



**TANGO
Device
Server**

Tango Device Server User's Guide

StateComposer Class

**Revision: 1.1 - Author: katyho
Implemented in Java**

Introduction:

This device provides a resum state from a given list of devices state. If one of the supervised device is in DevFailed Communication The StateComposer will be in FAULT State and must be reinitialized This device can also execute a grouped command on several device And it can interact with TextTalker device

Class Inheritance:

- fr.esrf.TangoDs.Device_Impl
 - StateComposer

Properties:

| Device Properties | | |
|-------------------------|-----------------|--|
| Property name | Property type | Description |
| DeviceNameList | Array of string | The list of device used to composed the resum state. |
| PriorityList | Array of string | The priority value for a state : STATE,priority |
| TextToTalkList | Array of string | The text to talk for a State : STATE, text to talk. |
| CommandNameList | Array of string | The request grouped commands |
| PropertyNameList | Array of string | The request group properties |
| Int | private | The time out for a device proxy |
| Int | private | The internal period of the Reading Thread |
| String | private | The full name of a TextTalker device (optional) |

Device Properties Default Values:

| Property Name | Default Values |
|------------------|------------------|
| DeviceNameList | No default value |
| PriorityList | No default value |
| TextToTalkList | No default value |
| CommandNameList | No default value |
| PropertyNameList | No default value |
| Int | No default value |
| Int | No default value |
| String | No default value |

There is no Class properties.

Attributes:

| Scalar Attributes | | | |
|-----------------------|------------|----------|--------|
| Attribute name | Data Type | R/W Type | Expert |
| lastStateEvent | DEV_STRING | READ | No |
| State | DEV_STRING | READ | No |
| version | DEV_STRING | READ | No |

Spectrum Attributes

| Attribute name | Data Type | X Data Length | Expert |
|---|------------|---------------|--------|
| devicesStateList: The list of the devices state in string format. Call <code>GetDeviceForIndex</code> to know which device corresponds to an index of the spectrum | DEV_STRING | 1000 | No |
| commandsResultReport | DEV_STRING | 1000 | No |
| devicesNumberStateList: The list of the devices state in number format. Call <code>GetDeviceForIndex</code> to know which device corresponds to an index of the spectrum. Call <code>GetTangoStates</code> to know the values of tango states. | DEV_SHORT | 1000 | 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 |
| GetDeviceForIndex | DEV_SHORT | DEV_STRING |

Device Commands for Expert Level Only

| Command name | Argument In | Argument Out |
|----------------------------|-------------|--------------------|
| GetTangoStates | DEV_VOID | DEVVAR_STRINGARRAY |
| GetPriorityForState | DEV_STRING | DEV_SHORT |
| UpdateAllProperties | 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:**

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:**

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:**

4 - GetTangoStates (for expert only)

- **Description:** of the TANGO states and their associated values. Ex : ON = 0, OFF=1
- **Argin:**
DEV_VOID :
- **Argout:**
DEVVAR_STRINGARRAY : The list of the state
- **Command allowed for:**

5 - GetDeviceForIndex

- **Description:** name for a given index of the spectrum attributes (devicesStateList or devicesNumberStateList)
- **Argin:**
DEV_SHORT : The index of the spectrum attribute
- **Argout:**
DEV_STRING : The name of the associated device

- **Command allowed for:**

6 - GetPriorityForState (for expert only)

- **Description:** priority associated to a given State.
- **Argin:**
DEV_STRING : The State name (ex:ON, OFF, FAULT)
- **Argout:**
DEV_SHORT : The priority of the state
- **Command allowed for:**

7 - UpdateAllProperties (for expert only)

- **Description:**
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**

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Device Commands Description

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The language device desctructor automatically calls the *delete_device()* method.
- **Argin:**
DEV_VOID : none.
- **Argout:**
DEV_VOID : none.
- **Command allowed for:**

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:**

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:**

4 - GetTangoStates (for expert only)

- **Description:** of the TANGO states and their associated values. Ex : ON = 0, OFF=1
- **Argin:**
DEV_VOID :
- **Argout:**
DEVVAR_STRINGARRAY : The list of the state
- **Command allowed for:**

5 - GetDeviceForIndex

- **Description:** name for a given index of the spectrum attributes (devicesStateList or devicesNumberStateList)
- **Argin:**
DEV_SHORT : The index of the spectrum attribute
- **Argout:**
DEV_STRING : The name of the associated device
- **Command allowed for:**

6 - GetPriorityForState (for expert only)

- **Description:** priority associated to a given State.
- **Argin:**
DEV_STRING : The State name (ex:ON, OFF, FAULT)

- **Argout:**
DEV_SHORT : The priority of the state
- **Command allowed for:**

7 - UpdateAllProperties (for expert only)

- **Description:**
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**

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