

VME PC config, trouble, installations...

1. Get the USB and GPIB mode r+w all the time after reboot :

Add file inside /etc/udev/rules.d/ → 60-laser-usb.rules and 60-laser-gpib.rules

Ask Savahna to have this into Profile (keep config after any re installation of SLC6)

2. #ldd laser → give the list of library used by laser

Libforms.so.1 - libg2c.so.o not found

To install libforms , thus "Xforms" ->

cd ~/software/xforms-1.0-release make install ; with sudo
and add one file in "/etc/ld.conf.d/gpib.conf", then run ldconfig.

3. for laser need also cern.tar.gz

Need to compile the source code again.

In home directory need .tcshrc.

In order to compile (and be able to do 'make' for dp2) :

tcsh

→ With Laser account !

#cd dim

#source .setup

cd dp2 → make

FAST MONITORING:

4. Define DIM_DNS_NODE (if there is no .dat file !)

Need tschrc shell... but not ok for CMS machine

Hi,

The point is we don't change the default shell for root because other users might want to log on the machine and they may be not familiar with tcsh (we, sysadmins, are not familiar with TCSH).

We may change YOUR user default shell in LDAP but that will apply on ALL the machines (not only the laser machines).

It will be easier for you to launch a TCSH shell from your ~/.bashrc.

And what do you mean by 'have defined DIM_DNS_NODE'? Environment variables can also be defined in bash.

→ So add 'tcsh' in file '.bashrc'

DNS, DIM SERVER

DNS can work on the same machine as slow monitor BUT it was on separate machine since the beginning and can't remember why !

Modify file ON PC where slow monitor is running (PC02 or PC05):

```
.tcshrc → setenv DIM_DNS_NODE ecal-laser-room-01
```

If DNS is running on PC01.

IF DNS running on same PC, change it !

6 Oct 2014: Start DNS on ecal-laser-room-02 as well to get histo& .dat !

```
# laser/dim/linux# .dns
```

To see the DIM server/client : Did

To enable Did, juste type : source .setup before Did

```
Ecal-laser-room-05 → /home/laser/dim/linux $ ./did          nLasers, nDso...
```

Acqiris driver installation:

Do not install the one from the CD: MD1.1-10.5 because gcc compiler not the same... can't work

(command : # gcc -version)

Use **Acqiris-4.2a-gcc-4.3....tar.gz**.

Acqiris/.../kernel26module : make clean all, make install

To enable or disable the kernel module, you can run the commands:

```
/etc/init.d/acqiris start  
/etc/init.d/acqiris stop
```

First update the kernel modules dependencies:

```
/sbin/depmod -a
```

Then load the kernel module:

```
/sbin/modprobe -v acqiris
```

http://www.keysight.com/upload/cmc_upload/All/README?&cc=CH&lc=gerOnly

5. View PCI board:

```
#modeprobe -list -> list of all modules files (tnt4882 should be there)
```

Or same with :
#/sbin/lsmmod | grep tnt
List of devices: #/sbin/lspci | grep PCI

For Acqiris we have:

Device: 43...
Class: Unassigned Class ff00
Vendor: Agilent technologies
Device: device 0001

!!!! ~/monitor/src should not be copy under root privilege ! else not working... !!!!!

Compile the GPIB driver:

Yes, you need to do “configure-make-make install”, and then edit the “/etc/gpib.conf”.

If not working : I think the kernel source you installed doesn't match the running kernel. You have to install the same version.

Ask Savannah..

Compile dp2 slow monitoring:

To compile, please do following commands first

With Laser account

```
[ECAL-LASER-ROOM-02 dim]$ tcsh
```

```
cd dim
```

```
source .setup
```

Make is already installed but then I don't know how to used it inside #dp2 to 'make laser Yes, the package is already installed. You may run “cd ~/dim; source .setup” first and then go to dp2 directory to run make.

Do all this under the same terminal ! (change folder on the same terminal .Another terminal to run make failed !)

6. VNC:

Install X11vnc and not vncserver:

```
# sudo yum install X11vnc
```

The just run X11 vnc as ecal-laser-room-01:

```
# x11vnc -displaya :0 -passwd xxxx - forever - gone 'xlock&'
```

IPMI :

<https://twiki.cern.ch/twiki/bin/viewauth/CMS/HowToRebootPcWithIPMI>

```
#ipmitool -H $HOSTIPMI -U root -f ~ecaldev/utills/ipmi chassis power off
```

```
COMMAND="sudo ipmitool -l lan -U root -f /etc/ipmi.conf -H $HOSTIPMI $IPMI_OPTIONS"
```

Normal command:

```
#sudo ipmitool -l lan -H ecal-laser-room-05.ipmi.cms -U root chassis power status
```

Better with "lanplus " than lan for newest machine.

(Or my account

```
#ipmitool -l lan -H ecal-laser-room-05.ipmi.cms -U Bailleux chassis power status )
```

check the scripts that are in ~ecaldev/utills/systools → They have the correct options to operate the ipmi.

