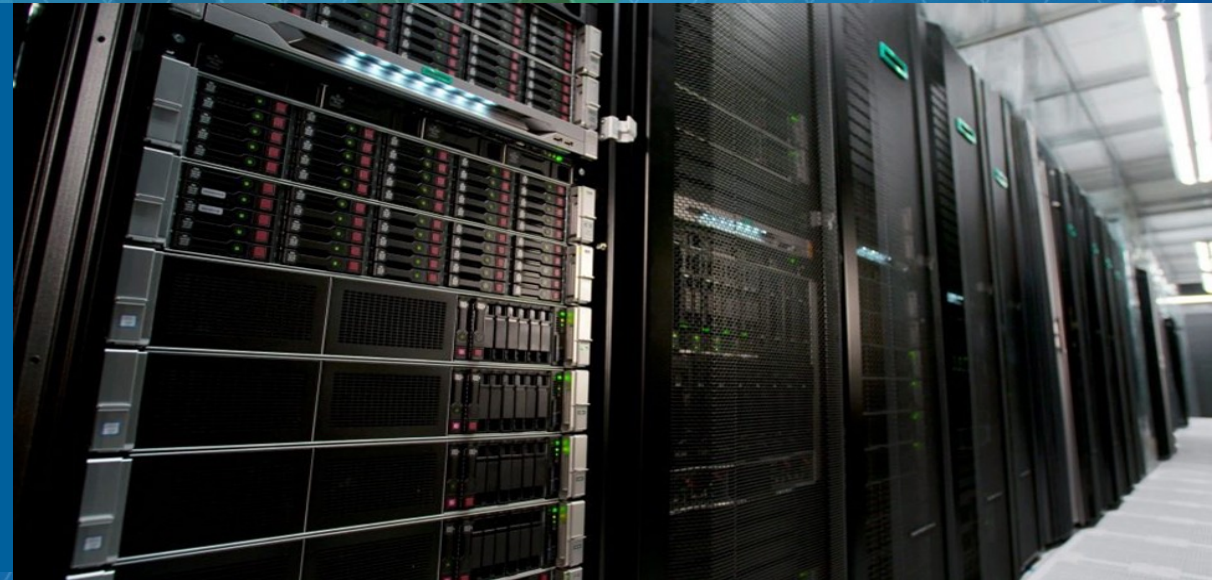


# SHARING DATA USING ALCF'S COMMUNITY DATA CO-OP (ACDC)



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U.S. DEPARTMENT OF  
**ENERGY**

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# WHAT IS ACDC

ACDC is ALCF Community Data Co-op service configured to allow PIs to broadly share their data hosted on Eagle using Globus, by applying simplified interfaces.

# WHAT IS EAGLE

- Eagle is ALCF's recently deployed storage system with 100PB of usable capacity
- Primary use of Eagle is sharing scientific data with the broader research community, using Globus.
- Few facts about Eagle
  - HPE ClusterStorE1000 with 8480 disk drives
  - Lustre Filesystem
  - Sustained transfer rate of 650GB/s
- The Globus endpoint on Eagle is called `alcf#dtn_eagle`

# GLOBAL NOMENCLATURE RELEVANT TO ACDC

## Guest and Mapped Collections

- <https://docs.globus.org/globus-connect-server/v5.4/reference/collection/>

## Groups

- <https://docs.globus.org/how-to/managing-groups/>

## Collaborators (ALCF account holders, external)

## Access Manager (Proxy)

- [https://docs.globus.org/api/transfer/endpoint/#managed\\_endpoints](https://docs.globus.org/api/transfer/endpoint/#managed_endpoints)

More information : <https://docs.globus.org/faq/>

# HIGH LEVEL PROCESS FOR PI'S USAGE OF EAGLE

- PI requests an Eagle allocation project
  - Allocations Committee reviews and approves requests
  - A project with a unixgroup, project directory and quota is setup for the approved Eagle allocation project
- A Globus sharing policy is created for the project with appropriate access controls
- PI creates a **guest collection** for the project, using the Globus **mapped collection** for Eagle. *Note: PI needs to have an active ALCF Account and will need to log in to Globus using their ALCF credentials.*
  - If PI already has a Globus account, it needs to be linked to their ALCF account
- PI adds collaborators to the guest collection. Collaborators can be ALCF users and external collaborators
- Can add with Read only or Read-Write permissions
- Anonymous read-only is enabled so collections can be shared publicly

# ALLOCATIONS ON EAGLE

- Eagle storage allocations will be granted to projects focused on data sharing.
- Interested users can submit an allocation request using the ALCF's Directors Discretionary Allocation Request form:  
**<https://accounts.alcf.anl.gov/allocationRequests>**

## Request a Discretionary Allocation

Request an allocation on ALCF compute and storage resources. Awards are made year round to industry, academia, laboratories, and others.

