# **ALICE TOF Shifters Instructions**

ALICE TOF Team 09/11/2009

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## 1. Foreword

Before to start a shift, you must be aware of:

- to know how to log on all the TOF machines (user and password for aldaqacr41, alitofon001, alitofsrv, alitofsm00...);
- to have access in the ALICE Counting Rooms (CR3 and CR4).

If not, ask an expert!!!

# 2. Shifters tasks

The shifter should check regularly various hardware parameters status: HV, LV, gas, cooling, temperatures, and compare them with reference values. PLEASE DO NOT TRY TO MODIFY ANYTHING UNLESS YOU ARE VERY SURE OF WHAT YOU ARE DOING.

The shifter should know what is happening in ALICE. Refer to the ALICE elog (<u>https://alice-logbook.cern.ch</u>, only from ALICE machines) for various informations on the activities and runs. In particular in runs--> "runs detector" you can see the actual running status. Try also to follow the activities in the control room and report them in the shift summary.

For long runs the shifter must check the data taken following the AMORE instruction in ALICE-TOF wiki (<u>https://twiki.cern.ch/twiki/bin/view/AliceTOF/MonitoringApplications</u>). Please report in the e-log any hole or peak in the hit rate/time/tot which is not compatible with reference values. Report in the TOF e-log <u>https://www.bo.infn.it/elog/Commissioning/</u> and <u>https://www.bo.infn.it/elog/Data+Taking/</u> all useful information on the shift:

- Runs: specify start/end time, trigger, readout components, magnetic field
- Errors/problems with as many details (also screen dumps).
- At the end of the shift write a mini summary of what happened (also in ALICE) during the shift. THIS IS VERY VERY IMPORTANT!!!!!

# 3. Starting

The machine devoted to monitoring and shifters general operations is ALITOFON001 (TOF Operator Node). Once you got logged into the DAQ machine assigned to TOF in the ALICE Control Room (account TOF, ask an expert if you don't know the password) you can start opening a remote desktop connection on the TOF Operator Node using your NICE credentials. All of you should have an active account on the operator node (if not, please send a request to A. Alici).

Three panels must be always running (you can launch them from Windows START menu):

- 1. <u>BasePanel (main PVSS panel);</u>
- 2. DCS User Interface (main FSM panel);
- 3. <u>Alarm panel</u> (alert monitoring).



## 4. TOF DCS User Interface

This panel is the standard ALICE DCS User Interface; you can launch it from START  $\rightarrow$  DCS\_UI.bat. If you want, you can find related documentation at the following link (ver. 3.0.2):

http://alicedcs.web.cern.ch/alicedcs/Software/Downloads/AliceDcsUi\_v3.0.pdf

This panel allows to monitor the state of the TOF Finite State Machine (FSM) and to send commands from the highest level of the hierarchy (TOP NODE) to all sub-nodes and devices. When the User Interface appears, it will ask you some credentials; use your NICE username and password to log in.



- 4.1 Description of the interface
- 1. Detector graphic locator; this small picture shows the actual status of all SMs (whether they are included or not from the FSM).
- 2. Selected node FSM state.
- 3. Logged user (click on the key to change user).
- 4. FSM node control (click to open FSM control panel).
- 5. FSM hierarchy tree browser.
- 6. Auxiliary monitoring zone; it can monitor the state and operation mode of a list of critical FSM nodes. A mouse click on the node opens in a child window the panel related to that.
- 7. FSM expert control (click to open FSM management panel).
- 8. State of distributed computers.
- 9. Click to open JCOP Alarm Panel (I recommend to open this panel from the Windows START Menu).
- 10. Click to open PVSS Info Browser.
- 11. Click to open these instructions.
- 12. Emergency button (click to shutdown the whole TOF detector). To be used only in emergency circumstances.

## 4.2 FSM hierarchy tree and Control panels

In the User Interface, the FSM hierarchy is displayed as a tree:



This tree is used to select which part of the detector has to be displayed or controlled. By default, the top node *TOF\_DCS* is selected. A new part can be selected by right-clicking on the corresponding node and select *VIEW PANEL*.

By right-clicking on an already selected node, a new item appears in the menu: *OPEN FSM CONTROL*. This opens the panel to control this node

To control the whole FSM, open FSM Control Panel, while the top node *TOF\_DCS* is selected in the FSM tree.

FSM Control :TOF_DC5: TOP	FSM CONTROL PANE	
System	FSM CONTROL PANE State	:L.
	REAL	DY 🗸 🔒
Sub-System	State	PAGE 1
TOF_INFRA	READY -	PAGE 2
TOF_ACM_	STANDBY -	×
TOF_RUN_	ок 👻	$\checkmark$
TOF_DCS_ConfDB	READY 🔻	1
TOF_SUPERMODULE_00	READY 🔻	<b>V</b>
TOF_SUPERMODULE_01	READY 🔻	. ✓
TOF_SUPERMODULE_02	OFF 🔻	×
TOF_SUPERMODULE_03	OFF 🔻	×
TOF_SUPERMODULE_04	OFF 🔻	×
TOF_SUPERMODULE_05	READY 🔻	
TOF_SUPERMODULE_06	OFF 🔻	×
TOF_SUPERMODULE_07	READY 🔻	
TOF_SUPERMODULE_08	READY 🔻	
TOF_SUPERMODULE_09	READY 🔻	
Messages		

These panels are used to control the FSM. There are 3 ways to invoke these panels:

- By clicking on the *FSM Control* button while the FMS which is to be controlled is selected
- By right-clicking on the selected node in the tree view and select *OPEN FSM CONTROL*
- By double-clicking on one of the children in an already opened FSM Control panel

For each FSM a lock indicate the status of its ownership. The different states are:

- Unlocked (Grey): nobody has control of its FSM. It means you can take it.
- *Green*: you have the control of this FSM.
- *Red*: somebody else has the control. It means you cannot take it before the control is released.
- *Blue*: the control of this FSM is shared.

#### Taking control of the FSM

When the lock is in *unlocked* state, the control of the FSM can be taken by clicking on the lock and select *take* in the menu. Then, it is possible to change the state of the FSM by clicking on the FSM state and select a command in the menu

#### **Releasing control**

This is done by clicking on the lock and select *release* in the menu.

#### Excluding parts of the detector

It is possible to exclude parts of the detector from the FSM, by clicking on the lock of the part to be removed, and select *exclude* in the menu. For some children this exclusion it is only temporary. Once the FSM control is released and taken by another computer, these excluded children will be included again. It is still possible to make this exclusion permanent: after the children have been excluded, reclick on the lock and select *LockOut* in the menu.

## 4.3 FSM expert control panel

The FSM Expert Control panel contains all relevant information about FSM detailed status and control.

	ne alidesdimdns.cern.ch	IN FSM Control Panel V 0.6 Distributed BIOSTRUETED FSM control to all distributed d FSM control to all distributed d	In a contract of the state of t
3 altofvm001 Status Tof_pes Tof_perA altofvm002 Status Hotsystitut MA © ©	ERICS I FwitestartAllburnains ERICS Inf.,dct:Manager3 ERICS Inf.,dct:Manager3 ERICS Inf.,dct:Manager3 ERICS Inf.,dct:Manager3		LOK lof_dcsManager3
- alite/wn003 Status	BEADY Dr.dcs Manager6	*	
Config. file Apply Configuration	Create Configuration	FSM Archiving	FSM Synoptics FSM Chart

- 1. *DIM DNS Server*: it displays the status of DIM DNS server node.
- 2. *FSM Server Managers*: it displays the status of a FSM server manager; the name of the system, the status of fwFsmSrv.ctl manager and the status of the FSM server manager are showed.
- 3. *Node Status*: it displays the status of a FSM domain node. The name of node, two push button to restart and stop the FSM tree recursively, the status of FSM Domain node and the ownership of that domain are showed.
- 4. *Release FSM Node*: release the ownership of the FSM.

## 4.4 FSM General Overview

The core of the DCS is based on Finite State Machine. A FSM is an intuitive, generic mechanism to model the functionality of a piece of equipment or a sub-system. The entity to be modeled is thought of as having a set of stable (finite) *states*. It can move between these states by executing *actions* that are triggered either by commands from an operator or another component or by other events such as state changes of other components. The control system is build as a tree-like structure. Communication between the different nodes in the tree (the control and device units) is performed via a well defined, so called, state/command interface.

Commands will propagate from the highest levels through the control units to end in the device units where action on the real hardware is performed.

States will propagate from the lower levels to the higher levels.

The set of all disposable states for TOF DCS is (and the shifters and anyone else MUST STRICLY follow the exact sequence powering ON and OFF the detector) is:



The state **OFF** means that the full detector (LV, HV, VME crates ...) is OFF. In the **STANDBY** state all the LV channels as well as the VME slots are powered ON.

In the **STBY\_CONFIGURED** important checks and configurations on the VME boards are performed.

**BEAM\_TUNING** means essentially FEE ready but HV @ 1 kV (safe condition for beam injection). In the **READY** state the detector is finally ready for taking data.

A set of command is defined as well: GO\_OFF, GO\_STANDBY, GO\_STBY\_CONF, GO\_BEAM\_TUNING, GO\_READY, CONFIGURE and PREPARE\_FOR\_RUN. During a state transition the will assume one of the following transient states: MOVING\_STANDBY, MOVING\_STBY\_CONF, MOVING\_BEAM\_TUN, MOVING\_READY, DOWNLOADING.

## 5. Base Panel

The Base Panel is a collection of many useful panels devoted to monitor and to control parts of the detector.

## 5.1 Gas Panel



The gas mixture is currently 93% Freon and 7%  $SF_6$ . A change in the status of one of the subsystems will trigger an alert (an alert sms to gas system expert will be also sent).

It is important to monitor the module gas fluxes and the state of the gas subsystems (see picture above).

NB: presently the GAS FSM could be NOT READY even if everything works. Please, refer to the picture above to see if the gas system is working or not.

