THE GEORGE WASHINGTON UNIVERSITY
WASHINGTON, DC

GW | Division of Information Technology

Columbian College of Arts & Sciences
THE GEORGE WASHINGTON UNIVERSITY
Office of Technology Services

Colonial One Background

- Colonial One is the new shared HPC cluster at GW
- Shared across colleges and departments, and supported by DIT
- “Pay to play” - groups who contribute resources have priority in the scheduling system
- Columbian College of Arts and Sciences lead the design and initial implementation
- One of a number of initiatives to support research at GW

Colonial One User's Lunch

- Begin a series of town hall style user meetings.
- Build a Community of Users Around Colonial One.
- Make announcements
- Listen for feedback from users.

Colonial One - Current System

- Dell C8220 cluster, 96 node
  - 32x GPU nodes, each with dual NVIDIA K20 GPUs
  - 64x CPU nodes, each with dual 2.6GHz 8-core Intel Xeon CPUs, and 64/128/256GB of RAM
- Totals:
  - 1,408 Intel Xeon CPU cores
  - 159,744 NVIDIA CUDA cores
  - over 8 TB of RAM
- Mellanox FDR Infiniband fabric
- Two primary filesystems
  - 150 TB NFS fileserver for /home and /groups
  - 300 TB Lustre filesystem for high-speed scratch

Colonial One - Current System

Colonial One - Getting Access

Accounts may be requested by emailing hpchelp@gwu.edu

Please include:

1. GW NetID
2. Research group name
3. and CC the PI / your advisor on the email

Affiliate accounts are available for non-GW users.

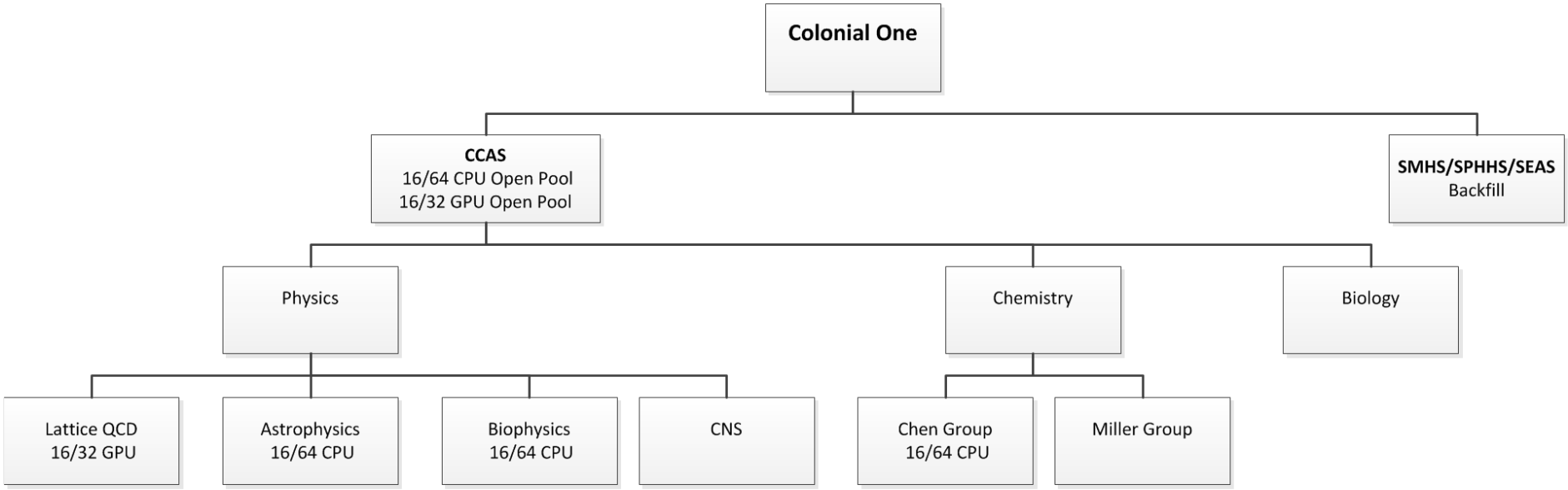
How Do I Get Priority Access?

