



TANGO
Device
Server

TANGO Device Server User's Guide

Vibrations Class

**Revision: - Author: tnunez
Implemented in Python**

Introduction:

Class computing vibrations in Petra Hall.

Class Identification:

- **Contact** : at mail.desy.de - tnunez
- **Class Family** : Miscellaneous
- **Platform** : Unix Like
- **Bus** : Not Applicable

Class Inheritance:

- PyTango.Device_4Impl
 - Vibrations

Properties:

Device Properties		
Property name	Property type	Description
FilePath	Tango::DEV_STRING	Path to the directory containing the data from Device.
DeviceDirection	Tango::DEV_STRING	Identify the direction of the device in the room: nord (S1n), east (S1e) or z (S1z).

Device Properties Default Values:

Property Name	Default Values
FilePath	No default value
DeviceDirection	S1

There is no Class properties.

States:

States	
Names	Descriptions
ON	Reading and processing file.
FAULT	
STANDBY	Waiting for files.
ALARM	Exceptions in thread

Attributes:

Scalar Attributes			
Attribute name	Data Type	R/W Type	Expert
Device	DEV_STRING	READ	No
DataType	DEV_STRING	READ	No
SampleRate	DEV_FLOAT	READ	No
TimeOffset	DEV_FLOAT	READ	No
Oversampling	DEV_FLOAT	READ	No
AmpGain	DEV_FLOAT	READ	No
VTransmission	DEV_FLOAT	READ	No
MinFreq	DEV_FLOAT	READ	No
DeviceType	DEV_STRING	READ	No
MaxFreq	DEV_FLOAT	READ	No
NDataPoints	DEV_LONG	READ	No
TSample	DEV_FLOAT	READ	No
NDataPointsSample	DEV_LONG	READ	No
NAverage	DEV_FLOAT	READ	No
VMean	DEV_FLOAT	READ	No
VStd	DEV_FLOAT	READ	No
RMS1Hz	DEV_DOUBLE	READ	No
RMS2Hz	DEV_DOUBLE	READ	No
RMS5Hz	DEV_DOUBLE	READ	No
RMS10Hz	DEV_DOUBLE	READ	No
RMS20Hz	DEV_DOUBLE	READ	No
RMS50Hz	DEV_DOUBLE	READ	No
TimeAverage	DEV_DOUBLE	READ	No
SumPSDs	DEV_DOUBLE	READ	No
MaxSig	DEV_DOUBLE	READ	No
MinSig	DEV_DOUBLE	READ	No
Time0	DEV_STRING	READ	No
LocalTime	DEV_STRING	READ	No
CurrentFileName	DEV_STRING	READ	No

Spectrum Attributes			
Attribute name	Data Type	X Data Length	Expert
TimeAxis	DEV_DOUBLE	3000	No
Frequencies	DEV_DOUBLE	3000	No
FrequenciesSample	DEV_DOUBLE	3000	No
S	DEV_DOUBLE	3000	No
V	DEV_DOUBLE	3000	No
A	DEV_DOUBLE	3000	No
FftS	DEV_DOUBLE	3000	No
FftV	DEV_DOUBLE	3000	No
FftA	DEV_DOUBLE	3000	No
PSDS	DEV_DOUBLE	3000	No
PSDV	DEV_DOUBLE	3000	No
PSDA	DEV_DOUBLE	3000	No
RMSS	DEV_DOUBLE	3000	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

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::FAULT
 - Tango::STANDBY
 - 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::FAULT
 - Tango::STANDBY
 - 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::FAULT
 - Tango::STANDBY
 - Tango::ALARM

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