

SUMMARY FOR RESEARCH PORTFOLIO MEETING

DATE: March 10, 2014

TIME: 10-11 a.m.

LOCATION: Eccles Broadcast Center, Dumke conference room

IN ATTENDANCE:

| | | | |
|---------------|-------------------|-------------|---------------|
| Abby Adamczyk | Martin Berzins | Frank Brown | Steve Corbató |
| Eric Denna | Catherine Soehner | | |

COMMITTEE SUPPORT: Julia Harrison

UNABLE TO ATTEND:

| | | | |
|------------------|-----------------|----------------|----------------------|
| Braid Cairns | Thomas Cheatham | Carleton DeTar | Julio Facelli |
| Cynthia Furse | George Hepner | Sean Lawson | Korbus Van der Merwe |
| Valerio Pascucci | Philip Smith | Mike Strong | |

AGENDA ITEMS DISCUSSED:

- CHPC Faculty User Agreements
- CHPC Budget
- Federal Research Funding and Prospects: Condo of Condos Award and NSF Track 2 Proposal
- CHPC Futures Committee and Director Search

CHPC Faculty User Agreements

The group discussed the previously circulated faculty user agreements, which formalize some of the practices already taking place for all Center for High Performance Computing (CHPC) users. A key aspect of the agreement states unused computing cycles from condo nodes will go a common-allocation pool to be used by others. Those jobs would be pre-empted by an owner's job once it entered the queue. Steve Corbató said the University provides a great deal of support for those nodes, so if they are not being used it would be unfortunate to see those cycles wasted.

One issue is that with changing economics, the ratio of faculty-provided nodes to University-provided nodes is increasing, which will cut down on the general-allocation pool going forward. Frank Brown noted that "unused" nodes are consuming power whether they are computing or not, and Corbató said the increase in power during processing is marginally higher than it is while idle. Brown noted the sustainability argument for the common-allocation pool as well. The group also discussed the other benefits faculty with owner nodes receive by being part of the CHPC user group, including servicing, storage, security, and energy efficiency. Julia Harrison will determine for the portfolio what the cost is to run the entire system, and what fraction of that cost for each machine the University provides.

Next up was discussion about the user agreements for virtual machines. The standard agreement makes clear that protected data cannot be on the machines unless an addendum to the agreement dictates how that VM project will be managed. For instance, one researcher's project involves

analyzing protected health information. There are certain measures being taken to ensure the security of that data while still allowing the research to move forward.

Those in attendance were supportive of the agreements, and the final vote will take place over email to get the input of those members not present.

CHPC Budget

The members were shown the preliminary budget for next fiscal year. CHPC is projected to run a deficit, but there are unspent capital expenditures funds that can account for the shortfall. Corbató said the biggest variable in this budget is power consumption. Projecting that cost has been more complex than anticipated for a number of reasons:

- During FY14, CHPC operated out of three different data centers. It has since consolidated to the Downtown Data Center (DDC). Each venue had different arrangements regarding accounting for CHPC power usage.
- Efforts are underway to isolate the consumption for just the CHPC area of the DDC, but those figures are not in yet.
- CHPC also pays a portion of the cooling and other overhead costs for the DDC, and University Information Technology's Finance group is still working out the exact portion of those costs.

Berzins pointed out that other departments on campus aren't asked to shoulder the costs of electricity in the same way CHPC is doing so, and that put it at a disadvantage in comparison. Eric Denna and Corbató said they believed others on campus understand the situation and are willing to work with CHPC to meet everyone's needs.

The portfolio discussed several ways CHPC might be able to obtain funding in the future, including asking faculty who intend to use those resources to factor staff support time into their grant requests, which is something that has already happened to a degree. Members also talked about comparing CHPC's staff numbers and resources to other computing centers. It was noted that CHPC staff are more involved in providing service and education to users than other centers' staffs. Berzins said that it is important for others to understand CHPC plays an important role by teaching students and researchers how to use high-performance computing so that they can then grow into even bigger national clusters.

Corbató will bring back more budget information to the Portfolio as it becomes available.

Federal Research Funding and Prospects: Condo of Condos Award and NSF Track 2 Proposal

The Condo of Condos project award is official, and the University will be working with five other schools to develop that shared-resource model. Some smaller follow-on awards will be sought in conjunction with Clemson, the lead Condo of Condos partner, as well. There is also the pending National Science Foundation HPC Acquisition solicitation for which CHPC will develop a proposal in conjunction with these same institutions.

Futures Committee and Director Search

The job description for director of CHPC has been posted, both in the traditional areas and to several high-visibility trade publications and audiences. Already there have been some candidates who have shown interest. Corbató is looking for some volunteers to help screen those applicants for a more formal interview process in the coming months.

| Action summary | | | |
|---------------------------|--|---------------|--|
| Action | Topic | Person/Group | Next step |
| Discussed/ action item | CHPC Faculty User Agreements | Portfolio | A vote will be completed over email to determine whether to accept the user agreements as presented. |
| Discussed | CHPC Budget | Portfolio | Steve Corbató and Julia Harrison will come back with more information regarding the budget projections as it develops. |
| Discussed | Federal Research Funding and Prospects: Condo of Condos Award and NSF Track 2 Proposal | Steve Corbató | Steve Corbató outlined current awards and upcoming proposals for which CHPC will seek funding. |
| Discussed/ action item | Futures Committee and Director Search | Portfolio | Portfolio members interested in joining the review committee for the CHPC director job should contact Steve Corbató. |