AIDA 2020

Advanced European Infrastructures for Detectors at Accelerators

WP5 Common DAQ Annual Meeting Parallel Session

D. Cussans

M. Wing

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 654168.

Aims

- Common DAQ work-package:
  - Making tools to make beam-tests easier and/or better
  - Hardware – TLU
  - DAQ software – EUDAQ2
    - Support provided by beam-line work-package
  - DQM software – Using DQM4HEP framework

Project Planning

- How do know if we are succeeding?
  - Use as early as possible in beam tests (AHCAL)
  - Meetings
  - Milestones and Deliverables

Purpose of Meeting

- How are we doing?
- Will we get things done in time?
  - A tool is only useful if it is available.
- Problems?
- Progress?
- Anything we need to change?

Deliverables

- D5.2 Trigger Logic Ready (M30).
  - Testing prototypes
  - Will make modifications and produce TLUs for AIDA-2020 beam-lines.
    - Units are costing more than expected → Will have to have a tight definition of AIDA-2020 beam-line
    - Will manufacture TLUs for other users at “Cost price”
    - May add features to make TLU useful for DUNE as well → larger production run →Lower cost. (… and risk of design problems in final unit not borne by AIDA-2020 WP5 …)
- D5.3 DAQ Software (M30).
  - Basically, EUDAQ 2.0
- D5.4 , D5.5 Data acquisition hardware (M30)
  - Linked to D5.2
- D5.6 Common DAQ system used in combined beam tests (M45)
  - Already running combined beam tests between different Calo systems.
  - Integration of Silicon strip tracker progressing

Milestones

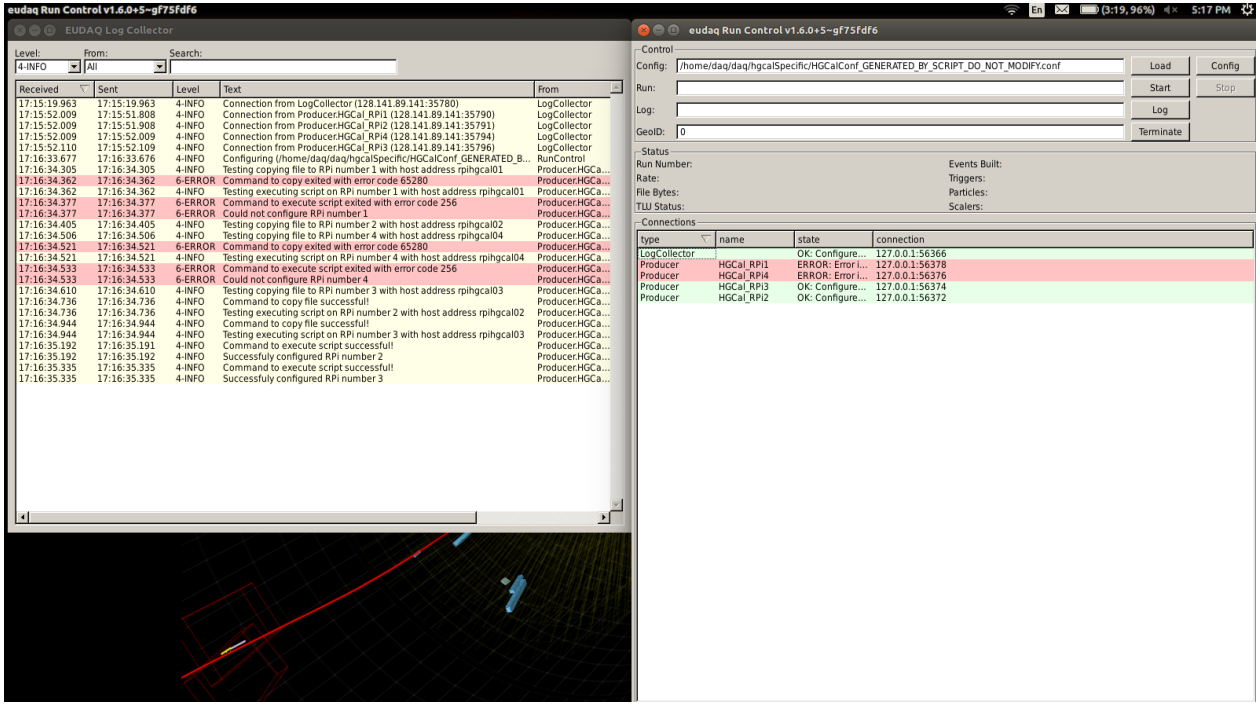
- MS43 , M21 (TLU Design ready) reached.
  - Prototype TLU exists. Report written
- MS46 , M24 (EUDAQ interfaces to other DAQs available.)
  - Expect progress after release of EUQDAQ 2.0
    - EUDAQ 2.0 release due next month.
    - Reaching milestone on time will be tight.
- MS62 , M27 (Development of run control ready)
  - Basically reached when EUDAQ 2.0 is released (Calorimeter groups already gaining experience integrating run control with EUDAQ)
- MS66 , M30 (TLU ready hardware)
  - See D5.2
- MS67 , M30 (Data quality tools ready)
  - Tom Coates (Uni Sussex) maintaining DAQ4HEP tools (Ete, Mirabito IN2P3) and enhancing integration with EUDAQ
  - Looks OK.

