

Migrating L1Proc to S3DF

Essential dependencies:

- Move away from afs disks
- Run executables using container
- Use SLURM commands in xml
- [Migrate all L1 packages to github](#)

Sustainability and optimization:

- ~~Get rid of SCons builds for L1 code~~
- ~~Upgrade python to v3 and above~~
- ~~Can we avoid crumbling altogether?~~
- Optimize # of crumbs for new CPUs
- ~~Use flash for staging instead of xrootd?~~
- import the locking script to slurm preempt

Infrastructure needs:

- [CVS is going away](#)
- Singularity containers
- Pipeline updates
- [Restore pipeline_wrapper](#)
- [Fix the log viewer](#)
- Final rsync for u41
- Fix the ingestor scripts

Non-L1 milestones:

- Test full L1Proc in S3DF with LCI data
- Update non-L1 xml (flagFT2, merge, setQual)
- Update L1Proc build/test/update [instructions](#)

Where to find/install stuff:

- working area: `/sdf/group/fermi/ground/PipelineConfig/L1Proc`
- pipeline cmd: `/sdf/home/g/glast/a/pipeline-II/prod/pipeline`
- singularity example (05/02/23): [pipeline task](#), [xml file](#)
- additional slurm parameters (10/10/23): `--account fermi:L1`
- preserve `LD_LIBRARY_PATH` in singularity (03/12/24): `singularity exec --env LD_LIBRARY_PATH=${LD_LIBRARY_PATH}`
- python used by ST: `/afs/slac/g/glast/ground/GLAST_EXT/redhat6-x86_64-gcc44/python/2.7.2-gl4/bin/python`



Singularity cheatsheet

`source /sdf/group/fermi/ground/PipelineConfig/L1Proc/6.0/start_rhel6.sh` **updated to 09/22 container version!**

`singularity shell --bind /sdf/group/fermi/a:/afs/slac/g/glast --bind /sdf:/sdf /sdf/group/fermi/sw/containers/fermi-rhel6.20230922.Sif`



Pipeline cheatsheet

`singularity exec --bind /sdf/group/fermi/a:/afs/slac/g/glast --bind /sdf:/sdf /sdf/group/fermi/sw/containers/fermi-rhel6.20230922.sif . /install.py`

`/sdf/home/g/glast/a/pipeline-II/prod/pipeline load -m DEV /sdf/group/fermi/ground/PipelineConfig/L1Proc/6.0/xml/L1ProcS3df-6.0.xml`

Migration milestones:

- Build L1 locally on containers
- Run single task in S3DF pipeline
- Update the L1Proc xml template
- Run full L1Proc in S3DF with LPA

Open questions:

- do we still need a wrapper for cleanup?
- do we need isocRun for every executable?
- what are the SLURM queue options?
- non-preemptable queue: `--account fermi:L1`
- how does the scratch space work on S3DF?
- FSW: need new staging dir, export, logging

S3DF Cheatsheet:

- Install ssh config as described [here](#)
- to login from terminal: `ssh slacd`
- to ssh as glastraw, run `kinit` first
- **NOTE: use terminal not XQuartz(?)**
- afs was migrated to: `/sdf/group/fermi/a/`
- nfs was migrated to: `/sdf/group/fermi/g/`
- **Singularity environment: see below**

Additional (non L1) deliverables:

- Migrate DQM/trending reports
- Migrate cronjobs for DQM reports
- Document L1Proc deployment

Historical information (obsolete):

- CVS, to passively download old stuff: `CVSROOT=/sdf/group/fermi/g/glast_ground/cvs`
- CVS, when live version is needed: `CVSROOT=:ext:monzani@centaurusa.slac.stanford.edu:/nfs/slac/g/glast/ground/cvs`
- the CVS viewer was moved [a new location](#)