NUG Monthly Meeting

21 April, 2022

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: **Remote development in NERSC Shifter containers with Visual Studio Code -** with Oliver Schulz from Max Planck Institute for Physics
  - 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/)

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

Today I learned

- Emailed in: (Thanks Koichi)
  - SLURM change after March Cori update: `#SBATCH --mail-type=END` no longer mails when job ends unsuccessfully - need to change this to `#SBATCH --mail-type=END,FAIL`
  - SLURM 2-job limit for accruing priority past the scheduling threshold
    - All of your jobs are still eligible for backfill, but only the first 2 are considered for scheduling
    - SLURM does 2 passes over the queue:
      - above a priority threshold it attempts to schedule each job within a "next 4 days" window (only 2 jobs per user are considered here)
      - below that threshold it scans for jobs that it can start immediately without altering the schedule

Announcements and CFPs

See weekly email for these and more:

- The PEARC22 (Practice and Experience in Advanced Research Computing, July 10–14, 2022, in Boston MA) Student Program applications close May 1
  - Highlights include an orientation day, a resumé clinic, mentor-protege pairing, an exhibitor Q&A, and a new tabling event called "The Village!", a friendly place to hang out and compare notes
  - See https://pearc.acm.org/pearc22/call-for-participation/pearc22-sp/ for more and to apply

Announcements and CFPs

See weekly email for these and more:

- The Student Cluster Competition at SC22 is now accepting team applications - applications close April 30
    - The SCC, and IndySCC, are designed to introduce undergraduate college and high school students to the challenge and excitement of working in HPC. It's a fun, frenetic 48 hours of cluster-building and workload-running while handling real-world operational challenges.
    - See https://sc22.supercomputing.org/program/studentssc/student-cluster-competition/ for more details and to apply

Announcements and CFPs

See weekly email for these and more:

- NERSC Summer internships
  - Are you, or do you have, a student looking for a summer internship? NERSC has several projects, check https://www.nersc.gov/research-and-development/internships/ for more information
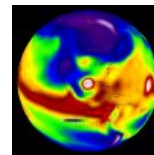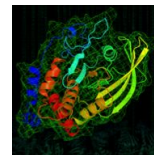- NERSC Codee Analyzer training to parallelize your applications, Apr 26-27

Announcements and CFPs

- Quarterly allocation reductions scheduled for May 19 (see next week's Weekly Email for details)

