

Tier 2 Storage

2018-02-19

MSI Storage Overview

- Primary storage: Filesystem storage
Home directories
Shared project space
Scratch (technically)
Has normal UNIX permissions
- Tier 2 storage: Object storage, Amazon S3 instance
Accessed via “s3cmd” (CLI) or Globus (browser)
Has ACLs, but are a pain to set up


S3 Access Control Lists

- Access control lists (ACLs) are how S3 manages permissions
- BUT - MSI doesn't seem to support them, and they are difficult to implement

Using Globus

- Globus is a credentials manager - it sits “above” the S3 ACL
- Website: <https://www.globus.org/app/transfer>
- Search for “University of Minnesota” in the bar, then click “continue”
- Log in with X500

Default View - Transfers

 globus

Manage Data

Publish

Groups ▾




Support ▾

Account

Transfer Files | Activity | Endpoints | Bookmarks | Console

Transfer Files



Get Globus Connect Personal
Turn your computer into an endpoint.

RECENT ACTIVITY  0  0  0

Endpoint

Path

Go



Endpoint

Path

Go

Start by selecting an endpoint.

Start by selecting an endpoint.

Label This Transfer

This will be displayed in your transfer activity.

Transfer Settings

☐ sync - only transfer new or changed files ?

☐ delete files on destination that do not exist on source ?

☐ preserve source file modification times ?

Access “Endpoints”

- Click into the left “Endpoint” field
- Search for “umnmsi#home” in the name field, then enter X500
 - This is Primary Storage, and it will default to your MSI home directory
- Click into right “Endpoint” field
- Search for “umnmsi#tier2” in the name field
 - This is S3 storage, will default to your buckets

Endpoints

Transfer Files

[Get Globus Connect Personal](#)
Turn your computer into an endpoint.

RECENT ACTIVITY  0  0  0

Endpoint



Path

Go




Endpoint


















Path

Go

[select all](#) [up one folder](#) [refresh list](#) [share](#) 

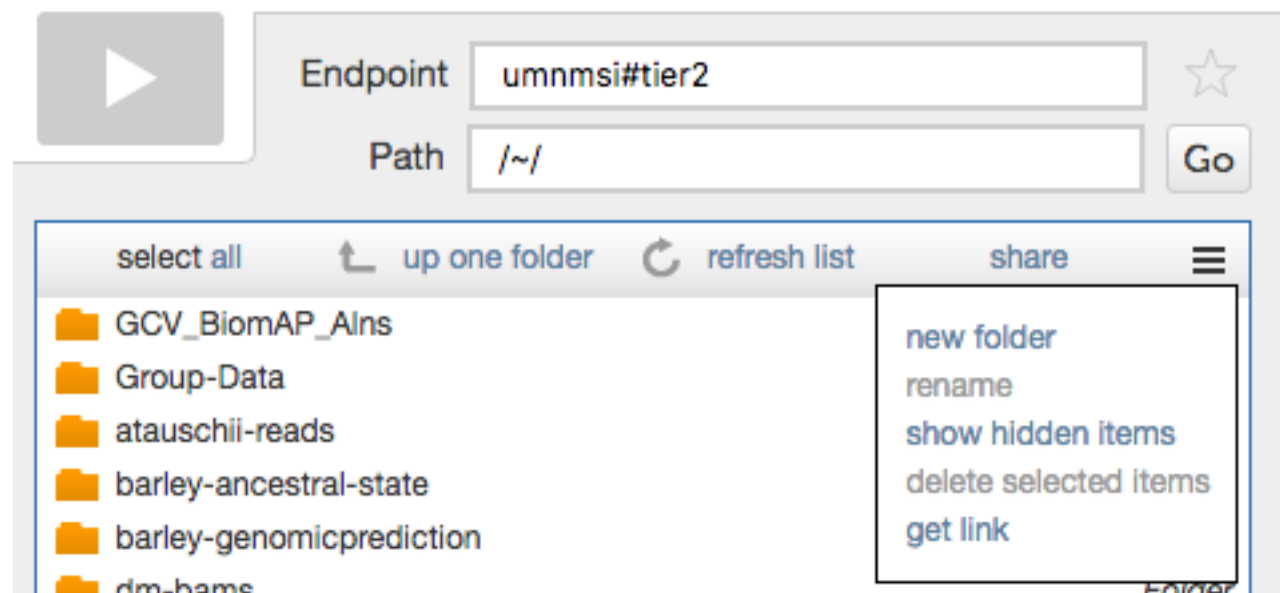
	Desktop	Folder
	Documents	Folder
	Downloads	Folder
	Music	Folder
	Pictures	Folder
	Projects	Folder
	Public	Folder
	Soft	Folder
	Templates	Folder
	Videos	Folder
	bin	Folder
	igv	Folder
	logs	Folder
	tmp	Folder
	Convert_Parts_To_Pseudomolecules.py	1.49 KB
	Count_Genotype_Depth.py	1.32 KB
	Count_Missing_Per_Site.py	1.16 KB
	Filter_VCF.py	2.59 KB
	H_murinum_Ancestral.py	3.51 KB
	TK_vim.tar.bz2	21.41 KB

[select all](#) [up one folder](#) [refresh list](#) [share](#) 

	GCV_BiomAP_Alns	Folder
	Group-Data	Folder
	atauschii-reads	Folder
	barley-ancestral-state	Folder
	barley-genomicprediction	Folder
	dm-bams	Folder
	dm-barley-excap-reads	Folder
	ipk-datasets	Folder
	liana-wildbarley-nam	Folder
	pph2	Folder
	sift	Folder
	snp-effect-prediction	Folder
	turartu-reads	Folder
	wbdc-exomecap-alignments	Folder

Transfer Files

- The “hamburger menu” has the option to create new directories



- Make a new directory and transfer some files into it

Transfer Files

- Note: Globus submits transfer requests like jobs
- It will send you an email when a transfer completes

Join a Group

- Link to a maize genomics research group within Globus
<https://www.globus.org/app/groups/9e5dbe64-150f-11e8-8c9b-0a27e80744b0>
- This is different from MSI groups.
- Globus groups allow users to share access to endpoints

Access Shared Endpoint

- Once in the maize group, search for the “Sample Maize Genomics Share” endpoint
- This should be accessible to everyone in the group

The image shows a file explorer interface with two panels. The left panel is titled 'Endpoint umnmsi#home' and shows a path of '/~/'. The right panel is titled 'Endpoint Sample Maize Genomics Share' and shows a path of '/'. The right panel lists folders: GCV_BiomAP_Alns, Group-Data (selected), and atauschii-reads.

Endpoint	Path	Actions	Items
umnmsi#home	/~/	select all, up one folder, refresh list, share	Desktop (Folder), Documents (Folder), Downloads (Folder)
Sample Maize Genomics Share	/	select none, up one folder, refresh list, permissions	GCV_BiomAP_Alns (Folder), Group-Data (Folder), atauschii-reads (Folder)

Transfer Files

- This endpoint should work just like any other endpoint
- Be careful when deleting data - make sure that you have a backup of the data somewhere else

Note About Globus CLI

- It's lousy (somehow a CLI program is worse than a web browser one)
- You basically use a terminal-based web browser to log into the Globus website and copy-paste endpoint IDs to initiate transfers

Globus Resources

- MSI document for Globus generally:
<https://www.msi.umn.edu/support/faq/how-do-i-use-globus-transfer-data-msi-0>
- MSI document for Tier2:
<https://www.msi.umn.edu/support/faq/how-do-i-use-globus-transfer-data-second-tier-storage-msi>
- Globus getting started guide:
<https://docs.globus.org/how-to/get-started/>