

BLUE WATERS

SUSTAINED PETASCALE COMPUTING

5/21/18

Blue Waters User Monthly Teleconference



GREAT LAKES CONSORTIUM
FOR PETASCALE COMPUTATION

CRAY®

Agenda

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

Recent Events and Outages

- No outages to report this period.
- Shifter outage 5/2-5/9
 - Service was disabled due to security concerns.
 - Shifter upgraded to address concerns.
 - Service re-enabled.

Recent Changes

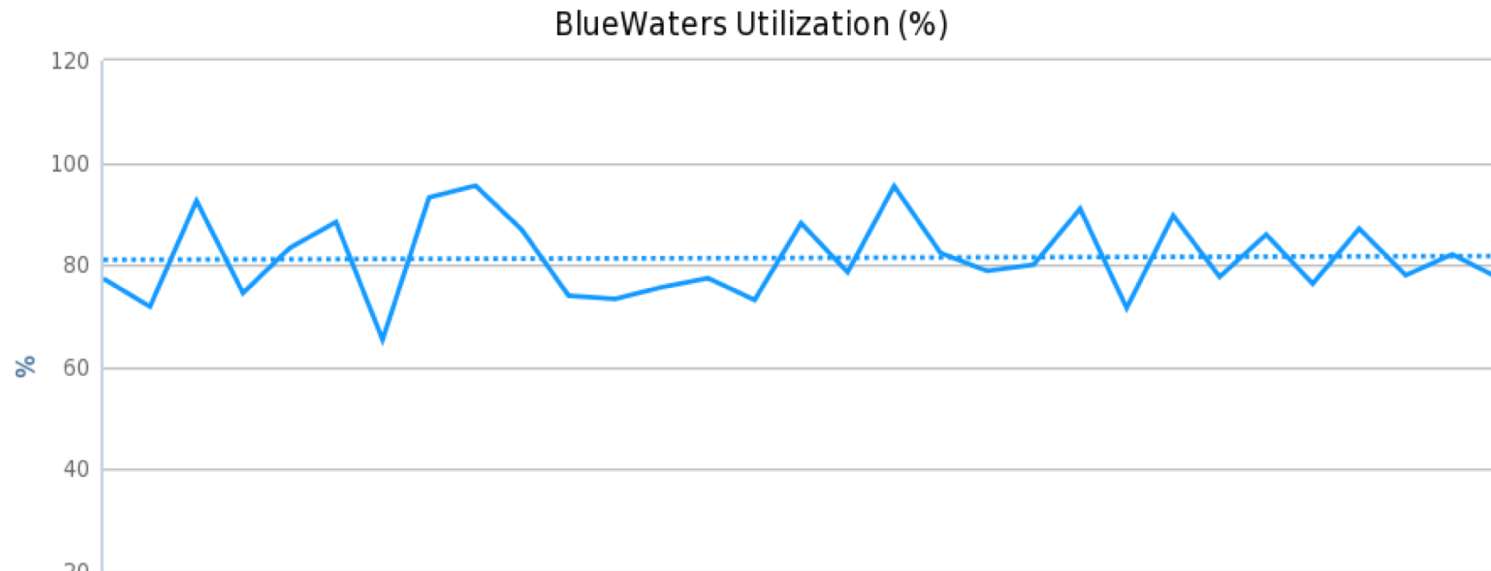
- No recent changes

Upcoming Changes

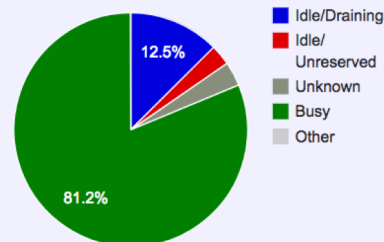
- Singularity available for testing
 - Alternative to Shifter.
 - Doesn't need Docker image (but can convert them).
 - See <https://bluewaters.ncsa.illinois.edu/singularity>
 - Singularity versus Shifter comparison
 - <http://geekyap.blogspot.com/2016/11/docker-vs-singularity-vs-shifter-in-hpc.html>
- Globus CLI (hosted ssh-based) EOL 8/1/2018.
 - Move to using Globus Python CLI
 - <https://docs.globus.org/cli/>
 - We are working to provide it via a module.
- CUDA 9.1?
 - Possibly.