- Coding for GPUs Using Standard Fortran, May 13
  - https://www.nersc.gov/users/training/events/coding-for-gpus-using-standard-fortran-may2022
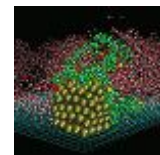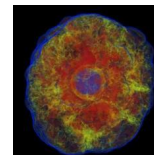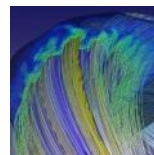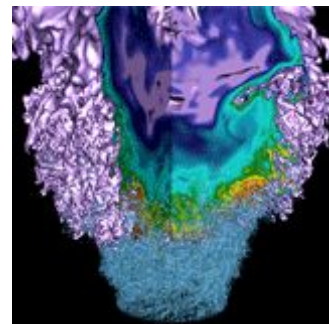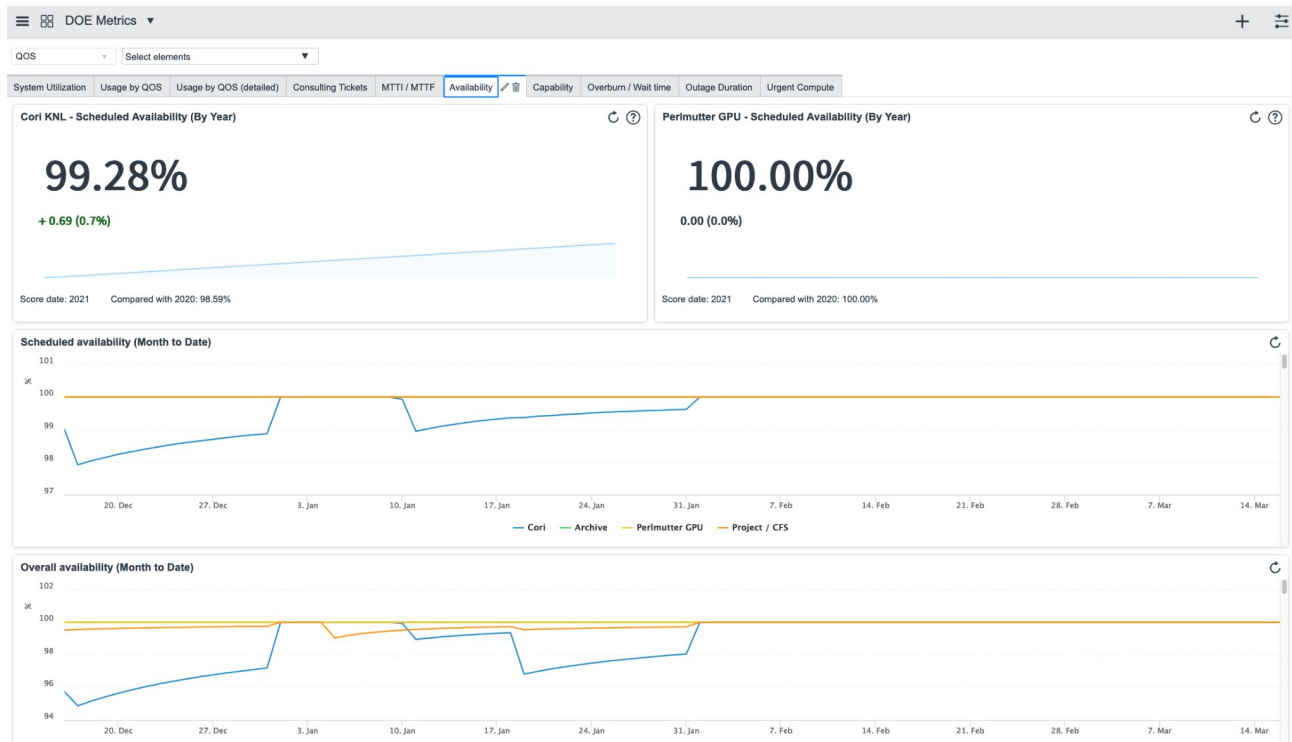
- Others?

Metrics of interest

Metrics of interest

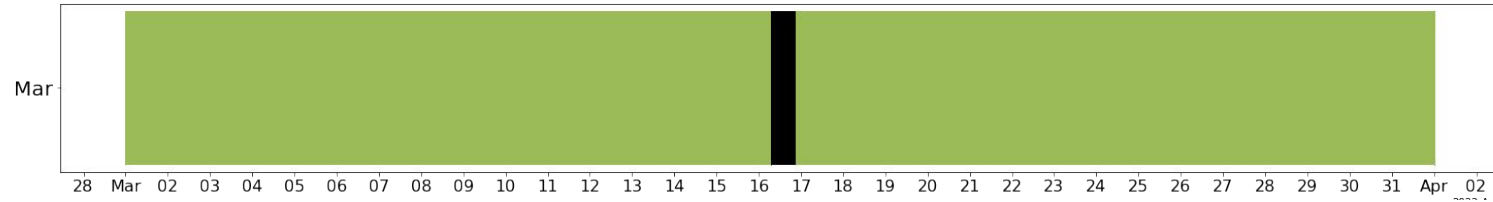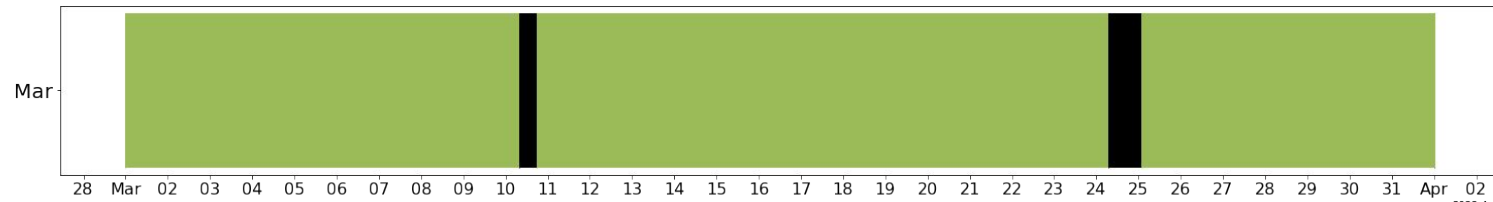Discussion Question: What metrics are interesting to people here?