Stision_1: TOF_base		CONNEC SM TIONS overview	TEMP	CAEN PS	HV	LV	FEE	FEAC	ACM	СТТМ	LTM	30	root
Cooling panels COMPLETE PARAMETERS	Cooling Plant Main Co	ACKN ACKN ACKN ACKN ACKN ACKN ACKN ACKN	Tank Pre	ture (°C) 9 °C rel 8.35 sssure 470 smperature 400	Leak     Safe     Resu     Mair     TCR     Resu     Resu     Resu     Resu     Resu     Resu     Resu     Resu     Resu     SM17.0- SM5-10     SM11-1E     SM5-10     SM11-11	ty Heater aved tenance a Control al aved aved aved aved aved aved aved aved	Illowed Illowe	Cooline Run mo Alar OFF OFF OFF OFF OFF OFF OFF	(shing g system) (shing m	Details Details Details Details SET SET SET SET SET SET SET SET SET	TC		

## 5.2 Cooling Panel

The status of the whole cooling plant as well as single TOF loops can be monitored from here. In normal condition you should have:

- Cooling system in RUN mode.
- ALL loops ON!
- Cooling water temperature of about 14°C.
- Return water temperature non exceeding 20°C.
- Cooling crates flux of about 300 l/min.
- Cooling FEAs flux of about 30 l/min.

#### NB: during maintenance operations all the loops are in ERROR. This is normal!

## 5.3 LV Panel



From here it is possible to monitor and to operate LV channels. Clicking on a square with *Open panel* action selected opens the relevant LV operational panel. To fix a LV channel try a few power cycles (OFF  $\rightarrow$  ON) then, if problems cannot be fixed, switch that channel OFF and remove the corresponding object from FSM.

When you are going to switch OFF/ON a whole crate, remember that:

- 1. switching ON  $\rightarrow$  you MUST first power on the RIGHT one, then the LEFT one.
- 2. switching OFF  $\rightarrow$  you MUST first power off the LEFT one, then the RIGHT one.

## 5.4 FEE Panel



Clicking on a crate square opens the relevant FEE operational panel. That panel could be also opened from the DCS UI:

 $DCS\_UI: \rightarrow TOF\_DCS \rightarrow TOF\_SUPERMODULE\_## \rightarrow TOF\_FEESYSTEM\_## \rightarrow TOF\_FEEBABYCRATES\_#### \rightarrow Crate## or TOF\_FEEBACKCRATES\_#### \rightarrow Crate## Description of the panel:$ 



- 1. LV operate: it opens the LV operational panel of this crate;
- 2. From here you can send commands to each VME board or enable/disable it;
- 3. From here you can send commands to the whole crate;
- 4. From here you can turn on and off the VME slot directly via the OPC server;
- 5. **VME server restart:** push to restart the VME server of this crate. After this the crate will get STANDBY;
- 6. **DIM restart:** push to restart the DIM server. After this all four SM crates will get STANDBY;
- 7. A2818 reload: push to reload the A2818 PCI card;
- 8. Crate infoBrowser (table with log messages from VME server);
- 9. VME boards temperatures display.

Selecting *LV operate* opens the LV operational panel. That panel could be also opened from the DCS UI:

 $DCS\_UI: \rightarrow TOF\_DCS \rightarrow TOF\_SUPERMODULE\_\#\# \rightarrow TOF\_LVSYSTEM\_\#\# \rightarrow TOF\_LVBABYCRATES\_\#\#\#\# \text{ or } TOF\_LVBACKCRATES\_\#\#\#\#$ 

irateL¥												? >
AEN Eas	sy B	oard	10	peratio	on	Ale	ert Sumr	mary :		HV Actio	n	Action
									·			
Board Name:	tof_d	cs:CA	NEN/a	alitofcael	v1/bc00	/easyCrat	.e3/easy	Board01			Model: A13	96
Serial number	: 48				F	irmware r	elease:	1.05				
Status —							emperat	ure —		Com	mands	
			S	nc	OK	Т	emperat	ture 1	26	VP	OFF O	n Off
12 PwS	ок		н	/ Sync [	OK							
121.110	0			, ojnoj								
48 PwS	ОK											
VP status	FAIL											
- Maciste –												
48 V 😑	On	On	Off	On	15.0	49.60	set			$\sim$		
- VME LV CH	nannel	s —					_	_ SY	1527	-(2)		
	Pw	-		Status	IMon	VCon			ear alarm			
3.3 V 😑	On	On	Off		102.9	3.30	set		ar alarm			
5 V 😑	On	On	Off	On	1.6	5.00	set		IE Slots -			
- FEA LV Ch	annels	;							SlotSt	SlotPw		
	Pw											
CH001 😑				Status	IMon	VCon		1	Ok	🔵 On	On Off	
	On	On	Off		IMon 4.9	VCon 2.73	set	1 2	Ok Ok	<ul><li>On</li><li>On</li></ul>	On Off On Off	
CH001	On On	On On	Off Off	On			set set			-		3
		On On	Off Off	On On On	4.9	2.73 2.66 2.70		234	Ok Ok Ok	<ul><li>On</li><li>On</li><li>On</li></ul>	On Off On Off On Off	3
CH002 • CH003 • 04 •	On On On	On On On	Off Off Off	On On On On	4.9 4.9 4.9 4.1	2.73 2.66 2.70 2.70	set set set	2 3 4 5	Ok Ok Ok Ok	On On On On	On Off On Off On Off On Off	3
CH002 • CH003 • 04 • 1 •5 •	On On On On	On On On On	Off Off Off Off	On On On On On	4.9 4.9 4.9 4.1 4.9	2.73 2.66 2.70 2.70 2.76	set set set set	2 3 4 5 6	Ok Ok Ok Ok	On On On On On	On Off On Off On Off On Off On Off	3
CH002 CH003 04 1 5 006	On On On On	On On On On On	Off Off Off Off	On On On On On On	4.9 4.9 4.1 4.9 4.9 4.9	2.73 2.66 2.70 2.70 2.76 2.73	set set set set	2 3 4 5 6 7	Ok Ok Ok Ok Ok	<ul> <li>On</li> <li>On</li> <li>On</li> <li>On</li> <li>On</li> <li>On</li> </ul>	On Off On Off On Off On Off On Off On Off	3
CH002 CH003 04 1 5 04 04 04 04 04 04 04 04 04 04 04 04 04	On On On On On	On On On On On On	Off Off Off Off Off Off	On On On On On On	4.9 4.9 4.1 4.9 4.9 4.9 4.1	2.73 2.66 2.70 2.70 2.76 2.73 2.73	set set set set set set	2 3 4 5 6 7 8	Ok Ok Ok Ok Ok Ok	<ul> <li>On</li> <li>On</li> <li>On</li> <li>On</li> <li>On</li> <li>On</li> <li>On</li> </ul>	On Off On Off On Off On Off On Off On Off On Off On Off	3
CH002 CH003 CH003 CH006 CH007 CH008	On On On On On On	On On On On On On	Off Off Off Off Off Off	On On On On On On On On	4.9 4.9 4.1 4.9 4.9 4.9 4.1 4.9	2.73 2.66 2.70 2.70 2.76 2.73 2.70 2.63	set set set set set set set	2 3 4 5 6 7 8 9	Ok Ok Ok Ok Ok Ok Ok	On On On On On On On On On	On Off On Off On Off On Off On Off On Off On Off On Off On Off	3
CH002 CH003 CH003 CH007 CH007 CH008 CH009	On On On On On On Off	On On On On On On On	Off Off Off Off Off Off Off	On On On On On On On On Off	4.9 4.9 4.1 4.9 4.9 4.9 4.1 4.9 0.0	2.73 2.66 2.70 2.70 2.76 2.73 2.70 2.63 0.00	set set set set set set set set	2 3 4 5 6 7 8 9 10	Ok Ok Ok Ok Ok Ok Ok Ok	<ul> <li>On</li> </ul>	On Off On Off On Off On Off On Off On Off On Off On Off On Off	3
CH002 CH003 CH003 CH006 CH007 CH008	On On On On On On	On On On On On On	Off Off Off Off Off Off	On On On On On On On Off	4.9 4.9 4.1 4.9 4.9 4.9 4.1 4.9	2.73 2.66 2.70 2.70 2.76 2.73 2.70 2.63	set set set set set set set	2 3 4 5 6 7 8 9	Ok Ok Ok Ok Ok Ok Ok	<ul> <li>On</li> <li>On</li> <li>On</li> <li>On</li> <li>On</li> <li>On</li> <li>On</li> <li>On</li> </ul>	On Off On Off On Off On Off On Off On Off On Off On Off On Off	3 Close

- 1. From here you can turn on and off the LV channels. Use this button if you find some of these channels in error and you want to try to fix them.
- 2. The *Clear Alarm* command allows removing all the alarm conditions in the boards housed by this specific SY1527.
- 3. From here you can turn on and off the VME slots (TO BE USED ONLY IF YOU REALLY KNOW WHAT ARE YOU DOING!!).

## 5.5 HV Panel



- 1. Click here to select a different time range and to have access to the channel history.
- 2. Click here to switch on/off the channel
- 3. To change a setting type in the corresponding field the value that you want to apply and then push the *set* button slots (TO BE USED ONLY IF YOU REALLY KNOW WHAT YOU ARE DOING!!).

## 6. Alarm Panel

By default, the panel displays all the alarms coming from all the ALICE DCS sub-systems; to display only the TOF alarms one have to use the appropriate filter.

