

Run the Rich Mirror Alignment

Claire Prouve

Also look here: <https://twiki.cern.ch/twiki/bin/view/LHCb/LHCbRichMirrorAlignRunOnline>

Configuration file (1/2)

Location: /group/rich/sw/cmtuser/AlignmentOnlineDev_v10r6/Rich/
RichMirrorAlignmentOnline/python/RichMirrorAlignmentOnline/Configuration.py

```
# @package RichMirrorAlignmentOnline
# @author Claire Prouve <Claire.Prouve@cern.ch>
# @date 08/07/2015

__author__ = "Claire Prouve <Claire.Prouve@cern.ch>"

from Gaudi.Configuration import *
import GaudiKernel.ProcessJobOptions
from Configurables import ( LHCbConfigurableUser)

class Rich1MirrAlignOnConf(LHCbConfigurableUser):
    __used_configurables__ = [ ]
    __slots__ = {
        "MajItStart" : 0
        , "MinItStart" : 0
    }
...

```

1. Rich1MirrAlignOnConf

```
class Rich2MirrAlignOnConf(LHCbConfigurableUser):
    __used_configurables__ = [ ]

    __slots__ = {
        "MajItStart" : 0
        , "MinItStart" : 0
    }
...

```

2. Rich2MirrAlignOnConf

Configuration file (2/2)

Configuration-variables explained below the listing:

```
_propertyDocDct = {  
    "MajItStart"      : "" Start the alignment at this major iteration. Please make sure this is consitent with MinItStart. ""  
    , "MinItStart"    : "" Start the alignment at this minor iteration. Please make sure this is consitent with MajItStart. ""  
    , "Rich"          : "" Rich1 or Rich2. ""  
    , "HistoDir"       : "" Directory where the savesets are being written to. ""  
    , "WorkDir"        : "" Directory in which all the output will be written. ""  
    , "coeffCalibTilt" : "" Mirror-tilts applied for the calculation of the magnification coefficients. ""  
    , "minAverageBinPop": "" Demanded minimal entries per bin in x-y-bin; atm 6: for 20 phi-bins, 4.8: for 25 phi-bins. ""  
    , "phiBinFactor"   : "" Factor by which the number of phi-bins is reduced. The histograms should now come with 60 phi bins, fac  
o 20 bin in the fit.""  
    , "deltaThetaWindow": "" dTheta-range in the histograms; 4.0 for Rich1 and 3.0 for Rich2. ""  
    , "combinFitVariant": "" Method for fitting the 2D histograms; 1: first fit the slices of dTheta with a Gaussian and then fit t  
mean of the Gaussian, 3: fit a 2D function ""
```

After a change: **compile!**

```
cd /group/rich/sw/cmtuser/AlignmentOnlineDev_v10r6
```

```
export OnlineDev_DIR=/group/online/dataflow/cmtuser/OnlineDev_v5r29/InstallArea/$CMTOPT
```

```
make -j 8 install
```



Or the corresponding version of OnlineDev listed in
/group/rich/sw/cmtuser/AlignmentOnlineDev_v10r6/CMakeLists.txt

XML-file to start from

XML-file taken from: /group/online/alignment/Rich1/MirrorAlign/
/group/online/alignment/Rich2/MirrorAlign/
Iterator picks the one with the biggest version number.

According to other sub-detectors the above folders should only contain the files that made it into the CONDDb.

➔ Run with your XML-file of choice:

- ➔ Copy it into the corresponding folder with a big version number
- ➔ Delete it after you are done
- ➔ (maybe I'll program something better soon, will let you know.)

The xml files should not have a header. If you add your own xml-file to the list remove the header (= the first three lines; and the little </DDB> at the end).

Start the error loggers

1. For the analyzers:

errorLog LHCbA

You can change the output level in the little settings window: navigate (with the arrow keys) up to "Severity for messages" and cycle through the options with the ">" key-combination. When you have found the one you want simply hit "enter". This can be done at any time during the running (the message window might need a while to catch up with the command though).

The screenshot shows the errorLog LHCbA window with a list of messages. The messages are displayed in a scrollable area, showing various error messages and warnings. The messages are organized into a table with columns for time, severity, and message text. The messages are sorted by time, with the most recent messages at the top.