Metrics of interest - downtimes

Cori: 1 outage (scheduled maintenance)

Perlmutter: 2 outages (scheduled maintenances)

Metrics of Interest
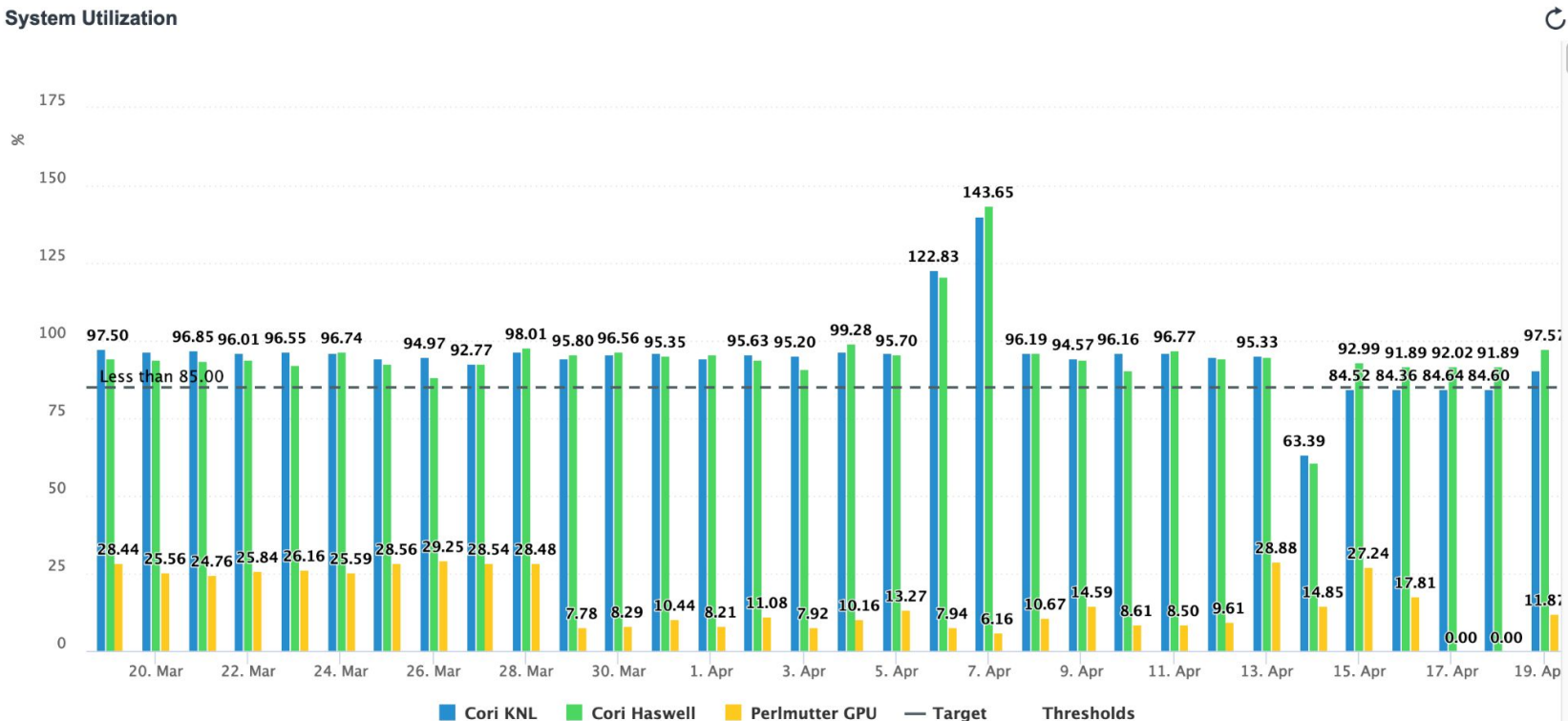
Metrics of Interest

Metrics of Interest

User Tickets Created per Month (NERSC Program)