Usage, Utilization and other Items

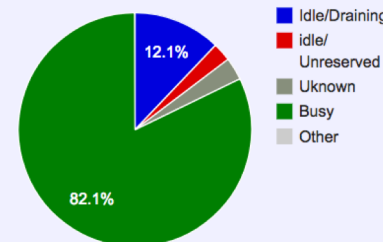
- Overall Utilization last 30 days



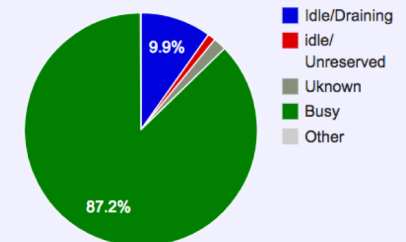
XE Utilization for this Period



Full System Utilization for this Period

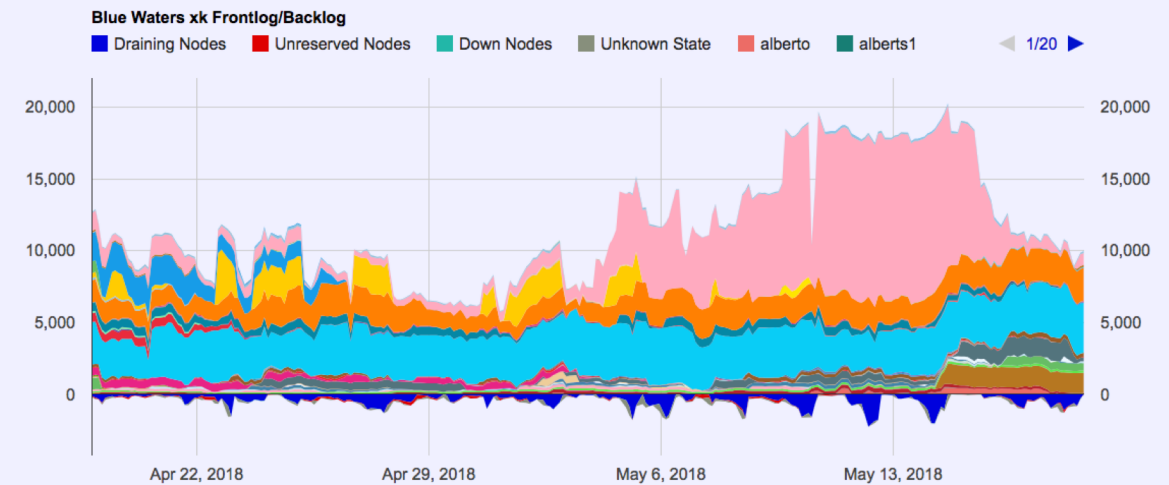
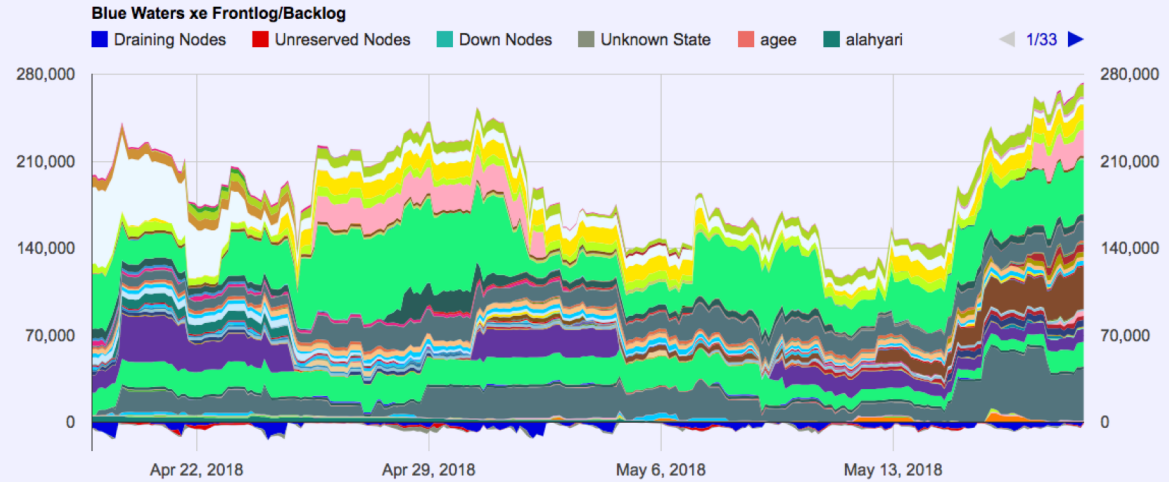


