

# Using Globus v5 at NCAR

*Brian Vanderwende*  
*CISL Consulting Services*

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# Reviewing the Globus services provided by CISL

## Storage Endpoints

NCAR GLADE  
NCAR Campaign Storage  
NCAR Quasar  
NCAR Stratus S3  
NCAR AWS S3

## Data Sharing Service

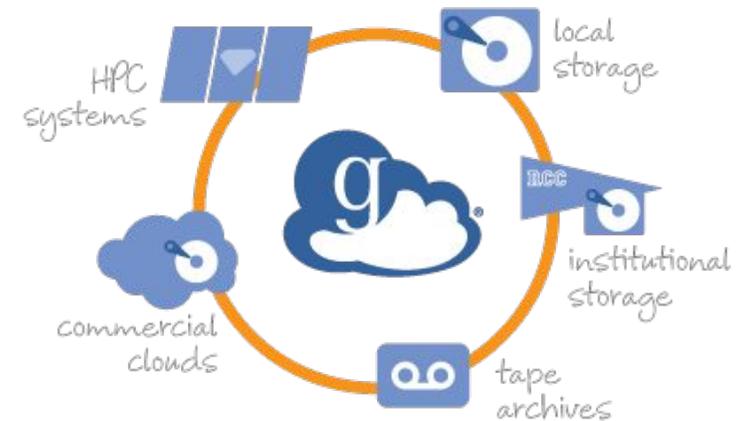
- Space by request in /glade/p/datashare
- Accessible by user-owned “shared endpoint”
- *Also possible to share data from Campaign Storage*

## Unattended Workflows

- Access to NCAR endpoints using InCommon certificates
- *gci* command to facilitate using certificates with Globus CLI

From multiple interfaces:

- [www.globus.org](http://www.globus.org)
- Globus CLI (via NPL or data-access)
- Globus Python API



# What's changed in version 5 of Globus?

**Terminology:** users now interact with *collections* rather than *endpoints*

- **Mapped collection** - a managed collection of files hosted on an endpoint. CISL collections like NCAR GLADE are of this type
- **Guest collections** - a user-created subset of files from a mapped collection with distinct Globus sharing permissions (*formerly shared endpoints*)

**Authentication:** mapped collections use OpenID (OAuth) identity mapping rather than myproxy authentication

# How do the changes affect Globus usage at NCAR?

## Mapped Collections

### Same names and UUIDS!

NCAR GLADE  
NCAR Campaign Storage  
NCAR Quasar  
NCAR Stratus S3  
NCAR AWS S3

***New OIDC  
authentication process***

## Guest Collections

### Flexible data sharing

- Most storage spaces can be shared via guest collections
- Permissions model that layers Globus access on top of native permissions
- Guest collections can be used to **create URLs to files on a storage system**

***Data Sharing Service is  
deprecated***

### Unattended workflows

- Create a guest collection (or two) for desired spaces
- Grant self open access to data and use guest collections in CLI/API commands instead of mapped collections

***InCommon certificates no  
longer supported!***

# Authenticating to the new NCAR *mapped collections*

The screenshot shows a web-based File Manager interface. At the top, there is a header with a folder icon and the text "File Manager". Below this, there are two input fields: "Collection" with the value "NCAR GLADE" and "Path" which is empty. A blue "Start" button with a play icon is positioned to the right of the "Collection" field. Below the input fields is a dark blue navigation bar containing icons and text for "select all", "up one folder", "refresh list", and "filter". The main content area displays a yellow warning triangle icon followed by the text "Authentication/Consent Required". Below this warning, a message states: "Authentication/Consent is required for Globus transfer service to manage data on this collection." At the bottom of the main content area, there is a blue "Continue" button.

**For each *mapped collection*, you will need to consent to access data via a linked identity the first time you use it**



### Identity Required

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An identity from one of the following identity providers is required to continue.

