2x2 DAQ/Computing Working Group for ArgonCube 2x2 Demonstrator

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27 June 2024

2x2 DAQ/Computing Working Group

News – 27 June 2024

- Next Thursday 4 July is a lab holiday
- Next week is a Fermilab Low Tempo week
  - Some experts might be away from the lab
- Redmine outage yesterday for all Redmine users
  - Redmine hosts the 2x2 wiki
  - I called the service desk to elevate the issue
- Detector commissioning is in progress
  - Cryo
  - DAQ
  - Shifting – local and remote
  - Purity monitor runs
  - HV – waiting for stable cryo
- Meetings
  - Toolbox meetings moved to 9 am everyday
  - 2x2 Operations Meeting every Tuesday @ 11
  - 2x2 DAQ/Computing meeting on Thursday 11 July @ 10

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Online Projects

- Run control and Data management - Matt Kramer, Geoff
- Runs Database - Sindhu Kumaran
- Slow Controls - Renzo Vizarreta and Company
  - Cryo monitoring added to Grafana after successful connection to the PostgresDB.
    - Reader and writer account permissions have been configured
    - Using reader account
  - Raspis where setup by Faiza and Nimmy and are ready to be plugged to the switch on Module 2 UPS. Scheduled for Friday.
- Shifting and Operations - Faiza Akbar, Nimmy Sarah Alex, Anne Norrick, Shifters
- Computing and networking – Geoff, Faiza, Nimmy, Bruno
  - 2 new cameras are here, network config in progress
  - Added network config to two Raspberry Pi's
    - Latest RPi OS has different network configuration steps
  - Add new RPi for level meter to the network today

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Databases

- Databases hosted in Fermilab central services
  - Production
  - Development – for testing before moving to production
- Reader and writer account permissions have been set in the production and development databases
  - Slow controls using reader account
- Need to transition Cryo and Purity Monitor to use the writer account
  - This can wait until after July 12
  - Alan reports the writer account did not work for PM
- This summer the production database needs to be moved to a new server
  - Starting a list of summer shutdown projects

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Data Management

- acd-daq02 (charge) setup and tested
- acd-daq01 (light) setup, ready for testing
- acd-mnv01 (mx2) setup, ready for testing
- Instructions streamlined
  - https://cdcvs.fnal.gov/redmine/projects/argoncube-2x2-demonstrator/wiki/Ac2x2-xrootd_
- Official directory is /data/DAQ/rawdata
  - DAQ experts should modify their code to write data and meta data to this directory
  - Files only go to disk, not tape
- DAQ tasks
  - Take runs with Meta data included
  - Verify meta data
  - Determine cleanup policy

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2x2 Communication

- 2x2 wiki
  - https://cdcvs.fnal.gov/redmine/projects/argoncube-2x2-demonstrator/wiki

- 2x2 logbook
  - https://dbweb0.fnal.gov:8443/ECL/argoncube

- 2x2 Slack channels – Slack is not a logbook
  - 2x2_operations
  - 2x2_run_control
  - minerva-for-2x2

- Email lists
  - dune-nd-lar-cnsrt-daqcomp
  - dune-2x2-ops

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Why this meeting?

- Started before 2x2 Operations meetings (Tuesdays at 11) and daily toolbox meetings (3:30) to address technical topics
  - Triggering (A9 signals) – open readout gates
  - Resistive wall monitor – identifies when protons pass RWM device
  - Computing and networking
- Discuss current topics (see agenda)
  - Run controls
  - Data management
  - Runs DB
  - Slow controls using Grafana and python scripts
  - Shifting and Operations
  - Computing and networking
- Look to the future
  - dunedaq - postponed
  - dune timing - postponed
  - slow controls for experiment devices
    - EPICS – used for SBN (SBND, Icarus, uBoone)
    - Ignition – used by Cryo controls

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