BLUE WATERS

SUSTAINED PETASCALE COMPUTING

8/19/18

Blue Waters User Monthly Teleconference

GREAT LAKES CONSORTIUM
FOR PETASCALE COMPUTATION

Agenda

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

Recent Announcements

- NCSA/Illinois not awarded *Towards a Leadership-Class Computing Facility - Phase 1*.
- Schedule for Blue Waters being discussed with NSF. Stay tuned.

Recent Events and Outages

- 8/17/2018 – Scratch file system degraded performance for 60 minutes. Unknown cause at this time.

Recent Changes

- 8/1/2018 - Globus ssh-based CLI deprecated. Use Globus Python CLI. See https://bluewaters.ncsa.illinois.edu/data-transfer-doc and https://docs.globus.org/cli/

Outstanding Issues

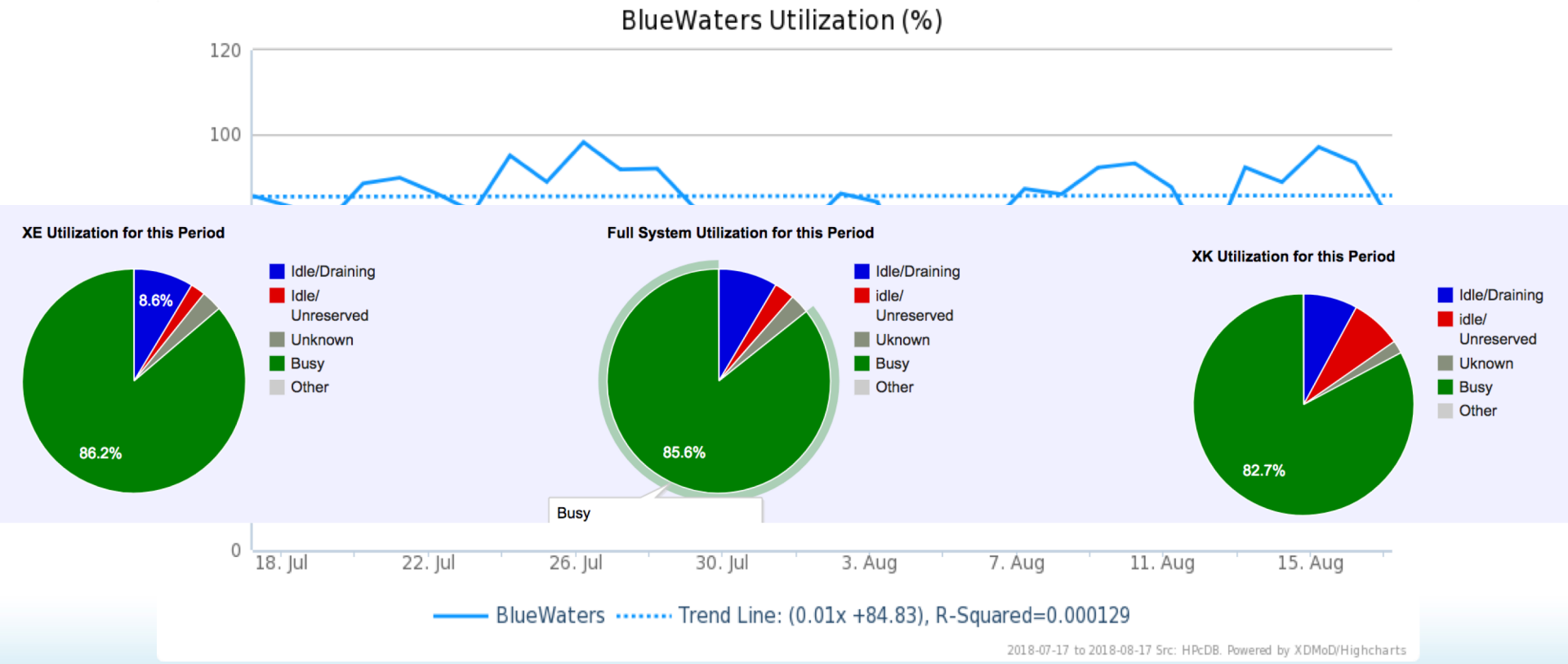
- CUDA 9.1 and GCC 6.3
  - broken std::tuple with GCC 6

https://devtalk.nvidia.com/default/topic/1028112/cuda-setup-and-installation/nvcc-bug-related-to-gcc-6-lt-tuple-gt-header-/

  - Work-around is to drop to GCC 5.
  - Working with Cray on CUDA 9.2 and CUDA 7
  - Impacts ML packages like TensorFlow etc.
  - Impacts releasing new BWPY version.

