



TANGO
Device
Server

NeXus Reader User's Guide

NeXusReader Class

Revision: release_2_0_1 - Author: poirier
Implemented in C++

Introduction:

Class Inheritance:

- Tango::Device_3Impl
 - NeXusReader

Properties:

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

States:

States	
Names	Descriptions
ON	
OFF	

Attributes:

Scalar Attributes			
Attribute name	Data Type	R/W Type	Expert
rootDirectory	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
GetData	DEV_STRING	DEVVAR_STRINGARRAY
GetNodeChildList	DEV_STRING	DEV_STRING
ReleaseData	DEV_STRING	DEV_VOID
ReleaseFile	DEV_STRING	DEV_VOID
ReleaseAll	DEV_VOID	DEV_VOID
ReleaseAttribute	DEV_STRING	DEV_VOID
GetMetaData	DEV_STRING	DEV_STRING
SetRootDirectory	DEV_STRING	DEV_VOID
GetDirectoryList	DEV_STRING	DEV_STRING
Logon	DEV_STRING	DEV_VOID
Logoff	DEV_VOID	DEV_VOID
ChangePassword	DEV_STRING	DEV_VOID
GetInfo	DEV_STRING	DEV_STRING
GetDataSubset	DEVVAR_LONGSTRINGARRAY	DEVVAR_STRINGARRAY
GetFileSize	DEV_STRING	DEV_ULONG
GetGroupContent	DEV_STRING	DEVVAR_STRINGARRAY
GetDataEx	DEVVAR_STRINGARRAY	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:**
 - Tango::ON

- Tango::OFF

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::OFF

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::OFF

4 - GetData

- **Description:** Data path inside NeXus file
- **Argin:**
DEV_STRING : NeXus file path;Data path inside NeXus file
- **Argout:**
DEVVAR_STRINGARRAY : Attributes list
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

5 - GetNodeChildList

- **Description:** Parent path inside file
- **Argin:**
DEV_STRING : NeXus File Full Path;Parent path inside file
- **Argout:**

DEV_STRING : Node childs list in the form 'Name'

● **Command allowed for:**

- Tango::ON
- Tango::OFF

6 - ReleaseData

● **Description:** Path in nexus file

● **Argin:**

DEV_STRING : NeXus file full path;Path in nexus file

● **Argout:**

DEV_VOID :

● **Command allowed for:**

- Tango::ON
- Tango::OFF

7 - ReleaseFile

● **Description:**

● **Argin:**

DEV_STRING : NeXus file full path

● **Argout:**

DEV_VOID :

● **Command allowed for:**

- Tango::ON
- Tango::OFF

8 - ReleaseAll

● **Description:**

● **Argin:**

DEV_VOID :

● **Argout:**

DEV_VOID :

● **Command allowed for:**

- Tango::ON
- Tango::OFF

9 - ReleaseAttribute

- **Description:**
- **Argin:**
DEV_STRING : Dynamic attribute name
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

10 - GetMetaData

- **Description:** Data path inside NeXus file
- **Argin:**
DEV_STRING : NeXus file full path;Data path inside NeXus file
- **Argout:**
DEV_STRING : metadata string
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

11 - SetRootDirectory

- **Description:** Set the top level for directory browsing
- **Argin:**
DEV_STRING : directory path
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON

12 - GetDirectoryList

- **Description:** Get directory item list
- **Argin:**
DEV_STRING : path relative to root directory
- **Argout:**
DEV_STRING : item list in the form 'iteml...'
- **Command allowed for:**
 - Tango::ON

- Tango::OFF

13 - Logon

- **Description:**
- **Argin:**
DEV_STRING : Crypted password
- **Argout:**
DEV_VOID :
- **Command allowed for:**
- Tango::ON
- Tango::OFF

14 - Logoff

- **Description:**
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
- Tango::ON
- Tango::OFF

15 - ChangePassword

- **Description:**
- **Argin:**
DEV_STRING : crypted password
- **Argout:**
DEV_VOID :
- **Command allowed for:**
- Tango::ON

16 - GetInfo

- **Description:** Data path inside NeXus file
- **Argin:**
DEV_STRING : NeXus file path;Data path inside NeXus file
- **Argout:**
DEV_STRING : dataset information

- **Command allowed for:**

- Tango::ON
- Tango::OFF

17 - GetDataSubset

- **Description:** size,[i],[j]

- **Argin:**

DEVVAR_LONGSTRINGARRAY : NeXus file path;Data path inside NeXus file;size,[i],[j]

