GLOBUS DATA TRANSFER

QUICK START GUIDE

NRAMM – SEMC – NYSBC 03/12/2019

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Introduction

Globus is an application that lets you transfer large amounts of research data efficiently and securely to your personal computer, institution's storage systems or a cloud provider. It eliminates the use of big portable external hard drives that needs to be mounted to a local storage to transfer data. The New York Structural Biology Center primarily use Globus to transfer data that is collected on-site from electron microscopes. To get started with, follow the instructions below.

How to register?

- 1. Open a web browser and navigate to https://www.globusid.org/create
- 2. Create a Globus ID

Create a Globus ID The client Globus Auth is requestir third-party website or application loc Globus ID account to continue.	Already have a Globus ID? Log
Username	@globusid.org
	Your username will be checked for availability. Usernames may contain both letters and numbers, but must begin with a letter and be between 3 and 31 characters long. NOTE: this is an ID you are creating — not a working e-mail address
Password	
	Better passwords are longer, use mixed-case letters with punctuation and numbers. Your password must be strong to be accepted.
Full Name	first and last name
E-mail	user@example.edu
This account will be used for	non-profit research or educational purposes
	commercial purposes
Organization	
	I have read and agree to the Globus Terms of Service and Privacy Policy
	Create ID

- Make sure you select the non-profit option
- Please use your institution provided email address for registration, if possible. You can also use your personal email ID but it should be valid
- 3. After you click on Create ID, you will shortly receive a conformational email to verify your email address

It is possible that the verification email has been sent to your spam folders. Please check it for confirmation

4. In the verification email, you will receive a verification code which you need to enter on the Globus website





To verify your email address and complete your Globus ID activation, copy the verification code below to the Globus ID verification page.

Verification Code: f50ffa5d-3c0f-484f-97a6-88debe33877b

Thank you for using Globus ID.

The Globus Team

If this wasn't you, please let us know: support@globus.org

5. Copy paste the verification code into the Globus website

globu	s 🚹 ID		test (testglobus1@globusid.org) Verify Your E-mail Address Home Log Out
Ver	ify E-mail Address		
The third e-ma	client Globus Auth is req -party website or applicati ail address to continue.	uesting access to your globusid.org account for a ion located at auth.globus.org . If you approve, plea	ccessing a ase verify your
An e	mail was sent to test@te	st.io.	
Plea	se check your e-mail and that appears in that e-ma	click on the verification link in that e-mail or enter th ail into the text box below.	ne verification
	Verification Code	Verify This is a text string like the following: 12345678-90ab-cdef-1234-567890abcdef	•
Can supp	t find the verification e-ma	ail? Check your spam folder or search for an e-mail y also re-send the verification e-mail.	from

How to login?

There are 2 ways to login into Globus.

- 1. Use the account id from which you registered or
- 2. You can look up for your institution name under the login page and directly sign in using your institution credentials

Log in to use Globus Web App

Use your existing organizational login

e.g., university, national lab, facility, project



Some institutions have already signed up with Globus which enables the users to sign with their existing email ID without registering for a new account on Globus. If your institution's name is not on the list, you have to create a new Globus ID described in the above step

Once you log in, you will see the following screen

globus ≡	File Manager	Bookmark Manager
🗂 File Manager 🛛 🔨		
RECENTLY USED		JQ
You have no recent activity	Path	Bookmark 🗸
PINNED BOOKMARKS		≡<
You have no pinned bookmarks		5 Share
Bookmark Manager	Click in the Collection field above to begin	Transfer or Sync to
-√r Activity	▶ Watch a two minute tour of what's new	New Folder
Endpoints		Rename
		☑ Delete Selected
Publish 🖉		Preview (limited)
දුවූ Groups		Download (https)
🕎 Console 🛛 🖉		Open (https)
Account sbhatkar@globusid.org		G Get Link
(?) Help		Show Hidden Items
Globus Home 🛛 🖉		Manage Activation

A collection is a named location containing data you can access with Globus. Collections can be hosted on many different kinds of systems, including campus storage, HPC clusters, laptops, Amazon S3 buckets, Google Drive, and scientific instruments. A collection allows authorized Globus users to browse and transfer files. Collections can also be used for sharing data with others or data publication. For us, the collection name is 'NYSBC-SEMC'

How to transfer files?

