

# Globus Online for Research Data Management

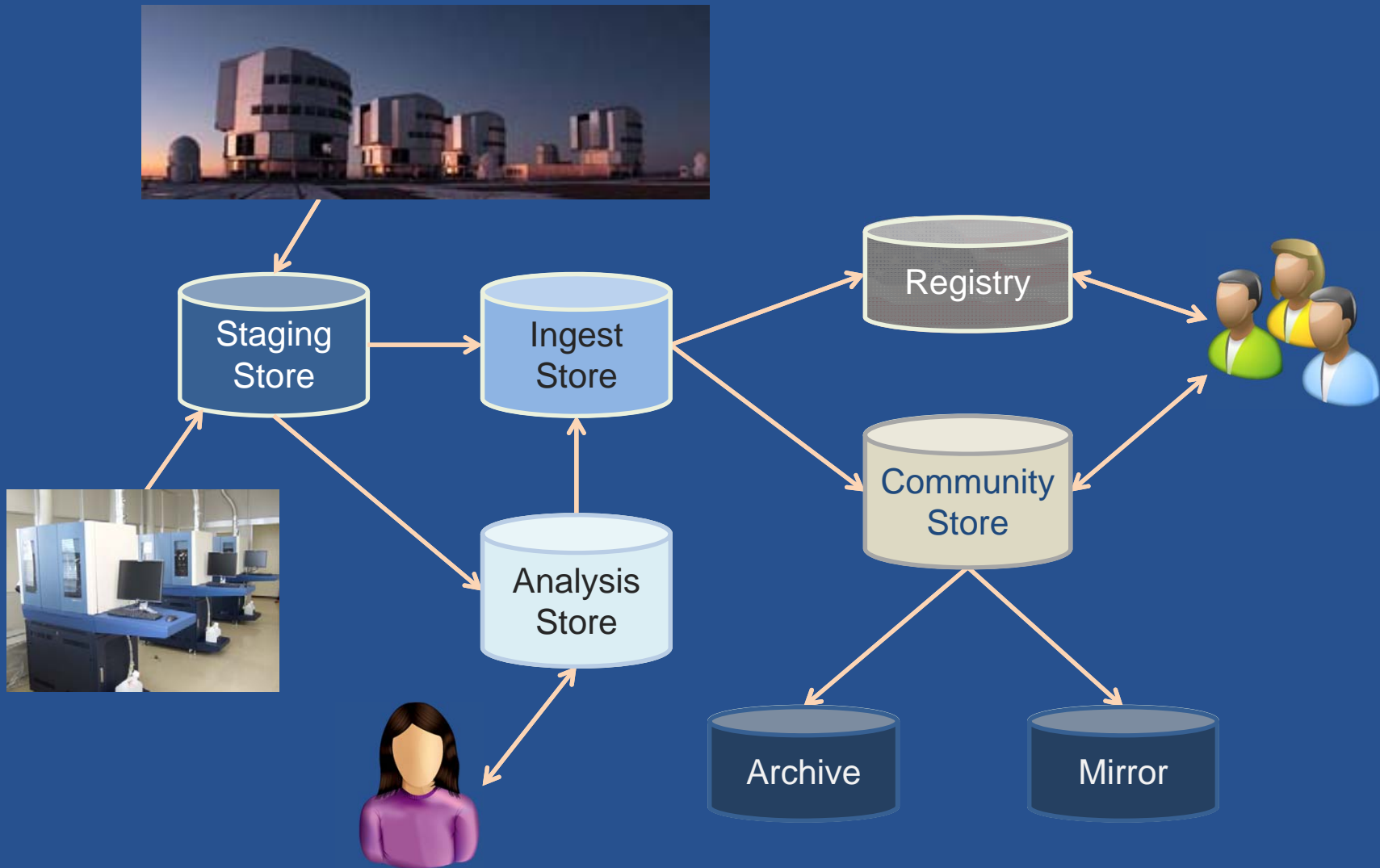
[www.globusonline.org](http://www.globusonline.org)

