

## OSManager Tango Cpp Class

### Contents :

- [Description](#)
- [Properties](#)
- [Commands](#)
  - [State](#)
  - [Status](#)
  - [ImmediateShutdown](#)
  - [DifferedShutdown](#)
  - [ShutdownAndPowerOff](#)
  - [ShellExe](#)
  - [Reboot](#)
  - [KillProcessByPID](#)
  - [StartService](#)
  - [ReStartService](#)
  - [ReStartStarterService](#)
  - [ReStartNTPDaemon](#)
  - [GetOSVersion](#)
  - [SearchProcesses](#)
  - [ProcessInfos](#)
  - [ProcessModules](#)
- [Attributes](#)
  - [upTime](#)
  - [time](#)
  - [secondSince1970](#)
  - [cpuCharge](#)
  - [physicalMemoryUsed](#)
  - [swapUsed](#)
  - [virtualMemoryUsed](#)
  - [sortProcessesListBy](#)
  - [servicesList](#)
  - [processesList](#)
  - [doubledProcessesList](#)
  - [lastCpuLoad](#)
- [States](#)

### OSManager Class Identification :

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

### OSManager Class Inheritance :

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

## OSManager Class Description :

DeviceServer used to remotely access the operating system through TANGO.

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## OSManager Properties :

There is no class properties

There is no device properties

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OSManager 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="#">ImmediateShutdown</a>	DEV_VOID	DEV_VOID	OPERATOR	Initiates an immediate shutdown of the operating system As this is not possible to get a remote indication of the real state of shutdown, , you should wait a few seconds before turning power off the crate, so that you let the system gracefully shutdown
<a href="#">DifferedShutdown</a>	DEV_SHORT	DEV_VOID	OPERATOR	Initiates a shutdown after the number of seconds given as argument You should wait a few seconds before turning power off the crate to let the system gracefully shutdown
<a href="#">ShutdownAndPowerOff</a>	DEV_VOID	DEV_VOID	OPERATOR	Does an immediate shutdown and switch power off if possible Of course, the system must support the power-off

<a href="#">ShellExe</a>	DEVVAR_STRINGARRAY	DEV_VOID	OPERATOR	feature. execute a shell script with arguments as this : "cmd", "arg1 arg2 ..."  For Linux, you can add the `&` character to avoid CORBA timeout !
<a href="#">Reboot</a>	DEV_VOID	DEV_VOID	OPERATOR	Reboot system
<a href="#">KillProcessByPID</a>	DEV_ULONG	DEV_VOID	OPERATOR	Kill a process identified by its pID.
<a href="#">StartService</a>	DEV_STRING	DEV_VOID	OPERATOR	Start the specified service
<a href="#">ReStartService</a>	DEV_STRING	DEV_VOID	OPERATOR	Stop and start the specified service
<a href="#">ReStartStarterService</a>	DEV_VOID	DEV_VOID	OPERATOR	ReStart the local starter service
<a href="#">ReStartNTPDaemon</a>	DEV_VOID	DEV_VOID	OPERATOR	ReStarts the NTP Daemon service
<a href="#">GetOSVersion</a>	DEV_VOID	DEV_STRING	OPERATOR	Returns the OS version on which the device is running
<a href="#">SearchProcesses</a>	DEV_STRING	DEVVAR_STRINGARRAY	OPERATOR	Returns process(es) matching the pattern. This command is case insensitive.
<a href="#">ProcessInfos</a>	DEV_ULONG	DEVVAR_STRINGARRAY	OPERATOR	Return process informations such as : - exe name - command line - memory usage - peak memory usage - started at - ended at - ...
<a href="#">ProcessModules</a>	DEV_ULONG	DEVVAR_STRINGARRAY	OPERATOR	Process dlls loaded

### 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	..
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### **Command Status :**

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

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

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### **Command ImmediateShutdown :**

Initiates an immediate shutdown of the operating system

As this is not possible to get a remote indication of the real state of shutdown,

, you should wait a few seconds before turning power off the crate, so that you let the system gracefully shutdown

<b>ImmediateShutdown Definition</b>		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

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### **Command DifferedShutdown :**

Initiates a shutdown after the number of seconds given as argument  
 You should wait a few seconds before turning power off the crate  
 to let the system gracefully shutdown

<b>DifferedShutdown Definition</b>		
Input Argument	Tango::DEV_SHORT	number of seconds before shutdown
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

**Command ShutdownAndPowerOff :**

Does an immediate shutdown and switch power off if possible  
 Of course, the system must support the power-off feature.

