Agenda

• NSF Dear Colleague Letter
• Recent Events and Changes to Blue Waters
• Usage, Utilization and other Items
• Upcoming Opportunities
• Request for publications!
The two NSF leadership-class computing resources, Blue Waters and Frontera, will be available for allocation with an award start date of April 1, 2019. Allocations to be done via supplemental funding requests. Blue Waters
- Up to 125 million node-hours will be available across five to six supplemental funding requests. Frontera
- 34 million node-hours will be available across 15 to 20 supplemental funding requests.
- “For full consideration, supplemental funding requests should be submitted no later than February 1, 2019.”

PIs interested in submitting supplemental funding requests must consult with the cognizant NSF program director for this DCL: Edward Walker.
Recent Events and Outages

- 12/27 – power interruption.
- 1/12 – Reboot to clear IO issue after LNET node failure.
Upcoming outage

- 1/30 – 2/1 – Nearline maintenance. No access to ncsa#Nearline during maintenance.
Recent Changes

• No changes to report.
Outstanding Issues

• CUDA 9.1 and GCC 6.3
  • broken std::tuple with GCC 6
  • Patch to gcc/6.3.0, as a work-around.
  • Known issue with optimization flag: -ftree-loop-vectorize
    • Observed 20% performance impact when disabled.
    • Plan to disable by default. User can re-enable.
Upcoming Changes

• Preparing to make PE 18-06 default. See PE Changes page 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 21 days since last user call
Backlog

- 21 days of last period.
- 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.
- Still seeing red.
Workload Details

- Fewer, full XE jobs. Larger XK jobs.
- Data combines XE and XK jobs.
- 21 days since last user call.
Job scheduler iteration time

Sum of Moab Iteration Time from 12/17/2018, 12:13:00 PM to 1/19/2019, 12:18:00 PM

Moab Iteration Time (seconds)
XSEDE Training Events

- February 12-13 - Big Data
- March 5 - GPU Programming Using OpenACC
- April 2-3 - Big Data

- https://portal.xsede.org/course-calendar
Blue Waters Weekly Webinar Series

- January 23, 2019: [Cloud Resource Federation for Galaxy](#), Enis Afgan, Research Scientist, Johns Hopkins University
- February 6, 2019: [Teaching Computational Scientists to Build and Package Open-Source Software](#), Prentice Bisbal, Lead Software Engineer, Princeton Plasma Physics Laboratory
- February 13, 2019: [3D Scientific Visualization with Blender](#), Brian R. Kent, Scientist, National Radio Astronomy Observatory

- 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