Reason: This collection requires your consent to allow data access

Please select the identity or identity provider to continue:

- [vanderwb@identity.7a577b.6fbd.data.globus.org](mailto:vanderwb@identity.7a577b.6fbd.data.globus.org)
- Link an identity from [NCAR OIDC Authentication \(identity.7a577b.6fbd.data.globus.org\)](#)

The “linked identity” will be your HPC account on Cheyenne/Casper (NCAR OIDC Authentication)

# Use your Cheyenne username and Duo token/passphrase

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Please enter your NCAR/CISL username and CIT password:

Username

Password

[Log In](#)

[Login Issues? Contact Administrator](#)

# Finally, you will need to consent to [www.globus.org](http://www.globus.org) accessing your data on the collection

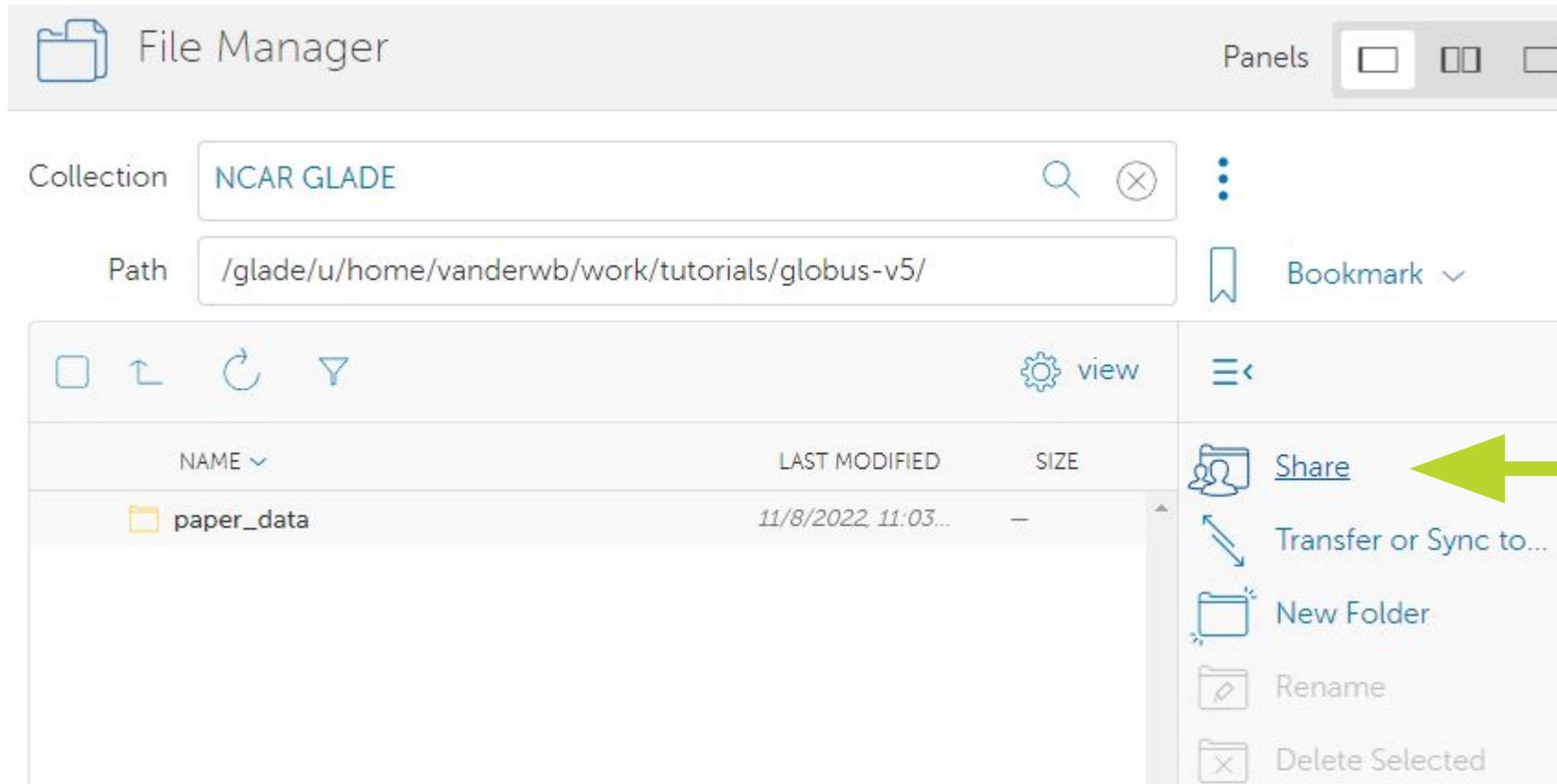
Globus Web App would like to:

