

# 1 HP Insight Manager WBEM Fibre Channel Host Bus Adapter

## Description

The HP Insight Management Web-Based Enterprise Management (WBEM) Fibre Channel Host Bus Adapter Profile describes the behavior of Fibre Channel host adapters supporting the SCSI (Fibre Channel Protocol) command set. A Fibre Channel (FC) adapter used in a host system is called a Host Bus Adapter (HBA). An HBA is a physical device that contains one or more Fibre Channel ports. A single system can contain one or more HBAs.

This provider implements the following profiles and installs the necessary files:

Profile Name	Organization	Version
SNIA SMI-S FC HBA Profile, Host book	Storage Networking Industry Association (SNIA)	1.4.0 r1
HP FC HBA Profile	HP WBEM TC	1.0

For each hardware architecture listed, this provider requires the following distributions

Requirements	HP Integrity managed servers	SLES 10 and later
		RHEL 5.0 and later
	HP ProLiant managed servers	SLES 11 and later
		RHEL 5.3 and later

Release History	Initial release with HP Insight Management Providers for Linux v2.0.
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## 1-1 Setting Up the Provider

Installing the Provider	There are no special installation instructions for this provider. It is installed by default as part of the HP Insight Management WBEM providers.
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Configuring the Provider	This provider does not accept specific configuration adjustments beyond standard HP Insight Management WBEM support.
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## 1-2 Using the Provider

### Namespaces Supported by the Provider

This provider returns instances in the `root/hpq` namespace.

### Schema Supported by the Provider

This provider supports the following classes:

- `SMX_FCHBAFCPort`
- `SMX_FCHBAPortController`
- `SMX_FCHBAFCPortStatistics`
- `SMX_FCHBALogicalPortGroup`
- `SMX_FCHBAPhysicalPackage`
- `SMX_FCHBAProduct`
- `SMX_FCHBASoftwareIdentityDrv`
- `SMX_FCHBAFirmwareIdentityFW`
- `SMX_FCHBAFirmwareIdentityBIOS`
- `SMX_FCHBAGroupSystemSpecificCollection`
- `SMX_FCHBAComputerSystemFCPort`
- `SMX_FCHBAComputerSystemPortController`
- `SMX_FCHBAComputerSystemLogicalPortGroup`
- `SMX_FCHBAComputerSystemSoftwareIdentityDrv`
- `SMX_FCHBAFCPortFCPortStatistics`
- `SMX_FCHBAFCPortLogicalPortGroup`
- `SMX_FCHBAPortControllerFCPort`
- `SMX_FCHBAPhysicalPackagePortController`
- `SMX_FCHBASoftwareIdentityDrvPortController`
- `SMX_FCHBAPortControllerFirmwareIdentityFW`
- `SMX_FCHBAPortControllerFirmwareIdentityBIOS`
- `SMX_FCHBAProductPhysicalComponent`
- `SMX_FCHBASystemPackaging`

- SMX\_FCHBAGroupHostedCollection
- SMX\_FCHBAFCPortGroupSystemSpecific
- SMX\_FCHBALocation
- SMX\_FCHBAPhysicalElementLocation

The tables in the following sections describe the properties of the supported classes. The classes are categorized by the class or superclass that defines the property, the first column is the Property Name (including type and units) and the second column describes how the provider determines the properties implementation. When the Property Implementation value is a number, the number given is the default behavior and the Managed Object Format interpretation is within parenthesis. If other values are returned, a problem is indicated.

Unless otherwise noted, all of the property implementation values given are for HP ProLiant and HP Integrity (cellular and non-cellular) systems. The location related properties and implementation values are determined based on the server type so they may differ.

## 1-2-1 SMX\_FCHBAComputerSystem

SMX\_FCHBAComputerSystem is used to identify classes that represent all Fibre Channel ports.