- **Argout:**

DEVVAR_STRINGARRAY : dynamic attribute name for the scan step

- **Command allowed for:**

- Tango::ON
- Tango::OFF

18 - GetFileSize

- **Description:**

- **Argin:**

DEV_STRING : file path

- **Argout:**

DEV_ULONG : file size in k-octets

- **Command allowed for:**

- Tango::ON
- Tango::OFF

19 - GetGroupContent

- **Description:** Data group path

- **Argin:**

DEV_STRING : NeXus file path;Data group path

- **Argout:**

DEVVAR_STRINGARRAY : Dynamic attributes list

- **Command allowed for:**

- Tango::ON
- Tango::OFF

20 - GetDataEx

- **Description:** Data path inside NeXus file
- **Argin:**
DEVVAR_STRINGARRAY : NeXus file path;Data path inside NeXus file
- **Argout:**
DEVVAR_STRINGARRAY : Attributes list
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

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NeXus Reader

Device Commands Description

NeXusReader 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 desctructor automatically calls the *delete_device()* method.
- **Argin:**
DEV_VOID : none.
- **Argout:**
DEV_VOID : none.
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

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::OFF

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::OFF

4 - GetData

- **Description:** Data path inside NeXus file

- **Argin:**

DEV_STRING : NeXus file path;Data path inside NeXus file

- **Argout:**

DEVVAR_STRINGARRAY : Attributes list

- **Command allowed for:**

- Tango::ON
- Tango::OFF

5 - GetNodeChildList

- **Description:** Parent path inside file

- **Argin:**

DEV_STRING : NeXus File Full Path;Parent path inside file

- **Argout:**

DEV_STRING : Node childs list in the form 'Name'

- **Command allowed for:**

- Tango::ON

- Tango::OFF

6 - ReleaseData

- **Description:** Path in nexus file
- **Argin:**
DEV_STRING : NeXus file full path;Path in nexus file
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

7 - ReleaseFile

- **Description:**
- **Argin:**
DEV_STRING : NeXus file full path
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

8 - ReleaseAll

- **Description:**
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

9 - ReleaseAttribute

- **Description:**
- **Argin:**
DEV_STRING : Dynamic attribute name
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

10 - GetMetaData

- **Description:** Data path inside NeXus file
- **Argin:**
DEV_STRING : NeXus file full path;Data path inside NeXus file
- **Argout:**
DEV_STRING : metadata string
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

11 - SetRootDirectory

- **Description:** Set the top level for directory browsing
- **Argin:**
DEV_STRING : directory path
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON

12 - GetDirectoryList

- **Description:** Get directory item list
- **Argin:**
DEV_STRING : path relative to root directory
- **Argout:**
DEV_STRING : item list in the form 'iteml...'
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

13 - Logon

- **Description:**
- **Argin:**
DEV_STRING : Crypted password
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

14 - Logoff

- **Description:**
- **Argin:**
DEV_VOID :
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

15 - ChangePassword

- **Description:**
- **Argin:**
DEV_STRING : crypted password
- **Argout:**
DEV_VOID :
- **Command allowed for:**
 - Tango::ON

16 - GetInfo

- **Description:** Data path inside NeXus file
- **Argin:**
DEV_STRING : NeXus file path;Data path inside NeXus file
- **Argout:**
DEV_STRING : dataset information
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

17 - GetDataSubset

- **Description:** size,[i],[j]
- **Argin:**
DEVVAR_LONGSTRINGARRAY : NeXus file path;Data path inside NeXus file;size,[i],[j]
- **Argout:**
DEVVAR_STRINGARRAY : dynamic attribute name for the scan step
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

18 - GetFileSize

- **Description:**
- **Argin:**
DEV_STRING : file path
- **Argout:**
DEV_ULONG : file size in k-octets
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

19 - GetGroupContent

- **Description:** Data group path
- **Argin:**
DEV_STRING : NeXus file path;Data group path
- **Argout:**
DEVVAR_STRINGARRAY : Dynamic attributes list
- **Command allowed for:**
 - Tango::ON
 - Tango::OFF

20 - GetDataEx

- **Description:** Data path inside NeXus file
 - **Argin:**
DEVVAR_STRINGARRAY : NeXus file path;Data path inside NeXus file
 - **Argout:**
DEVVAR_STRINGARRAY : Attributes list
 - **Command allowed for:**
 - Tango::ON
 - Tango::OFF
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