XK Utilization for this Period



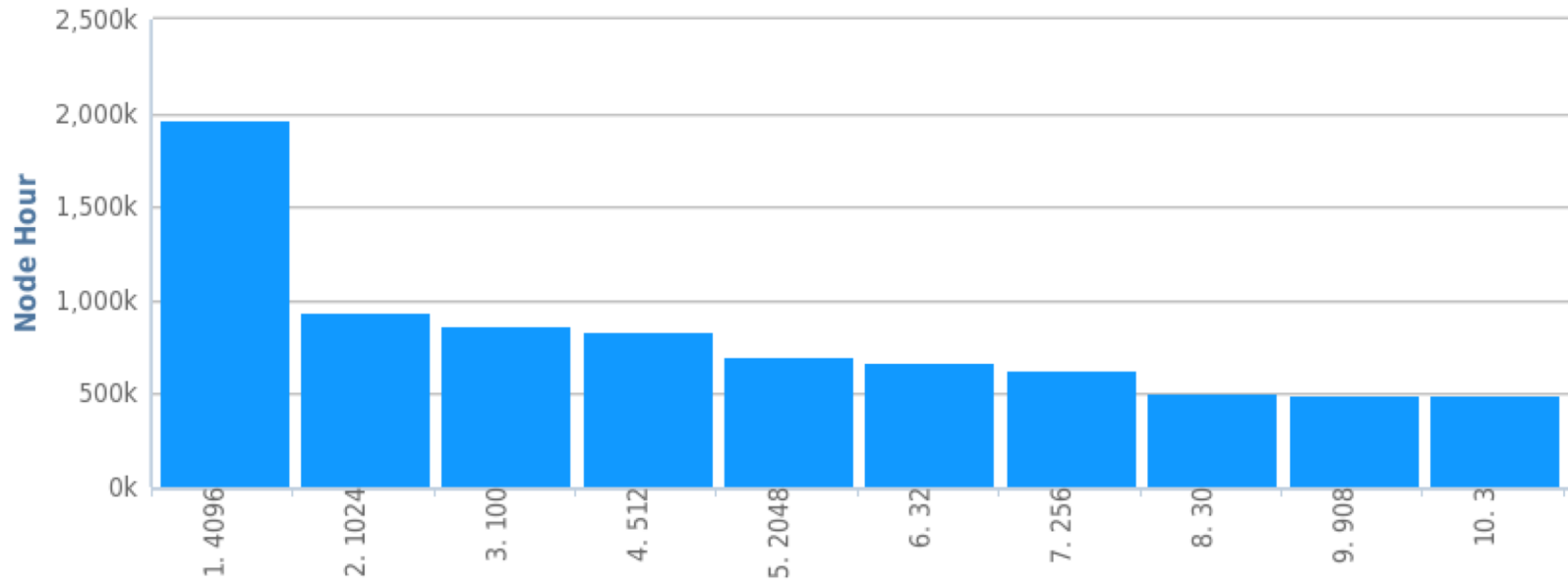
Backlog

- 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.
- Several allocations end by 5/31.