Property Name	Property Implementation
<b>CIM_ManagedElement</b>	
Caption	Fibre Channel System
ElementName	Fibre Channel System
<b>CIM_ManagedSystemElement</b>	
Name	GUID
OperationalStatus[0]	0 (Unknown) 2 (OK) 6 (Error) 10 (Stopped)
StatusDescriptions[0]	Unknown OK Stopped Error
<b>CIM_LogicalElement</b>	
<b>CIM_EnabledLogicalElement</b>	
EnabledDefault	2 (Enabled)
EnabledState	5 (Not Applicable)

Property Name	Property Implementation
RequestedState	12 (Not Applicable)
<b>CIM_Systems</b>	
CreationClassName	SMX_FCHBAComputerSystem
NameFormat	Other
<b>CIM_ComputerSystem</b>	
Dedicated	0
IdentifyingDescriptions[0]	HPQ:GUID
OtherIdentifyingInfo[0]	GUID

## 1-2-2 SMX\_FCHBAFCPort Class

The SMX\_FCHBAFCPort class implements the HPFCHBA\_FCPort class is used to represent a FC port device.

The following table lists the properties implemented.

Property Name	Value
<b>CIM_ManagedElement</b>	
ElementName	<p>Fibre Channel Port &lt;port controller number&gt; &lt;-port number&gt;</p> <p>Where: &lt;FC port controller number&gt; is the associated FC port controller instance number; &lt;-port number&gt; is the FC port number and is only added when the associated FC port controller has multiple FC ports.</p>
<b>CIM_ManagedSystemElement</b>	
OperationalStatus[0]	<p>0 (Unknown)</p> <p>2 (OK-Online)</p> <p>6 (Error)</p> <p>10 (Stopped)</p> <p>11 (In Service)</p>

Property Name	Value
StatusDescriptions[0]	Unknown OK-Online Stopped Offline Stopped Bypassed Stopped Diagnostics Stopped Link down Error
<b>CIM_LogicalElement</b>	
<b>CIM_EnabledLogicalElement</b>	
EnabledDefault	2 (Enabled)
EnabledState	5 (Not Applicable)
RequestedState	12 (Not Applicable)
<b>CIM_LogicalDevice</b>	
CreationClassName	SMX_FCHBAFCPort
DeviceID	Opaque value.
SystemName	Opaque value.
SystemCreationClassName	SMX_FCHBAComputerSystem
<b>CIM_LogicalPort</b>	
MaxSpeed	One of (in Bits per Second): 0 1000000000 2000000000 10000000000

Property Name	Value
OtherPortType	Other Not present Fabric Public Loop FL Port Fabric Port Fabric expansion port Generic Fabric Port Private Loop Point to Point
PortType	1 (Other)
Speed	One of (in Bits per Second): 0 1000000000 2000000000 10000000000
UsageRestriction	4 (not restricted)
<b>CIM_NetworkPort</b>	
LinkTechnology	4 (FC)
PermanentAddress	Port WWN
PortNumber	Port number.
SupportedMaximumTransmissionUnit	Port maximum frame size.

### 1-2-3 SMX\_FCHBAPortController Class

The `SMX_FCHBAPortController` class represents a logical device corresponding to a hardware network port controller.

The following table lists the properties implemented.

Property Name	Value
<b>CIM_ManagedElement</b>	
ElementName	Product Name

Property Name	Value
<b>CIM_ManagedSystemElement</b>	
Name	NodeWWN
<b>CIM_LogicalElement</b>	
<b>CIM_EnabledLogicalElement</b>	
EnabledDefault	2 (Enabled)
EnabledState	5 (Not Applicable)
RequestedState	12 (Not Applicable)
<b>CIM_LogicalDevice</b>	
CreationClassName	SMX_FCHBAPortController
DeviceID	Node WWN:SerialNumber:<instanceNum> Where: <instanceNum> is the port controller instance number for the same adapter.
SystemCreationClassName	SMX_FCHBAComputerSystem
SystemName	Opaque
<b>CIM_Controller</b>	
<b>CIM_PortController</b>	
ControllerType	4 (FC)

## 1-2-4 SMX\_FCHBAFCPortStatistics Class

The SMX\_FCHBAFCPortStatistics class represents statistics for a FC port. .