😽 Vision_1: JCOP Alarm So	creen			_ 🗆 X
Alarm Screen	Acknowledgement	Unacknowledged G Current A Individual/Group acknowledged C Historica	Select Time Range	× .
Alarm Filters Systems tof_dcs tof_hv tof_vme	Device Name  * Device Type  *	Logical Name	Alarm Text * WEF	Alarm State
🐥 Alarm Filter				?×
Alarm Filters Systems tof_dcs tof_hw tof wree 2 nage Filters E	Device Name	Logical Name		Alarm State
W         tof_dcs:CAEN/aii           W         tof_mc>CAEN/aii           W         tof_mc>CAEN/aii	tofcaek5/bc02/easyCra tofcaek5/bc02/easyCra SM08/L tofcaek5/bc00/easyCra SM08/L tofcaek5/bc00/easyCra SM10/L tofcaek5/bc00/easyCra SM10/L tofcaek5/bc00/easyCra SM10/L tofcaek5/bc00/easyCra SM10/L tofcaek5/bc00/easyCra SM01/L tofcaek5/bc02/easyCra SM01/L tofcaek5/bc02/easyCra SM07/L tofcaek5/bc02/easyCra to	VB/BabyCrate3233/Cr VB2/BabyCrate3233/Cr VBabyCrates4041/Crat VBabyCrates4041/Crat VBabyCrates4041/Crat abyCrates0405/Crate0 VBabyCrates2829/Crat VBabyCrates2829/Crat		III         2008/07/11 17:51:22.043           III         2008/07/11 17:51:27.747           III         2008/07/11 17:51:30.903           x         2008/07/11 17:51:30.903           x         2008/07/11 17:51:30.903           x         2008/07/11 17:51:30.903           x         2008/07/11 17:51:33.903           x         2008/07/11 17:51:33.559           x         2008/07/11 17:51:33.559           x         2008/07/11 17:51:33.559           x         2008/07/11 19:21:27.469           x         2008/07/11 19:50:93.577           x         2008/07/11 19:50:93.72           x         2008/07/11 19:50:93.56

- Click on the Modify Filter button (1);
- Click on the Open folder button (2);
- Select the *tof* filter and load it (3);
- Apply the filter (4).

By right-clicking on a row in the table a small menu opens. If the corresponding help file has been defined, you can open a window with some details and instructions selecting *Alarm Help*.

E	tof_hv:CAEN/alitofcaehv1/bo	oard08/chanr	OverCuri
W	tof_dcs:crateTempSt17.ltm		HOT
W	tof_dcs:crateTempSt40.feaq		НОТ
		FSM Panel	
		Details	
		Trend	
		Alarm Help	

## 6.1 An instructive example: RDB manager DOWN

TOF data (voltage, current, temperature...) are recorded in an on-line Oracle database through the use of the RDB (Relational Database) Manager provided by PVSS. Let suppose that the following alert came

sion_1: JCOP Alarm Screen									
arm Screen	Unack	lual/Group	le Current Alarms Historical Alarms	Select Time	Range	root			<b>_</b> ∨
Jarm Filters Vystems Device Name		Logical Name		Alarm Text			Ala	rm State	
of dcs		*		*			*		
of_hv Device Type		Device Description		,,,,	Quick	Eiltoro:			
of_vme *	Ŧ	*		WE		available	Y	₹.	🕾 🕨
	1		-1			$\sim$			
Sh Device DP element	Description		Alarm text			Dir.	Value	Ack	
V tof_dcs:crateTempSt17.ltm			HOT			CAME	1		2009/08
V_tof_dcs:tof_pcAlitofsm05.status			Connection OF			CAME			2009/08
V tof_dcs:tof_pcAlitofsm01.status			Connection OF			CAME	þ		2009/08
tof_vme:_RDBArchive.dbConnection.co		RDB ARCHIVE MANAGER NOT RU					FALSE		2009/09
V tof_hv:Gas_Di_RackiStepWS/TOF_Di_I				n rack 61 state I		WENT			2009/09
V tof_hv:Gas_Di_ModStepWS/TOF_Di_M				n state NOT RE/		WENT	35		2009/09
V tof_hv:Gas_Di_RackiStepWS/TOF_Di_I				n rack 62 state I	NOT READY	WENT		111	2009/09
V tof_hv:Gas_Pp_StepperWS/TOF_Pp_S			GAS pump sta			WENT			2009/09
V tof_hv:Gas_Mx_StepperVVS/TOF_Mx_S			GAS mixer sta	te NOT READY			12		2009/09
tof_hv:CAEN/alitofcaehv1/board13/chan			UnderVoltage				FALSE		2009/09
tof_hv:CAEN/alitofcaehv1/board13/chan			OverCurrent				FALSE		2009/09
tof_hv:CAEN/alitofcaehv2/board13/chan			Under/Voltage				FALSE		2009/09
tof_hv:CAEN/alitofcaehv2/board13/chan	ur		OverCurrent				FALSE		2009/09
tof_dcs:crateTempSt40.feac2			TOO HOT			WENT			2009/09
W tof_dcs:CAEN/alitofcaelv5/bc00/easyCr	ra		UNDER VOLTA	GE			FALSE		2009/09
V tof_dcs:crateTempSt53.feac7			HOT			WENT			2009/09
<pre>Ctof_dcs: RDBArchive.dbConnection</pre>	R		RDB ARCHIVE	MANAGER NO	F RUNNING				2009/09
toi_rivRUBArchive.dbConnection.	SM Panel		RDB ARCHIVE	MANAGER NU	RUNNING		FALSE		2009/09
tor_des.tor_persitorsmoo.states	)etails		Connection OF			CAME			2009/09
	rend		Connection OF	F		CAME			2009/09
	Varm Help		Connection OF			CAME			2009/09
V tof dcs:tof pcAlitofsmO3.status			Connection OF	F		CAME			2009/09
tof dcs:FEE/Crate03.info.delay						CAME			2009/09

The alert is flagged in the Direction column (*Dir.* in the panel) as *CAME* or *WENT*. CAME it means that alert is still active while WENT it means that the alert went out (and you can acknowledge it using the button in the panel).

You can check also date and time of the alarm looking at the *Time* column. In the table you can see:

- 1. the system sending the alert (*tof\_dcs*)
- 2. the alert description (RDB ARCHIVE MANAGER NOT RUNNING)

Right-click on the row in the table and select Alarm Help. A standard help panel opens

\\Alidcsfs002\DCS_Common\dcs_share\tof_share\help\en_USiso00591\tofAlarmsHelp\tofPPS9	_ O X
Ela Edit View Enverter Tools High	
()Added s002/DCS_Common/des_share(tof_share(teb)	en_USJso005
Address 😭 ((Akdosfs002/DC5_Common)dos_share)tof_share)help\en_U5.iso86591'(tofAlarmsHelp(tof) 💌 💽 Go	Links **
Alarm Help	-
PVSS Manager DOWN	
A PVSS Manager went DOWN. The manager has to be restarted manually.	
Warning	
Error	
Fatal	
Action	
Open a web lexumer and connect directly to the <u>PVSS Process MON8er</u> of the correspon system. Fe <u>GL</u> <u>64</u> <u>659</u> <u>miltime</u> <i>darkers</i> <u>diff</u> <u>Miltime</u> <u>Miltime</u> <u>darkers</u> is <u>http://miltime.com/sites/miltime</u> . <u>http://darkers/miltime</u> <u>fillime</u> <u>darkers</u> <u>is a miltime</u> <u>darkers</u> <u>is the miltime</u> <u>darkers</u> <u>is the miltime</u> <u>darkers</u> <u>is the miltime</u> <u>miltime</u> <u>miltim</u> <u>miltime</u> <u>miltime</u> <u>miltime</u> <u>miltime</u> <u>miltim</u>	m the
Contact details	
Name: Andrea Akci Email <u>Andrea Sofie</u> Phone: 165850	
4	- D - E
Done Local intranel	

The panel suggests you to open with a web browser the page <u>http://alitofwn001.cern.ch:4999/</u>

e <u>E</u> dit	New	Favorites Iools He	зþ				<b>#</b>
				Favorites 😧 🙆 😓 🕞			
dress 🛓	http://ali	tofwn001.cem.ch:4995	Increfre	sh		💌 🔁 GO	Links
Start	Stop			Restart Project Wait N			
	r Status State	of 51 entries @ 20 Manager	09.09. PID	16 10:49:24 W. Europe Da Starttime	vylight Time Options	-1	
C				2009.08.19 14:42:07.578		-	
c				2009.09.15 08:02:33.150			
c			<u> </u>	2009.09.15 08:03:44.744			
c				2009.09.15 08:04:20.760			
Ċ.	running	PVSS00sim(1)	2304	2009.09.15 08:04:22.463		-	
0	running	PVSS00dist(1)	5352	2009.09.15 08:04:29.447			
c	stopped	PVSS00ui(1)	-1	1970.01.01 01:00:00.000	-m gedi	1	
0	running	PVSS00ctrl(10)	5844	2009.09.15 08:04:31.135	-num 10 -f fwInstallationAgent.lst	-	
c	stopped	PVSS00ctrl(2)	-1	2009.09.15 08:04:31.947	-f fwScripte.let		
C	running	PVSS00sim(13)	3028	2009.09.15 08.04.33.447	-tuen 13		
C	nunning	PVSS00opc(6)	468	2009.09.15 08:04:39 744	-num 6		
Ċ	stopped	PVSS00sim(6)	-1	1970.01.01 01:00:00.000	-num 6		
0	running	PVSS00mod(15)	4788	2009.09.15 08:05:02.244	-men 15		
C	stopped	PVSS00sim(15)	-1	1970.01.01 01:00:00.000	-num 15		
Ċ.	running	PVSS00ctrl(2)	5636	2009.09.15 08:05:07.900	unDistributedControl.ctl		
C	nunning	PVSS00ctrl(3)	2636	2009.09.15.08:05:09.525	fwFemSeve		
¢	stopped	PVSS00ui(1)	-1	1970.01.01 01:00:00.000	-p fwDeviceEditorNavigator/fwDeviceEditorNavigator.pnl -iconBar -menuBar		
C .	stopped	PVSS00dip(1)	-1	1970.01.01.01.00.00.000			
с	stopped	PVSS00ut(1)	-1		-p fwTrending/fwTrending.pnl -iconBar -menuBar		
c	stopped	PVSS00ui(1)	-1	1970.01.01.01.00.00.000	-p fwFSMConfDB/fwFSMConfDB pnl -iconBar -menuBar		
5			-1	1970.01.01 01:00:00.000	-p dcsUi/dcsUiMainPanel pnl -centered -iconBar -menuBar		
6)	stopp	PVSS00rdb(99)	D	2009.09.15 08.05:12.885	-num 99 -dbg 0		
Ĉ	stopped	PVSS00opc(11)	-1	1970.01.01 01:00:00.000	-num 11		
c	running	PVSS00sim(11)	2624	2009.09.15 08:06:12.166	-num 11		
С	stopped	PVSS00opc(14)	-1	1970 01 01 01 00 00 000	-num 14		

Find the right manager (*PVSS00rdb*(99)), select the radio button on the left and click on *Start*.

