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 shared storage allocations?
- Faculty supervisors and Core directors can request shared storage allocations.

How do I add my staff, students, and collaborators?
- **Cheaha:** Submit a request to support@listserv.uab.edu.
- **LTS:** Use Globus or set bucket permissions through CLI (see our docs for more details).

What about individual storage allocations?
- All UAB faculty, staff, and graduate students are entitled to 5 TB individual storage allocations on both Cheaha and LTS.
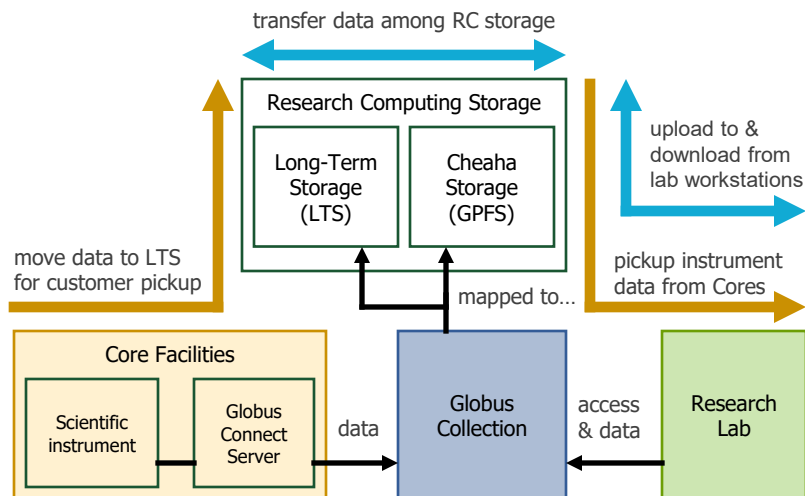
What if I need more storage?
- Let's talk! Email us at support@listserv.uab.edu and we will discuss your needs.
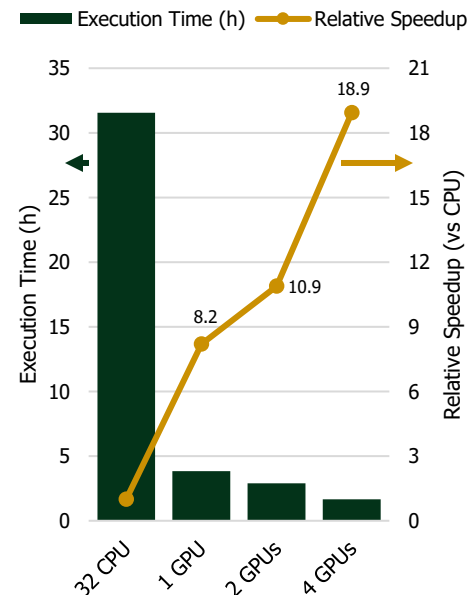
What if I have PHI or NIH genomic data?
- NIH genomic data requiring NIST 800-171 may be stored and processed on any Research Computing systems (RCS), but not on other UAB computing systems.
- Currently only Cheaha is HIPAA aligned and suitable for PHI data. We are working toward self-attestation for all RCS with the UAB Internal Security Officer and HSIS.

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

Chart values: 32 CPU, 1 GPU (8.2), 2 GPUs (10.9), 4 GPUs (18.9)

Case Study: Genome Annotation

90 calendar days saved

8.5× single-core speedup

50× parallel speedup

Create your account!

https://rc.uab.edu