The following table lists the properties implemented and the HBAAPI\_PORTSTATISTICS prefix refers to the HBA API HBA\_PORTSTATISTICS structure. This information comes directly from the HBA and is not altered.

Property Name	Value
<b>CIM_ManagedElement</b>	
ElementName	Product name
<b>CIM_StatisticalData</b>	
InstanceID	Opaque

Property Name	Value
SampleInterval	0
<b>CIM_NetworkPortStatistics</b>	
BytesTransmitted	HBAAPI_PORTSTATISTICS.TxWords
BytesReceived	HBAAPI_PORTSTATISTICS.RxWords
PacketsTransmitted	HBAAPI_PORTSTATISTICS.TxFrames
PacketsReceived	HBAAPI_PORTSTATISTICS.RxFrames
<b>CIM_FCPortStatistics</b>	
CRCErrors	HBAAPI_PORTSTATISTICS.InvalidCRCCount
DumpedFrames	HBAAPI_PORTSTATISTICS.DumpedFrames
ErrorFrames	HBAAPI_PORTSTATISTICS.ErrorFrames
InvalidTransmissionWords	HBAAPI_PORTSTATISTICS.InvalidTxWordCount
LinkFailures	HBAAPI_PORTSTATISTICS.LinkFailureCount
LIPCount	HBAAPI_PORTSTATISTICS.LIPCount
LossOfSignalCounter	HBAAPI_PORTSTATISTICS.LossOfSignalCount
LossOfSyncCounter	HBAAPI_PORTSTATISTICS.LossOfSyncCount
NOSCount	HBAAPI_PORTSTATISTICS.NOSCount
PrimitiveSeqProtocolErrCount	HBAAPI_PORTSTATISTICS.PrimitiveSeqProtocolErrCount

## 1-2-5 SMX\_FCHBALogicalPortGroup Class

The `SMX_FCHBALogicalPortGroup` class is a collection of one or more ports logically grouped for administrative and discovery/topology purposes.



The following table lists the properties implemented.

Property Name	Value
<b>CIM_ManagedElement</b>	
Description	Grouping of all FC Ports for this HBA
Caption	Logical Port Group
ElementName	Logical Port Group
<b>CIM_Collection</b>	
<b>CIM_SystemSpecificCollection</b>	
InstanceID	Opaque
<b>CIM_LogicalPortGroup</b>	
Name	NodeWWN
NameFormat	WWN

## 1-2-6 SMX\_FCHBAPhysicalPackage Class

The SMX\_FCHBAPhysicalPackage class represents the physical elements of the associated FC port controller.

The following table lists the properties implemented.

Property Name	Value
<b>CIM_ManagedElement</b>	
ElementName	Product Name
<b>CIM_ManagedSystemElement</b>	
Name	NodeWWN
OperationalStatus[]	1 (Other) 2 (OK) 3 (Degraded) 6 (Error)
<b>CIM_PhysicalElement</b>	
CreationClassName	SMX_FCHBAPhysicalPackage

Property Name	Value
Manufacturer	Manufacturer
Model	Model
OtherIdentifyingInfo	Location; PCI Slot <x> Where: <x> is the PCI slot number OR PCI Mezzanine=<x> where <x> is the Mezzanine slot number.
SerialNumber	Serial Number
Tag	NodeWWN: <instanceNum> Where: <instanceNum> is the port controller instance number for the same adapter
Version	Board Version or N/A when not available
<b>CIM_PhysicalPackage</b>	
RemovalConditions	2 (Not Applicable)

## 1-2-7 SMX\_FCHBAPProduct Class

The SMX\_FCHBAPProduct class is used to aggregate physical element of the FC HBA.

The following table lists the properties implemented and the HBAAPI\_ADAPTERATTRIBUTES prefix refers to the HBA API HBA\_ADAPTERATTRIBUTES structure. This information comes directly for the HBA and is not altered

Property Name	Value
<b>CIM_ManagedElement</b>	
ElementName	Product Name
<b>CIM_Product</b>	
IdentifyingNumber	HBAAPI_ADAPTERATTRIBUTES.VendorSpecificID
Name	NodeWWN: <instanceNum> Where: <instanceNum> is the port controller instance number for the same adapter
Vendor	Manufacturer
Version	F/W Version of HBA or N/A when not available

## 1-2-8 SMX\_FCHBASoftwareIdentityDrv Class

The SMX\_FCHBASoftwareIdentityDrv class represents adapter software associated with the FC port controller.