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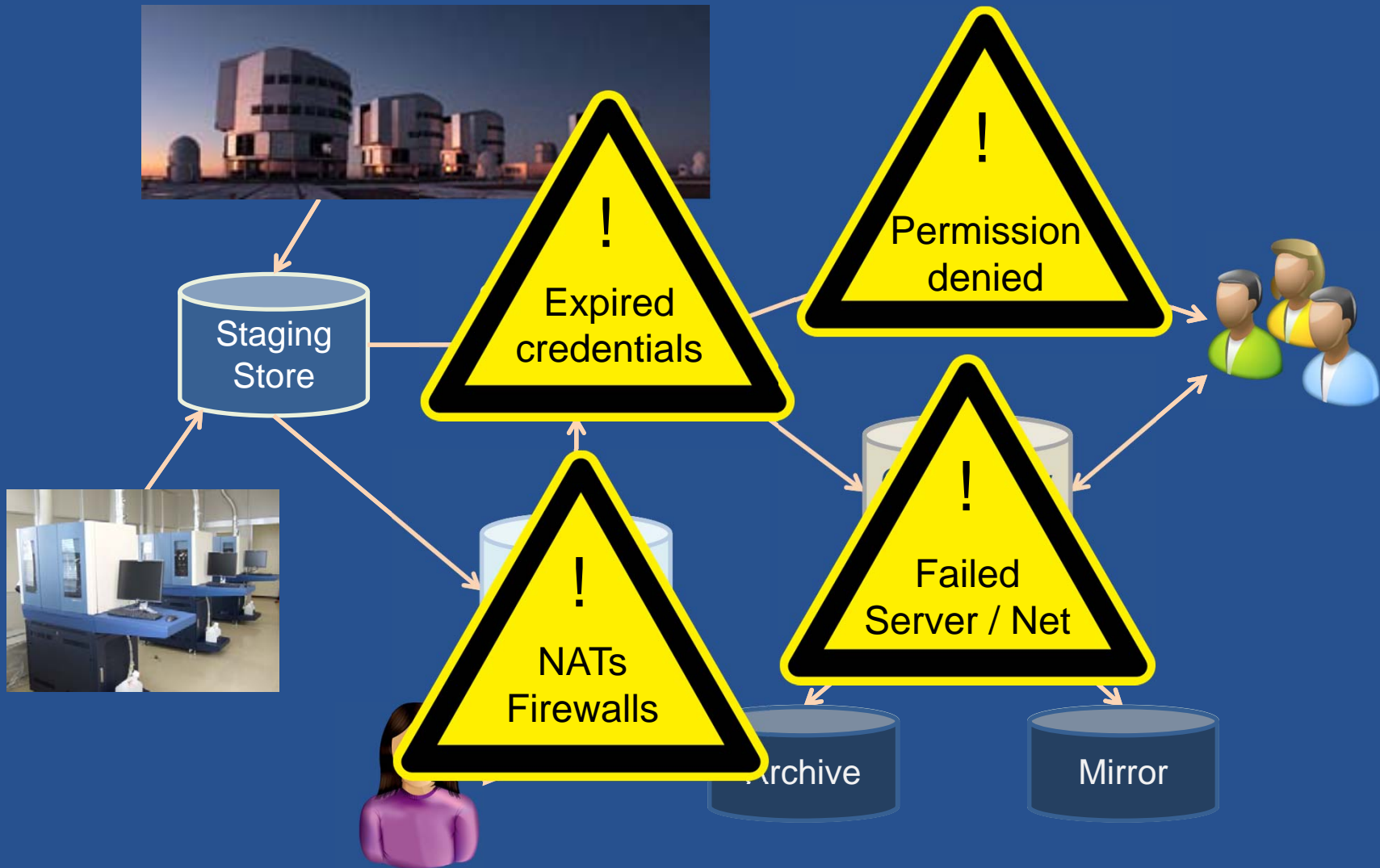


# Big science data should be easy ...





# ... but it's hard and frustrating!





# What is Globus Online?

Big data transfer  
and sharing...

