

# ATLAS DDM Operation without SRM

Wei Yang  
On Behalf of the ATLAS DDM

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# ATLAS DDM Operation Requirement

- Data access by jobs - Xroot / HTTP protocols preferred
- Data transfer, 3<sup>rd</sup> Party Copy (TPC)
  - Including scale up / clustering
  - Protocol requirement: GridFTP - Was SRM, will be (maybe) Xroot/HTTP
- Remote Management
  - Space reporting Json
    - A flat file, with static info - only total space/quota absolutely needed
    - <https://twiki.cern.ch/twiki/bin/viewauth/AtlasComputing/SRM2GridftpMigration>
  - Remote deletion
- Optional storage dump - a list of files in storage
  - Once a month
  - For DDM to discover missing data, dark data
  - This is not necessarily a storage function. Implementation is site/storage dependent.

# ATLAS SRM-less Operation and DPM Readiness

- ATLAS has many GridFTP only DDM sites already:
  - EOS, CASTOR, RAL Echo (Ceph), NERSC, SLAC, OU
  - SRM is still supported, But
    - Focus point is moving toward GridFTP, and will be (maybe) Xroot/HTTP
    - Support of SRM in ATLAS DDM is fading away in long term
    - Unless you have tape library, SRM is not needed
- DPM supports GridFTP (and Xroot, HTTP, SRM)
  - Use Globus GridFTP, and a plugin (DSI?) to support clustering / load balancing
  - Remote data management function is compatible to Globus GridFTP
  - Though, to be an EGI certified site, you are expected to provide BDII info
    - via SRM (and Is this statement correct?)

# Future of 3<sup>rd</sup> Party Copy

- Globus dropped support of the Globus Toolkit / GridFTP since Jan, 2018
- ATLAS and CMS are actively engaged in Xrootd and HTTP based 3<sup>rd</sup> Party Copy
  - As well as remote data access
- Xrootd TPC targets GSI based implementation
  - "easier" – still tones of nasty details to sort out
- HTTP TPC is working toward token based authentication
  - A bigger / harder / more fruitful goal.
- DPM developers are well connected to Xrootd and HTTP TPCs
  - And play critical roles in both