

Center for Research Computing

# *Globus*

**KU** THE UNIVERSITY OF  
**KANSAS**

# Who are we?

- Center for Research Computing
- Manage
  - KU Community Cluster (422 Nodes, 11468 Cores)
  - Hawk (Research Identifiable Data Cluster. Not HIPAA)
  - Globus
  - XSEDE (Extreme Science and Engineering Discovery Environment)
- Co-Manage
  - Research File Storage (ResFS) and Research Archive Storage (RAS)
  - Azure CUI Environment
  - Science DMZ (Friction-Free Network on Campus)
- <https://crc.ku.edu>
- [crchelp@ku.edu](mailto:crchelp@ku.edu)

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# What is Globus?

- Fast, reliable file transfer service
- Automates the activity of managing file transfers
  - monitoring performance
  - automatic restarts when transfers are disrupted
  - reporting status
- Transfers between KU and other institutions
  - Managed Endpoint
- Transfers between laptop/desktop
  - Globus Connect Personal
- Transfers between KU storage systems
  - ResFS, RAS, KU Community Cluster Storage

# What is Globus?

- Share KU storage system folders with others
- Share folders from laptop/desktop via Globus Connect Personal (Globus Plus account upgrade)
  - Granular permissions per share (Read/Write)
  - Ability for colleagues to upload data
  - Only need email address of recipient(s)
- Works behind firewalls
  - No VPN required
- Peak 24 Gb/s to Cornell during ESnet Data Mobility Exhibition<sup>1</sup>

1. <https://fasterdata.es.net/performance-testing/2019-2020-data-mobility-workshop-and-exhibition/>

# Who uses Globus?

- Hundreds of other Universities
- XSEDE Resources
- Department of Energy HPC Sites
- National Institutes of Health Biowulf (HPC)

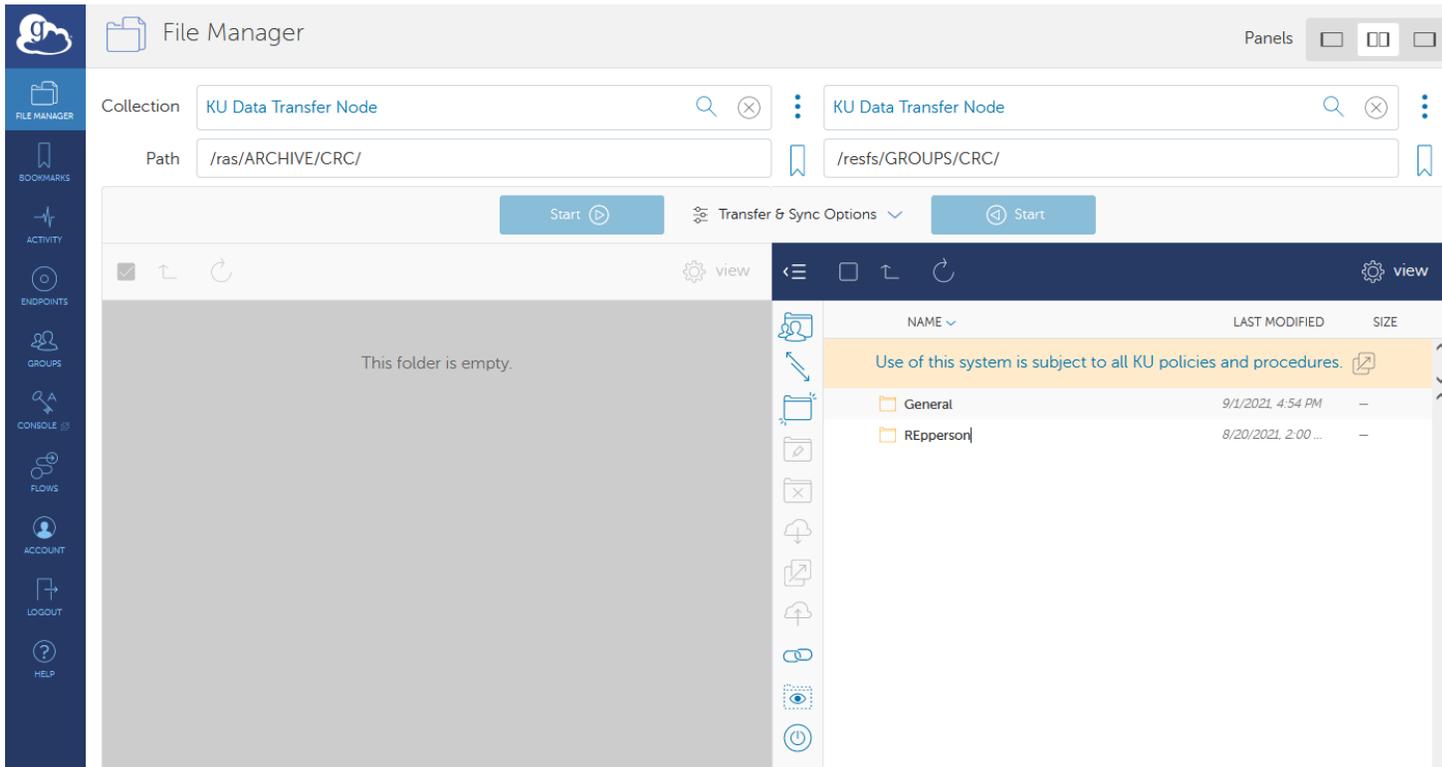
<https://www.globus.org/usage-brief-library>

