BLUE WATERS
SUSTAINED PETASCALE COMPUTING

Blue Waters User Monthly Teleconference

Agenda

- Changes and Recent Events
- Utilization and Usage
- Opportunities
- PUBLICATIONS!

Blue Waters 2017 Symposium Highlights

Mini-tutorials
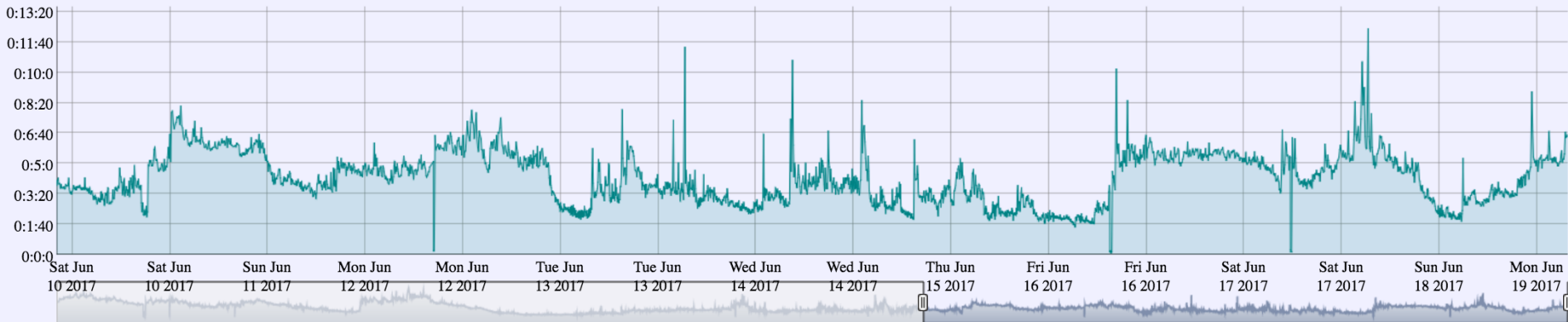
Bob Panoff's dinner talk

Audience participation with Alan Alda Center's Laura Lindenfeld