The following table lists the properties implemented.

Property Name	Value
<b>CIM_ManagedElement</b>	
Caption	FCHBA Driver
Description	<Product_Name> Device Driver Where: <Product_Name> is the product name of the HBA.
ElementName	FCHBA Driver
<b>CIM_ManagedSystemElement</b>	
Name	NodeWWN
<b>CIM_LogicalElement</b>	
<b>CIM_SoftwareIdentity</b>	
ClassificationDescriptions	FCHBA Driver
Classifications	2 (Driver)
InstanceID	HPQ:NodeWWN:<instanceNum> Where: <instanceNum> is the port controller instance number for the same adapter
Manufacturer	Manufacturer
VersionString	File version of the Driver.

## 1-2-9 SMX\_FCHBAFirmwareIdentityFW Class

The SMX\_FCHBAFirmwareIdentityFW class represents adapter firmware associated with the FC port controller.

The following table lists the properties implemented.

Property Name	Value
<b>CIM_ManagedElement</b>	
Caption	FCHBA Firmware

Property Name	Value
Description	FCHBA Firmware details for <i>&lt;Model_Name&gt;</i> Where: <i>&lt;Model_Name&gt;</i> is the model name of the HBA.
ElementName	FCHBA Firmware
<b>CIM_ManagedSystemElement</b>	
Name	NodeWWN
<b>CIM_LogicalElement</b>	
<b>CIM_SoftwareIdentity</b>	
ClassificationDescriptions	FCHBA Firmware
Classifications	10 (firmware)
InstanceID	HPQ:NodeWWN:<instanceNum> Where: <i>&lt;instanceNum&gt;</i> is the port controller instance number for the same adapter
Manufacturer	Manufacturer
SerialNumber	Serial number
VersionString	Firmware version

## 1-2-10 SMX\_FCHBAFirmwareIdentityBIOS Class

The SMX\_FCHBAFirmwareIdentityBIOS class represents adapter BIOS associated with the FC port controller.

The following table lists the properties implemented.

Property Name	Value
<b>CIM_ManagedElement</b>	
Caption	FCHBA Option ROM
Description	FCHBA Option ROM detail for <i>&lt;Model_Name&gt;</i> Where: product name is the <i>Model_Name</i> of the HBA.
ElementName	FCHBA Option ROM
<b>CIM_ManagedSystemElement</b>	

Property Name	Value
Name	NodeWWN
<b>CIM_LogicalElement</b>	
<b>CIM_SoftwareIdentity</b>	
ClassificationDescriptions	FCHBA Option ROM
Classifications	11 (bios/fc)
InstanceID	HPQ:NodeWWN:<instanceNum> Where: <instanceNum> is the port controller instance number for the same adapter
Manufacturer	Manufacturer
VersionString	BIOS Version as reported by HBA
TargetTypes	HBA BIOS UNKNOWN
SerialNumber	Serial Number
MajorVersion	0
MinorVersion	0
RevisionNumber	0
<b>HP_SoftwareIdentity</b>	

## 1-2-11 SMX\_FCHBAGroupSystemSpecificCollection Class

The SMX\_FCHBAGroupSystemSpecificCollection class is used to represent the group status of all FC Ports.

The following table lists the properties implemented.

Property Name	Value
<b>CIM_ManagedElement</b>	
Caption	FCHBA Consolidated Status
Description	Consolidated status for HP FC HBAs
ElementName	FCHBA Consolidated Status
<b>CIM_Collection</b>	

Property Name	Value
<b>CIM_SystemSpecificCollection</b>	
InstanceID	Opaque
<b>HP_GroupSystemSpecificCollection</b>	
GroupOperationalStatus[0]	0 (Unknown) 1 (Other) 2 (OK) 3 (Degraded) 6 (Error) 10 (Stopped)
GroupStatusDescriptions[0]	Unknown Other OK Degraded Error Stopped

## 1-2-12 SMX\_FCHBAComputerSystemFCPort Class

The `SMX_FCHBAComputerSystemFCPort` class is used to represent an association between `SMX_ComputerSystem` and `HPFCHBA_FCPort`.