<b>ShutdownAndPowerOff Definition</b>		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

**Command ShellExe :**

execute a shell script with arguments as this :  
 "cmd", "arg1 arg2 ..."

For Linux, you can add the `&` character to avoid CORBA timeout !

<b>ShellExe Definition</b>
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Input Argument	Tango::DEVVAR_STRINGARRAY	path to the shell script,argument1 , argument2 , ..]
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

### **Command Reboot :**

Reboot system

<b>Reboot Definition</b>		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

### **Command KillProcessByPID :**

Kill a process identified by its pID.

<b>KillProcessByPID Definition</b>		
Input Argument	Tango::DEV_ULONG	process ID
Output Argument	Tango::DEV_VOID	no argout
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

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**Command StartService :**

Start the specified service

<b>StartService Definition</b>		
Input Argument	Tango::DEV_STRING	name of the service to start
Output Argument	Tango::DEV_VOID	no argout
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

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**Command ReStartService :**

Stop and start the specified service

<b>ReStartService Definition</b>		
Input Argument	Tango::DEV_STRING	name of the service to restart
Output Argument	Tango::DEV_VOID	no argout
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

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**Command ReStartStarterService :**

ReStart the local starter service

<b>ReStartStarterService Definition</b>		
Input Argument	Tango::DEV_VOID	no argin
Output Argument	Tango::DEV_VOID	no argout
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

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### **Command ReStartNTPDaemon :**

ReStarts the NTP Daemon service

<b>ReStartNTPDaemon Definition</b>		
Input Argument	Tango::DEV_VOID	no argin
Output Argument	Tango::DEV_VOID	no argout
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

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### **Command GetOSVersion :**

Returns the OS version on which the device is running

<b>GetOSVersion Definition</b>		
Input Argument	Tango::DEV_VOID	no argin
Output Argument	Tango::DEV_STRING	OS version
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..



Command allowed for	All states	..
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### **Command SearchProcesses :**

Returns process(es) matching the pattern.  
This command is case insensitive.

<b>SearchProcesses Definition</b>		
Input Argument	Tango::DEV_STRING	Pattern to found
Output Argument	Tango::DEVVAR_STRINGARRAY	List of process(es) matching the pattern
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

### **Command ProcessInfos :**

Return process informations such as :

- exe name
- command line
- memory usage
- peak memory usage
- started at
- ended at
- ...

<b>ProcessInfos Definition</b>		
Input Argument	Tango::DEV_ULONG	Process PID
Output Argument	Tango::DEVVAR_STRINGARRAY	Process Informations
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

**Command ProcessModules :**

Process dlls loaded

ProcessModules Definition		
Input Argument	Tango::DEV_ULONG	Process pid
Output Argument	Tango::DEVVAR_STRINGARRAY	List of loaded modules
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

OSManager Class Attributes							
Name	Inherited	Abstract	Attr. type	R/W type	Data type	Level	Description
<a href="#">upTime</a>	false	false	Scalar	READ	Tango::DEV_STRING	OPERATOR	
<a href="#">time</a>	false	false	Scalar	READ	Tango::DEV_STRING	OPERATOR	gives the date of the day, and the current CPU hour.
<a href="#">secondSince1970</a>	false	false	Scalar	READ	Tango::DEV_LONG	OPERATOR	gives the number of seconds elapsed since 1970
<a href="#">cpuCharge</a>	false	false	Scalar	READ	Tango::DEV_SHORT	OPERATOR	The cpu usage in percent.
<a href="#">physicalMemoryUsed</a>	false	false	Scalar	READ	Tango::DEV_DOUBLE	OPERATOR	Total physical memory used (%).
<a href="#">swapUsed</a>	false	false	Scalar	READ	Tango::DEV_DOUBLE	OPERATOR	Swap used (%).
<a href="#">virtualMemoryUsed</a>	false	false	Scalar	READ	Tango::DEV_DOUBLE	OPERATOR	Virtual memory used in percent.
							Specifies how to sort the processes list.\nExpected

