Chirp for User Output

- Rod Walker, LMU

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User Output File size

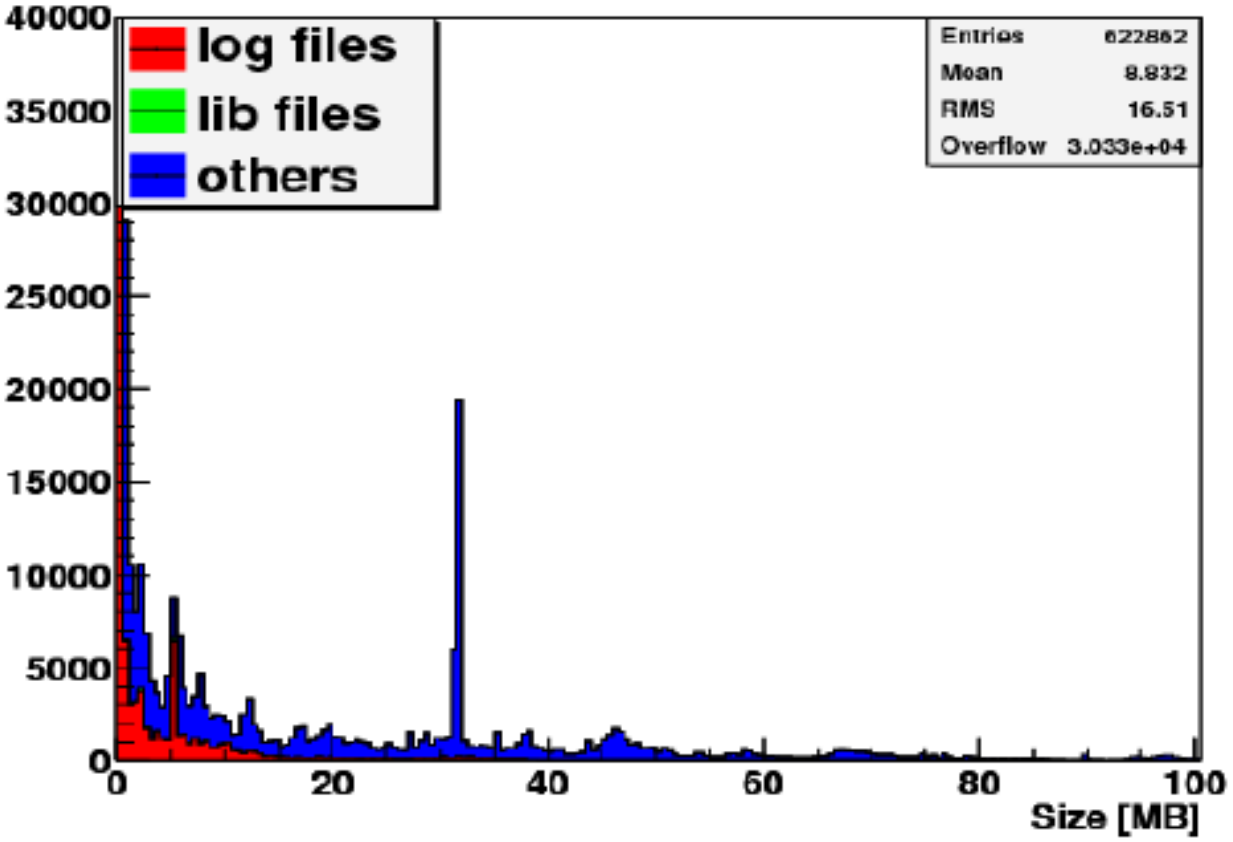

Fig 1: Snapshot of user output files at FZK from June 2010

~8MB

Problem with that

- Manual user step to get data
  - many jobs = many dq2-get and all SRMs need to work
- dq2-get is chaotic access to SRM
  - possible interference with controlled DDM transfers
- Moving files with DDM better for SRMs but ..
  - adding many small files to the system slows it down

Status

- Catch-all Chirp server at CERN
- Ganga(Panda backend) and Pathena have user switches to enable storing output to Chirp
- Wiki linked to FAQ (low-profile)
  - https://twiki.cern.ch/twiki/bin/view/Atlas/ChirpForUserOutput
- Few users tested, and 1 heavy user
  - 358k files on server, (last report was 80k)
- All lxplus nodes allows FUSE!
  - Chirp tools in ATLAS afs area

source /afs/cern.ch/atlas/offline/external/GRID/DA/cctools/setup.sh

```
[lxplus442] ~ $ mkdir chirp
[lxplus442] ~ $ fusermount -u chirp
[lxplus442] ~ $ ls chirp/voatlas92.cern.ch/RodWalker/
.........
```

New Usage

- Panda jobs produce root files and store to Chirp
- User accesses them directly from root
  - using fuse
  - usually running hadd to merge them
- Very positive feedback, but still small user group(12)
  - users like posix access

Experience

- Chirp server froze a few times under heavy load
  - possibly due to authentication cpu, but did not investigate (did not reproduce)
  - holes in datasets recovered using dq2-get
    - i.e. must also store to local SRM, or have retries/failovers and require Chirp success for job success.
  - WN network store time is negligible
    - 1MB/s < 1min. SRM,LFC interaction can take longer on local store.

Future Plans

- Need to debug server freeze
  - devs keen to help, but no time to reproduce it