SRM + GLUE

Comments and Observations

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Purpose of GLUE

- Provide information on services of SRM
  - Capacity
    - Total by types (permanent, durable, volatile)
  - Type of service
    - Get, put, copy, multi-file requests, status, call_back
  - Policies
    - MaxFileSize, MaxPinDuration, MaxQuotaSize, Lifetime per file type
  - Directory service
    - ls, mkdir, etc.
- Provide dynamic information for planning
  - Current space available
  - Current system load
  - Current MBs left in my space (by type)

GLUE + SRM terminology

- Storage Service
  - SRM: SRM service
  - GLUE confuse SRMs and MSSs – call both Storage Service
- Storage Space
  - SRM: Space
- Access protocol
  - SRM: Protocol
- State (dynamic properties)
  - e.g. CurrentIOLoad, AvailableSpace
  - SRM: ???
  - SRM: requestStatus, FilesStatus, filesMetadata

GLUE + SRM terminology (more)

- File System
  - Associated with Storage Space
  - SRM: not applicable?
- Directory
  - Associated with Storage Space
  - SRM: per user, per space-type
- Policy
  - Many: MaxFileSize, MinFileSize, ,MaxData, MaxNumFiles, MaxPinDuration, MaxQuotaSize, FileLifetime
  - SRM: only getProtocols
- File
  - Lots of date info: DateCreated, LastModified, LastAccessed, Latency, LifeTime, Path
  - SRM: lots of other info: owner, group, fileType, checkSum, …

Conclusions

- Some concepts are similar
  - Storage space, files
  - File types: V, D, P
  - Policies
  - Access Protocol
- Some concepts are not
  - Storage Library ?
  - Multiple File Systems for each Storage Space
    - In srm: file system uniform by type, by user
  - Directory associated with Storage Space
    - In srm: directory by type, by user

Conclusions (more)

- Need to separate
  - Static properties – goes to MDS
    - SRM are active: notify MDS of static properties when they are initiated, terminated or updated
  - Dynamic properties – used by planner
    - SRMs are passive: interrogated on a per-need basis
    - Open: should SRMs advertise dynamic properties?
    - Open: Should SRMs accept advisory_requests?
- Need to synchronize SRMs and GLUE
  - Does GLUE need the additional concepts (see previous page)?
  - GLUE needs a lot more on “type of service”
  - SRM and GLUE need a lot more on dynamic properties

Conclusions (more)

- Any reason SRM and GLUE should not maintain identical information?
  - Both should keep identical static and dynamic storage properties, policies, access protocols
  - SRM keeps dynamic properties per request, GLUE needs only dynamic summary information