BLUE WATERS

SUSTAINED PETASCALE COMPUTING

Welcome

Greg Bauer

NCSA

GREAT LAKES CONSORTIUM
FOR PETASCALE COMPUTATION

CRAY

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

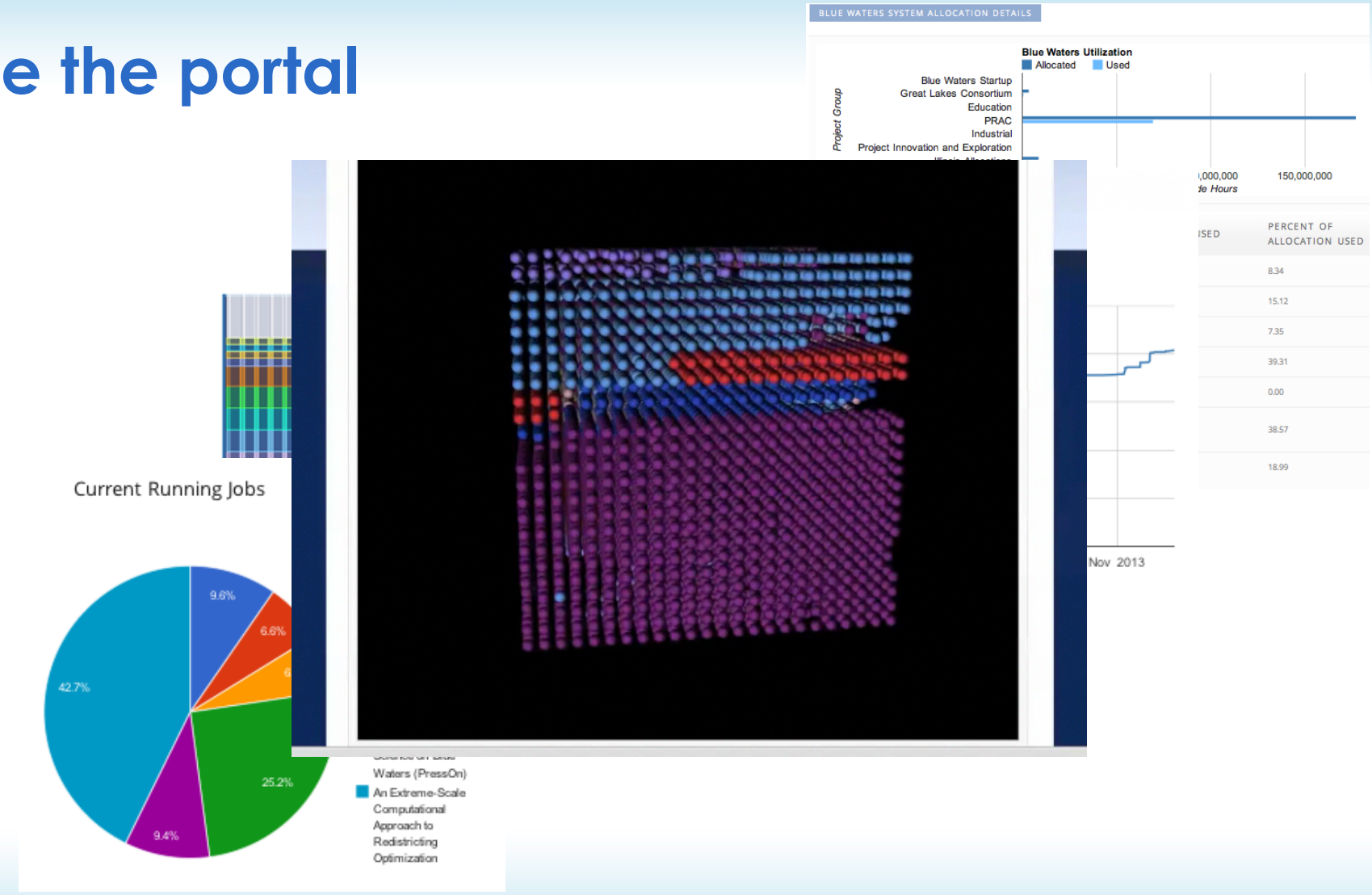
Day 3 (Thursday, Dec 5)
7:30 - 8:30 Continental Breakfast (NCSA foyer)
8:30 - 10:30 Advanced HDF programming – Quincy Koziol (HDFGroup)
10:30 - 10:45 Break
10:45 - 12:00 Rapidfire presentations and/or topical table discussions with SEAS staff
12:00 - 1:00 Lunch (NCSA foyer)

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.

Category	Number of Teams
NSF PRAC	28 active, 6 exploratory, 5 completed
University of Illinois	15 general, 15 exploratory
GLCPC	10
Education	4
Industry	1
Innovation and Exploration	8

Use the portal



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