

Notes for the ITC-Research Computing Standing Committee Meeting
September 8, 2008 at 10:30 AM
2015 Ivy Road, 1st Floor Conference Room

Members: Alice, Andrew, Hamp, Jim, Joe S., Mark, Mike, Robin, Terry, Tim S., Tom and members of Systems, Research Computing and ACHS as desired

Attending: Alice, Andrew, Hamp, Jim, Joe S., Mark, Mike, Terry, Tom, Katherine, Kathy

Chair: [Tom](#)

Recorder: [Alice](#)

Rather than working from our “standard” agenda, this meeting was devoted mainly to discussion of possible configurations for a new cluster.

The meeting started off with Mike giving an update about our new approach to HPC:

- This computational science initiative (including a Center) has begun with a ‘stone soup’ approach with resources (financial, human, space, hardware, etc) contributed by the VP/CIO, ITC, the Library – and likely from COFU funding. So for the next 3 years it will be supported by a partnership – if successful, it will become largely self-supporting over time.
- In practical terms, ITC’s resources for this initiative include Katherine and Ed, and some hardware/software resources.
- A new faculty Policy and Allocation Board (PAB) is being established for the allocation of HPC resources. Our Research Computing committee will need to figure out how to interface ITC’s infrastructure with the strategic direction coming from advisory group(s). What we will try for starters is that the PAB would have high level discussions about goals and policies – and we would implement them in terms of configurations, operations, etc., with Andrew and Mike as a bridge.
- Andrew gave a recent example of working through priorities and the allocation of resources in the initial startup of Tiger Teams and selecting the proposals that they have been focusing on. The Board could choose to change our utilization policies – for example, to establish a meta-queue for multiple clusters with the objective of rationalizing resource utilization across UVa.

What to do about a new cluster?

- This could be a replacement for Cedar if it has comparable or greater capacity.
- We have several faculty interested in a condo cluster purchase – Michael Shirts (ChemE) has funds and needs to have a cluster in place by January. Others (Matt Neurock/ChemE and Martin Wu/Biology) are also interested.
- Potential configurations were discussed (e.g. Hamp proposed dual quad-core with 32 GB of RAM).
- Do we need to stay with homogeneous clusters? Not necessary anymore – so we could have some variation in the cluster – but for now we could stick with recommending a basic configuration and see what happens with respect to demand later.
- The interconnect is an issue – do we need/want some nodes connected via Infiniband? (although this does cost more – in increments of 24 nodes per the switch capacity).
- Over time, we may want to move Schools/users away from allocating \$\$ to clusters and towards allocations that they can use at UVa or elsewhere.
- Meanwhile we can recommend Hamp’s configuration to people and provide a 24-port Infiniband switch.
- Andrew described another option of getting ‘lightly used’ hardware. As an example, the CS department got hardware from a bank. However it did take more effort to understand how to use the hardware – and it also took lots of paperwork. Hamp will talk to Scott in CS about how hard this was. Could be worth looking into for future needs.
- However we have users who need something NOW – and we do have some machine room capacity – especially if this is a cedar replacement.
- Action Plan:
 - Talk to Scott in CS about their gift system;
 - Get back to the folks who currently have funds and interest in a condo cluster purchase. (Hamp will send Andrew the quote.)

Storage Plans and Issues:

- Jim gave an overview of ITC’s current approach and policies.
- Hearing from some users that they might not need backups, etc – they would like another, lower-cost model to choose for some of their storage needs -- one that offers availability and persistence, but not necessarily backups.
- Also hearing that some users would like the storage options unbundled – for example with respect to amount of space, backups, and replication – and offer different levels of service for different needs – with “what is the entitlement” also defined.
- ITC will have defined a general mid-level storage option by next semester.
- Meanwhile if there are individual storage needs (e.g. Michael Shirts) we could add it, independent of a need for nodes – until we have a larger strategy.

The PBS Pro quote from Altair:

- There was discussion about how many cores we need to cover at UVa – and some discussion about whether we want to try to recover any costs – and whether this is more of an infrastructure cost than a software-budget cost. But, given our familiarity with

PBS Pro, it seems worth paying for this – and it was decided that ITC would pay \$12,000 (to cover 3000 cores - including support, maintenance, upgrades) for a one year license.

Next Scheduled Meeting of ITC ResComp Standing Committee: Monday, October 13 in ITC-Dynamics, 2015 Ivy Road, Room #102 (First Floor Conference Room)!

Please send suggestions, additions, corrections to: [Tom](#) or [Alice](#)