



Light weight Disk Pool Manager status and plans

Jean-Philippe Baud, IT-GD, CERN

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Agenda



- Functionality offered in the current releases
- Security
- Current developments
- Current sites using DPM
- Plans



Functionality offered in the production release (1.6.4)



- Management of disk space on geographically distributed disk servers
- Management of name space (including ACLs)
- Control interfaces: socket, SRM v1.0, SRM v2.1, SRM v2.2 (no srmCopy)
- Data access protocols: secure RFIO, GsiFTP (Globus 2.4)



Features added in the latest release (1.6.5)



- Full support for permanent and volatile spaces
- ACLs on disk pools
- Improved version of dpm-qryconf
- recursive srmLs and srmRmdir
- SL4 32 bits release including gridFTP 2 plugin
- SL4 on 64 bits architecture (being tested at a few sites)



Current status of SRM 2.2 and xroot



- SRM v2.2 interface
 - Basic tests and use case tests in S2 are ok
 - Current stress tests show that the system is stable
 - Being deployed at selected sites in UK and France
 - srmCopy and srmChangeSpaceForFiles still missing
- Xrootd plugin
 - Requested by ALICE
 - Prototype delivered in November 2006
 - Currently being tested by ALICE
 - Could also be used by ATLAS and CMS later (ongoing discussions)



Current sites using DPM



- DPM running in production at more than 90 sites
 - Austria, Belgium, Canada, France, Greece, Hungary, India, Italy, Japan, Holland, Poland, Russia, Spain, Switzerland, Taiwan, UK
- DPM serving more than 100 Virtual Organizations
 - HEP experiments, biomed, esr, fusion ...
- Collaboration with NAREGI on interoperability
- Collaboration with Globus



Plans for future versions



- Short term (October 2007)
- Medium term (end of 2007)
- Longer term (first half of 2008)



Disk Pool Manager short term plan



- Quotas
- srmCopy
- Optional encryption (control and data channel)
- Interface to DICOM Storage Element (Biomed)



Disk Pool Manager medium term plan



- CASTOR-DPM common RFIO library
 - CASTOR RFIO does not integrate grid security
 - Different interface to the backend but same I/O protocol
 - Requested by ATLAS/CMS
 - Development done by Jiri Kosina in collaboration with the CASTOR team
 - Release not planned before late Autumn
- Perl interface (Tomas Kouba)
- Integration with fabric monitoring
 - Lemon sensors?
- Improved performance
- Accounting
- This is probably too optimistic schedule



Disk Pool Manager longer term plan



- Relative path (VO HOME)
- Streaming mode (SRM v3)
- Limit number of streams per disk server (may be useful for some applications like bulk replication, so pool dependent)
- Implementation of a migrator/recaller to either recall/migrate files automatically between Tier1 and Tier2 or interface to a tape/DVD backend
- NFS v4 access to DPM data

- Problem of ACLs propagation during replication between SEs (RRS/RMS ?)



Documentation



- <https://twiki.cern.ch/twiki/bin/view/LCG/DataManagementDocumentation>
 - Reference man pages
 - Admin guide
 - Troubleshooting