- a. Transferring files from NYSBC to your personal endpoint
- 1. Click on the Collections tab and type 'NYSBC-SEMC' This will act as your source endpoint, where you will be transferring files from



2. You will see a login widget below which will ask for your username and password to authenticate.

Please take a note that, you need to enter the username which is provided by SEMC/NRAMM when you first registered for your project. Also, note that this username is all **lowercase**

Collection	NYSBC - SEMC
Path	
D Ple	ease authenticate to access NYSBC - SEMC
Login Serv	er
38.96.169.	161 🥒 Edit
Username	
sbhatkar	SEMC provided username
Password	
•••••	Password for SEMC
Advanced	~
Authenti	cate

3. After you authenticate, you will see your default path which is currently set at /gpfs/

Collect	ion NYSBC - SE	МС			Q
P	ath /gpfs/				
select	tall 🔶 🕄			∽ Sort	≡>
	appion 03/12/2019 03:47pm	_		>	
	frames 03/12/2019 03:47pm	_		>	
	leginon 03/12/2019 03:47pm	_		>	

- 4. You can transfer raw frames and references by selecting the 'frames' folder
 - Select your username
 - Then, select the session you want to transfer frames from eg: (19mar07c)
 - Under the rawdata folder, you will see all your raw frames
- 5. You can also transfer aligned images by selecting the **'leginon'** folder
 - Select your username
 - Then select the session you want to transfer frames from eg: (19marc07c)
 - Under the rawdata folder you will see all your aligned images

File Manager					
Collection		NYSBC - SEM	C		
Pa	ath	/gpfs/leginon/	/sbhatkar/18oct22b/rawdata/		
select	tall	í S	≣ ≡	∽ Sort	
	18oc 03/12/	t 22b_00003fcr /2019 05:37pm	n.mrc 3.41 MB		
	18oc 03/12/	t 27e_cad20_0 ('2019 05:43pm	0022gr_00031sq_00004hln.mrc 3.55 MB		
	18oc	t 27e_cad20_0 (/2019 05:43pm	0022gr_00031sq_00005hln.mrc 3.55 MB		

6. Now, you need to select the destination endpoint. For transferring files to your personal computer, you need to install Globus Connect Personal.

Click on 'Endpoints' on the left navigation bar and select 'Globus Connect Personal'

🔊 globus	C Endpoints O Add an Endpoint
File Manager	Select the type of endpoint you wish to add:
–∜r Activity	Globus Connect Personal
Endpoints	This option will allow you to share and transfer files to and from your
A Publish	Iaptop or desktop computer — even if it's behind a firewall. Supported operating systems include: macOS, Windows and Linux.
_ୟ ମ୍ଭ Groups	

7. You will see the following screen

🔊 globus	≡<	() File Manager	Create New GCP Endpoint
File Manager RECENTLY USED You have no recent activity PINNED BOOKMARKS You have no pinned bookmarks Bookmark Manager	^ 	STEP 1	Name Your Endpoint Endpoint Display Name MyPersonal Endpoint Please enter a human-filendly name for your Globus Connect Personal endpoint to help you identify it. This will be a high assurance endpoint One this installation process is completed you will have to get this endpoint certified by your IT department before high assurance data such as HIPAA (with BAA), PHI, PII or controlled unclassified is allowed to be accessed.
-√r Activity ⊙ Endpoints			Associated Identity sbhatkar@globusid.org
Publish Console Account Subarkaregiobusid.org Help	译 译	STEP 2	Generate a Setup Key for Installation This setup key will be required during the installation of Globus Connect Personal on your computer. Setup key successfully generated for MyPersonal Endpoint Setup Key d4d1557d-12c1-48ae-ae32-3b1c87b50bbc
Globus Home	Ø	STEP 3	Download & Install Globus Connect Personal Click one of the buttons below to download and install Globus Connect Personal for your operating system. Image: Start Sta