Legend:
- (empty)
- Account Support (Account Support)
- Allocations
- Data/IO
- Datawarp
- ERCAP
- Hardware
- Running Jobs
- Login Node
- Network
- Other
- Performance
- Programming
- Scratch/Slurm Hanging
- Security
- Software
- Account Support (support)
- System Outage
- Consulting Triage
- Workstation Support

Group by: Category

Metrics of Interest

Cori KNL - Capability Metric

Jan 31
Cory KNL – Capability Metric: 38.99%
Click to open Analytics Hub

— Cory KNL – Capability Metric
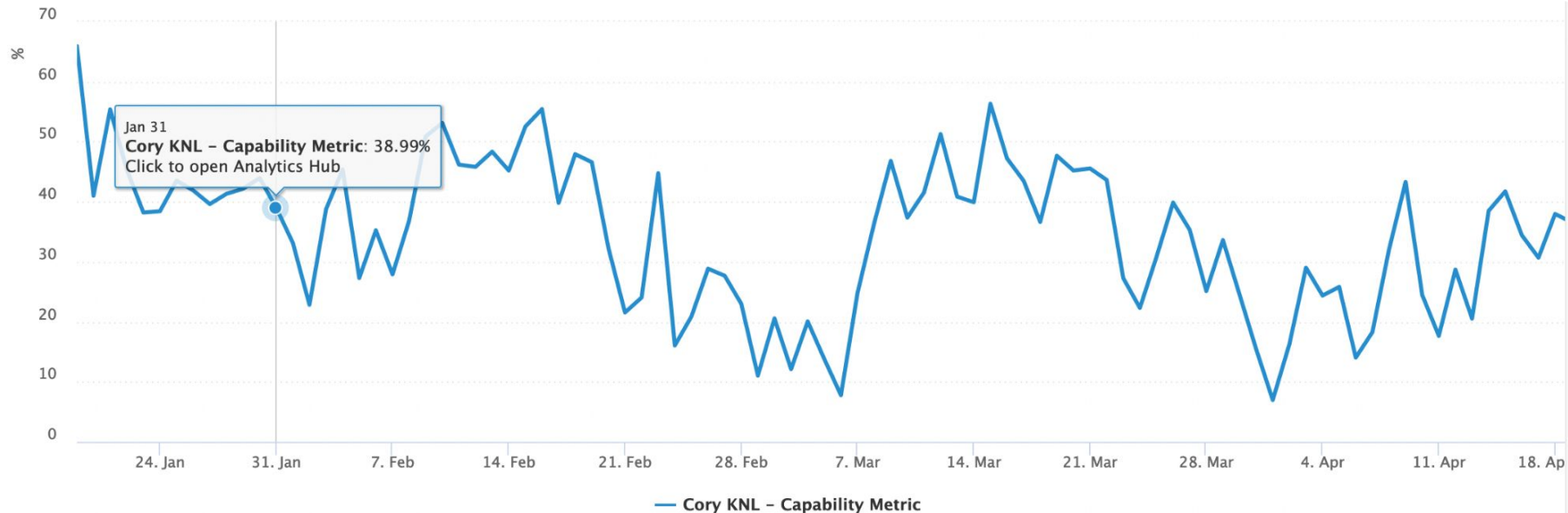
Metrics of Interest

Cori KNL - Average Wait Time for Regular

Cori Haswell - Average Wait Time for Regular

Metrics of Interest

Discussion Question:

What metrics are interesting to people here?

Coming up

Upcoming topics:

NERSC Annual User Survey - a first look at some outcomes

HPSS Interfaces

Data Citation and DOIs

We'd love to hear more lightning talks **from NERSC users** about the research you use NERSC for!

Nominate a topic at https://forms.gle/WjYx7zV7SAz2CaYz7

Thank You