



TANGO Device Server

Vacuum temperature new generation device server. User's Guide

VacTemperature Class

Revision: Release_2_0 - Author: peru
Implemented in C++ - CVS repository: ESRF

Introduction:

This is a modernized version of the "VacTemperature" device server.

Class Inheritance:

- Tango::Device_4Impl
  - VacTemperature

Properties:

Device Properties		
Property name	**Property type**	**Description**
WagoDeviceName	Tango::DEV_STRING	The device name of the thermocouple controler.
HdbAccessDeviceName	Tango::DEV_STRING	
HdbMaxDelay	Tango::DEV_SHORT	This is the delay (expressed in seconds) after which a value of temperature will be stored to HDB, will it be required or not.
HdbSignalPrefix	Tango::DEV_STRING	
HdbConfigDeviceName	Tango::DEV_STRING	
HdbRelativeChange	Tango::DEV_DOUBLE	If the difference between past and present temperature values reaches this value then the temperature value will be stored to HDB.
FillingModeAttributeName	Tango::DEV_STRING	

Device Properties Default Values:

Property Name	**Default Values**
WagoDeviceName	No default value
HdbAccessDeviceName	No default value
HdbMaxDelay	1800
HdbSignalPrefix	No default value
HdbConfigDeviceName	SYS/HDB-CONFIG/1
HdbRelativeChange	2.0
FillingModeAttributeName	SYS/MACHSTAT/TANGO/Filling_mode_id

There is no Class properties.

States:

States	
Names	**Descriptions**
ON	When everything is OK.
FAULT	When something is wrong with the thermocouple controller.
MOVING	When the thermocouple controller is in maintenance mode.
ALARM	This state is reached when at least one thermocouple is in alarm.

Attributes:

Scalar Attributes			
Attribute name	**Data Type**	**R/W Type**	**Expert**
NumberOfThermocouple	DEV_SHORT	READ	No
RefreshPeriod: Interval (expressed in seconds)between two access to the hardware.	DEV_SHORT	READ_WRITE	No
DerivativeInterval: Interval (expressed in samples) to be applied to the last read sample in order to calculate the derivative.	DEV_SHORT	READ_WRITE	No
NumberOfFailures	DEV_LONG	READ_WRITE	No
SR_filling	DEV_SHORT	READ_WRITE	No
AlarmLevelFlag	DEV_BOOLEAN	READ	No

Spectrum Attributes			
Attribute name	**Data Type**	**X Data Length**	**Expert**
Temperatures	DEV_DOUBLE	60	No
Setpoints	DEV_DOUBLE	60	No
Alarms	DEV_SHORT	60	No
Labels	DEV_STRING	60	No
Locations	DEV_DOUBLE	60	No
Max_temperatures	DEV_DOUBLE	180	No
Derivatives	DEV_DOUBLE	60	No
HdbStorageEnable	DEV_BOOLEAN	60	No
States	DEV_SHORT	60	No
XLocations	DEV_DOUBLE	60	No
YLocations	DEV_DOUBLE	60	No

Commands:

More Details on commands....

Device Commands for Operator Level		
Command name	**Argument In**	**Argument Out**
Init	DEV_VOID	DEV_VOID
State	DEV_VOID	DEV_STATE
Status	DEV_VOID	CONST_DEV_STRING
ResetMaxTemperature	DEV_VOID	DEV_VOID
ToggleDebug	DEV_VOID	DEV_VOID
DoReloadConfiguration	DEV_VOID	DEV_VOID
Reset	DEV_VOID	DEV_VOID
AdjustAlarmLevel	DEV_VOID	DEV_VOID
RejectAlarmLevel	DEV_VOID	DEV_VOID

1 - Init

- **Description:** This commands re-initialise a device keeping the same network connection.
  After an Init command executed on a device, it is not necessary for client to re-connect to the device.
  This command first calls the device *delete_device()* method and then execute its *init_device()* method.
  For C++ device server, all the memory allocated in the *nit_device()* method must be freed in the *delete_device()* method.
  The language device desctructor automatically calls the *delete_device()* method.

- **Argin:**
  DEV_VOID : none.

- **Argout:**
  DEV_VOID : none.

- **Command allowed for:**
  - Tango::ON
  - Tango::FAULT
  - Tango::MOVING
  - Tango::ALARM

2 - State

- **Description:** This command gets the device state (stored in its *device_state* data member) and returns it to the caller.

- **Argin:**
  DEV_VOID : none.

- **Argout:**
  DEV_STATE : State Code

- **Command allowed for:**
  - Tango::ON
  - Tango::FAULT
  - Tango::MOVING
  - Tango::ALARM

3 - Status

- **Description:** This command gets the device status (stored in its *device_status* data member) and returns it to the caller.

- **Argin:**
  DEV_VOID : none.

- **Argout:**
  CONST_DEV_STRING : Status description

- **Command allowed for:**
  - Tango::ON
  - Tango::FAULT
  - Tango::MOVING
  - Tango::ALARM

4 - ResetMaxTemperature

- **Description:** Reset the max temperature data (value + date + last reset date).

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::ON
  - Tango::MOVING
  - Tango::ALARM

5 - ToggleDebug

- **Description:** This command toggles the debug display.

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::ON
  - Tango::FAULT
  - Tango::MOVING
  - Tango::ALARM

6 - DoReloadConfiguration

- **Description:** Force the device server to reload the thermocouple controller configuration.

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::ON
  - Tango::FAULT
  - Tango::MOVING
  - Tango::ALARM

7 - Reset

- **Description:**

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::ON
  - Tango::FAULT
  - Tango::MOVING

- Tango::ALARM

8 - AdjustAlarmLevel

- **Description:** Command used by vacuum group to adjust the alarm level after "normal" alarms have appeared.

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::ON
  - Tango::FAULT
  - Tango::MOVING
  - Tango::ALARM

9 - RejectAlarmLevel

- **Description:**

- **Argin:**
  DEV_VOID :

- **Argout:**
  DEV_VOID :

- **Command allowed for:**
  - Tango::ON
  - Tango::FAULT
  - Tango::MOVING
  - Tango::ALARM