



Getting Started with RC

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Sign in! <http://tinyurl.com/curc-names>

- Slides available for download at:
https://github.com/ResearchComputing/Globus_Spring_2021

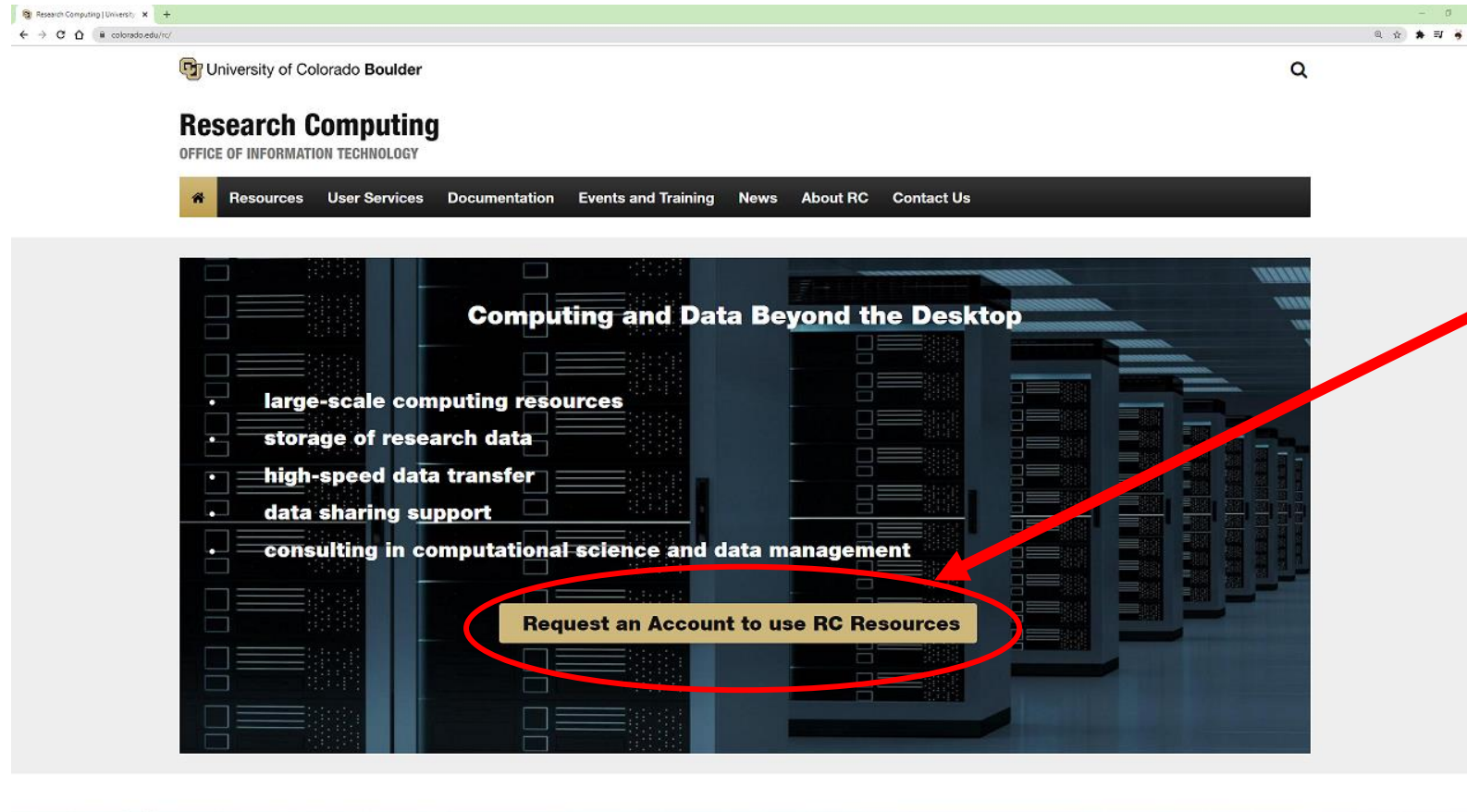
Outline

- Getting an RC Account
- Navigating the RC Ecosystem
- Globus Demo
- Sharing Data with Globus
- Getting A Petalibrary Allocation