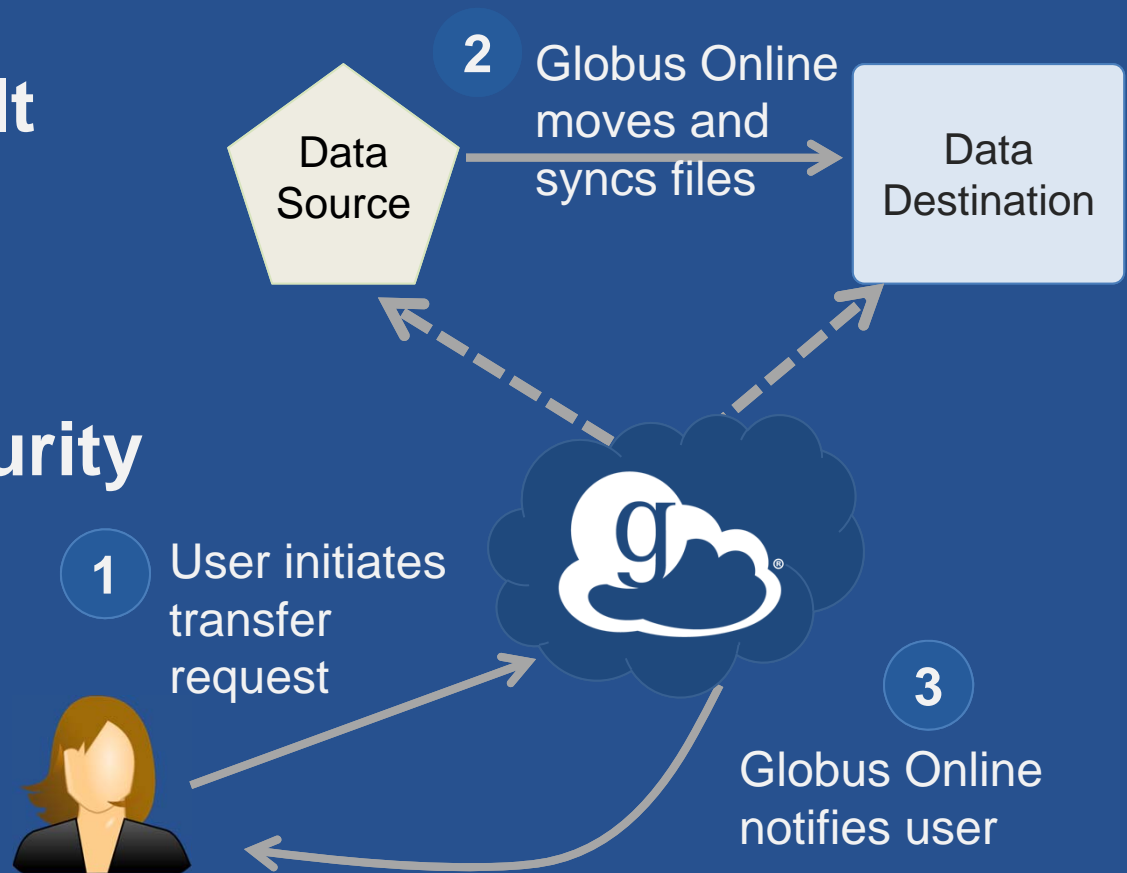
...with Dropbox-like  
simplicity...

...directly from your own  
storage systems



# Reliable, secure, high-performance *file transfer* and *synchronization*

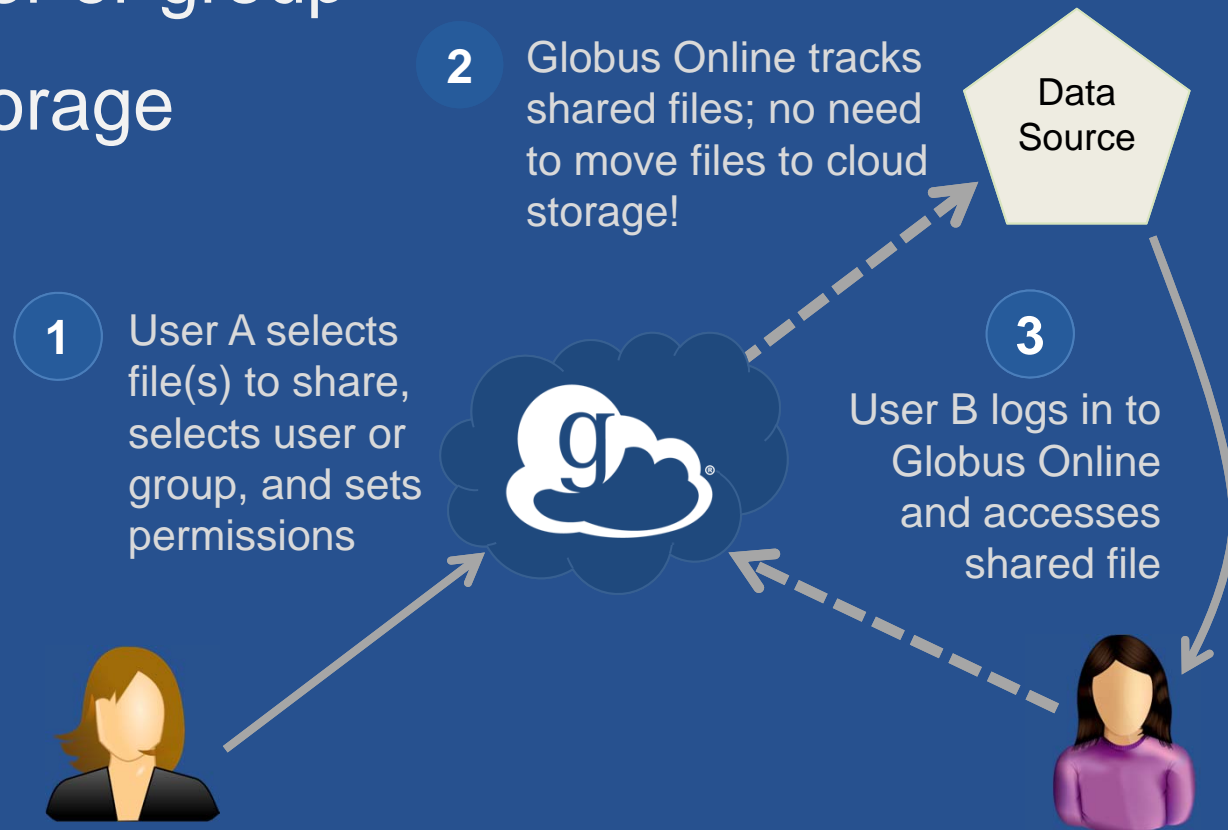
- “Fire-and-forget” transfers
- Automatic fault recovery
- Auto tuning
- Seamless security integration