<a href="#">sortProcessesListBy</a>	false	false	Scalar	READ_WRITE	Tango::DEV_STRING	OPERATOR	values :\n-> For *nix OS\n- PID\n- EXENAME: lexicographic order\n- MEMORY (actual process memory used)\n- DEFAULT : length of the entire string\n- THREAD (number of process threads)\n\n-> For win32 : above list +\n- PEAK (max memory used per
<a href="#">servicesList</a>	false	false	Spectrum	READ	Tango::DEV_STRING	OPERATOR	process)\n\n\n Show all services stopped or running on this machine
<a href="#">processesList</a>	false	false	Spectrum	READ	Tango::DEV_STRING	OPERATOR	Show all processes running on this machine
<a href="#">doubledProcessesList</a>	false	false	Spectrum	READ	Tango::DEV_STRING	OPERATOR	List of doubled processes if any.
<a href="#">lastCpuLoad</a>	false	false	Spectrum	READ	Tango::DEV_LONG	OPERATOR	The last cpu load (last hour)

**There is no dynamic attribute defined.**

**Attribute upTime :**

Attribute Definition	
Attribute Type	Scalar

Attribute Properties	
label	

Attribute Event Criteria	
Periodic	Not set

R/W Type	READ
Data Type	Tango::DEV_STRING
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states

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

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 time :**

gives the date of the day, and the current CPU hour.

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 allowed for	All states

Attribute Properties	
label	time
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 secondSince1970 :**

gives the number of seconds elapsed since 1970

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_LONG
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states

Attribute Properties	
label	time since 1970
unit	s
standard unit	s
display unit	s
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 cpuCharge :**

The cpu usage in percent.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_SHORT
Display Level	OPERATOR
Inherited	false

Attribute Properties	
label	cpu charge
unit	%
standard unit	
display unit	%
format	%d

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set

Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states

max_value	100
min_value	0
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

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 physicalMemoryUsed :**

Total physical memory used (%).

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states

Attribute Properties	
label	physical memory used
unit	%
standard unit	%
display unit	%
format	%4.2f
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 swapUsed :**

Swap used (%).

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states

Attribute Properties	
label	swap used
unit	%
standard unit	%
display unit	%
format	%4.2f
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 virtualMemoryUsed :**

Virtual memory used in percent.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false

Attribute Properties	
label	virtual memory used
unit	%
standard unit	%
display unit	%
format	%4.2f
max_value	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set

Polling Period	Not polled
Memorized	Not set
Read allowed for	All states

min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

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 sortProcessesListBy :**

Specifies how to sort the processes list.  
 Expected values :  
 -> For \*nix OS  
 - PID  
 - EXENAME: lexicographic order  
 - MEMORY (actual process memory used)  
 - DEFAULT : length of the entire string  
 - THREAD (number of process threads)  
 -> For win32 : above list +  
 - PEAK (max memory used per process)

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 allowed for	All states
Write allowed for	All states

Attribute Properties	
label	sort processes list by
unit	
standard unit	
display unit	
format	%s
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 servicesList :**

Show all services stopped or running on this machine

Attribute Definition	
Attribute Type	Spectrum ( 1024 )
R/W Type	READ
Data Type	Tango::DEV_STRING
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states

Attribute Properties	
label	services list
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 processesList :**

Show all processes running on this machine

Attribute Definition	
Attribute Type	Spectrum ( 1024 )
R/W Type	READ
Data Type	Tango::DEV_STRING
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled

Attribute Properties	
label	processes list
unit	
standard unit	
display unit	
format	
max_value	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set

Memorized	Not set
Read allowed for	All states

min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

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 doubledProcessesList :**

List of doubled processes if any.

<b>Attribute Definition</b>	
Attribute Type	Spectrum ( 1024 )
R/W Type	READ
Data Type	Tango::DEV_STRING
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states

<b>Attribute Properties</b>	
label	doubled processes list
unit	
standard unit	
display unit	
format	%s
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

<b>Attribute Event Criteria</b>	
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 lastCpuLoad :**

The last cpu load (last hour)

Attribute Definition	
Attribute Type	Spectrum ( 10800 )
R/W Type	READ
Data Type	Tango::DEV_LONG
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states

Attribute Properties	
label	last cpu load
unit	%
standard unit	%
display unit	%
format	%3.1d
max_value	100
min_value	0
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

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**There is no state defined**