# TPC update

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GDB

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# Status and target date

- HTTP-TPC chosen for all disk TPC transfers
  - T0/T1/T2
  - ATLAS, CMS and LHCb on board with this
  - Opening tickets for their sites
- Different take on xrootd as secondary protocol
  - LHCb wants to keep it just in case, ATLAS will remove it
- Target date to move the disks endpoint
  - **May 31st 2021**
  - Will leave time to fine tune until the start of run3
    - Finding new problems related to load
- TPC for other sites
  - HPC for example using globus online ?
  - T3 with no pledged resources
  - Will have to review these sites in the coming months
- RAL
  - Last T1 to be enabled by all experiments
    - ADCINFR-195 (used as a DOMA ticket)

# Uploads & Downloads

- Not strictly TPC but quite a lot of the SRM/gsiftp traffic generated by uploads and downloads
  - Need to review these settings too

# Baseline versions

- For the sites that still don't know the baselines are these
  - DPM 1.14.2
  - StoRM 1.11.19
  - dCache 5.2.15
  - XRootD 5.1 <- not out yet
    - xrootd team working hard to deliver by end of February
  - EOS 4.8.33
- WLCG Ops tickets opened by Julia
  - ATLAS and CMS also checking the sites that migrate
  - Don't close the tickets until experiments have checked
- FTS and gfal
  - Need to coordinate also on this for experiments
  - LHCb sites coming up with different errors
    - Some related to delegation

# Tests

- Another reminder for sites once they have upgraded to check everything works as it should in first instance
- Smoke tests (atomic curl tests)
  - Smoke tests can be used by sites to do the initial tests

    wget https://raw.githubusercontent.com/paulmillar/http-tpc-utils/master/bin/smoke-test.sh

    chmod 755 ./smoke-test.sh

    voms-proxy-init -voms dteam

    ./smoke-test.sh https://<storage_head>:<port><dpm_path>/dteam

  - They work also with atlas credentials
    - -v atlas and appropriate path
- Experiments will do their own tests afterwards before putting in production

# TAPE: SRM+HTTP

- SRM still in front of the tape but there is a plan to get rid of it in few stages
  - SRM needed for a handful of tape operations
  - SRM can support different transfer protocols
- First stage replace gsiftp with http as SRM transfer protocol
  - This works already using x509 but we are enabling http everywhere with macaroons
  - FTS/gfal development to use SRM+HTTP with macaroons
- SRM+HTTP testbed
  - DOMA rucio + FTS-devel
    - Plan agreed end of January
  - **We need volunteer T1s** with dteam enabled on tape

# TAPE: REST API

- Tape storage solution are
  - SRM: dCache, StoRM
  - SRMless: CTA
- To completely eliminate SRM an alternative is needed
  - WLCG workshop in November it was decided to look at the dCache REST-API
    - Process accelerated with presentation at the GDB
    - Now also part of the TPC agenda
      - Today overview of the API

# OIDC

- **WLCG DOMA TPC** OIDC testbed
  - Compliance tests for storage developers to have immediate feedback
    - successful transfer doesn't necessary mean compliant SE impl.
  - Used for the AuthN/Z hackaton but now progress has stalled
- IAM instances @CERN
  - Important first step towards a token infrastructure
  - Experts (Andrea) effort on this
    - VOMS-admin deprecation plan
      - Authz WG
- Token migration plan see
  - Brian's presentation & discussion later
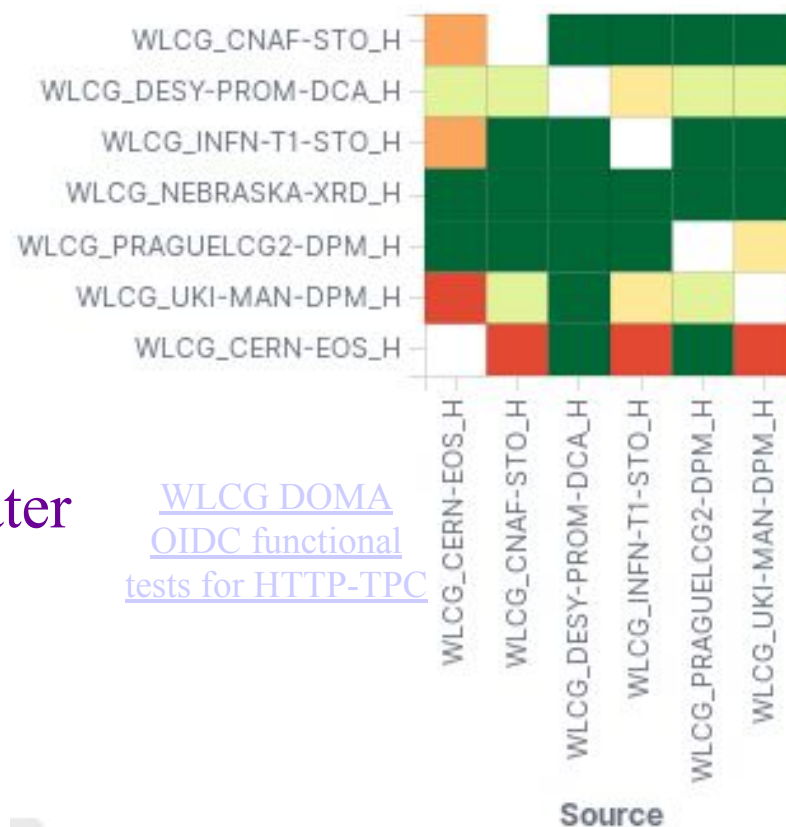
WLCG DOMA OIDC functional tests for HTTP-TPC

# Networking

?

# TPC evolution

- TPC gone beyond its original remit
  - It has become a forum for different DOMA development, testing, and deployment activities
- Don't have a common tracker
  - Currently using ATLAS ADC JIRA for things that might need also CMS and LHCb input (see RAL ticket ADCINFR-195)
  - Also ATLAS only one which can be tracked see other ADC ticket (ADCINFR-166)
- Perhaps we need a DOMA JIRA
- And a redefinition of the group to reflect the extra activities

# Conclusions

- TPC migration to HTTP progressing at much faster pace than expected during HL-LHC review
  - 3 experiments on board
  - Added WAN/LAN settings reconfiguration
  - Will need to evaluate what to do with the non standard resources
- TPC as a WG has expanded
  - Will need to agree on a new mandate or working guidelines

# Backup

# HTTP-TPC Related Issues

- Still discovering new issues
  - **usually related to increasing volume of HTTP-TPC**
- Latest released DPM/dmlite
  - LCGDM-2953 - *failing transfers under stress (or long distc.)*
  - LCGDM-2961 - mixing IPv4/IPv6 failure - happy-eyeball
- EOS fails with push mode (now fixed in XRootD)
- StoRM INFN-T1 scalability issue GGUS:150181
- No RemoteConnection in dCache & StoRM perf marker
  - also not supported by Davix, FTS IPv4/IPv6 info misleading
- *FTS/gfal terminate stuck transfers too late* DMC-1236
  - zero progress not considered like with gsiftp protocol
  - number of active transfers limited (per site, per link)
- CRL often not considered (XRootD,EOS,DPM,gfal,...)
  - CRL validation is mandatory in the EGI/WLCG infrastructure
- Multistream transfers - missing or not tested

… this is just few recent examples with different severity …

# Links

- Storage upgrade GGUS tickets
- TPC twiki
- Petr's test of protocols configured in Rucio