

# 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 SCong 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](#)

## 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

## 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_64-64bit-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`

### 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](#)