The following table lists the properties implemented.

Property Name	Value
<b>CIM_Component</b>	
<b>CIM_SystemDevice</b>	
<b>SMX_FCHBAComputerSystemFCPort</b>	
GroupComponent	Refer to <code>SMX_FCHBAComputerSystem</code> class properties.
PartComponent	Refer to <code>SMX_FCHBAFCPort</code> class properties.

## 1-2-13 SMX\_FCHBAComputerSystemPortController Class

The `SMX_FCHBAComputerSystemPortController` class is used to represent an association between `SMX_ComputerSystem` and `SMX_FCHBAPortController`.

The following table lists the properties implemented.

Property Name	Value
<b>CIM_Component</b>	
<b>CIM_SystemDevice</b>	
<b>SMX_FCHBAComputerSystemPortController</b>	
GroupComponent	Refer to SMX_FCHBAComputerSystem class properties.
PartComponent	Refer to SMX_FCHBAPortController class properties.

## 1-2-14 SMX\_FCHBAComputerSystemLogicalPortGroup Class

The SMX\_FCHBAComputerSystemLogicalPortGroup class is used to represent an association between SMX\_ComputerSystem and SMX\_FCHBALogicalPortGroup.

The following table lists the properties implemented.

Property Name	Value
<b>CIM_Dependency</b>	
<b>CIM_HostedDependency</b>	
<b>CIM_HostedCollection</b>	
<b>SMX_FCHBAComputerSystemLogicalPortGroup</b>	
Antecedent	Refer to SMX_FCHBAComputerSystem class properties.
Dependent	Refer to SMX_FCHBALogicalPortGroup class properties.

## 1-2-15 SMX\_FCHBAComputerSystemSoftwareIdentityDrv Class

The SMX\_FCHBAComputerSystemSoftwareIdentityDrv class is used to represent an association between SMX\_ComputerSystem and SMX\_FCHBASoftwareIdentityDrv.

The following table lists the properties implemented.

Property Name	Value
<b>CIM_Component</b>	
<b>CIM_SystemDevice</b>	
<b>SMX_FCHBAComputerSystemSoftwareIdentityDrv</b>	
InstalledSoftware	Refer to SMX_FCHBASoftwareIdentityDrv class properties.

Property Name	Value
System	Refer to SMX_FCHBAComputerSystem class properties.

## 1-2-16 SMX\_FCHBAFCPortFCPortStatistics Class

The SMX\_FCHBAFCPortFCPortStatistics class is used to represent an association between SMX\_FCHBAFCPort and SMX\_FCHBAFCPortStatistics.

The following table lists the properties implemented.

Property Name	Value
<b>CIM_ElementStatisticalData</b>	
<b>SMX_FCHBAFCPortFCPortStatistics</b>	
ManagedElement	Refer to SMX_FCHBAFCPort class properties.
Stats	Refer to SMX_FCHBAFCPortStatistics class properties.

## 1-2-17 SMX\_FCHBAFCPortLogicalPortGroup Class

The SMX\_FCHBAFCPortLogicalPortGroup class is used to represent an association between SMX\_FCHBAFCPort and SMX\_FCHBALogicalPortGroup.

The following table lists the properties implemented.

Property Name	Value
<b>CIM_MemberOfCollection</b>	
<b>SMX_FCHBAFCPortLogicalPortGroup</b>	
Collection	Refer to SMX_FCHBALogicalPortGroup class properties.
Member	Refer to SMX_FCHBAFCPort class properties.

## 1-2-18 SMX\_FCHBAPortControllerFCPort Class

The SMX\_FCHBAPortControllerFCPort is used to represent an association between SMX\_FCHBAPortController and SMX\_FCHBAFCPort.