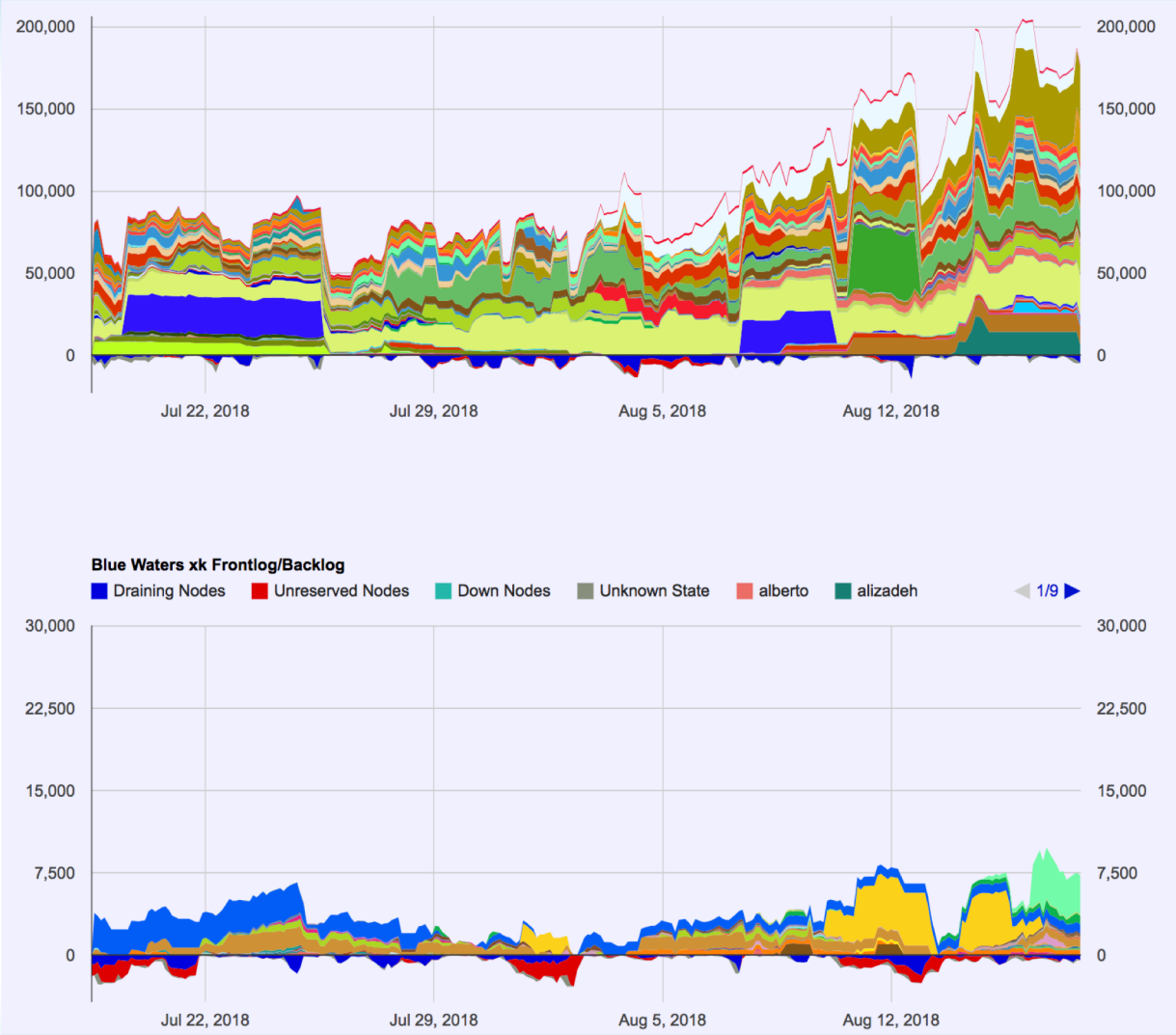
Usage, Utilization and other Items

- Overall Utilization last 30 days

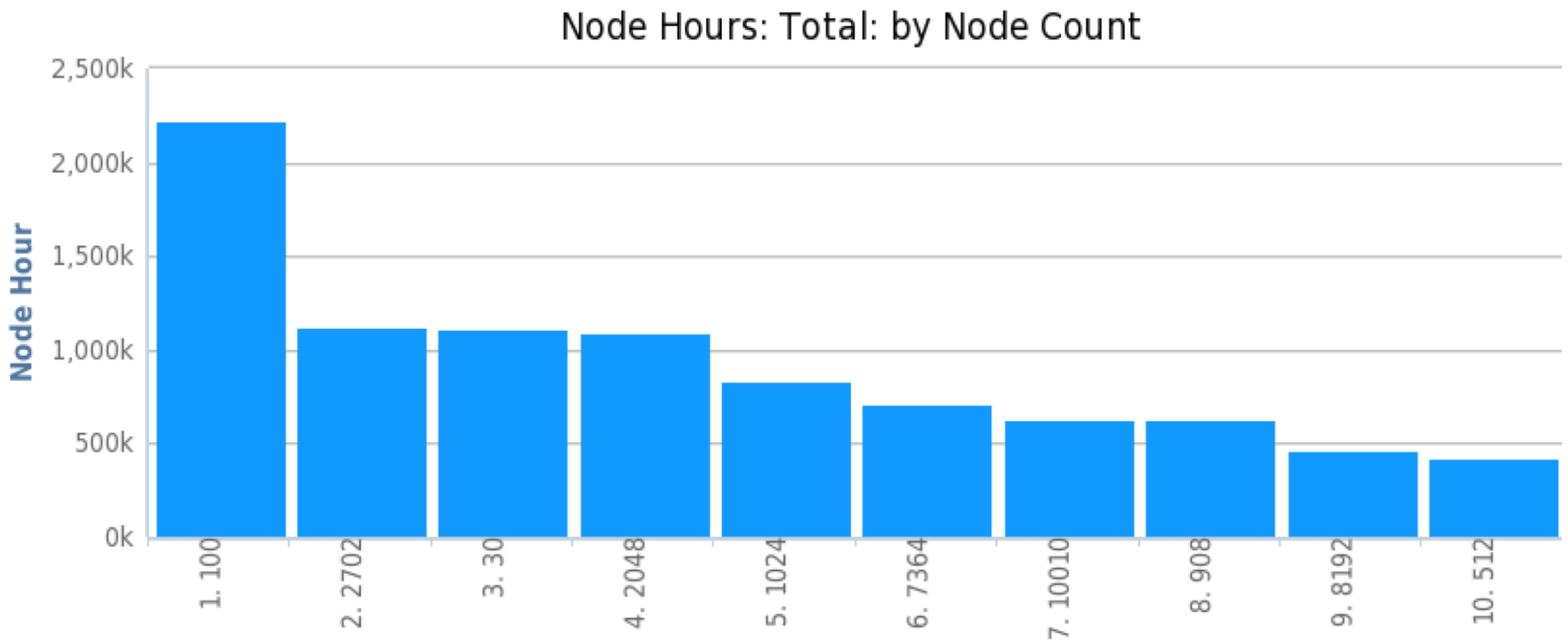


Backlog

- Last 30 days.
- 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.
- Next batch of allocations expire end of August.

