# Chirp Demonstrator?

Rod Walker, LMU

- "A file system for Grid computing"
  - Shared FS with full acls and x509 authentication
  - Simple: users can easily deploy servers
- Developed in Condor team
  - dev now moved to Notre Dame
- Several features of global file system
  - access it from user job and client
    - workshop assumption of WAN usage allows this
  - keep small files out of DDM,LFC,SRM,FTS,...

http://www.cse.nd.edu/~ccl/software/chirp/

User File sizes
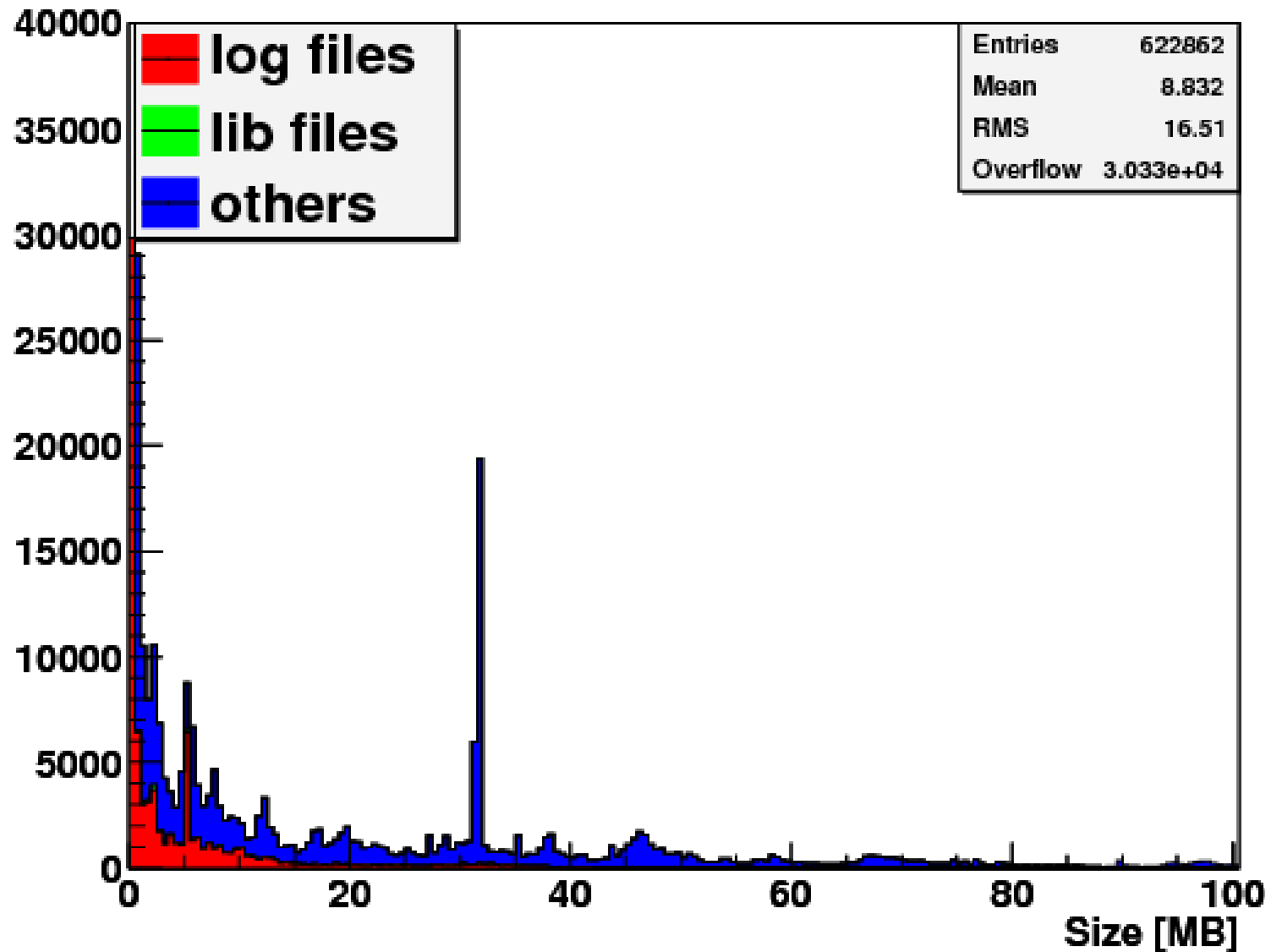
Server and Client

- Start your own server (then it trivially scales)
  - chirp_server -r /data &
  - needs 1 port open
- Access the server from anywhere
  - chirp_put localFile host.lmu.de /mydir/theFile
  - puts file in host:/data/mydir/theFile
- Or FUSE the file system
  - $ mkdir chirp
  - $ chirp_fuse chirp
  - $ ls chirp/host.lmu.de/mydir/theFile
  - And all other posix operations
- All of the above are x509 authenticated

Auth and acls

- ## Each directory has hidden file .__acl

globus:/C=DE/O=GermanGrid/OU=LMU/CN=Rodney_Walker rwlda
globus:/DC=ch/DC=cern/OU=Organic_Units/OU=Users/CN=hanawa/CN=678589/CN=Keita_Han
awa rl
globus:/C=AT/O=AustrianGrid/OU=UIBK/OU=astro/OU=HEPHY/CN=Brigitte_Epp rl
globus:/C=CA/O=Grid/OU=westgrid.ca/CN=Roghaiyeh_Dastranj_Tabrizi_42 rl

- ## User controls acl for their directory
  - ### e.g. can give access to analysis group
- ## no voms support
  - ### but active and cooperative dev team

Demonstration Plan

- Test few hundred jobs writing 20MB each to single server
  - done with no problems
- Integrate into Ganga Panda analysis
  - optionally store output and log files ALSO to user defined chirp server
  - only files <50MB
  - document on wiki for config, client, fuse, and server.
- Criteria
  - Technical/scaling problems
  - Do users like it.

Status

- Chirp server at LMU configured with write access for ATLAS VO
  - also machine identified at CERN
- Panda pilot dev version writes output file
  - log file and prod release next week
- Ganga config for user to set chirp host and path
  - dev version tested and in svn – on afs next week
- CCtools tarball, includes chirp, available on afs
  - client tested on lxplus
  - chirp_fuse tested on lxplus: selected machines and users

Summary

- Other stuff

  - Integrate multiple chirp servers into performant/redundant FS with single access host:path

  - Chirp interface to HDFS in next cctools

    - adds acls and auth to everyones favourite FS

  - More standard: webdav,gridsite/slashgrid,dropbox

- Hopefully have first users next week