Agenda

- Moving Data: Nearline Best Practices
- Recent Events and Changes to Blue Waters
- Usage, Utilization and other Items
- Upcoming Opportunities
- Request for publications!
Nearline Use Best Practices

- Reminder: Nearline will be offline 12/19/2019.
- Consider short-term use such as for checkpoints.
- Bundle or package many, smaller files into fewer, larger files using utilities like tar, or similar.
- Prefer files in the GB range (1-1000).
- How much and how many files in Nearline project space?

https://bluewaters.ncsa.illinois.edu/usage-project-details?project=<psn>
Globus Online Use Best Practices

- When moving lots of data off of Nearline
  - Globus Online (GO) retries on endpoint errors
    - Check your remote endpoint quota
    - Check for endpoint expiration
  - Too many remote endpoint errors
    - Consider transfer from Nearline to Blue Waters scratch.
    - Then from Blue Waters scratch to remote site.
  - For sync diff comparison: use size and date rather than checksum for large files.
  - Monitor your transfer activity [https://app.globus.org/activity](https://app.globus.org/activity)
Globus Online Use Best Practices

• Ask us for assistance with Nearline when:
  • Deleting millions of files.
  • Moving files internally.
Globus Online Use Best Practices

- When using Globus Connect Personal client, consider the following when transferring:
  - Speed will depend on the smaller resource: desktop, laptop, VM.
  - Smaller network "pipe" and slower IO speeds.
  - LAN might not be in good shape.
Globus Python SDK or Python CLI

- Use Python SDK or Python CLI to script or automate transfer processing.
- [https://docs.globus.org/cli/](https://docs.globus.org/cli/)
Recent Events and Outages

- 5/12/2019 – Complications from an OSS failover.
Upcoming Changes or Outages

• NPC building power maintenance
  • Sunday, June 23rd.
Upcoming Changes

- See https://bluewaters.ncsa.illinois.edu/pe-updates.
Usage, Utilization and other Items

- Overall Utilization since last user call

BlueWaters Utilization (%)

- XE Utilization for this Period
- Full System Utilization for this Period
- XK Utilization for this Period

BlueWaters Trend Line: (0.21x +81.40), R-Squared=0.023797

2019-04-16 to 2019-05-17 Src: HPcDB. Powered by XMDom/Highcharts
Backlog

- Since last user call.
- 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.

- Change in project workload profiles.
Workload Details

- Data combines XE and XK jobs.
- Since last user call.
Job scheduler iteration time

- Keeping iteration time mostly under 5 minutes.
XSEDE Training Events

• https://portal.xsede.org/course-calendar
Petascale Computing Institute

- August 19-23, 2019
- Still looking for additional host sites.
- Keynote speaker: Gordon Bell.

https://bluewaters.ncsa.illinois.edu/petascale-computing-2019
Blue Waters Symposium

- When: June 3-6, 2019
- Where: Sunriver, OR.
- Serves as the PRAC annual meeting.
- Registration emails sent February 15th.
Blue Waters Weekly Webinar Series

• 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