

Skippy Tango Python Class

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Skippy Class Identification :

Contact : at cells.es - sblanch
Class Family : Communication
Platform : All Platforms
Bus : Socket
Manufacturer : none
Manufacturer ref. :

Skippy Class Inheritance :

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

Skippy Class Description :

Standard Commands for Programmable Instruments (SCPI) DeviceServer

Skippy Properties :

There is no class properties

Device Properties			
Name	Description	Type	Default Value
Instrument	The name of the instrument to use	String	none
Port	In case of socket interface the port value can be changed	short	5025
NumChannels	Number of channels available in the instrument, if it has	short	0
NumFunctions	Number of functions available in the instrument, if it has	short	0
MonitoredAttributes	When the device is in RUNNING state, the attributes listed here will be monitored (having events) with a period said in the attribute TimeStampsThreshold (or different if specified with a : separator after the attrName)	String[]	none
AutoOn	When device startup, try an on() to connect to the instrument authomatically	boolean	True
AutoStart	When device startup, try an Start() to monitor attributes, if MonitoredAttributes is configuredc, authomatically	boolean	True
AutoStandby	When device startup, try an standby() to connect to the instrument authomatically.	boolean	True

Skippy Class Commands				
Name	Input type	Output type	Level	Description
State	DEV_VOID	DEV_STATE	OPERATOR	This command gets the device state (stored in its device_state data member) and returns it to the caller.
Status	DEV_VOID	CONST_DEV_STRING	OPERATOR	This command gets the device status (stored in its device_status data member) and returns it to the caller.
IDN	DEV_VOID	DEV_STRING	OPERATOR	Request identification to the instrument.
Start	DEV_VOID	DEV_BOOLEAN	OPERATOR	Start an active monitoring.
Stop	DEV_VOID	DEV_BOOLEAN	OPERATOR	Stop the active monitoring.
On	DEV_VOID	DEV_BOOLEAN	OPERATOR	Allow communication with the instrument.
				Release the

Off	DEV_VOID	DEV_BOOLEAN	OPERATOR	communication with the instrument.
Exec	DEV_STRING	DEV_STRING	EXPERT	evaluate python code inside the device server. This command can be very helpful and dangerous.
AddMonitoring	DEV_STRING	DEV_BOOLEAN	OPERATOR	Add an attribute to the list of monitored attributes
RemoveMonitoring	DEV_STRING	DEV_BOOLEAN	OPERATOR	Remove an attribute from the list of monitored attributes
SetMonitoringPeriod	DEVVAR_STRINGARRAY	DEV_BOOLEAN	OPERATOR	From the list of already monitored attributes, establish (or change) the period that it is checked.
GetMonitoringPeriod	DEV_STRING	DEV_FLOAT	OPERATOR	Get the period that is checked an attribute monitored.
CMD	DEV_STRING	DEV_STRING	EXPERT	Expert command for a direct send of a SCPI command and read the answer.
CMDfloat	DEV_STRING	DEVVAR_FLOATARRAY	EXPERT	Expert command for a direct send of a SCPI command and read the answer converted to a float list.
Standby	DEV_VOID	DEV_BOOLEAN	OPERATOR	Stablish communication with the instrument.

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	Device state
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	Device status
DisplayLevel	OPERATOR	..
Inherited	true	..
Abstract	true	..
Polling Period	Not polled	..
Command allowed for	All states	..

Command IDN :

Request identification to the instrument.

IDN Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_STRING	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none">• OFF• FAULT• INIT	..

Command Start :

Start an active monitoring.

Start Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_BOOLEAN	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> • OFF • RUNNING • FAULT • INIT • STANDBY 	..

Command Stop :

Stop the active monitoring.

Stop Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_BOOLEAN	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> • OFF • ON • FAULT • INIT • STANDBY 	..

Command On :

Allow communication with the instrument.

On Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_BOOLEAN	

DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> • ON • RUNNING • FAULT • INIT 	..

Command Off :

Release the communication with the instrument.

Off Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_BOOLEAN	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none"> • OFF • RUNNING • FAULT • INIT 	..

Command Exec :

evaluate python code inside the device server. This command can be very helpful and dangerous.

Exec Definition		
Input Argument	Tango::DEV_STRING	
Output Argument	Tango::DEV_STRING	
DisplayLevel	EXPERT	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..

