Agenda

- Recent Events, Coming Changes to Blue Waters
- Usage, Utilization and other Items
- Upcoming Opportunities
- Request for publications!
Recent Events and Outages

• No events of note.
• Normal events such as DIMM or Opteron failures can cause application failure.
  • Recommend that job scripts be written to handle application failure due to hardware issue.
  • Use aprun restart option.
  • Checkpoint appropriately.
Recent Changes

- Newer compilers available (not default)
  - PGI 17.5.0
  - Intel 2016 Update 4
  - (Looking at Intel 2017 update 4)
Recent Changes

• Limits on MOM node use within a job
  • Each job has a MOM node to launch executable on compute nodes. Several jobs share a MOM node.
  • The changes will help prevent MOMs (shared resource) from running out of memory (OOM) or having excessive loads.
  • maximum number of MOM processes per job: 2048
  • maximum MOM memory per job process: 4 GB
• Always use aprun to execute on compute node
  • This includes python pre/post-processing steps
• Look for
  fork: No space left on device
  Process Error: failed to allocate memory
Usage, Utilization and other Items

- Utilization since (August 21)

BlueWaters Utilization (%)
Backlog

- Since 8/21
- Vertical axis in units of nodes. Colors are different users. Red below the x-axis indicates unreserved nodes. Blue below the x-axis indicates draining.
- Data feed dropped after emergency maintenance.
- XE region shows dropping backlog but several large allocations expire end of the month.
- XK region has seen increase in backfill.
Workload Details

- Data combines XE and XK jobs.
- Since (8/21).
- Fewer large node count jobs.
Is job bundling having desired impact on iteration time?
Blue Waters Weekly Webinar Series

- For more information about the webinar series, including registration, abstracts, speakers, as well as links to Youtube recordings, please visit the Blue Waters webinar series webpage.

<table>
<thead>
<tr>
<th>Date</th>
<th>Title</th>
<th>Presenter</th>
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<th>Survey</th>
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<tbody>
<tr>
<td>September 27, 2017</td>
<td>Software Engineering Practices - rescheduled to November 29</td>
<td>Jeff Carver</td>
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<tr>
<td>October, 2017</td>
<td>No webinar on October 4, 2017</td>
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<tr>
<td>October 18, 2017</td>
<td>Opportunities and Challenges: Diversifying your Workforce</td>
<td>Toni Collis</td>
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Request for Science Successes

- We need to be current on products that result from time on Blue Waters such as:
  - Publications, Preprints (e.g. arXiv.org), Presentations.
  - Very interested in data product sharing.
- Appreciate updates sooner than annual reports.
  - Send to gbauer@illinois.edu
- NSF PRAC teams send information to PoCs.
- See the Share Results section of the portal as well.
- Be sure to include proper acknowledgment
  - Blue Waters - National Science Foundation (ACI 1238993)
  - NSF PRAC – OCI award number