Migrating to Project-Based Directories in HPSS

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What are we doing?

- We are moving from user-centric areas
  - /home/$USER

- To project areas
  - /hpss/prod/PROJECT

- The goal is to make HPSS' directory layout more like Spider/GPFS

- Organize data in HPSS by Project

- Planning on mid to late January to make the change

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Why are we doing this?

- User access is based on project membership

- Confusion between user data and project data.

- Better understand data in HPSS

- Attempt to help users find data (data is restricted to specific project areas)

- Allow PIs to track and manage data better

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How are we doing this?

- You will still have a home directory
  - Home directory will contain symlinks to project areas
    - /home/$USER/PROJECT -> /hpss/prod/PROJECT
  - Will not be able to write to your /home/$USER area

- Users with existing data will not be affected at this time

- New Users and Existing Users with no data in their home directory will be affected

- Directories will be scanned on a regular basis
  - Empty directories will be converted
  - Asking all users to move data to the appropriate project areas

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Project Areas will change as well

- Mimic GPFS/Alpine directory layout
  - /hpss/prod/PROJECT/proj-shared
  - /hpss/prod/PROJECT/users/$USER
  - /hpss/prod/PROJECT/world-shared (only for category 1 projects)
- For existing projects:
  - Project Areas already exist in /proj
  - Existing data in /proj/PROJECT copied to /hpss/prod/PROJECT/proj-shared
    - Symlink /proj/PROJECT -> /hpss/prod/PROJECT/proj-shared

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Who is Affected?

- New Users will get this new layout by default

- Current Users that do not have data stored in their home directory will be switched to the new layout

- Legacy home directories (HPSS home directories that do not have current active users associated with it) will be moved to a private area
  - Data will not be accessible
  - We can easily retrieve and relocate the data as needed

- Current users with data in their HPSS home directory (either files or directories) will not be changed at this time

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What is the migration plan for existing users?

- We will be working with users to have them move their data in /home/$USER to the appropriate /hpss/prod/PROJECT area

- Once your home directory is 'empty' and scanned, your home directory will be automatically converted to the new layout
  - If you notice any issues, please contact the OLCF User Assistance Group help@olcf.ornl.gov

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```
O:[/home/griffith]: ls -l
/home/griffith:
lrwxrwxrwx    1 root     root                17 Dec 10 23:11 gen101@ -> /hpss/prod/gen101
lrwxrwxrwx    1 root     root                17 Dec 10 23:11 stf008@ -> /hpss/prod/stf008

O:[/home/griffith]: cd stf008
O:[/home/griffith/stf008]: ls -l
/home/griffith/stf008:
drwxrwx---    2 root     stf008          512 Dec 10 23:13 proj-shared
drwxr-x---    3 root     stf008          512 Dec 10 23:16 users
drwxrwxr-x    2 root     stf008           512 Dec 10 23:14 world-shared


O:[/home/griffith/stf008]: cd users/griffith
O:[/home/griffith/stf008/users/griffith]: ls -l
/home/griffith/stf008/users/griffith:
-rw-------    1 griffith  hpss            1628 Dec 10 23:18 log.ini
```

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Questions?

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