



TANGO
Device
Server

BeamLineEnergyCristal User's Guide

BeamLineEnergyCristal Class

Revision: release_1_1_1 - Author: delos
Implemented in C++

Introduction:

Synchronize in the line CRISTAL the undulator, the monochromator, the two mirrors and three diffractometers.

Class Inheritance:

- Tango::Device_3Impl
 - BeamLineEnergyCristal

Properties:

Device Properties		
Property name	Property type	Description
DefaultCouplingNumber	Tango::DEV_SHORT	Used to parameterize the device when we start it.
DefaultConfigurationNumber	Tango::DEV_SHORT	The default diffractometer number 1 = the 4C-diffractometer A ; 2 = the 6C-diffractometer B ; 3 = the 2C-diffractometer C
UndulatorProxyName	Tango::DEV_STRING	The undulator device name
UndulatorEnergyAttributeName	Tango::DEV_STRING	The name of the energy attribute of the undulator device
MonochromatorProxyName	Tango::DEV_STRING	The monochromator device name
MonochromatorTz2AttributeName	Tango::DEV_STRING	The monochromator Tz2 name
MonochromatorEnergyAttributeName	Tango::DEV_STRING	The monochromator energy name
MonochromatorCrystalAttributeName	Tango::DEV_STRING	The monochromator crystal attribute name
PlaneMirrorProxyName	Tango::DEV_STRING	The planar mirror proxy name
PlaneMirrorHeightAttributeName	Tango::DEV_STRING	The planar mirror height name
BimorphMirrorProxyName	Tango::DEV_STRING	The bimorph mirror proxy name
BimorphMirrorHeightAttributeName	Tango::DEV_STRING	The bimorph mirror height name
CommandStateName	Tango::DEV_STRING	The command state name
CommandStopName	Tango::DEV_STRING	The command stop name
TableRootPath	Tango::DEV_STRING	The path to the directory containing all files

Device Properties Default Values:

Property Name	Default Values
DefaultCouplingNumber	No default value
DefaultConfigurationNumber	No default value
UndulatorProxyName	No default value
UndulatorEnergyAttributeName	No default value
MonochromatorProxyName	No default value
MonochromatorTz2AttributeName	No default value
MonochromatorEnergyAttributeName	No default value
MonochromatorCrystalAttributeName	No default value
PlaneMirrorProxyName	No default value
PlaneMirrorHeightAttributeName	No default value
BimorphMirrorProxyName	No default value
BimorphMirrorHeightAttributeName	No default value
CommandStateName	No default value
CommandStopName	No default value
TableRootPath	No default value

There is no Class properties.

States:

States	
Names	Descriptions
MOVING	The device is in the MOVING state, at least one device is moving.
ALARM	The device is in the ALARM state, at least one device is in ALARM state.
STANDBY	The beam line energy device is waiting for request.
FAULT	At least one device is unreachable.
INIT	The beam line energy proxies initialization is ok but you need to call the Init command.

Attributes:

Scalar Attributes			
Attribute name	Data Type	R/W Type	Expert
energy	DEV_DOUBLE	READ_WRITE	No
currentCouplingName	DEV_STRING	READ	No
currentConfigurationName	DEV_STRING	READ	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
Stop	DEV_VOID	DEV_VOID
ChangeCoupling	DEV_SHORT	DEV_VOID
ChangeConfiguration	DEV_SHORT	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::MOVING
 - Tango::ALARM
 - Tango::STANDBY
 - Tango::FAULT
 - Tango::INIT

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::MOVING
 - Tango::ALARM
 - Tango::STANDBY
 - Tango::FAULT
 - Tango::INIT

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::MOVING
 - Tango::ALARM
 - Tango::STANDBY
 - Tango::FAULT
 - Tango::INIT

4 - Stop

- **Description:**
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::MOVING
 - Tango::ALARM
 - Tango::STANDBY
 - Tango::FAULT
 - Tango::INIT

5 - ChangeCoupling

- **Description:**
- **Argin:**
DEV_SHORT :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::MOVING
 - Tango::ALARM
 - Tango::STANDBY
 - Tango::FAULT
 - Tango::INIT

6 - ChangeConfiguration

- **Description:**
- **Argin:**
DEV_SHORT :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::MOVING
 - Tango::ALARM
 - Tango::STANDBY
 - Tango::FAULT
 - Tango::INIT

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Command name	Argument In	Argument Out
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State	DEV_VOID	DEV_STATE
Status	DEV_VOID	CONST_DEV_STRING
Stop	DEV_VOID	DEV_VOID
ChangeCoupling	DEV_SHORT	DEV_VOID
ChangeConfiguration	DEV_SHORT	DEV_VOID

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After an Init command executed on a device, it is not necessary for client to re-connect to the device.
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DEV_VOID : none.
- **Argout:**
DEV_VOID : none.
- **Command allowed for:**
 - Tango::MOVING
 - Tango::ALARM
 - Tango::STANDBY
 - Tango::FAULT
 - Tango::INIT

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- **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::MOVING
 - Tango::ALARM
 - Tango::STANDBY
 - Tango::FAULT
 - Tango::INIT

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::MOVING
 - Tango::ALARM
 - Tango::STANDBY
 - Tango::FAULT
 - Tango::INIT

4 - Stop

- **Description:**
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::MOVING
 - Tango::ALARM
 - Tango::STANDBY
 - Tango::FAULT
 - Tango::INIT

5 - ChangeCoupling

- **Description:**
- **Argin:**
DEV_SHORT :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::MOVING
 - Tango::ALARM
 - Tango::STANDBY
 - Tango::FAULT
 - Tango::INIT

6 - ChangeConfiguration

- **Description:**
- **Argin:**
DEV_SHORT :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::MOVING
 - Tango::ALARM
 - Tango::STANDBY
 - Tango::FAULT
 - Tango::INIT

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[Link to Non-frame version.](#)



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BeamLineEnergyCristal Device Commands Description BeamLineEnergyCristal Class

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For C++ device server, all the memory allocated in the *init_device()* method must be freed in the *delete_device()* method.
The language device destructor automatically calls the *delete_device()* method.
- **Argin:**
DEV_VOID : none.
- **Argout:**
DEV_VOID : none.
- **Command allowed for:**
 - Tango::MOVING
 - Tango::ALARM
 - Tango::STANDBY
 - Tango::FAULT
 - Tango::INIT

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::MOVING
 - Tango::ALARM
 - Tango::STANDBY
 - Tango::FAULT
 - Tango::INIT

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::MOVING
 - Tango::ALARM
 - Tango::STANDBY
 - Tango::FAULT
 - Tango::INIT

4 - Stop

- **Description:**
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::MOVING
 - Tango::ALARM
 - Tango::STANDBY
 - Tango::FAULT
 - Tango::INIT

5 - ChangeCoupling

- **Description:**
- **Argin:**
DEV_SHORT :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::MOVING
 - Tango::ALARM
 - Tango::STANDBY
 - Tango::FAULT
 - Tango::INIT

6 - ChangeConfiguration

- **Description:**
- **Argin:**
DEV_SHORT :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::MOVING
 - Tango::ALARM
 - Tango::STANDBY
 - Tango::FAULT
 - Tango::INIT

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