## 7. Alarms

## 7.1 Alarm List

- LV System
  - Over Current
  - Under Voltage
  - Over Voltage
  - Trip
  - A1396 temperature (with action on LV channels)
  - VME boards temperature (with action on VME slots)
  - FEAC cards temperature (action on FEAC cards not active jet)

#### HV System

- Over Current
- Under Voltage
- Over Voltage
- Trip

#### Connections

- Crate DIM server
- Crate VME server
- INTERCOM, ACM server, CTTM server
- RDB and DIST Managers status
- Linux PCs status
- PVSS DIM Managers status
- OPC Server status

#### Cooling System

- Cooling water temperature
- Crate Flux (SMS to expert will be also sent)

#### Gas System

- Distribution Rack 61 status (SMS to expert will be also sent)
- Distribution Rack 62 status (SMS to expert will be also sent)
- Mixer module status (SMS to expert will be also sent)
- Pump status (SMS to expert will be also sent)
- Purifier module status (SMS to expert will be also sent)

#### General

• Free RAM (%) for alitofwn001, alitofwn002 and alitofwn003 (SMS to expert will be also sent)

## 7.2 Alarm Description

#### • LV system

#### • Over Current, Under Voltage, Trip

It means that some LV channels went in an OVC, UNV, OVV or TRIP error state. **How to fix:** find out which is the channel in error reading the logical name of the object in the Alarm panel. Using the FSM hierarchy tree browser find out the relevant node and open the operational panel. Try to switch OFF and ON again that channel, or get a *Clear Alarm* if needed. If the error still persists, the corresponding object has to be removed from the FSM.

#### • A1396 temperature

**HOT:** it means that the temperature of an A1396 is more than 40°C.

**VERY HOT:** it means that the temperature of an A1396 is more than 45°C.

**TOO HOT:** it means that the temperature of an A1396 is more than 50°C.

How to fix: if the temperatures reach the 50°C, the crate will be suddenly switched off. Before it happens, check if the cooling plant is working fine. In any case the action to take is to switch off the crate (or the crates if the high-temperature crate is a right one) with the appropriate procedure.

VME boards temperature

**Warning:** it means that at least one temperature sensor of the VME board shows a temperature higher than  $55^{\circ}C$ .

**Error:** it means that at least 3 temperature sensors (just one in the case of a DRM) show a temperature higher than 60°C. The board (the whole crate but the CPDM in the case of a DRM) will be suddenly switched off.

**How to fix:** find out which is the crate housing the hot VME board reading the logical name of the object in the Alarm panel. Using the FSM hierarchy tree browser find out the relevant node, open the operational panel and disable the boards.

#### • FEAC cards temperature

Warning: it means that the temperature of a FEAC card is higher than 35°C. Error it means that the temperature of a FEAC card is higher than 40°C. How to fix: using the FSM hierarchy tree browser find out the relevant node, open the operational panel, switch off the card and disable it.

#### • HV system

Over Current, Under Voltage, Over Voltage, Trip
 It means that some HV channels went in an OVC, UNV, OVV or TRIP error state.

 How to fix: find out which is the channel in error reading the logical name of the object in the
 Alarm panel. Using the FSM hierarchy tree browser find out the relevant node and open the
 operational panel. Try to switch OFF and ON again that channel, or get a *Clear Alarm* if
 needed. If the error still persists, you have to exclude the object from the FSM.

#### Connections

#### • Connection with PCs OFF

It means that the PC could be off.

**How to fix:** check if the Linux machine is really off; if this is the case turn on the machine again (see <u>how to restart a Linux machine</u>).

#### VME server and DIM server DOWN

It means that the communication between a ddl and the corresponding Linux machine has been lost or that the Linux machine is off or hangs.

**How to fix:** find out to which crate the ddl belong and open the corresponding operational panel. Click on the *VME server restart* (or *DIM server restart*) button. Check the status of the Linux machine (ALITOFSM## where ## is the SM's number). If problem still persists you have to switch off the whole crate because the board temperatures are not monitored so far.

#### ACM server DOWN

It means that the communication with the ACM has been lost or that the Linux machine ALITOFCTRL is off or hangs.

**How to fix:** open the ACM operational panel and click on the *ACM restart* button. Check if ALITOFCTRL is working well.

#### ACM server DOWN

It means that the communication with the ACM has been lost or that the Linux machine ALITOFTRG is off or hangs.

**How to fix:** open the ACM operational panel and click on the *ACM restart* button. Check if ALITOFTRG is working well.

#### INTERCOM server DOWN

It means that the INTERCOM server is not running so far. **How to fix:** open the RUN operational panel and click on the *INTERCOM restart* button.

#### PVSS Dist and RDB Manager status

Some critical PVSS managers (Distribution Manager manage the connection between the main project TOF\_DCS and the other projects, RDB Manager manage the data storage on ORACLE database) are continuously monitored. If they stop to work properly an alert is activated. To restart a manager you can look at the section *How to monitor PVSS managers* of this manual.

#### PVSS DIM Manager status

PVSS DIM Managers are continuously monitored. If they stop to work properly an alert is activated. To restart a manager you can look at the section <u>*How to monitor PVSS managers*</u> of this manual.

#### OPC Server status

If an OPC server hangs you lose the communication with the LV channels belonging to an SY1527 mainframe.

How to fix: go in front on the SY1527 and reset it.

#### Cooling System

#### Cooling water temperature

The temperature of the cooling water is monitored and registered at the exit of the tank. **TOO LOW:** cooling water temperature lower than 13°C. **LOW:** cooling water temperature lower than 14°C. **HIGH:** cooling water temperature higher than 18°C. **TOO HIGH:** cooling water temperature higher than 20°C. **How to fix:** check why the water temperature is so high (or low); if it is not possible to fix the problem switch off the whole TOF.

#### Gas System

- **Distribution Module:** the distribution module is not ready
- **Distribution Rack 61:** the rack 61 distribution system is not ready
- Distribution Rack 62: the rack 62 distribution system is not ready
- **Mixer system:** the mixer system is not ready
- **Pump module:** the pump system is not ready

## 8. FSM states and actions

The FSM controls and monitor the whole detector.

Here is a list of all the possible states of the TOF FSM hierarchy Top Node, and the commands associated to these states:

- **OFF:** Everything is OFF.
  - GO\_STANDBY: all the front-end and the read-out electronics is switching ON. A recipe is loaded to set up once more all the LV channels (V0, Imax, Vmax and Trip time).
  - EOR: move the TOF\_DCS\_RUN to EOR\_PROGRESSING state
  - ACK\_RUN\_FAILURE: send a **RESET** to the TOF\_DCS\_RUN
- **STANDBY:** all the LV channels are ON as well as the VME boards.
  - o GO\_OFF: turn OFF the whole detector.
  - CONFIGURE: a dedicated HV recipe which set up the V0 to the working voltage is loaded. Move the VME boards to **STBY\_CONFIGURED** state.
  - EOR: move the TOF\_DCS\_RUN to **EOR\_PROGRESSING** state
  - ACK\_RUN\_FAILURE: send a **RESET** to the TOF\_DCS\_RUN
- **STBY\_CONFIGURED:** all the LV channels are ON and the read-out electronic is configured.
  - GO\_STANDBY: move the VME boards to **STANDBY** state.
  - GO\_BEAM\_TUN: power on high voltage channels and load a dedicated recipe which set up the V0 to 1000V (safe condition for beam injection). Move the read-out electronic to **READY** state.
  - GO\_READY: power on all the high voltage channels. Move the read-out electronic to **READY** state.
  - CONFIGURE: configure the TOF for dedicated run\_type.
  - EOR: move the TOF\_DCS\_RUN to EOR\_PROGRESSING state
  - ACK\_RUN\_FAILURE: send a **RESET** to the TOF\_DCS\_RUN
- **BEAM\_TUNING:** safe condition for beam injection. The read-out electronic is ready for data taking, the HV channel are ON but V0 is set to 1000V only.
  - GO\_STBY\_CONF: switch OFF all the HV channels and move the VME boards to **STBY\_CONFIGURED** state.
  - GO\_READY: load a dedicated recipe which set up the HV channel V0 to the working voltage.
  - CONFIGURE: configure the TOF for dedicated run\_type.
  - PREPARE\_FOR\_RUN: configure the TOF for dedicated run\_type.
  - EOR: move the TOF\_DCS\_RUN to EOR\_PROGRESSING state
  - ACK\_RUN\_FAILURE: send a **RESET** to the TOF\_DCS\_RUN
- **READY:** the detector is ready for physics data taking (the correct HV values have to be set up by the operator manually)
  - GO\_BEAM\_TUN: load a dedicated recipe which set up the HV channel V0 to 1000V only.
  - GO\_STBY\_CONF: switch OFF all the HV channels and move the VME boards to **STBY\_CONFIGURED** state.

- SOR: run parameter (run type, run number and ddl list) are sent to the Run Unit and move the detector to **SOR\_PROGRESSING** state.
- CONFIGURE: configure the TOF for dedicated run\_type.
- PREPARE\_FOR\_RUN: configure the TOF for dedicated run\_type.
- EOR: move the TOF\_DCS\_RUN to EOR\_PROGRESSING state
- ACK\_RUN\_FAILURE: send a **RESET** to the TOF\_DCS\_RUN
- **MIXED:** the detector is in an inconsistent state (may be temporary)
  - EOR: move the TOF\_DCS\_RUN to EOR\_PROGRESSING state
  - ACK\_RUN\_FAILURE: send a **RESET** to the TOF\_DCS\_RUN
- **ERROR:** a fatal error occurred in the detector.
  - GO\_OFF: turn OFF the whole detector.
  - EOR: move the TOF\_DCS\_RUN to EOR\_PROGRESSING state
- MOVING\_STBY\_CONF: the detector is moving to a STBY\_CONFIGURED state.
- **MOVING\_READY:** the detector is moving to a **READY** state.
- **MOVING\_BEAM\_TUN:** the detector is moving to a **BEAM\_TUNING** state.