Recent and Future Changes

- Proposed scheduler configuration changes to address long iteration times
  - two-node minimum
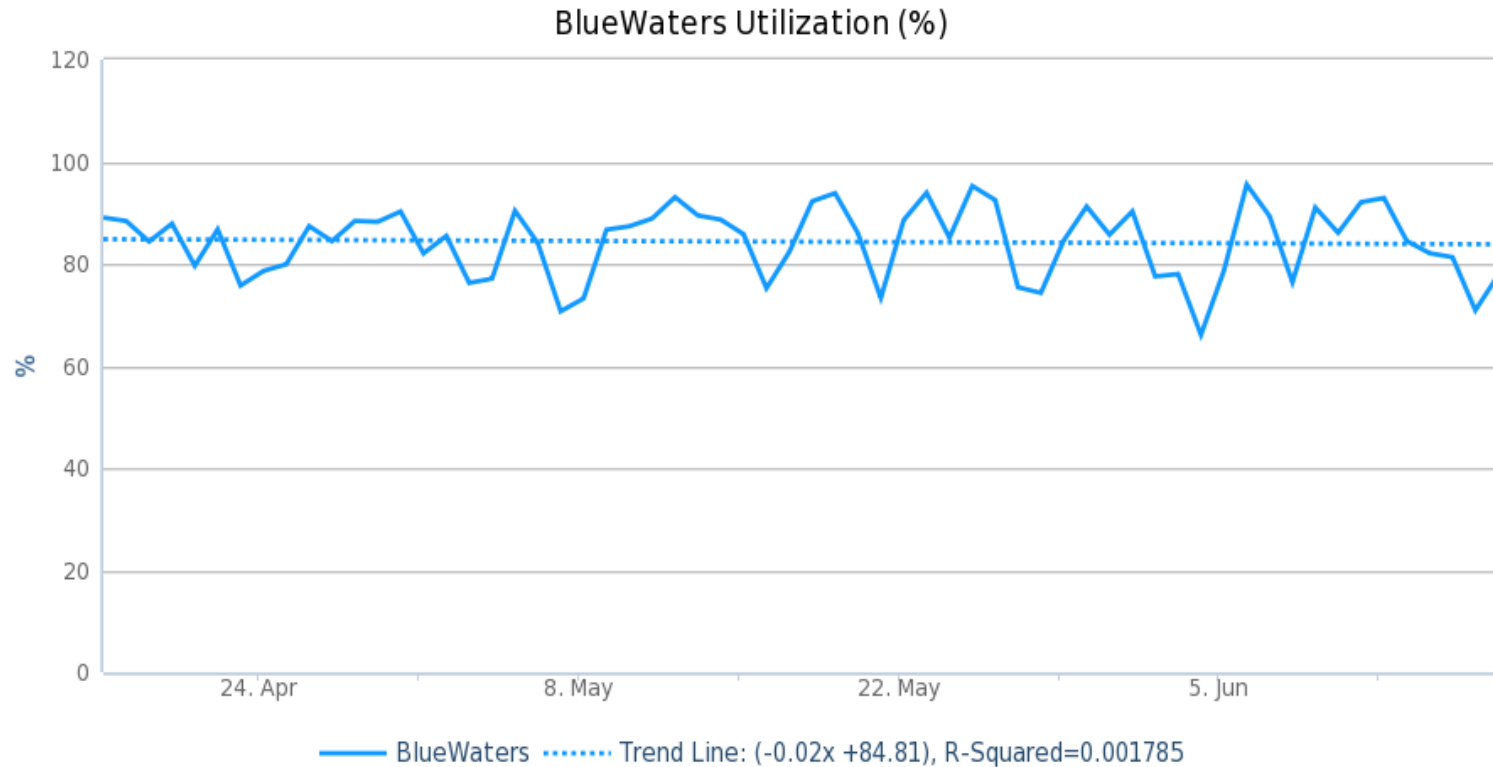 - adjust the number of jobs running per user

Recent and Future Changes

- Login node instability
  - Patch has been applied to resolve 'ps hang'.

Recent Events (since last User call)

