

LHCb Top 5

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1. Data Access from T1 MSS
2. glexec usage
3. File management
4. Deployment procedure
5. Information System

Data Management System

- Data access problems via remote protocol access from WN
 - For dCache sites srm_get wasn't staging a file
 - just returned a TURL - now fixed in latest release of dCache
 - Authorization issues associated with use of VOMS
 - 1 associate with Gridmap file
 - Configuration of gPlazma
 - Stability of dCache servers under heavy load
 - Recently discovered dCache problem under load
 - file registered but not physically on disk
 - Still under investigation - not clear load from transfers or pool migration operation
- Transfer problems (using lcg_utils efficiency <50%)
 - Many instabilities with gsidcap doors
 - Though current situation is a lot better
 - Transfer failures to CASTOR
 - "Resource Busy" message from CASTOR due to corrupted entry (from previous transfers timed out or failed) that Castor (for consistency) refuses to overwrite.
- ROOT (AA) seems to be completely disconnected from SRM
 - Need to manipulate tURL format before passing to ROOT
 - dcap:gsidcap://... , castor://, Nos of slashes, rfio format

glexec on the Worker Nodes

- LHCb are keen to exploit this
 - Particularly an issue of control resources for analysis
 - Optimized 'filling' of the computing slot
 - Can help reduce load on LCG RB etc
- Testing currently ongoing with IN2P3 (Lyon)
 - "ad-hoc" glexec tested successfully on WNs
 - LHCb DIRAC WMS is ready to make use of this
- Concerns glexec be certified in time
 - Pre-view testbed version
 - Uses LCAS/LCMAPS info from local files rather than from a dedicated service
 - Delays on LHCb side
 - Postponed whilst a stager agent was developed to deal with file access issues we were suffering
 - Will be part of gLite release deployed? Guinea pig sites?
 - Possibilities to rollout Lyon's "ad-hoc" glexec

Storage

- SE instabilities
 - Last quarter '06
 - Limited time where all 7 LHCb Tier1s available
 - Back log of replication of 80k DSTs
 - Sites upgrading storage implementations
 - LHCb welcome this ...
 - .. but sometimes deployment of unstable versions
- SRM v2.2 deployment/testing
 - Relatively late deployment of SRM2.2 w.r.t. real data taking
 - Limited time-scale for testing LHCb use cases
- Interfaces to SRM2.2 (lcg-utils/GFAL)
 - Currently testing python binding to lcg-utils/GFAL
 - Bulk operations not clearly supported
 - For example, file removal, metadata queries, ...
 - Discussions with developers next week
 - Also currently no support for file pinning in GFAL or lcg-utils
 - GFAL use of "bring_online" for SRM2.2
 - Currently in SRM v1.1 no generic way to stage files

Deployment & Release Procedure

- Use of LCG AA
 - Early client exposure
 - Allows LHCb to test early in production environment
 - Quick feedback for client developers
 - E.g. lcg copy to allow surl to surl copies requested in July'06 only now being rolled out with gLite
 - Issues associated with compatibility
 - Recent problems associated with globus libraries & use of lcg-utils
- Early exposure to VO in parallel to later certification
 - Useful to allow VO to test in production environment
 - E.g. LHCb still not using gLite RB in production
 - Version of LHCb gLite RB provided at CERN know to have problems
 - Version, known to be problematic, was deployed for LHCb to test
- Central VOMS servers
 - Lack of central automatic propagation to sites

Information System

- Consistency of info's published by different top-BDII's (FCR or not FCR, order of various blocks, different pools of sites published)
 - It prevents for a real load-balanced service spread among different sites.
- Latency of the info's propagation causing flood of CE (free slots published do not reflect real situation on the LRMS)
 - Effect amplified by using multiple RBs : PIC use case
 - VOView introduction helps quite a lot
- Instability/scalability of the system
 - lcg-utils failing just because the SE (working) was not published
 - CE appearing/disappearing from the BDII (while they were OK)
- Content of the information
 - Disk space consumption and space left published by SRM, granularity of information, OS and platform advertised in a coherent way (SL,SL4,SLC4, Scientific Linux 4...)
- Splitting (pseudo) static information from dynamic information would be beneficial
 - amount of information shipped over the network (and hence latency could be reduced)
 - for improved stability of the system and it allows for major reliability of the access of static information required by DM clients.

Other Issues

- Stability of shared software area
- Authorisation/ACL issues surrounding data storage
- VOMS storage of LHCb "nickname"