Classroom Use of the HPC

Classroom use of the HPC is permitted, however there are a few things to consider with respect to resource allocation. Here at Research Computing we have a main mission of ensuring these resources are fairly allocated to the campus.

Overall Considerations

- Pick a dataset that can be accommodated by our system.
  - Keep in mind the multiplicative nature of resource allocation when it comes to classroom use: what might be doable for one or two users probably will not work for fifteen.
  - Generally the smaller the dataset the better the experience.
- Test your program before the semester begins to ensure everything is in place and functions as expected.
- Give Research Computing advanced notice of your intent to use the HPC for a class.
  - Submit a support request at least 60 days in advance of your class with the following info:
    - Class name
    - Anticipated enrollment
- Please try to use GitHub or ASULearn to distribute assignments and receive work back from your class. We can setup a shared directory for your class for sharing data sets but with the way we have the system configured getting read/write access to each student's home directory for grading is problematic. Once the code is turned in for grading you can clone it down to your HPC account and test it there.
- The HPC is not long term storage and classroom data will be removed at the end of the term. Please advise your students to copy any data they want to keep off the system.

Storage

The HPC has 18TB of raw disk storage that is shared between all users, research and classroom alike. These resources are for all College of Arts and Sciences users as they paid the outlay for the hardware. Every user starts out with a 400GB quota to as per our storage policy. This can be temporarily increased if needed on an individual basis, however when it comes to classroom use this proves to be problematic due to limited resources and the typical number of enrolled users in a classroom setting. For example, if a class with 10 students wants to use the HPC and each student requires 1TB of space for a data set that will unfairly consume the entirety of the cluster's storage.

Compute

There are three main partitions on our cluster. The debug partition consists of two older nodes with 256GB of RAM and 32 threads, the compute partition with the primary nodes and the cs-gpu partition that is limited to users in the Computer Science department. Generally we prefer to limit

classroom users to the debug partition as it keeps any problems inexperienced users might cause limited to those nodes, thus not interrupting service to the researchers using the primary nodes in the compute partition.

Revision #5
Created 2026-04-01 13:39:31 UTC by Leander Hutton
Updated 2026-04-01 15:49:31 UTC by Leander Hutton