

Research Computing Advisory Committee

Minutes June 1, 2020 (taken by Erik Deumens)

Present: Paul Avery, Brad Barbazuk, Nikolay Bliznyuk, Erik Deumens, Susmita Datta, Jorge Frias-Lopez, Richard Hennig, Bill Hogan, Damon Lamb, Alberto Riva, Erik Schmidt, Plato Smith, Laurie Taylor, Bruce Vogel

Updates

- RC has converted to fully remote support: All staff are reachable by email, phone, and have zoom office hours. According to the UF plan to return to the workplace, RC staff will return by June 30. Office hours and meetings will continue to be virtual until Dec 2020.
- The new /blue file system is ready to go in production. We are a little delayed in publishing how data will be copied to the new files system, but we already copied about 50%. Announcements will be made this week or next.
- The HiPerGator 3.0 ITN is in progress. UF received 12 proposals.
 - o They show that our requirement of 20,000 cores in a 300 kW power envelope is achievable within the available budget. We cannot provide specific details at this time.
 - o The proposals do not have Intel Ice Lake or AMD Milan processors, which as late as February were expected to be available in Oct 2020. Now they will not be available until after January 2021. Since we cannot delay HiPerGator 3.0 we will buy current processors Intel Cascade Lake AP or AMD Rome.
- NVIDIA announced new GPU technology: The Ampere A100 GPU and the DGX A100 node with 8 A100 GPUs tightly coupled. UF is one of the few universities in the world to get two such nodes. They will arrive in June.
- Work to accommodate more power in the data center is being planned.
- UFIT RC has completed two searches and is about to make offers to two outstanding candidates, who will be strong contributors if and when they accept the job. This will help RC to accomplish the big to-do list RC has to deliver on in the rest of 2020.

Discussion

Reports that login nodes are used incorrectly by (often novice) users have increased since the pandemic forced many researchers to change their work habits. Some problems are the fact that input/output operations cannot be controlled, as the use of CPU and RAM is. This together with the fact that the /ufrc file system is no longer up to the task causes delays for all users on the login nodes.

RC staff had been working on multiple approaches to mitigate the adverse effect. These will now become operational in June.

- The new blue storage system is ready for production now. All usage will be transitioned from /ufrc to /blue in the coming weeks.

- A performance dashboard will be announced, giving an overview of the performance of login nodes, the activity on the cluster managed by slurm, and a number of other metrics <https://metrics.rc.ufl.edu>
 - o You need to be on the VPN and authenticate with Gatorlink and then login to Grafana with your HiPerGator account, which is the same set of credentials as your GatorLink. This step authorizes you as a HiPerGator user; it is not enough to have a UF GatorLink account to see the site.
- An online basic training module with a test at the end has been developed in the UF training system, which allows tracking that users have taken the training and passed the test.
 - o Successful completion of the training will be required for all new accounts. Users will be given their account and they have 2 weeks to complete the basic training. New users can use the account to try out the tasks described in the training.
 - o If the training has not been completed within 2 weeks, the account is locked until the training is completed.
- The pages describing the acceptable use policies and procedures have been updated and will be published in June. That will make it more clear what is allowed as activity on various nodes and will allow staff to monitor it more precisely and automate such monitoring.

Next meeting will be on July 6, 2020 from 1:30 – 2:30 pm. The meeting will be Zoom only. An invitation will be sent.