nd-daq-comp meeting minutes
Dec/14/2023
Scribe: Luis Zazueta

Kevin Status report:

Racks went underground: purity monitor, cryogenic control
Charge readout test
improvement to daq code
noise assessment studies, more details in the pixel readout meeting
logbook entry bound
Louise: the logbook should have entries when people **start** work.
DQM development at LBNL from Jaafar
AC 3-phase being installed this week

Bruno on network updates:

New servers installed
proxy server. The expert was able to debug the problem. Now working at LarTF. Waiting for power underground to implement devices.
Purity monitor network switch to be installed on Monday
cryo computer will be connected to router for the duration.

Jaafar Charge readout DQM:

Charge readout DQM metrics implented
packet rate by packet size
data rate by IO channel
FIFO status for packet Local and shared
metrics displayed in grafana, getting more metrics implemented
Currently local setup work, hope for implementation on 2x2

Louise: What metrics are we expecting the CR experts to see vs. which are for shifters? Maybe collapse to a more coarse metric for the average person. Are we capable of see which individual channel is noisy?

Kevin: first development of an “expert” level dashboard, then moving to a shifter level one.

Cynthia: Vision of having a general dashboard that can point trouble and having different dashboards with more detailed information.

Louise: should we keep calling this process DQM “data quality” name might be overloaded, we should think about an alternative name. Cynthia suggests raw data quality

Renzo: In which server are we running the influxdb and grafana code?

unclear at the movement, need to ask Geoff. Also, need to make a clear map of what daq software is running where.

Renzo on Minerva commissioning for 2x2:

Minerva operations mailings now available DUNE-MX2-OPS, next meeting January 5th

There is only one working spare VME crate. 2 bad VME crates at Lab F. (there is a daq test stand in lab F). maybe the 2 bad ones can be repaired.

Event transfer and run control scripts are being updated to dune-compliant metadata code lives in nsf/minerva, which defeats the purpose of having a separate test stand

Jack: we should think about the minerva migration from /minerva/app to exp/minerva/app

minerva is moving to host principal Kerberos
need to run the DQM on srv04

Kevin: Minerva DQM generates plots to a web page? Jack: that is correct, run in a separate server machine. Howard: there was a program that gave real-time information (gmBrowser)

Jack: to some first order, if the daq is running is usually enough to know that minerva is working properly, if a board fails the daq stops

Tammy: Do we keep 2x2 data if minerva is down? There is agreement that we should.

Louise: we should look at high-level minerva monitoring, and separate the critical things and the less relevant information related to raw data monitoring.

About making a unified DAq for minerva, charge, and light

We should think about what are the important things we want to do. Might be a good idea to have the TPC and the minerva separate. Minerva going down should not stop the tpc daq.

Sound like we would like the daqs should start together and run together. Need to think about what we want to do in failures mode (ex minerva down but 2x2 ok, etc.)

Need to understand file size limits, in case different systems role over data at the same time. Could this mess with computing? Tammy: Fermilab's tape system is changing sometime in the future (next year?)