# KU Data Transfer Node

- 100 Gbps Network through Science DMZ
- Research File Storage
  - /resfs/GROUPS
- Research Archive Storage
  - /resfs/ARCHIVE (Migrating data to /ras/ARCHIVE)
- KU Community Cluster Storage
  - /panfs/pfs.local

# Globus Transfer

- <https://docs.globus.org/how-to/get-started/>
- University of Kansas
- Collection Name: KU Data Transfer Node



The screenshot displays the Globus File Manager interface. The top bar shows 'File Manager' and 'Panels'. The main area is divided into two panels. The left panel shows the 'Collection' as 'KU Data Transfer Node' and the 'Path' as '/ras/ARCHIVE/CRC/'. The right panel shows the 'Collection' as 'KU Data Transfer Node' and the 'Path' as '/resfs/GROUPS/CRC/'. Below the path fields, there are 'Start' buttons and a 'Transfer & Sync Options' dropdown. The main content area is currently empty, displaying 'This folder is empty.' On the right side, there is a table with columns for 'NAME', 'LAST MODIFIED', and 'SIZE'. The table contains a warning message and two folders: 'General' and 'REpperson|'.

NAME	LAST MODIFIED	SIZE
Use of this system is subject to all KU policies and procedures.		
General	9/1/2021, 4:54 PM	-
REpperson	8/20/2021, 2:00 ...	-

# Share - KU Data Transfer Node

- <https://docs.globus.org/how-to/share-files/>
  - After clicking “Share” on folder, choose “Add a Guest Collection”
- If the email shared with is not associated with any method to login, the person may create a GlobusID with the specified email
- The person’s institution must have a managed endpoint or the person must install Globus Connect Personal

# Globus Connect Personal

- Allows transfer of data between laptop/desktop and KU Data Transfer Node collection
- Does not require administrative privileges to install
- Works behind firewalls and most NATs
- <https://www.globus.org/globus-connect-personal>
  - Click on OS for instructions
- Download: <https://app.globus.org/file-manager/gcp>
- After install you are able to bring up endpoint in File Manager to transfer data