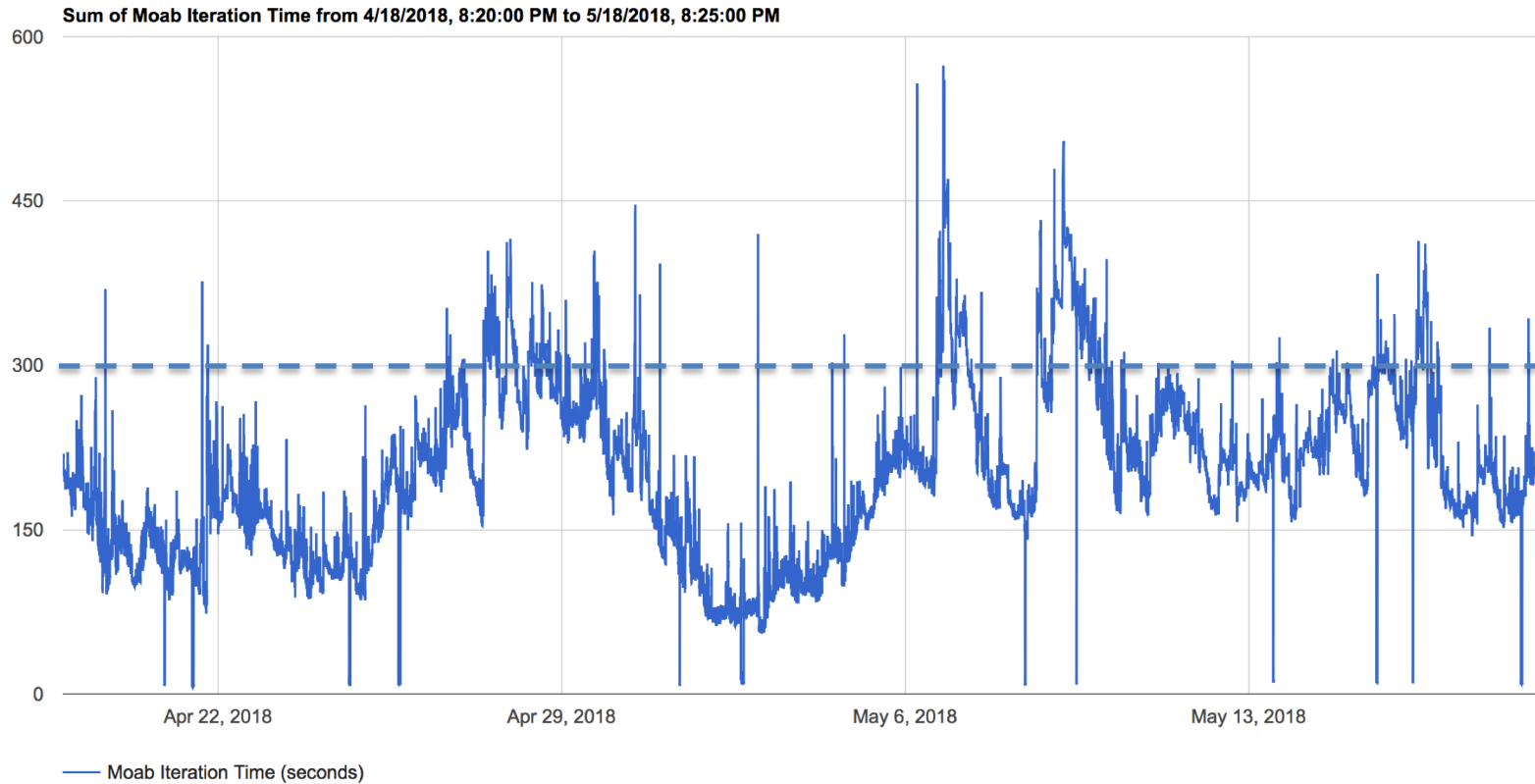
Workload Details

Node Hours: Total: by Node Count



- Less contribution from full system jobs.
- Data combines XE and XK jobs.
- Last 30 days.

Job scheduler iteration time



- Working to keep iteration time < 300 seconds.

Blue Waters Weekly Webinar Series

- Practice and Experience in Advanced Research Computing: PEARC18 - Wednesday, May 23, 2018.
- Charm++ - Wednesday, May 30, 2018.
- Beyond Exascale: The Future of HPC - Wednesday, July 11, 2018.

- 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.


NCSA GPU Hackathon - September 10-14

- Team applications for the NCSA [Blue Waters GPU Hackathon](https://bluewaters.ncsa.illinois.edu/bw-hackathon-2018) are now open.
- Will take place September 10-14, 2018 at NCSA.
- The deadline to apply is June 18, 2018.
- Prior GPU experience is not required, as those selected will be paired with experienced mentors who will teach them how to leverage accelerated computing in their own applications or further optimize their codes.
- <https://bluewaters.ncsa.illinois.edu/bw-hackathon-2018>

XSEDE Training Events

- <https://portal.xsede.org/course-calendar>

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](https://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