HostInfo Tango Cpp Class

Contents :

HostInfo Class Identification :

Contact   : at esrf.fr - broquet
Class Family   : Miscellaneous(specfic ESRF)
Platform   : Unix Like
Bus   : Not Applicable
Manufacturer   : none
Manufacturer ref. :

HostInfo Class Inheritance :

- Tango::DeviceImpl
    - HostInfo

HostInfo Class Description :

The class collects some hardware information about the host on which it`s running.

HostInfo Properties :

Class Properties			
Name	**Description**	**Type**	**Default Value**
pciDeviceList	This property gives the list of PCI devices known (IEEE1394, Serial Communication ...) The DS scan the PCI bus and compare VendorID and DeviceID with those listed in the property. All Intel PCI devices are ignored. Other ``motherboard`` PCI Devices as Broadcom Ethernet device can be ignored. Add it in the code (read_pciDevices() method). The syntax of a PCI device item is: vendorIDdeviceID description Ex: 1093c801 National Instruments : PCI-GPIB	String[]	none
osSupported	This property defined the list of Operating System on which this DS will run. !!! Be Careful !!! : The method setting the OS name is based on the /etc/issue file. So be sure the items of the property are the same as the OS name found in /etc/issue. For instance, if the file /etc/issue gives ``Debian GNU/Linux 7.0 (final)`` don`t put ``debian`` in the property array, but ``Debian``	String[]	none

Device Properties			
Name	**Description**	**Type**	**Default Value**
pciDeviceList	This property gives the list of PCI devices known (IEEE1394, Serial Communication ...) The DS scan the PCI bus and compare VendorID and DeviceID with those listed in the property. All Intel PCI devices are ignored. Other ``motherboard`` PCI Devices as Broadcom Ethernet device can be ignored. Add it in the code (read_pciDevices() method) The syntax of a PCI device item is: vendorIDdeviceID description Ex: 1093c801 National Instruments : PCI-GPIB	String[]	none
osSupported	This property defined the list of Operating System on which this DS will run. !!! Be Careful !!! : The method setting the OS name is based on the /etc/issue file. So be sure the items of the property are the same as the OS name found in /etc/issue. For instance, if the file /etc/issue gives ``Debian GNU/Linux 7.0 (final)`` don`t put ``debian`` in the property array, but ``Debian``.	String[]	none

HostInfo 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.
saveStatus	DEV_VOID	DEV_VOID	OPERATOR	Save status in database. It puts a device property called LastStatus containing the status value. The status contains all attributes value. The property is overwritten when calling this command.

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 saveStatus :

Save status in database. It puts a device property called LastStatus containing the status value. The status contains all attributes value. The property is overwritten when calling this command.

saveStatus Definition		
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	..

HostInfo Class Attributes							
Name	**Inherited**	**Abstract**	**Attr. type**	**R/W type**	**Data type**	**Level**	**Description**
kernelVersion	false	false	Scalar	READ	Tango::DEV_STRING	OPERATOR	Version of the kernel running on the host followed by the Operating System architecture (32 or 64bits).
cpuArchitecture	false	false	Scalar	READ	Tango::DEV_STRING	OPERATOR	CPU architecture (32 or 64 bits)
osDistribution	false	false	Scalar	READ	Tango::DEV_STRING	OPERATOR	Operating System distribution. This attribute is based on the /etc/issue file of standard Linux distribution. This attribute uses the property osSupported. It tries to find the strings defined in osUpported in the /etc/issue file. If one of the items is found, the release is concatenated. Otherwise, the attribute value is Unsupported. It is very important to check the spelling of the property items compared to

							the /etc/issue file.
hostType	false	false	Scalar	READ	Tango::DEV_STRING	OPERATOR	Check if the host is a VME. Otherwise, it is set to Rackable PC.
netInterface	false	false	Scalar	READ	Tango::DEV_STRING	OPERATOR	Network Interface. Gives the interface name with the corresponding IP Address and MAC Address.
upTime	false	false	Scalar	READ	Tango::DEV_STRING	OPERATOR	Time from last boot up.
pciDevices	false	false	Scalar	READ	Tango::DEV_STRING	OPERATOR	List of PCI devices plugged on the host. For each device, it compares if it is a motherboard device as INTEL device or BROADCOM ethernet controller. The comparison is done by Vendor ID. The Vendor ID of motherboard device is defined as macro in the code. If a motherboard device is found, it is ignored. If the PCI device is not a motherboard

									device, it is compared with the PCI devices defined in the property pciDeviceList. If the comparison failed, the PCI device is unknown.

