DPM/LFC, GFAL/lcg_util status

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Enabling Grids for E-sciencE

- **LFC and DPM**
  - Current status and activity
  - Forthcoming release
  - Plans

- **GFAL and lcg_util**
  - Current status
  - Changes this year
  - Plans

- **Summary**

DPM and LFC

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- **DPM/LFC 1.6.11-3 is the last stable release on SLC4 (since 18 Aug)**

- **No major problems**

- **Issues are reported and handled via GGUS, Savannah and support mailing lists**

- **DPM is used by about 135 sites in LCG**

  - Current LCG statistics:
    https://twiki.cern.ch/twiki/bin/view/LCG/GSSDSRMv2DeploymentMonitoring

- **LFC is gaining momentum:**

  - Recently became part of VDT and being deployed through OSG

  - Part of NorduGrid's ARC distribution

The next release is v1.7.0 and is currently in certification

- **srmCopy has been fully implemented**
- **WLCG SRM MoU requirements:**
  - write permission to a space can be limited to multiple groups
  - SRM2.2 srmReleaseFiles can be used without a requestToken
  - srmLs can return information about the spaces a given file is in

- **new dpm-listspaces CLI tool which also serves as a dynamic information provider**
- **DPM retains replica space residency when the admin *drains* a file from a filesystem (a part of maintenance)**
- **ready for SLC5**

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- **LFC specific changes:**

  - Small enhancement in the swig generated perl and python interface to the C API
    - Also SL5 support in the swig generation

- **A new, more friendly LFC and DPM python interface has been developed**
  - Not yet released, decided to add to glite as an entirely new package separate from the main LFC and DPM bundle

For DPM the following are identified as areas of interest

- **Further checksum support**
  - Dynamic calculation is already in gridftp2

- **Enhance xrootd support**
  - Pass xrootd client authentication details to the DPM for authorization decisions

- **Quota system**

- **Tool for consistency check and repair**
  - Both internal DPM structures and namespace verification by users

- **Enhance filesystem selection**

- **Shared filesystem support (e.g. NFS 4.1)**
  - Input from the T1,T2 analysis working group could be used to decide direction

Both LFC and DPM

- **Compliance with the gLite logging recommendations**

- **Resource limits**
  - Load limits for LFC
  - Load and disk server transfer limits for DPM

- **Must also remain alert to the issues arising from sites**

GFAL and lcg_utils

- **GFAL-client 1.10.18, lcg_util 1.6.17 is in PPS**

- **Problems are handled via GGUS and Savannah**

- **Changes this year**
  - Operations without BDII (-b)
  - Improved error messages
    - Adding remote service type: LFC, BDII, SE
    - More detailed security errors
  - mainly bugfix releases this year
  - started using autoconf, automake and libtool

- **Detailed support for timeouts on each operation**

- **Fall-back to secondary replicas, if "first" is unavailable**
  - "first" is default SE, "second" is from the local domain and the rest

- **Improved Python interface**
  - Supporting recent Swig versions (1.3.33)

- **GFAL2/lcg_util2**
  - Better error handling
  - Major rewrite for thread/session separation (i.e. no global functions)
  - Synchronizing the behavior with FTS
  - More user friendly Python API (e.g. exceptions)

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- **New releases of LFC, DPM, GFAL and lcg_utils are currently in certification or pre-production**

- **Have shown plans for DPM and LFC development**
  - But must balance the requests and issues arising in the significant deployment base

- **Have shown plans for GFAL and lcg_utils**