### Allocation Request Information

Is this a new project or renewal project?

- New Project  
 Renewal Project

Required Field

Which resource(s) are you requesting?

- Theta
- Cooley  
Cooley is used for data analytics/visualization allocations. Additionally, if you selected Theta and would like a default allocation on Cooley, check the box and type in 8000 as the amount.
- Grand  
Grand is the file system intended for results data from your computational runs on the ALCF computing systems. It is accessible by project members with an ALCF account.
- Eagle

# WORKFLOW FOR A PI..

## STEP 1: Authenticate to Globus

globus  
a uchicago non-profit service

I Want To... Pricing Resources Support About Log In

# Introducing Flows

Our new service that accelerates discovery

Auth Transfer Web Form Describe Identifier Share Search

GET CREDENTIALS TRANSFER DATA USER INPUT GET METADATA MINT DOI SET POLICY CREATE INDEX

LEARN MORE ABOUT FLOWS

1

## STEP 2: Search for Eagle endpoint

Collection Search

Collection alcf#dtn\_eagle

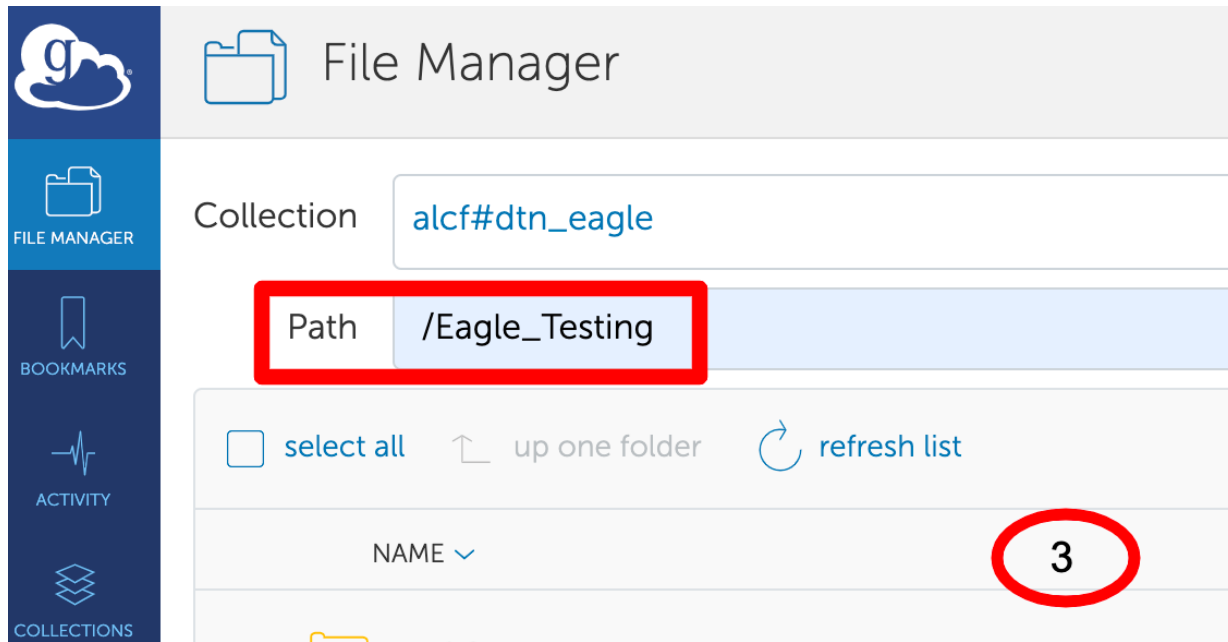
alcf#dtn\_eagle\_dashboard  
Owner: 2237d405-e75a-4d40-b673-31553ccbcad3@clients.auth.globus.org  
no description provided

alcf#dtn\_eagle  
Owner: 2237d405-e75a-4d40-b673-31553ccbcad3@clients.auth.globus.org  
ALCF Eagle