- No outage events!
- No notices of interruption!
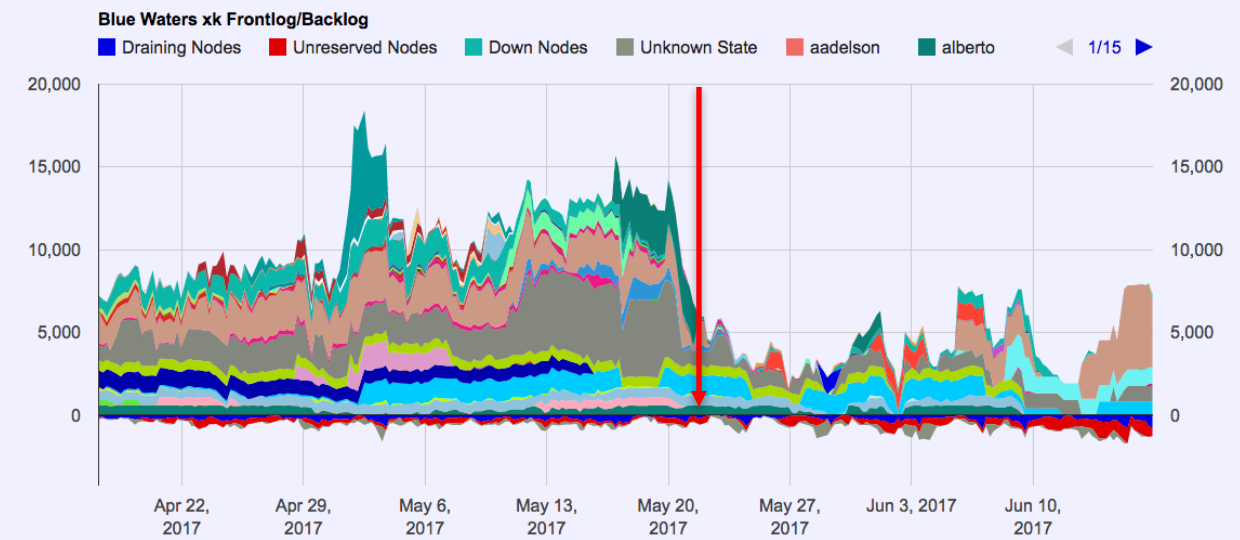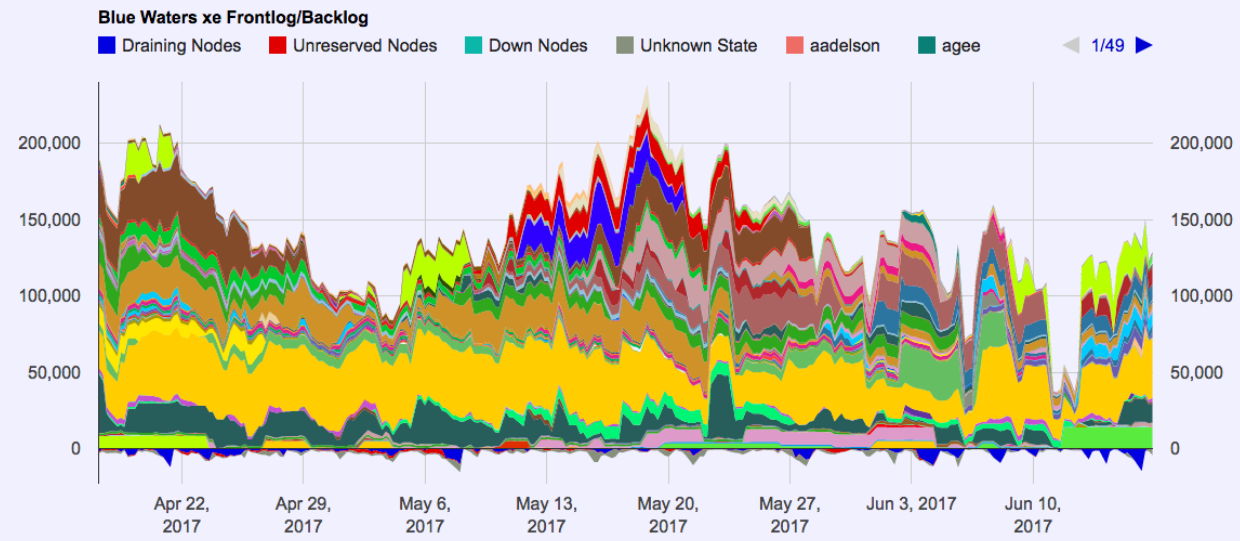
Usage, Utilization and other Items

- Utilization since last BW User Call (April 17)

BlueWaters Utilization (%)

