

ACE

A COOL Editor

ATLAS Online Database meeting
3rd December 2007, CERN

Chun Lik Tan - clat@hep.ph.bham.ac.uk

Contents

ACE

— [Current situation

— [Basic requirements

— [Features

— [Screenshots

— [Software dependencies

— [Other requirements

— [Next steps

— [Trying ACE

Current situation

ACE

- [There are tools available that provide varying access to COOL.
 - KTIDBExplorer (Read-only access), not COOL-specific.
 - Various useful scripts are available to create and populate COOL folders.
- [Ad-hoc modification of folder entries is tedious and error prone.

Basic requirements

ACE

- [Browse existing COOL folders

- All LCG database technologies including SQLite

- [Add new rows by modifying existing ones

- No editing of historical data!

- [Commit new additions to COOL

Features

ACE

- [Pure COOL API.

- [Connection builder with history for quick connections.

- [Dedicated tab for separate COOL connections with tabulated folder contents including Channel Id, Since and Until fields.

- [Bulk field population for convenience.

- [Display mask (e.g. hex conversion) for individual columns.

- [Cloning of existing rows and committing to COOL when changes to new rows have been finalised.

- [Dockable windows for folder content tables.

Screenshots (Main screen)

ACE

ACE - A COOL Editor

Connection Folder Preferences View Help

Open Refresh Commit

DB Connect 1

Folders

- TDAQ
 - L1Calo
 - Calibration
 - Physics
 - CmmCalib
 - CpChipCalib
 - CpmCalib
 - CpmDeadChannels
 - JemCalib
 - JemDeadChannels
 - JemInputCalib
 - PpmCalib
 - PprChanCalib
 - PprChanEnergy
 - PprChanTiming
 - PprMcmCalib
 - PprMcmEnergy
 - PprMcmTiming
 - SerialiserCalib
 - Configuration
 - Physics
 - PpmConfig
 - PprChanConfig
 - PprMcmConfig
 - Results
 - Physics
 - CmmBpTimingResults
 - CmmCableTimingResults
 - CmmReadoutResults
 - CpmFioCpChipResults
 - CpmFioModuleResults
 - CpmInputModuleResults
 - CpmReadoutResults
 - CpmSerialiserResults
 - EnergyCalibRunResults

Folder contents

ChannelId	Since	Until	ttcrxPhase1	ttcrxPhase2	bpTiming00	bpTiming01	bpTiming02
9400000	11902116943...	11937476811...	0	0	0	0	0
9400000	11937476811...	11938245050...	100	0	0	0	0
9400000	11938245050...	11938317910...	100	0	0	0	0
9400000	11938317910...	11938582950...	100	0	0	0	0
9400000	11938582950...	11938587601...	0	3	0	0	0
9400000	11938587601...	11938587738...	100	0	0	0	0
9400000	11938587738...	11938601945...	100	0	0	0	0
9400000	11938601945...	11938725678...	100	0	0	0	0

Folder contents

ChannelId	Since	Until	phaseEmLeftBo	phaseEmLeftMid	phaseEmLeftTop	phaseHadLeftBo	phaseHadLeftMid	phaseHadLeftTop
9200000	11902116944...	92233720368...	2	0	0	2	0	0
9200100	11902116944...	92233720368...	2	0	1	2	0	0
9200200	11902116944...	92233720368...	2	0	1	2	0	0
9200300	11902116944...	92233720368...	2	0	0	0	0	0
9200400	11902116944...	92233720368...	2	0	0	0	0	1
9200500	11902116944...	11938739441...	1	0	2	1	0	0
9200500	11938739441...	92233720368...	128	128	128	128	128	128
9200600	11902116944...	92233720368...	1	0	2	1	0	0
9200700	11902116944...	92233720368...	1	0	2	1	0	0
9210000	11902116944...	11906333470...	2	0	0	2	0	0

Screenshots (Connection Builder.)

ACE

Open COOL connection

Connection Builder History

Database type: sqlite

Server: epat10

Login: clat

Password:

Schema: alvin

Database: L1CALO

Test Cancel Connect

Open COOL connection

Connection Builder History

sqlite://;schema=/home/clat/local/ace/temp/calib_test.sqlite;dbname=L1CALO

Clear All Remove Entry

Test Cancel Connect

Screenshots (Entry cloning)

ACE

/TDAQ/L1Calo/Calibration/Physics/CpChipCalib

ChannelId	Since	Until	phaseEmLeftBo	phaseEmLeftMik	phaseEmLeftTo	phaseHadLeftBo	phaseHadLeftMi
B2D0700	11906333470...	92233720368...	1	0	2	1	0
B2E0000	11906333470...	92233720368...	2	0	0	2	0
B2E0100	11906333470...	92233720368...	2	0	1	2	0
B2E0200	11906333470...	92233720368...	2	0	1	2	0
B2E0300	11906333470...	92233720368...	2	0	0	0	0
B2E0400	11906333470...	92233720368...	2	0	0	0	1
B2E0500	11906333470...	92233720368...	1	0	2	1	0
B2E0600	11906333470...	92233720368...	1	0	2	1	0
B2E0700	11906333470...	11936157536...	1	0	2	1	0
B2E0700	11936157536...	92233720368...	0	0	2	1	0