Messages in real time

Settings for errorlogger

Output-level

Severity for messages: WARNING history: INFO

Mode watch: ...and watch message: =

History summary

Edit filters

Process history files

Close

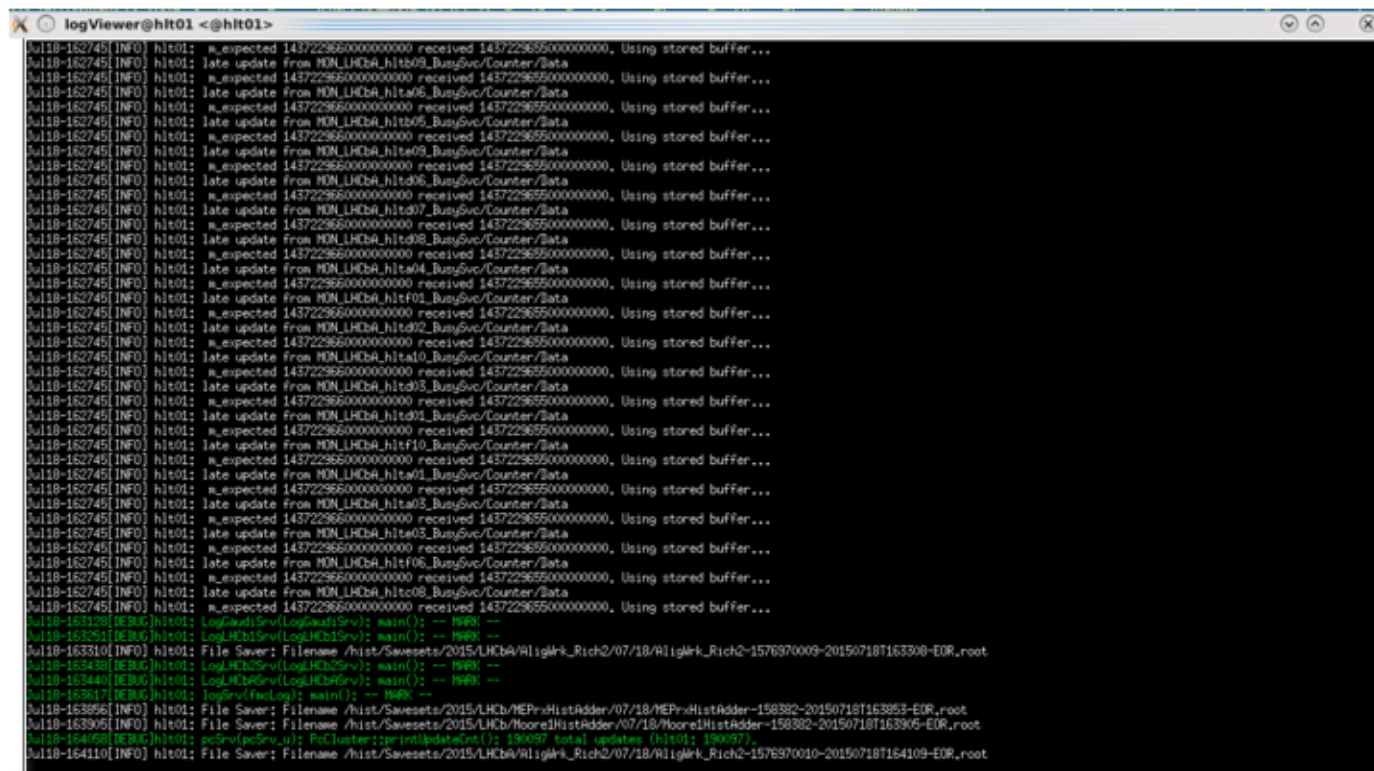
Start the error loggers

2. For the iterator:

```
ssh -Y hlt02
```

```
errlog -m hlt02
```

This panel it is a bit moody and will sometimes not output the messages at the right time. It might take a while, or wait for the next iteration or wait til the program finished.

