

ALH: EPICS Alarm Handler

ALH: Alarm Handler :

- is an EPICS CA Client software as one of standard extension software.
- notify NEW alarm to the operator
- Provide the operator guidance for handling of specific alarms
- show current alarm status.
- take a pre-defined action to the new alarm.
- Logging/History of alarms
- X11/Motif application

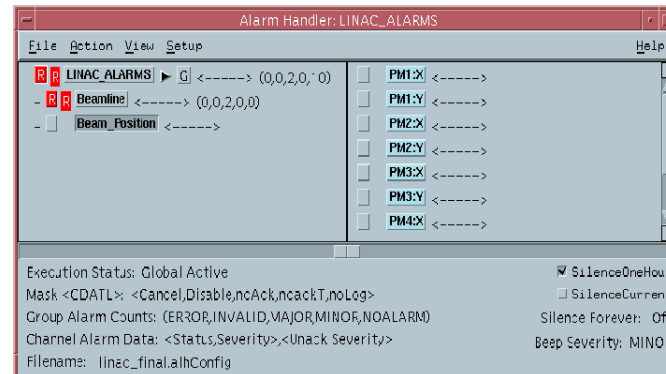
ALH: panels

Main Panel

- Normal:
- Alarm status



Alarm status Panel



ALH configuration

ALH monitors Alarm Status and Severity of the channels specified in the configuration file.

ALH configuration file should be specified at start up.

It is also possible modify/update configuration during run time.

Simple configuration file

```
GROUP NULL RootGroup
$FORCEPV COTEST:TESTREC:BI -D-T- 1 0
CHANNEL RootGroup COTEST:TESTREC:AO
CDATL
$GUIDANCE
This is an alarm guidance for COTEST:TESTREC:AO
$END
```

ALH Configuration File Format

GROUP parentName GroupName

CHANNEL parentName ChannelName <mask>

INCLUDE parentName fileName

\$FORCEPV forcePVName forceMask <forceValue> <resetValue>

\$SEVRPV sevrPVName

\$GUIDANCE

<Guidance String>

\$END

\$GUIDANCE urlAddress

\$ALIAS anyValidTextString

ALH Configuration File Format

\$COMMAND anyValidCommand

\$SEVRCOMMAND severityChangeValue anyValidCommand

\$STATCOMMAND alarmStatusStringValue anyValidCommand

\$ALARMCOUNTFILTER inputCount inputSeconds

\$BEEPSEVERITY severity

Group/Channel

GROUP NULL <groupname> : root of alh

GROUP <p> <c> : child group <c> of <p>

CHANNEL <group> <channel> <mask>

- Defines hierarchical structure of alarm group/channel.

Mask

Alarm channel can have alarm mask.

Alarm mask is indicated by 5 characters, such as <-D-T->.

- C (Cancel Alarm) : IOC will not report alarm status change.
- D (Disable Alarm) : Ignore alarm status change(ALH will not notify alarm status)
- A (NoAck Alarm) : Operator is not requested to respond alarm.
- T (NoAck Transient Alarm) : Alarm will be reset without operator acknowledgement when device come back to normal state.
- L (NoLogAlarm) :Alarm will not be logged into the file.

Force Process Variable

Format:

```
$FORCEPV forcePVName forceMask <forceValue>  
<resetValue>
```

- the value of forcePVName is used to change value of mask for alarm group or channel dynamically.

Severity Process Variable

Format:

`$SEVRPV sevrPVName`

Put back severity value of alarm group or channel to the value of specified channel.

COMMAND/SEVERCOMMAND/STATC

\$COMMAND *anyValidCommand*

- Operator Clicks "P" button

\$SEVRCOMMAND *severityChangeValue anyValidCommand*

- when channel or group SEVERITY matches severityChage condition, ALH executes command.

\$STATCOMMAND *alarmStatusStringValue anyValidCommand*

- Only valid for alarm channel (not for alarm group)
- when channel STATUS matches status condition, ALH executes command.



ALH Reference

"Alarm Handler User's Guide"
by Janet Anderson, APS/ANL
available on the web

