

NERSC Users Group Monthly Meeting

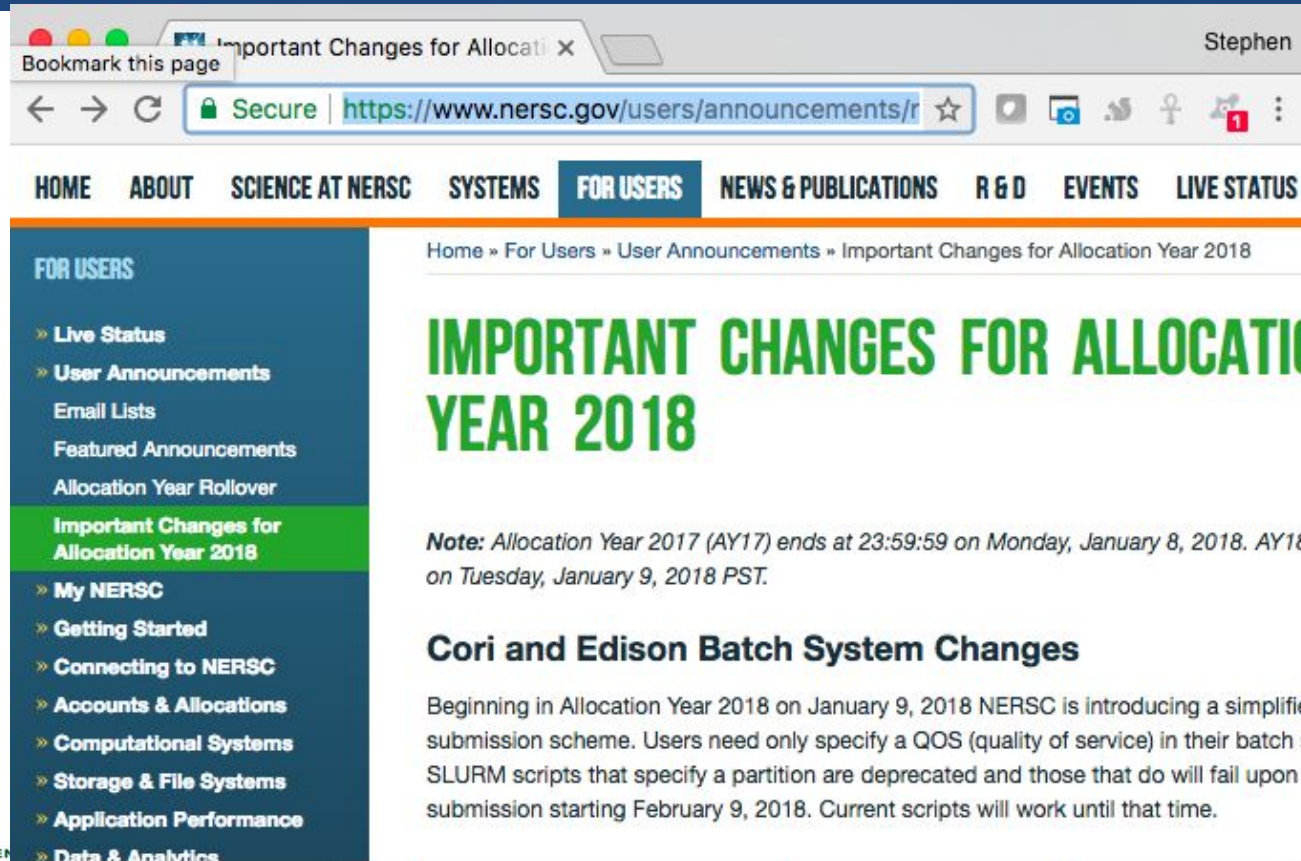
January 18, 2018

1. Announcements and Outages
 - a. Feb 6: Quarterly Maintenance
2. AY2018 updates
 - a. Batch system changes
 - b. PrgEnv update policy
 - c. KNL mode changes limited to reservations
 - d. New HPSS charging policy
3. Multi-factor authentication
4. NERSC User Survey

Feb 6 Quarterly Maintenance

NERSC systems will be unavailable during a quarterly maintenance on February 6 between 6am and 7pm

This includes \$HOME and /project filesystems



Important Changes for Allocation Year 2018

Bookmark this page

Secure | <https://www.nersc.gov/users/announcements/r>

Stephen

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IMPORTANT CHANGES FOR ALLOCATION YEAR 2018

Note: Allocation Year 2017 (AY17) ends at 23:59:59 on Monday, January 8, 2018. AY18 on Tuesday, January 9, 2018 PST.

