**Quiz name:** HUST15 Attendee Survey  
**Date:** 11/20/2015  
**Total Questions:** 15

**Question with Most Correct Answers:** #0  
**Question with Fewest Correct Answers:** #0

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### 1. Who are you?

<table>
<thead>
<tr>
<th>Option</th>
<th>Correct Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>5/29</td>
</tr>
<tr>
<td>B</td>
<td>1/29</td>
</tr>
<tr>
<td>C</td>
<td>13/29</td>
</tr>
<tr>
<td>D</td>
<td>12/29</td>
</tr>
<tr>
<td>E</td>
<td>10/29</td>
</tr>
</tbody>
</table>

### 2. How do users manage their environment on your HPC system?

<table>
<thead>
<tr>
<th>Option</th>
<th>Correct Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0/29</td>
</tr>
<tr>
<td>B</td>
<td>10/29</td>
</tr>
<tr>
<td>C</td>
<td>16/29</td>
</tr>
<tr>
<td>D</td>
<td>2/29</td>
</tr>
<tr>
<td>E</td>
<td>4/29</td>
</tr>
<tr>
<td>F</td>
<td>0/29</td>
</tr>
</tbody>
</table>

### 3. If using modules (or similar), what module naming scheme do you use?

<table>
<thead>
<tr>
<th>Option</th>
<th>Correct Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>10/29</td>
</tr>
<tr>
<td>B</td>
<td>4/29</td>
</tr>
<tr>
<td>C</td>
<td>15/29</td>
</tr>
<tr>
<td>D</td>
<td>1/29</td>
</tr>
<tr>
<td>E</td>
<td>0/29</td>
</tr>
</tbody>
</table>

### 4. Do you automatically generate module files?

<table>
<thead>
<tr>
<th>Option</th>
<th>Correct Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>8/29</td>
</tr>
<tr>
<td>B</td>
<td>19/29</td>
</tr>
<tr>
<td>C</td>
<td>2/29</td>
</tr>
</tbody>
</table>

### 5. Do you use tools to build/install scientific software?

<table>
<thead>
<tr>
<th>Option</th>
<th>Correct Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>13/29</td>
</tr>
<tr>
<td>B</td>
<td>12/29</td>
</tr>
</tbody>
</table>

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Page 1 of 8
<table>
<thead>
<tr>
<th>6.</th>
<th>Do you collaborate with other sites on software deployment?</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/29</td>
<td>A  Yes</td>
</tr>
<tr>
<td>9/29</td>
<td>B  No</td>
</tr>
<tr>
<td>12/29</td>
<td>C  Sometimes</td>
</tr>
<tr>
<td>3/29</td>
<td>D  I don't know</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7.</th>
<th>Are you using tools to track executable/library use at your site?</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/29</td>
<td>A  Yes</td>
</tr>
<tr>
<td>13/29</td>
<td>B  No</td>
</tr>
<tr>
<td>6/29</td>
<td>C  Sometimes</td>
</tr>
<tr>
<td>2/29</td>
<td>D  I don't know</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8.</th>
<th>Do you test software builds?</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/29</td>
<td>A  Automatically, with each install</td>
</tr>
<tr>
<td>8/29</td>
<td>B  Manually (always)</td>
</tr>
<tr>
<td>18/29</td>
<td>C  Manually (sometimes)</td>
</tr>
<tr>
<td>1/29</td>
<td>D  No testing</td>
</tr>
<tr>
<td>0/29</td>
<td>E  I don't know</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9.</th>
<th>Do you test the performance of your HPC software?</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/29</td>
<td>A  Yes</td>
</tr>
<tr>
<td>5/29</td>
<td>B  No</td>
</tr>
<tr>
<td>16/29</td>
<td>C  Sometimes</td>
</tr>
<tr>
<td>1/29</td>
<td>D  I don't know</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10.</th>
<th>Do you monitor the performance of your software over time?</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/29</td>
<td>A  Yes</td>
</tr>
<tr>
<td>16/29</td>
<td>B  No</td>
</tr>
<tr>
<td>8/29</td>
<td>C  Sometimes</td>
</tr>
<tr>
<td>1/29</td>
<td>D  I don't know</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11.</th>
<th>What are the biggest user support issues you face at your HPC site?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Anon a1e80</td>
</tr>
</tbody>
</table>
providing many tools and versions for systems without internet access

Anon b4a30

- 

Anon c5384

Inefficient use of job scheduler.

