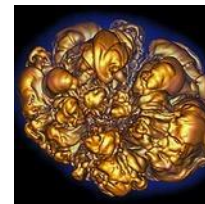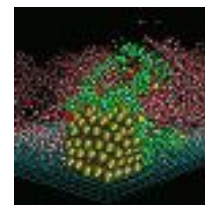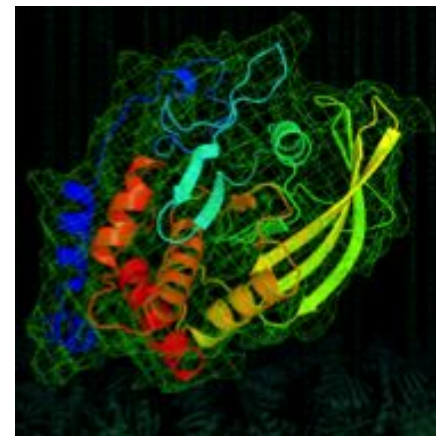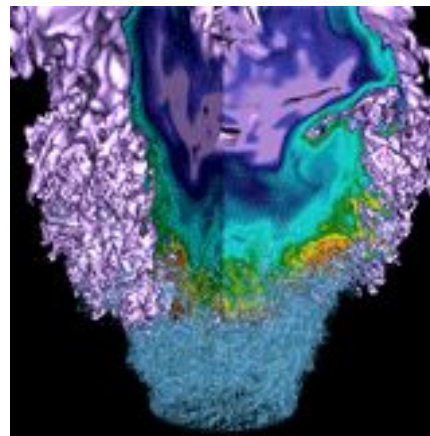# Accounts and Allocations
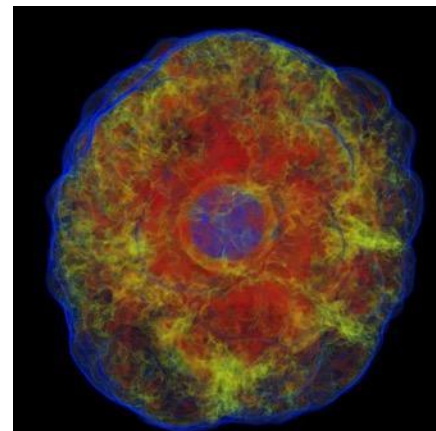
Clayton Bagwell
NERSC User Engagement Group

NERSC New User Training
June 21, 2019

Accounts vs. Allocations

There are two types of *accounts* at NERSC:

1. Your personal, user account
   - Associated with your *login* or *user name*
   - Provides *authentication* (personal identity) and *authorization* (which resources you can access)
   - You can request an account on your own or your project's Principal Investigator (PI) or Project Manager can request an account for you
   - Three primary account *roles*
     - PI, Project Manager, User

2. A Project allocation account, or *repository* (aka *repo*)
   - Like a bank account you use to "pay" for computer time and archival storage
   - Managed by a Principal Investigator (PI) and (optionally) one or more Project Managers.
   - All MPP users belong to at least one repo
   - An individual user may belong to more than one repository
     - But only one *default repo*

NIM – NERSC Information Management

- **Web-based tool for user and repo management**
  - Check daily balance, change password, change login shell, update contact information, etc.

https://nim.nersc.gov

NERSC Information Management

Please sign in

NERSC Username:

NIM Password:

MFA OTP:
(One-Time Password)

Reset your NIM password. | Forgot your username? | Lost your tokens? | Sign in as Staff

Log In

NIM Controls

- **Drop-down menus**

  - – Actions menu
    - Change password, change default login shell, generate HPSS token, change default repo

- **Tabs**

Account Usage

Account Usage Summary

Resrc	Repo	User_id	Login	Login Type	User Hrs Used	User Charged	Avg CF	% Used	% Allowed	User Balance	Last Charged On	Base Repo?	Dflt Now?
MPP	mpccc	17931	dpturner	Authorized	6,219	6,178	1.0	0.1	10	993,822	08-SEP-13	Y	Y
MPP	matcomp	17931	dpturner	Authorized	1,430	1,430	1.0	0.0	1.0	228,570	05-SEP-13	N	N
MPP	usplanck	17931	dpturner	Authorized	447	447	1.0	0.0	5	384,553	03-SEP-13	N	N

