

- DQ2 is the software for ATLAS Distributed Data Management System (DDM)
- DQ2 uses datasets for data movement
- Datasets are groups of files with a certain common metadata
- Follows ATLAS Computing Model requirements for data movement

- DQ2 stores in ATLR
 - Dataset definitions
 - files produced -> ready to be moved
 - Dataset subscriptions
 - requests to move data between sites
 - Dataset replicas
 - overview where the files are located (higher-layer on top of site's Local File Catalogs)

- All data is critical
 - we have no way to know if a dataset is more important than another
 - without datasets
 - no data can be moved efficiently
 - no new produced files can be registered
 - without subscriptions no transfer requests can be fulfilled
 - without replicas the “good” sources for transfers cannot be identified efficiently

- Why have a read replica of the database?
 - in case of a downtime
 - current transfer requests can still move
 - downtime would have less impact on DDM
 - users can still browse all dataset information
 - where the data is, what do you have inside
 - less impact on users
- Maximum admissible downtime: 4h
 - after 4h, produced data during the downtime needs to be registered and shipped urgently
 - solution: turn read replica to master replica?