Cori and Edison Batch System Changes

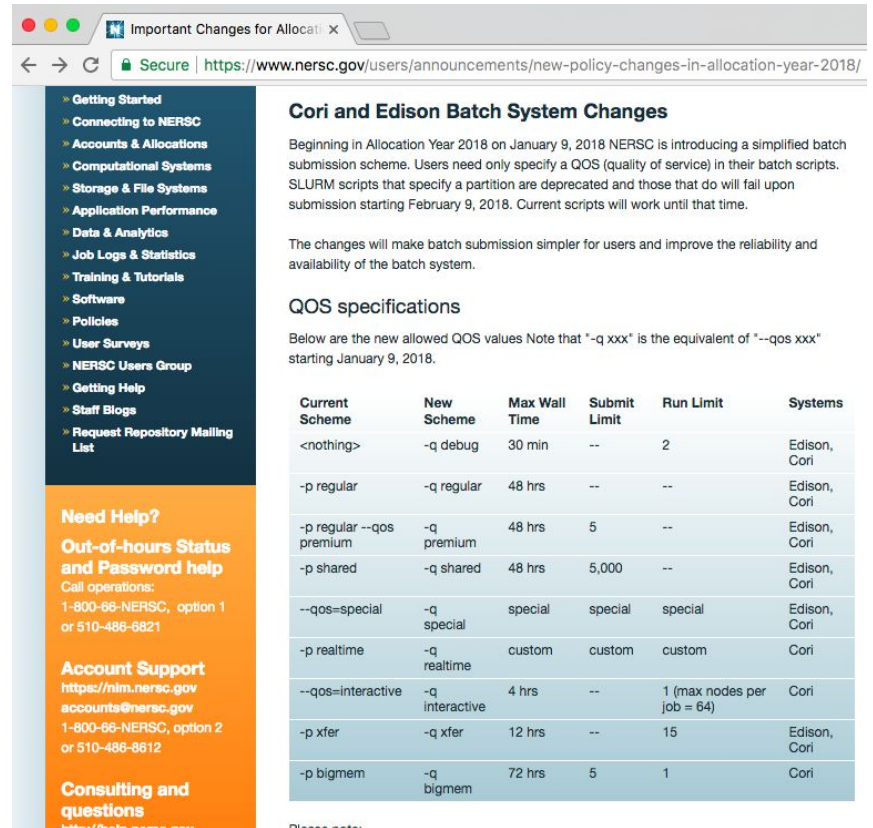
Beginning in Allocation Year 2018 on January 9, 2018 NERSC is introducing a simplified submission scheme. Users need only specify a QOS (quality of service) in their batch SLURM scripts that specify a partition are deprecated and those that do will fail upon submission starting February 9, 2018. Current scripts will work until that time.

AY2018 updates: Batch system changes

Simplified job submission:

- No more partitions
- Everything must have a QoS (-q)

ie: ask for the resources you need, no need to guess which partition to target



Important Changes for Allocation Year 2018

Secure | <https://www.nersc.gov/users/announcements/new-policy-changes-in-allocation-year-2018/>

- › Getting Started
- › Connecting to NERSC
- › Accounts & Allocations
- › Computational Systems
- › Storage & File Systems
- › Application Performance
- › Data & Analytics
- › Job Logs & Statistics
- › Training & Tutorials
- › Software
- › Policies
- › User Surveys
- › NERSC Users Group
- › Getting Help
- › Staff Blogs
- › Request Repository Mailing List

Cori and Edison Batch System Changes

Beginning in Allocation Year 2018 on January 9, 2018 NERSC is introducing a simplified batch submission scheme. Users need only specify a QOS (quality of service) in their batch scripts. SLURM scripts that specify a partition are deprecated and those that do will fail upon submission starting February 9, 2018. Current scripts will work until that time.

The changes will make batch submission simpler for users and improve the reliability and availability of the batch system.

QOS specifications

Below are the new allowed QOS values Note that "-q xxx" is the equivalent of "--qos xxx" starting January 9, 2018.

Current Scheme	New Scheme	Max Wall Time	Submit Limit	Run Limit	Systems
<nothing>	-q debug	30 min	--	2	Edison, Cori
-p regular	-q regular	48 hrs	--	--	Edison, Cori
-p regular --qos premium	-q premium	48 hrs	5	--	Edison, Cori
-p shared	-q shared	48 hrs	5,000	--	Edison, Cori
--qos=special	-q special	special	special	special	Edison, Cori
-p realtime	-q realtime	custom	custom	custom	Cori
--qos=interactive	-q interactive	4 hrs	--	1 (max nodes per job = 64)	Cori
-p xfer	-q xfer	12 hrs	--	15	Edison, Cori
-p bigmem	-q bigmem	72 hrs	5	1	Cori

Please note:

Aims:

- Predictable update schedules
- Same version remains available throughout an AY

Policy:

- New versions installed quarterly, starting at AY rollover
- Default remains for 6 months
- 3 versions: current default, previous default, latest
 - "normal use", "require stability", "early adopters"

AY2018 updates: PrgEnv update policy



PS:

The screenshot shows a web browser window with the URL <https://www.nersc.gov/users/computational-syst...>. The page title is "SAVE AND RESTORE PROGRAMMING ENVIRONMENT VERSIONS". The breadcrumb trail is "Home » For Users » Computational Systems » Cori » Programming » Save and restore programming". The main content area contains the following text:

The default programming environment on Cori changes over time. Usually the Cray Develop Toolkit (CDT) version is upgraded about every six months on Cori so that users can get benefit from the enhanced software features and performance. However, if you need to compile a code with a specific version of CDT which is not the default version anymore, or if your code works best with a mix of default and non-default software modules and you want to recompile with the same set of modules, then you can use the Cray provided cdt modules or the module snapshot feature to restore the compilation environment where your code was built previously.