The following table lists the properties implemented.

Property Name	Value
<b>CIM_Dependency</b>	



Property Name	Value
CIM_ControlledBy	
SMX_FCHBAPortControllerFCPort	
Antecedent	Refer to SMX_FCHBAPortController class properties.
Dependent	Refer to SMX_FCHBAFCPort class properties.

## 1-2-19 SMX\_FCHBAPhysicalPackagePortController Class

The SMX\_FCHBAPhysicalPackagePortController class is used to represent an association between SMX\_FCHBAPortController and SMX\_FCHBAPhysicalPackage.

The following table lists the properties implemented.

Property Name	Value
CIM_Dependency	
CIM_Realizes	
SMX_FCHBAPhysicalPackagePortController	
Antecedent	Refer to SMX_FCHBAPhysicalPackage class properties.
Dependent	Refer to SMX_FCHBAPortController class properties.

## 1-2-20 SMX\_FCHBASoftwareIdentityDrvPortController Class

The SMX\_FCHBASoftwareIdentityDrvPortController class is used to represent an association between SMX\_FCHBAPortController and SMX\_FCHBASoftwareIdentityDrv.

The following table lists the properties implemented.

Property Name	Value
CIM_Dependency	
CIM_ElementSoftwareIdentity	
SMX_FCHBASoftwareIdentityDrvPortController	
Antecedent	Refer to SMX_FCHBASoftwareIdentityDrv class properties.
Dependent	Refer to SMX_FCHBAPortController class properties.

## 1-2-21 SMX\_FCHBAPortControllerFirmwareIdentityFW Class

The SMX\_FCHBAPortControllerFirmwareIdentityFW class is used to represent an association between SMX\_FCHBAPortController and SMX\_FCHBAFirmwareIdentityFW.

The following table lists the properties implemented.

Property Name	Value
CIM_Dependency	
CIM_ElementSoftwareIdentity	
SMX_FCHBAPortControllerFirmwareIdentityFW	
Antecedent	Refer to SMX_FCHBAFirmwareIdentityFW class properties.
Dependent	Refer to SMX_FCHBAPortController class properties.

## 1-2-22 SMX\_FCHBAPortControllerFirmwareIdentityBIOS Class

The SMX\_FCHBAPortControllerFirmwareIdentityBIOS class is used to represent an association between SMX\_FCHBAPortController and SMX\_FCHBAFirmwareIdentityBIOS.

The following table lists the properties implemented.

Property Name	Value
CIM_Dependency	
CIM_ElementSoftwareIdentity	
SMX_FCHBAPortControllerFirmwareIdentityBIOS	
Antecedent	Refer to SMX_FCHBAFirmwareIdentityBIOS class properties.
Dependent	Refer to SMX_HPFCHBAPortController class properties.

## 1-2-23 SMX\_FCHBAProductPhysicalComponent Class

The SMX\_FCHBAProductPhysicalComponent class is used to represent an association between SMX\_FCHBAProduct and SMX\_FCHBAPhysicalPackage.

The following table lists the properties implemented.

Property Name	Value
CIM_Component	
CIM_ProductPhysicalComponent	

Property Name	Value
<b>SMX_FCHBAPhysicalComponent</b>	
GroupComponent	Refer to SMX_FCHBAPhysicalComponent class properties.
PartComponent	Refer to SMX_FCHBAPhysicalPackage class properties.

## 1-2-24 SMX\_FCHBASystemPackaging Class

The SMX\_FCHBASystemPackaging class is used to represent an association between SMX\_FCHBAPhysicalPackage and SMX\_ComputerSystem.

The following table lists the properties implemented.

Property Name	Value
<b>CIM_Dependency</b>	
<b>CIM_SystemPackaging</b>	
<b>SMX_FCHBASystemPackaging</b>	
Antecedent	Refer to SMX_FCHBAPhysicalPackage class properties.
Dependent	Refer to SMX_FCHBAComputerSystem class properties.