# Simple, secure *sharing* off existing storage systems

- Easily share large data with any user or group
- No cloud storage required





# Demonstration



# Log into Globus Online



globus online

[Manage Data](#)

[Groups](#)

[News & Events](#)

[About](#)

[Support](#)

[Log In](#)

[Sign Up](#)

## Sign In

[Sign Up with Globus Online](#)

Use Your GlobusOnline login

[alternate login](#)

Username

Password

Sign In

[Forgot Password?](#)





# Alternate Logins



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[Manage Data](#)

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Sign In

Select a different login



with Globus Online

GlobusOnline

Argonne LCF

Argonne MCS & LCRC

BIRN

CLI Transition

EGI

ESG ANL

Exeter

Google

InCommon / CILogon

LRZ

NCSA

NCSA Blue Waters

NERSC

UChicago CI

UChicago iBi

UK NGS

WestGrid

XSEDE

Support



# Login using InCommon



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[Sign Up](#)

## Sign In

Use Your InCommon / CILogon login

[alternate login](#)

You will now be redirected to InCommon / CILogon's authentication page.

Proceed

Support



# InCommon Login



THE UNIVERSITY OF  
CHICAGO



## CILogon

### Sign In

You are logging in to: **CILogon**

CILogon facilitates secure access to CyberInfrastructure (CI).

CNetID:

[Hospital Employee?](#)

Password:

[Forgot your password?](#)

Login

Signing in allows you to access multiple University of Chicago web applications while entering your CNetID and password only once. To end your session, simply close your browser.

**Questions?** Contact the IT Services Service Desk by phone at 2-5800 (773-702-5800), via email at [itservices@uchicago.edu](mailto:itservices@uchicago.edu), or get walk-in help at the TECHB@R on the first floor of Regenstein Library during reference desk hours <http://hours.lib.uchicago.edu/>.

**Alumni** account holders may contact [alumni-support@uchicago.edu](mailto:alumni-support@uchicago.edu) or call 1-877-292-3945 between 9 AM and 3 PM CST with any questions.



# Source endpoint



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[Manage Data](#)

[Groups](#)

[Support](#)

[ranantha](#)

[start transfer](#)

[view transfer activity](#)

[manage endpoints](#)

[dashboard](#)

## Transfer Files

[Get Globus Connect](#)

Turn your computer into an endpoint.

Endpoint



Go

Path

Go



Endpoint



Go

Path

Go

[select all](#) | [none](#) [up one folder](#) [refresh list](#)



scratch-midway

Folder



share

Folder

Please select an endpoint above.



# Destination endpoint



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[ranantha](#)

[start transfer](#)

[view transfer activity](#)

[manage endpoints](#)

## Transfer Files

[Get Globus Connect](#)

Turn your computer into an endpoint

Endpoint

Go

Path

Endpoint

### Activate Endpoint: xsede#ranch

The administrator of this endpoint, **xsede#ranch**, requires that you authenticate using their MyProxy OAuth server to activate the endpoint. When you click 'Continue' you will be redirected to their website.

Continue

Cancel

Please select an endpoint

Select an endpoint above.

[more options](#)

Label This Transfer

This will be displayed in your transfer activity.



# Activation

## XSEDE

Extreme Science and Engineering  
Discovery Environment

### Welcome to the XSEDE User Portal Authorization Page

#### Science Gateway Access

The XSEDE Science Gateway or Service below is requesting access to your XSEDE account. If you approve, please sign in with your XSEDE username and password.

**Note:** Only members of active XSEDE project allocations will be able to sign in on this page.

#### SCIENCE GATEWAY INFORMATION

The XSEDE Science Gateway listed below is requesting access to your XSEDE account. If you approve, please sign in.