## 9. How To

- 9.1 How to switch ON the full detector
- 1. Open the <u>FSM Control Panel</u> (upper left FSM button in the DCS UI panel) while the top node (TOF\_DCS) is selected in the FSM tree.
- 2. <u>Take control</u> (if it is not already taken) by clicking on the lock of the top node and select *Take*.
- 3. Click on the top node and select the commands to send moving the TOF in READY state :
  - 1. From OFF state send GO\_STANDBY;
  - 2. From STANDBY send CONFIGURE(run type);
  - 3. From STBY\_CONFIGURED send GO\_READY.

## 9.2 How to switch OFF the full detector

- 1. Open the <u>FSM Control Panel</u> (upper left FSM button in the DCS UI panel) while the top node (TOF\_DCS) is selected in the FSM tree.
- 2. <u>Take control</u> (if it is not already taken) by clicking on the lock of the top node and select *Take*.
- 3. Click on the top node and select the commands to send switching off the TOF :
  - 1. From READY state send GO\_STBY\_CONFIGURED;
  - 2. From STBY\_CONFIGURED send GO\_STANDBY;
  - 3. From STANDBY send GO\_READY.

#### 9.3 How to take control of the FSM

Right-click on TOF\_DCS in the tree on the left side and select *view panel;* this opens the <u>FSM Control</u> <u>Panel</u>. Click on the lock and select *Take*. If control is taken by someone else, open the <u>FSM expert</u> <u>control panel</u> and release the ownership of the TOF DCS node.



9.4 I need to take control of the TOF DCS but in the FSM Control panel the lock is red painted. What can I do?

First of all, check (asking the global DCS shifter) if the control has been already taken by the global DCS shifter. If yes, ask him to release it (if it is possible). If the global DCS shifter has not taken the lock you can release it from the FSM Expert Control panel. Press the FSM Expert Control panel button in the DCS UI:



Then click on the Release FSM Node button to release the ownership of the FSM.

FSMContr	rol				ALICE - MAI		SM Control Panel v 0.6
LICE TOP	DIM DNS DIM DN: DIM DN:	S name	alidc	sdimdn: DNS RL	s.cern.ch	_	tribuited IS DISTRIBUITED !
-FSM Serv	/er Manag	jers —					-FSM control to all distributed domai
tof_dcs(72	2)	RUNN	IING !!	FwR	testartAllDomains		
tof_hv(73)		RUNN	IING !!		testartAllDomains		Start/Restart All
tof_vme(7	4)	RUNN	IING !!	FwR	estartAllDomains		
-alitofwn0	01 Status	;					
TOF_DCS	*	0	READ	Y	tof_dcs:Manager4	6	
TOF_INFR/	А 🔣		OFF		Not owned !		TOF_DCS_RUN 🔛 🔟 RUN_OK
	02 Status TEM_MA		READ	Y	Not owned !		TOF_GAS READY

## 9.5 How to exclude part of the FSM

Click on the V button (see figure below) of the object to be excluded, then select Disable.

FSM CONTROL PANEL       Object     State       TOF_SUPERMODULE_00     READY     ✓       Sub-System     State     ✓       TOF_LVSYSTEM_00     READY     ✓       TOF_FEESYSTEM_00     READY     ✓       TOF_HVSYSTEM_00     READY     ✓       TOF_HVSYSTEM_00     READY     ✓	SIPPERMODU :TOF_SUPERMODU	LE_00: TOP	×	
Object     State       Tof_SUPERMODULE_00     READY     Image: Constraint of the state       Sub-System     State       Tof_LVSYSTEM_00     READY     Image: Constraint of the state       Tof_FEESYSTEM_00     READY     Image: Constraint of the state       Tof_feesystem_00     READY     Image: Constraint of the state	INFR	FSM CONTROL PANEL		
TOF_SUPERMODULE_00     READY     Image: Constraint of the second	Object	State		PAGE 1
TOF_LVSYSTEM_00 READY Modes TOF_FEESYSTEM_00 READY TOF_LVSYSTEM_00 READY TOF_LVSYSTEM_00 READY		ULE 00 READY		PAGE 2
TOF_LVSYSTEM_00 READY Modes TOF_FEESYSTEM_00 READY TOF_LVSYSTEM_00 READY TOF_LVSYSTEM_00 READY				
TOF_FEESYSTEM_00 READY ✓ TOF_LVSYSTEM_00	Sub-System	State		
TOF_FEESYSTEM_00 READY TOF_LVSYSTEM_00 Is Enclosed	TOF_LVSYSTEM_00	READY - 🗸	🕴 Modes	
TOF_HVSYSTEM_00 READY V Is Enabled		RLADI V		
	TOF_HVSYSTEM_00	READY 🔹 🗸	ls Enabled	
X Disable		·/	X Disable	
				-

#### 9.6 How to restart the FSM

Click on the <u>FSM expert control</u> button. Once the FSM expert control panel opens click on the *Start/Restart All* button and wait for the FSM restart.

## 9.7 TOF is MIXED; what I have to do?

If TOF becomes not ready while is running, the run crashes. The shifter should recover that situation. First you have to find where the problem is. In the example below SuperModule 6 is in a mixed state; use the *FSM Control* panel to find in which subsystem (*LV*, *FE*E or *HV*) the problem is. Double-click on the rectangle called *TOF\_SUPERMODULE\_06* to expand it; in this example the problem is in the FEE subsystem (see below).



Now you can use the BasePanel to better investigate the situation. Open the FEE Panel and look at it; crate 24 is mixed because TRM in slot 7 is no more ready.

GENERAL GAS	COOL		JN fo	CONNEC TIONS	SM overvie	w TE	MP	CAEN	PS	H١	/	LV	FEE
FEE panels	sr	100	SM01	SM02	SM03	SMO	)4	SM05	SM	06	SM07	SM08	SMO
ALL CRATES 2 sides	01	00	05 04	09 08	13 12	17	16 2	21 20	25	24	29 28	33 32	37 3
	RE	RE	RE RE	RE RI	E RE R	E RE F	REF	RE RE	B	MX)	RE RE	RE RE	RE F
ALL CRATES 00-71													
CRATES	RE	RE	RE RE	RE R	E RE R	E RE	RE	RE RE	RE	RE	RE RE	RE RE	RE F
side A - Baby	RE	RE	RE RE	RE R	E RE R	E RE	RE	RE RE	RE	RE	RE RE	RE RE	RE F
CBATES	RE	RE	RE RE	RE R	E RE R	E RE	RE	RE RE	RE	RE	RE RE	RE RE	RE F
side C - Back	RE	RE	RE RE	RE R	OFR	E RE	RE	RE RE	RE	RE	OF RE	RE RE	RE F
All crates	RE	RE	RE RE	RE R	REO	F RE	RE	RE RE	RE	RE	RE RE	RE RE	RE F
vertical	RE	RE	RE RE	RE R	E RE R	E RE	RE	RE RE	RE	RE	RE RE	RE RE	RE F
Open FSM	RE	RE	RE RE	OF R	E RE R	OF	RE	RE RE	R	SC)	RE RE	RE RE	RE F
Commands	RE	RE	RE RE	RE R	E RE R	E RE	RE	RE RE	RE	RE	RE RE	RE RE	REF
	RE		RE RE	RE R				re re	RE	RE	RE RE	RE RE	
			RE RE					RE RE	RE		RE RE	OF RE	
	RE	RE	RE RE	RE R	E RE R	OF	RE	re re	RE	RE	RE RE	RE RE	
OFF	RE	RE	RE RE	RE R	E RE R	E RE	RE	RE RE	RE	RE	RE RE	RE RE	RE F

Now you can right-click on the TRM corresponding square to enable a small menu with commands you can send to the board. Select GO\_READY to put the TRM in a ready state.

Vision_1: TOF_base									
GENERAL GAS	COOL	RUN info	CONNEC TIONS	SM overview	TEMP	CAEN F	PS HV	LV	FEE
FEE panels	SMO	0 SM01	SM02	5M03	SM04	SM05	SM06 S	M07 SM08	5M09
ALL CRATES 2 sides	01 0	0 05 04	\$ 09 08	13 12	17 16	21 20	25 24 29	28 33 32	37 36
ALL CRATES 00-71				RE RE	RE RE	RE RE			RE RE
CRATES side A - Baby		RE RE R		RE RE	RE RE	RE RE	RE RE RI	RE RE RE	RE RE
CRATES side C - Back		RE RE R		RE RE	RE RE	RE RE	RE RE RI		RE RE
All crates	RE F	RE RE R	E RE RE	RE OF	RE RE	RE RE	RE RE RI	RE RE RE	RE RE
Open FSM	RE F	RE RE R	E OF RE	RE RE	OF RE	RE RE	RE Cra	ate24-Slot07	RE RE
Commands		RE RE R		RE RE	RE RE	RE RE		OFF	RE RE
		RE RE R		RE RE	RE RE	RE RE		_STANDBY _STBY_CONF	RE RE
OFF	REF	RE RE R	E RE RE	RE RE	RE RE	RE RE		_READY	RERE
STANDBY		2 07 08		15 14 RE RE	19 18 RE RE	23 22	27 2		39 38

#### 9.8 How to fix LV issue

Open <u>LV panel</u> inside the BasePanel, select *Open Panel* in *Select action* field (up – right corner) and look at the status of LV channel. You may try to switch it ON again. If the problem cannot be fixed, exclude the corresponding object from FSM.



## 9.9 How to fix FEE issue

Open <u>FEE Operational panel</u> inside the BasePanel and look at the log table (crate InfoBrowser) to understand what happens. You may try a power cycle (turn the board OFF and then move it back to

READY). If the problem cannot be fixed, exclude the corresponding object from FSM (see picture below).