RC Accounts

- Before accessing your resources, Research Computing requires users to obtain specialized RC accounts.
- Why?
 - A lot of CU users do not need access to HPC or Enterprise grade storage
 - Highly valuable resource!
 - RC requires the setup of 2-factor authentication
 - Other institutions utilize RMACC Summit
- Accounts can quickly and easily be obtained through our website at www.Colorado.edu/rc

Getting an RC Account



Click here to get started!

Duo Accounts

- After requesting your account you will soon be sent an invitation to RC's Duo 2-factor authentication utility.
 - You will be prompted to set up a smart device with the Duo application.
 - Follow the steps prompted by the email invitation to activate your device.
- Don't have a smart Device? No Problem!
 - RC also offers 2 factor authentication tokens to access your account.
 - Contact rc-help@colorado.edu for more information

Accessing RC Services

- There are numerous ways to access RC Resources from your local machine
 - Globus (if just managing files!)
 - Command line (Most common for Jobs)
 - Jupyterlab
 - Visualization Cluster
- Globus is probably the easiest solution when accessing files your files on Petalibrary

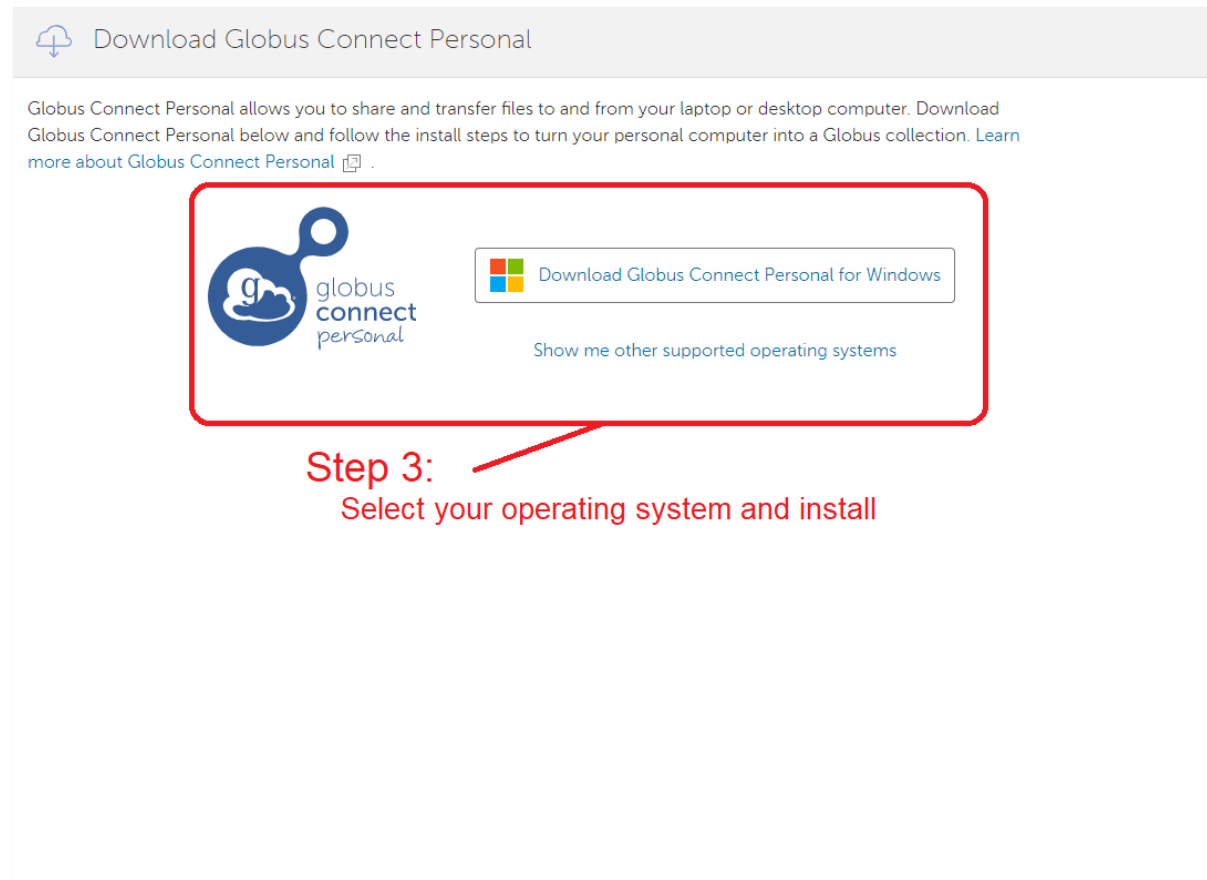
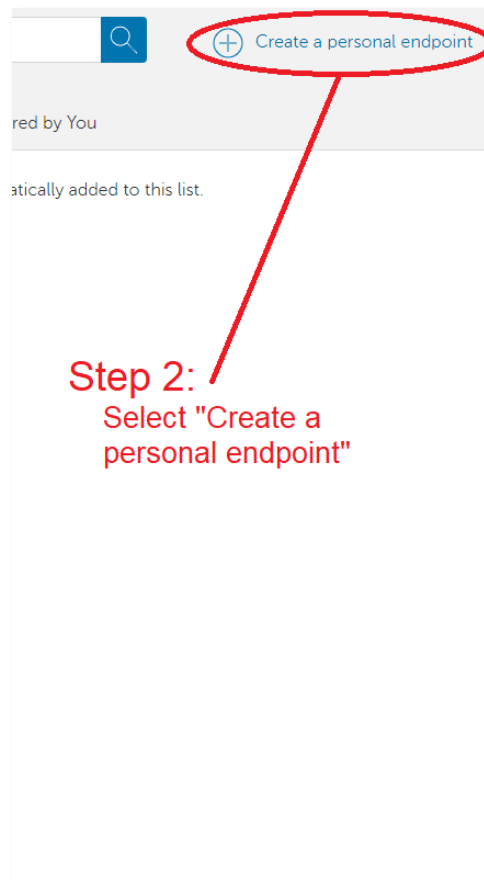
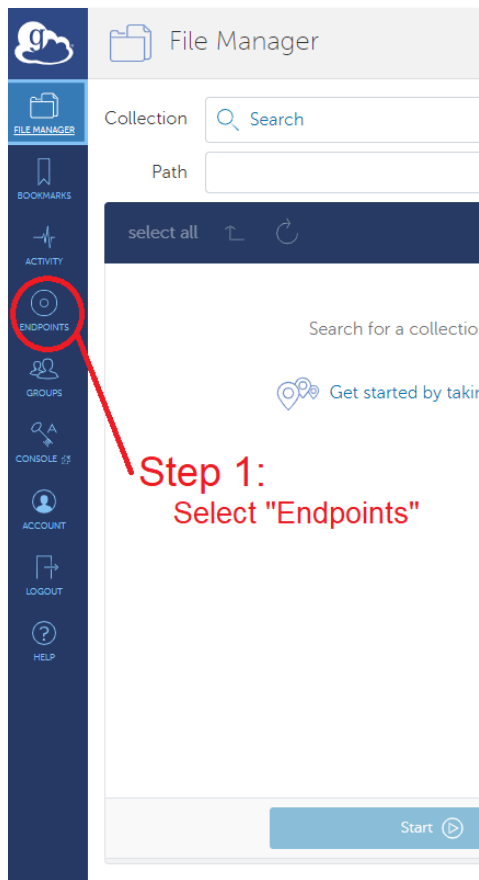
Globus

- Data transfers to Petalibrary are done like any other directory on RC resources.
- Globus
 - By far the most stable and recommended way for data transfers
 - Fast transfers
 - Transfers continue if a user disconnects
 - Web GUI option or Globus Connect Personal



