

Computing News

Analysis Tools Meeting
Apr. 17, 2014

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Outline

- SLF5/SLF6 issues.
- dCache
- Microboone products reorganization.

SLF6 Migration Status

- Up until today, login nodes uboonegpvm01-03 and 05-06 were at SLF5. Uboonegpvm04 is at SLF6.
 - In today's downtime, uboonegpvm05-06 will be upgraded to SLF6.
 - We haven't decided when to upgrade the remaining login nodes to SLF6. We will keep at least one node at SLF5 as long as we need to to support SLF5 compilations.
- Fermigrad is currently split about 50-50 between SLF5 and SLF6.
 - New purchases are being installed using SLF6.
 - Remainder of Fermigrad will be upgraded to SLF6 in coming months.

SLF5/SLF6 Issues and Larsoft

- Larsoft official release is being built for both SLF5 and SLF6.
 - In general, when you setup larsoft on an interactive or grid worker node, you get whichever version is appropriate for your node (`$LD_LIBRARY_PATH`, etc.).
- When you make a local build of larsoft or uboonecode, you likewise build the version that is appropriate for your build node.
 - MRB supports building multiple flavors from the same source area into the same install area. Instructions on wiki:

https://cdcvcs.fnal.gov/redmine/projects/uboonecode/wiki/Uboone_guide#Building-multiple-flavor-binaries-from-a-single-source-area

- Multiple OS builds require you to run your build several times on different build nodes.

SLF5/SLF6 Issues and Grid Jobs

- On FermiGrid, you can control the OS that your batch job is allowed to run on using jobsub option --OS:
 - `jobsub --OS=SL5,SL6` # Default is SL5 (for now).
 - `submit_lar.sh --OS SL5,SL6`
 - `project.py`: put “<OS>SL5,SL6</OS>” in your xml file.
- If you want your grid job to use your local test release, make sure that your build flavor(s) match your grid flavor(s).

dCache

- Microboone has been given access to the IF shared dCache area.
 - This area will be used as sam cache and scratch disk.
 - Volatile area visible under path /pnfs/uboone/scratch on uboonegpvmXX nodes.
 - Total size 12 PB.
 - Shared between sam cache and volatile area, for all IF experiments.
 - No quotas.
 - Deletion policy hasn't been set yet, but file lifetime is expected to be rather long (several months).

Accessing dCache

- Make your own directory under `/pnfs/uboone/scratch/users`.
- dCache files can be accessed interactively via `nfs` from `slf6` nodes (currently `uboonegpvm04-06`).
- You can transfer files to/from dCache using “`ifdh cp`.” Just specify a target path starting with “`/pnfs/uboone/scratch`.”
 - Works on both `slf5` and `slf6` nodes.
- Accessing dCache from grid jobs.
 - Always use “`ifdh cp`” method to transfer files to/from dCache in grid jobs (same as `bluearc`).
 - `Project.py/condor_lar.sh` allow you to specify your output directory in dCache space.
 - Run `project.py` on an `slf6` node.

Microboone Products Reorganization

- Microboone ups products ubtools, ubfcl, and ubxml have been merged into ubooncode.
 - Will be part of official larsoft release starting with v1_00_08.
 - Also available in development branch head.
- Ubtools.
 - Source tree.
 - Executable scripts in ubooncode/scripts.
 - Python modules in ubooncode/python.
 - Install area.
 - Executable scripts in ubooncode/<flavor-qual>/bin.
 - On \$PATH.
 - Python modules in ubooncode/python.
 - On \$PYTHONPATH.

Microboone Products Reorganization (cont.)

- Ubfcl.
 - Source tree ubooncode/fcl.
 - Installed in ubooncode/job.
 - Visible on `$FHICL_FILE_PATH`.
- Ubxml.
 - Source tree ubooncode/xml.
 - Installed in ubooncode/xml.
- Existing versions of ubtools, ubfcl, and ubxml will be left in place for use with older versions of larsoft. No new versions will be made.