Agenda

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

• 10/15 - 7:33 AM power loss to one feed (of 4) into the NPCF causing 3 rows to fail 27 minutes before maintenance was to start.
Recent Changes

- 10/15 - Security Update
  - Apply patch to address Mutagen Astronomy exploit.
  - Recently changed stack limits will revert to previous settings.
- Limit on open files set to 64K on compute nodes and MOM nodes. Used to be 1K/4K and 100000 respectively.
Outstanding Issues

• CUDA 9.1 and GCC 6.3
  • broken std::tuple with GCC 6
  • Work-around is to drop to GCC 5.3.
    • bwpy 2.0 pre-release for testing.
  • We are working with Cray and NVIDIA to get fix from CUDA 9.2 back-ported.
Upcoming Changes

• Preparing to make PE 18-06 default. See [PE Changes page](https://portals.org) on the portal.
• For testing ...
  • module unload PrgEnv-cray; module load PrgEnv/cray-18_06-cuda-9.1
  • module unload PrgEnv-gnu; module load PrgEnv/gnu-6.3.0-cuda-9.1
  • module unload PrgEnv-intel; module load PrgEnv/intel-18.0.3.222-cuda-9.1
  • module unload PrgEnv-pgi; module load PrgEnv/pgi-18.3.0-cuda-9.1
• Add as needed
  • OpenACC
    • module add craype-accel-nvidia35
  • CUDA
    • module add cudatoolkit/9.1.85_3.10-1.0502.df1cc54.3.1
  • HDF5
    • module add cray-hdf5/1.10.2.0
    • module add cray-hdf5-parallel/1.10.2.0
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.
- Decreased backlog. Good turn-around time for jobs.
Workload Details

- Large contribution from 1K to 3K XE jobs, 1200 XK jobs.
- Data combines XE and XK jobs.
- Last 30 days.
Job scheduler iteration time

Sum of Moab Iteration Time from 9/17/2018, 8:24:00 PM to 10/12/2018, 8:29:00 PM

Moab Iteration Time (seconds)
XSEDE Training Events

- [https://portal.xsede.org/course-calendar](https://portal.xsede.org/course-calendar)
  - November 6, OpenACC.
NVIDIA Online Training Event

• **New OpenACC Online Course Will Help You Quickly Accelerate Your Code on GPUs**
  
  • October 18, 2018 – Analyzing and Parallelizing with OpenACC
  
  • October 25, 2018 – GPU Programming with OpenACC
  
  • November 1, 2018 – Optimizing and Best Practices with OpenACC
Blue Waters Weekly Webinar Series

THE NEXT SCHEDULED WEBINARS

- October 10, 2018: Developing Interactive Parallel Workflows in Python using Parsl
- October 24, 2018: Introduction to Performance Tuning with Cray Perftools
- November 7, 2018: Introduction to NVIDIA Nsight Systems - A Performance Analysis Tool
- November 21, 2018: Getting started with WDL and Cromwell for workflow management on multiple platforms

- 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.
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