



**TANGO**  
Device  
Server

# **File SnapShot Device Server User's Guide**

## **SnapShot Class**

**Revision: - Author:  
Implemented in C++**

### **Introduction:**

The purpose of this device server is to store the current values of a defined list of attributes, and to restore them when required. Basically 3 steps are necessary :

- Step 1: Load the Device with a predefined list of attributes (LoadConfigurationFile command)
- Step 2: Take the Snapshot (i.e save the current values of the previously defined attributes), in a file (which name you specify) (SnapAttributes command)
- Step 3: Ask the Device to restore attribute values (RestoreAttributes command)

Of course, steps may take place in different dates, for instance:

- Step 1 is done when experimental setup is installed
- Step 2 is done 5 times to store 5 different configurations of the experimental setup
- Step 3 is done many times to reconfigure the experimental setup to the 5 backup configurations

## Properties:

<b>Device Properties</b>		
<b>Property name</b>	<b>Property type</b>	<b>Description</b>
<b>Path</b>	Tango::DEV_STRING	Property to define the path where the various files are stored

Device Properties Default Values:

<b>Property Name</b>	<b>Default Values</b>
Path	No default value

**There is no Class properties.**

## Attributes:

<b>Scalar Attributes</b>			
<b>Attribute name</b>	<b>Data Type</b>	<b>R/W Type</b>	<b>Expert</b>
<b>ConfigurationFileLoaded</b>	DEV_STRING	READ	No
<b>LastSnapAttributesFile</b>	DEV_STRING	READ	No
<b>LastRestoreAttributesFile</b>	DEV_STRING	READ	No
<b>CommandReport:</b> This attribute permits to have the report of a command in case of a timeout occurs.	DEV_STRING	READ	No

## Commands:

More Details on commands....

## Device Commands for Operator Level

Command name	Argument In	Argument Out
<b>Init</b>	DEV_VOID	DEV_VOID
<b>State</b>	DEV_VOID	DEV_STATE
<b>Status</b>	DEV_VOID	CONST_DEV_STRING
<b>LoadConfigurationFile</b>	DEV_STRING	DEV_STRING
<b>SnapAttributes</b>	DEV_STRING	DEV_STRING
<b>RestoreAttributes</b>	DEV_STRING	DEV_STRING

### 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 - LoadConfigurationFile

- **Description:** This command reads a specific file which contains the attributes to snap. The format of the input file is an ASCII , 2 columns format with :
  - Column 1 : attribute name
  - Column 2 : R (for storing read point) or W (for storing set point)Command returns a text report of :
  - the attributes successfully taken into account (and ready for snapshot)
  - the attributes which have incorrect and cannot be backup
- **Argin:**  
**DEV\_STRING** : Name of the file wich contains the list of attributes to snap
- **Argout:**  
**DEV\_STRING** : Execution Report
- **Command allowed for:**

## 5 - SnapAttributes

- **Description:** This command records the loaded attributes and their values in the file given in argument. This command returns a text report of :
  - the attributes whose values have been successfully saved
  - the attributes which whose backup has failed
- **Argin:**  
**DEV\_STRING** : Name of the snap file
- **Argout:**  
**DEV\_STRING** : Report success and errors
- **Command allowed for:**

## 6 - RestoreAttributes

- **Description:** This method rewrite the attributes values ( stored in the specifiied file) on the hardware. This command returns a text report with attributes which have succed and have failed
- **Argin:**  
**DEV\_STRING** : Name of the snap file
- **Argout:**  
**DEV\_STRING** : Report
- **Command allowed for:**

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<b>Device Properties</b>		
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<b>Attribute name</b>	<b>Data Type</b>	<b>R/W Type</b>	<b>Expert</b>
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<b>LastRestoreAttributesFile</b>	DEV_STRING	READ	No
<b>CommandReport:</b> This attribute permits to have the report of a command in case of a timeout occurs.	DEV_STRING	READ	No

## Commands:

More Details on commands....

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<b>State</b>	DEV_VOID	DEV_STATE
<b>Status</b>	DEV_VOID	CONST_DEV_STRING
<b>LoadConfigurationFile</b>	DEV_STRING	DEV_STRING
<b>SnapAttributes</b>	DEV_STRING	DEV_STRING
<b>RestoreAttributes</b>	DEV_STRING	DEV_STRING

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- **Description:** This command gets the device state (stored in its *device\_state* data member) and returns it to the caller.
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DEV\_STATE : State Code
- **Command allowed for:**

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- **Argin:**  
DEV\_VOID : none.



- **Argout:**  
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- **Command allowed for:**

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- **Description:** This command reads a specific file which contains the attributes to snap. The format of the input file is an ASCII , 2 columns format with :
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- **Argin:**  
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- **Description:** This command records the loaded attributes and their values in the file given in argument. This command returns a text report of :
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- **Argin:**  
**DEV\_STRING** : Name of the snap file
- **Argout:**  
**DEV\_STRING** : Report success and errors
- **Command allowed for:**

## 6 - RestoreAttributes

- **Description:** This method rewrite the attributes values ( stored in the specifiied file) on the hardware. This command returns a text report with attributes which have succed and have failed
- **Argin:**  
**DEV\_STRING** : Name of the snap file
- **Argout:**  
**DEV\_STRING** : Report
- **Command allowed for:**

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# File SnapShot Device Server

## Device Commands Description

### SnapShot Class

Revision: - Author:

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DEV\_STATE : State Code
- **Command allowed for:**

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- **Description:** This command gets the device status (stored in its *device\_status* data member) and returns it to the caller.
- **Argin:**  
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- **Argout:**  
**DEV\_STRING** : Execution Report
- **Command allowed for:**

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- **Description:** This command records the loaded attributes and their values in the file given in argument. This command returns a text report of :
  - the attributes whose values have been successfully saved
  - the attributes which whose backup has failed
- **Argin:**  
**DEV\_STRING** : Name of the snap file
- **Argout:**  
**DEV\_STRING** : Report success and errors
- **Command allowed for:**

## 6 - RestoreAttributes

- **Description:** This method rewrite the attributes values ( stored in the specified file) on the hardware. This command returns a text report with attributes which have succeeded and have failed
  - **Argin:**  
**DEV\_STRING** : Name of the snap file
  - **Argout:**  
**DEV\_STRING** : Report
  - **Command allowed for:**
- 

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