Milestones

- MS68 (Slow control system ready) , M30
  - Very little effort available
  - … However, can use DQM4HEP framework, so little effort required
- MS80 (Common DAQ system ready for combined beam-tests) , M36
  - Already mounting common beam-tests between different ILC detector prototype DAQ systems.

News – New EUDAQ users

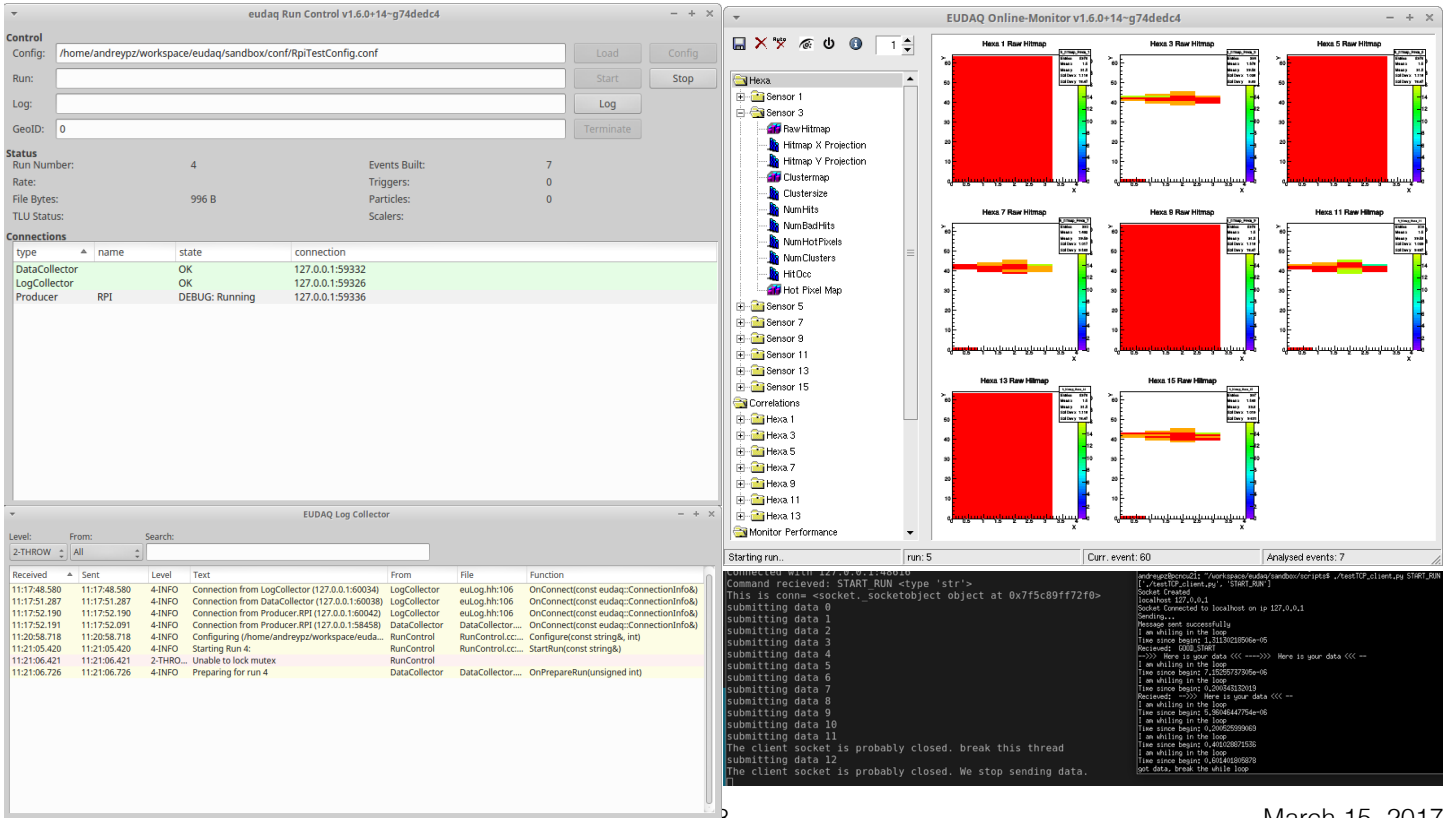
- EUDAQ already used by ATLAS pixel beam test community
- Looking likely that CMS HGCAL will use EUDAQ for combined beam-test with Calice AHCAL:



Tanmay Mudholkar , CMS

News – New EUDAQ users

- … including DQM tool



Andrey Pozdnyakov , CMS