Edit text on RACK PC:

Gedit not working with sudo → used

```
# sudo nano xxxx.txt ,ect...
```

COPY FOLDER FROM RACK PC to ANOTHER (PC02 to PC05):

Copy #monitor from PC05 to PC02:

Login on laser@PC02:

```
laser@ecal-laser-room-02~$
```

```
scp -r bailleux@ecal-laser-room-05:/home/laser/monitor /home/laser/monitor
```

➔ The folder monitor will be created automatically

Copy file for PC02 to PC05:

```
laser@ecal-laser-room-05~$ scp bailleux@ecal-laser-room-02:/home/laser/dp2n/dsoxxx.ps .
```

VALUE OF THE EMTC :

Connect to the laser supervisor : ecalod-laser-xdaq

```
#cd
```

```
/cmsnfs/home0/nfshome0/ecaldev/DAQ/ECAL/Sandbox_Laser/ecal/ecalLaser/emtccons_fw14/caen/
```

```
# ./emtccons 17
```

```
emtc> mon
```

```
➤ Orbit_length 3564      3564      3564      3564
➤ BC0-to-WTE   3018      3018      3018      3018
➤ BC0-to-TE1   3414      3414      3414      3414
➤ TE1-to-TE2    89        89        89        89
➤ TE1-to-LV1   201       201       201       201,
➤ .....
```

EMTC log:

The emtc log file is located in

`ecal-laser-room-04:/localdata/matacq-data/emtc-log/`

Time stamp: 1266996085.673421, status 00000000101111000000000000000010

Active 2: 69333426 69378346 234600 24000 606801

TTC: 1: 41 1 2 0 3564 2915 3414 89 193 2 0 0 0 0 3 78300

TTC: 2: 41 1 2 0 3564 2915 3414 89 193 2 0 0 0 0 3 78300

TTC: 3: 41 1 2 0 3564 2915 3414 89 193 2 0 0 0 0 3 78300

TTC: 4: 41 1 2 0 3564 2915 3414 89 193 2 0 0 0 0 3 78300

for each TTC channel (one per partition), you have:

- the last monitoring region requested (1..54)
- the monitoring side (0 or 1)
- the trigger type (0=laser, 1=LED 2=TP, 3=pedestal)
- the color (0=blue, 1=green, 2=red, 3=infra-red)
- orbit length (3564 clocks)
- BC0 to WTE (2915 clocks)
- BC0 to TE1 (3414 clocks)
- TE1 to TE2 (89 clocks)
- TE1 to LV1 (193 clocks)
- number of starts
- number of stops
- number of timeouts (on TE2 reception)
- number of single errors (on TTC-rx reception, recoverable)
- number of double errors (on TTC-rx reception, not recoverable)
- number of resync
- estimation of the trigger rate (100xnumber of LV1 received between 2 TE)

Matacq DATA/soft:

1. Start/check the Matacq-Light CHECKER:

```
ssh ecalod-laser-xdaq
cd ~ecallaser
sudo -u ecallaser -H bash -l
#ecallaser@..-09 (or 04..)
cd ~ecallaser/bin
$ ./lmfc status matacq_feedback
./lmfc start matacq_feedback
```

Twiki: <https://twiki.cern.ch/twiki/bin/view/CMS/EcalLaserMonitoring>

Laser farm controls (for experts)

The `~ecallaser/bin/lmfc` script provides control for starting, stopping and display status of the laser farm processes. Note that `~ecallaser/bin` is in the `PATH` of user `ecallaser` so it can usually be omitted while executing `lmfc` command.

 Application `lmfc` must be run as `ecallaser` user. In order to switch to the `ecallaser` user account, execute the command `~ecallaser/bin/laser`.

<code>monitoring</code>	monitoring analysis process
<code>sorting</code>	sorting process
<code>matacq_feedback</code>	matacq feedback process
<code>emtc_log emtc</code>	logger process
<code>matacq_xfer</code>	matacq data copy to LMF process
<code>prim_gen laser primitive</code>	generation process
<code>lighchecker</code>	web page server of laser light checker http://ecal-laser-room-03.cms/laser-fastcheck/ ( not yet supported by the <code>lmfc</code> command)
<code>db_writing</code>	process transferring LMF primitives info to OMDS database
<code>cls_writing</code>	process transferring LMF normalized primitives info to OMDS database
<code>corr_writing</code>	process transferring corrections to OMDS database
<code>global_check</code>	process checking last results for LMF

2. Plot Matacq

```
ssh Vmepc-ecal-laser-01
ssh srv-ecal-laser-13
cd /nfshome0/ecallaser/matacqFastFeedback/histo_dqm      or /histo2
```

➔ Copier plot root:

```
cp /nfshome0/ecallaser/matacqFastFeedBack/histo_dqm/analog_dqm_20141125_04_0_6.root .
```