NUG Monthly Meeting

15 July, 2021
Today's plan

- Interactive - please participate!
  - Raise hand or just speak up
  - **NERSC User Slack** (link in chat), #webinars channel

- Agenda:
  - Win-of-the-month
  - Today-I-learned
  - Announcements/CFPs
  - Topic of the day: **Energy Efficiency**
  - Coming meetings: topic suggestions/requests?
  - Last month's numbers
Win of the month

Show off an achievement, or shout out someone else's achievement, e.g.:

- Had a paper accepted
- Solved a bug
- A scientific achievement (maybe candidate for Science highlight, or **High Impact Scientific Achievement award**)
- An **Innovative Use of High Performance Computing** (also a candidate for an award) ([https://www.nersc.gov/science/nersc-hpc-achievement-awards/](https://www.nersc.gov/science/nersc-hpc-achievement-awards/))

Please let us know of award-worthy work from you or your colleagues - tell us what you did, and what was the key insight?
Today I learned

What surprised you that might benefit other users to hear about? (and might help NERSC identify documentation improvements!)

Eg:

- Something you got stuck on, hit a dead end, or turned out to be wrong about
  - Give others the benefit of your experience!
  - Opportunity to improve NERSC documentation
- A tip for using NERSC
- Something you learned that might benefit other NERSC users

"If we knew what it was we were doing, it would not be called research, would it?" - Einstein
Announcements and CFPs

See weekly email for these and more:

- New Slurm behavior: jobs running multiple things per node now need `--overlap`
  
  ```
  #SBATCH -N 1
  srun -N1 -n1 --overlap ./thing1 &
  srun -N1 -n1 --overlap ./thing2 &
  wait
  ```

  (most "typical" jobs are not affected by this)

- Upcoming Cori OS update - September
  - New Programming Environment (default modules)
  - Statically-linked executables likely to need re-link
Announcements and CFPs

See weekly email for these and more:

- **CFPs:**
  - 8th Workshop on Accelerator Programming using Directives (WACCPD 2021)
  - Parallel Applications Workshop, Alternatives to MPI+X (at SC21)
  - SuperCheck-SC21

- **Training:**
  - ECP-IDEAS webinar: Multi-Institutional Scientific Software Development, August 4
  - CUDA Multithreading with Streams, July 16
  - CMake Training, August 23-26
See weekly email for these and more:

- Software stack: E4S Version 21.02 Now Available on Cori
  - 45 E4S packages, including Adios2, HDF5, PAPI, SLEPc, SuperLU, Tau, and UPCXX
  - *module load load e4s/21.02* - makes E4S modules visible with "module avail", sets up a Spack environment
Energy Efficiency at NERSC
Coming up

August: (tentatively) - walk through the ERCAP process

Topic requests/suggestions?

We'd love to hear some lightning talks from NERSC users about the research you use NERSC for!
### Last month's numbers - June

#### Scheduled and overall availability:

<table>
<thead>
<tr>
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<th>Scheduled</th>
<th>Overall</th>
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</thead>
<tbody>
<tr>
<td>Cori</td>
<td>99.8%</td>
<td>99.8%</td>
</tr>
<tr>
<td>HPSS</td>
<td>100%</td>
<td>99.5%</td>
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<tr>
<td>CFS</td>
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Cori: 2 outages (2 unscheduled totaling 6 hrs 40 min)

- System degraded due to cabinet hardware failure
Last month's numbers - June

Cori Utilization: 94.4%
Large jobs: 33.6%

New Tickets: 694
Closed Tickets: 631
Backlog at 1 May: 529
Thank You