

What are the most important performance metrics for your HPC applications?

- Time to solution.
- Utilization, time to finish.
- Time to result for user.
- runtime, scalability
- cpu usage, ib traffic
- Time to solution; Memory usage; I/O
- Memory usage
- memory usage
- mem/core usage
- memory usage, cpu utilization
- run time, queue wait.
- time to solution io performance uptime/availability/sla
- repeatable, predictable execution times
- Efficiency
- number of users, student users
- Queuing times Annual user surveys
- Depends on the application
- Science Output

What are the biggest user support issues you face at your HPC site?

- **Resource mgmt & performance**
 - Inefficient use of job scheduler.
 - User failure to comply with best practices.
 - issues with resource manager/scheduler (Torque/MOAB)
 - understanding performance bottlenecks.
 - Bad Code
- **Automation**
 - Would you please help me install xxxx?
(Translation: please let me know when you're done installing this for me.)
 - staff time for installation of software
 - Building their custom code and running code.
 - providing many tools and versions for systems without internet access
 - software installation requests
 - reducing the number of requests that we can automate checks for
- **Staffing**
 - Lack of support staff
 - Not enough time
 - Retention of high quality staff
 - Process improvement
- **User issues**
 - Education
 - Users don't know how debug problems or what information to provide when they request help.
 - Getting users to use the system as intended with a constantly shifting and renewing user base
 - Naively written job scripts, lack of fundamental understanding of HPC concepts and limitations

Could your user support issues be solved by better automation? If so, what kind of tools would you use?

- **Yes! Build automation!**
 - YES, and we do that already (EasyBuild for software installation)
 - yes, build tools, modules
 - yes, and will be. easybuild, spack
 - Probably. XALT, EasyBuild, etc.
 - We use a locally-developed tool tailored to our needs
 - Yes. Very interested in many of the tools presented at HUST'14 and HUST'15.
 - automated environment checks
- **No/not really**
 - Some.
 - I don't think so, unfortunately...
 - no
- **Yes! Involve Users!**
 - Most likely. Tools which automatically present performance issues and other problems directly to the user as well as provides systemwide views for the administrator. The frontend should be both CLI based and a web GUI that has powerful capabilities to do ad hoc data exploration.
- **Yes! Monitoring!**
 - Definitely. Would like to make use of better job analysis tools as described in the workshop.
 - Yes, job monitoring would help
 - certainly. auto profiling and user notification.
 - more extensive monitoring for problem identification.
 - Some could be automated. Run-time monitoring tools would help.
 - performance detection

What steps could be taken to build wider collaboration among HPC sites?

- **Explicit funding for center collaboration**

- Discussing the need with program managers/funding agencies, will also help community get resources to develop these tools.
- Unfortunately we're a much smaller site with limited staff - this leaves little time for spending time on being involved in the collaborations that we'd like. More funding would be great - of course - but we're working towards being even more involved.

- **Collaboration on building software & software stacks**

- A robust and standardized installation procedure, which removes "customization" for path, environmental vars etc from documentations and others.
- Contributing recipes / configuration management playbooks into a central repository. The OpenHPC initiative's repository could perhaps provide a good platform for this.
- OpenHPC is a good step

- **More HUST!**

- Workshops like HUST, BoF sessions like Getting Scientific Software Installed
- Continued venues like HUST
- The HUST workshop has been a great start, provides a venue for tools
- More workshops for HPC support staff

- **Community, evangelism, mailing lists**

- Just evangelism
- Community involvement!
- Mailing lists targeted at support staff
- A common mailing list specific to HPC user support!!!

- **Open source tools!**

- Open source tools with good documentation
- Ensuring that tools are flexible so that they can be adapted to the eccentricities at each site is also important.
- Normalize support tool stack

- **Use & contribute to others' tools; don't reinvent!**

- It would help if sites took a look at what's out there before creating new stuff. I found it odd that with so many performance monitoring tools out there (collectl, collectd, ganglia, etc.) ...
- Sites actually using open tools, and not re-writing tools every time.. For example: tacstats, at the time it was written multiple tools were available to gather metrics, collectd, ganglia, nwpref, etc. and to visualize, cview, ganglia, and others.... But it seems they decided to start all over., which makes just one more tool to look at and decide to use

- **Don't know**

- Don't know; I don't know. Not sure.

Interested in Helping with
HUST16?

Email us!

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