

Install/manage Alarm,Log,Archive for CSS (Mysql)

From LNLEpicsWiki

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Configuration

JMS Server

nothing to do you only

- download the last version of apache-active-qm (<http://activemq.apache.org/>) version and untar in /usr/local/css/ path
- create the service for run the program at start-up of pc (for test you can lunch /usr/local/css/apache-activemq-5.3.1/bin/activeqm) go to #Demon/Service

ArchiveEngine

You must install mysql befor. See the wiki for install mysql and import the script for RDB Archive[1] (<http://10.5.0.12/wiki/index.php/MySql>) .

For run Archive Engine after create the executable file[2] (<http://10.5.0.12>

/wiki/index.php/HowTo_install/configure_eclipse_for_develope_CSS) the command and arguments are like this:

```
./ArchiveEngine -rdb_url jdbc:mysql://localhost:3306/archive -rdb_user archive -rdb_password archive
```

Configuration Program

My advise is that it' is better to read the guide to how configure the classic archiveEngine for understand how to change this parameter

```
write_period  
max_repeats  
buffer_reserve
```

and how to prepare the xml for import the channel schema into new archiveEngine. After create this file xml you can import into mysql database with this application **EngineConfigImport.product**, that you can find in this directory **org.csstudio.archive.rdb**. Same example are in the imported_config folder of the same package, below I report a little example of our engine:

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>  
<engineconfig>  
  <write_period>10</write_period>  
  <get_threshold>20</get_threshold>  
  <file_size>100</file_size>  
  <ignored_future>6</ignored_future>  
  <buffer_reserve>8</buffer_reserve>  
  <max_repeat_count>120</max_repeat_count>  
  <disconnect/>  
  <group><name>Magnet</name>  
    <channel><name>TaBtraMagn_Hcps-Cond</name><period>10</period><monitor/></channel>  
    <channel><name>TaBtraMagn_Hcps-Cond</name><period>10</period><monitor/></channel>  
  </group>  
  <group><name>Target</name>  
    <channel><name>TaHeat_:Cond</name><period>10</period><monitor/></channel>  
    <channel><name>TaHeat_Hcps-Cond</name><period>10</period><monitor/></channel>  
  </group>  
</engineconfig>
```

After that you must change the plugin-customisation.ini file:

```

# Archive Engine
# See preferences.ini in org.csstudio.archive.engine plugin,
# then maybe override settings in here like this:
# Write period in seconds
org.csstudio.archive.engine/write_period=20
# Maximum number of repeat counts for scanned channels
org.csstudio.archive.engine/max_repeats=120
# Write batch size
org.csstudio.archive.engine/batch_size=500
# Buffer reserve (N times what's ideally needed)
org.csstudio.archive.engine/buffer_reserve=200.0

```

the batch size is need to tell at archiverEngine after how many sample write this on mysql or hypertable if you read the source code you can read that 500 is the better value.

The ip-adress in the properties org.csstudio.platform.libs.epics/addr_list are the ip-adress of epics network so if these change you have to change in the plugin-customisation.ini file is not necessary to build all package

```

# Accel Network
org.csstudio.platform.libs.epics/addr_list=10.5.0.9 10.5.0.7 10.5.0.11 10.5.0.14 10.5.0.23

```

Change the part of JMS Hosts

```

# JMS Hosts: First the office server, then the accel network one
org.csstudio.platform/log4j.appender.css_jms.providerURL=failover\:(tcp\://localhost:61616)

```

1. Channel Access

```

org.csstudio.platform.libs.epics/use_pure_java=true

```

Now you can create the executable if you don't remember go to HowTo install/configure eclipse for developpe CSS

Change or put the configuration channel in MySql DB

Before to lunch Archive Engine you must put the configuration of database into MySql with EngineConfigImport.product

If you have install epics and configure it with the srs of CSS

- start your the eclipse enviroment
- open the package org.csstudio.archive.rdb
- you can find this file EngineConfigImport.product (double-click on it)
- play the start button your eclipses Console you can see:

An other way:

- \$ssh epics@epicshost1
- \$cd EngineConfigImport
- \$EngineConfigImport

```
Missing option -engine
Options:
-help                : show help
-config my_config.xml : XML Engine config file
-rdb_url jdbc:...    : RDB URL
-rdb_user user       : RDB User
-rdb_password password : RDB Password
-engine my_engine     : Engine Name
-export              : export configuration as XML
-description 'My Engine' : Engine Description
-host my.host.org     : Engine Host
-port 4812            : Engine Port
-replace_engine       : Replace existing engine config, or stop?
-steal_channels       : Steal channels that are already in other engine
-delete_config        : Delete existing engine config
```

- go to Run --> Run Configuration select EngineConfigImport.product on the left then select Arguments Tab in program arguments windows put the following instruction the first time if you use the second way this is the arguments for the first run:

```
-config /home/epics/archiveEngineDisp.xml
-rdb_url jdbc:mysql://epicshost1:3306/archive
-rdb_user archive
-rdb_password archive
-engine LNL_Engine
-description "lnl archiver you can find only pv displayed on interface"
-port 4812
```

If you want to change some channel you can use the sql query or use the program changing the arguments

- -port 4812 -config /home/epics/EngineConfigImport/target-group.xml

```
-rdb_url jdbc:mysql://localhost:3306/archive
-rdb_user archive
-rdb_password archive
-engine LNL_Engine
-replace_engine
```

- after this command the output must be similar to:

```

2010-04-28 16:17:42,599 INFO [main] org.csstudio.archive.rdb.EngineConfigImportApp: Importing :
2010-04-28 16:17:42,599 INFO [main] org.csstudio.archive.rdb.EngineConfigImportApp: Engine :
2010-04-28 16:17:42,599 INFO [main] org.csstudio.archive.rdb.EngineConfigImportApp: Description :
2010-04-28 16:17:42,599 INFO [main] org.csstudio.archive.rdb.EngineConfigImportApp: URL :
2010-04-28 16:17:42,599 INFO [main] org.csstudio.archive.rdb.EngineConfigImportApp: Replace engine:
2010-04-28 16:17:42,599 INFO [main] org.csstudio.archive.rdb.EngineConfigImportApp: Steal channels:
2010-04-28 16:17:42,945 INFO [main] org.csstudio.archive.rdb.engineconfig.XMLImport: Import 'LNL_Eng
2010-04-28 16:17:43,031 INFO [main] org.csstudio.archive.rdb.engineconfig.XMLImport: Import 'LNL_Eng
2010-04-28 16:17:43,147 INFO [main] org.csstudio.archive.rdb.engineconfig.XMLImport: Import 'LNL_Eng
2010-04-28 16:17:43,247 INFO [main] org.csstudio.archive.rdb.engineconfig.XMLImport: Import 'LNL_Eng
2010-04-28 16:17:43,321 INFO [main] org.csstudio.archive.rdb.engineconfig.XMLImport: Import 'LNL_Eng
2010-04-28 16:17:43,417 INFO [main] org.csstudio.archive.rdb.engineconfig.XMLImport: Import 'LNL_Eng
2010-04-28 16:17:43,707 INFO [main] org.csstudio.archive.rdb.engineconfig.XMLImport: Import 'LNL_Eng
2010-04-28 16:17:43,913 INFO [main] org.csstudio.archive.rdb.engineconfig.XMLImport: Import 'LNL_Eng
2010-04-28 16:17:43,998 INFO [main] org.csstudio.archive.rdb.engineconfig.XMLImport: Import 'LNL_Eng
2010-04-28 16:17:44,096 INFO [main] org.csstudio.archive.rdb.engineconfig.XMLImport: Import 'LNL_Eng

```

Alarm

import the configuration into MySql DB

- You must read alh guide for create a file .alhConfig after that you can use AlarmConfigTool.product into org.csstudio.alarm.configtool for convert and after import yours alarm into MySql DB.

Example of *.alhConfig

```

GROUP NULL LNL_ALARM
$GUIDANCE
Line 1 of guidance
$END
GROUP LNL_ALARM Magnet
CHANNEL Magnet TaBtraMagn_Hcps:Volt
CHANNEL Magnet TaBtraMagn_Hcps:Curr
GROUP LNL_ALARM Heat
CHANNEL Heat TaHeat_Hcps:Curr
CHANNEL Heat TaHeat_Hcps:Volt
GROUP LNL_ALARM Oven
CHANNEL Oven TaIoniOven_Hcps:Curr
CHANNEL Oven TaIoniOven_Hcps:Volt
GROUP LNL_ALARM Anode
CHANNEL Anode TaIoniPlas_Hvps:Curr
CHANNEL Anode TaIoniPlas_Hvps:Volt
GROUP LNL_ALARM Line
CHANNEL Line TaIoniSurf_Hcps:Curr
CHANNEL Line TaIoniSurf_Hcps:Volt

```

- go to your eclips enviroment
- open the package org.csstudio.alarm.configtool and change the file plugin_cotomistation.ini