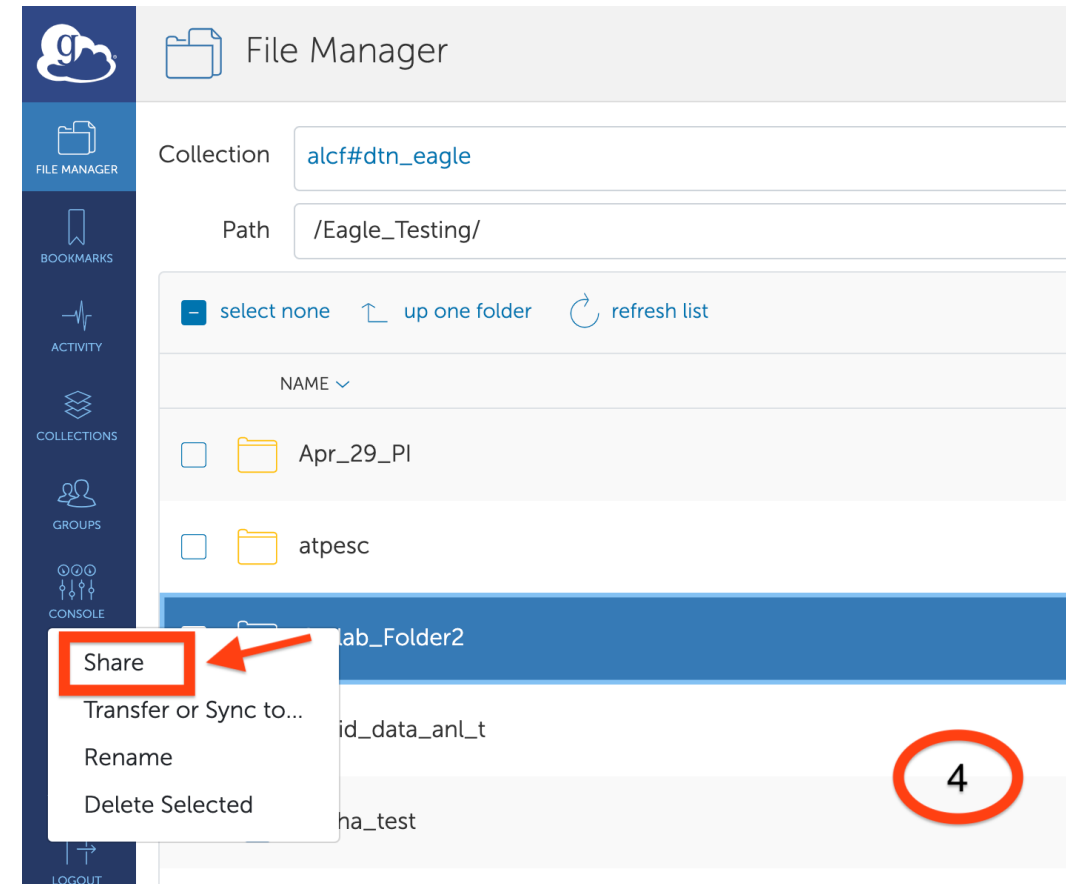
2

# WORKFLOW FOR A PI (CONT..)

**STEP 3:** Navigate to your Project directory



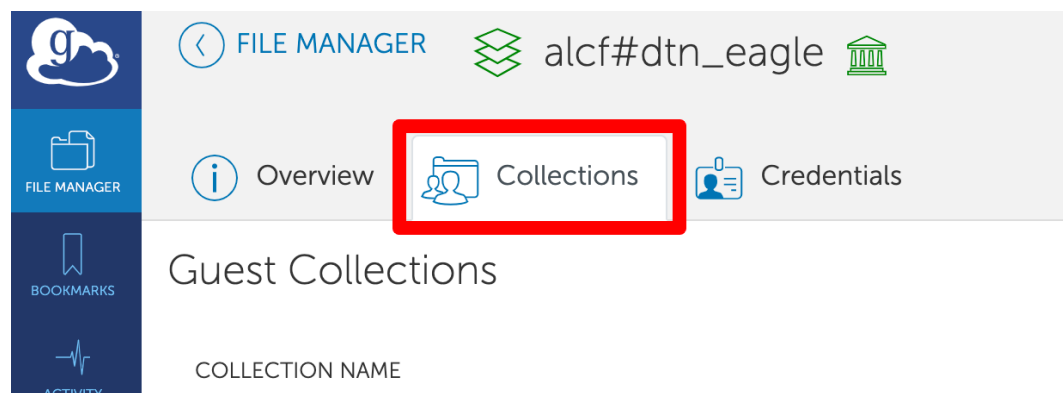
**STEP 4:** Click on the folder to be shared





