SRM methods

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Introduction

- The goal is to find which methods are
  - Mandatory
  - Desirable
- In these slides, the proposed mandatory ones are marked in red and the desirable ones in yellow

SRM v1.1 methods

- Get
- Put
- Copy
- GetRequestStatus
- SetFileStatus
- GetFileMetaData
- AdvisoryDelete (?)
- GetProtocols
- Ping
- Other methods like Pin/UnPin were poorly defined and not implemented by any site

SRM v2.1.1 (1)

- Global Space Management Functions:
  - ReserveSpace (reservation is associated with a lifetime)
  - ReleaseSpace
  - UpdateSpace to change global space reservation
  - CompactSpace (space occupied by files in "released" state is deduced from the global space reservation)
  - GetSpaceMetaData
  - ChangeFileStorageType
  - GetSpaceToken

SRM v2.1.1 (2)

- Permission Functions:
  - SetPermission (similar to Posix ACLs)
  - CheckPermission (similar to Posix ACLs)
  - ReassignToUser

SRM v2.1.1 (3)

- Directory Functions:
  - Mkdir
  - Rmdir
  - Rm
  - Ls
  - Mv

SRM v2.1.1 (4)

- Data Transfer Functions:
  - PrepareToGet
  - PrepareToPut
  - Copy
  - StatusOfGetRequest
  - StatusOfPutRequest
  - StatusOfCopyRequest
  - ReleaseFiles
  - PutDone
  - ExtendFileLifeTime
  - GetRequestId
  - GetRequestSummary
  - AbortRequest
  - RemoveFiles
  - AbortFiles
  - SuspendRequest
  - ResumeRequest

SRM v2.1.1 (5)

- There is some overlap between Directory/Copy Functions and GridFTP but it is much easier to write middleware on top of a single interface

SRM Basic/ SRM Advanced

- As sites do not necessarily want to implement a full version, it was proposed to have
  - SRM Basic: all methods must be implemented
  - SRM Advanced: other methods are split into subsets
    - Directory
    - Permissions
    - Global Space Reservation
    - Advanced admin methods

    - Each site implements full subsets and publish which subset it supports. It also implements a method that you may call to know if a given subset is implemented or not

SRM 3.0

- This will be the first release which supports SRM Basic/SRM Advanced

- It offers also new functionality like "streaming" mode

- The proposal has been discussed at LBNL in October 2004 and a draft specification is being produced

Current systems in production

- BNL and LBNL run SRM v1.1 (HRM + DRM)
- CERN run SRM v1.1 as interface to CASTOR HSM
- FNAL run SRM v1.1 as interface to dCache/Enstore
- JLAB run SRM v2.1 as interface to Jasmine (HSM + Disk only system)
- RAL run an hybrid interface to the AtlasStore: the set of methods defined in v1.1 but with a syntax close to v2.1

Current developments

- LBNL has developed an almost full implementation of SRM v2.1 (without Permission methods) and is testing it

- FNAL has released a new SRM v1.1 server using a Postgres database

- RAL is developing an SRM v2.1 compliant interface to the AtlasStore

- LCG has developed an almost full implementation of SRM v2.1 on top of a Light Weight Disk Pool Manager (currently without Global Space Reservation) and is testing it

SRM testing

- LCG has developed two extensive test suites: one for SRM v1.1 (Jiri Kosina/Prague) and one for v2.1 (Gilbert Grosdidier/Orsay)

- We would like to run compatibility tests between sites using these test suites

- We propose that these test suites are used by LCG to validate the different SRM implementations available at least at Tier1 and possibly at Tier2 sites