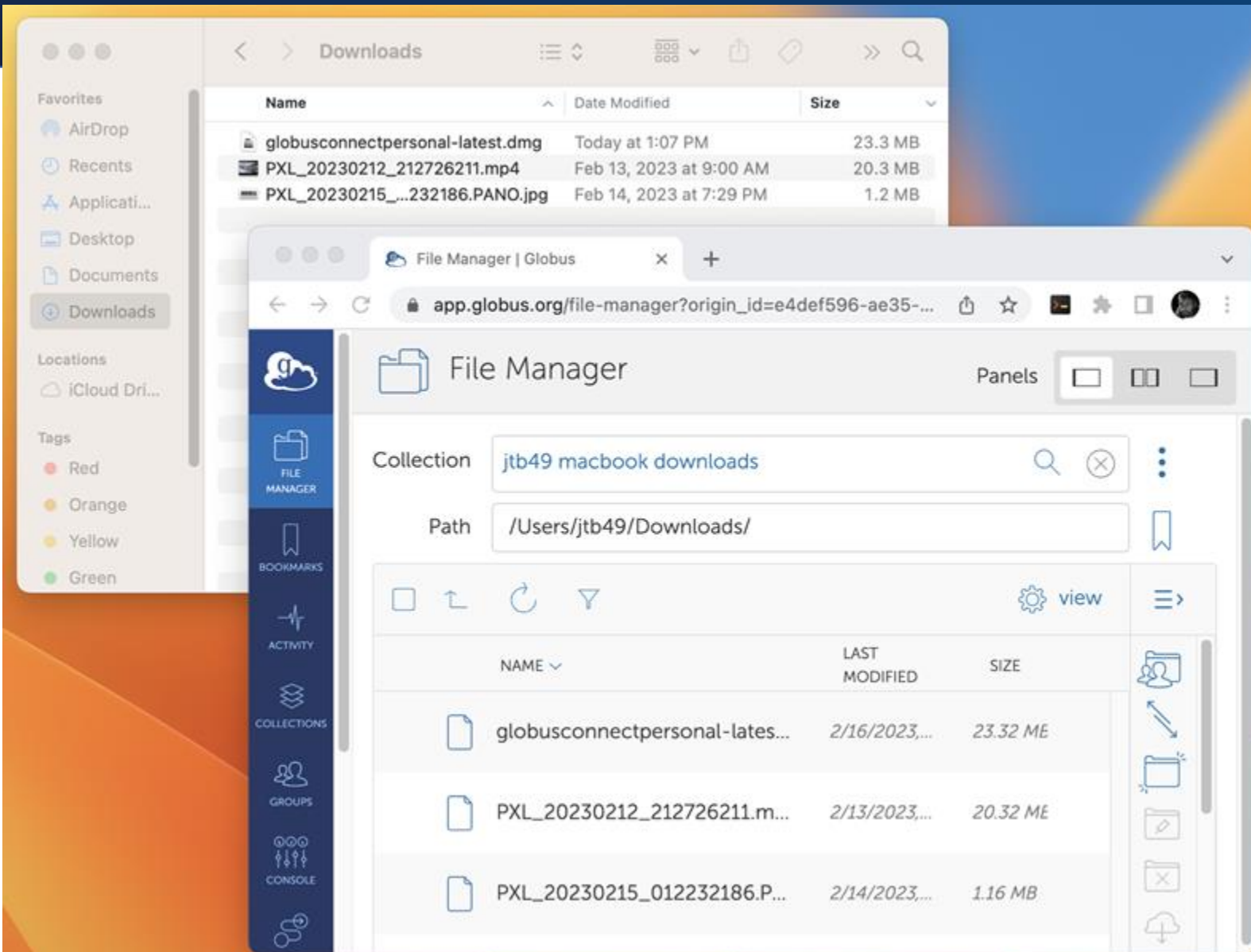
Open

Upload

Uploads

- cluster\_workshop\_ondemand.pdf ✓
- cluster\_workshop\_ondemand.orig.pptx ✓
- ondemand-editor.png ✓
- cluster\_workshop\_ondemand\_jb.pptx ✓

# Easy PC transfers: Globus Personal



# Demo



# Download from: [www.globus.org/globus-connect-personal](http://www.globus.org/globus-connect-personal)



Globus Connect Personal Setup

globus connect personal

### Collection Details

Owner Identity

Collection Name

Description

File Accessibility

General **Access** Audit Log Info

Accessible Directories and Files

Directory or File	Shareable	Writable
/Users/buechler	<input type="checkbox"/>	<input checked="" type="checkbox"/>

☒ Deny access to hidden (e.g. security) files in your home directory

Reset to Defaults

Collection Search

Collection

**jtb project on monsoon**  
Owner: jtb49@nau.edu  
Domain: g-f3d13d.76cbc.03c0.data.globus.org

**jtb macbook ssd**  
Owner: jtb49@nau.edu  
Description: Files on work Macbook

# Thank You

Full globus workshop/slides: <https://in.nau.edu/arc/workshops/>

Globus' security FAQ: <https://docs.globus.org/faq/security/>