ADC Retreat: CLIENTS AND INTERFACES

Discussion Slides

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Clients and Interfaces 1

- POSIX like global namespace
  - DDM provides a simple one
    - dq2-get & dq2-ls
    - Dataset pattern convention -> PATH
  - Federated XROOTD, NFS4.1, etc. can provide a real one
  - Convenient for users
  - Users interact with dataset centric system
    - Containers, metadata?
    - Versioning? External service
  - Wrapper Interface for DQ2 to POSIX access
    - CHIRP / FUSE / Xrootd / NFS 4.1 plugins demonstrator (ref next discussion)
    - But will it scale? Central Catalogues caching
  - Overlapping datasets? (duplicate files, hard links, etc.)
  - DQ2 functionalities not provided in basic Unix commands

Clients and Interfaces 2

- Meta-data interface
  - Search by meta data, rather than dataset pattern
    - Hard to scale with pattern
  - Proposal 1 - *dq2-ls --project='data10' --datatype='AOD'*
  - Proposal 2 - *dq2-ls 'data10*/*/*/AOD'*
- Web interface for dq2 functions
  - Too many internal details exposed to users (e.g. lcg-cp errors)
  - Web Interface downloader demonstrator (like RAPIDSHARE, MEGAUPLOAD, HOTFILE, FILESERVE, etc)
  - TORRENTS or list of file http links (needs support from storage)

Client and Interfaces 3

- HTTP(s) storage interface
  - Many open source clients with nice features
    - WGET, CURL, ARIA2 (multisource support)
    - Cyberduck (AMAZON S3, WEBDAV, HTTPS, GOOGLE STORAGE (REST), Eucalyptus, Openstack, etc.)
    - Jdownloader - jdownloader
    - Native support (python, java, etc.)
  - Less dev. and support
  - REST based
  - Middleware changes and features
    - HTTP redirection
    - Ref. next talk, storage and middleware