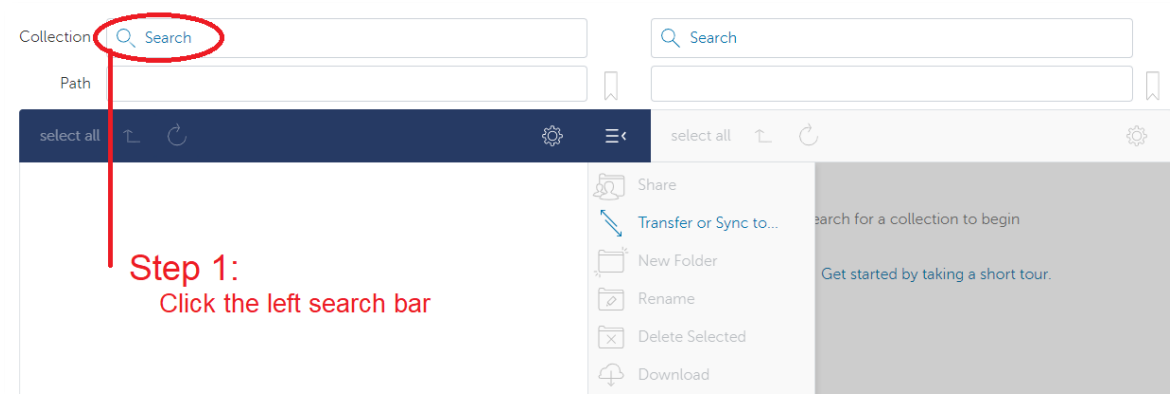
Globus Demo (1)

- Globus login is simple and quick: <https://app.globus.org>
 1. Select University of Colorado at Boulder under the dropdown menu
 2. Login with your CU credentials
 3. Continue with onscreen prompts until you are brought to the Globus WebGUI
- Installing a Globus Endpoint on your local machine
 1. Navigate down to Endpoints on the sidebar
 2. Click create an endpoint on the top right of the page
 3. Select your operating system and download the installer
 4. Follow the prompts on the installer and complete the installation

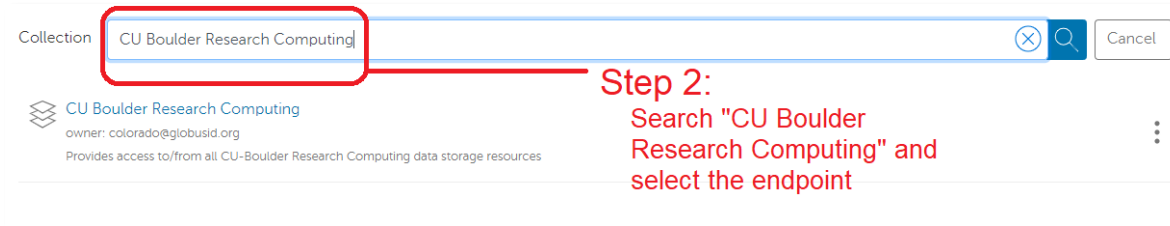


Globus Demo (2)

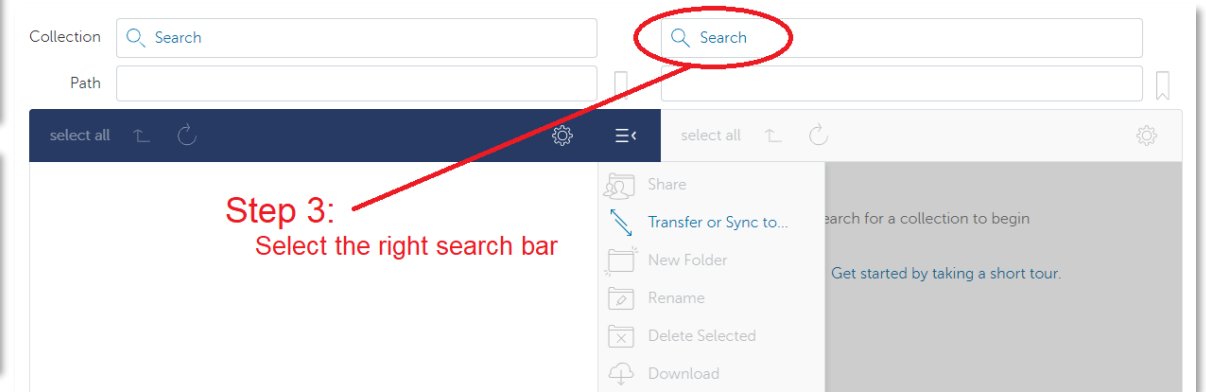
- Transferring Files can be done through the GUI
- From the File Manager tab:
 1. Click the “Two Panel” view button at the top right.
 2. Click the top left Search bar.
 3. Search “CU Boulder Research Computing” and select the end point.
 4. Sign into Research Computing’s Endpoint
 5. Click the right search bar
 6. On the ‘Your Collections’ tab, choose the endpoint you created
 7. Transfer your files!



