

## NXSConfigServer Tango Python Class

### Contents :

- [Description](#)
- [Properties](#)
- [Commands](#)
  - [State](#)
  - [Status](#)
  - [Open](#)
  - [Close](#)
  - [Components](#)
  - [Selections](#)
  - [InstantiatedComponents](#)
  - [DataSources](#)
  - [AvailableComponents](#)
  - [AvailableSelections](#)
  - [AvailableDataSources](#)
  - [StoreSelection](#)
  - [StoreComponent](#)
  - [StoreDataSource](#)
  - [CreateConfiguration](#)
  - [DeleteComponent](#)
  - [DeleteSelection](#)
  - [DeleteDataSource](#)
  - [SetMandatoryComponents](#)
  - [MandatoryComponents](#)
  - [UnsetMandatoryComponents](#)
  - [ComponentDataSources](#)
  - [ComponentsDataSources](#)
  - [ComponentsVariables](#)
  - [ComponentVariables](#)
  - [Merge](#)
  - [DependentComponents](#)
- [Attributes](#)
  - [XMLString](#)
  - [Selection](#)
  - [JSONSettings](#)
  - [Version](#)
  - [Variables](#)
  - [STEPDataSources](#)
- [States](#)

### NXSConfigServer Class Identification :

Contact : at null - null  
 Class Family :  
 Platform :  
 Bus :  
 Manufacturer :

### NXSConfigServer Class Inheritance :

- [Tango::DeviceImpl](#)
  - NXSConfigServer

Manufacturer ref. :

## **NXSConfigServer Class Description :**

# Configuration Server based on MySQL database

## **NXSConfigServer Properties :**

**There is no class properties**

Device Properties			
Name	Description	Type	Default Value
VersionLabel	version label	String	XCS

NXSConfigServer Class Commands				
Name	Input type	Output type	Level	Description
<a href="#">State</a>	DEV_VOID	DEV_STATE	OPERATOR	This command gets the device state (stored in its <i>device_state</i> data member) and returns it to the caller.
<a href="#">Status</a>	DEV_VOID	CONST_DEV_STRING	OPERATOR	This command gets the device status (stored in its <i>device_status</i> data member) and returns it to the caller.
<a href="#">Open</a>	DEV_VOID	DEV_VOID	OPERATOR	Opens connection to the database
<a href="#">Close</a>	DEV_VOID	DEV_VOID	OPERATOR	Closes connection into the database
<a href="#">Components</a>	DEVVAR_STRINGARRAY	DEVVAR_STRINGARRAY	OPERATOR	Returns a list of required components
<a href="#">Selections</a>	DEVVAR_STRINGARRAY	DEVVAR_STRINGARRAY	OPERATOR	Returns a list of required selections
<a href="#">InstantiatedComponents</a>	DEVVAR_STRINGARRAY	DEVVAR_STRINGARRAY	OPERATOR	Returns a list of required components
<a href="#">DataSources</a>	DEVVAR_STRINGARRAY	DEVVAR_STRINGARRAY	OPERATOR	Return a list of required DataSources
<a href="#">AvailableComponents</a>	DEV_VOID	DEVVAR_STRINGARRAY	OPERATOR	Returns a list of available component names
				Returns a list of

<a href="#">AvailableSelections</a>	DEV_VOID	DEVVAR_STRINGARRAY	OPERATOR	available selection names
<a href="#">AvailableDataSources</a>	DEV_VOID	DEVVAR_STRINGARRAY	OPERATOR	Returns a list of available DataSource names
<a href="#">StoreSelection</a>	DEV_STRING	DEV_VOID	OPERATOR	Stores the selection from XMLString
<a href="#">StoreComponent</a>	DEV_STRING	DEV_VOID	OPERATOR	Stores the component from XMLString
<a href="#">StoreDataSource</a>	DEV_STRING	DEV_VOID	OPERATOR	Stores the DataSource from XMLString
<a href="#">CreateConfiguration</a>	DEVVAR_STRINGARRAY	DEV_VOID	OPERATOR	Creates the NDTs configuration script from the given components. The result is stored in XMLString
<a href="#">DeleteComponent</a>	DEV_STRING	DEV_VOID	OPERATOR	Deletes the given component
<a href="#">DeleteSelection</a>	DEV_STRING	DEV_VOID	OPERATOR	Deletes the given selection
<a href="#">DeleteDataSource</a>	DEV_STRING	DEV_VOID	OPERATOR	Deletes the given datasource
<a href="#">SetMandatoryComponents</a>	DEVVAR_STRINGARRAY	DEV_VOID	OPERATOR	Sets the mandatory components
<a href="#">MandatoryComponents</a>	DEV_VOID	DEVVAR_STRINGARRAY	OPERATOR	Sets the mandatory components
<a href="#">UnsetMandatoryComponents</a>	DEVVAR_STRINGARRAY	DEV_VOID	OPERATOR	It removes the given components from the mandatory components
<a href="#">ComponentDataSources</a>	DEV_STRING	DEVVAR_STRINGARRAY	OPERATOR	returns a list of datasource names for a given component
<a href="#">ComponentsDataSources</a>	DEVVAR_STRINGARRAY	DEVVAR_STRINGARRAY	OPERATOR	returns a list of datasource names for a given components
<a href="#">ComponentsVariables</a>	DEVVAR_STRINGARRAY	DEVVAR_STRINGARRAY	OPERATOR	returns a list of variable names for a given components
<a href="#">ComponentVariables</a>	DEV_STRING	DEVVAR_STRINGARRAY	OPERATOR	returns a list of variable names for a given component
<a href="#">Merge</a>	DEVVAR_STRINGARRAY	DEV_STRING	OPERATOR	Merges give components
<a href="#">DependentComponents</a>	DEVVAR_STRINGARRAY	DEVVAR_STRINGARRAY	OPERATOR	returns a list of dependent component names for a given components