Name: Globus Online

URL: <https://www.globusonline.org/>

#### SIGN IN

Username

Password

**SIGN IN**

**CANCEL**

Please send any questions or comments about this site to [help@xsede.org](mailto:help@xsede.org).



# Transfer data



globus online

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## Transfer Files

Get Globus Connect  
Turn your computer into an endpoint.

Endpoint  ...

Path

select all | none | up one folder | refresh list | ≡

CSSEF Folder

testfolder Folder

09-035\_OWS-6\_Security\_ER.pdf 1.08 MB

Endpoint  ...

Path

select all | none | up one folder | refresh list | ≡

Emacs Folder

QuickTimeUSBVDCDigitizer.component Folder

casQuality Folder

globusOnline Folder

README 4.74 kB

test1.txt 27 b

test2.txt 28 b

▶ more options

Label This Transfer

This will be displayed in your transfer activity.





# Transfer options

▼ less options

Label This Transfer

This will be displayed in your transfer activity.

## Transfer Settings

- ☐ only transfer new or changed files ?
- ☐ delete files on destination that do not exist on source ?
- ☐ preserve source file modification times ?
- ☒ verify file integrity after transfer ?
- ☐ encrypt transfer ?





# Share data



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[start transfer](#) | [view transfer activity](#) | [manage endpoints](#) | [dashboard](#)

## Transfer Files

Get Globus Connect  
Turn your computer into an endpoint.

Endpoint  ... Go

Path  Go

select all | none up one folder refresh list

CSSEF

testfolder

09-035\_OWS-6\_Security\_ER.pdf

new folder

show hidden files

delete selected files

share

Endpoint  ... Go

Path  Go

Please select an endpoint above.

more options

Label This Transfer

This will be displayed in your transfer activity.



# Set permissions



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## Transfer Files

Get Globus Connect

Enter into an endpoint.

Endpoint

Path

[select all](#) | [none](#) | [up one folder](#)

- CSSEF
- testfolder
- 09-035\_OWS-6\_Security\_ER.pdf

[more options](#)

Label This

### Beta Manage Shared Endpoint

[« shared endpoints list](#)

#### Manage Permissions For ranantha#CSSEF

Host: ucrcc#sharing:/~/share/CSSEF/

name	read	write	delegate
Path:/			
Rachana Ananthakrishnan	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ian Foster	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

✓ Ian Foster added successfully.

ID (User or Group)  [search](#)

Path

Permissions ☒ read ☐ write ☐ delegate

Add

[view transfer path](#)



# Manage Groups



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Manage Data

Groups

News & Events

About

Support

ranantha

## My Groups

Search

### My Admin Queue

#### BIRN Community

Cornell demo

Demo Group1

gpnread

gpnwrite

IU Demo

KBase Test

NCARdemo

pnnl

#### MEMBER OF

Ag-GRID

birn-steering

BIRNCC

confluence-users-birn

F-BIRN

GlobusWorld Tutorial

kbase\_users

managementtest

NEURODEV

Create New Group »

● admin action required

## BIRN Community

Home

Members

SubGroups

Settings

edit

This is the 'umbrella' group for BIRN's Access system, which will provide general access to certain BIRN services.

For more information about BIRN, see BIRN's [About page](#) on [birncommunity.org](#).

Support



# Globus Online CLI

Interactive login to command line interface:

```
$ ssh tuecke@cli.globusonline.org
```