#### 9.10 The status showed for a crate is not the correct one

4	tof_cra	ate									
	SlotSt	SlotP	L ∾ ope		tof dcs:FEE	/Crate NG_OFI		SI	<b>M 11</b> GC	то	
1	Ok	On	On	Off	5 Ena_Stby	Ena	Dis	Off	Standby	Stby_Con	Ready
2	Ok	On	On	Off	5 Ena_Stby	Ena	Dis	Off	Standby	(tby_Con	Ready
З	Ok	On	On	Off	5 Ena_Stby	Ena	Dis	Off	Standby	Stby_Con	Ready
4	Ok	On	On	Off	5 Ena_Stby	Ena	Dis	Off	Standby	Stby_Con	Ready
5	Ok	On	On	Off	5 Ena_Stby	Ena	Dis	Off	Standby	Stby_Con	Ready
6	Ok	On	On	Off	5 Ena_Stby	Ena	Dis	Off	Standby	Stby_Con	Ready
7	Ok	On	On	Off	5 Ena_Stby	Ena	Dis	Off	Standby	Stby_Con	Ready
8	Ok	On	On	Off	5 Ena_Stby	Ena	Dis	Off	Standby	Stby_Con	Ready
9	Ok	On	On	Off	5 Ena_Stby	Ena	Dis	Off	Standby	Stby_Con	Ready
10	Ok	On	On	Off	5 Ena_Stby	Ena	Dis	Off	Standby	Stby_Con	Ready
11	Ok	On	On	Off	5 Ena_Stby	Ena	Dis	Off	Standby	Stby_Con	Ready
12	Ok	On	On	Off	5 Ena_Stby	Ena	Dis	Off	Standby	Stby_Con	Ready
					all	Ena	Dis	Off	Standby	Stby_Con	Ready
F			CAL	BRA' ADE		ME sen shutdov					
		со		L_FE		ME ser restar		P	OF global Reload [		

It may happen that the status showed for a crate is not the correct one (see picture below).

If you restart the VME server for this crate pressing on the VME server restart button the problems should disappear.

#### 9.11 How to exclude HV channels from the FSM

The HV are managed by a dedicated FSM running in a separated machine. Single HV channels cannot be included or excluded in the usual way; the operational panel (in the DCS UI panel) and the enable or disable buttons have to be used instead.



After excluding the bad HV channel shifter should update the HV configuration file. Naming convention for configuration file is: *HVConfiguration\_[year]\_[month]\_[day].txt* 

Severa	_1: TOF_base	COOL	RUN info		INNEC IONS	SM overview	, те	ЮΡ	CAEN PS HV	LV	FEI		FEAC	A	см	СТТМ	LTM	INFO	root 9:12:3	1 AM 11/3	LO/2009
				Mod0	I Mod1	Mod2	Mod3	Mod	4				Mod0	Mod1	Mod	2 Mod3	Mod4				
ΗV	/ panels	SMOO	Neg	7	7		7	~			SM09	Neg	~	~	7	~	7			_	
Ha	ardware		Pos	7	7	~			ena all dis all	commit		Pos	~		V	~		na all dis	all commi	t	
	view	SM01	Neg Pos	ব	2	2	2	<u> </u>	ena all dis all		SM10	Neg Pos	ব		2		I I er				
	etector view		Nea	<u>v</u>	ব	<u>र</u>	ব	<u>∾</u> ⊽	ena all dis all	commit		Neg		<b>V</b>	<u>र</u>	ব	l⊻ _er	na all dis	all commi		
Ba	rMonitor	SM02	Pos		V		2		ena all dis all	commit	SM11	Pos	5	2	V			na all dis	all commi	t I	
	nannels	SM03	Neg	7	~	•	-	~	/		SM12	Neg	~	V	~	~				-	
	Channels Aonitor	0	Pos	7	~		2	~	ena all dis all	commit	GIIIIE	Cite Cite	- noose a	a File	-	-	-			1	?
тс	DF Total	SM04	Neg	7	~		~	~			SM13	Lool	kijn: <table-cell></table-cell>	D:/P	VSS_Pn	ojects/tof_	_ui/data/		Ŧ	(- (- (-	· # # 10
	Current		Pos	7	V	2	~	~	ena all dis all	commit			 export				🖬 HVC	Configuration	_allDisabled.	t×t	
0	en FSM	SM05	Neg Pos	ব	ব	ব	ব	ব	ena all dis all	commit	SM14	6	sounds								No
Cor	mmands		Neg	₩ 1	- -	2	<u>م</u>	• ا	ena ali dis ali	commit				figuratio		9_05_12.b					available
		SM06	Pos	7	1	2	<b>V</b>	~	ena all dis all	commit	SM15		HVCon	nguratio	n_2009	9_11_10.b	<t th=""  <=""><th></th><th></th><th>_</th><th></th></t>			_	
		SM07	Neg	7	~	1	~	~			SM16		-			on_2009_1	1_10.t×t			$\equiv$ (	<u>S</u> ave
			Pos	V	2		2	~	ena all dis all	commit				All Files							Cancel
		SM08	Neg	7	7	~	7	~			SM17	Proj			5_Proje	cts\tof_ui\				-	
			Pos	7	7	7	2	~	ena all dis all	commit		Pos	<b>v</b>	~	V		🔽 er	na all dis	all commi	t	
			Арр	ly co	onfig	uratior		2	Write config	uration	to file		Оре	en co	nfig	uratior	n file			Ð	

#### 9.12 How to monitor PVSS managers

If you would like to monitor or manage the status of the PVSS managers or to restart the whole project, you can connect directly to the PMON using a web browser and select the address:

- <u>http://alitofwn001.cern.ch:4999</u> for TOF\_DCS
- http://alitofwn002.cern.ch:4999 for TOF\_HV
- <u>http://alitofwn003.cern.ch:4999</u> for TOF\_VME

#### 9.13 How to restart a Linux machine

- 1. Open a *ssh* session on alitofsrv, then type:
  - 1.1. go [sm nr.] (if you want to restart alitofsm00 type go 0; you will directly redirect to alitofsm00);
  - 1.2. *su* (*root* password is like the usual *tof* password)
  - 1.3. halt
- 2. From alitofsrv give the commands:
  - 2.1. cd SOFT/IPMI
  - 2.2. ./nodepower status alitofsm[sm nr.] (if you get no answer you have to go in the CR3 and switch ON/OFF the machine directly from the front panel)
  - 2.3. ./nodepower off alitofsm[sm nr.]
  - 2.4. ./nodepower on alitofsm[sm nr.]
- 3. Wait for machine restart.

## 9.14 A whole crate OFF

If looking at the crate operational panel you find all the slots in fail

					to	of dcs:FEE	/Crat	e05
3	SlotSt	SlotF		V rate	D	OFF		
1	Fail	On	Qn	Off	3	Ena_Off	Ena	Dis
2	Fail	On	On	Off	3	Ena_Off	Ena	Dis
3	Fail	On	On	Off	3	Ena_Off	Ena	Dis
4	Fail	On	On	Off	3	Ena_Off	Ena	Dis
5	Fail	On	On	Off	3	Ena_Off	Ena	Dis
6	Fail	On	On	Off	3	Ena_Off	Ena	Dis
7	Fail	On	On	Off	3	Ena_Off	Ena	Dis
8	Fail	On	On	Off	3	Ena_Off	Ena	Dis
9	Fail	On	On	Off	3	Ena_Off	Ena	Dis
10	Fail	On	On	Off	3	Ena_Off	Ena	Dis
11	Fail	On	On	Off	3	Ena_Off	Ena	Dis
12	Fail	On	On	Off	3	Ena_Off	Ena	Dis
							_	

it means that the 3.3V channel is no more ON. Select LV operate to investigate.

## 9.15 Run Unit in error

If the object TOF\_DCS\_RUN is in error try to:

- 1. send a *RESET* command from the *FSM Control Panel*;
- 2. restart the *INTERCOM* server from the TOF\_DCS\_RUN panel.

The	e system is	RU	NINING	2009.09.09 16:19:37		
Lasta	ction seen SOR			on 2009.09.0916.19.34.6	18	
Runty	pe PHYSICS			on 2009.09.0916.19.34.6	18	
Runn	umber 85221			on 2009.09.09 16:19:34.6	and the second se	
DDL I	DDL 1292   129 DDL 1308   130	13   1296 19   1312	1205   1200   1209     1297   1304   1305     1313   1316   1317     1321   1324   1325	on 2009.09.09 16:19:34.6	18	-
	1328   132 1340   134 1282   128	19   1332 11   1344 13   1286	1333 1336 1337 1345 1340 1349 1290 1291 1294	RUNNING	633	
	106 10 1 30 30 31 3	11   14   4   35   3	45   48   49   52   53   4   65   68   69   02   03 15   18   19   26   27   0   39   22   23   42   43			_
ack	106   10   30   31   3   46   47   201   21   2	11   14   4   35   3 50   51   7   70   7	4   65   69   02   03 15   10   19   20   27   15   10   19   20   27   15   15   58   59   62   10   155   58   59   62			2009.09.0916193763
	0 SOR/EOR	11   14   4   36   3 50   51   7   70   7 20M resta	4   65   65   65   62   03 51   01   19   02   03 01   39   22   23   42   43 54   55   56   59   62   1 1 1 1 1 1 1 1 1 1 1 1 1			
ack msg	0 SOR/EOR	11   14   4   35   3 50   51   7   70   7	4   65   69   02   03 15   10   19   20   27   15   10   19   20   27   15   15   58   59   62   10   155   58   59   62	d in crate 16 d in crate 22 d in crate 23 d in crate 18 d in crate 33 d in crate 33 d in crate 33		 2009 09 09 16 19 37 63 2009 09 02 05 45 27 44
	0 IO6 I01 16 101 2 146 147 7 INTERC 0 SORVEOR Ime 2005 08 29 12 30 6 2005 08 29 12 30 6 2005 08 29 12 30 6 2005 08 29 12 45 40 2005 08 29 12 45 40 2005 08 29 12 45 40 2005 08 29 13 46 30 2005 08 30 81 0 3 2005 08 30 81 10 2 2005 08 30 81 10 2 2005 08 30 81 10 2 2005 08 30 11 17 29	11   14   4   35   3 50   51   50   50   50   50   50   50   50   50	4 i 65 j 69 j 69 j 62 j 62 j 15 j 10 1 19 j 62 j 127 j 10 j 29 j 22 j 23 l 42 j 43 j 4 j 155 j 16 j 19 j 62 j 27 j 4 j 10 normally completed desceptor FIUN status transfor fale FUN status transformation fale FUN status transformation fale	d in crate 16 d in crate 22 d in crate 23 d in crate 18 d in crate 33 d in crate 33 d in crate 64	A	