Anon 13d81

Lack of support staff

Anon 5d124

Users don’t know how debug problems or what information to provide when they request help.

Anon eb997

reducing the number of requests that we can automate checks for

Anon 6dc9e

Increasingly naive userbase which requires more and better tools to help them.

Anon 4b42b

understanding performance bottlenecks.

Anon 1ad40

Not enough time

Anon 1a831

Getting users to use the system as intended with a constantly shifting and renewing user base

Anon db4cc

Not enough support staff

Anon 1077a

Naively written job scripts, lack of fundamental understanding of HPC concepts and limitations

Anon 9f591

Lack of times/staff

Anon 22ff8

batch scheduling
parallel file system performance

Anon 54955

not enough staff

Anon 4bd21

Building their custom code and running code.

Anon 5b047

User failure to comply woth best practices.

Anon d0729

.

Anon 624dd

Retention of high quality staff;
Process improvement

Anon 93ce4

Bad Code

Anon 1d9e0
Would you please help me install xxxx? (Translation: please let me know when you're done installing this for me.)

Anon 80edc
software installation requests, issues with resource manager/scheduler (Torque/MOAB)

Anon 3d70f
staff time for installation of software

Anon 8be08
* Increasing number of projects and users generates increasing and even more varying support load
* Root-causing failed jobs (primarily OOM issues)
* Help with getting jobs to run correctly
* Software installation requests

Anon 2b92d
.

Anon e4620
Education

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12. What is the highest level of support your provide for your users?

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>0/29</td>
<td>A</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>8/29</td>
<td>B</td>
<td>Email</td>
<td></td>
</tr>
<tr>
<td>4/29</td>
<td>C</td>
<td>Telephone hotline with dedicated tech support</td>
<td></td>
</tr>
<tr>
<td>2/29</td>
<td>D</td>
<td>Telephone hotline with dedicated technical experts</td>
<td></td>
</tr>
<tr>
<td>19/29</td>
<td>E</td>
<td>Close collaboration between support experts and application teams</td>
<td></td>
</tr>
<tr>
<td>2/29</td>
<td>F</td>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

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

Anon a1e80
time to solution
io performance
uptime/availability/sla

Anon b4a30
.

Anon c5384
Time to solution.

Anon 13d81
number of users, student users

Anon 5d124
Time to result for user.

Anon eb997
repeatable, predictable execution times

Anon 6dc9e
.

Anon 4b42b
run time, queue wait.

Anon 1ad40

Utilization, time to finish.

Anon 1a831

Queuing times
Annual user surveys

Anon db4cc

None

Anon 1077a

Depends on the application

Anon 9f591

None

Anon 22f18

node utilization

Anon 54955

happy end users

Anon 4bd21

Efficiency

Anon 5b047

cpu usage, ib traffic

Anon d0729

I/O related

Anon 624dd

Time to solution; Memory usage; I/O

Anon 93ce4

Science Output

Anon 1d9e0

Scalability understood in the broadest sense -- e.g. good citizenship with respect to Lustre when running at scale.

Anon 80edc

runtime, memory usage, scalability

Anon 3d70f

memory usage, cpu utilization

Anon 8be08

* mpi library time
* memory (max, min, average etc)
* i/o load (max, min, average etc)
* cpu usage (max, min, average etc)

Anon 2b92d

mem/core usage

Anon e4620

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

- **Anon a1e80**
  - n/a

- **Anon c5384**
  - I don't think so, unfortunately...

- **Anon 13d81**
  - yes, build tools, modules

- **Anon 5d124**
  - Yes. Very interested in many of the tools presented at HUST’14 and HUST’15.

