HTTP Update

WLCG DOMA / TPC Derek Weitzel, 15 August 2018

Reminder: Big-picture Goals

- Between now and January 1, would like to get the "full matrix" of connectivity.
 - Working with "standalone Xrootd" (Xrootd+HDFS, Xrootd+Lustre), DPM, and dCache.
 - Need input: StoRM and ECHO.
- Land patches as needed.
- Perform scale tests (work not started).

Goals for 15 August

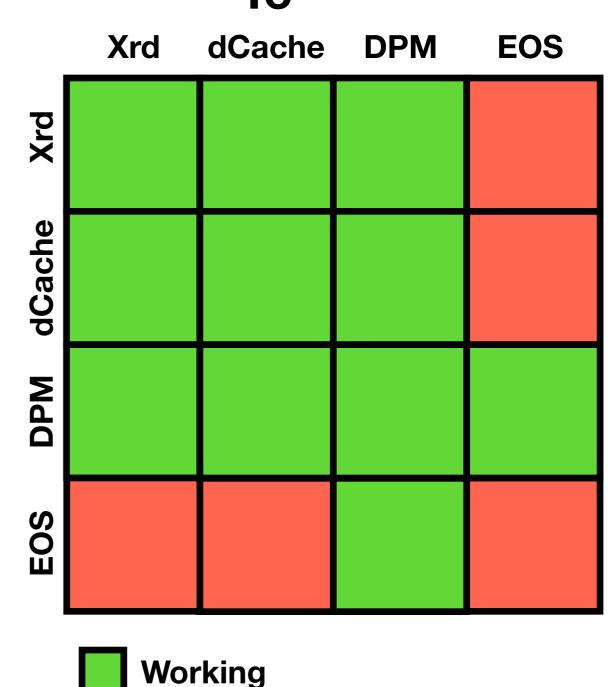
- Focus on compatibility, not scalability: FTS-based fixes for broken DPM and dCache links.
- Add another SE type to matrix (StoRM or EOS).
- Start setup of Rucio instance for continuous transfer.
- Move a second PhEDEx link to use HTTPS for TPC. X

Test Endpoints

- Using these for testing:
 - DPM: CERN DPM test instance. Added Glasgow endpoint (thanks Sam!).
 - dCache: DESY test instance, Imperial.
 - Did not make progress on adding AGLT2 to the testing (sorry Shawn!).
 - Standalone Xrootd: Florida, Nebraska
 - EOS: CERN EOS PPS (thanks Xavi!).
- Exact endpoint names updated in twiki page.
 - Anyone have friends who run Echo or Storm?

Connectivity Matrix

- Results of transferring files via <u>fts3-devel.cern.ch</u> and <u>hcc-briantest7.unl.edu</u> (when testing gfal2 / fts3 patches).
- Much better than last report as we put some simple FTS-side patches in place to tweak credential management.
- EOS does not implement COPY command (breaking EOS->EOS transfers) and does not implement token-based auth (breaking Xrd<->EOS).
 - Unclear why EOS<->dCache is broken. Needs debugging potential dCache bug.
 - Picture will get better when EOS rolls out XrdHttp support.



Broken

Untested

Known Issues

• DAVIX:

- Incorrect handling of checksums in response: https://its.cern.ch/jira/browse/DMC-1063. In progress.
- gfal2:
 - Fallback to GridSite delegation if requested by storage: https://its.cern.ch/jira/browse/DMC-1069. **Patch available**.
 - Remove file after transfer attempt: https://its.cern.ch/jira/browse/DMC-1068. Patch available.
- DPM:
 - Do not require GridSite delegation if there's a valid bearer token for remote site. https://its.cern.ch/jira/browse/LCGDM-2452.
 Workaround by explicitly setting delegation style (GFAL PR #13).
- dCache:
 - Macaroon does not work with COPY unless its path points to parent directory. dCache RT#9468. Workaround in FTS3 PR #18.
 - Does not recognize "davs" as a valid scheme. dCache RT#9473.
- Xrootd:
 - XrdHTTP does not support checksums. **Fix merged** for 4.9.0 release.
 - XrdHTTP support for TPC & Macaroons currently in standalone plugin. Fix merged for 4.9.0 release.
- EOS: XrdHttp support still in progress.

Building a Testing Infrastructure

- Working with the Rucio team to setup a dedicated test instance:
 - Started discussion Nebraska team needs to learn more about k8s before rollout.
 - Maybe next meeting?

Thinking Forward - Production

- Our single HTTP-based PhEDEx link (UCSD -> Nebraska) remains.
 - Working with Florida to change over Florida->Nebraska. Not done yet.
- Plan to work with Rucio (AGIS?) team to similarly incorporate this into an ATLAS instance. Effort not started.

29 August Goals

- All FTS3 patches rolled out to fts3-devel.cern.ch
- "10 TB test" in FTS beginning of scale testing.
- 4 PhEDEx links upgraded.