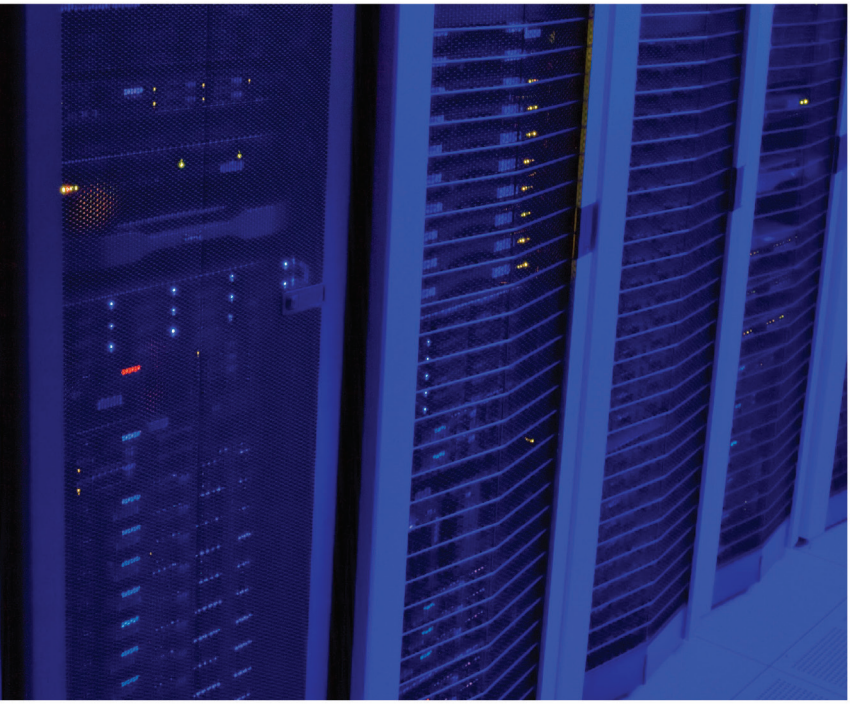
UNIVERSITY OF GEORGIA

GEORGIA ADVANCED COMPUTING RESOURCE CENTER



UNIVERSITY OF GEORGIA
1785
Georgia Advanced Computing Resource Center

PROVIDING SERVICES THAT ACCELERATE RESEARCH

ABOUT THE GACRC

The Georgia Advanced Computing Resource Center (GACRC) is the result of a collaborative partnership between the Office of Research and the Office of the Vice President for Information Technology.

THE GACRC IS ADMINISTERED BY UGA'S ENTERPRISE INFORMATION TECHNOLOGY SERVICES (EITS).

The Center provides to the UGA research and education community an advanced computing environment comprised of a high-performance computing and networking infrastructure located at the Boyd Data Center; a comprehensive collection of scientific, engineering and business applications, as well as consulting and training services.

HOW THE GACRC CAN HELP RESEARCHERS:

The GACRC offers technical expertise to manage high-performance computing platforms, software, storage, physical security, cyber security and advanced networking.

Researchers have used the GACRC's resources to process complex data and perform difficult computations in the areas of public health, physics, engineering, bioinformatics, marine sciences and educational psychology, to name just a few.

Whether a first-time user of high-performance computing resources or an accomplished expert, the GACRC provides expertise and training to assist individual researchers and help research groups succeed. The GACRC can also be a valuable partner for grant-funded research.

WHAT WE DO

OUR VISION

GACRC will be the first place UGA researchers turn to for solutions and services for large-scale computing

OUR MISSION

GACRC provides shared human and technological resources to the UGA community to enable and accelerate research requiring large-scale computing.

Large-scale computing refers to high-performance digital technologies including servers and clusters, tiered data storage, advanced networks, etc. – including the necessary human resources such as a help desk, training and advanced user support, specialized knowledge, etc. – as well as their maintenance and continued evolution.

STRATEGIC APPROACHES

Provide shared technological resources for the UGA community to maximize availability, ease-of-use and security.

Provide shared human resources to support the UGA community in large-scale computing and to maximize capabilities, knowledge and coverage, while minimizing time to product.

Advance digital research at UGA through advocacy and training, the introduction and evolution of advanced technological capabilities and the facilitation of access to national resources.

GACRC FACILITIES & STAFF

GACRC's equipment is located in UGA's Boyd Data Center (BDC). The GACRC has a full-time staff of systems administrators and scientific computing consultants, specializing in Linux/UNIX system administration, storage administration and scientific computing consultation and training.

COMPUTATIONAL RESOURCES

One Linux cluster is available with a core count of approximately 22,000 compute cores. In addition to conventional compute nodes, the cluster has several large memory and GPU specific nodes. There is also a small cluster devoted to graduate teaching.

High performance storage for the Linux clusters is provided for users' home directories and temporary scratch space. Slower storage resources are available for long-term project needs.

The computational resources are available free of charge to UGA researchers and students. Unless otherwise noted, the storage resources attached to the clusters are also available free of charge.

GACRC HAS ACCESS TO THE FOLLOWING EXPERTISE:

- HPC cluster computing system administration, including cluster design, operating systems, job scheduling software, network design and administration, operating system security;
- Storage administration, including user data management, hardware troubleshooting, performance optimization, optimal availability, data security and subsystem design/configuration;
- System integration and administration using programming and scripting for data conversions, data analysis and data migration;
- Software selection, installation, maintenance and troubleshooting;
- Network administration, security, troubleshooting, design and implementation;
- Design, assistance in coding and debugging of HPC parallel computing programs, offering consultation and assistance to researchers and their staff;
- Consultation and training in the use of computational science tools and referential databases

GACRC CLUSTER BUY-IN PROGRAM

Participants in the GACRC Cluster Buy-In Program enjoy priority access to purchased cluster resources for their research group(s). The GACRC provides the support infrastructure of racks, network switches, cabling and support servers, as well as the cooling and power infrastructure, all hosted within the Boyd Data Center.

The buy-in resources will be integrated in the GACRC's research cluster environment. The GACRC's Operations Team will administer all resources.

Compute nodes and storage options are available in the Buy-In Program. Buy-in costs cover the purchase of the equipment and management software, as well as the networking access and physical hosting cluster. In addition to their buy-in resources, groups will continue to have access to all GACRC resources commonly available to UGA faculty, staff and students on a fair-share basis. A standard 5-year MOU will be established with the participating research groups in the GACRC buy-in program.

THE PROGRAM IS DEVOTED TO FULFILLING PRIORITIZED COMPUTATIONAL NEEDS OF:

- New faculty recruits through their start-up packages
- Individual researchers
- Groups of researchers working on collaborative projects
- Departments, centers & institutes wanting to provide compute or storage resources to their faculty

OFFICE INFORMATION

LOCATION

101 Computing Services
The University of Georgia
Athens, GA 30602

OFFICE HOURS

Monday through Friday
8 a.m. until 5 p.m.

Schedule an appointment to meet with us at: help.gacrc.uga.edu.

UNIVERSITY OF GEORGIA
Georgia Advanced Computing Resource Center

GEORGIA ADVANCED COMPUTING RESOURCE CENTER

FOR MORE INFORMATION, PLEASE CONTACT:

Dr. Guy Cormier

Georgia Advanced Computing Resource Center

101 Computing Services, The University of Georgia

Athens, GA 30602

UNIVERSITY OF GEORGIA

Georgia Advanced Computing Resource Center

PHONE: 706.542.0355

EMAIL: GACRC@UGA.EDU

WEB: GACRC.UGA.EDU