- **Anon eb997**
  - automated environment checks

- **Anon 6dc9e**
  - Would help, both for admin and users. Looking at build tools & user file mgmt tools.

- **Anon 4b42b**
  - certainly. auto profiling and user notification.

- **Anon 1ad40**
  - Probably. XALT, EasyBuild, etc.

- **Anon 1a831**
  - 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.

- **Anon db4cc**
  - Some could.

- **Anon 1077a**
  - Some could be automated. Run-time monitoring tools would help.

- **Anon 9f591**
  - No

- **Anon 22ff8**
  - some could be solved, automated monitoring of i/o may help

- **Anon 54955**
  - sw package expertise and many of the tools in the morning session were super great!!!

- **Anon 4bd21**
  - Some.

- **Anon 5b047**
  - no

- **Anon 624dd**
  - We use a locally-developed tool tailored to our needs

- **Anon 93ce4**
  - performance detection

- **Anon 1d9e0**
  - Tools that detect, prevent, correct common mistakes.

- **Anon 80edc**
YES, and we do that already (EasyBuild for software installation)

Anon 3d70f

yes, and will be. easybuild, spack, and more extensive monitoring for problem identification.

Anon 8be08

Not solved, but helped by:
* Per-job resource utilization reports
* Automatic OOM events reports
* Automatic feedback from the scheduler reg. expected queue time, as well as some submit-time sanity checks

Anon 2b92d

Definitely. Would like to make use of better job analysis tools as described in the workshop.

Anon e4620

Yes, job monitoring would help

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

Anon a1e80

n/a

Anon c5384

A robust and standardized installation procedure, which removes "customization" for path, environmental vars etc from documentations and others.

Anon 13d81

normalize support tool stack

Anon 5d124

The HUST workshop has been a great start, provides a venue for tools work. Discussing the need with program managers/funding agencies, will also help community get resources to develop these tools. Ensuring that tools are flexible so that the can be adapted to the eccentricities at each site is also important.

Anon eb997

continued venues like hust

Anon 6dc9e

HUST is a great start. Is there something similar for cluster sysadmin? Only see occasional BOFs. Is operations mgmt within HUST's scope?

Anon 4b42b

it would help if sites took a look at whats out there before creating new stuff. i found it odd that with so many performance monitoring tools out there (collectl, collectd, ganglia, etc.) that Tacc decided to start from scratch with tacc stats. wouldn't it make more sense to work within the community?

Anon 1ad40

Not sure.

Anon 1a831

Contributing recipes / configuration management playbooks into a central repository. The OpenHPC initiative's repository could perhaps provide a good platform for this.

Anon db4cc

Workshops, mailing list, web site

Anon 1077a

I don't know.
Anon 9f591
More events like HUST

Anon 22ff8
hust is a great start
awareness and availability of automated tools in opensource community

Anon 54955
I would love to help establish a formal HUST user group!! Count me in...skalwani@yahoo.com

Anon 4bd21
Open source tools with good documentation

Anon 5b047
na

Anon 624dd
More workshops for HPC support staff; mailing lists targetted at support staff

Anon 93ce4
Sites actually using open tools, and not re-writing tools every time.. For example: tacctstats, at the
time it was written multiple tools were available to gather metrics, collectd, ganglia, nwperf, 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. if they had added plug-ins to collectd say, then many
people would have access to them, they would have a base of open source developers looking at
code, and all the visualization and analytics codes would be able to directly use the data.

Anon 1d9e0
Frankly, more liberal ops/support budgets. Collaboration is rewarding and valuable. But those
alligators need attention now!

Anon 80edc
OpenHPC is a good step, workshops like HUST, BoF sessions like Getting Scientific Software
Installed

a common mailing list specific to HPC user support!!!

Anon 3d70f
just evangelism

Anon 8be08
This workshop helps.

Anon 2b92d
unfortunately we're a much smaller site with limited staff - this leave 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.

Anon e4620
Don't know