Trend Line: (-0.02x +84.81), R-Squared=0.001785

2017-04-17 to 2017-06-17 Src: HPcDB. Powered by XDMoD/Highcharts
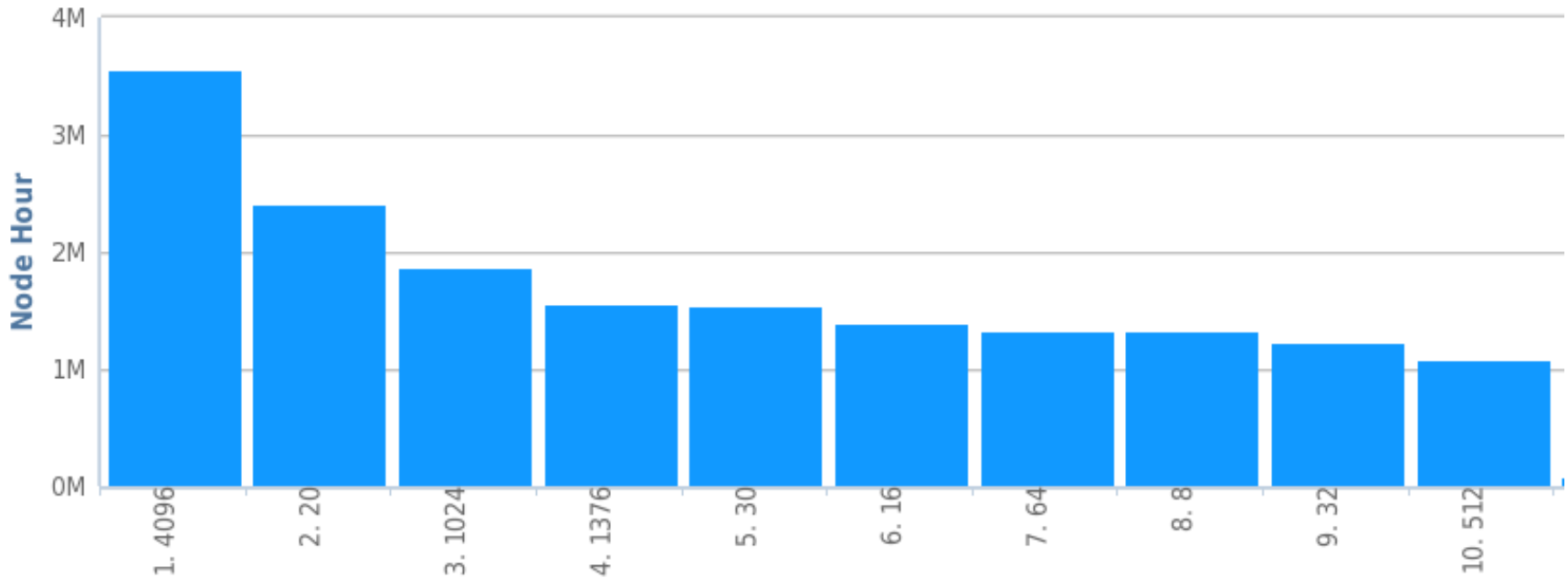
Backlog

- Since BW User Call 04/17

- 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.

- **Drop in XK backlog.**

- Several large PRAC projects expired 5/31.

Workload Details

Node Hours: Total: by Node Count

- Data combines XE and XK jobs.
- Since last BW User Call (April 17)
- Single node jobs drops below 10th place!

Blue Waters Weekly Webinar Series

- Started Wednesday, March 1. Webinars will begin at 10 a.m. Central Daylight 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](#).

June 21, 2017	Hyperglyphs	Jeff Sale
June 28, 2017	VIKING	Ilia Solov'yov

PEARC17 (formerly XSEDE)

- PEARC17 is for everyone who cares about the challenges in using and operating advanced research computing.

  Practice & Experience in Advanced Research Computing

- July 9–13, 2017 — New Orleans — Sustainability, Success and Impact

Scaling to Petascale Institute

- JUNE 26 – 30, 2017

- Only non-training account registrations available.

- Free and open to anyone.

- Organized by ALCF, Blue Waters/NCSA, NERSC, OLCF, Stony Brook University, TACC

- Target: scaling computational codes and/or data analysis programs to petascale-class resources.

Towards a Leadership-Class Computing Facility - Phase 1

https://nsf.gov/funding/pgm_summ.jsp?pims_id=503148

NSF proposal for the acquisition and deployment of a High Performance Computing (HPC) system, called the Phase 1 system, with the option of a possible future upgrade to a leadership-class computing facility. The Phase 1 system will serve two important and complementary purposes:

1. It will serve as a robust, well-balanced, and forward-looking computational asset for a broad range of research topics for which advances in fundamental understanding require the most extreme computational and data analysis capabilities; and

2. It will serve as an evaluation platform for testing and demonstrating the feasibility of an upgrade to a leadership-class facility five years following deployment.

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