

ITCC Minutes for October 8, 2008

Attendees: Thomas Vojta, Michael Davis, Ed Malone, Thuydung Huynh, Matthew Pickens, Travis Megee, Al Crosbie, Hojong Baik, Tseggai Isaac, Frank Blum, Jee-Ching Wang, Ken Ragsdell, Katie Grantham-Lough, Margaret Cline, Eric Sigler, Adam Potthast, Frank Liu, Donald Wunsch

Meeting called to order at 4 PM.

Carol Lay absent. Thuydung Huynh volunteered to take notes.

1. Approval of minutes: moved by Thomas Vojta, seconded by Tseggai Isaac, approved.

2. Officer terms and elections

Last meeting, the ITCC chose to retain current officers until the October meeting to double check the Faculty Senate Bylaws that constitute standing committees.

Term lengths were discussed, including multiple views.

MOTION: ITCC officers will have one-year terms.

Moved by Al Crosbie, seconded by Frank Blum.

Motion approved by acclamation, several YEA, one NAY, one Abstain.

MOTION: ITCC Chair will be Donald Wunsch, Vice-Chair will be Frank Liu.

Moved by Kenneth Ragsdell, seconded by Frank Blum.

Passed unanimously by acclamation.

3. High Performance Computing and research IT support (The NIC Cluster Policy - IT Support is appended at the end of these minutes per Eric Sigler. It is also a web link in his report.)

Eric Sigler outlined some issues with file systems, storage space, Linux updates, queuing, cluster migration, data center capabilities. His full report, entitled HPC Status, appears at the end of these minutes, just above the aforementioned NIC Cluster IT Support Policy. The majority of the meeting was spent thereafter discussing the lack of IT research support. The sense of the discussion was that this is a serious strategic gap if Missouri S&T is to maintain or enhance its status in research rankings. ITCC members, whether faculty or students, are encouraged to seek input from their colleagues about needs for research computing support. What would support look like in order for us to be competitive with our peer and aspirational peer institutions? We need feedback for the November ITCC meeting and for the ITCC Retreat in December.

4. ITCC Retreat.

We couldn't get the desired space on-campus for the December 10 date that was chosen. IT will investigate suitable off-campus spaces.

Adjourned at 5:17

HPC Status:

- File system stability:

- Computing Systems team is working to resolve the current issues, we have taken some steps, and have several additional steps to take, have to wait on other high priority projects to complete to free up equipment.
- Underlying meta-problem is the unconstrained demand and growth for the service, with no structure or funding for facilities that can meet that kind of demand.

- Node availability:

- Customers are continuing to have issues understanding and determining what nodes are available to them, and at what times. We have provided documentation both for how to use the tools to determine allocations, as well as public (but rapidly out of date) wiki documentation.
- The current expectation is to completely revamp the scheduler system with the transition to ROCKS5, to something that allows a much higher utilization (and is hopefully easier for customers to understand).

- ROCKS5 cluster migration

- Announcement will be sent out in short order, saying that the new ROCKS5-based 10-node pilot cluster is available for any customer to login and test their software. This is a very similar environment to our older ROC KS4.1-based cluster, but will have newer revisions of software and many "bug fixes".
- Based on testing & pilot feedback, we will determine a date to migrate the remaining nodes to the new revision.
- The expectation is that existing software and configurations will run as before, but new compilations and builds may use newer default settings.

- Additionally, a LARGE amount of work is going into revamped documentation for this release. We have had a student assistant working for multiple months on it now, including better and wider ranging sample programs.

- HPC datacenter construction:

- We have finally agreed upon a design that is affordable and sustainable.
- HVAC equipment is now on order, bids are out for electrical work, to be completed in multiple parts over November 2007 through January 2009.
- APC will be engaged within the next day or two, to recertify the support equipment design (racks, cabling, power distribution units, "an all in one" system), and begin the order fulfillment process.
- Fire suppression system vendor will be engaged next week to begin that work.
- Our current expectation is to begin shakedown testing of the new HPC datacenter late November.
- This will include additional improvements to the underlying file system network.

HPC / Research Computing Support:

- Current HPC Support policy:
 - Has been articulated to multiple customers, the ITCC, and other standards bodies over the years
 - Is available at http://wiki.mst.edu/numerical/nic/support_policy
 - Is the "best effort" that the Computing Systems team can provide, given our current level of funding (\$0)

NIC Cluster Policy - IT Support

Who this covers:

Any customer using the NIC Cluster

What this covers:

What level of support is provided by IT, and what expectations are asked of the customer

Definition:

There are four categories of NIC Cluster support:

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Break/Fix Issues - A known resource on the system (scheduler, file system, compute node) has failed in service.

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Standard application support - The customer has used software that is provided by default on the NIC Cluster

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Custom application support - The customer has either created an application or loaded a 3rd party application (either source or binary) onto the NIC Cluster

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Hosted node support - The customer has purchased privately hosted nodes, and requires alternate software configuration

All issues should be handled through the same mechanism: a request ticket submitted to <http://help.mst.edu>. Do not contact IT staff support outside of the help request system, as it may not always engage the right staff within IT regarding the issue.

All issues are handled during normal business hours, 8AM to 5PM Monday to Friday. Issues reported outside of these hours are triaged and escalated for management review, but may not be resolved until the next business day.

Break/Fix issues: IT provides full support. Any reported outage of a NIC Cluster service will be investigated and resolved as soon as possible (within the time constraints listed above).

Standard application support: IT provides standard support. "Standard support" is defined as support of the software available by default with a new user account. Support includes instructions on usage, diagnostics of misconfiguration / usage, and upgrades/patching as vendor update cycle / security requires. IT reserves the right to add/remove/substitute applications as necessary for day-to-day operations.

Custom application support: IT provides limited support. We provide instructions on usage of the standard compilers and MPI libraries provided with the NIC Cluster, and will provide assistance if

any misconfiguration of the standard libraries / settings are found. Custom application development support is available at \$45/hour, pending availability of staff to cover the request.

Hosted node support: IT provides augmented support. IT will provide all of the support listed above, but will also work with the customer to establish alternate baseline configurations for their hosted nodes (the initial cost is covered as part of the node purchase fee). Any alternations to these baseline configurations will require negotiation and potentially additional engineering fees.

Last revised:

2008-09-18

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