

Request to install a new Xrootd production version

First draft

Reason for change

The current production version is 20071101-0808p2. We would like to install the new production candidate version 20080513-1222.

The new xrootd version allows to restrict the access to the GLAST data which is a requirement. The current production version does not support access control. The new xrootd version has various improvements and fixes that make the system more reliable.

- allows access control to the data which is required.
- fix for checksum problems that could crash the server.
- better handling of redirection for existing files.
- other small bug fixes.

Testing

The production candidate version 20080513-1222 and its predecessor version 20080410-0747 have been deployed on the glast xrootd cluster running parallel to the production xrootd daemons. This allows using the new version on the glast xrootd cluster without interfering with the production version.

An update from 20080410-0747 to 20080513-1222 was needed as a critical bug was found (<https://jira.slac.stanford.edu/browse/GXR-33>) that caused the server to crash when re-reading the updated authorization file. Otherwise there are only small bug fixes between 20080410-0747 and 20080513-1222 that don't affect GLAST.

The test setup on the glast xrootd cluster used the configuration that would be used in production, in particular authorization has been turned on. Only glast users are allowed to read data and certain production accounts are allowed to write to xrootd.

The basic functionality of the new xrootd version has been examined in a test cluster. The testing included reading/writing with xrdcp, stating files and checksumming of files.

All other test were done against the new version 20080410-0747 and repeated for production candidate version 20080513-1222 on the glast xrootd cluster:

The main tests were:

- running the crawler
- MC-simulation
- skimmer jobs
- reading and writing with xrdcp
- reading from xrootd with root version 5.18.00(b)

and all tests passed.

The test that required the xrootd client tools (xrdcp to transfer files, xrd.pl to stat,checksum and remove files) were done with using the one from the new version.

Rollback

It is possible to re-activate the old xrootd version, no data will be lost.

CCB Jira

[SSC-43@JIRA](#)

Details

Deploying the new xrootd version requires to restart the new version on all glast xrootd servers, including the redirectors (glast-rdr). In addition the client admin tools in /afs/slac/g/glast/applications/xrootd/PROD have to be updated as the current version does not support authorization.

The steps are:

1. Install new client admin tools:
mv /afs/slac/g/glast/applications/xrootd/TEST to /afs/slac/g/glast/applications/xrootd/PROD
The new version works with the old xrootd servers and this move doesn't cause any disruption to clients.
2. Stop xrootd on all data servers
3. Stop xrootd on the redirectors (glastlnx04/05)
4. Activate the new version on the redirectors and restart them.
5. Activate the new version on the data servers and restart them.

The whole procedure should take less then five minutes and clients will retry to access xrootd during that time and not fail. User will be informed when the restart will happen in order to reduce the load on xrootd, just as a precaution.