

CSC Shifter Training

EMU Page 1

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8-21-09 Under Development

Reach from CSCOperations Twiki page or directly:

<https://cms-emu-slicetest.web.cern.ch/cms-emu-slicetest/904/Procedures/ShifterTraining-EmuPage1.pdf>

View of the Emu Page 1 Window

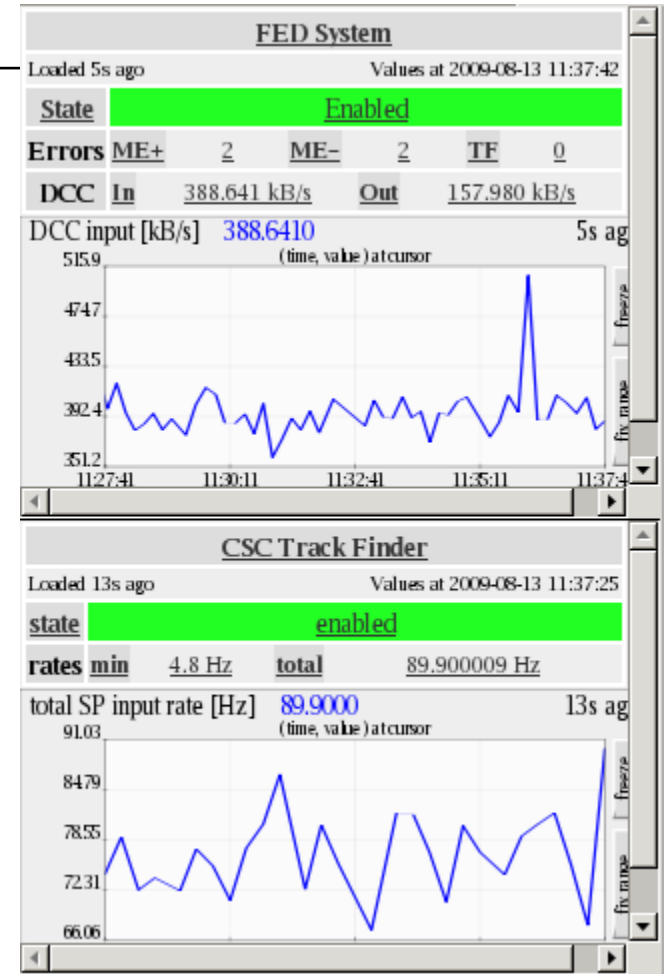
- Emu Page 1 is the main monitoring page that helps you keep an eye on the whole system.
- Keep it in clear view all the time.
- There are 3 basic areas
- Left Side
 - FED System Panel
 - Track Finder
 - Local DAQ Panel
 - Local DQM Panel
- Top
 - PCrate Manager
 - Local DAQ Disks
 - PCrate Service (Plus/Minus)
 - PCrate Monitor (Plus/Minus)
- Body
 - Hotspot alarm/error browser

The screenshot shows the Emu Page 1 interface with several monitoring panels. On the left side, there are panels for FED System, CSC Track Finder, Local DAQ, and Local DQM. The top section contains PCrate Manager, Local DAQ Disks, PCrate Service Minus, and PCrate Monitor Plus. The main body features a table of acknowledged events with columns for date/time, identifier, and message. A text box is overlaid on the table with the following text:

If a panel remains blank, right mouse click on it, and select *This Frame* → *Reload Frame*

