Accounts and Allocations

Clayton Bagwell
NERSC User Engagement Group

NERSC New User Training
March 21, 2018
There are two types of accounts at NERSC:

1. Your personal, private account
   - Associated with your login or user name
   - Provides authentication (personal identity) and authorization (which resources are accessible)
   - You can request an account on your own or your project’s Principal Investigator (PI) or Proxy can request an account for you
   - Four primary account roles
     - PI, PI Proxy, 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 PI Proxies.
   - 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
NIM Controls

• Drop-down menus

– Actions menu
  • Change password, change default login shell, generate HPSS token, change default repo, opt in/out of MFA

• Tabs
## Account Usage Summary

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

• All users must sign 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#K01vz$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
- Opt In/Out of MFA via NIM
- Generate token
- Online instructions
  - http://www.nersc.gov/users/connecting-to-nersc/mfa/
Allocations Process - PIs

- PIs apply through *Energy Research Computing Allocations Process (ERCAP)*
  - Accessed through the NERSC Help Desk at:
    - [https://ercap.nersc.gov](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 AY18
  – 80% to “DOE Base”
  – 10% to ASCR Leadership Computing Challenge (ALCC)
  – 10% to “Director’s Reserve”
    • NERSC Exascale Science Application Program (NESAP)
    • Exploratory (Startups), staff, Education, etc.
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

http://www.nersc.gov/users/accounts/
http://www.nersc.gov/users/accounts/user-accounts/
http://www.nersc.gov/users/accounts/allocations/
https://nim.nersc.gov
https://nim.nersc.gov/nersc_account_request.php
http://www.nersc.gov/users/connecting-to-nersc/mfa/
http://www.nersc.gov/users/accounts/user-accounts/how-usage-is-charged
https://ercap.nersc.gov
Resources cont.

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

- **NERSC Allocation Support**
  - [http://help.nersc.gov](http://help.nersc.gov)
  - [allocations@nersc.gov](mailto:allocations@nersc.gov)
  - 1-800-66-NERSC, menu option 2 or 510-486-8612
Thank you.