## 9.16 ACM in error

Before to call an expert:

- 1. check if the VME crate is ON
- 2. restart the ACM Server

Vision_1: TOP										×
15:52:36 16-09-0	o desta v.3.0.7				N	USER LOGGE	D		003	SHUTDOWN
aalici							_	_		LUCIDISATE
-			<u>۸</u>	0 🕤	0			10	P 🌇 📩	
FSM ERROR	√ Mg #2		-							18.0 °C 61.622 mbar
D GTOF_DCS		OF ACM sta	at the second second	ROR						
E OF INFRA										$\sim$
TOP_DCS_ACM	IEW PANEL	0 Execu	ted request to	move ACM (	DFF	(	ACM	00_0FF		
- cor_acm	PEN FOM CONTROL	g time	level	description				00_STANDBY	0.00	
B OTOF_DCS_CTTM C	SPEN FSM CONTROL	2009.09.15 18.3			nt ON upon request, VME cha	unel opened				
E-OTOF_DCS_RUN		2009.09.15 18.4			TBY_CONFIGURED			GO_STBY_CONF		
RONTOF SUPERMODULE_00		2009.09.15 18.5		ACM is now R				OO READY	SysRESET	
DOF_SUPERMODULE_02		2009.09.15 19.0 2009.09.15 19.0		ACM is now 5 Moving to ST/	TBY_CONFIGURED			00 JEADT		
IT OF SUPERMODULE 03		2009.09.15 19:0			go DFF, closing VME connect					
B-OF SUPERMODULE 04		2009.09.15 19.0			be turned OFF					
BOOTOF SUPERMODULE OS		2009.09.15.19.0			go OFF, closing VME connect	ion				
B OTOF SUPERMODULE 06		2009.09.15 19.0	17:00 Info	ACM crate will	be turned OFF		Clear Table	-		
TOP SUPERMODULE 07		2009.09.15 19.0	17:00 Info	ACM crate will	be turned OFF	•		_		
• OF SUPERMODULE_08		4				<b>)</b>	Clear Msg from Pv	/55		
. OF_SUPERMODULE_09		Denne								
OF_SUPERMODULE_10		Busy S	100 -1.000000	-1.000000	-1.000000 -1.000000	Busy SM00	0 0	0	0	
. TOF_SUPERMODULE_11		Occupancy	101 -1.000000	-1.000000	-1.000000 -1.000000	Counters SM01	0 0	0	0	
B OTOF_SUPERMODULE_12		9	102 -1.000000	+1.000000	+1.000000 +1.000000	51402	0 0	0	0	
RIGHTOF SUPERMODULE 13			1.000000	+1.000000	+1.000000 +1.000000	59403	0 0	0	0	
Sub-System	State	R	AGE1 00	-1.000000	-1.000000 -1.000000	5804	0 0	0	0	
TOF_INFRA	OFF	* 2 P	AGE 2	-1.000000	-1.000000 -1.000000	51405		0	0	
	-		AGE 2 00	-1.000000	-1.000000 -1.000000	9406	0 0	0	0	
TOF_DCS_ACM	ERROR	- V	00	-1.000000	-1.000000 -1.000000	51407	0 0	0	0	
1			100	+1.000000	-1.000000 -1.000000	5400	0 0	0	0	
TOF_DCS_CTTM	ERROR		00	-1.000000	-1.000000 -1.000000	51409	0 0	0	0	_
TOF DCS RUN	FUN INHIBIT	• 8	100	-1.000000	-1.000000 -1.000000	5110	0 0	0	0	
TUP_DUS_RUN	RUNJAMET	<u> </u>	00	-1.000000	-1.000000 -1.000000	9411	0 0	0	0	
B-OTOF_SUPERMODULE_17			412 -1.000000	-1.000000	-1.000000 -1.000000	SM12	0 0	0	0	
IN TOF_LVSYSTEM_17			113 -1.000000	-1.000000	-1.000000 -1.000000	SN13	0 0	0	0	
HOF_FEESISTEM_17			114 -1.000000	-1.000000	-1.000000 -1.000000	5014	0 0	0	0	
TOF_HVSVSTEM_17			15 -1.000000	-1.000000	-1.000000 -1.000000		0 0	0	0	
			116 -1.000000	-1.000000	-1.000000 -1.000000	. SP15 SP16	0 0	0	0	
			110 -1.000000	-1.000000	-1.000000 -1.000000	, 5M10 SM17	0 0	0	0	
(				,	, , , , , , , , , , , , , , , , , , , ,	3917	, 1-		,	

## 9.17 CTTM in error

Before to call an expert:

- 1. check if the VME crate is ON
- 2. restart the CTTM Server

Wisken_1: TOP           15:51:52         16-09-09         Setti v 2.0.7		_	NO USER LOGGED	SHITDOWN
aalici 🔍 🔚			NO ODER EDOOLD	
TOF_DCS_CTTM		🔺 🖉 🗊 👰 🚫		18.0 °C 61.626 mbar
E-GTOF_DCS	TOF CTTM stat			$\frown$
B OTOF_DCS_ACM				WME Control
tof_DCS_CTTM ++ VIEW PANEL	ack 0		CTTM 00_OFF	crate power
R-ORTOF DCS RUN OPENFERICON	TROL I time	level description	GO_STAND	w l
B GTOF_SUPERMODULE_00				
# OF_SUPERMODULE_01			00_STBY_00	
B OF_SUPERMODULE_02			GO_READ	SysRESET
B GOTOF_SUPERMODULE_00				
B GTOF_SUPERMODULE_04				
E OTOF_SUPERMODULE_05				
B GTOF_SUPERMODULE_06				
TOF_SUPERMODULE_07 @TOF_SUPERMODULE_08			Clear Table	
B GTOF_SUPERMODULE_08	1		Clear Msg from PVSS	
TOF SUPERMODULE_10			Clear Mtg rom PV55	
B GTOF_SUPERMODULE_11				
Bub-System St	ate	PAGE 1		
TOF NERA	OFF +			
	off • 🔊	PAGE 2		
TOF_DCS_ACM	ERROR •	nnels		
TOF_DCS_CTTM	terror - 🗸			
TOF_DCS_RUN	RUN_INHIDIT -			L
HINTOF_FEESYSTEM_16				
In the state of				
B GTOF_SUPERMODULE_17				
GOF_LVSYSTEM_17				
DOF_FEESYSTEM_17				
. OF HVSYSTEM_17				
				Ľ
<b>1</b>				

#### 9.18 No link to PVSS DIM service

If you receive such a message it means that one of the PVSS DIM managers is not running. If the source of this message is the INTERCOM server it means that the DIM manager 47 should be restarted (see the section *HOW to monitor PVSS managers*).

If the source of this message is the ACM server it means that the DIM manager 48 should be restarted (see the section *HOW to monitor PVSS managers*).

If the source of this message is the CTTM server it means that the DIM manager 46 should be restarted (see the section *HOW to monitor PVSS managers*).

If you receive a message like

PVSS DIM slot power services/command not available

while you are trying to power on or to configure a VME slot it means that the DIM manager 49 should be restarted (see the section *HOW to monitor PVSS managers*).

## 9.19 How to recover a DRM in error

VP stat		FAIL	_										Slot	St Slo	otPw		V rate	) to		s:FE ERR	E/Cra OR	te42	SI	м 10 <sub>.</sub>	OTO	
Macist	-	0	0	04	0.	20.0	40.50	1.1	1			1	Ok	0	n	On	Off	1	Erro	or	Ena	Dis	Off	Standb	Stby_Co	n Read
48 V	•	On	On	Uff	Un	26.0	49.50	set				2	Ok	0	n	On	Off	9	Ena	Rea	c Ena	Dis	Off	Standb	y Stby_Co	n Read
VME L\	/ Ch	annel	s						- S	Y152	7 ——	- З	Ok	0	n	On	Off	9	Ena	Rea	c Ena	Dis	Off	Standb	y Stby_Co	n Read
		Pv	/		Status	IMon	VCon			clear	alarm	4	Ok	0	n	On	Off	9	Ena	Rea	c Ena	Dis	Off	Standb	y Stby_Co	n Read
3.3 V	•	On	On	Off	On	96.3	3.31	set				J 5	Ok	0	n	On	Off	9	Ena	Rea	c Ena	Dis	Off	Standb	y Stby_Co	n Read
5 V	•	On	On	Off	Dn	1.7	5.00	set		ME S	Slots —	- 6	Ok	0	n	On	Off	9	Ena	Rea	c Ena	Dis	Off	Standb	y Stby_Co	n Read
FEALV	Ch	nnels								Slo	otSt	7		0	n	On	Off			-	c Ena		Off		y Stby_Co	
	-	Pw	-		Status	IMon	VCon		1	1	Ok	8		0	n	On	Off		-	-	c Ena		Off	Standb	y Stby_Co	n Read
CH001		On	On	Off	On	4.2	2.78	set			Ok	9		0		On	Off		-	-	c Ena	_	Off		y Stby_Co	
CH002	-	On	On		On	4.2	2.74	set			Ok	10		0	_	On	Off		-	-	c Ena	_	Off		y Stby_Co	
CH003	-	On	On		On	4.9	2.72	set	4		Ok	11		0		On	Off				c Ena	_	Off		y Stby_Co	_
CH004		On	On		On	5.0	2.76	set			Ok	12	2 Ok	0	n	On	Off	9	Ena	_Rea	c Ena	Dis	Off	Standb	y Stby_Co	n Read
CH005		On	On		On	4.1	2.73	set		-	Ok									al	Ena	Dis	Off	Standb	y Stby_Co	n Read
CH006		On	On	Off		4.9	2.69	set	7	-	Ok															
CH007		On	On		On	5.0	2.69	set	8		Ok			_		CAL	IBRAT	-		ı v	ME ST	/SRES	6	A2818 r	eload	
CH008	•	On	On	Off		5.0	2.60	set	9		Ok			_	-		ADE	_					2			
CH009		Off	On	Off		0.0	0.00	set	10	0	Ok			_			L FE			-	√ME s shutd					
CH010		Off	On	Off		0.0	0.00	set	11	1	Ok	· ۱		_	CON	VIRO	L_I.C		WD	- 1				OF globa		
CH011		Off	On	Off		0.0	0.00	set	12	2	Ok					neric				1	vME s rest			Reload		

