



TANGO
Device
Server

Virtual rinter for the HQPS PLC's User's Guide

VirtualPrinter Class

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

Introduction:

This class simulates the printer normally connected to the PLC's used in the HQPS project.
There is one virtual printer per PLC.

Class Identification:

- **Contact** : at esrf.fr - taurel
- **Class Family** : Hqps (ESRF Specific)
- **Platform** : Unix Like
- **Bus** : Serial Line
- **Manufacturer** : Saia
- **Reference** : unknown

Class Inheritance:

- Tango::Device_4Impl
 - VirtualPrinter

Properties:

Class Properties		
Property name	Property type	Description
EndTag	Tango::DEV_STRING	Tag at the message's end
HdbDevName	Tango::DEV_STRING	Name of the device used to send data to HDB
SleepBetweenStorage	Tango::DEV_LONG	Number of seconds the storage thread sleeps between each inspection to check if something has to stored within HDB
HdbThreadEventsNb	Tango::DEV_LONG	Number of events required to the PLC virtual printer by the Hdb thread

Device Properties		
Property name	Property type	Description
EndTag	Tango::DEV_STRING	Tag at the message's end

Class Properties Default Values:

Property Name	Default Values
EndTag	No default value
HdbDevName	Undef
SleepBetweenStorage	3600
HdbThreadEventsNb	200

Device Properties Default Values:

Property Name	Default Values
EndTag	No default value

States:

States	
Names	Descriptions
ON	The virtual printer is ON and running
MOVING	The virtual printer is receiving data from the PLC
ALARM	Something wrong has been detected in the HDB storage. Try the Reset command

Attributes:

Scalar Attributes			
Attribute name	Data Type	R/W Type	Expert
EventNb: Number of event for which the PLC will sent description during the AskEventData command	DEV_LONG	READ_WRITE	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
AskEventsData	DEV_VOID	DEV_VOID
Read	DEV_VOID	CONST_DEV_STRING
Reset	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::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::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::MOVING
- Tango::ALARM

4 - AskEventsData

- **Description:** Ask the PLC to send events data

- **Argin:**

DEV_VOID :

- **Argout:**

DEV_VOID :

- **Command allowed for:**

- Tango::ON
- Tango::ALARM

5 - Read

- **Description:** Read the data returned by the PLC after a AskEventData command

- **Argin:**

DEV_VOID :

- **Argout:**

CONST_DEV_STRING : The string describing the events

- **Command allowed for:**

- Tango::ON
- Tango::ALARM

6 - Reset

- **Description:** Reset the device storing flags and start one storage loop for this device

- **Argin:**

DEV_VOID :

- **Argout:**

DEV_VOID :

- **Command allowed for:**

- Tango::ALARM

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Device Servers : CVS repository on tango-ds project