### **Command State :**

This command gets the device state (stored in its *device\_state* data member) and returns it to the caller.

State Definition		
Input Argument	Tango::DEV_VOID	none.
Output Argument	Tango::DEV_STATE	State Code
DisplayLevel	OPERATOR	..
Inherited	true	..
Abstract	true	..
Polling Period	Not polled	..
Command allowed for	All states	..

---

### **Command Status :**

This command gets the device status (stored in its *device\_status* data member) and returns it to the caller.

Status Definition		
Input Argument	Tango::DEV_VOID	none.
Output Argument	Tango::CONST_DEV_STRING	Status description
DisplayLevel	OPERATOR	..
Inherited	true	..
Abstract	true	..
Polling Period	Not polled	..
Command allowed for	All states	..

---

### **Command Open :**

Opens connection to the database

Open Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..

Command NOT allowed for	• RUNNING	..
-------------------------	-----------	----

---

### **Command Close :**

Closes connection into the database

Close Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	• ON • RUNNING	..

---

### **Command Components :**

Returns a list of required components

Components Definition		
Input Argument	Tango::DEVVAR_STRINGARRAY	list of component names
Output Argument	Tango::DEVVAR_STRINGARRAY	list of required components
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	• ON • RUNNING	..

---

### **Command Selections :**

Returns a list of required selections

Selections Definition		
Input Argument	Tango::DEVVAR_STRINGARRAY	list of selection names
Output Argument	Tango::DEVVAR_STRINGARRAY	list of required selections
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>	..

---

### **Command InstantiatedComponents :**

Returns a list of required components

InstantiatedComponents Definition		
Input Argument	Tango::DEVVAR_STRINGARRAY	list of component names
Output Argument	Tango::DEVVAR_STRINGARRAY	list of instantiated components
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>	..

---

### **Command DataSources :**

Return a list of required DataSources

DataSources Definition		
Input Argument	Tango::DEVVAR_STRINGARRAY	list of DataSource names
Output Argument	Tango::DEVVAR_STRINGARRAY	list of required DataSources
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..

Command NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>	..

**Command AvailableComponents :**

Returns a list of available component names

<b>AvailableComponents Definition</b>		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEVVAR_STRINGARRAY	list of available component names
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>	..

**Command AvailableSelections :**

Returns a list of available selection names

<b>AvailableSelections Definition</b>		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEVVAR_STRINGARRAY	list of available selection names
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>	..

**Command AvailableDataSources :**

Returns a list of available DataSource names

AvailableDataSources Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEVVAR_STRINGARRAY	list of available DataSource names
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>	..

---

### **Command StoreSelection :**

Stores the selection from XMLString

StoreSelection Definition		
Input Argument	Tango::DEV_STRING	selection name
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>	..

---

### **Command StoreComponent :**

Stores the component from XMLString

StoreComponent Definition		
Input Argument	Tango::DEV_STRING	component name
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..



Command NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>	..

---

### **Command StoreDataSource :**

Stores the DataSource from XMLString

<b>StoreDataSource Definition</b>		
Input Argument	Tango::DEV_STRING	datasource name
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>	..

---

### **Command CreateConfiguration :**

Creates the NDTs configuration script from the given components. The result is stored in XMLString

<b>CreateConfiguration Definition</b>		
Input Argument	Tango::DEVVAR_STRINGARRAY	list of component names
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>	..

---

### **Command DeleteComponent :**

Deletes the given component

DeleteComponent Definition		
Input Argument	Tango::DEV_STRING	component name
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"><li>• ON</li><li>• RUNNING</li></ul>	..

---

### **Command DeleteSelection :**

Deletes the given selection

DeleteSelection Definition		
Input Argument	Tango::DEV_STRING	selection name
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"><li>• ON</li><li>• RUNNING</li></ul>	..

---

### **Command DeleteDataSource :**

Deletes the given datasource

DeleteDataSource Definition		
Input Argument	Tango::DEV_STRING	datasource name
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..

Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>	..

---

### **Command SetMandatoryComponents :**

Sets the mandatory components

<b>SetMandatoryComponents Definition</b>		
Input Argument	Tango::DEVVAR_STRINGARRAY	component names
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> <li>• RUNNING</li> </ul>	..

---

### **Command MandatoryComponents :**

Sets the mandatory components

<b>MandatoryComponents Definition</b>		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEVVAR_STRINGARRAY	component names
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> <li>• RUNNING</li> </ul>	..

