



Storage Resource Reporting

What is SRR, short reminder

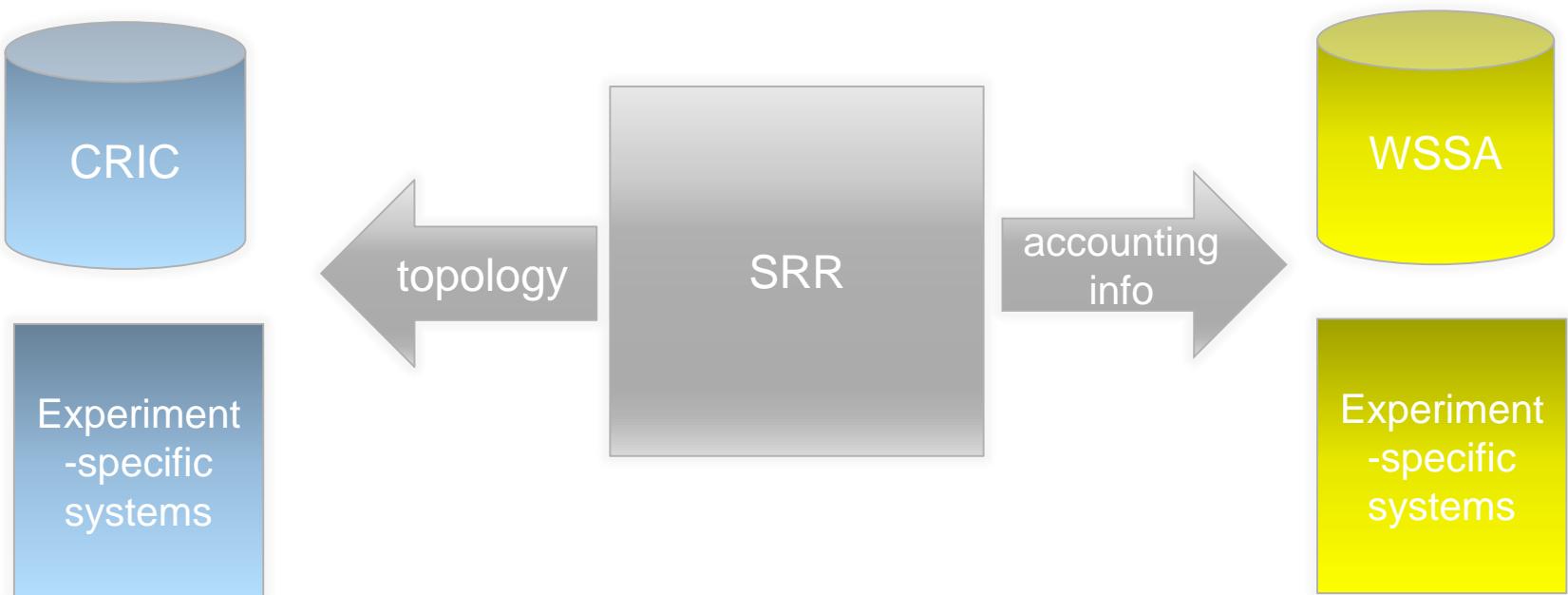
- SRR stands for Storage Resource Reporting proposal developed as a follow up of the WLCG accounting review at the (pre-)GDB in April 2016. [More info](#)
- Several rounds of ‘consensus building’ with experiments, storage providers and sites. Still evolving.
- Prototyping phase has been agreed at the GDB in October 2017. [More info](#)

Two important dimensions of SRR

(1)

- Storage topology description (SRR for topology)
 - Protocols
 - Storage shares equivalent/similar to SRM space quotas (path with quota defined, dedicated for a particular usage, accounted separately, not overlapping in terms of space)
- Non-SRM Storage Space Accounting enabled (SRR for accounting)
 - Non-SRM protocol to query used/free space
 - JSON file which includes both topology description and accounting data accessible through http

Two important dimensions of SRR (2)



SRR implementation status

SRR implementation by the storage middleware providers

SRR implementation is being followed up with all storage middleware providers. Mailing list for people involved in this activity is srr-implementation@cern.ch

SRR implementation status

Storage type	Implementation status	Deployment status	Storage contact
DPM	Implemented starting from version 1.10.3. Requires DPM re-configuration with DOME enabled	DPM upgrade Task Force has been setup. Work in progress	Fabrizio Furano & Oliver Keeble
dCache	First prototype to be ready for testing by the end of October	-	Paul Millar
EOS	Enabled at CERN. Some issues to be fixed. Not yet ready for deployment to other sites	CERN only	Andreas Peters
STORM	First prototype at CNAF is ready for testing and validation	-	Andrea Ceccanti
xRootd	First prototype to be ready for testing by the end of October	-	Wei Yang

BACKUP SLIDES

SRR for topology (1)

- No source for complete and reliable storage topology description is currently available for the WLCG infrastructure
- Some pieces of info exist in GocDB and BDII. However, experiments rely on their own solutions.
- Required for any kind of data management operations (access/transfer/storage cleaning, testing, etc...)
- Might be useful for DOMA activities as well
- This task has a higher priority compared to SRR for accounting

SRR for topology (2)

- CRIC aims to provide topology description for WLCG storage services addressing all known complexity. Prototyped in AGIS.
- Still every storage service has to describe itself. This description should be available through http protocol.
- Since information is static, as a first approximation storage topology description can be manually created/modified by site/storage administrators, unless solution is available for every storage implementation
- SRR proposal suggests common format which might still evolve while we work on implementation and get experience of using it
- SRR proposal foresees that storage topology description generation is provided for all storage implementations widely used on the WLCG infrastructure

Topology description for computing resources

- Approach proposed for storage description is currently being discussed at the IS evolution task force also for computing resources. [More info](#)
- [Format](#) is still under discussion

SRR for accounting

- Two possible solutions are foreseen:
 - Enable at least one non-srm protocol (http, xrootd) to query used/free space for every storage share/quota included in the storage topology description file
 - Extend storage topology description file with accounting data (used/free space and time stamp of the measurement)
- Can be used both for operations (request on demand) and storage space accounting system (will collect data hourly). Foreseen frequency of update order of 30 minutes.