

Minutes for the ITC-Research Computing Management Meeting
January 22, 2007 at 10:30AM
2015 Ivy Road, 2nd Floor Conference Room

Members: Alice, Hamp, Jim, Joe S., Mark, Mike, Robin, Terry, Tim S., Tom S., Tim T.
 Attending: Alice, Hamp, Jim, Joe S., Mark, Mike, Robin, Terry, Tom S., Tim T.

Chair: [Tim T.](#) Recorder: [Alice Howard](#)

I. Corrections to [minutes from last meeting on December 18, 2006](#)? None.
 (Click to review the [agenda from this meeting](#))

II. Old Business:

- *We are planning a public input forum on our proposed expenditures – and have set a meeting for January 30 from 10A to 11:30 in Newcomb Hall Commonwealth Room to present our situation and our proposal for allocation. Proposal for allocating \$150K (or it could be a bit less) in hardware funds – Mike will moderate the forum and we'll spend a few minutes on the current environment, move on to what options have been considered and our recommendations.*
 - Use Nortel switches on dogwood, rather than spend some of \$150K on best possible switches - difference between better and best. Could it be characterized at 80% vs 100%?
 - Not renew Birch maintenance contract for another year, rather may have to let nodes die as equipment fails if parts not available (e.g., can't find these older myrinet card anywhere), expect at most 2 or 3 nodes to have such failures.
 - Maximizes allocation to buy 24 to 36 infiniband cluster (for fine-grained parallel) to replace birch. (Note: there was some discussion about whether or not we have users who would really use a high-speed interconnect – and we could get more nodes and memory without the infiniband.)
 - PLUS 1 or 2 very large memory computers (not clusters) - 4Way CPU with 32 GB memory, with Linux OS to replace "athena". Requires 64-bit kernel. (Hamp estimated that a 2Way box with 8 GB nodes would cost around \$3200/node.; 16GB/node about \$4,500.) Intel CPU more slightly more expensive than comparable AMD.
- *Two Proposals for "buy-in" to the cluster, both new one and existing dogwood. One gives priority to running jobs anytime you want by dedicating X purchased nodes to exclusive use of the researcher. The other gives priority queue access to the entire cluster. Draft proposal of these two is detailed at: <http://holmes.itc.virginia.edu/ResNotes/cluster-purchase.html>*
 - Jim & Hamp, at December 18 meeting, were going to look into rate for buying "priority" time on dogwood cluster: There was some discussion about what "priority" might actually mean – and about whether or not we are trying to encourage this service. The technology is easy – but there could be issues for users (e.g. on the need to code with check points so that jobs could be restarted if pre-empted). "Priority" could also mean next-in-queue.
 - Or we could allow users to "buy" nodes for some period-of-time ahead of time – i.e. reserve a week ahead of time so others would not be allowed to start – this has appeal.
 - And we could also have a pre-emptive queue for "quick" jobs or jobs that could get yanked.
 - Tom S: consider VMWare, is a 10% performance hit, but might help solve checkpoint issue. Hamp thinks 10% performance hit is pretty step given how maxed out clusters are on usage.
 - Mark: Have a "pre-empitable" queue

- Tim T. will sketch these up; Jim and Hamp will have a go at figuring a rate/charge.
- Tom S. Genomics might want to buy in to cluster – but infiniband type cluster not appropriate for them. They need large memory computers.
- *Linux Clusters: Birch, Cedar, Dogwood - any issues, concerns or upcoming updates/changes?*
 - *Status of cedar test cluster switching to 64-bit OS? Later this week.*
 - *All Nortel switches installed on dogwood now? Yes.*
- *Any update on conversion to authenticate to Eservices via Kerberos for Unix logins/connections to blue.unix, HSM & Longtmp? (AKA Phase 2 of Netbadge CDP).*
 - HSM: will be a long slow migration moving the data (probably a couple of months) – might have to suspend service a bit to finish the change-over – will have a Samba client that does Eservices login.
 - Longtmp: has been moved to a network appliance and is using Eservices.
 - This transition will involve a major user education issue – especially for blue.unix users. We are doing a pilot with Eservices authentication on the Student Council server and will learn from this experience.
 - No timeline for this project yet – it has to wait until after the “Unified Password” web site is up.
 - ftp to blue.unix is being phased out, ITC-Service Transitions CDP working on schedule.
- *Infrastructure Supporting Research Task Force (<https://www1.seas.virginia.edu/itr/f/>). (Maillist is itr/f@virginia.edu)*
 - *CI-TEAM NSF proposal funded. Course has a time (MWF, 9-10) and course number (CS494 Computational Mathematics), fully enrolled (40+ undergrads, mostly 3rd & 4th year, mix of E-School disciplines, not all CS.*
 - *UVa's participation in ORNL's response to NSF RFP for next generation/iteration of Supercomputing Center. The full proposal is due on 2/2/07 - Any ITC participation, input? Mike will contact Mitch Rosen who is coordinating.*
- *Update on longtmp and HSM upgrades? See notes above. (HSM scheduled for spring07 semester)*
 - Longtmp switched to NetApp - more disk space now. Snapshot frequency should be? Hamp will check.
- *SURA survey request- TimT. will contact Phil about pulling together group, possibly by email. No news.*
- *At Dec 14 meeting, agreed that TimT. would contact Elec.Engineering about dropping the 8 Ultra60s in E225 and ITC no longer having a presence in E225 after Spring 2007 semester. We are willing to transfer the Ultra60s to Elec Engineering if they want them. Will put a one or two each of Linux, Sun and Macintosh workstations in ResComp Lab in Clark. No news.*
- *EnvSci request to get nodes from Aspen cluster. Agreed 12/14 to have TimT. meet with EnvSci faculty coordinator of LSP making request to see if other ways we can meet needs generating this request.*
 - They mostly just want to experiment and learn.

III. New Business:

- *Jim and/or Tim S. - Report on StoneSoup.org meeting in early January. Mike was there as well.*
 - There was a survey at the last meeting about how different schools do support, see www.stonesoup.org for results.
 - Other schools are also having Data Center problems. Indiana is providing a massive data

storage system known as the data capacitor.

- *Mike - report on new Computational Science Advisory Council:* this group will be working on implementation issues from Task Force report from Spring06 – will stay at the strategic level, so not the kind of advisory group for ITC.
- *Any other items?* Tom S. reported that there is a new program in Public Health Genomics with 18 faculty spread over 3 locations.

IV. Adjourn by 12:00 and next meeting

- Next Scheduled Meeting of ITC ResComp Standing Committee: Monday, February 26th, 10:30 AM in ITC-2015 Ivy Road, Room #220.

Please send suggestions, additions, corrections to: [Tim Tolson](#) or [Alice Howard](#)



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