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

**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
- 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

**New OIDC authentication process**

**Data Sharing Service is deprecated**

**InCommon certificates no longer supported!**
Authenticating to the new NCAR mapped collections

File Manager

Collection: NCAR GLADE
Path:

Start

Authentication/Consent Required

Authentication/Consent is required for Globus transfer service to manage data on this collection.

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

Identity Required

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
- 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

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 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.

Allow  Deny
Creating a guest collection: choose the root directory

File Manager

Collection: NCAR GLADE

Path: /glade/u/home/vanderwb/work/tutorials/globus-v5/

Share

Add a Guest Collection
Creating a guest collection: provide collection metadata

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


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

Create Collection  Cancel
Creating a guest collection: managing permissions

- Use public sharing for direct URLs to files
- Avoid write permissions unless justified
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://rchelp.ucar.edu
• Phone: 303-497-2400

Specific questions from today and/or feedback:
• Email: vanderwb@ucar.edu