

AY2021-2022 Transition



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Outline



- **AY2022 Allocations**
- **AY Transition Process**
- **On the AY2022 Start Day**
- **Changes in AY2022**
- **Discontinued Users**

AY2022 Allocations



- **AY2022: Jan 19, 2022 - Jan 17, 2023**
 - AY2021 allocation hours do not carry over
- Allocation award emails go out the week of Dec 13
- Each project has **separate CPU and GPU awards**
 - CPU allocation for Cori and Perlmutter CPU
 - GPU allocation for Perlmutter GPU
 - Minimum amount is 100 **Node Hours** (new unit) each for CPU and GPU time
- AY22 charge on Cori starts on Jan 20
- Perlmutter remains free of charge until further notice

What happens at AY Transition?



- IRIS needs to be updated with the new AY2022 allocation data: projects, users, CPU, GPU and HPSS storage allocations awarded, etc.
- Computational systems need to sync up with the IRIS active users data and clean up batch jobs that do not have AY2022 allocations
- System maintenances
- Some other changes: policy, software, ...
- More information:
 - <https://www.nersc.gov/news-publications/announcements/allocation-year-transition-2021-to-2022/>

Shortly before AY2022 starts ...



- No new user account creation/validation: Jan 12-18, 2022
- No new AY2021 project requests (via ERCAP) after Oct 14, 2021
- Before end of AY2021 (deadline is Jan 18, last day of AY21):
 - **Pls must nominate** which users will **continue** in project in AY2022
 - **Pls must decide** which users will have “**premium**” QOS access for AY2022
 - Instructions at:
<https://docs.nersc.gov/iris/iris-for-pis/#set-your-user-list-for-the-next-allocation-year> (API in IRIS via “Roles” tab for this feature will be available soon)
- Pls/users may want to check “premium” jobs currently in the queue and update to “regular” QOS to avoid:
 - unwanted 2X charge (if such jobs run in AY22)
 - jobs being deleted (if the user is not continued or enabled for premium)

On the AY2022 Start Day (1)



- **IRIS: Jan 19, 7am - 9:30 am**
 - Logout and login to reflect new AY data
- **Cori: Jan 19, 7am - 8 pm, scheduled maintenance**
- **Perlmutter: No downtime**
 - May experience some Slurm commands slowness while syncing with IRIS
- **All other systems and services are up**

On the AY2022 Start Day (2)



These jobs will be deleted on Cori and Perlmutter:

- Jobs associated with non-continuing projects
- Jobs associated with a continuing project that the user is no longer a member of for AY2022
- "premium" jobs from users who no longer have access to the "premium" QOS
- "overrun" jobs
- Held jobs older than 12 weeks

New allocation units, charging factors



- In AY2022, each project has separate CPU and GPU allocations
- Charging factors are based on Perlmutter node hours
 - Charging factor for Perlmutter CPU is 1.0
 - Charging factor for Perlmutter GPU is 1.0
- CPU charging unit changed from “NERSC hours” to “CPU Node hours”.
- One "CPU Node Hour" is the equivalent of 400 "NERSC Hours"

	Charging Unit	Cori Haswell	Cori KNL	Perlmutter CPU
AY2022	CPU Node Hours	0.34	0.2	1.0
AY2021	NERSC Hours	140	80	N/A

New default python module



- On Jan 19, 2022, python default module on Cori will change from 3.8-anaconda-2020.11 to 3.8-anaconda-2021.05. Perlmutter already has the new default version.
- pip packages installed via --user will be installed at \$HOME/.local/cori/3.8-anaconda-2021.05 (defined by \$PYTHONUSERBASE).
- Updates in python/3.8-anaconda-2021.05 include:
 - Mamba 0.7.3 (a faster alternative to conda)
 - netcdf4 1.5.3
 - mpi4py 3.1.1
 - authlib 0.15.4 (support for NERSC's Superfacility API)
- Python documentation
<https://docs.nersc.gov/development/languages/python/nersc-python>

Cori user environment change in March

The NERSC logo is located in the top right corner. It features the word "NERSC" in a bold, white, sans-serif font, set against a dark blue background with a bright light flare effect emanating from behind the letters.

- On March 16, 2022, Cori will have an OS upgrade from CLE7.0UP01 to CLE7/0UP03
- New PE CDT default from cdt/19.11 to cdt/21.09
 - New default cray-mpich, cray-libsci, cray-netcdf, cray-hdf5-parallel, gcc, cce, perftools, etc.)
- New default intel compiler version from 19.0.3.199 to 19.1.2.254
- Statically compiled codes need to be relinked. Recommend to rebuild all applications.
- NERSC supported software will be rebuilt
- This is our last planned major OS upgrade and default PE version change before Cori retires, except as needed for critical security or other concerns

Discontinued users



- Users with no active project are “discontinued”, effective AY2022 starts on Jan 19, 2022
- Have limited login access to authorized systems until Feb 21, 2022 to clean up data, but can not run batch jobs
- Have write access to HPSS until Feb 21, 2022, then read-only access and delete access until July 21, 2022



Thanks!
Questions?

