Disk Pool Manager

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(on behalf of the DPM team)

Goals

- Simplify life of users
- Simplify life of administrators
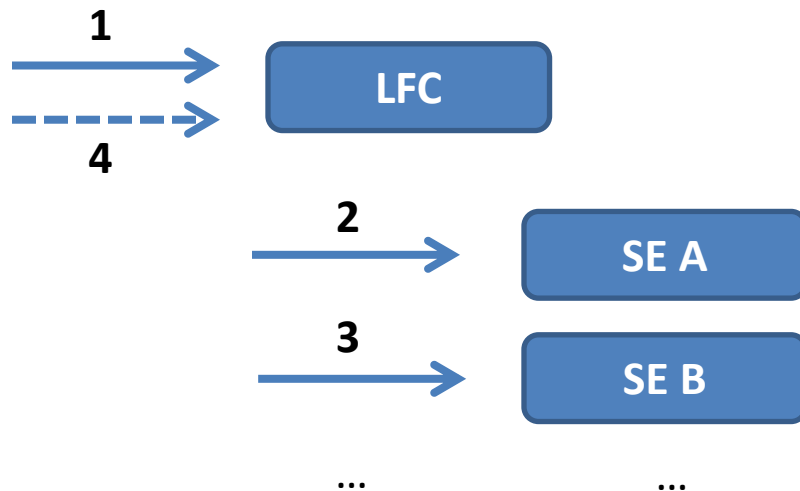- Improve feature set and performance

- Standard protocols (HTTP / WebDAV, pNFS)
- Standard building blocks
- Prepare for what is coming

Consolidation

- HTTP / WebDAV
  - Based on Apache 2
  - Deployed at several sites (beta)
  - Extensively tested at ASGC with good results
  - Third party copies, multiple streams, credential delegation
- NFS 4.1 / pNFS
  - Based on Ganesha
  - Deployed at several sites (beta)
  - Tests ongoing at ASGC, trickier to get all right
- XROOTD
  - Rewriting the plugin, committed to do it fast
- HTTPS for SRM (client SSL session reuse)
- Nagios, Puppet, Catalog Synchronization

https://svnweb.cern.ch/trac/lcgdm/wiki/Dpm/Dev/Components

Global Access Service

- Based on HTTP / WebDAV

- Looking into doing the same with pNFS

- Working prototype with LFC and DPM
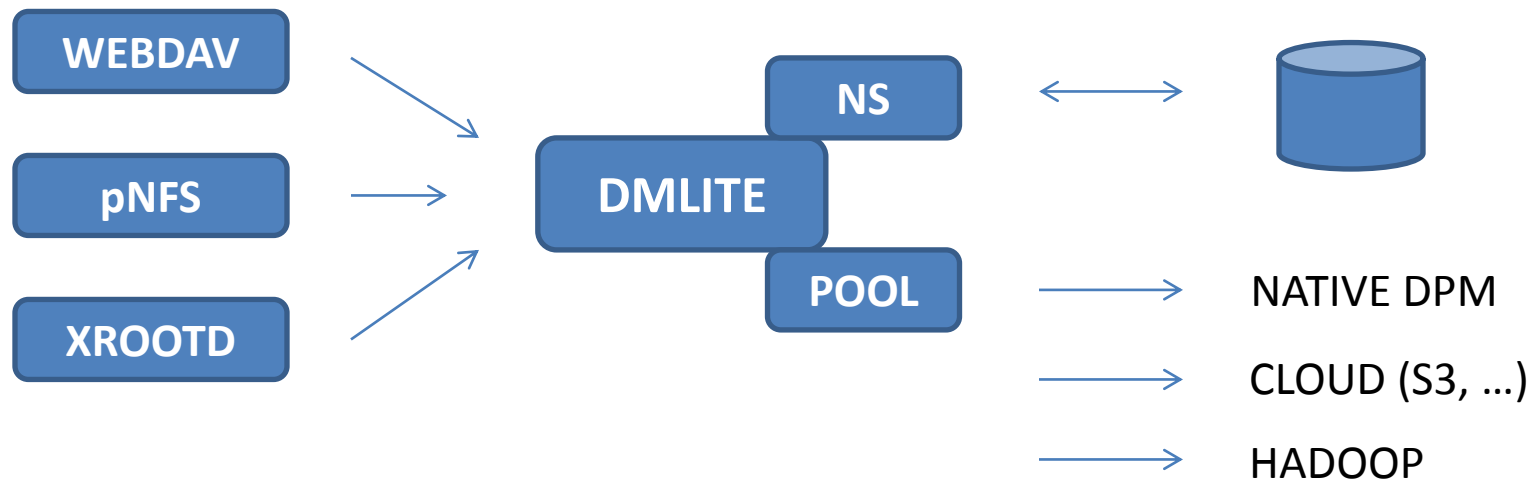 - Support in dCache being added soon

1

4

LFC

o Standard HTTP clients

o Magic comes with HTTP redirection

2

SE A

o SEs redirect to next replica on failure (transparent to the client)

3

SE B

o Clients can be redirected back to the LFC (on PUT or to get more replicas)

…   …

https://indico.cern.ch/contributionDisplay.py?sessionId=1&contribId=65&confId=147484

Dynamic federations

- Extending the concepts described before
- Loosely coupled catalogs and metadata
  - Multiple LFC catalogs
  - Private catalogs
  - No catalogs (plain HTTP / DAV SE endpoints)
- Design ongoing, exploratory developments starting

Preparing the future

- Significant code refactoring almost finished

- Separation between namespace and pool management
  - DMLITE based on a plugin stack
    - NS: MySQL, Oracle, memcache, DynFederation, …
    - POOL: Native DPM, HADOOP, S3, CEPH, …
  - Extending DPM to other storage technologies

DPM Community Workshop

- Join us!

- 27th February 2012 - CERN

- https://indico.cern.ch/events.py?tag=dpm-community-workshop-2012