



NP04 DAQ in 2019

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DAQ Workshop
04 Feb 2019

Introduction

- Thanks for the memories
 - Plane leaves tomorrow at 10:50 am
 - So this is my last day here
- Kurt keeps pestering me to write down some stuff
- Cover items for which DAQ is responsible on np04
- Goal: Keep np04 running
 - Tests – Cryostat, LAr, HV, photon detection, cold electronics
 - Cold electronics testing with APA7 in the cold box
- Resources
 - Better understand relation with neutrino platform
 - Network
 - DAQ barracks – racks, computers, cables, ...
 - UK – computers

Single Points for Failure

- NFS server
 - Main server is np04-srv-007
 - Second server is np04-srv-008
 - Backups from srv007 to srv008
 - Only 1 Gb links to both – performance limitation?
- Online monitoring
 - Monet – display framework
 - Slow response
 - Difficult to access from outside CERN
 - Processing
 - Aidan Reynolds goes back soon and needs to graduate
 - Plots are not saved
- Network switches – supported by CERN-IT

Possible Development Bottlenecks

- Space in the DAQ barrack
 - All the racks are filled
- Readout cold box
 - Fiber network ports for cold box
 - New fibers to cold box
 - Use resources from one APA
- Transition to full FELIX readout
 - Enough 10 Gb ports
 - Power

Computing Infrastructure Improvements

- Might have time for reinstalls starting when the cryostat is emptied
 - Then there is only cold box readout
 - Adjust the disk partitions to be the same
- Improvements
 - Kernel version upgrade
 - Computer monitoring - prometheus
- Services
 - External web server access
 - External access - vnc
 - Analysis info - window size, HV settings
 - Log files - filebeat, logstash
 - Squid proxy

My contributions, maybe?

- Configuration files (fhcl)
 - Develop scripts for generation
- Log files
 - Improve space monitoring
 - Collate and store
 - At least zip
- Hardware and operating system monitoring
- Disk space estimates for proposed tests - offline
- At this point I have no definitive roles
 - Need to consult with my management
 - I am a member of the Neutrino Division at Fermilab