Account Policies

- **All users must sign an Appropriate Use Policy form**
  - This is incorporated into the Self-Service account request form

https://nim.nersc.gov/Appropriate_Use_Policy.php

- **Password policies**
  - Must change password every 6 months
  - **Do not share passwords**
  - **Do not email passwords**

- **Account locked after 5 consecutive login failures**
  - Login to NIM to clear login failures
  - If you have forgotten your password, there is a link on the NIM login page that will lead you through the process of resetting a password
  - Call NERSC Account Support for more help

Password Rules

- **Must contain**
  - *at least* eight characters
  - *at least* one each of:
    - UPPER-case letter
    - lower-case letter
    - numeric digit
    - "special" character (! @ $ % ? & etc.)
- **Good**

  j#KO1vz$euP@!udls
- **Bad**

  P@ssw0rd
- **One possible method**
  1. computer security is very important for nersc users
  2. csivifnu
  3. C$1v1fnu

Multi-Factor Authentication

- **Provides an additional security layer to accessing NERSC**
- **Required for ALL users**
- **Generate token in NIM**
    - Synch with an OTP generator like Google Authenticator, Authy, Duo, etc
- **Online instructions**
    - http://www.nersc.gov/users/connecting-to-nersc/mfa/

Generating a Token

Allocations Process - PIs

- **PIs apply through *Energy Research Computing Allocations Process* (ERCAP)**
  - Accessed through the NERSC Help Desk at:
    - https://ercap.nersc.gov
  - Renew current projects annually, typically late summer
  - Science objectives, approach, and resource requirements
    - Computer time and archival storage space
  - Reviewed and awarded by DOE Science Offices
  - Most allocations are awarded in late Fall (December)
    - Allocation year starts in January
    - Small Exploratory (startup) allocations are awarded throughout the year with DOE approval

Allocations Process - NERSC

- **Amount of MPP time available**
  - Approximately 9.23 billion MPP hours AY19
  - 80% to "DOE Mission Science"
  - 10% to ASCR Leadership Computing Challenge (ALCC)
  - 10% to "Director's Reserve"
    - NERSC Exascale Science Application Program (NESAP)
    - Exploratory, Education, staff, etc.

Quarterly Allocation Reductions

- **We encourage you to plan your computing usage and use your time consistently**
- **We withdraw time on a Quarterly basis for under-usage**
  - http://www.nersc.gov/users/accounts/allocations/allocation-reductions/
  - Time goes back to the DOE Office of Science program for re-distribution
- **Only from DOE Mission Science projects**
  - NOT ALCC, Director's Reserve, Exploratory, or Education

Running Out of Time

- **User**
  - PI determines how much of the repo's MPP allocation each user can use
    - Either as a % of Total allocation or a fixed # of hours
  - If user runs out of time
    - Submitted jobs go into the scavenger queue if repo cannot pay for job
    - Contact PI to increase percentage or # of hours
- **Repo**
  - If repo runs out of time, PI should contact appropriate DOE Science Office Allocations Manager
    - Each Office typically holds a certain amount of time in reserve
  - Any jobs submitted will run in scavenger (low priority)

Resources

- **Self Help**

https://ercap.nersc.gov
https://nim.nersc.gov
https://nim.nersc.gov/nersc_account_request.php
http://www.nersc.gov/users/accounts/
http://www.nersc.gov/users/accounts/user-accounts/
http://www.nersc.gov/users/accounts/allocations/
http://www.nersc.gov/users/accounts/user-accounts/how-usage-is-charged
http://www.nersc.gov/users/connecting-to-nersc/mfa/
http://www.nersc.gov/users/data-and-file-systems/hpss/hpss-charging/
http://www.nersc.gov/users/accounts/allocations/allocation-reductions/

Resources cont.

- **NERSC Account Support**
  - http://help.nersc.gov
  - accounts@nersc.gov
  - 1-800-66-NERSC, menu option 2 or 510-486-8612

- **NERSC Allocation Support**
  - http://help.nersc.gov
  - allocations@nersc.gov
  - 1-800-66-NERSC, menu option 2 or 510-486-8612

Thank you.