

Research Computing Advisory Committee

Minutes Apr 6, 2015 (taken by Erik Deumens)

Present: Paul Avery, Mike Conlon, Lauren McIntyre, Hannah Norton, Alberto Riva, Laurie Taylor

Updates

- The President, Provost, and VP for Research approved the funds to proceed and build the HiPerGator expansion called HiPerGator2. The President notified the Board of Trustees in the meeting in the morning of Friday April 3. The VP and CIO notified the Provost and the VP for Research of the chosen vendor. The five vendors were notified Monday April 6.
- Two vendors had very strong proposals, Cray and Dell. Dell was chosen as the partner to build HiPerGator2.
 - o The system will add 30,000 compute cores (Intel E5-2698 v3 CPUs) in 912 compute nodes.
 - o There are 32 special nodes with various combinations of NVIDIA k80 GPUs and Intel Xeon Phi 5110p accelerators.
 - o HiPerGator2 has a peak performance of 1 Pflops: 10^{15} floating point operations per second. This means it can perform one million (10^6) times one billion (10^9) multiplications per second. Its top500 performance is expected to be approximately 0.723 Pflops.
 - o HiPerGator by comparison has a top500 performance rating of 0.119 Pflops. Thus HiPerGator2 is 6 times faster than HiPerGator. The combination of the two will provide a performance improvement of a factor 7 for HiPerGator.
- The system will be delivered in early August and is planned to be ready for production sometime in October.
- UF will work with all institutions in the South on a proposal for Big Data Regional Innovation Hub to NSF. Erik will attend a meeting in Durham NC on April 13.
- The exploration of the business models in use by other universities who have been running such infrastructure for a long time, for example Purdue, showed that UF is doing things in a very similar way.

Discussion

- The business model that will be followed at UF is similar to Purdue: By charging faculty, we will recover 50% to 70% of the acquisition cost of hardware for computation and storage such as HiPerGator. The cost of staff, datacenter, and electricity will be covered by the university.
- This is effectively what the matching program has done. The matching program for this spring will be revised to more accurately reflect this business model.
- The policies for use of the system at no charge will also be updated and will be replaced by other mechanisms to provide access to faculty. For example by asking the department or college to buy a number of resources to be shared by faculty with needs that fit in the current use-at-no-charge policy.

Organization

Next meeting will be on Monday May 4, 2015 at the usual location in NPB 2205 from 1:30 – 2:30 pm.