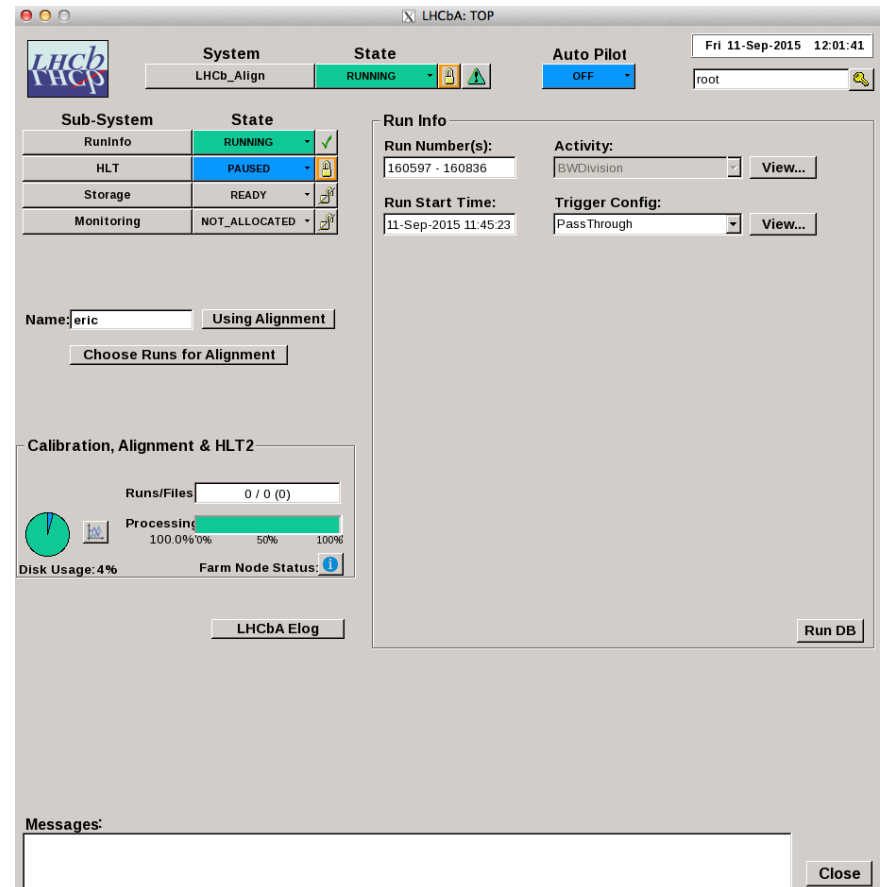


```
logViewer@hlt01 <@hlt01>
Jul18-162745 [INFO] hlt01: n_expected 1437229660000000000 received 1437229655000000000, Using stored buffer...
Jul18-162745 [INFO] hlt01: late update from NON_LHCbA_hlt09_BusySvc/Counter/Data
Jul18-162745 [INFO] hlt01: n_expected 1437229660000000000 received 1437229655000000000, Using stored buffer...
Jul18-162745 [INFO] hlt01: late update from NON_LHCbA_hlt06_BusySvc/Counter/Data
Jul18-162745 [INFO] hlt01: n_expected 1437229660000000000 received 1437229655000000000, Using stored buffer...
Jul18-162745 [INFO] hlt01: late update from NON_LHCbA_hlt05_BusySvc/Counter/Data
Jul18-162745 [INFO] hlt01: n_expected 1437229660000000000 received 1437229655000000000, Using stored buffer...
Jul18-162745 [INFO] hlt01: late update from NON_LHCbA_hlt09_BusySvc/Counter/Data
Jul18-162745 [INFO] hlt01: n_expected 1437229660000000000 received 1437229655000000000, Using stored buffer...
Jul18-162745 [INFO] hlt01: late update from NON_LHCbA_hlt06_BusySvc/Counter/Data
Jul18-162745 [INFO] hlt01: n_expected 1437229660000000000 received 1437229655000000000, Using stored buffer...
Jul18-162745 [INFO] hlt01: late update from NON_LHCbA_hlt07_BusySvc/Counter/Data
Jul18-162745 [INFO] hlt01: n_expected 1437229660000000000 received 1437229655000000000, Using stored buffer...
Jul18-162745 [INFO] hlt01: late update from NON_LHCbA_hlt08_BusySvc/Counter/Data
Jul18-162745 [INFO] hlt01: n_expected 1437229660000000000 received 1437229655000000000, Using stored buffer...
Jul18-162745 [INFO] hlt01: late update from NON_LHCbA_hlt04_BusySvc/Counter/Data
Jul18-162745 [INFO] hlt01: n_expected 1437229660000000000 received 1437229655000000000, Using stored buffer...
Jul18-162745 [INFO] hlt01: late update from NON_LHCbA_hlt01_BusySvc/Counter/Data
Jul18-162745 [INFO] hlt01: n_expected 1437229660000000000 received 1437229655000000000, Using stored buffer...
Jul18-162745 [INFO] hlt01: late update from NON_LHCbA_hlt02_BusySvc/Counter/Data
Jul18-162745 [INFO] hlt01: n_expected 1437229660000000000 received 1437229655000000000, Using stored buffer...
Jul18-162745 [INFO] hlt01: late update from NON_LHCbA_hlt010_BusySvc/Counter/Data
Jul18-162745 [INFO] hlt01: n_expected 1437229660000000000 received 1437229655000000000, Using stored buffer...
Jul18-162745 [INFO] hlt01: late update from NON_LHCbA_hlt03_BusySvc/Counter/Data
Jul18-162745 [INFO] hlt01: n_expected 1437229660000000000 received 1437229655000000000, Using stored buffer...
Jul18-162745 [INFO] hlt01: late update from NON_LHCbA_hlt01_BusySvc/Counter/Data
Jul18-162745 [INFO] hlt01: n_expected 1437229660000000000 received 1437229655000000000, Using stored buffer...
Jul18-162745 [INFO] hlt01: late update from NON_LHCbA_hlt05_BusySvc/Counter/Data
Jul18-162745 [INFO] hlt01: n_expected 1437229660000000000 received 1437229655000000000, Using stored buffer...
Jul18-162745 [INFO] hlt01: late update from NON_LHCbA_hlt03_BusySvc/Counter/Data
Jul18-162745 [INFO] hlt01: n_expected 1437229660000000000 received 1437229655000000000, Using stored buffer...
Jul18-162745 [INFO] hlt01: late update from NON_LHCbA_hlt06_BusySvc/Counter/Data
Jul18-162745 [INFO] hlt01: n_expected 1437229660000000000 received 1437229655000000000, Using stored buffer...
Jul18-162745 [INFO] hlt01: late update from NON_LHCbA_hlt08_BusySvc/Counter/Data
Jul18-162745 [INFO] hlt01: n_expected 1437229660000000000 received 1437229655000000000, Using stored buffer...
Jul18-163128 [DEBUG] hlt01: LogGaudiSvc(LogGaudiSvc): main(): -- MARK --
Jul18-163251 [DEBUG] hlt01: LogLHCbSvc(LogLHCbSvc): main(): -- MARK --
Jul18-163310 [INFO] hlt01: File Saver: Filename /hist/SaveSets/2015/LHCbA/Align_Rich2/07/18/Align_Rich2-1576970009-20150718T163308-EOR.root
Jul18-163438 [INFO] hlt01: LogLHCb2Svc(LogLHCb2Svc): main(): -- MARK --
Jul18-163440 [INFO] hlt01: LogLHCb4Svc(LogLHCb4Svc): main(): -- MARK --
Jul18-163617 [DEBUG] hlt01: LogSvcFacLog: main(): -- MARK --
Jul18-163896 [INFO] hlt01: File Saver: Filename /hist/SaveSets/2015/LHCbA/MEPrHistAdder/07/18/MEPrHistAdder-158382-20150718T163893-EOR.root
Jul18-163905 [INFO] hlt01: File Saver: Filename /hist/SaveSets/2015/LHCbA/MooreHistAdder/07/18/MooreHistAdder-158382-20150718T163905-EOR.root
Jul18-164058 [DEBUG] hlt01: PdcCluster: (pdcCluster::Get()) : 130097 total updates (hlt01: 130097)
Jul18-164110 [INFO] hlt01: File Saver: Filename /hist/SaveSets/2015/LHCbA/Align_Rich2/07/18/Align_Rich2-1576970010-20150718T164109-EOR.root
```

