Application Start

CA_PUT
Monitor = APPL_NAME

CA_PUT
Count = 0

CA_PUT
mod( Count+1, 1000000 )

CA_PUT
Status

Wait
(time should be < 50% of CountDelay)

PVs used by monitoring application:
Monitor
Count
Status
Application Watchdog

Wait
CountDelay

Count changed?
  yes
  no

AlarmState < 10
  yes
  no

Set
Status = 10

Set
AlarmState = 10
AckedStatus
LatchDelay
AckType
Latch
Status change
yes
no
Wait
LatchDelay
Monitor
Status
Status change
yes
no
ModeFilter matches
yes
no
Status = 1 - 9
?
A

Status >
AlarmState
?
B

Status <
AckerStatus
?

AckType
= 0 &&
AlarmState <
10?

Set
AckerStatus = 0

Set
AlarmState =
Status

A
AckedStatus

Ack

AlarmState

E

Monitor
Ack

Ack 0 => 1 ?

yes

AlarmState > AackedStatus

no

yes

Set
AackedStatus = Status

Set
AlarmStatus = Status

Acknowledgement

AlarmState
Ack
AackedStatus
Monitor  (empty part of pvname) Name of the monitoring application, set by the monitoring application

Count  Heart beat (counter), incremented by monitoring application.

CountDelay  If the alarm monitor does not see a change in Count after this delay, it assumes the monitoring application is dead and triggers an alarm. This alarm sets Status to 10.

Status  Status set by monitoring application.
Values: 0 = no alarm, 1 = information, 2 = warning, 3 = alarm, 4 = critical, 10 = application dead

LatchDelay  Changes in Status are accepted into Latch after this delay. This parameter can filter short glitches.

Latch  The latched Status value. This is the actual alarm status as signaled by the monitoring application.

ModeFilter  Filter alarms dependant on external conditions. Initially, only the SPEAR status will be used. This filter only filters alarms with a Status value of < 10.
Values: 0 = no filter
1 = suppress alarm in DOWN mode
2 = suppress alarm in ACCPHY mode
3 = suppress alarm in INJECT mode

AlarmState  Current alarm state

AudioDelay  Delay after which an alarm (Status > 1 ) sounds the audible alarm.

Audio  Audio alarm (on/off). Can be disabled by AudioState = 0. OUT field defines wolf box channel.

AudioState  Disable/Enable audio alarm. (Should not be used by operator but for general configuration purpose only)

AudioRepeat  Delay after which (unacknowledged) alarm will be retriggered

AckType  Alarm acknowledgement type.
Values: 0 = Auto-Acknowledge any alarm
1 = Auto-Acknowledge AlarmState going down
2 = Acknowledge needed for any AlarmState change

Ack  Acknowledgement “button” from operator. Acknowledges the current AlarmState.

AckedStatus  Maximum value of acknowledged AlarmState