```

# Office Test
org.csstudio.alarm/rdb_url=jdbc:mysql://localhost/ALARM?user=alarm&password=alarm

```

- open the package `org.csstudio.alarm.configtool` and play `AlarmConfigTool.product` this is the parameter that you set

```
Alarm Config Tool
Missing file name
Options:
- help                : Display Help
- rdb_url <string>    : Alarm config database URL
- root <string>       : Alarm config root element
- export              : Export XML config file
- modify              : Modify existing config with imported XML file
- import              : Import XML config file (replace existing config)
- alh                 : Convert ALH config into XML config file
- file <string>       : XML config file to import
- pluginCustomization <string> : Eclipse plugin defaults
- data <string>       : Eclipse workspace location
```

- First step after you create your `*.alhConfig` file is convert that into a `.xml` file so you must go into Run--> Run Configuration and Select in the left `AlarmConfigTool.product` and set:

```
-rdb_url jdbc:mysql://localhost:3306/ALARM?user=alarm&password=$alarm
-root LNL_ALARM [if must the same declare in alconfig file]
-alh
-file /home/epics/AllarmiRudolf.alhConfig <path_of the file to convert>
```

- cut and paste the output show in consol in a file `.xml` start to select from:

```
Generated from ALH config file
File name: '/home/epics/AllarmiRudolf.alhConfig'
```

This is an example:

```
!-- Generated from ALH config file
- File name: '/home/epics/AllarmiRudolf.alhConfig'
--
<config name="LNL_ALARM">
  <component name="Magnet">
    <pv name="TaBtraMagn_Hcps:Volt">
      <description></description>
      <latching>true</latching>
    </pv>
    <pv name="TaBtraMagn_Hcps:Curr">
      <description></description>
      <latching>true</latching>
    </pv>
  </component>
  <component name="Heat">
    <pv name="TaHeat_Hcps:Curr">
      <description></description>
      <latching>true</latching>
    </pv>
    <pv name="TaHeat_Hcps:Volt">
      <description></description>
      <latching>true</latching>
    </pv>
  </component>
  <component name="Oven">
    <pv name="TaIoniOven_Hcps:Curr">
      <description></description>
      <latching>true</latching>
    </pv>
    <pv name="TaIoniOven_Hcps:Volt">
      <description></description>
      <latching>true</latching>
    </pv>
  </component>
  <component name="Anode">
    <pv name="TaIoniPlas_Hvps:Curr">
      <description></description>
      <latching>true</latching>
    </pv>
    <pv name="TaIoniPlas_Hvps:Volt">
      <description></description>
      <latching>true</latching>
    </pv>
    <pv name="TaIoniPlas_Hvps:Curr">
      <description></description>
      <latching>true</latching>
    </pv>
    <pv name="TaIoniPlas_Hvps:Volt">
      <description></description>
      <latching>true</latching>
    </pv>
  </component>
  <component name="Line">
    <pv name="TaIoniSurf_Hcps:Curr">
      <description></description>
      <latching>true</latching>
    </pv>
    <pv name="TaIoniSurf_Hcps:Volt">
      <description></description>
      <latching>true</latching>
    </pv>
  </component>
</config>
```

- After create the file .xml you must import that, Run--> Run Configuration and Select in the left AlarmConfigTool.product and set:

```
-rdb_url jdbc:mysql://localhost:3306/ALARM?user=alarm&password=$alarm
-root LNL_ALARM [if must the same declare in alconfig file]
-import
-file /home/epics/alh.xml <path_of the file to import>
```

- the output after this command