Clone rows
Display as ▶

Screenshots (Entry modification)

ACE

/TDAQ/L1Calo/Calibration/Physics/CpChipCalib *							
ChannelId	Since	Until	phaseEmLeftBo	phaseEmLeftMid	phaseEmLeftTop	phaseHadLeftBo	phaseH
B2E0100	11906333470...	92233720368...	2	0	1	2	0
B2E0200	11906333470...	92233720368...	2	0	1	2	0
B2E0300	11906333470...	92233720368...	2	0	0	0	0
B2E0400	11906333470...	92233720368...	2	0	0	0	1
B2E0500	11906333470...	92233720368...	1	0	2	1	0
B2E0600	11906333470...	92233720368...	1	0	2	1	0
B2E0700	11906333470...	11936157536...	1	0	2	1	0
B2E0700	11936157536...	92233720368...	0	0	2	1	0
9200100	11940396479...	92233720368...	4	0	1	2	0
9200200	11940396479...	92233720368...	2	0	1	2	0

Colour change (from alternating grey/white rows) denotes that folder has been modified.

Screenshots (Bulk entry modification)

ACE

//////////////////////////////// /TDAQ/L1Calo/Calibration/Physics/CpChipCalib * //////////////////////////////////

Until	phaseEmLeftBo	phaseEmLeftMi	phaseEmLeftTo	phaseHadLeftBo	phaseHadLeftMi	phaseHadLeftTo	phaseEmRightBo
92233720368...	2	0	1	2	0	1	2
92233720368...	2	0	1	2	0	1	2
92233720368...	2	0	0	0	0	0	2
92233720368...	2	0	0	0	1	0	0
92233720368...	1	0	2	1	0	2	1
92233720368...	1	0	2	1	0	0	1
11936157536...	1	0	2	1	0	0	1
92233720368...	0	0	2	1	0	0	1
92233720368...	1	0	2	1	0	0	1
92233720368...	1	0	2	1	0	0	1

Commit
Remove rows
Fill
Display as ▶

Screenshots (Entry masks)

ACE

..... /TDAQ/L1Calo/Calibration/Physics/CpChipCalib * [Copy] [Close]

ChannelId	Since	Until	phaseEmLeftBot	phaseEmLeftMid	phaseEmLeftTop	phaseHadLeftBo	phaseHadLeftMi
B2E0100	11906333470...	92233720368...	2	0	1	2	0
B2E0200	11906333470...	92233720368...	2	0	1	2	0
B2E0300	11906333470...	92233720368...	2	0	0	0	0
B2E0400	11906333470...	92233720368...	2	0	0	0	1
B2E0500	11906333470...	92233720368...	1	0	2	1	0
B2E0600	11906333470...	92233720368...	1	0	2	1	0
B2E0700	11906333470...	11936157536...	1	0	2	1	0
B2E0700	11936157536...	92233720368...	0	0	2	1	0
B2E0600	11940382772...	92233720368...	1	0	2	1	0
B2E0700	11940382772...	92233720368...	1	0	2	1	0

.....

Display as: Hex, Oct, Dec, No mask

Current status

ACE

- [Not all buttons/menu items have been activated.
- [Only private build using modified L1 Calo software package (qtExternal) at the moment.
- [No support for adding of new folders.
- [No tag support.
- [No documentation as yet.
- [Since/Until fields now display readable date/time format.
- [Sorting of columns enabled.

Software dependencies

ACE

- [COOL v2.1.1 and above

- [TDAQ-01-08-00 and above

- [Temporary dependancy on L1 Calo's qtExternal package

- [Qt v4.3 and above

Other requirements?

ACE

- [Folder construction from
 - scratch with a folder builder panel
 - XML specification
- [Lazy loading of large folders.
- [Tag support.

Next steps

— [Immediate term

- Build public release against L1 Calo software.
- Enable all essential buttons and menu items.

— [Medium term

- Filter mechanisms (e.g. since/until filters).
- Large folder support using lazy loading mechanisms.
- COOL tag support?

Trying ACE

ACE

On LXPLUS:

```
/afs/cern.ch/atlas/project/tdaq/level1/calor/bin/ace.sh
```

At Point1:

```
/det/l1calor/bin/ace.sh
```

Note:

There is a (temporary) prerequisite for TDAQ software to be available prior to running ACE with the above scripts. On LXPLUS, this can be done by sourcing the script below:

```
source /afs/cern.ch/atlas/project/tdaq/cmt/tdaq-01-08-03/installed/setup.sh
```