

Cornell HPC Service Choice Chart

Which service is right for your computing needs? This document provides a decision guide comparing BioHPC (Bioinformatics Facility) and CAC (Center for Advanced Computing).

1. Start Here: Type of Work

Work Type	Recommended Service
Life sciences / bioinformatics workflows	BioHPC
General HPC or custom OS/software environments	CAC

2. Computing Environment

If you need...	Choose	Why
Preconfigured life-science software environments	BioHPC	Uniform life-science tools installed everywhere
Custom OS (Windows/Linux) or full root access	CAC	Cloud-style VM flexibility
Facility-installed and maintained software	BioHPC	1,200 software titles installed, new available on request
Building custom computing stacks	CAC	Supports deep customization

3. On-demand Computing, Access & Scheduling

Requirement	Choose	Notes
Exclusive full-machine reservations	BioHPC	Calendar scheduling; SLURM available optionally
On-demand cloud-style VMs	CAC (Red Cloud)	Scalable and flexible provisioning
GPU compute	Both	BioHPC: 9 GPU servers; CAC: GPU VM instances

4. Hosting Group-Owned Servers

Requirement	Choose	Notes
Hosted servers integrated into life-science environment	BioHPC	Fully managed; identical to rental servers except for access rights
Custom clusters with admin control	CAC	OpenHPC + Slurm with full system control

5. Storage Options

Storage Feature	Choose	Why
High-speed scalable storage mounted on hosted or rented computing resources	Both	Both facilities offer native high-speed storage, 2.7 PB Lustre in BioHPC, 1.9 PB Ceph in CAC
Mountable on desktop/laptop	BioHPC	Home or group directories exported via Samba (CIFS)

Automated backups	BioHPC	Included as additional service
S3-compatible object storage	CAC	Ceph-based cloud storage
Attachable persistent volumes	CAC	Cloud-style storage

6. Consulting & Research Support

Support Type	Choose	Why
Life-science research support	BioHPC	Bioinformatics PhD staff
Advanced software engineering	CAC	Custom development, ML/AI, automation
Help with grants involving life sciences, including direct participation	BioHPC	Deep life sciences expertise
Cloud consulting and workflow scaling	CAC	Integrates AWS/Azure/Google and Red Cloud