Welcome

Greg Bauer
Administrative

- WiFi – Use SSID UIpublicWiFi
  - If needed ports are blocked we will get guest access.
- NPCF Tour Wed. 4PM – Sign the sign-up sheet.
- WebEx coordinates sent out this morning.
- Slides will be posted to the workshop page on the portal.
In the room

- Science and Engineering Support (SEAS)
  - Victor Anisimov
  - Ryan Mokos
  - Tom Cortese
  - Kalyana Chadalavada
  - Manisha Gajbe
  - Robert Brunner
  - Jing Li

- Gengbin Zheng
- Omar Padrone
- Galen Arnold
- Mark Straka
- Craig Steffen

- UTK NICS Scientific Computing Group
  - Haihang You
  - Reuben Budiardja
  - Pragnesh Patel
Schedule

Day 1 (Tuesday, Dec. 3)
7:30 - 8:30 Continental Breakfast (NCSA foyer)
8:30 - 8:45 Welcome - Greg Bauer
8:45 - 9:30 Blue Waters Overview - Greg Bauer
9:30 - 10:00 Programming and Programming Models on Blue Waters – Craig Steffen
10:00 - 10:30 Running Jobs on Blue Waters – Omar Padron
10:30 - 10:45 Break
10:45 - 12:00 Optimizing Applications for Blue Waters – Robert Brunner
12:00 - 1:00 Lunch (NCSA foyer)
1:00 - 2:00 Performance Tools Overview – Manisha Gajbe, Tom Cortese
2:00 - 3:00 XK Programming environment and tools – Victor Anisimov
3:00 - 3:30 Break
3:30 - 4:00 Resiliency and fault tolerance - Ana Gainaru (NCSA), Leonardo Bautista Gomez (ANL)
4:00 - 5:00 Hands on time (SEAS staff will be available)
6:00 – Dinner (NCSA foyer)
Schedule

Day 2 (Wednesday, Dec 4)
7:30 - 8:30 Continental Breakfast (NCSA foyer)
8:30 - 9:30 Debugging on Blue Waters (hands on) – Galen Arnold
9:30 - 10:30 Data Management Best Practices – Ryan Mokos, Jason Alt
10:30 - 10:45 Break
10:45 - 12:00 Topology consideration – Bob Fiedler (Cray)
12:00 - 1:00 Lunch (NCSA foyer)
1:00 - 3:00 Advanced CUDA K20x programming - Cliff Woolley (NVIDIA)
3:00 - 3:30 Break
3:30 - 4:00 How not to fool the masses: fair representation of performance improvement. – Babak Behzad (CS/UIUC)
4:00 - 5:00 Hands on time (SEAS staff will be available) or NPCF tour.
6:00 – Dinner (On your own or Pizza)
Schedule

Day 3 (Thursday, Dec 5)
7:30 - 8:30 Continental Breakfast (NCSA foyer)
8:30 - 10:30 Advanced HDF programming – Quincy Koziol (HDFGroup)
10:30 - 10:45 Break
10:45 - 12:00 Rapidfire presentations and/or topical table discussions with SEAS staff
12:00 - 1:00 Lunch (NCSA foyer)
Blue Waters Status

- In production for over 6 months.
- Expansion in July/August to 4,224 XK nodes.
- To date
  - Provided 100M XE node-hrs. and 18M XK node-hrs.
  - Over 111,000 XE jobs and 47,000 XK jobs executed.

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Teams</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSF PRAC</td>
<td>28 active, 6 exploratory, 5 completed</td>
</tr>
<tr>
<td>University of Illinois</td>
<td>15 general, 15 exploratory</td>
</tr>
<tr>
<td>GLCPC</td>
<td>10</td>
</tr>
<tr>
<td>Education</td>
<td>4</td>
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<tr>
<td>Innovation and Exploration</td>
<td>8</td>
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</tbody>
</table>
Use the portal

Current Running Jobs

- 42.7%
- 25.2%
- 9.4%
- 8.6%
- 6.8%
- 5.6%
- 4.8%
NCSA/Illinois Enhanced Intellectual Services for Petascale Performance (NEIS-P2)

• Direct Support phase (completed) to help teams realize aspects of the Cray XE6/XK7 system. Results on the portal.

• Community Engagement (in progress) – Fellowships, Internships and Blue Waters Symposium. Watch for announcements.

• Application Improvement Discovery (planning) - facilitate the creation of new methods and approaches, making effective use of systems at all scales.
Keep Informed

• Bi-annual training opportunities
• XSEDE and Blue Waters Extreme Scalability Workshop
• Virtual School Events
• Monthly Webconferences