

Xrootd FGST Tasks

Using a release

The xrootd tools used by FGST are in the release directory of the glastdat user. Sourcing the wk_env script will set the PATH to a release bin directory and set the PYTHONPATH for the python packages.

```
% cd /u/gl/glastdat/releases/current/  
% . bin/wk_env
```

Running commands remotely on servers

The *ScaRunOnHosts* script will take a list of FGST xrootd servers and a command. It will ssh to all of the servers in the list and execute the command directly on the server. The basic usage is:

```
% ScaRunOnHosts -s wain018,wain034 -r -e -- <command>  
% ScaRunOnHosts -f glast -r -e -- <command>
```

It should be run from a release as described above. The available options are:

- p : ssh to all host in parallel
- w : wait for all hosts do be done. Only useful with -p option.
- e : Setup the release environment on the remote host. With out this option the command to be run has to be found in the default PATH of the glastdat
- s srv1,srv2,...,srvn : list of servers to run the command
- f <flist> : read server list from a file. The file is looked for in /afs/slac.stanford.edu/g/glast/applications/xrootd/config/

Remove old recon files

The script reads from a file the list of recon files that can be purged from a xrootd server. Purging a file includes the following steps:

- #) Check if file is on disk
- #) Check if file is marked as migrated. On Solaris this means comparing a files mtime with the corresponding .lock files. On linux xattrs are used instead.
- #) If the file is marked as migrated check in HPSS if the file exists and compare file sizes.
- #) remove file (and .lock file) if the check in HPSS succeeded.

Usage SrvPurgeFiles.sh

```
SrvPurgeFiles.sh [options] pass  
  
options:  
-l   write output to log file  
-n   number of files to purge  
-T   test, print only command and exit  
  
pass: P202 | P300
```

Example:

```
% cd /u/gl/glastdat/releases/current  
% . bin/wk_env  
% ScaRunOnHosts -f glast -r -e -- SrvPurgeFiles.sh -l P202  
% ScaRunOnHosts -f glast -r -e -- SrvPurgeFiles.sh -l P300
```

The above commands will ssh to all xrootd servers and do the purge. Log files are written to the directory /var/adm/mps/logs (Solaris) or /var/adm/frm/logs (Linux) and the logfile name is purge_file.YYYYMMDDTHHMMSS. As all output from SrvPurgeFiles.sh_ is written to a log file one will not see any output from the command above. The first(second) example would purge the recon files that are succeeded by the P202(P300) reprocessing.

Migration to HPSS

Migrate files using the daily file lists

```
ScaRunOnHosts -f glast -e -r -- SrvMigrateFiles.sh -b [-r] [-e]
```

The **-r** migrates the recon files, **-e** use the extra-backup file lists.

re-migrate a file

1. Create a file, <file-list>, with filenames that need to be remigrated (/glast/....)
2. Mark file on server as migratable (Linux):

```
frm_admin mark -m /glast/Data/.....
```

3. Run migration

```
SrvMigrateFiles.sh <file-list>
```

Migration commands

Show the current migration status

ssh to all data server and tail the last few lines of the most recent migrate log file. Count the number of migrated files.

```
ScaRunOnHosts -f glast -e -r -- SrvMigrStat.sh
```

Stop migration using semaphore file

The migration tools check for a semaphore file (/var/adm/frm/STOP_MIGR or /var/adm/mps/STOP_MIGR) and will exit if it exists. To set remove or list the semaphore files on all servers run:

```
ScaRunOnHosts -f glast -e -r --SrvMigrateFlags.sh [list | rm | set]
```