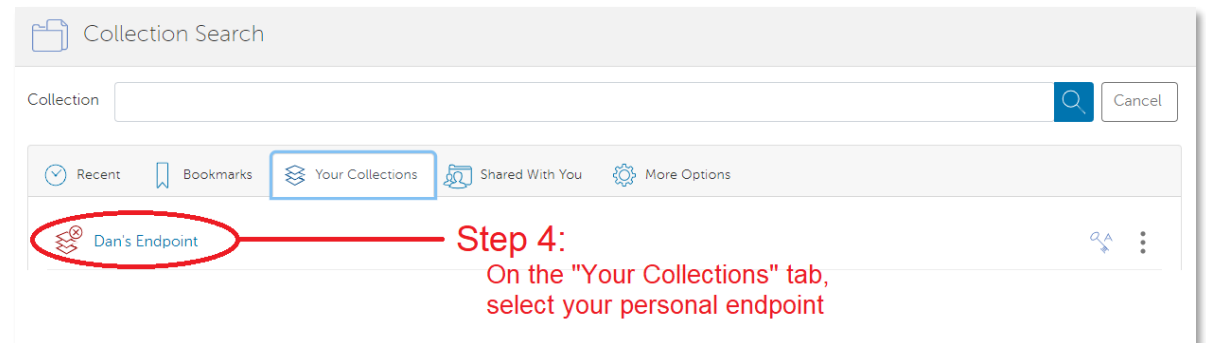
Step 1:
Click the left search bar



Step 2:
Search "CU Boulder Research Computing" and select the endpoint



Step 3:
Select the right search bar



Step 4:
On the "Your Collections" tab, select your personal endpoint

Access through the Command Line

- Other users may find the use of Globus to be overly clunky when wanting to check on their files.
- Users can log into RC servers on their local machines by opening a terminal and running the command:

```
ssh <your-username>@rc.colorado.edu
```

- You will be prompted to enter a password after running this command.
 - Note: Your text is invisible when typing this to ensure privacy!
- Lastly, a Duo notification will pop up on your phone. Accept it to gain access.

