Online Software Status

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`http://www.hep.ph.qmul.ac.uk/~landon/talks`

Overview

- Recent progress
- Review
- Next steps
- Summary

Recent Developments

Testbeam preparation (some already mentioned)

- Bytestream decoding, monitoring framework and presenter
- Continued development of PPM and JEM1 software
- Integration of BUSY module
- Attempt to move to ROD crate DAQ run controller (only started working after the testbeam)

Review

If, when, what scope?

- We always intended to review the online software “after the slice tests”
- These should officially be finished by Christmas – meanwhile production and installation are approaching rapidly
- So should we still try to have a review, if so when and what should its scope be?
- SW meeting concensus was “yes”: either mid/late December (eg 15-16) or early/mid January (eg 12-13)
- Suggested 1-2 days discussion, presentations for major components, light on documentation, treat L1Calo online/offline as external to each other for review purposes

Missing/Incomplete Software (1)

Still needed for the slice tests

- Automated timing setup and scans: must get started with calibration!
- More test vectors to thoroughly test corners of the system

  (some CMM readout bit errors were only noticed in testbeam not slice tests)
- Incorporate and test LTP: feedback on LTP must be submitted before Christmas
- 9U ROD: some software already done, more needed... (plus the module!)
- HDMC optimisation: startup speed is excessive for heavily occupied crates

Missing/Incomplete Software (2)

Conditions database

- ATLAS database strategy is getting clearer: but implementations of the preferred model are not yet available
- However still a split between configuration and conditions DB
- We would like a way to save online configuration and access it offline
- Many discussions started on a common trigger configuration (whole of level 1 and HLT)
- We need to think about how to store calibrations in conditions DB, also hot/dead cells, etc

Missing/Incomplete Software (3)

Calibration

- Lack of progress with calibration, especially together with calorimeters is becoming critical
- It may be too late to do anything other than try to fit in as best as possible with what LAr and Tile have independently decided
- Eg at the RCD workshop it emerged the TileCal have already more than exhausted the available TTCvi “BGo” inputs: this may restrict the ways we can run jointly with them by linking LTPs?

Migrations (1)

ROD Crate DAQ

- Initial tests already successful (configuration only)
- Still more to do (monitoring: hardware and events)
- NB at the recent RCD workshop, the DAQ group asked for feedback (soon!) on any changes we might like to the ROS/RCD architecture. Some suggestions already submitted

Migrations (2)

Monitoring

- We have successfully used Adrians monitoring framework and histo display
  – but he is leaving us...
- Several other subdetectors (Muons, Tiles, Pixels?) used an alternative monitoring framework and histogram presenter
- There is enthusiasm to develop these tools further after gathering requirements from other subdetectors
- We should at least feed back our experience and the best features of our existing tools and then consider whether to migrate

Summary

Progress

- As ever, forward but slowly
- With a lot of hard effort, especially for monitoring, we just made it to the testbeam
- But we didnt have time to move to RCD or use the conditions DB, etc

Major next steps

- Review
- Databases
- Calibration