## Share - Globus Connect Personal

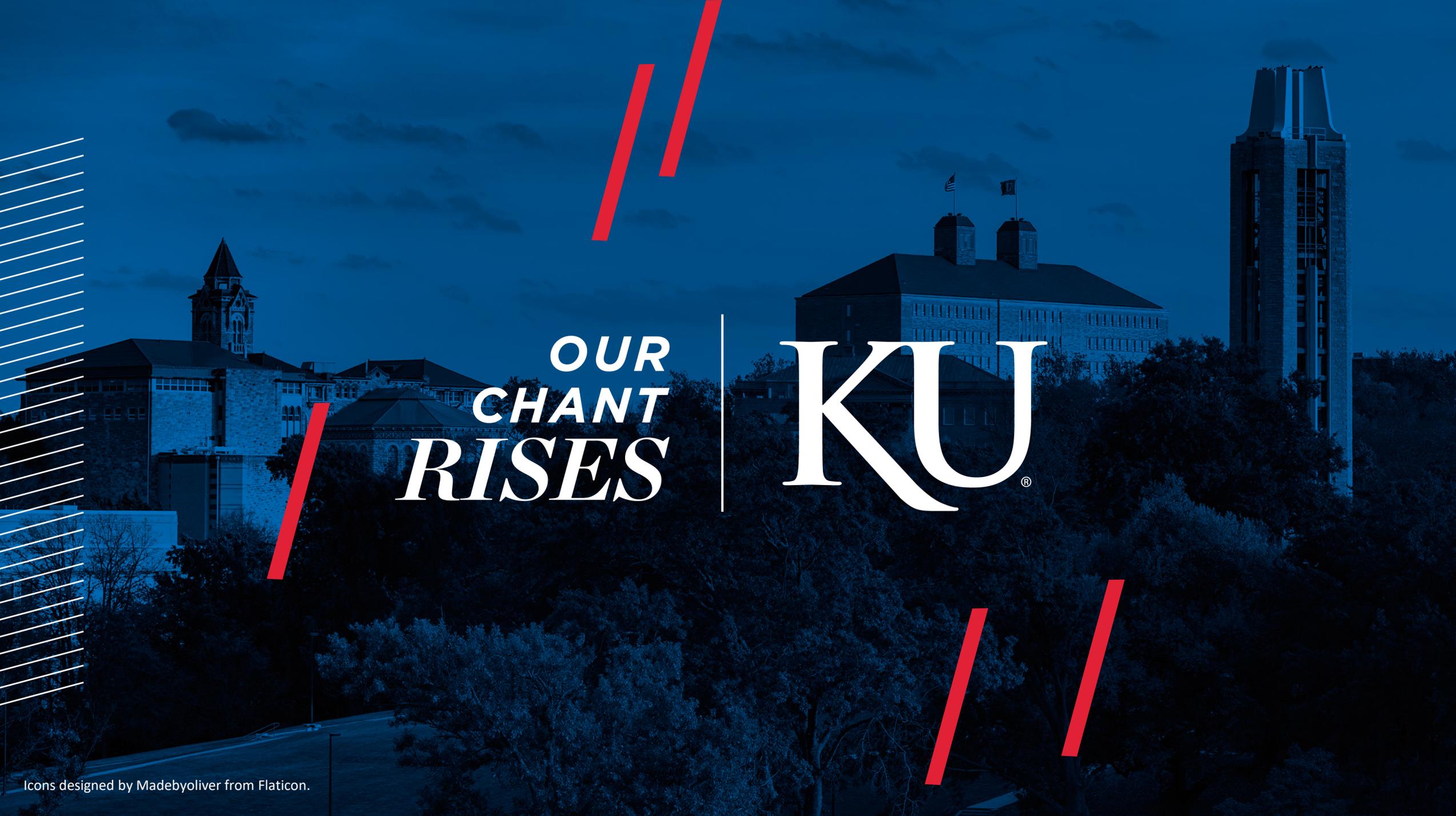
- Must request access to join KU Center for Research Computing group
  - <https://app.globus.org/groups/de2480c8-3c7c-11e5-8915-22000aeb2621/join>
  - Must be KU student, staff, faculty, or an affiliate. Will not grant any outside people to group.
- After approved, click the “Shareable” box in the Globus Connect Personal Configuration
- Create share through Globus web application

# Globus CLI

- Python Environment
- Will need internet browser to get authentication token
- <https://docs.globus.org/cli/>
- <https://docs.globus.org/cli/examples/>
- KU Community Cluster
  - module load globus-cli

## Other Methods

- Globus Con: Requires quite a lot of action to move data
- Just wanting to transfer a couple files
  - scp
  - sftp
  - rsync
- Use host “dtn.ku.edu”
- <https://crc.ku.edu/hpc/storage/scp-sftp>



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