Blue Waters User Monthly Teleconference
Agenda

Topics for this webconference:

• XK Upgrade Update.
• Resource Management and Job Scheduling.
• Allocation usage monitoring.
• Request for publications, presentations, …
• Topics for future Blue Waters Users telecons/webinars?
• Special Presentation – Bob Fielder (Cray) on "Overlapping communication and computation with non-blocking MPI collectives or Coarray Fortran".
XK Upgrade Status

- Upgrade specifics
  - 12 additional XK cabinets moves total to 4,224 XK nodes from 3,072.
  - Increase of overall torus dimension to 24x24x24.
  - Changes to XK node shape: from 8x8x24 to 15x6x24, improves aggregate bandwidth.
  - Relocation of IO blades into XK region.
- Outage to begin July 15th.
- Expect a 4 week interruption of compute systems.
- Login, filesystem, and near-line storage will be available with brief interruptions.
Upgraded to Torque 4.2.3 and Moab 7.2.3.
Job scheduling priorities completed.
For all features: xe, xk, x.

<table>
<thead>
<tr>
<th>QUEUES</th>
<th>Priority (1 highest)</th>
<th>Charge Factor</th>
<th>Preemptible</th>
</tr>
</thead>
<tbody>
<tr>
<td>debug</td>
<td>1</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>high</td>
<td>2</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>normal</td>
<td>3</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>low</td>
<td>4</td>
<td>.5</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Allocation monitoring

• Usage monitoring from portal being enhanced.
  • Improved hierarchical view in progress.
• usage command now available on login nodes.
  > usage -h
  usage [ -p proj ] [ -u login ] [ -m mach ] [ -t [ pmu ] ] [ -s start-date ] [ -e end-date ] [ -l period ] [ -r ] [ -a ] [ -i ] [ -h ]
  • date – m/d/y (e.g. 05/20/13)
  • period – 1d (one day), 2w (two weeks), 3m ...
• Shows multiple projects that you belong to.
• Provides total project usage.
• Handles queue charging.
Usage

• Utilization of the XE portion of the system has improved. XK usage remains high.
• Want to avoid end of allocation period congestion.
• Continue to refine quarterly “return” concept to promote steady usage.
• We are working to provide “usage rate” tools on the portal, login nodes and notification via email.
Request for publications, presentations, …

- We need to be current on products that result from time on Blue Waters such as:
  - Publications, Preprints (e.g. arXiv.org), Presentations.
- Appreciate updates sooner than annual reports.
- NSF PRAC teams send information to PoCs.
- See the Share Results section of the portal as well.
Upcoming Events

- Next Blue Waters User webinar July 15th.
- Allinea/NVIDIA webinar: Understanding Dynamic Parallelism at any scale with Allinea's unified tools, Wednesday, 12:00 PM Eastern, June 26, 2013. https://www2.gotomeeting.com/register/329003250
Future Topics?

• Please send us your suggestions on topics for future teleconferences / webinars