BLUE WATERS

SUSTAINED PETASCALE COMPUTING

Blue Waters User Monthly Teleconference

NCSA NSF GREAT LAKES CONSORTIUM FOR PETASCALE COMPUTATION CRAY

Agenda

- Upcoming changes to the programming environment.

- Save the date for Blue Waters Advanced User workshop: the week of October 13th.

- SC14 Conference

- XSEDE and VSCSE training opportunities.

- Requests for Science Successes.
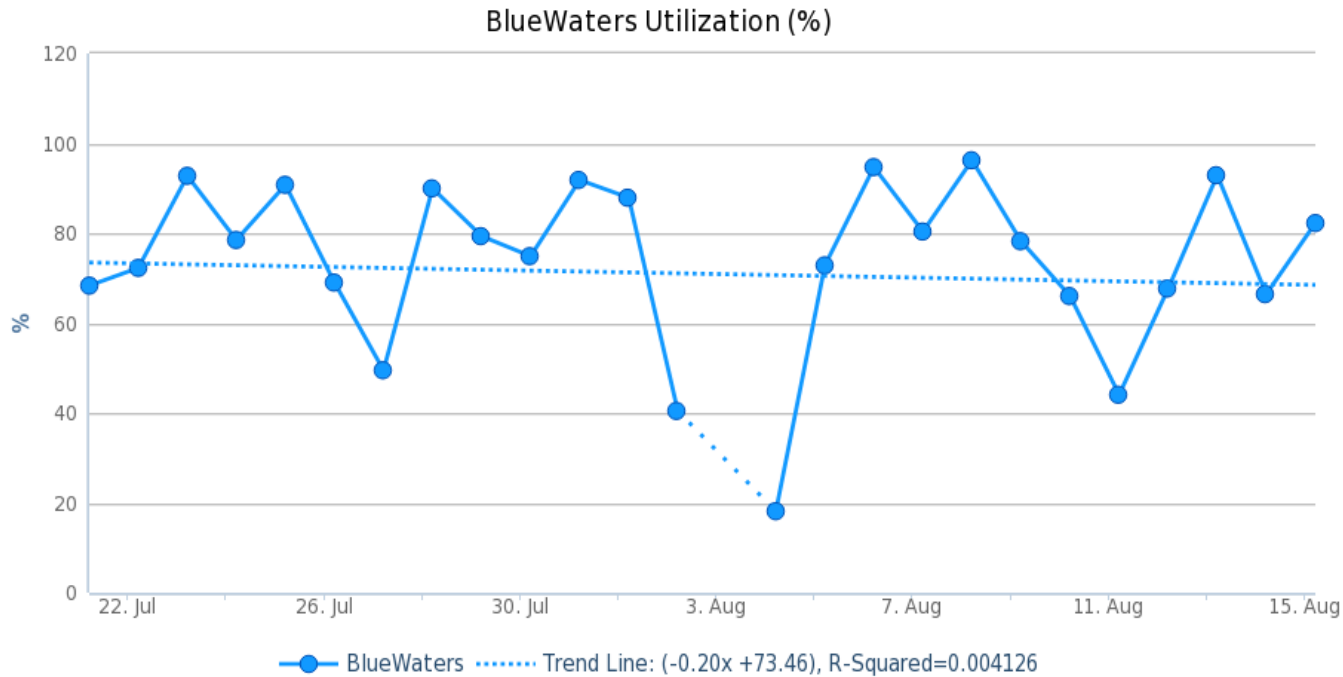
Recent System Events

- Some normal file system failover events
    - As discussed in prior BW User Call, exit code for IO calls need to be checked, retry when needed.
    - Reads/Writes in progress will hang till failover clears.
    - New file access could result in error. Need to retry.

Recent Changes

- Previously
  - Change to showq reporting
    - To report nodes and not processors. Change your scripts if needed.
  - Change to file access time on login nodes
    - Enable ATIME mounting. Accessing file via usual commands will change file atime.

System Utilization

- Utilization since last BW User Call (July 21)

Upcoming Events

- Additional testing for OS upgrade 8/25 – 8/26.
  - Move to newer kernel from 2.6.32 ➜ 3.0
  - Move to Lustre 2.5 client (wide striping)

Subsystem / Services	Duration	Availability
Compute	8/25 (06:00am) - 8/26 (02:00am)	Unavailable
Login / Filesystem	8/25 (06:00am) - 8/26 (02:00am)	Unavailable
Scheduler	8/25 (06:00am) - 8/26 (02:00am)	Unavailable
GO endpoint ncsa#BlueWaters	8/25 (06:00am) - 8/26 (02:00am)	Unavailable
GO endpoint ncsa#Nearline	8/25 (06:00am) - 8/25 (10:00am)	Unavailable

  - Take advantage of backfill before the reservation.

Upcoming changes

- Planned Programming Environment (PE) changes
    - Next PE will require rebuild of MPI based applications.
    - Please try the new release. See
        https://bluewaters.ncsa.illinois.edu/pe-updates
    - MPT 7.0.X release adheres to the "MPICH ABI Compatibility Initiative" - https://www.mpich.org/abi
    - Fixes to some bugs from initial release.
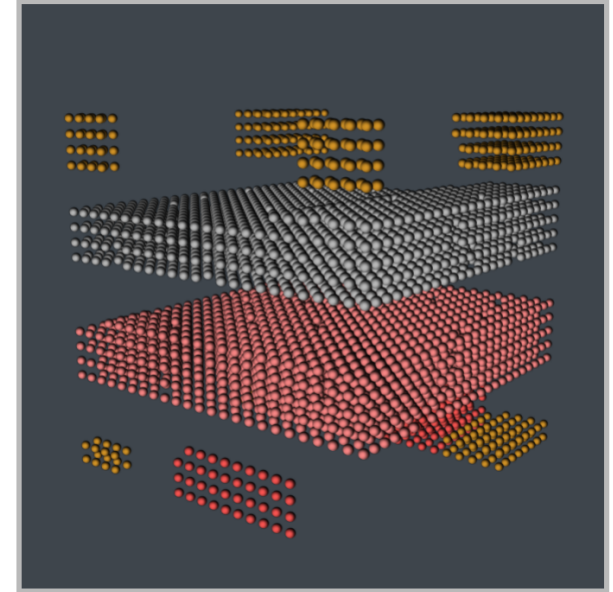
New software

- IDL – Everything but the license is installed .
- Intel compiler – Purchase in progress.

Data Sharing Service Update

- Phase 1 based on Globus Online.
- Finalizing procedural aspects.
    - DOI
    - Metadata Collection

Topology Aware Scheduling Update

- Workload testing complete.
- Final acceptance testing:
  - Functional testing of services
  - API feature validation
- BOF at SC14

Blue Waters Advanced User Workshop

- The week of October 13th at NCSA.
- More hands-on section oriented
  - Monday: Cray Tools: Reveal and Topaware
  - Tuesday: Allinea DDT and PGI
  - Wednesday: NVIDIA and Cray
- Bring your own code.
- Tie in with YT visualization workshop from Matthew Turk (NCSA).

VSCSE and XSEDE Events

VSCSE

- Science Visualization - August 25-26
  - NCSA hosting local site
  - http://www.vscse.org/summerschool/2014/
- Check out XSEDE training events at 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 🙂), 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

Future Topics?

- Please send us your suggestions on topics for future teleconferences / webinars