Running commands remotely:

```
$ ssh tuecke@cli.globusonline.org <command>
```

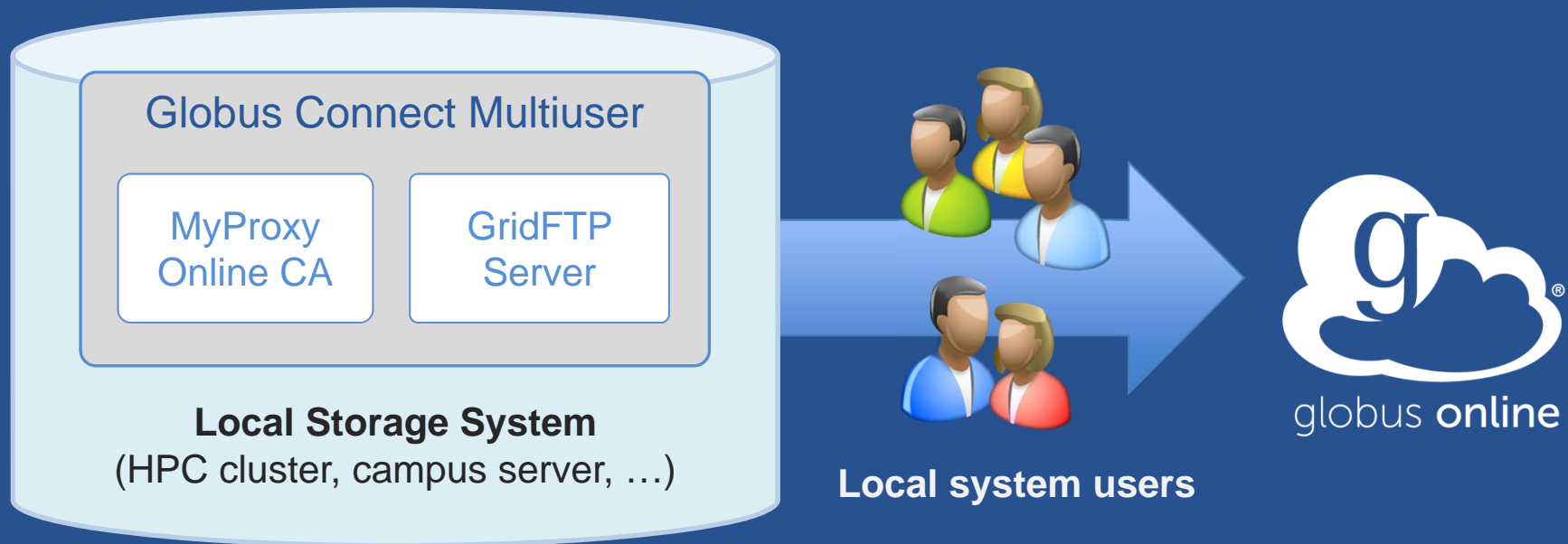
```
$ ssh tuecke@cli.globusonline.org scp -r -s 3 -D \  
    nersc#dtn: ~/myfile* mylaptop: ~/projects/p1  
Task ID: 4a3c471e-edef-11df-aa30-1231350018b1  
$ _
```

Using CLI with gsissh:

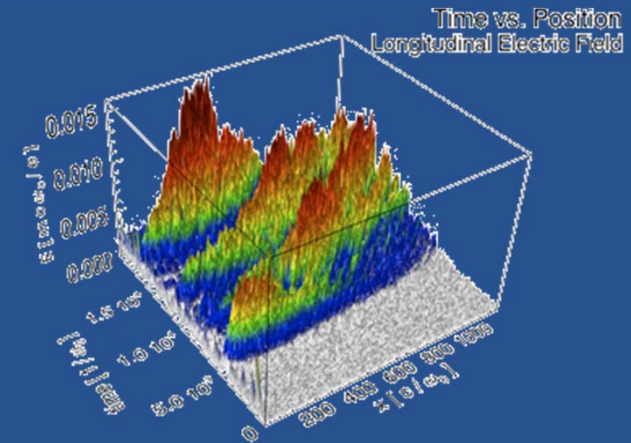
```
$ gsi ssh tuecke@cli.globusonline.org <command>
```



# Globus Connect Multiuser



- **Create endpoint in minutes; no complex GridFTP install**
- **Enable all users with local accounts to transfer files**
- **Native packages: RPMs and DEBs**
- **Also available as part of the Globus Toolkit**



