



**TANGO  
Device  
Server**

# **DataSocket User's Guide**

## **DataSocket Class**

**Revision: release\_1\_0\_1 - Author: abeilleg  
Implemented in C++**

### **Introduction:**

The purpose of this `Tango DataSocket DeviceServer` is to exchange Data between TANGO and a LabView application. It acts as a gateway whose only purpose is to get and set values which are available in a Labview Application from the TANGO world. It also permits to read/write values from an OPC server.

### **Properties:**

**There is no Class properties.  
There is no Device Properties.**

## Attributes:

<b>Scalar Attributes</b>			
<b>Attribute name</b>	<b>Data Type</b>	<b>R/W Type</b>	<b>Expert</b>
<b>transfert_number:</b> Number of transferts occurred with the remote DataSocket Server	DEV_LONG	READ	Yes

## Commands:

More Details on commands....

<b>Device Commands for Operator Level</b>		
<b>Command name</b>	<b>Argument In</b>	<b>Argument Out</b>
<b>Init</b>	DEV_VOID	DEV_VOID
<b>State</b>	DEV_VOID	DEV_STATE
<b>Status</b>	DEV_VOID	CONST_DEV_STRING
<b>ReadLong</b>	DEV_STRING	DEV_LONG
<b>ReadDouble</b>	DEV_STRING	DEV_DOUBLE
<b>ReadString</b>	DEV_STRING	DEV_STRING
<b>ReadLongArray</b>	DEV_STRING	DEVVAR_LONGARRAY
<b>ReadDoubleArray</b>	DEV_STRING	DEVVAR_DOUBLEARRAY
<b>ReadStringArray</b>	DEV_STRING	DEVVAR_STRINGARRAY
<b>WriteLong</b>	DEVVAR_LONGSTRINGARRAY	DEV_VOID
<b>WriteDouble</b>	DEVVAR_DOUBLESTRINGARRAY	DEV_VOID
<b>WriteString</b>	DEVVAR_STRINGARRAY	DEV_VOID
<b>WriteLongArray</b>	DEVVAR_LONGSTRINGARRAY	DEV_VOID
<b>WriteDoubleArray</b>	DEVVAR_DOUBLESTRINGARRAY	DEV_VOID
<b>ReadBool</b>	DEV_STRING	DEV_BOOLEAN
<b>WriteBool</b>	DEVVAR_LONGSTRINGARRAY	DEV_VOID
<b>CloseAllHandles</b>	DEV_VOID	DEV_VOID

## Device Commands for Expert Level Only

Command name	Argument In	Argument Out
GetOpenedURL	DEV_VOID	DEVVAR_STRINGARRAY

### 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 - ReadLong

- **Description:** Used to get a long value from DS
- **Argin:**  
DEV\_STRING : URL to read
- **Argout:**  
DEV\_LONG : long read on the datasocket
- **Command allowed for:**

## 5 - ReadDouble

- **Description:**
- **Argin:**  
DEV\_STRING : URL to read
- **Argout:**  
DEV\_DOUBLE : value read on the DataSocket
- **Command allowed for:**

## 6 - ReadString

- **Description:**
- **Argin:**  
DEV\_STRING : URL to read
- **Argout:**  
DEV\_STRING :
- **Command allowed for:**

## 7 - ReadLongArray

- **Description:**
- **Argin:**  
DEV\_STRING : URL to read
- **Argout:**  
DEVVAR\_LONGARRAY :
- **Command allowed for:**

## 8 - ReadDoubleArray

- **Description:**
- **Argin:**  
DEV\_STRING : URL to read
- **Argout:**  
DEVVAR\_DOUBLEARRAY :
- **Command allowed for:**

## 9 - ReadStringArray

- **Description:**
- **Argin:**  
DEV\_STRING : URL to read
- **Argout:**  
DEVVAR\_STRINGARRAY :
- **Command allowed for:**

## 10 - WriteLong

- **Description:**
- **Argin:**  
DEVVAR\_LONGSTRINGARRAY : Value to write + URL to write
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**

## 11 - WriteDouble

- **Description:**
- **Argin:**  
DEVVAR\_DOUBLESTRINGARRAY : Value to write + URL to write
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**

## 12 - WriteString

- **Description:** Write a string on the DataSocket
- **Argin:**  
DEVVAR\_STRINGARRAY :
- **Argout:**  
DEV\_VOID : Value to write + URL to write on
- **Command allowed for:**

## 13 - WriteLongArray

- **Description:**
- **Argin:**  
DEVVAR\_LONGSTRINGARRAY :
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**

