Storage Resource Manager (SRM) Interactions

Heinz.Stockinger@cern.ch

WP2 Workshop, 12-14 Feb. 2003

Outline

- MSS Status in EDG Testbed
- SRM
- Reptor + SRM
- Discussion

SE Status in EDG testbed

- SE is mainly a **disk server with GridFTP**
  - some SE have MSS (Castor, HPSS, etc.)
  - staging software
  - RFIO access (read/write, file transfer – staging)
- **explicit staging** is done by
  - edg-replica-manager and GDMP (disk – MSS)
  - gdmp_stage_to|from_mss
  - edg-stage-daemon
- several **limitations** in this model
  - need "real" SE/SRM

Storage Resource Manager (SRM)

- **SRM** specification:
  - http://sdm.lbl.gov/srm-wg/
  - current version: v2.1
- have a common interface to SE
  - disk and or tape
  - automatic reservation, staging and pinning
  - lifetime and space management
- **several** groups provide **implementations**:
  - Castor, WP5, LBL, Jlab, Fermilab
- we will use WP5 software soon for Reptor
  - close co-operation in the next months needed

SRM – Client side

- Reptor is a **client of SRM** :
  - write files to SRM
  - read files from SRM
  - reserve disk space
  - retrieve storage file names

- we should consider SRM as an "**extended File Server**":
  - call SRM functions for all copy and replicate commands
  - conventional GridFTP clients should *not* be used anymore
    - srmPut, srmGet, srmCopy instead of globus-url-copy

Interfacing SRM from Reptor

- SRM interface defined in version 2.1
- need to **add SRM interface** to Reptor
  - currently only on internal class for StorageElement
  - needs to be easily replaceable ("simple")
- Currently copy class (GlobusURLCopy) needs to be extended:
  - need to make use of SRM calls
- Alternative access method:
  - use GridFTP directly – not recommended
- Discussion