Start the runcontrol panel

1. Log into ui machine: `ssh -Y ui`
2. Start the panel : `/group/online/ecs/Shortcuts311/LHCB/ECS/ECS_UI_FSM.sh`
3. Right-click on LHCB_Align

This is what it looks like:
(approximately, it may
change over time)



Take the partition (optional)

The screenshot shows the LHCbA TOP interface. At the top, the title bar reads 'LHCbA: TOP'. Below it, the 'System' tab is selected, showing 'LHCb_Align' and 'RUNNING' status. A red circle highlights a button with a lock icon and a green triangle, with a red arrow pointing to it and the text 'Take the partition'. To the right, the 'Auto Pilot' is set to 'OFF'. The date and time are 'Fri 11-Sep-2015 12:01:41'. Below the system status, there is a table of sub-systems:

Sub-System	State
RunInfo	RUNNING
HLT	PAUSED
Storage	READY
Monitoring	NOT_ALLOCATED

Below the table, there is a 'Name' field with 'eric' and a 'Using Alignment' button. A 'Choose Runs for Alignment' button is also present. In the bottom left, there is a 'Calibration, Alignment & HLT2' section with a 'Runs/Files' field showing '0 / 0 (0)', a 'Processing' progress bar at 100.0%, and a 'Disk Usage: 4%' indicator. A 'Farm Node Status' button is also visible. The 'Run Info' panel on the right shows 'Run Number(s): 160597 - 160836' and 'Run Start Time: 11-Sep-2015 11:45:23'. The 'Activity' dropdown is set to 'BWDivision', and the 'Trigger Config' is set to 'PassThrough'. A blue box highlights the 'Activity' dropdown, with a blue arrow pointing to it from the text 'If this panel is "unclickable" you have to take the partition.' The 'Run DB' button is at the bottom right of the 'Run Info' panel. The 'Close' button is at the bottom right of the entire interface.

If **this** panel is "unclickable" you have to take the partition.

If it is clickable don't take the partition.

Click "take" and then wait for a smaller new panel to show up (**this may take a while, just be patient**). In the new panel just click "dismiss".

Reserve the farm

LHCbA: TOP

System LHCb_Align **State** RUNNING **Auto Pilot** OFF

Fri 11-Sep-2015 12:01:41
root

Sub-System	State
RunInfo	RUNNING
HLT	PAUSED
Storage	READY
Monitoring	NOT_ALLOCATED

Run Info

Run Number(s): 160597 - 160836
Run Start Time: 11-Sep-2015 11:45:23

Activity: BWDivision
Trigger Config: PassThrough

Reserve the farm

Name: eric **Using Alignment**

Choose Run for Alignment

Calibration, Alignment & HLT2

Runs/Files: 0 / 0 (0)

Processing: 100.0% 0% 50% 100%

Disk Usage: 4% Farm Node Status:

LHCbA Elog Run DB

Messages:

Close

Type your name in and click the “Using Alignment” button.