```
Alarm Config Tool
Importing configuration 'LNL_ALARM' from /home/epics/alh.xml
Loading Component LNL_ALARM/Magnet (OK/OK/OK)
Loading PV LNL_ALARM/Magnet/TaBtraMagn_Hcps:Volt (OK/OK/OK)
Loading PV LNL_ALARM/Magnet/TaBtraMagn_Hcps:Curr (OK/OK/OK)
Loading Component LNL_ALARM/Heat (OK/OK/OK)
Loading PV LNL_ALARM/Heat/TaHeat_Hcps:Curr (OK/OK/OK)
Loading PV LNL_ALARM/Heat/TaHeat_Hcps:Volt (OK/OK/OK)
Loading Component LNL_ALARM/Oven (OK/OK/OK)
Loading PV LNL_ALARM/Oven/TaIoniOven_Hcps:Curr (OK/OK/OK)
Loading PV LNL_ALARM/Oven/TaIoniOven_Hcps:Volt (OK/OK/OK)
Loading Component LNL_ALARM/Anode (OK/OK/OK)
Loading PV LNL_ALARM/Anode/TaIoniPlas_Hcps:Curr (OK/OK/OK)
Loading PV LNL_ALARM/Anode/TaIoniPlas_Hcps:Volt (OK/OK/OK)
Loading Component LNL_ALARM/Line (OK/OK/OK)
Loading PV LNL_ALARM/Line/TaIoniSurf_Hcps:Curr (OK/OK/OK)
Loading PV LNL_ALARM/Line/TaIoniSurf_Hcps:Volt (OK/OK/OK)
```

Configure AlarmServer

- change the file plugin_customization.ini the parameter that you pay attention are:
1. org.csstudio.alarm/root_component [have to the same to root set befor]
 2. org.csstudio.alarm/rdb_url [where is installed mysql]
 3. org.csstudio.alarm/jms_url [where is installed jmsServer]
 4. org.csstudio.platform.libs.epics/use_pure_java [it is must be set true if you dan't use jni channelAccess]
 5. org.csstudio.platform.libs.epics/addr_list [all the ip to where is an IOC SERVER]


```

# Alarm System
org.csstudio.alarm/rdb_url=jdbc:mysql://localhost/ALARM
org.csstudio.alarm/rdb_user=alarm
org.csstudio.alarm/rdb_password=alarm
org.csstudio.alarm/root_component=LNL_ALARM
org.csstudio.alarm/jms_user=alarm
org.csstudio.alarm/jms_password=alarm
org.csstudio.alarm/jms_alarm_server_topic=ALARM_SERVER
org.csstudio.alarm/jms_alarm_client_topic=ALARM_CLIENT
org.csstudio.alarm/jms_talk_topic=TALK
org.csstudio.alarm/jms_url=failover:(tcp://localhost:61616)

# Channel Access
org.csstudio.platform.libs.epics/use_pure_java=true
org.csstudio.platform.libs.epics/monitor=ALARM
org.csstudio.platform.libs.epics/addr_list=10.5.0.7 10.5.0.9 10.5.0.11 10.5.0.14 10.5.0.23

```

- After make the step above you can create the executable file how is explain in HowTo install/configure eclipse for developpe CSS
- go #Install

LOG

- change the file plugin_customization.ini that you can found in this folder: org.csstudio.sns.jms2rdb

add the following line:

```

# JMS URL where tool listens for messages to log
org.csstudio.sns.jms2rdb/jms_url=failover:(tcp://localhost:61616)

# List of topics to log, separated by ','
org.csstudio.sns.jms2rdb/jms_topic=LOG,ALARM_SERVER,ALARM_CLIENT,TALK,WRITE

```

- create the executable file and go to #Install

Install

1) prepare your database go to MySql and Hypertable the second if and only if you use the our version of archive engine.

2) You need #Configuration and create (see HowTo install/configure eclipse for developpe CSS the executable file from surces of this package,

```

org.csstudio.alarm.server
org.csstudio.archive.engine
org.csstudio.sns.jms2rdb

```

3) Create a directory where do you prefer: **e.g**

```
#mkdir /usr/local/css
```

4) copy the program create before in this directory and **JmsServer (apache-activemq-5.3.0)**

```
drwx-xr-r 6 root root 4096 2010-02-18 12:50 AlarmServer
drwx-xr-r 9 root root 4096 2010-02-18 12:50 apache-activemq-5.3.0
drwx-xr-r 6 root root 4096 2010-02-18 12:49 ArchiveEngine
drwx-xr-r 6 root root 4096 2010-02-18 12:49 JMS2RDB
```

5) #Demon/Service download the script nameservice.doc rename in nameservice and copy this file into its respective folder 6) edit this file and control that the OPT paramiter are the same of you set when you runned AlarmConfigTool and in EngineConfigimport

Demon/Service

These are Examples of daemon and these are tested only in Fedora 11.

Media:Activemq.doc Media:Init_d_activemq.doc

Media:jms2rdb.doc Media:init_d_JMS2RDB.doc

Media:archivengine.doc Media:init_d_ArchiveEngine.doc

Media:alarmserver.doc Media:init_d_alarmserver.doc

the file init_d_* must be copy into /etc/init.d/ the other files into the respectively directory.

Retrieved from "http://10.5.0.12/wiki/index.php/Install/manage_Alarm%2CLog%2CArchive_for_CSS_%28Mysql%29"

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