# WORKFLOW FOR A PI (CONT..)

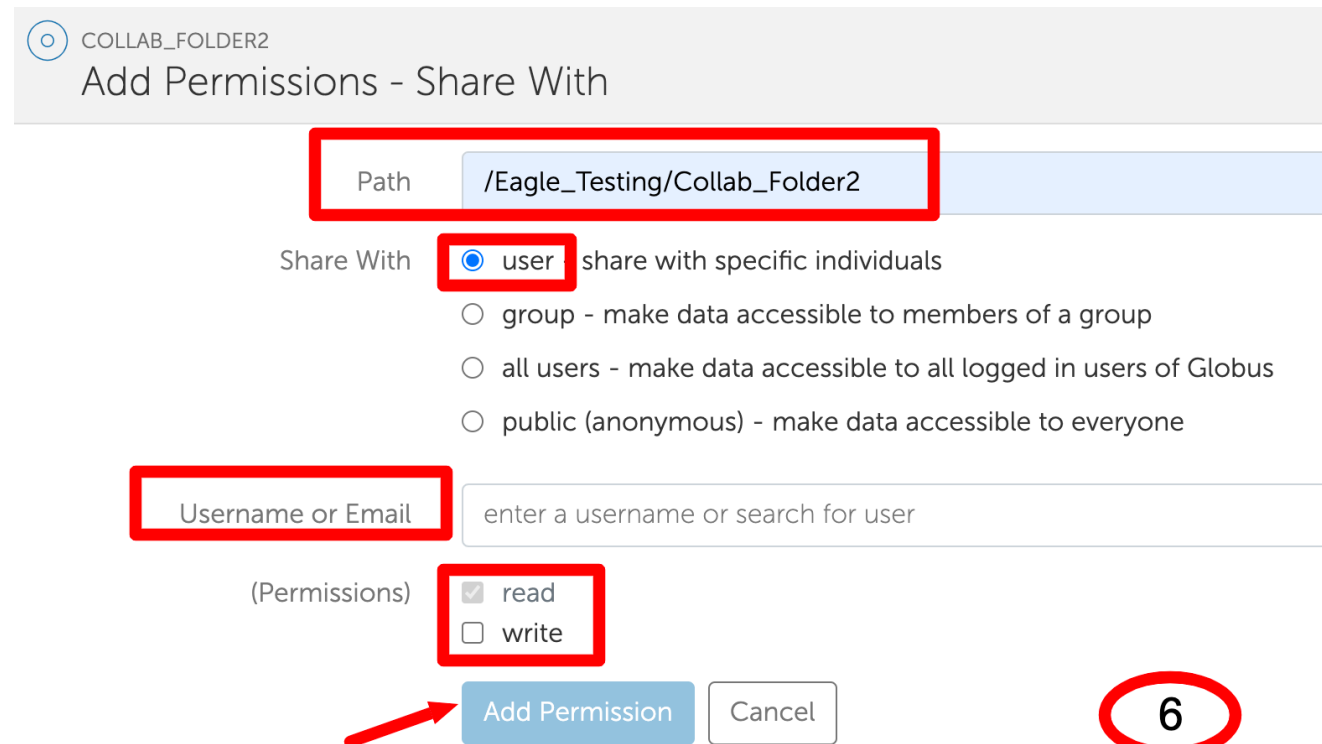
## STEP 5: Add a guest collection



The screenshot shows the Argonne File Manager interface. The top navigation bar includes 'FILE MANAGER', 'alcf#dtn\_eagle', and a building icon. Below this, there are tabs for 'Overview', 'Collections' (highlighted with a red box), and 'Credentials'. The main area is titled 'Guest Collections' and contains a 'COLLECTION NAME' input field. A red box highlights the '+ Add a Guest Collection' button at the bottom left.