There is no dynamic attribute defined.

Attribute kernelVersion :

Version of the kernel running on the host followed by the Operating System architecture (32 or 64bits).

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	Kernel Version
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	

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

delta_val			Push Change event by user code	false
			Push Archive event by user code	false
			Push DataReady event by user code	false

Attribute cpuArchitecture :

CPU architecture (32 or 64 bits)

Attribute Definition			Attribute Properties			Attribute Event Criteria	
Attribute Type	Scalar		label	CPU Architecture		Periodic	Not set
R/W Type	READ		unit			Relative Change	Not set
Data Type	Tango::DEV_STRING		standard unit			Absolute Change	Not set
Display Level	OPERATOR		display unit				
Inherited	false		format			Archive Periodic	Not set
Abstract	false		max_value			Archive Relative Change	Not set
Polling Period	Not polled		min_value			Archive Absolute Change	Not set
Memorized	Not set		max_alarm				
			min_alarm			Push Change event by user code	false
Read allowed for	All states		max_warning			Push Archive event by user code	false
			min_warning			Push DataReady event by user code	false
			delta_time				
			delta_val				

Attribute osDistribution :

Operating System distribution. This attribute is based on the /etc/issue file of standard Linux distribution.
This attribute uses the property osSupported. It tries to find the strings defined in osUpported in the /etc/issue file. If one of the items is found, the release is concatenated.
Otherwise, the attribute value is Unsupported. It is very important to check the spelling of the property items compared to the /etc/issue file.

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	OS Distribution
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	false

Attribute hostType :

Check if the host is a VME. Otherwise, it is set to Rackable PC.

Attribute Definition			Attribute Properties			Attribute Event Criteria	
Attribute Type	Scalar		label	Host Type		Periodic	Not set
R/W Type	READ		unit			Relative Change	Not set
Data Type	Tango::DEV_STRING		standard unit			Absolute Change	Not set
Display Level	OPERATOR		display unit				
Inherited	false		format			Archive Periodic	Not set
Abstract	false		max_value			Archive Relative Change	Not set
Polling Period	Not polled		min_value			Archive Absolute Change	Not set
Memorized	Not set		max_alarm				
			min_alarm			Push Change event by user code	false
Read allowed for	All states		max_warning			Push Archive event by user code	false
			min_warning			Push DataReady event by user code	false
			delta_time				
			delta_val				

Attribute netInterface :

Network Interface. Gives the interface name with the corresponding IP Address and MAC Address.

Attribute Definition			Attribute Properties			Attribute Event Criteria	
Attribute Type	Scalar		label	Network Interface		Periodic	Not set
R/W Type	READ		unit			Relative Change	Not

Data Type	Tango::DEV_STRING
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read 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	

	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 upTime :

Time from last boot up.

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_STRING
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	10000
Memorized	Not set

Attribute Properties	
label	UP Time
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	

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	Not

Read allowed for	All states

min_warning	
delta_time	
delta_val	

Change	set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	false

Attribute pciDevices :

List of PCI devices plugged on the host.
For each device, it compares if it is a motherboard device as INTEL device or BROADCOM ethernet controller. The comparison is done by Vendor ID.
The Vendor ID of motherboard device is defined as macro in the code.
If a motherboard device is found, it is ignored. If the PCI device is not a motherboard device, it is compared with the PCI devices defined in the property pciDeviceList. If the comparison failed, the PCI device is unknown.

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	PCI Devices
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	false

There is no state defined