Welcome to the first Midas Seminar

TRIUMF July 15th 2015
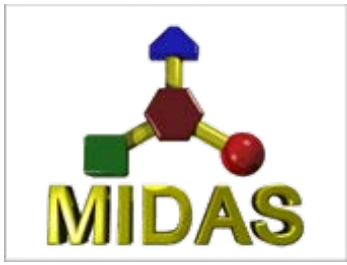
Pierre-André Amaudruz

This Seminar: https://indico.psi.ch/conferenceDisplay.py?confId=3793

WebEx video broadcast: https://goo.gl/beR4SR

Git repository: https://bitbucket.org/tmidas/midas

Elog site: https://midas.triumf.ca/elog/Midas

Few words

- This seminar is to highlight some of the use of Midas in concrete experiment rather than a Midas-101 course.

- We are happy to answer "basic Midas" questions, but not during the next 4 hours.

- Dr. Stefan Ritt has been with us during the last 2 and half weeks
  - Implement new features
  - Thinking about the big picture of DAQ and the direction we should take

- Elog summary will be composed to reflect the work done during Stefan presence, drawn conclusions and possible plan for implementation.
  - BTW, volunteer for development are welcome

- For the remote participant, let us know if you have question using the chat window

- Seminar is recorded and will be available on Elog

DAQ group at TRIUMF

- Suzannah Daviel
  - Local experiment support
  - Midas document
- Thomas Lindner
  - Experiment support, DAQ system
  - Main local Data Analysis (ROOTANA) developer
- Konstantin Olchanski
  - Experiment Support, DAQ system, network manager
  - Main local Midas, JSON developer. Firmware developer
- Chris Pearson
  - DAQ support, Firmware developer, Experiment support
- Pierre-André Amaudruz
  - System integration, Experiment support
  - Slow control (MSCB)

2015 Stefan Visit work plan

[13d]

Left column:

1 ✓ - GET_RECENT in RPC 0.5d
10 - Deferred transition ✓ 0.5d → end of run sequencing!
   script path = seq path
2 ✓ - Sequencer data types, scripts, Bool, 2d
   - mhttpd Ranging . TL
4 ✓ - moongoose KO **https, websocket** 0.5d
9 - mhist segfault on time/history 1d
   - mscb/usblib.1.0 → docu
3 ✱ ✓ Lz0, Lz4 mlogger (gsip-1, pbzip2, Lz4/Lz0)
       ↓ std   ↓ max comp   ↓ max rate
       60 M/s   30 M/s
11 ✓ - web chat page 2d
8 ✓ - mlx speaker → browser 1d r pipe on linux, r alarm talk
6 - include .odb-mset() SD 0.3d
7 - Javascript cm_exist() 0.5d , ajax start/stop program
   ✓ - shift check list reset cookies!
TL - add canvas resize in Rootana (PG)
   ✓ → default and max SYSTEM buf size.
      (no save SYSTEM buf to disk)
5 - edit arbitrary files in browser 2d
   ✓ → mserver/RPC security/access control
   ✓ → windows support?   C++11! cygwin?
   ✓ → mhttpd "custom frame"
   ✓ → AJAX "status page"
   ✓ → mJAX

Middle column:

✓ - msg page scrolling
✓ - message page facility
   - remove webpage (odb)

Right column:

→ cancel run start (K.O.)
→ AJAX run start (stop/cancel)
→ run script on start abort
→ remove ROOT
→ use Root-config instead of ROOTSYS
✓ → Analyzer discussion. → ROOT AJAX web based GRAPHICS.
→ "modular frontend" **for later**
✓ → Replay midas eot backward **use indexing**
✓ → Bryerton stuff — AJAX/json mscB
         extended ODB — enum values
                       — limits
                       — units
                       — display format
✓ - odb watch
   - odb key error msg improv.
   → mlogger → till writing to tape
      → keep writing to ftp
      → settings → type, format, compression → rename
      → keep ROOT
      → till ascii, dump
→ mg unlock
→ cm_execute before mg_write
✓ → MAX_event_size → DEFAULT_MAX_event_size
✓ → 2GB system buffer   _EVENT_BUF_SIZE
→ Json export history data fetch
ANALYSIS messages

crc > bzip > pipe(...)
bzp > crc > file
bzip(50) > crc > ftp(...)   **Scripts**