B. Winjum (UCLA) moves  
900K-file **plasma physics**  
datasets UCLA → NERSC

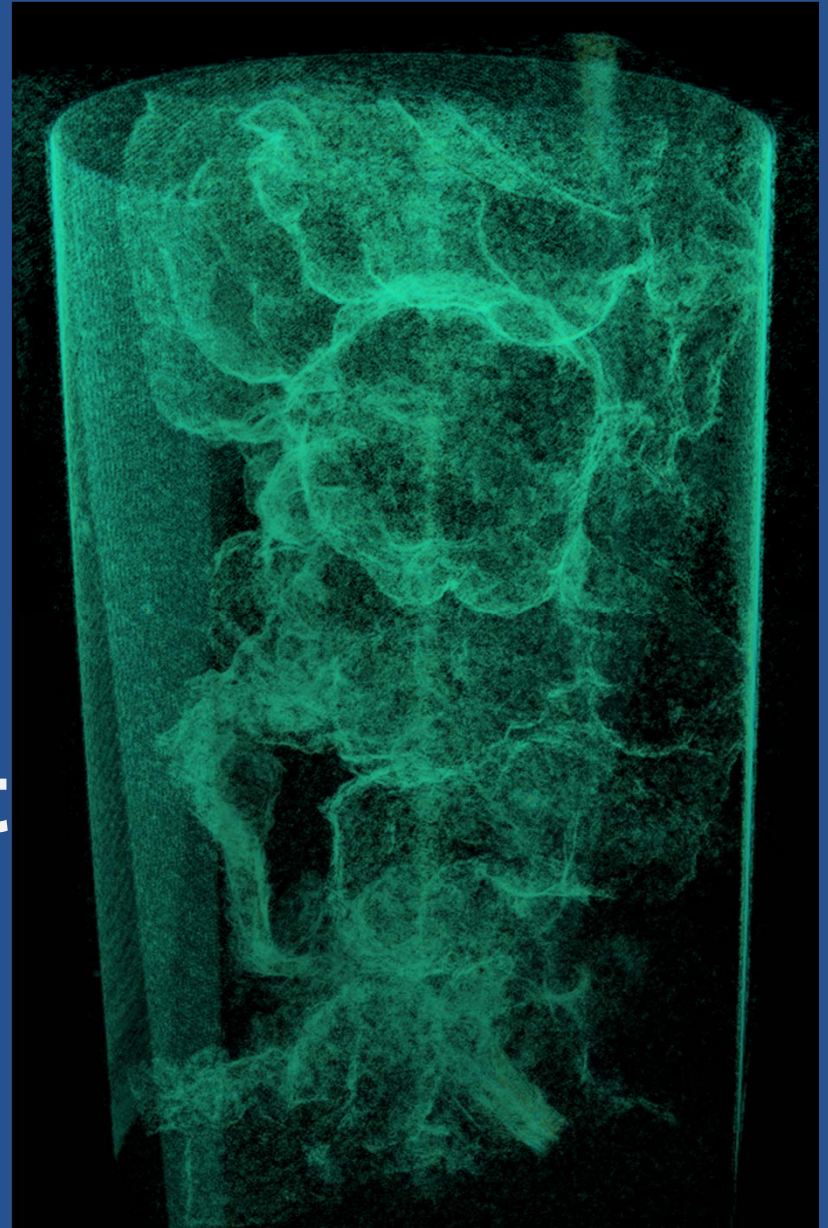


Dan Kozak (Caltech)  
replicates 1 PB LIGO  
**astronomy** data for  
resilience





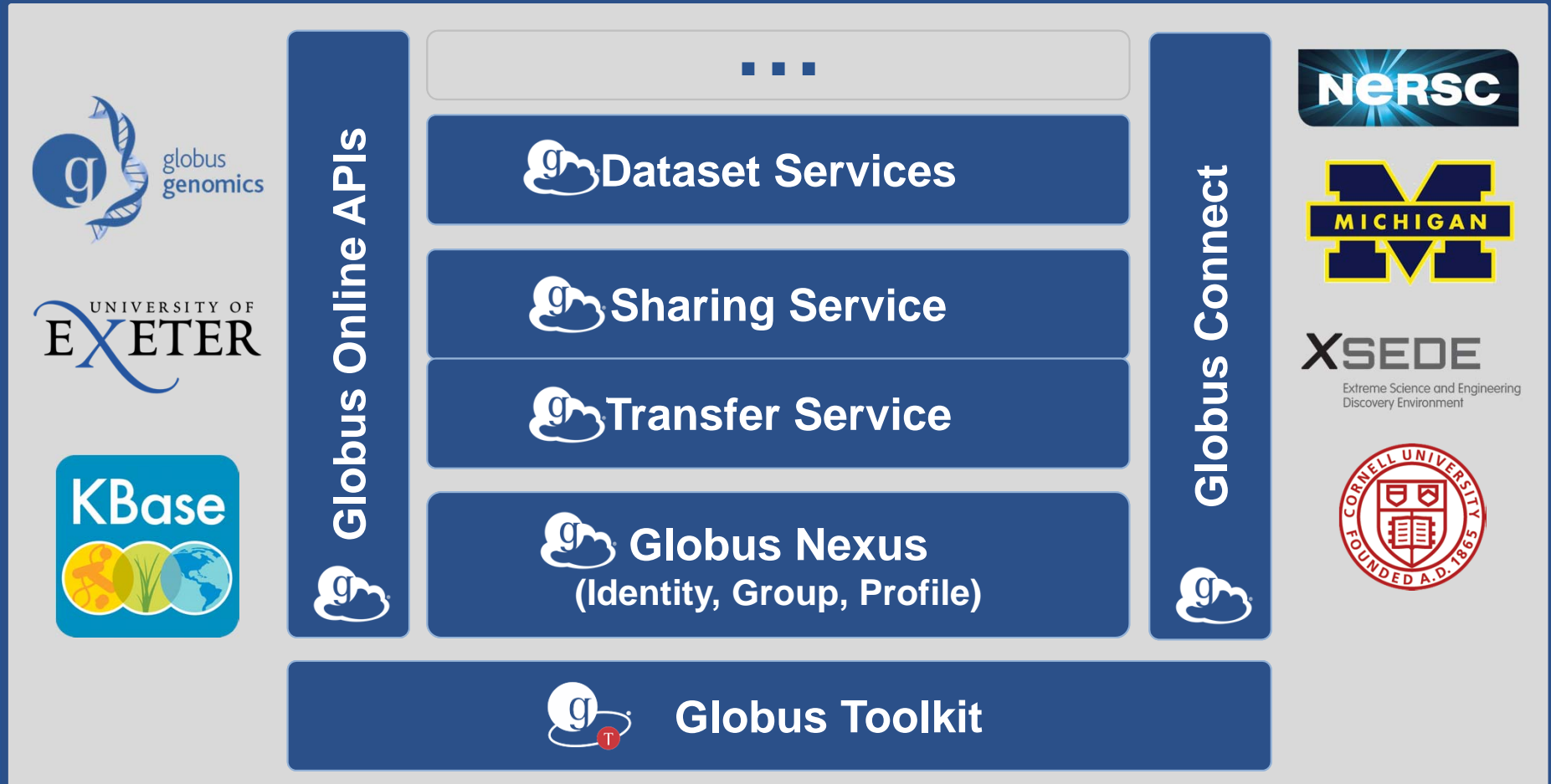
**Erin Miller (PNNL)  
collects data at  
Advanced Photon  
Source, renders at  
PNNL, and views at  
ANL**