Chose alignment

The screenshot displays the LHCbA TOP control interface. At the top, the title bar reads 'LHCbA: TOP'. The main interface is divided into several sections:

- System Status:** Shows 'System' as 'LHCb_Align' and 'State' as 'RUNNING'. The 'Auto Pilot' is set to 'OFF'. The current user is 'root' and the date/time is 'Fri 11-Sep-2015 12:01:41'.
- Sub-System Status:** A table showing the status of various sub-systems:

Sub-System	State
RunInfo	RUNNING
HLT	PAUSED
Storage	READY
Monitoring	NOT_ALLOCATED
- Run Info:** Displays 'Run Number(s): 160597 - 160836' and 'Run Start Time: 11-Sep-2015 11:45:23'. The 'Activity' is set to 'BWDivision' and 'Trigger Config' is set to 'PassThrough'. A red circle highlights the 'Activity' dropdown, and a red arrow points to it with the text 'Pick alignment'.
- Calibration, Alignment & HLT2:** Shows 'Runs/Files' as '0 / 0 (0)' and 'Processing' as '100.0%'. It also indicates 'Disk Usage: 4%' and 'Farm Node Status: [info icon]'.
- Buttons:** Includes 'Using Alignment', 'Choose Runs for Alignment', 'LHCbA Elog', 'Run DB', and 'Close'.

Allocate

The screenshot shows the LHCbA: TOP control interface. At the top, the 'System' is 'LHCb_Align' and the 'State' is 'RUNNING'. A red circle highlights the 'RUNNING' state, and a red arrow points to the 'Allocate' button (a green icon with a white 'A') in the state menu. The 'Auto Pilot' is set to 'OFF'. The 'Run Info' section shows 'Run Number(s): 160597 - 160836' and 'Run Start Time: 11-Sep-2015 11:45:23'. The 'Activity' is 'BWDivision' and the 'Trigger Config' is 'PassThrough'. The 'Sub-System' table shows the following states:

Sub-System	State
RunInfo	RUNNING
HLT	PAUSED
Storage	READY
Monitoring	NOT_ALLOCATED

The 'Name' field is 'eric' and the 'Using Alignment' button is visible. The 'Choose Runs for Alignment' button is also present. The 'Calibration, Alignment & HLT2' section shows 'Runs/Files: 0 / 0 (0)' and a 'Processing' progress bar at 100.0%. The 'Disk Usage' is 4% and the 'Farm Node Status' is 'i'. The 'LHCbA Elog' and 'Run DB' buttons are at the bottom. The 'Messages' section is empty.

Select “Allocate” in the menu and wait until the partition is allocated.

Chose runs for alignment (1/2)

LHCbA: TOP

System LHCb_Align **State** RUNNING **Auto Pilot** OFF

Fri 11-Sep-2015 12:01:41

root

Sub-System	State
RunInfo	RUNNING
HLT	PAUSED
Storage	READY
Monitoring	NOT_ALLOCATED

Run Info

Run Number(s): 160597 - 160836 Activity: BWDivision View...

Run Start Time: 11-Sep-2015 11:45:23 Trigger Config: PassThrough View...

Name: eric Using Alignment

Choose Runs for Alignment

Choose runs

Calibration, Alignment & HLT2

Runs/Files 0 / 0 (0)

Processing 100.0% 0% 50% 100%

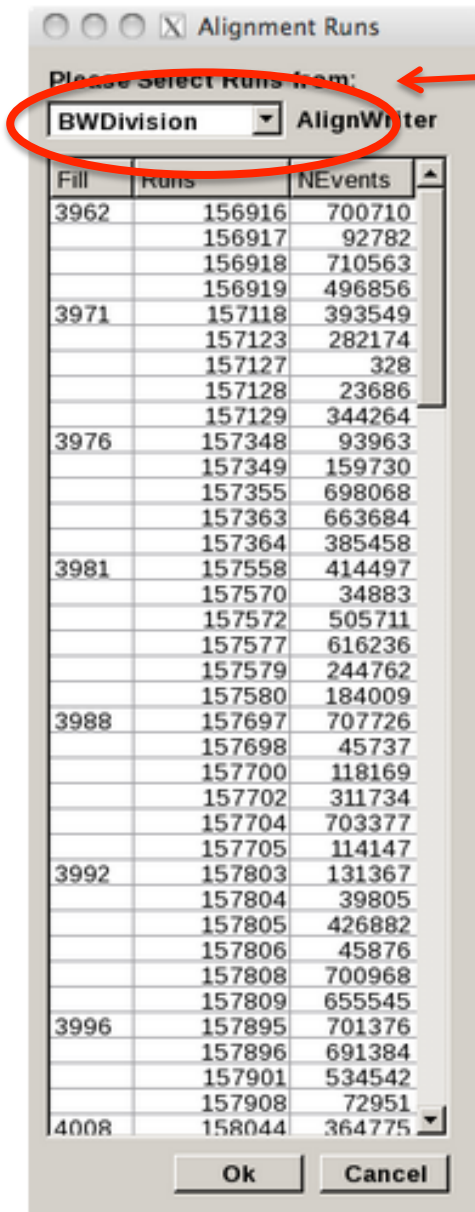
Disk Usage: 4% Farm Node Status: i

LHCbA Elog Run DB

Messages:

Close

Chose runs for alignment (2/2)



Alignment Runs

Please Select Runs from: **BWDivision** AlignWriter

Fill	Runs	NEvents
3962	156916	700710
	156917	92782
	156918	710563
	156919	496856
3971	157118	393549
	157123	282174
	157127	328
	157128	23686
	157129	344264
3976	157348	93963
	157349	159730
	157355	698068
	157363	663684
	157364	385458
3981	157558	414497
	157570	34883
	157572	505711
	157577	616236
	157579	244762
	157580	184009
3988	157697	707726
	157698	45737
	157700	118169
	157702	311734
	157704	703377
	157705	114147
3992	157803	131367
	157804	39805
	157805	426882
	157806	45876
	157808	700968
	157809	655545
3996	157895	701376
	157896	691384
	157901	534542
	157908	72951
4008	158044	364775

Ok Cancel

This is by default the alignment you are running.

Select your runs.

Nevents is the number for RICH1 + RICH2 (because we only have one HLT1 line for both). There **should** be about 50% RICH1 events and 50% RICH2 events.

Click "Ok".

Run the alignment (1/2)

The screenshot shows the LHCbA: TOP control interface. At the top, the 'System' is 'LHCb_Align' and its 'State' is 'RUNNING', which is circled in red. A red arrow points from the word 'Configure' to the 'RUNNING' state. The 'Auto Pilot' is set to 'OFF'. The date and time are 'Fri 11-Sep-2015 12:01:41' and the user is 'root'. Below this, there is a table of sub-systems:

Sub-System	State
RunInfo	RUNNING
HLT	PAUSED
Storage	READY
Monitoring	NOT_ALLOCATED

To the right of the table, there is a 'Run Info' section with 'Run Number(s): 160597 - 160836' and 'Run Start Time: 11-Sep-2015 11:45:23'. Below this, there is a 'Configure' section with 'Activity: BWDivision' and 'Trigger Config: PassThrough'. At the bottom left, there is a 'Calibration, Alignment & HLT2' section with a 'Runs/Files' counter at '0 / 0 (0)', a 'Processing' progress bar at 100.0%, and a 'Disk Usage: 4%' indicator. At the bottom right, there is a 'Messages' section with a 'Close' button.

Configure the alignment.

The configuring process might take a couple of minutes and some nodes might take significantly longer than others. That's just normal.

There is a **time-limit** set of how long the configuring is allowed to take. **It is possible to take longer and if nodes take longer their status will appear as error.** Give it time and verify in the errorlogger that something is still happening.

Run the alignment (2/2)

The screenshot shows the LHCbA: TOP interface. At the top, the 'System' is 'LHCb_Align' and its 'State' is 'RUNNING', which is circled in red. A red arrow points from the text 'Start run' to the 'RUNNING' state. To the right, the 'Auto Pilot' is set to 'OFF'. Below this, a table lists sub-systems and their states:

Sub-System	State
RunInfo	RUNNING
HLT	PAUSED
Storage	READY
Monitoring	NOT_ALLOCATED

Below the table, there are fields for 'Name' (eric) and 'Using Alignment'. A 'Choose Runs for Alignment' button is also present. On the left, a 'Calibration, Alignment & HLT2' section shows 'Runs/Files' as 0 / 0 (0), a 'Processing' progress bar at 100.0%, and 'Disk Usage: 4%'. At the bottom, there is a 'Messages' section and a 'Close' button.

When the configuring is done select “start run”.

If the **autopilot** is on it will start automatically.

When the alignment has finished the state will go to “READY”. If that happens, before touching anything else, **check the output files** if alignment has really converged. Otherwise click “start run” again.

Free the farm

Click the “Free” button.

The screenshot shows the LHCbA TOP control interface. At the top, the system is labeled 'LHCbA: TOP' with a timestamp of 'Fri 11-Sep-2015 12:01:41'. The main status bar shows 'System: LHCb_Align', 'State: RUNNING', and 'Auto Pilot: OFF'. Below this, a table lists sub-systems and their states:

Sub-System	State
RunInfo	RUNNING
HLT	PAUSED
Storage	READY
Monitoring	NOT_ALLOCATED

To the right of the table, 'Run Info' displays 'Run Number(s): 160597 - 160836' and 'Run Start Time: 11-Sep-2015 11:45:23'. Below the table, a red circle highlights the 'Using Alignment' button, with a red arrow pointing to it and the text 'Reserve the farm' in red. Other buttons include 'Choose Run for Alignment', 'LHCbA Elog', and 'Run DB'. The bottom left shows 'Calibration, Alignment & HLT2' with a 'Runs/Files' counter at '0 / 0 (0)', a 'Processing' progress bar at 100%, and 'Disk Usage: 4%'. A 'Messages' section is at the bottom.

