



TANGO
Device
Server

Taco/Tango Wrapper for RFKlystron User's Guide

RFKlystronWrapper Class

Revision: FirstRelease - Author: bla
Implemented in C++ - CVS repository: ESRF

Introduction:

This Tango class is used to wrap a sy/rf-tra/tra* taco server.

Class Identification:

- **Contact** : at sncf.dk - bla
- **Class Family** : Miscellaneous
- **Platform** : Unix Like
- **Bus** : Not Applicable

Class Inheritance:

- Tango::Device_4Impl
 - RFKlystronWrapper

Properties:

Device Properties		
Property name	Property type	Description
Klystron_taco_device	Tango::DEV_STRING	The klystron taco device that will be wrapped to tango world.
Hardware_access_delay	Tango::DEV_LONG	Read on taco server are done in one pass. This property is the delay between two access to the taco device. This is done to avoid taco access on each attribute read.
Configuration_file_path	Tango::DEV_STRING	Configuration file path.
Rf_on_threshold	Tango::DEV_SHORT	This is the threshold value that fix the rf_on attribute. If the RF_Power is greater than this property, the rf_on attribute will be 1, else 0.
Beam_on_threshold	Tango::DEV_SHORT	This is the threshold value that drives the beam_on attribute. if Elec power is greater than this property, the attribute will be 1, else 0

Device Properties Default Values:

Property Name	Default Values
Klystron_taco_device	No default value
Hardware_access_delay	3
Configuration_file_path	/operation/
Rf_on_threshold	10
Beam_on_threshold	10

There is no Class properties.

States:

States	
Names	Descriptions
ON	
OFF	

Attributes:

Scalar Attributes			
Attribute name	Data Type	R/W Type	Expert
Phase	DEV_DOUBLE	READ	No
Elec_power	DEV_DOUBLE	READ	No
Rf_power	DEV_DOUBLE	READ	No
Transmitter_mode	DEV_STRING	READ	No
Shutdown	DEV_STRING	READ	No
Configuration_file	DEV_STRING	READ	No
ShortStatus	DEV_STRING	READ	No
ConfigurationFilePath	DEV_STRING	READ	No
Rf_on	DEV_BOOLEAN	READ	No
Beam_on	DEV_BOOLEAN	READ	No
CavitiesVoltageSet	DEV_DOUBLE	READ_WRITE	No

Spectrum Attributes			
Attribute name	Data Type	X Data Length	Expert
SubDevicesStates	DEV_STATE	18	No
SequenceHistory	DEV_STRING	4096	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
On	DEV_VOID	DEV_VOID
Off	DEV_VOID	DEV_VOID
Standby	DEV_VOID	DEV_VOID
LowHeating	DEV_VOID	DEV_VOID
Reset	DEV_VOID	DEV_VOID
Stop	DEV_VOID	DEV_VOID
ReadConfigurationFile	DEV_STRING	DEV_VOID
WriteConfigurationFile	DEV_STRING	DEV_VOID
HighHeating	DEV_VOID	DEV_VOID
TunnelAccess	DEV_VOID	DEV_VOID
GetConfigurationFilePath	DEV_VOID	DEV_STRING

Device Commands for Expert Level Only		
Command name	Argument In	Argument Out
ToggleDeviceDebugFlag	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::OFF

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::OFF

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::OFF

4 - On

- **Description:** Turn ON the device
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

5 - Off

- **Description:** Turn OFF the device.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

6 - Standby

- **Description:** Put the device in STANDBY.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

7 - LowHeating

- **Description:** Put the device in LOW HEATING mode.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

8 - Reset

- **Description:** Send a RESET to the TACO device.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

9 - Stop

- **Description:** Send a STOP command to the TACO device.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

10 - ReadConfigurationFile

- **Description:** Load a configuration file (wraps DevRead taco command).
- **Argin:**
DEV_STRING :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

11 - WriteConfigurationFile

- **Description:** Save a configuration file (wraps DevWrite taco command).
- **Argin:**
DEV_STRING :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

12 - ToggleDeviceDebugFlag (for expert only)

- **Description:** This command is for debug purpose only and must not be used for operation. Code behind this command is normally commented out.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

13 - HighHeating

- **Description:**
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

14 - TunnelAccess

- **Description:**
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

15 - GetConfigurationFilePath

- **Description:** Configuration_File_Path is returned by this method.
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_STRING : Configuration_File_Path is returned.
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

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Device Servers : CVS repository on tango-ds project