UAB IT — Research Computing

Need Resources?

Empower your **Research** through **Computing**

We are UAB IT Research Computing, dedicated to empowering UAB researchers through access to our team of RC experts, high-performance computing resources, data management, and collaboration tools.

What we can offer you:
- An **expert team** of facilitation and operations professionals;
- Compute including **CPUs**, **GPUs**, and related tools;
- Software including **Jupyter, MATLAB, R, SAS**, and more;
- Scalable solutions for data management customizable for your project's needs, including Globus and **up to 100TB** of storage.

Documentation

Visit for much more info!
https://docs.rc.uab.edu

Hardware Summary

GPU
- **40 A100** 80GB for AI and deep learning
- **72 P100** 16GB for ML and prototyping

CPU
- **~14,000** cores (AMD & Intel)
- **512 GB** up to **1.5 TB** memory per node

Cloud
- **32 A100** 40GB for AI and deep learning
- sudo, containers, web apps, prototyping

Questions? Contact us!

https://docs.rc.uab.edu/#how-to-contact-us

Zoom Office Hours
Mondays & Thursdays
10:00 AM – 12:00 PM

Email — support@listserv.uab.edu

Got Data?

Research Computing Shared Storage Options			
Platform	**Access?**	**Size (TB)?**	**Expandable?**
Cheaha (GPFS)	SSH, OOD, Globus	25 TB	Not yet...
Long-Term Storage (LTS)	CLI, Globus	75 TB	Yes (at cost)

Who can request these allocations?
- PIs and Core directors can request shared storage allocations.

How to add staff, students, collaborators?
- **Cheaha:** Submit a request to support@listserv.uab.edu.
- **LTS:** Use Globus or set bucket permissions through CLI.

What about individual storage allocations?
- All UAB faculty, staff, and graduate students are entitled to 5 TB storage allocations on Cheaha and LTS.
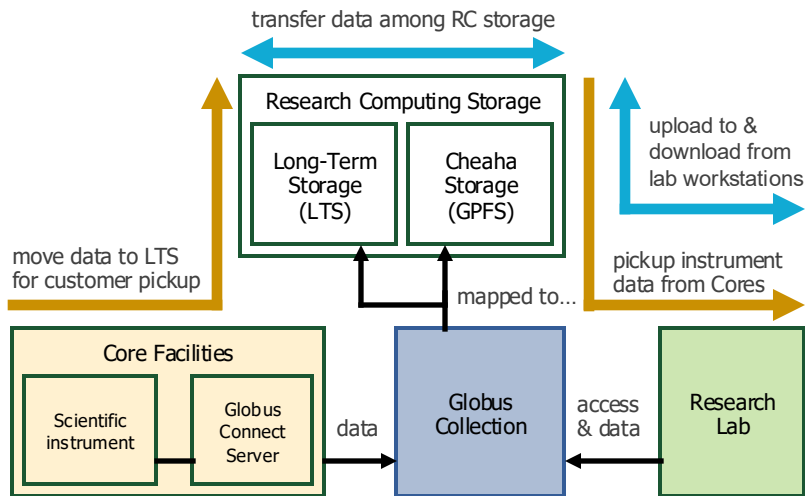
What if I need more storage?
- Let's talk! Email us at support@listserv.uab.edu.

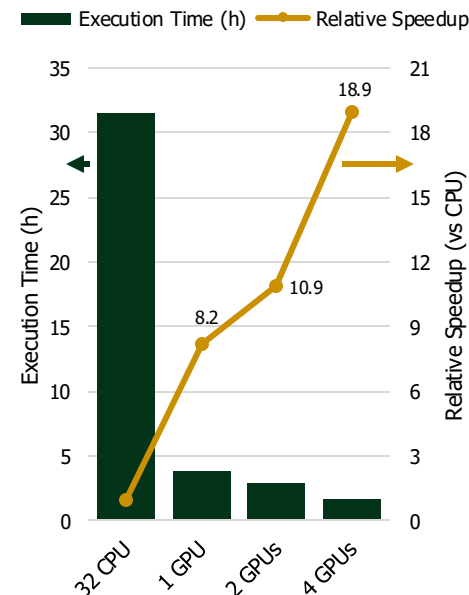**What if I have PHI or other protected data?**
- Currently only Cheaha is HIPAA aligned.
- Both Cheaha and LTS are authorized to store PHI. In addition, Globus and any SFTP transfer tool (scp, rsync, rclone, etc.) are available tools to transfer PHI between Cheaha, LTS, and other machines.

Globus for Cores and Researchers

transfer data among RC storage

Research Computing Storage

Long-Term Storage (LTS)

Cheaha Storage (GPFS)

upload to & download from lab workstations

move data to LTS for customer pickup

mapped to...

pickup instrument data from Cores

Core Facilities

Scientific instrument

Globus Connect Server

data

Globus Collection

access & data

Research Lab

Speed up!

Case Study: GPU Parabricks

■ Execution Time (h) ━●━ Relative Speedup

Values shown: 8.2, 10.9, 18.9 (Relative Speedup)
X-axis: 32 CPU, 1 GPU, 2 GPUs, 4 GPUs

Case Study: Genome Annotation

90 calendar days saved

8.5× single-core speedup

50× parallel speedup

Create your account!

https://rc.uab.edu