## 1-2-25 SMX\_FCHBAGroupHostedCollection Class

The SMX\_FCHBAGroupHostedCollection class is used to represent an association between SMX\_ComputerSystem and SMX\_FCHBAGroupSystemSpecificCollection.

The following table lists the properties implemented.

Property Name	Value
<b>CIM_Dependency</b>	
<b>CIM_HostedDependency</b>	
<b>CIM_HostedCollection</b>	
<b>HP_GroupHostedCollection</b>	
<b>SMX_FCHBAGroupHostedCollection</b>	
Antecedent	Refer to SMX_ComputerSystem class properties.
Dependent	Refer to SMX_FCHBAGroupSystemSpecificCollection class properties.

## 1-2-26 SMX\_FCHBAFCPortGroupSystemSpecific Class

The SMX\_FCHBAFCPortGroupSystemSpecific class is used to represent an association between SMX\_FCHBAFCPort and SMX\_FCHBAGroupSystemSpecificCollection.

The following table lists the properties implemented.

Property Name	Value
CIM_MemberOfCollection	
SMX_FCHBAFCPortGroupSystemSpecific	
Collection	Refer to SMX_FCHBAGroupSystemSpecificCollection class properties.
Member	Refer to SMX_FCHBAFCPort class properties.

## 1-2-27 SMX\_FCHBALocation Class

The SMX\_FCHBALocation class is used to specify the location of the HBA, PCI Slot number.

The following table lists the properties implemented.

Property Name	Value
CIM_ManagedElement	
CIM_Location	
Name	NodeWWN:SerialNumber:<instanceNum> Where: <instanceNum> is the port controller instance number for the same adapter.
HP_Location	
ElementLocationTag	<physical location> Refer to <a href="#">"Physical Location"</a> for more information.
ElementLocationTagDesc	1 (slot)
PhysicalPosition	<physical location> Refer to <a href="#">"Physical Location"</a> for more information.

## 1-2-28 SMX\_FCHBAPhysicalElementLocation Class

The SMX\_FCHBAPhysicalElementLocation is used to represent an association between the SMX\_FCHBAPhysicalPackage and SMX\_FCHBALocation.

The following table lists the properties implemented.

Property Name	Value
<b>CIM_ElementLocation</b>	
<b>SMX_FCHBAPhysicalElementLocation</b>	
Element	Refer to SMX_FCHBAPhysicalPackage class properties.
PhysicalLocation	Refer to SMX_FCHBALocation class properties.

## 1-2-29 SMX\_FCHBASCSIProtocolController

SMX\_FCHBASCSIProtocolController represents a protocol controller that manages a SCSI interface. This class is used for backward compatibility with SMI-S 1.0.

Property Name	Value
<b>CIM_ManagedElement</b>	
ElementName	ProductName
<b>CIM_ManagedSystemElement</b>	
<b>CIM_SystemSpecificCollection</b>	
OperationalStatus[0]	0 (Unknown) 2 (OK-Online) 6 (Error) 10 (Stopped) 11 (In Service)
<b>CIM_LogicalElement</b>	
<b>CIM_EnabledLogicalElement</b>	
EnabledDefault	2 (Enabled)
EnabledState	5 (Not Applicable)
RequestedState	12 (Not Applicable)
<b>CIM_LogicalDevice</b>	
CreatingClassName	SMX_FCHBASCSIProtocolController
DeviceID	PortWWN
SystemName	Opaque value
SystemCreationClassName	SMX_FCHBAComputerSystem
<b>CIM_ProtocolController</b>	

Property Name	Value
MaxUnitsControlled	255
CIM_SCSIProtocolController	

## 1-2-30 SMX\_FCHBASCSIProtocolEndpoint

SMX\_FCHBASCSIProtocolEndpoint represents a SCSI protocol controller running through a part.

