Run control, data management

Matt Kramer

2x2 DAQ/computing meeting
June 13 2024

Run control

- MORCS priorities: BlobCraft2x2 integration for slow controls data, subrun-level info

- After "morcs stop-run", MORCS will:
  - Ask BlobCraft2x2 to:
    - Produce JSON blobs of slow controls time series and upload to UConDB
    - Produce JSON file with info on all subruns and summaries (averages, etc.) of key slow control parameters
  - Parse summary JSON file and populate MORCS runs_DB.sqlite

- Getting subrun-level info:
  - CRS: Scan DAQ's filesystem for filenames with correct run number?
  - LRS: Use LRS DAQ's sqlite DB
  - Mx2: Also provides an sqlite DB

Data management TODOs

- Test xrootd config (auth, directories, firewall) on all 3 DAQ machines

- Test ingestd config

- Determine subrun lengths for 1-10 GB file size
    - CRS: 15 MB in 10 minutes → Impractically long subruns?
        - Solution: Synchronized LRS and CRS subruns in merged HDF5 files?

- Ensure DAQs configured to write data + metadata to /data/DAQ

- Activate Rucio rules for NERSC CFS, dCache tape