- CCAS researchers get queue priority proportional to their contribution.
- Other groups - need to buy in, please talk to Tim/Brian Ensor for details.

How are costs shared for CCAS researchers?

- CCAS covers the shared infrastructure costs.
- DIT covers the facilities and operational costs.
- The researcher covers the node costs.

Current Resource Priority



Colonial One - Support Model

- Professional systems support
- Senior HPC Systems Administrator - Tim Wickberg
- HPC Specialists - provide direct support for researchers, with domain-specific backgrounds
  - Physical Sciences - Glen MacLachlan (CCAS)
  - Genomics - (starting soon)

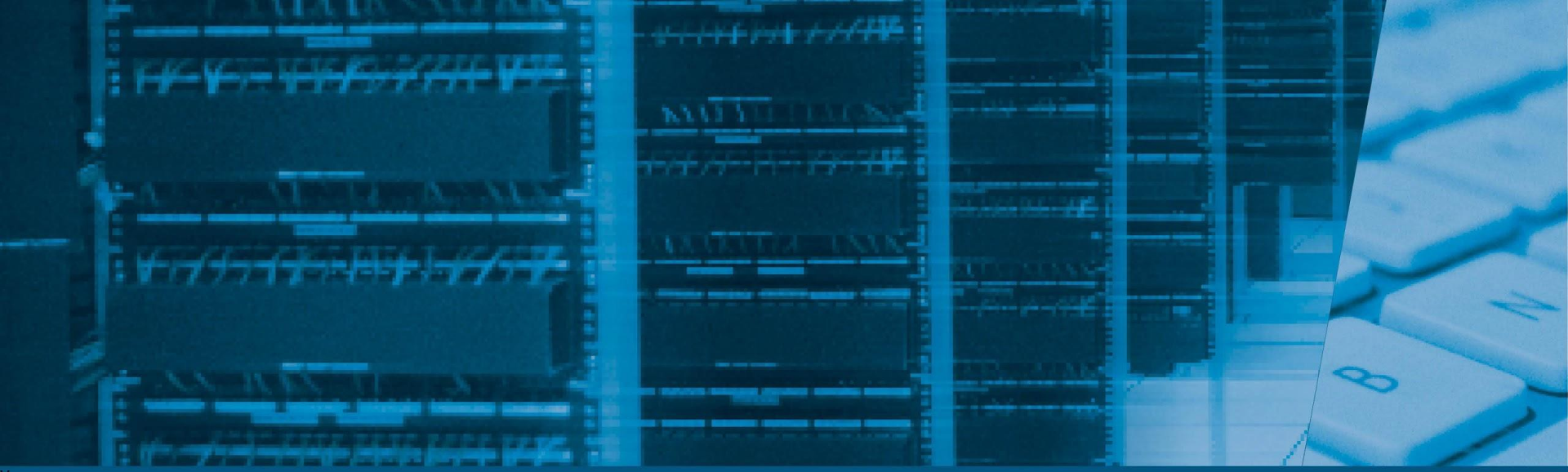
- Email hpchelp@gwu.edu to report issues and request support.

Colonial One - News

- Intel Cluster Studio XE is installed
  - Intel C/C++ and Fortran Compilers
- Matlab Distributed Computing system coming soon
- Maintenance outage on Monday
  - Jobs will resume after completion
  - No user-visible changes, this outage is backend work in preparation for expansion and security improvements

Colonial One - Expansion

- Expansion plans are underway
  - ~250 nodes within the next year
- Colleges and departments who contribute have priority in the scheduling system
- Spare resources available with restrictions
- HPC Advisory Committee will set long-term directions and provide oversight
- Provide an on-ramp to XSEDE systems for compute-intensive groups



For More Information

Colonial One overview:

http://it.gwu.edu/colonialone-high-performance-computing

User documentation:

http://colonialone.gwu.edu

Or send us email:

Colonial One support - hpchelp@gwu.edu