Property Name	Value
CIM_ManagedElement	
ElementName	SCSI Protocol Endpoint
CIM_ManagedSystemElement	
Name	PortWWN
CIM_LogicalElement	
CIM_EnabledLogicalElement	
EnabledDefault	2 (Enabled)
RequestedState	12 (Not Applicable)
CIM_ServiceAccessPoint	
CreatingClassName	SMX_FCHBASCSIProtocolEndpoint
SystemName	Opaque value
SystemCreationClassName	SMX_FCHBAComputerSystem
CIM_ProtocolEndpoint	
ProtocolFType	57 (HIPPI Interface)
CIM_SCSIProtocolController	
ConnectionType	2 (fibre channel)
Role	2 (initiator)

## 1-2-31 SMX\_FCHBAComputerSystemSCSIProtocolController

SMX\_FCHBAComputerSystemSCSIProtocolController is used to represent an association between SMX\_FCHBAComputerSystem and SMX\_FCHBASCSIProtocolController.

Property Name	Value
CIM_Component	
CIM_SystemDevice	
SMX_FCHBAComputerSystemSCSIProtocolController	
GroupComponent	ref:SMX_FCHBAComputerSystem
PartComponent	ref:SMX_FCHBASCSIProtocolController

## 1-2-32 SMX\_FCHBAFCPortSCSIProtocolEndpoint

SMX\_FCHBAFCPortSCSIProtocolEndpoint is used to represent an association between SMX\_FCHBAFCPort and SMX\_FCHBASCSIProtocolEndpoint.

Property Name	Value
CIM_Dependency	
CIM_DeviceSAPImplementation	
SMX_FCHBAFCPortSCSIProtocolEndpoint	
Antecedent	ref:SMX_FCHBAPort
Dependent	ref:SMX_FCHBASCSIProtocolEndpoint

## 1-2-33 SMX\_FCHBASCSIProtocolControllerFCPort

SMX\_FCHBASCSIProtocolControllerFCPort is used to represent an association between SMX\_FCHBASCSIProtocolController and SMX\_FCHBAFCPort.

Property Name	Value
CIM_Dependency	
CIM_ProtocolControllerForDevice	
CIM_ProtocolControllerFCPort	
SMX_FCHBASCSIProtocolControllerFCPort	
Antecedent	ref:SMX_FCHBASCSIProtocolController
Dependent	ref:SMX_FCHBAFCPort

## 1-2-34 SMX\_FCHBASystemServiceAccessPoint

SMX\_FCHBASystemServiceAccessPoint is used to represent an association between SMX\_FCHBAComputerSystem and SMX\_FCHBASCSIProtocolEndpoint.

Property Name	Value
CIM_Dependency	
CIM_HostedDependency	
CIM_HostedAccessPoint	
SMX_FCHBASysteServiceAccessPoint	
Antecedent	ref:SMX_FCHBAComputerSystem
Dependent	ref:SMX_ FCHBASCSIProtocolEndpoint

## 1-2-35 SMX\_FCHBAConcretIdentity

SMX\_FCHBAConcreteIdentity is used to represent an association between SMX\_ComputerSystem and SMX\_FCHBAComputerSystem.

Property Name	Value
CIM_LogicalIdentity	
CIM_ConcreteIdentity	
SMX_FCHBAConcreteIdentity	
SystemElement	ref:SMX_ComputerSystem
SameElement	ref:SMX_ FCHBAComputerSystem

## 1-3 Physical Location

The Physical Location is a string representing the physical location of the Fibre Channel Host Bus Adapter device. This string should represent the physical location of the device with which an end-user can uniquely locate the device. Most of these strings will be represented in customer documentation, silkscreen labels, or hood tags.

The following table lists the properties implemented. Any combination of the following applicable descriptors could be used to better define the device location.

All Systems	HP Integrity Cellular Servers	HP BladeServers in C3000 / C7000 Enclosures
Slot=<num>	Cabinet=<num>	Blade=<num>



All Systems	HP Integrity Cellular Servers	HP BladeServers in C3000 / C7000 Enclosures
Embedded Controller=<logical_controller_id>	Bay=<num>	RootPort=<num> (if embedded on System Board)
System Mainboard (referring to System Board/motherboard)	Chassis=<num>	Mezzanine=<num> (I/O Mezzanine slot num)

## 1-4 Provider Indications

**Indications Generated by the Provider** This provider generates no indications.