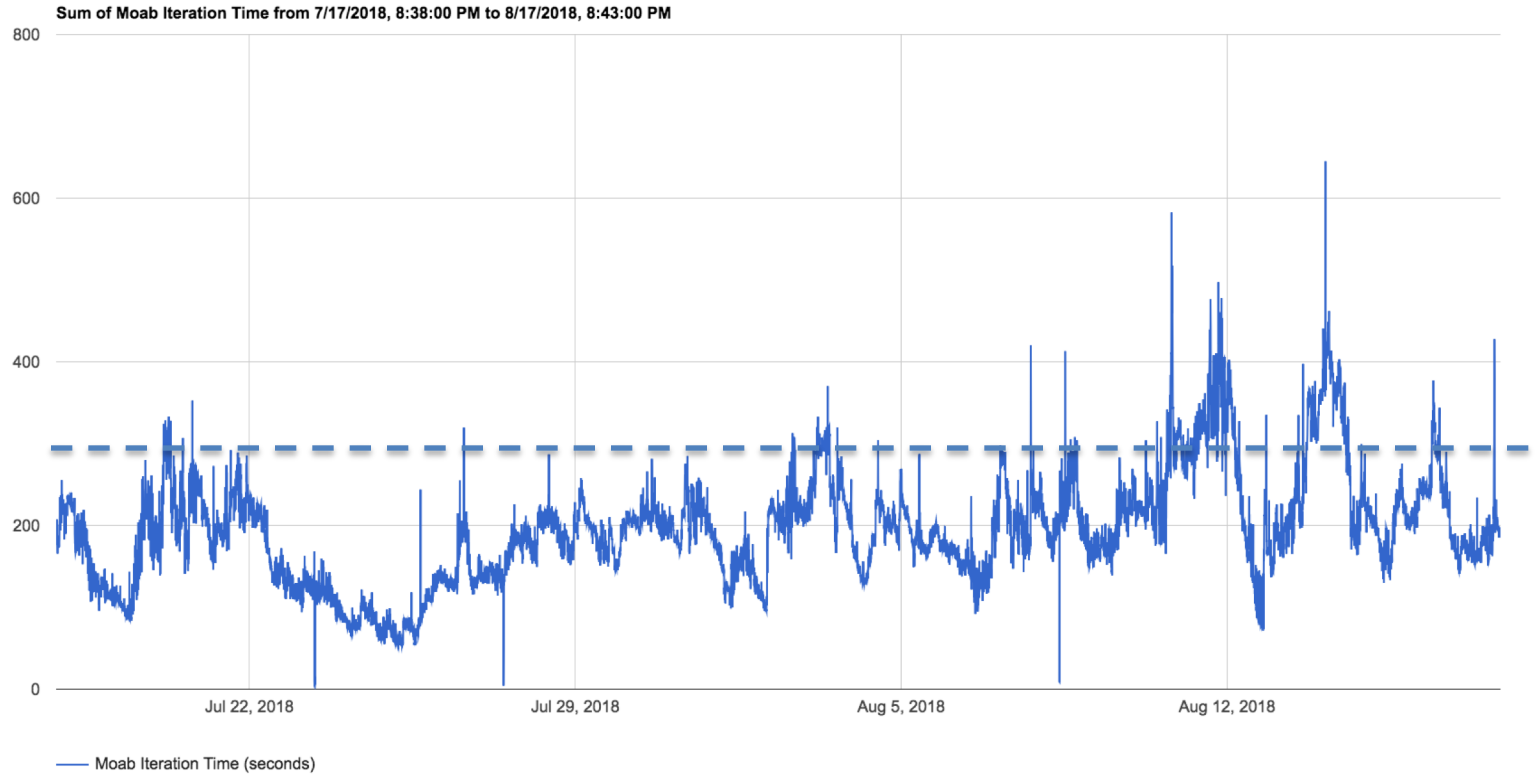


Workload Details



- Again, large contribution from 1K to 8K XE jobs.
- Data combines XE and XK jobs.
- Last 30 days.

Job scheduler iteration time



Blue Waters Weekly Webinar Series

- No webinars for remaining weeks of July or August.
- Webinars are at 10 AM Central Time.
- 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.
- Make sure to RSVP on Facebook and on the Blue Waters Portal
- We welcome suggestions for topics that will benefit the petascale community. Send your suggestions to bw-eot@ncsa.illinois.edu.

XSEDE Training Events

- https://portal.xsede.org/course-calendar
  - Big Data Sept 5-6

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