Rate Plots

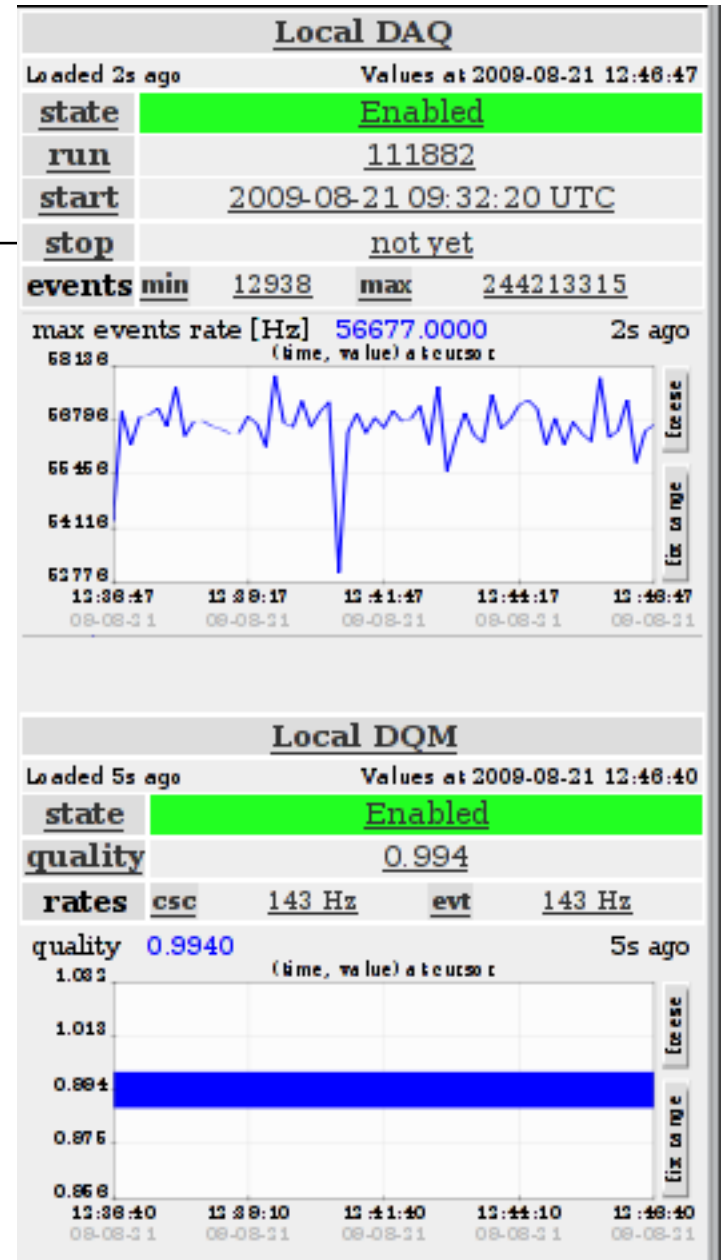
- FED System
 - Plot shows the raw data rate INTO the DCCs
 - Also shown is the data rate OUT OF, and a count of errors since last reset
 - Click on the number of errors to see specific errors in FED Crate Monitors State should be "Enabled" during running
- CSC Track Finder
 - Plot shows the SP input rate in Hz
- V



Rate Plots

- Local DAQ
 - State should be "Enabled during running
 - Displays important run information about runs, which should be entered into the ELOG:
 - Run number
 - Run start/stop time
 - Number of events
 - CSC L1A rate (Hz)
- Local DQM
 - State should be "Enabled" if Online DQM has been started
 - Ratio of # reported CSCs to # all CSCs

All plots can be manipulated with the mouse.



Top Panels

<u>PCrate Manager</u>		<u>PCrate Service Plus</u>		<u>PCrate Service Minus</u>	
Loaded 10s ago	Values at 2009-08-19 17:08:14	Loaded 12s ago	Values at 2009-08-19 17:08:13	Loaded 12s ago	Values at 2009-08-19 17:08:13
State	Enabled	VME Access	Enabled	VME Access	Enabled
<u>Local DAQ disks</u>		<u>PCrate Monitor Plus</u>		<u>PCrate Monitor Minus</u>	
Loaded 2s ago	Values at 2009-08-19 17:05:20	Loaded 12s ago	Values at 2009-08-19 17:08:13	Loaded 11s ago	Values at 2009-08-19 17:08:14
usage	64 %	VME Access	ON Heartbeat	VME Access	ON Heartbeat
			0.2302 Hz		0.1538 Hz

- **PCrate Manager**
 - State should be "Enabled" during running
- **Local DAQ Disks**
 - Shows how much disk space is available in Local DAQ
 - Background should be green.
- **PCrate Service (Plus/Minus)**
 - State should be "Enabled" during running
- **PCrate Monitor (Plus/Minus)**
 - VME Access should be "ON"
 - Heartbeat rate should be nonzero

Troubleshooting

- Panel is grayed out
 - Wait to see if it recovers
- Panel is grayed out and time stamp blinking
 - Click on the panel title to see if that application is up and running
 - If the application is down, see the *CSCOperations* twiki page for the appropriate action to take

PCrate Service Minus	
Loaded 16s ago	Values at 2009-08-21 14:20:21
VME Access	Enabled

PCrate Monitor Plus	
Loaded 1m 8s ago	Values at 2009-08-21 14:19:28
VME Access	ON
Heartbeat	0.2300 Hz

Needed

- Need to add pics of first page on 4 left side and top
- Need to add EMU Counters
- Need to add 'other' global type pages

Hotspot setup

XDAQ online
designed by J. Outleber L. Orsini

4. Click to browse

1. Select Settings

2. Type
<http://csc-daq00.cms:9999/emu/base/html/hotspot.xml>

3. Click to load

File Console Browser Mode About

<http://csc-daq00.cms:9999/emu/base/html/hotspot.xml> Load

- las
- spotlight
- wseventing
- heartbeat
- view for Applications
- view for Chambers
- view for Peripheral Crates
- view for FED Crates