- $\circ~$ Enter your endpoint display name. eg: MyPersonalEndpoint
- Click on generate key and a setup key will be generated.
- Copy the key to any safe location because you will need it while installing the software on your personal laptop
- Download and install the Globus Connect Personal as per your OS distribution For specific installation instructions, Mac installation: <u>https://docs.globus.org/how-to/globus-connect-personal-mac/</u> Windows: <u>https://docs.globus.org/how-to/globus-connect-personal-windows/</u> Linux: https://docs.globus.org/how-to/globus-connect-personal-linux/
- Next, select your personal endpoint as your destination endpoint.
 Go back to the file manager and select NYSBC-SEMC in the Collection tab
- 9. Then select, transfer and sync to option.

10. On the right side, select your personal endpoint as the destination endpoint. Please see the screenshot

globus ≡	File Manager Panels				Bookmark Manager
File Manager 🔨 🔨			MuDamanal Faula sist	<u></u>	
RECENTLY USED	Collection NYSBC - SEMC	Q	MyPersonal Endpoint		Q
You have no recent activity	Path /gpfs/	<u>\</u>	/~/		
PINNED BOOKMARKS	select all 👔 📜	✓ Sort >Ξ	select all		∽ Sort
You have no pinned bookmarks	appion 03/12/2019 03:47pm –	Share 💭	Desktop 03/12/2019 06:07pm	_	>
Bookmark Manager	frames	Transfer or Sync to	Documents		×
-√r Activity	03/12/2019 03:47pm —	New Folder	03/12/2019 06:22pm	-	/
Endpoints	leginon 03/12/2019 03:47pm –	Rename 😥	Downloads 03/12/2019 06:03pm	_	>
🚔 Publish 🛛 🖉		Delete Selected X	Movies 09/05/2018 04:11pm	_	>
ୟୁ Groups		Download (https)	Music 10/05/2018 01:57pm	_	>
🗳 Console 🛛 🖉		Open (https)	Dictures		
Account sbhatkar@globusid.org		Get Link	09/05/2018 04:11pm	_	>
(?) Help		Show Hidden Items & Sy	ync Public		>
Globus Home	Start 🕞	Optio	/	④ Start	

You will now see the folders on your laptop.

11. Once you select the appropriate source and destination folder, then click on Start to initiate the transfer process



12. To monitor the transfer process, click on the Activity tab on the left sidebar

You will see the transfer logs and the message when the transfer is completed.

Note: Sometimes, your personal computer will be under firewall which will not allow transferring files. To configure your firewall settings, please follow the link https://docs.globus.org/how-to/configure-firewall-gcp/

- b. Transferring files from NYSBC to your home institution endpoint
- 1. Follow steps 1 5 as described above
- Then select your home institution endpoint as the destination endpoint. Please contact your organization's IT team to acquire the name of the endpoint authorized by your institution and for the login credentials and queries related to your directory permissions
- 3. For this tutorial, New York University is used as the destination endpoint



4. When you click on the Activity tab, you'll see the following message when the transfer is complete

Activity list	VYSBC - SEMC to nyu#prince				
(j) Overview	Event Log				
	Task Label	NYSBC - SEMC to nyu#prince			
	Source	NYSBC - SEMC	3	Files	
	Destination	nvu#prince	0	Directories	
	Task ID	08a49e4c-451a-11e9-a618-0a54e005f950	10.53 MB	Bytes Transferred	
	Owner	Swapnil Bhatkar (sbhatkar@globusid.org)	4.66 MB/s	Effective Speed	
	Condition	SUCCEEDED	0	Skipped	
	Requested	2019-03-12 06:56 pm			
	Completed	2019-03-12 06:56 pm		Marca da barra da ta	
	Transfer Settings	 verify file integrity after transfer transfer is not encrypted overwriting all files on destination 		view debug data	

You will also get an email notification when the transfer is complete.

For any issues related to Globus please contact <u>semcit@nysbc.org</u>