Verify and trouble shoot

The HLT farm and its nodes

The screenshot displays the LHCbA: TOP control interface. At the top, the 'System' is 'LHCb_Align' and the 'State' is 'RUNNING'. The 'Auto Pilot' is set to 'OFF'. The date and time are 'Fri 11-Sep-2015 12:01:41'. The user is logged in as 'root'.

Below the system status, there is a table of sub-systems:

Sub-System	State
RunInfo	RUNNING
HLT	PAUSED
Storage	READY
Monitoring	NOT_ALLOCATED

The 'HLT' row is highlighted with a red circle. To the right of the table, there is a 'Run Info' section with fields for 'Run Number(s): 160597 - 160836', 'Run Start Time: 11-Sep-2015 11:45:23', 'Activity: BWDivision', and 'Trigger Config: PassThrough'. There are 'View...' buttons next to the 'Activity' and 'Trigger Config' fields.

Below the table, there is a 'Name: eric' field and a 'Using Alignment' button. A 'Choose Runs for Alignment' button is also present.

At the bottom left, there is a 'Calibration, Alignment & HLT2' section with a 'Runs/Files' field showing '0 / 0 (0)', a 'Processing' progress bar at 100.0%, and a 'Disk Usage: 4%' indicator. A 'Farm Node Status' button is also present.

At the bottom right, there is a 'Run DB' button. A 'Close' button is located at the very bottom right.

To look at the state of the farm and the individual nodes click the HLT button and **wait** for a new window to appear.

The HLT farm and its nodes

LHCbA_HLT: TOP (on ui01)

System: HLT State: RUNNING

Fri 12-Jun-2015 12:24:40

root

Sub-System State

LHCbA_partAlloc	RUNNING	✓
LHCbA_partMajority	RUNNING	✓
PARTAlign	RUNNING	🔒

Quick Actions

Included Nodes: (1284)

Removed Nodes: (32)

Include Remove

Included SubFarms: (47)

Removed SubFarms: (9)

Include Remove

Messages

Included subfarms

Move selected nodes to exclude

Number of included nodes

Exclude

Farm Percentage OK 96%

Node	State	Included	EvtProd	TRG	DiskWR	EvtHolder
HLTE1003_A	RUNNING	yes	no	no	no	no
HLTE1004_A	RUNNING	yes	no	no	no	no
HLTE1005_A	RUNNING	yes	no	no	no	no
HLTE1006_A	RUNNING	yes	no	no	no	no
HLTE1007_A	RUNNING	yes	no	no	no	no
HLTE1008_A	RUNNING	yes	no	no	no	no
HLTE1009_A	RUNNING	yes	no	no	no	no
HLTE1010_A	RUNNING	yes	no	no	no	no
HLTE1011_A	RUNNING	yes	no	no	no	no
HLTE1012_A	RUNNING	yes	no	no	no	no
HLTE1013_A	RUNNING	yes	no	no	no	no
HLTE1014_A	RUNNING	yes	no	no	no	no
HLTE1015_A	RUNNING	yes	no	no	no	no
HLTE1016_A	RUNNING	yes	no	no	no	no
HLTE1017_A	RUNNING	yes	no	no	no	no
HLTE1018_A	RUNNING	yes	no	no	no	no
HLTE1019_A	RUNNING	yes	no	no	no	no
HLTE1020_A	RUNNING	yes	no	no	no	no
HLTE1021_A	RUNNING	yes	no	no	no	no
HLTE1022_A	RUNNING	yes	no	no	no	no
HLTE1023_A	RUNNING	yes	no	no	no	no
HLTE1024_A	RUNNING	yes	no	no	no	no
HLTE1025_A	RUNNING	yes	no	no	no	no
HLTE1026_A	RUNNING	yes	no	no	no	no
HLTE1027_A	RUNNING	yes	no	no	no	no
HLTE1028_A	RUNNING	yes	no	no	no	no
AdderE10_A	RUNNING	yes	-	-	-	-
ALL Nodes	-	mixed	no	no	no	no
ALL Adders	-	yes				

Refresh Apply

Open HLT Tree Share

View FARM Allocation Status

Close

Shows included/excluded nodes and farms.

If number of included nodes <<1700: deallocate and reallocate.

Exclude nodes (not subfarms):

1. select the node (e.g. HLTE1028_A)
2. click “arrow” to exclude area
3. Click “remove” to exclude (might take a while, just wait)

State of farms and nodes

To look at the state of the farm and the individual nodes click the “PartAlign” button and **wait** for a new window to appear.