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## STEP 6: Share with a collaborator



The screenshot shows the 'Add Permissions - Share With' dialog box. The 'Path' field is set to '/Eagle\_Testing/Collab\_Folder2'. The 'Share With' section has three radio button options: 'user' (selected and highlighted with a red box), 'group', and 'all users'. Below these are three checkboxes for permissions: 'read' (checked and highlighted with a red box) and 'write' (unchecked). At the bottom, there is an 'Add Permission' button (highlighted with a red box and an arrow) and a 'Cancel' button. The 'Username or Email' field contains the placeholder text 'enter a username or search for user'. A red circle highlights the number '6' at the bottom right.

6

# EMAIL NOTIFICATION TO COLLABORATOR

Globus user Avanthi Madduri ([mantrala@alcf.anl.gov](mailto:mantrala@alcf.anl.gov)) shared the folder "/Eagle\_Testing/Collab\_Folder2/" on the endpoint "Collab\_Folder2" (endpoint id: 040537c4-8348-4b93-91f6-46c160398a9e) with Ravi Madduri ([madduri@anl.gov](mailto:madduri@anl.gov)).

Use this URL to access the share:

[https://app.globus.org/file-manager?&origin\\_id=040537c4-8348-4b93-91f6-46c160398a9e&origin\\_path=/Eagle\\_Testing/Collab\\_Folder2/&add\\_identity=114e9185-bda9-450f-ae7a-d3408ca2ccfb](https://app.globus.org/file-manager?&origin_id=040537c4-8348-4b93-91f6-46c160398a9e&origin_path=/Eagle_Testing/Collab_Folder2/&add_identity=114e9185-bda9-450f-ae7a-d3408ca2ccfb)

The Globus Team

[support@globus.org](mailto:support@globus.org)

# COLLABORATOR'S VIEW OF THE GUEST COLLECTION

The screenshot shows a web-based File Manager interface. At the top, there is a header with a 'g' logo and the text 'File Manager'. Below this is a navigation sidebar on the left with icons for 'FILE MANAGER', 'BOOKMARKS', 'ACTIVITY', 'COLLECTIONS', 'GROUPS', 'CONSOLE', and 'FLOWS'. The main content area shows a 'Collection' dropdown menu with 'Collab\_Folder2' selected, highlighted by a red box. Below the collection name is a 'Path' field containing '/'. The main area contains a list of files and folders with columns for 'NAME', 'LAST MODIFIED', and 'SIZE'. Each item has a red checkmark to its left. The items are: 'cypress.json' (3 B, 5/20/2021, 4:25 PM), 'External\_folder\_user' (5/20/2021, 4:56 PM), 'ScreenShot\_1.png\_rename\_t' (139.36 KB, 5/20/2021, 4:19 PM), and 'ScreenShot\_2.png\_test' (262.14 KB, 1/28/2022, 10:34 AM). At the top of the file list are controls for 'select all', 'up one folder', and 'refresh list', along with a 'view' button.

File Manager

Collection **Collab\_Folder2**

Path /

select all   up one folder   refresh list   view

| NAME  | LAST MODIFIED       | SIZE      |
|---|---------------------|-----------|
| <input checked="" type="checkbox"/> cypress.json              | 5/20/2021, 4:25 PM  | 3 B       |
| <input checked="" type="checkbox"/> External_folder_user      | 5/20/2021, 4:56 PM  | —         |
| <input checked="" type="checkbox"/> ScreenShot_1.png_rename_t | 5/20/2021, 4:19 PM  | 139.36 KB |
| <input checked="" type="checkbox"/> ScreenShot_2.png_test     | 1/28/2022, 10:34 AM | 262.14 KB |

# A PI CAN..

Create,  
delete and  
share

Create, delete and share with ALCF users and collaborators

Access  
Manager

Specify someone as an Access Manager for the shared collection

Transfer

Transfer data between globus endpoints

# A COLLABORATOR CAN..

- Read files from a collection\*
  - If the collaborator has read permissions on the guest collection in Globus
- Write to a collection and delete files in a collection\*
  - If the collaborator has write permissions on the guest collection in Globus

\*assumes PI has the appropriate POSIX permissions on the files

# CAVEATS

Only PI can create guest collections

Guest collections are active as long as the **project is active** and **PI's account is active**

What does a 'Permission Denied' error mean for:

- PI
- Others

# QUESTIONS?

## DOCUMENTATION & FAQs:

<https://www.alcf.anl.gov/support-center/theta-and-thetagpu/eagle-data-sharing>

# THANK YOU FOR YOUR TIME AND ATTENTION



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