If you find the situation illustrated in the figure above and if you have the following message in the crate <u>infoBrowser</u>

failed to open VME connection to crate (ret=-2)

then you can try as following:

- 1. Try a power cycle on the DRM (switch the card off, then on again);
- 2. Switch off the DRM, select A2818 Reload and then turn on the DRM;
- 3. If problem is still in, try to switch off the whole crate, i.e. press the *LV operate* button and turn off the 3.3V and the 5V channel. Remember that if the crate is a right one you MUST to turn off before the left crate, then the right one.
- 4. <u>Reboot</u> the relevant PC Linux.

## 9.20 How to exclude a DDL from readout

						UCA INTO:	14:48:02:3	PHYSICS	TUF FER	J 15 READY		
	XDATE - selection of	f active equipm	nent			[		,				
					D-RO	RCs for de	etector : T	OF				
					Data sou	irce : 🔳 [	DDL 🗆 Int	ernal				
	ldc-1	Fof-a00-a04-0	<b>1280</b>	<b>1281</b>	<b>1284</b>	<b>1285</b>	<b>1288</b>	<b>1289</b>	<b>1292</b>	<b>1293</b>	<b>1296</b>	<b>1297</b>
	ldc-1	FOF-A05-A09-0	<b>1300</b>	<b>1301</b>	1304	1305	<b>1308</b>	<b>1309</b>	1312	1313	1316	<b>131</b>
	ldc-1	FOF-A10-A13-0	<b>1320</b>	<b>1</b> 321	<b>1</b> 324	<b>1</b> 325	<b>1328</b>	<b>1</b> 329	<b>1332</b>	<b>1</b> 333		
	ldc-1	FOF-A14-A17-0	<b>1336</b>	<b>=</b> 1337	<b>i</b> 1340	<b>=</b> 1341	<b>=</b> 1344	<b>=</b> 1345	<b>i</b> 1348	<b>i</b> 1349		
	ldc-1	FOF-C00-C04-0	<b>1282</b>	<b>1283</b>	<b>1286</b>	1287	<b>1290</b>	<b>i</b> 1291	<b>i</b> 1294	<b>1295</b>	<b>1298</b>	<b>i</b> 1299
	ldc-1	FOF-C05-C09-0	<b>1</b> 302	<b>=</b> 1303	<b>=</b> 1306	<b>i</b> 1307	<b>=</b> 1310	<b>=</b> 1311	📕 1314	<b>=</b> 1315	<b>=</b> 1318	<b>=</b> 1319
	ldc-1	FOF-C10-C13-0	<b>1322</b>	<b>i</b> 1323	<b>i</b> 1326	<b>i</b> 1327	<b>=</b> 1330	<b>=</b> 1331	<b>=</b> 1334	<b>=</b> 1335		
	ldc-1	FOF-C14-C17-0		<b>i</b> 1339	📕 1342	📕 1343	<b>i</b> 1346	📕 1347	<b>i</b> 1350	<b>=</b> 1351		
X Alice DAQ			3									
Detector: TOF			•									
infoBrowser												
runControl												
readout status												
select equipment	2											
detector files												
ECS		4										
Quit												
	Some changes are pendin	ıg: Commit	Rollback							Refresh	Desel	ect all
<u>∞∞, -</u> R <u>-</u> 0	EBUG ECS/DAQ	AMORE PVS	S 📃 tof@	⊉aldaq	XAlic	e DAQ	× infoBr	ows 🗙	TOF_D		DATE - s	e

- 1. Open the TOF Detector Control Agent;
- 2. Select select equipment;
- 3. deselect the DDL you want to exclude (remember **ddl number = crate number +1280**);
- 4. commit your modifications;
- 5. release the resources (see below) from the DCA panel.



## 9.21 How to check the FEAC threshold

Before starting a new run it is important to check if the thresholds are correct. **Remember that the TOF\_DCS must be READY and not running!** 



Currently thresholds are 500mV (this value could be change in future). If you find an LTM with different values try a power cycle (OFF  $\rightarrow$  READY). If this doesn't fix the problem call an expert.

## 9.22 How to extract error from the DAQ site InfoBrowser

It is likely in your shift report you want to report error messages from the InfoBrowser (either the ALICE DAQ or the TOF one). To select a portion of messages and save it in a file follows this procedure:

- decide which messages you want to extract
- deselect the online bottom
- typically use the following keys to get only the messages you want: min Time, Level, Facility, then push *Query*

				Host 🔄 Role 🔄 Pid 🔄 Usemame 📑 System 👅 Facility 📑 Stream 📑 Run 👅 Message
Level	Time	Host	Facility	Message
Info	18:33:36	alitofsm16	VME65	> TRM in slot # 5 selected for acquisition
Info	18:33:36	alitofsm16	VME65	> TRM in slot # 6 selected for acquisition
Info	18:33:36	alitofsm16	VME65	> TRM in slot # 7 selected for acquisition
Info	18:33:36	alitofsm16	VME65	> TRM in slot # 8 selected for acquisition
Info	10:33:36	alitofsm16	VME65	> TRM in slot # 9 selected for acquisition
Info	10:33:36	alitofsm16	VME6S	> TRM in slot # 10 selected for acquisition
Info	18:33:36	alitofsm16	VME65	> TRM in slot # 11 selected for acquisition
nfo	18:33:36	alitofsm16	VME65	> TRM in slot # 12 selected for acquisition
Info	18:33:36	alitofsm16	VME65	Active TRMs: 10 (Mask: 0x7FE)
Info	18:33:36	alitofsm16	VME65	> L1 acceptanhce window from L0: 205 - 225 BC
Info	18:33:36	alitofsm16	VME65	> DRM is already running with EXT CLK
Info	18:33:36	alitofsm16	VME65	Setting up PULSER lines using L0 generation via LTU
Info	18:33:36	alitofsm16	VME65	Slot 1 now READY to take data
Info	18:33:39	alitofsm10	DIM43	Power transition will be requested on slot 12
Info	18:33:41	alitofsm10	DIM43	detected power change in slot # 12 (was 0 now 1)
Info	18:33:42	alitofsm10	DIM43	Power transition completed on slot 12
Info	18:33:42	alitofsm10	VME43	=> GOTO_STANDBY request for slot 12
Info	18:33:42	alitofsm10	VME43	Slot 12 now in STANDBY
Info	18:33:44	alitofsm10	VME43	=> GOTO_STBY_CONFIGURED request for slot 12
nfo	18:33:44	alitofsm10	VME43	Arming TRM in crate 43 (SM: 10, link 3) slot 12 (VME ad: 0xC0000000)
ERROR	18:33:46	alitofsm10	VME43	Failed handshake with Microprocess on this TRM
ERROR	18:33:46	alitofsm10	VME43	Slot 12 NOT configured
Info	18:33:55	alitofsm10	DIM43	detected power change in slot # 12 (was 1 now 0)
Info	18:34:18	alitofsm10	VME43	=> GOTO_STBY_CONFIGURED request for slot 11
Info	18:34:18	alitofsm10	VME43	Disarming TRM # 11 on crate 3
Info	18:34:18	alitofsm10	VME43	Slot 11 now in STDBY_CONFIGURED
Info	18:34:25	alitofsm10	VME43	=> GOTO_READY request for slot 11
info	18:34:25	alitofsm10	VME43	Arming TRM in crate 43 (SM: 10, link 3) slot 11 (VME ad: 0xB0000000)
nfo	18:34:28	alitofsm10	VME43	> TRM Control Register set to: 0x0083
Info	18:34:28	alitofsm10	VME43	> Final TRM Status 0x303C
Info	18:34:28	alitofsm10	VME43	Slot 11 now READY to take data
Info	18:34:40	alitofsm10	DIM43	Power transition will be requested on slot 12
nfo	18:34:41	alitofsm10	DIM43	detected power change in slot # 12 (was 0 now 1)
Info	18:34:42	alitofsm10	DIM43	Power transition completed on slot 12
Info	10:34:42	alitofsm10	VME43	=> GOTO_STANDBY request for slot 12
Info	18:34:42	alitofsm10	VME43	Slot 12 now in STANDBY
nfo	18:34:44	alitofsm10	VME43	=> GOTO STBY CONFIGURED request for slot 12
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• once you have the entries you want to save, push "export" and save them in a file. The file with the error is pure text and it can be usefully sent as an attach in log entry.

## 9.23 Readout error

If during a run you get errors in the DAQ like

Read Event Rorc Data, eqld=1287, CDH mismatch

*ReadEvent RorcData: eqId=1287, (ERROR 357) CDH trigger error bit(s)* 

First of all try to start a new run. If you get still problems remove the DDL from readout.

## **10. Useful information**

Andrea's CERN mobile: Gilda's CERN mobile: Roberto's CERN mobile: ALICE Control Room: ALICE TOF Twiki: https://twiki.cern.ch/twiki/bin/view/AliceTOF/WebHome ALICE TOF Elog: https://www.bo.infn.it/elog/ALICE-TOF/ ALICE DCS Pages: http://alicedcs.web.cern.ch/alicedcs/ ALICE Homepage: http://aliceinfo.cern.ch/