



SRM v2.2



- What is SRM v2.2?
 - v1.1 has various deficiencies
 - v2.1 turned out to take too much time to implement
 - Only DPM was basically ready
 - v2.2 is a generic SRM standard allowing for WLCG shortcuts
 - Only some options and use cases have to be supported
 - Reduce implementation effort, also for clients
- Designed during May 22-23 workshop at Fermilab
 - After many preparatory discussions in teleconferences and e-mail
 - Mandated by WLCG MB after Mumbai workshop
- Progress and issues discussed during Aug. 29 – Sep. 1 workshop at CERN



Storage classes

- “Tape1Disk0”
 - Standard HSM with system-managed disk cache in front
 - Long-term data that will be staged in as needed
 - Retention policy “Custodial”, access latency “Nearline”
- “Tape0Disk1”
 - Disk-only storage managed by the VO (but using SRM name space)
 - Short-term data, e.g. intermediate output files
 - Do not waste tape on that
 - Retention policy “Replica”, access latency “Online”
- “Tape1Disk1”
 - Disk storage managed by the VO, with backup on tape
 - Long-term data that must never be staged out
 - Retention policy “Custodial”, access latency “Online”



Storage Classes working group



- Mandated by GDB
- Study deployment configurations of storage classes
 - Per SRM back-end
 - How to assign pools to the various storage classes needed by a VO
 - How to configure (subsets of) pools for LAN or WAN access
 - Try to devise common configurations for VOs, per site
- Tape1Disk1 implementation is not evident
 - The other two are standard
- Allowed transitions between classes are not evident
 - Explicit stageout Tape0 → Tape1 awkward to implement
 - Disallow?



v2.2 servers and clients

- Servers
 - Berkeley SRM
 - CASTOR
 - dCache
 - DPM
 - StoRM
- Supported clients
 - FTS
 - GFAL
 - lcg-utils
- Clients use space tokens (or descriptions) to refer to storage classes
- VO applications do not need to deal with the SRM directly
 - Details to be handled by the supported clients



GLUE schema changes



- New schema for SE to reflect properties of SRM v2.2 and higher
 - Storage Area → space
 - Access Policy info per SA per VO
 - Foresees quotas
 - Enhances Access Protocol info
 - Removes obsolete/unused notions
- Submitted to GLUE schema working group



Plan of work

- Deploy v2.2 services on a few major sites by Nov. 1
 - Allow for large-scale stress tests by the VOs
 - A Service Challenge week in Jan./Feb. would be desirable
- Have v2.2 deployed on all relevant WLCG sites by spring
 - Keep v1.1 service for legacy applications
- Settle open issues in phone conferences + mailing lists
 - ACL semantics, ...
 - Avoid non-trivial changes to WSDL/spec for the time being
 - Collaborate with Storage Classes WG
- Continuous interoperability testing
 - Berkeley SRM-Tester
 - Test suite by Jiri Mencak (RAL)



Unfinished business

- Dynamic space reservation by users
- xrootd support
 - E.g. for updating existing files
- rfiio incompatibility between CASTOR and DPM
- Quotas
- ...

→ The minimal SRM v2.2 for WLCG is not the end of the story...