## 14 - WriteDoubleArray

- **Description:**
- **Argin:**  
DEVVAR\_DOUBLESTRINGARRAY :
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**

## 15 - GetOpenedURL (for expert only)

- **Description:** Command to get the list of URL which are currently opened
- **Argin:**  
DEV\_VOID :
- **Argout:**  
DEVVAR\_STRINGARRAY :
- **Command allowed for:**

## 16 - ReadBool

- **Description:** Read the boolean value associated to the URL given in parameter.
- **Argin:**  
DEV\_STRING : URL to read
- **Argout:**  
DEV\_BOOLEAN : Boolean value read on the datasocket
- **Command allowed for:**

## 17 - WriteBool

- **Description:** Sets the data value of the DataSocket object associated to the URL given in parameter.
- **Argin:**  
DEVVAR\_LONGSTRINGARRAY : Value to write ,0<=> false , !0 <=> true) + URL
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**

## 18 - CloseAllHandles

- **Description:** Forces the closure of all handles
- **Argin:**  
DEV\_VOID :
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**

---

**ESRF - Software Engineering Group**

# Frame Alert

This document is designed to be viewed using the frames feature. If you see this message, you are using a non-frame-capable web client.  
[Link to Non-frame version.](#)





TANGO  
Device  
Server

---

# DataSocket

## Device Commands Description

### DataSocket Class

Revision: release\_1\_0\_1 - Author: abeilleg

## 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 *init\_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 - ReadLong

- **Description:** Used to get a long value from DS
- **Argin:**  
DEV\_STRING : URL to read
- **Argout:**  
DEV\_LONG : long read on the datasocket
- **Command allowed for:**

### 5 - ReadDouble

- **Description:**
- **Argin:**  
DEV\_STRING : URL to read
- **Argout:**  
DEV\_DOUBLE : value read on the DataSocket
- **Command allowed for:**

### 6 - ReadString

- **Description:**
- **Argin:**  
DEV\_STRING : URL to read
- **Argout:**

**DEV\_STRING :**

- **Command allowed for:**

## **7 - ReadLongArray**

- **Description:**
- **Argin:**  
DEV\_STRING : URL to read
- **Argout:**  
DEVVAR\_LONGARRAY :
- **Command allowed for:**

## **8 - ReadDoubleArray**

- **Description:**
- **Argin:**  
DEV\_STRING : URL to read
- **Argout:**  
DEVVAR\_DOUBLEARRAY :
- **Command allowed for:**

## **9 - ReadStringArray**

- **Description:**
- **Argin:**  
DEV\_STRING : URL to read
- **Argout:**  
DEVVAR\_STRINGARRAY :
- **Command allowed for:**

## 10 - WriteLong

- **Description:**
- **Argin:**  
DEVVAR\_LONGSTRINGARRAY : Value to write + URL to write
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**

## 11 - WriteDouble

- **Description:**
- **Argin:**  
DEVVAR\_DOUBLESTRINGARRAY : Value to write + URL to write
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**

## 12 - WriteString

- **Description:** Write a string on the DataSocket
- **Argin:**  
DEVVAR\_STRINGARRAY :
- **Argout:**  
DEV\_VOID : Value to write + URL to write on
- **Command allowed for:**

## 13 - WriteLongArray

- **Description:**
- **Argin:**  
DEVVAR\_LONGSTRINGARRAY :
- **Argout:**  
DEV\_VOID :

- **Command allowed for:**

## 14 - WriteDoubleArray

- **Description:**
- **Argin:**  
DEVVAR\_DOUBLESTRINGARRAY :
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**

## 15 - GetOpenedURL (for expert only)

- **Description:** Command to get the list of URL which are currently opened
- **Argin:**  
DEV\_VOID :
- **Argout:**  
DEVVAR\_STRINGARRAY :
- **Command allowed for:**

## 16 - ReadBool

- **Description:** Read the boolean value associated to the URL given in parameter.
- **Argin:**  
DEV\_STRING : URL to read
- **Argout:**  
DEV\_BOOLEAN : Boolean value read on the datasocket
- **Command allowed for:**

## 17 - WriteBool

- **Description:** Sets the data value of the DataSocket object associated to the URL given in parameter.

- **Argin:**  
DEVVAR\_LONGSTRINGARRAY : Value to write ,0<=> false , !0 <=> true) + URL
- **Argout:**  
DEV\_VOID :
- **Command allowed for:**

## 18 - CloseAllHandles

- **Description:** Forces the closure of all handles
  - **Argin:**  
DEV\_VOID :
  - **Argout:**  
DEV\_VOID :
  - **Command allowed for:**
- 

**ESRF - Software Engineering Group**