MINERνA Commissioning for 2x2

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2x2 DAQ/Computing Meeting
Thursday 14, December 2023

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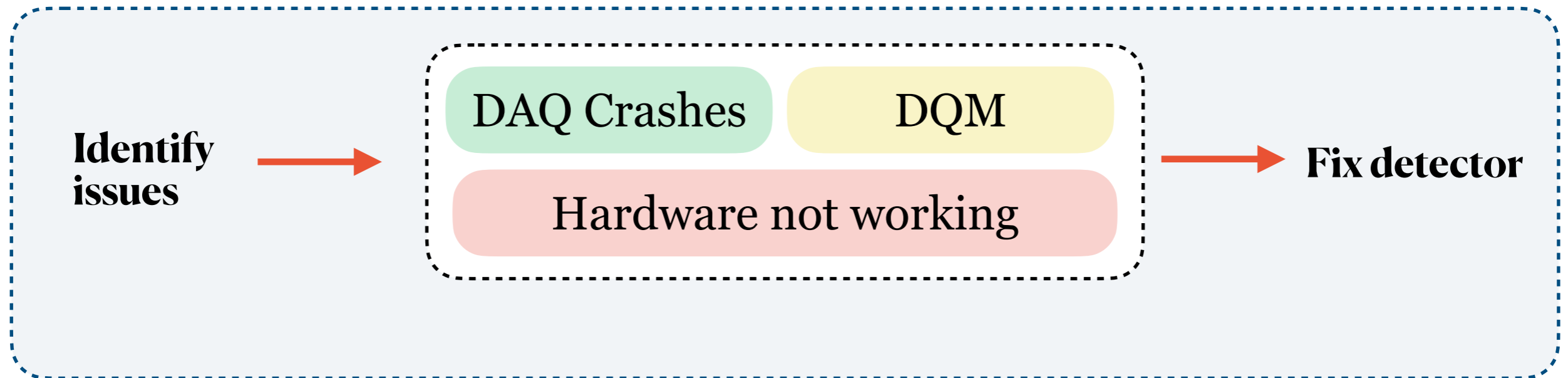
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Mx2 People

- Jack Smedley, Jeanie, Wolfs, Howard Budd — monitoring and repairing detector

- Akeem Hart — DAQ upgrades

- Luis Zazueta — 2x2 Deputy RunCo

- Alysia Marino — DQM

- Tammy Waldron, Carlos Pernas — Offline, calibrations

- Faiza Akbar, Renzo Vizarreta — organize

- Geoff Savage

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Mx2 Operation meeting @ 11 AM CDT

- Keep track of regular operations to monitor the detector and ongoing software development work.

Core Monitoring Operations: ▶ Who is working on this? **Jack, Jeanie & Howard.**

Identify issues → DAQ Crashes | DQM | Hardware not working → **Fix detector**

Hardware:

- 2 bad VME crates at Lab F:
  - has a bad power supply
  - IRQ*(interrupt request) is bad: maybe one of the slots is damaged or "a bent pin." — Get them repaired.

  * IRQ is a special line when CRIM sends a message to start to take data

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Status of DAQ updates: ▶ Who is working on this? **Akeem.**

- Event Transfer Updated: v9.0 → 16.5 (Complete)
  - Some significant functional and structural changes
    - In particular signalling between ET and our DAQManager needs an overhaul
- CAENVME libraries updated: v2.7 → 3.4.4 (Complete)
- Run control scripts (mostly) updated to Python3 (In progress)
  - RunControl GUI written in wxPython Classic, python3 has wxPython phoenix
    - Big headache to convert over
- Updating MetaData produced to be compliant with DUNE standards (In progress)

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Status of DAQ updates:

- Run DAQ on AlmaLinux9 at LabF:
    - –acd-mnv03 is in place at LabF
    - OS installation on mnv03 complete
    - setup of data disks – 20TB raid 10 is done
    - Auto start of a2818 driver – rebuild driver on AL9?
- Proposal to Incorporate 2x2 DAQs in Minerva run control:
    - start and stop three DAQs with the same information (there was discussion in Slack channel #minerva-for-2x2)

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Next steps/Working on...

- Update run control to use host principals.
  - Minerva run control uses kerberos to manage processes on multiple servers
  - Kerberos special (host) principals are used instead of personal kerberos principals
  - Need to run DQM on acd-srv04. (maybe Jack or Renzo will try this)

For details: DUNE-doc-29724 (Geoff's talk)

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