Module Snapshot

The module subcommand "snapshot" is available starting from modules/3.2.10.5. The command captures the currently loaded modules and saves the list into a file for later restoration. Here is how to use it:

To save the current module environment into a file, do

The left sidebar menu includes: FOR USERS, Live Status, User Announcements, My NERSC, Getting Started, Connecting to NERSC, Accounts & Allocations, Computational Systems, Cori, Updates and Status, Cori Timeline, Cori Configuration, Getting Started, Programming, Quick Start for Edison Users, Compiling Codes on Cori, Save and restore programming environment versions (highlighted), Programming models, and Running Jobs.

- Most jobs use "quad,cache already" - easiest
 - So most users will not be affected
- "Flat" mode requires NUMA-aware code
 - and in most cases provides only a small performance benefit => insufficient to justify the time and disruption of node reboots
- For jobs that *really* need other modes, **mode changes will still be allowed in reservations**

HPSS will now charge based only on volume of storage in GBs

- Previously used SRUs which were a function of volume, IO transactions, and number of files
- However, we don't recommend storing "active" data in HPSS, it's very inefficient. Please contact us if you find yourself needing to do this
- At some point in the future, when your usage is over quota, you will only be able to access HPSS read only

AY2018 updates: New HPSS charging policy



- Space charges are still spread evenly across repos, you can adjust these in NIM

Usg Z. Testaccount | Logout | Change My Password

Quick Search: Repository Go

NERSC **NIM**

NIM Home My Stuff Search Reports Actions

Welcome to the NERSC Information Management (NIM) system. Use this interface to find information about NERSC users and repositories. Authorized managers can also modify information and create or review allocation requests. Staff-only options are in gold.

Last NIM login on 01/18/2018 09:58:12
Your password will expire on 12/23/2044

NERSC System Status: **MOTD**

System Login Failures Cleared:
No Login Failures

MPP Available Rep

HPSS Available Re

Repo 7-day R

Actions

- NIM Bug
- ERCAP requests
- Change Default MPP Repo
- Change Default PDSF
- Group
- Change Default JGI Share
- Change SRU Proj Pct
- Change HPSS Test
- Change NIM Password
- Set Security Questions
- Change Shell
- MFA Opt In/Out
- Appropriate Use Policy

Account Usage Logins by Host Unix Groups Roles Contact Info Grid Certificates SSH Keys MFA Tokens

Usg Z. Testaccount

Change HPSS SRU Project Percentages

Login	Repo	Proj %
usgtest	matcomp	<input type="text" value="0"/>
	nstaff	<input type="text" value="100"/>
Running Total of Proj %		100
<input type="button" value="Save All Rows"/>		

Multi-factor Authentication (MFA)

Abe Singer, NERSC Networking and Security

- Now open - please fill at least some it it out!
 - Helps us to evaluate where to focus effort in the next year
- Access via ServiceNow (next slide) or <https://goo.gl/fxebNM>
- Survey closes **Jan 26**

NERSC User Survey - <https://goo.gl/fxebNM>



Take survey | NERSC Help Desk

Stephen

Secure https://nersc.service-now.com/na...to.do?uri=%2Fassessment_take2.do%3Fsysparm...

NERSC NERSC Help Desk

Stephen Leak (sleak)

NERSC user survey 2017

Submit Save Cancel

Welcome to the 19th annual NERSC User Survey. This survey covers the 2017 calendar year. Your responses help us judge the quality of our services, give DOE feedback on how NERSC is doing, and point us to areas in which we can improve. We will not disclose your identity outside of NERSC; we use it only for demographic reporting.

We appreciate you taking time to fill out this survey. We'd like as much feedback as possible, but you do not need to fill out every question. **At a minimum, please fill out the 'Overall Satisfaction with NERSC' section.** You can save your progress at any time by clicking on the 'Save' button at the top or bottom of the survey. When you are finished please click the 'Submit' button.

The survey closes on January 26.

Overall Satisfaction with NERSC

	Very Satisfied	Mostly Satisfied	Somewhat Satisfied	Neutral	Somewhat Dissatisfied	Mostly Dissatisfied	Very Dissatisfied
* Overall satisfaction with NERSC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* NERSC services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* NERSC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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