		-
Command allowed for	All states	..

Command AddMonitoring :

Add an attribute to the list of monitored attributes

AddMonitoring Definition		
Input Argument	Tango::DEV_STRING	
Output Argument	Tango::DEV_BOOLEAN	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
		-
Command NOT allowed for	<ul style="list-style-type: none"> • OFF • FAULT • INIT 	..

Command RemoveMonitoring :

Remove an attribute from the list of monitored attributes

RemoveMonitoring Definition		
Input Argument	Tango::DEV_STRING	
Output Argument	Tango::DEV_BOOLEAN	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
		-
Command NOT allowed for	<ul style="list-style-type: none"> • OFF • FAULT • INIT 	..

Command SetMonitoringPeriod :

From the list of already monitored attributes, establish (or change) the period that it is checked.

SetMonitoringPeriod Definition		
Input Argument	Tango::DEVVAR_STRINGARRAY	
Output Argument	Tango::DEV_BOOLEAN	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none">• OFF• FAULT• INIT	..

Command GetMonitoringPeriod :

Get the period that is checked an attribute monitored.

GetMonitoringPeriod Definition		
Input Argument	Tango::DEV_STRING	
Output Argument	Tango::DEV_FLOAT	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command NOT allowed for	<ul style="list-style-type: none">• OFF• FAULT• INIT	..

Command CMD :

Expert command for a direct send of a SCPI command and read the answer.

CMD Definition	
Input Argument	Tango::DEV_STRING
Output Argument	Tango::DEV_STRING
DisplayLevel	EXPERT ..
Inherited	false ..
Abstract	false ..
Polling Period	Not polled ..
Command NOT allowed for	<ul style="list-style-type: none"> • OFF • FAULT • INIT ..

Command CMDfloat :

Expert command for a direct send of a SCPI command and read the answer converted to a float list.

CMDfloat Definition	
Input Argument	Tango::DEV_STRING
Output Argument	Tango::DEVVAR_FLOATARRAY
DisplayLevel	EXPERT ..
Inherited	false ..
Abstract	false ..
Polling Period	Not polled ..
Command NOT allowed for	<ul style="list-style-type: none"> • OFF • FAULT • INIT ..

Command Standby :

Stablish communication with the instrument.

Standby Definition	
Input Argument	Tango::DEV_VOID
Output Argument	Tango::DEV_BOOLEAN

DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

Skippy Class Attributes							
Name	Inherited	Abstract	Attr. type	R/W type	Data type	Level	Description
Idn	false	false	Scalar	READ	Tango::DEV_STRING	OPERATOR	Instrument identification
QueryWindow	false	false	Scalar	READ_WRITE	Tango::DEV_USHORT	EXPERT	When many attributes are requested at the same time, they are grouped in subqueries of this size
TimeStampsThreshold	false	false	Scalar	READ_WRITE	Tango::DEV_FLOAT	EXPERT	This value sets the threshold time to use a cached value or hardware read it

There is no dynamic attribute defined.

Attribute Idn :

Instrument identification

Attribute	Attribute	Attribute Event Criteria
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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"> • OFF • FAULT • INIT

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

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	false

Attribute QueryWindow :

When many attributes are requested at the same time, they are grouped in subqueries of this size

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_USHORT
Display Level	EXPERT
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	true
Write hardware at init.	true
Read	All states

Attribute Properties	
label	Query Window
unit	queries
standard unit	
display unit	
format	%2d
max_value	
min_value	1
max_alarm	
min_alarm	
max_warning	20
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	false

allowed for	
Write allowed for	All states

code	
Push DataReady event by user code	false

Attribute TimeStampsThreshold :

This value sets the threshold time to use a cached value or hardware read it

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ_WRITE
Data Type	Tango::DEV_FLOAT
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

Attribute Properties	
label	Time stamps threshold
unit	seconds
standard unit	
display unit	
format	%3.2g
max_value	3
min_value	0.1
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	false

Skippy Class States	
Name	Description
OFF	No connection established with the instrument.

ON	Connection established with the instrument.
RUNNING	Connection established and active monitoring.
ALARM	Reported errors from the instrument.
FAULT	Communication error with the instrument.
INIT	Initialization stage.
STANDBY	