---

### **Command UnsetMandatoryComponents :**

It removes the given components from the mandatory components

<b>UnsetMandatoryComponents Definition</b>		
Input Argument	Tango::DEVVAR_STRINGARRAY	list of component names
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>	..

**Command ComponentDataSources :**

returns a list of datasource names for a given component

<b>ComponentDataSources Definition</b>		
Input Argument	Tango::DEV_STRING	component name
Output Argument	Tango::DEVVAR_STRINGARRAY	list of datasource names
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>	..

**Command ComponentsDataSources :**

returns a list of datasource names for a given components

<b>ComponentsDataSources Definition</b>		
Input Argument	Tango::DEVVAR_STRINGARRAY	component names
Output Argument	Tango::DEVVAR_STRINGARRAY	list of datasource names
DisplayLevel	OPERATOR	..
Inherited	false	..

Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>	..

### **Command ComponentsVariables :**

returns a list of variable names for a given components

<b>ComponentsVariables Definition</b>		
Input Argument	Tango::DEVVAR_STRINGARRAY	component names
Output Argument	Tango::DEVVAR_STRINGARRAY	list of variable names
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>	..

### **Command ComponentVariables :**

returns a list of variable names for a given component

<b>ComponentVariables Definition</b>		
Input Argument	Tango::DEV_STRING	component name
Output Argument	Tango::DEVVAR_STRINGARRAY	list of variable names
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>	..

### **Command Merge :**

Merges give components

Merge Definition		
Input Argument	Tango::DEVVAR_STRINGARRAY	list of component names
Output Argument	Tango::DEV_STRING	merged components
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>	..

**Command DependentComponents :**

returns a list of dependent component names  
for a given components

DependentComponents Definition		
Input Argument	Tango::DEVVAR_STRINGARRAY	component names
Output Argument	Tango::DEVVAR_STRINGARRAY	list of component names
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>	..

NXSConfigServer Class Attributes							
Name	Inherited	Abstract	Attr. type	R/W type	Data type	Level	Description
<a href="#">XMLString</a>	false	false	Scalar	READ_WRITE	Tango::DEV_STRING	EXPERT	It allows to pass XML strings into database during performing StoreComponent and StoreDataSource. \nMoreover

<a href="#">Selection</a>	false	false	Scalar	READ_WRITE	Tango::DEV_STRING	EXPERT	It allows to pass JSON strings into database during performing
<a href="#">JSONSettings</a>	false	false	Scalar	READ_WRITE	Tango::DEV_STRING	EXPERT	StoreSelection. The JSON string with parameters of MySQLdb.connect(...).
<a href="#">Version</a>	false	false	Scalar	READ	Tango::DEV_STRING	OPERATOR	Configuration version
<a href="#">Variables</a>	false	false	Scalar	READ_WRITE	Tango::DEV_STRING	OPERATOR	The JSON string with XML configuration variables
<a href="#">STEPDataSources</a>	false	false	Spectrum	READ_WRITE	Tango::DEV_STRING	OPERATOR	datasources to be switched into STEP mode during creating configuration process

**There is no dynamic attribute defined.**

**Attribute XMLString :**

It allows to pass XML strings into database during performing StoreComponent and StoreDataSource.  
 \nMoreover

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_STRING
Display Level	EXPERT
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read NOT allowed for	<ul style="list-style-type: none"> <li>ON</li> <li>RUNNING</li> </ul>
Write allowed for	All states

Attribute Properties	
label	XML configuration
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by	Not

**Attribute Selection :**

It allows to pass JSON strings into database during performing StoreSelection.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_STRING
Display Level	EXPERT
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>
Write allowed for	All states

Attribute Properties	
label	Selected Component
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

**Attribute JSONSettings :**

The JSON string with parameters of MySQLdb.connect(...).

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE

Attribute Properties	
label	Arguments of MySQLdb.connect(...)
unit	

Attribute Event Criteria	
Periodic	Not set
	Not



Data Type	Tango::DEV_STRING
Display Level	EXPERT
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read allowed for	All states
Write allowed for	All states

standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Relative Change	set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

**Attribute Version :**

Configuration version

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_STRING
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read NOT allowed for	<ul style="list-style-type: none"> <li>• ON</li> <li>• RUNNING</li> </ul>

Attribute Properties	
label	configuration version
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

**Attribute Variables :**

The JSON string with  
XML configuration variables

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_STRING
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read NOT allowed for	<ul style="list-style-type: none"> <li>RUNNING</li> </ul>
Write allowed for	All states

Attribute Properties	
label	XML configuration variables
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

**Attribute STEPDataSources :**

datasources to be switched  
into STEP mode during creating configuration process

Attribute Definition	
Attribute Type	Spectrum ( 4096 )
R/W Type	READ_WRITE
Data Type	Tango::DEV_STRING

Attribute Properties	
label	datasources to be switched into STEP mode
unit	
standard unit	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
	Not

Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states
Write allowed for	All states

display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Absolute Change	set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

NXSConfigServer Class States	
Name	Description
OPEN	Open connection to the database
ON	Server is ON
RUNNING	Performing a query