Basic Navigation Commands

- Change directories

```
cd <relative-or-full-path>
```

- List contents of a directory

```
ls <optional-path>
```

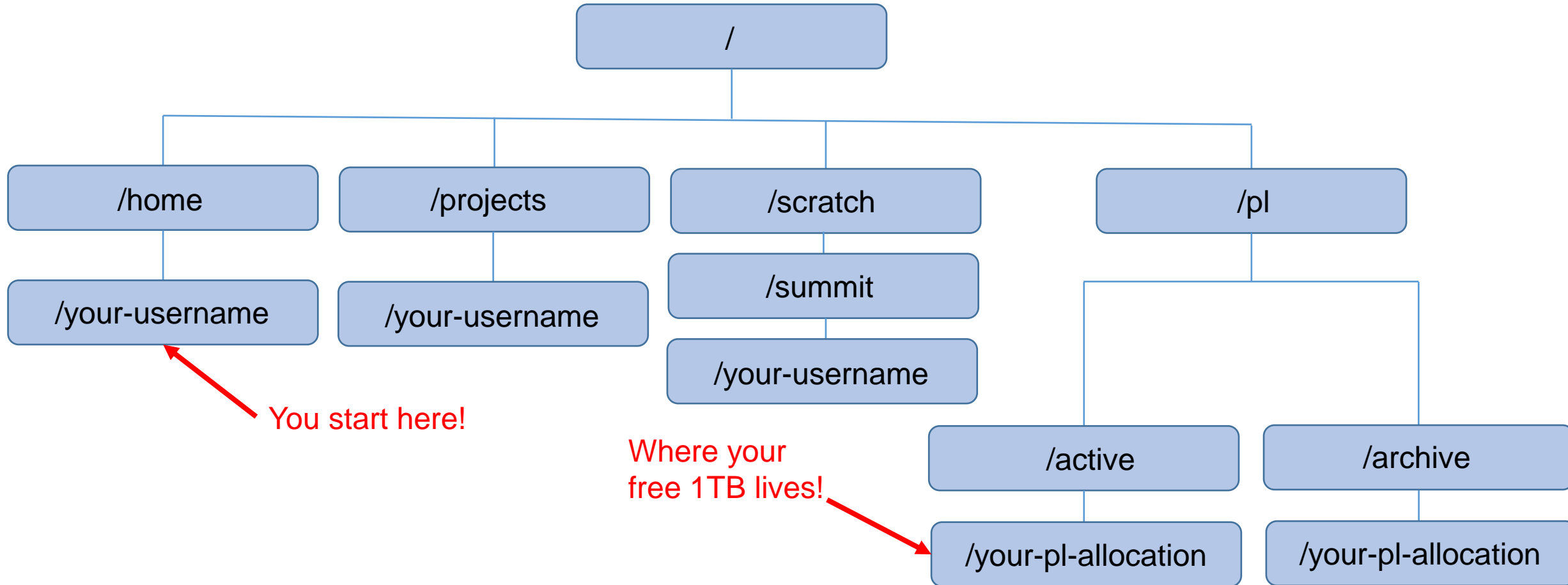
- Print current working directory

```
pwd
```


RC Filesystem

- As with most Linux distributions, after logging into RC Resources you will be placed on your RC home directory.
- RC's file system is broken up into 4 major components
 - Home – 2GB
 - Projects – 250GB
 - Scratch – 10TB
 - PL (Petalibrary) – 1 Free TB in active storage
- Backups occur regularly on Home and Projects.
 - PL Active capability is coming soon!
- Scratch will delete files older than 90 days.

RC File system map



Sharing Data

- Other RC Users
 - To share a Petalibrary space with other RC users. Simply contact RC with a list of users you would wish to allow access.
 - RC will place the chosen users in the owner's group
 - The owner can then set up permissions in the space
 - On premise collaborators can also access Petalibrary files with Globus Shared Endpoints
- Off-premise collaborators
 - Off premise collaborators can only access Petalibrary files through Globus Shared Endpoints

Globus Shared Endpoints

- Globus offers 'shared endpoints' which don't require a user to have an account with RC.
- RC provides this capability for easy access of Data.
- Generates a shared collection that can be accessed with a link.
 - Can assign various permissions to specific users or all users withing Globus
 - More information on here: <https://docs.globus.org/how-to/share-files/>

Data Publishing with Petalibrary

- Using Globus shared endpoints can be a great way to publish your data while maintaining the convenience of having it Petalibrary.
- Example: <https://scholar.colorado.edu/concern/datasets/9593tw13k>

Checking your Petalibrary Allocation

- *curc-quota* – Research Computing tool to monitor disk usage.
 - Provides detailed summary of your core storage
 - Provides detailed summary of scratch space on compile and compute nodes
 - Also lists current capacity of all Petalibrary allocations you have access to

```
[userXXXX@login12 ~]$ curc-quota
```


Thank you!

- Please fill out the survey: <http://tinyurl.com/curc-survey18>
- Contact information: rc-help@Colorado.edu
- Slides: https://github.com/ResearchComputing/Globus_Spring_2021