LHCbA_HLT: TOP (on ui01)

System: HLT State: RUNNING

Fri 12-Jun-2015 12:24:40

root

Sub-System: LHCbA_partAlloc RUNNING LHCbA_partMajority RUNNING PARTAlign RUNNING

Farm Percentage OK: 96%

Node	State	Included	EvtProd	TRG	DiskWR	EvtHolder
HLTE1003_A	RUNNING	yes	no	no	no	no
HLTE1004_A	RUNNING	yes	no	no	no	no
HLTE1005_A	RUNNING	yes	no	no	no	no
HLTE1006_A	RUNNING	yes	no	no	no	no
HLTE1007_A	RUNNING	yes	no	no	no	no
HLTE1008_A	RUNNING	yes	no	no	no	no
HLTE1009_A	RUNNING	yes	no	no	no	no
HLTE1010_A	RUNNING	yes	no	no	no	no
HLTE1011_A	RUNNING	yes	no	no	no	no
HLTE1012_A	RUNNING	yes	no	no	no	no
HLTE1013_A	RUNNING	yes	no	no	no	no
HLTE1014_A	RUNNING	yes	no	no	no	no
HLTE1015_A	RUNNING	yes	no	no	no	no
HLTE1016_A	RUNNING	yes	no	no	no	no
HLTE1017_A	RUNNING	yes	no	no	no	no
HLTE1018_A	RUNNING	yes	no	no	no	no
HLTE1019_A	RUNNING	yes	no	no	no	no
HLTE1020_A	RUNNING	yes	no	no	no	no
HLTE1021_A	RUNNING	yes	no	no	no	no
HLTE1022_A	RUNNING	yes	no	no	no	no
HLTE1023_A	RUNNING	yes	no	no	no	no
HLTE1024_A	RUNNING	yes	no	no	no	no
HLTE1025_A	RUNNING	yes	no	no	no	no
HLTE1026_A	RUNNING	yes	no	no	no	no
HLTE1027_A	RUNNING	yes	no	no	no	no
HLTE1028_A	RUNNING	yes	no	no	no	no
AdderE10_A	RUNNING	yes	-	-	-	-
ALL Nodes	-	mixed	no	no	no	no
ALL Adders	-	yes				

Alignment partition

Included Nodes: (1284) Removed Nodes: (32)

Included SubFarms: (47) Removed SubFarms: (9)

Messages

Close

State of farms and nodes

PARTAlign: TOP (on ui01)

System: PARTAlign State: RUNNING

Fri 12-Jun-2015 12:24:22

root

Sub-System	State
HLTJobOptionsWriter_Align	RUNNING ✓
PARTAlign_Master	RUNNING ✓
PARTAlign_AdderEtc	RUNNING ✓
HLTA01_A	PAUSED
HLTA02_A	PAUSED
HLTA03_A	PAUSED
HLTA04_A	PAUSED
HLTA05_A	PAUSED
HLTA06_A	PAUSED
HLTA07_A	PAUSED
HLTA08_A	PAUSED
HLTA09_A	PAUSED
HLTA10_A	PAUSED
HLTB01_A	PAUSED
HLTB02_A	PAUSED
HLTB03_A	PAUSED
HLTB04_A	RUNNING
HLTB05_A	PAUSED
HLTB06_A	PAUSED
HLTB07_A	PAUSED
HLTB08_A	PAUSED
HLTB09_A	PAUSED
HLTB10_A	PAUSED
HLTC01_A	PAUSED
HLTC02_A	PAUSED
HLTC03_A	OFFLINE
HLTC04_A	RUNNING

Annotations:

- Iterator (points to PARTAlign_Master)
- Subfarms (points to HLTA01_A through HLTA10_A)

Click on a farm to see its individual nodes.

Output of the alignment

During the alignment procedure the files are stored in:

/group/online/AligWork/Rich1

/group/online/AligWork/Rich2

After the alignment has finished the alignment is copied under a time-stamp to:

/group/online/AligWork/MirrorAlignments/Rich1

/group/online/AligWork/MirrorAlignments/Rich2

Sometimes a copy is made in the middle of the alignment procedure (just ignore for now).

Make logbook entry. 😊

Stuff that happens

1. Everything takes ages: that's normal :D
2. Farms goes into state error: Check weather it is all nodes or just one
 1. If its **all nodes** then there is an actual error in the code, try checking the error loggers.
 2. If **only individual nodes** are in error it could be time-out during configuring (give it time ~20 min, see slide 14), or a crushed node during running (exclude the node as shown in slide 19 and start run again).
3. Alignment goes into state "READY" but the alignment hasn't converged: just click on "start run" again (no reconfiguring etc.!!!) as in slide 15
4. Read herring in errorlogger: something complaining about some Configuration.py file in the "OnlineDev ..." directory ➔ something in our own Configuration file is wrong