Hotspot

The screenshot shows the XDAQ online interface. At the top left is the logo 'XDAQ online' with the text 'designed by J. Gutleber L. Orsini'. Below the logo are navigation buttons: 'Reset', 'Up', 'Re-arm', and 'Pin-down'. To the right are 'Hotspot', 'Browser', 'Settings', and 'Dashboard' buttons. A search bar contains 'Start 08/19/2009 15:42' and 'End 08/19/2009 15:42' with a 'Retrieve' button. A tree view on the left shows a hierarchy: Emu[1](49/0) > Applications[2](49/0) > Services[3](30/0) > Run Control[11](19/0) > Local DAQ[15](0/0) > Local DQM[210](0/0) > FED Crate[288](0/0) > Peripheral Crate[296](0/0) > Chambers[310](0/0) > Peripheral Crates[879](0/0) > FED Crates[940](0/0) > Other[0](0/0). The main area has tabs for 'Tile', 'List', 'HeatMap', and 'Scroll'. It contains several status panels: 'Applications' (Fatal 0/0, Error 19/0, Warn 38/0), 'Chambers' (Fatal 0/0, Error 0/0, Warn 0/0), 'Peripheral Crates' (Fatal 0/0, Error 0/0, Warn 0/0), 'FED Crates' (Fatal 0/0, Error 0/0, Warn 0/0), and 'Other' (Fatal 0/0, Error 0/0, Warn 0/0). A callout box points to the 'Error' button in the Applications panel with the text 'Click to list errors'. Another callout box points to the 'Other[0](0/0)' item in the tree view with the text 'item name [item unique id](all / acknowledged)'. At the bottom, there are navigation arrows and a 'Snap 1 secs' indicator. A callout box points to the navigation arrows with the text 'Must be blinking'.

Hotspot error list

The screenshot shows the CSC DAQ CMS web interface. On the left, there are several monitoring panels for different systems: FED System, Local DAQ disks, Local DAQ, and Local DQM. The main area displays a table of error messages. One error message is highlighted in blue, and a callout points to it with the text "Click for details". Another callout points to the "acknowledged" column with the text "Click to acknowledge".

acknowledged	dateTime	identifier	Message
<input type="radio"/>	Thu Aug 13 08:58:58 2009 UTC	IRQThreadFiber252	Fiber error read on crate 2 slot 5 fiber2 chamber +2/2/30
<input type="radio"/>	Thu Aug 13 08:38:32 2009 UTC	IRQThreadFiber4110	Fiber error read on crate 4 slot 11 fiber0 chamber -1/1/35
<input type="radio"/>	Thu Aug 13 08:27:07 2009 UTC	IRQThreadFiber2110	Fiber error read on crate 2 slot 11 fiber 0 chamber +1/1/35
<input type="radio"/>	Thu Aug 13 08:26:04 2009 UTC	IRQThreadFiber4120	Fiber error read on crate 4 slot 12 fiber 0 chamber -1/1/34

Name	Value
dateTime	1250151964.190649
function	IRQThread
identifier	IRQThreadFiber4120
line	578
message	Fiber error read on crate 4 slot 12 fiber 0 chamber -1/1/34
module	/nfs/home0/csc/pio/te/starea/TrIDAS/emu/emuDCS/FEDUIB/svc/common/IRQThreadManager.cc
notifier	http://csc-fed2.cms.20100/um:xdaq-application:ld=62
qualifiedErrorSchemaURI	http://xdaq.web.cern.ch/xdaq/xsd2005/QualifiedSoftwareErrorRecord-10.xsd
sessionId	74742
severity	ERROR
tag	FEDcrate 4 RUI 35 fiber 00 chamber -1/1/34
uniqueid	516f7072-4f86-473f-a63e-f5e72c074ad6
um:xdaq-application:class	emu::fed::Communicator
um:xdaq-application:context	http://csc-fed2.cms.20100

Hotspot setup for playback

The screenshot shows the XDAQ online interface with four numbered callouts:

- 1. Select *Settings***: A callout box points to the 'Settings' button in the top navigation bar, which is highlighted with a blue border.
- 2. Select *Mode***: A callout box points to the 'Mode' button in the top navigation bar.
- 3. Check *Playback***: A callout box points to the 'Playback' radio button, which is selected with a filled circle.
- 4. Select *Hotspot* to return to browser**: A callout box points to the 'Hotspot' button in the top navigation bar.

The interface also includes the XDAQ logo (designed by J. Cutleber L. Orsini), a menu bar with 'File', 'Console', 'Browser', 'Mode', and 'About', and a 'Toggle fullscreen' button. Below the mode selection, there are two spinners for 'Buffered exceptions time window (HH:MM)' set to '1'.

Hotspot playback

1. Choose period

2. Click to retrieve

Applications

Category	Fatal	Error	Warn	Active/Ack
Applications	0/0	1/0	0/0	0/0
Chambers	0/0	1/0	0/0	0/0
Peripheral Crates	0/0	0/0	0/0	0/0
FED Crates	0/0	1/0	0/0	0/0
Other	0/0	0/0	0/0	0/0

Fri Aug 21 12:30:00 GMT+0200 2009

Fri Aug 21 12:38:00 GMT+0200 2009 Snap 1 secs