Zeus User Meeting

March 28th, 2012

Agenda

- Upcoming downtimes
- General Information
- Known Issues
- Protecting restricted data
- Q&A
- Accessing HSMS with HSI

Downtime Schedule

- April 10th – Facility Outage
  - Zeus and HPSS will be unavailable
  - Downtime will be start early (7-8am EDT)
  - Downtime will last 8-10 hours
- Additional system work during downtime
  - Install additional software on compute nodes
  - Reconfigure Moab
  - Remount Lustre filesystems to support protecting restricted data through access control lists (ACLs)
  - Additional system work
  - Change network switches, retest fabric
- If this additional work cannot be completed on April 10th there will be an additional downtime, most likely the 11th

General Information

- Use qsub (not msub)
  - During the system wide downtime, system will be configured to block all use of msub
- Permanent IDL license has been obtained
  - Will be installed really soon
- Permanent Totalview license has been obtained
  - Is now working from compute nodes

Transitional directory links

- The following transitional directory links have been created:
  - /com
  - /cots
  - /ncep1
  - /ncep2
  - /ptmp
  - /stmp
  - /nwprod
- This links will be available for no more than 120 days to support transition.

Define these paths as variables in your script and reference the paths. DO NOT HARDCODE paths across your scripts. This is not portable.

https://nesccdocs.rdhpcs.noaa.gov/wiki/index.php/Using_environment_variables_for_paths

Outstanding Issues

- Details of issues and current status can be found at:
  - https://nesccdocs.rdhpcs.noaa.gov/wiki/index.php/Known_Issues
  - We'll take a look at this site…

Protecting Restricted Data

- The method previously used on Vapor and CCS to set group ownership to rstprod to protect restricted data works on Zeus today, but is NOT how it will work long term.
- We have a working solution, but senior management asked for a solution that works on Zeus, Gaea, CCS, and future upgrades.
- This will probably be implemented using scripts where the interface will be the same but the actual mechanics will change.
- This has to happen in the next few weeks. If no common solution is found, we will move forward with our working solution (not based on *chmod rstprod*).
- Updates will be provided over the next few weeks.

Any Questions?

Accessing the HSMS using HSI

- The hierarchical storage management system (HSMS) for long term retention of data is based on IBM HPSS.
- It works the same way as it does from Vapor and the CCS
- This is intended as a getting started for users who have never used HSI (new NCEP users and any users who have no experience with NCEP systems)

This information can be found at:

https://nesccdocs.rdhpcs.noaa.gov/wiki/index.php/Using_The_HSMS_(HPSS)

What is HSI

- HSI provides a FTP like interface to HPSS
- It can be used
  - Interactively
  - Via a script of commands
  - String of commands on the command line
- To use HSI, load the HPSS module

```
# module load hpss
```

- Authentication is done using keytab files
  - These should already be created. If you have a problem, email the help system and let us know there is a problem.

Input to HSI

To create an interactive session:

```
# hsi
```

Single line Execution

```
# hsi "mkdir foo; cd foo; put hpss_file"
```

From a command file:

```
# hsi "in command_file"
```

From a batch script:

```
# hsi << EOF
   mkdir foo
   cd foo
   get local_file : hpss_file
   EOF
```

HSI Example
Moving files with HSI

- Put a local file to into HPSS directory /BMC/fim/ctierney/local_file

```
# hsi put /fullpath/local_file | /BMC/fim/ctierney/local_file
```

- Retrieving a file from the HPSS directory /BMC/fim/ctierney/ into the local directory (.):

```
# hsi get /BMC/fim/ctierney/remote_file
```

- Retrieving a file from the HPSS directory /BMC/fim/ctierney to a new name

```
# hsi get /full/path/local_file : /BMC/fim/ctierney/remote_file
```

- Listing the contents of a directory

```
# hsi ls /BMC/fim/ctierney
```

HPSS Directory Structure

- For existing Vapor/CCS accounts, the directory structure has not changed (it is based on your old vapor/CCS name):

  /NCEPDEV/...

- For new projects, they will be in standard portfolio directory structure

  /$PORFOLIO/$PROJECT

  - Portfolio is either NCEPDEV or BMC
  - Project is for any disk allocated projects (as reported by account_params)

Getting more information on HSI

- Run “help” at HSI command line

```
HPSS File and Directory Commands
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get, cget, mget, recv     - Copy HPSS file to local directory
put, cput, mput, replace, save, store, send
                          - Copy a local file to HPSS
cp, copy                  - Copy a file within HPSS
delete, mdelete, erase, rm
                          - Remove a file from HPSS
ls, list                  - List directory
pwd                       - Print current directory
find                      - Traverse a directory tree looking
for a file
ln                        - Create symbolic link in HPSS
mv, move, rename          - Rename an HPSS file
mkdir, md, add            - Create an HPSS directory
rmdir, rd, remove         - Delete an HPSS directory
cd, cdls                  - Change current directory
touch                     - Update last access time
```