Accounts and Allocations

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NERSC New User Training
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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 Project Manager can request an account for you
   • Four 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
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

<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>dptturner</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>dptturner</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>dptturner</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 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#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
- Required for ALL users
- Generate token
- Online instructions
  - [http://www.nersc.gov/users/connecting-to-nersc/mfa/](http://www.nersc.gov/users/connecting-to-nersc/mfa/)
Generating a Token

FreeOTP Token (Chrome)

<table>
<thead>
<tr>
<th>User</th>
<th>Serial Id</th>
<th>Token Description</th>
<th>Fails</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOTP22856A68</td>
<td>my phone</td>
<td>0</td>
</tr>
</tbody>
</table>

**OATH Soft Token**

QR-Code for installing the OATH compatible Soft Tokens (FreeOTP, Google Authenticator and other apps using the 'otpauth://' syntax).

This will be the only time you will be able to scan this code into your Google Authenticator (or similar app), or use the URL string below.

For other apps that require manual configuration, choose the "OTP seed" tab above.

```
otpauth://totp/NERSC-TOTP22856A68?
secret=TOTP22856A68
```
• 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/allocation-reductions/
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/accounts/allocations/allocation-reductions/
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

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Thank you.