- ✓ Access your data on NCAR GLADE via HTTPS ⓘ
- ✓ Manage your data on NCAR GLADE ⓘ
- ✓ Manage data using Globus Transfer ⓘ
- ✓ Manage collections on NCAR GCS5 ⓘ

To work, the above will need to: ▼

By clicking "Allow", you allow **Globus Web App**, in accordance with its [terms of service](#) and [privacy policy](#), to use the above listed information and services. You can rescind this and other consents at any time.

# Creating a guest collection: choose the root directory



➕ Add a Guest Collection



# Creating a guest collection: provide collection metadata

You are creating a guest collection on NCAR GLADE to share data

Directory

/glade/u/home/vanderwb/work/tutorials/globus-v5/paper\_data/

Browse



Display Name

Brian V's Cool Climate Journal Article 2022 - Model Data

Description

Use this data to reproduce our results!

Keywords

genomics, Higgs boson, climate change

Force encryption on transfers to and from this collection

[view more fields](#)

Create Collection

Cancel

# Creating a guest collection: managing permissions

 Add Permissions – Share With



 BRIAN V'S COOL CLIMATE JOURNAL ARTICLE 2022 - MODEL DATA

Add Permissions - Share With

Path

/

Browse

Share With

- user - share with specific individuals
- group - make data accessible to members of a group
- all users - make data accessible to all logged in users of Globus
- public (anonymous) - make data accessible to everyone

***use public sharing for direct URLs to files***

***avoid write permissions unless justified***

Who all logged in Globus users will have access to this folder

(Permissions)

- read
- write

Add Permission

Cancel

# Using our mapped collections in the Globus CLI also requires linking an identity and consent to access data

```
The collection you are trying to access data on requires you to grant consent for the Globus CLI to access it.
```

```
message: Missing required data_access consent
```

```
Please run
```

```
globus session consent 'urn:globus:auth:scope:transfer.api.globus.org:...'
```

```
to login with the required scopes
```

*Even if you do this in the Web interface, you will still need to perform a one-time consent in the CLI too (as well as any custom Python APIs)*

# Current limitations of the Globus CLI

1. **Guest collections** - these can be queried and managed via the CLI, but currently can only be created in the web interface
2. **Terminology** - *endpoint* and *collection* are confusingly used by some CLI commands:

e.g., *globus endpoint search* is still used to find collection UUIDS

3. To search for our collections, use [ncar@globusid.org](mailto:ncar@globusid.org) for the search phrase, not the owner:

*NO:* *globus endpoint search --filter-owner-id 'ncar@globusid.org' NCAR*

***YES:* *globus endpoint search 'ncar@globusid.org'***

# Globus v5: Bottom Line for Different Workflows...

1. **User of NCAR host endpoints** - new authentication method but otherwise no changes (collections keep the same name and UUIDs).
2. **Data sharing service users** - existing shared endpoints have become *guest collections* with same name and UUIDs. New users are instructed to create guest collections directly on work/scratch/campaign.
3. **Unattended transfers** - myproxy-based InCommon Certificates no longer work, and gci/gcert have been retired. Switch to *guest collections* with open-access for owner (will still require Globus login)
4. **Data publishers** - new URL-sharing provides direct access to files

# Getting assistance from the CISL Help Desk

<https://www2.cisl.ucar.edu/user-support/getting-help>

- Walk-in: ML 1B Suite 55
- Web: <https://rhelp.ucar.edu>
- Phone: 303-497-2400

Specific questions from today and/or feedback:

- Email: [vanderwb@ucar.edu](mailto:vanderwb@ucar.edu)