# Globus Platform-as-a-Service





# Early platform adopters

The collage features three overlapping web pages:

- KBase (DOE Systems Biology Knowledgebase):** The top-left page has a header with a logo and navigation links: Home, About, News, and Developer Zone. The main content area is titled "The new Systems Biology Knowledgebase (KBase)" and describes a collaborative effort to accelerate understanding of communities and plants. It mentions a community-driven, extensible source software framework and application system that will provide access to data, models, and simulations, enabling scientists to gain new knowledge and share findings.
- Blue Waters:** The top-right page is titled "BLUE WATERS SUSTAINED PETASCALE COMPUTING". It features a header with the NCSA logo and a "SIGN IN SIGN UP" link. The main text states: "Reliable, high-performance, secure file transfer by Globus Online." Below this, it says: "Blue Waters has partnered with the Globus Online file transfer service. You may access this service by entering your Blue Waters username and password." There is a "Sign In" section with a "Use Your NCSA" link and an "alternate login" link.
- Earth System Grid:** The bottom page is titled "Earth System Grid" and has a header with navigation links: Home, Data, Account, About, Contact Us, and Logout. The main content area is titled "Globus Online Transfer: Step 2 of 3". It explains that Globus Online can be used to download selected files to a local machine or to another machine with a GridFTP server. It notes that if downloading to a local machine, a one-time setup of [Globus Connect](#) is required, which can be downloaded from [Globus Online](#). It also states: "Please ensure Globus Connect is running before the next step." Below this, it says: "Required Fields are Denoted by Blue text." There are two input fields: "Destination Endpoint:" with a dropdown menu showing "alcf#dtn" and "Destination Directory:" with a text input field containing "/tmp/". Below the text input field, it says: "\*nix: /tmp/" and "Windows: temp\". At the bottom, there are three buttons: "Next >>", "<< Back", and "Cancel".



We are a non-profit service  
provider to the non-profit  
research community



We are a non-profit service  
provider to the non-profit  
research community

Our challenge:  
**Sustainability**



# Globus Online End User Plans

- **Basic: Free**
  - File transfer and synchronization to/from servers
  - Create private and public endpoints
  - Access to shared endpoints created by others
- **Plus: \$7/month (or \$70/year)**
  - Create and manage shared endpoints
  - Peer-to-peer transfer and sharing



# Globus Online Provider Plans

Bundle of Plus subscriptions  
+ Features for providers

<http://globusonline.org/provider-plans>  
(Working on NET+ offering)



Our research is supported by:



U.S. DEPARTMENT OF  
**ENERGY**



THE UNIVERSITY OF  
**CHICAGO**

**Argonne**

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**amazon**  
web services



Move. Sync. Share. It's easy.

- **Signup:** [globusonline.org/signup](https://globusonline.org/signup)
- **Connect your system:**  
[globusonline.org/globus\\_connect](https://globusonline.org/globus_connect)
- **Learn:** [support.globusonline.org/forums](https://support.globusonline.org/forums)
- **Need help?** [support.globusonline.org](https://support.globusonline.org)
- **Follow us:** @globusonline

[www.globusonline.org](https://www.globusonline.org)