1 HP Insight Management WBEM Smart Array Provider

Description

The HP Insight Management Web-Based Enterprise Management (WBEM) Management Smart Array provider extends the management capability of referencing profiles by adding the capability to represent HP Management Processor on HP servers. This provider implements the following profiles and installs the necessary files:

Profile Name	Organization	Version
HP Smart Array Profile (P00121)	HP WBEM TC	1.0.0 (P00121)

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

Requirements

HP Integrity managed servers	SLES 10 and later
	RLEL 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 WBEM Providers for Linux v2.0.

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.

Configuring the Provider   This provider does not accept specific configuration adjustments beyond standard HP Insight Management WBEM support.

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_SAArraySystem

- SMX_SAArrayController

- SMX_SAStorageVolume

- SMX_SADiskDrive

- SMX_SAStorageExtent

- SMX_SADiskDriveFirmware

- SMX_SAPhysicalPackage

- SMX_SAArrayControllerPhysicalPackage

- SMX_SADiskPhysicalPackage

- SMX_SAStorageEnclosure

- SMX_SAStorageEnclosureProcessor

- SMX_SAPortController

- SMX_SADAPort

- SMX_SASPIPort

- SMX_SAFirmware

- SMX_SAEnclosureFirmware

- SMX_SAPrimordialPool

- SMX_SAStoragePool

- SMX_SAMediaAccessStatData

- SMX_SAStorageSetting

- SMX_SADriveCage

- SMX_SASCSIProtocolEndpoint

- SMX_SASCSIProtocolController

- SMX_SARedundancySet

- SMX_SAStorageRedundancySet

- SMX_SAStorageSpecificCollection

- SMX_SADriveCageLocation

- `SMX_SAArraySystemLocation`

- `SMX_SADiskDriveLocation`

- `SMX_SAArrayControllerLocation`

- `SMX_SAStorageCapabilities`

- `SMX_SAProduct`

- `SMX_SAStorageEnclosureLocation`

- `SMX_SAArraySystemRedundancySet (Association)`

- `SMX_SAStorageVolumeStorageSetting (Association)`

- `SMX_SAPrimordialPoolStorageCapabilities (Association)`

- `SMX_SAStoragePoolStorageCapabilities (Association)`

- `SMX_SAArraySystemStorageEnclosureProcessor (Association)`

- `SMX_SAArraySystemSCSIProtocolController (Association)`

- `SMX_SAArraySystemPortController (Association)`

- `SMX_SAArraySystemDiskDrive (Association)`

- `SMX_SAArraySystemStorageVolume (Association)`

- `SMX_SAArraySystemStorageExtent (Association)`

- `SMX_SAArraySystemSPIPort (Association)`

- `SMX_SAArraySystemDAPort (Association)`

- `SMX_SMX_SAArraySystemDAPort (CIM_SystemDevice)`

- `SMX_SAArraySystemPrimordialPool (Association)`

- `SMX_SAArraySystemStoragePool (Association)`

- `SMX_SAComputerSystemArraySystem (Association)`

- `SMX_SAArraySystemArrayController (Association)`

- `SMX_SAStorageEnclosureStorageEnclosureProcessor (Association)`

- `SMX_SAProductPhysicalPackage (Association)`

- `SMX_SAStorageEnclosureDriveCage (Association)`

- `SMX_SAPhysicalPackageArrayControllerPhysicalPackage (Association)`

- `SMX_SAPhysicalPackageDiskPhysicalPackage (Association)`

- `SMX_SAPhysicalPackageStorageEnclosure (Association)`

- SMX_SADriveCageDiskPhysicalPackage (Association)

- SMX_SAStoragePoolStorageExtent (Association)

- SMX_SAPrimordialPoolStorageExtent (Association)

- SMX_SAStorageSpecificCollectionArraySystem (Association)

- SMX_SAArrayControllerRedundancySet (Association)

- SMX_SAStorageRedundancySetStorageExtent (Association)

- SMX_SAArraySystemFirmware (Association)

- SMX_SASCSIProtocolControllerStorageVolume (Association)

- SMX_SAFirmwareArraySystem (Association)

- SMX_SAStorageEnclosureProcessorEnclosureFirmware (Association)

- SMX_SADiskDriveDiskDriveFirmware (Association)

- SMX_SADiskDriveStorageExtent (Association)

- SMX_SADiskPhysicalPackageDiskDrive (Association)

- SMX_SAStoragePoolStorageVolume (Association)

- SMX_SAPrimordialPoolStoragePool (Association)

- SMX_SASpareExtentStorageExtent (Association)

- SMX_SASpareExtentStorageRedundancySet (Association)

- SMX_SAStorageExtentStorageVolume (Association)

- SMX_SADAPortSCSIProtocolEndpoint (Association)

- SMX_SAStorageGroupHostedCollection (Association)

- SMX_SAPhysicalPackageArraySystem (Association)

- SMX_SAArrayControllerPhysicalPackageArrayController (Association)

- SMX_SADiskDriveMediaAccessStatData (Association)

- SMX_SAArrayControllerPhysicalPackageArrayControllerLocation (Association)

- SMX_SAPhysicalPackageArraySystemLocation (Association)

- SMX_SADriveCageDriveCageLocation (Association)

- SMX_SADiskPhysicalPackageDiskDriveLocation (Association)

- SMX_SASCSIProtocolEndpointSCSIProtocolController (Association)

- SMX_SAStorageEnclosureEnclosureLocation (Association)

- `SMX_TSASSCSIProtocolEndpoint`

- `SMX_ISASSCSIProtocolEndpoint`

- `SMX_TSASPort`

- `SMX_ISASPort`

- `SMX_ISASPortISASSCSIProtocolEndPoint (Association)`

- `SMX_ArraySystemISASSCSIProtocolEndPoint (Association)`

- `SMX_ArraySystemISASPort (Association)`

- `SMX_PortControllerISASPort (Association)`

- `SMX_ArraySystemTSASSCSIProtocolEndpoint (Association)`

- `SMX_TSASPortTSASSCSIProtocolEndpoint (Association)`

- `SMX_ArraySystemTSASPort (Association)`

- `SMX_DiskDriveTSASSCSIProtocolEndpoint (Association)`

- `SMX_SCSIInitiatorTargetLogicalUnitPath`

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_SAArraySystem Class

The `SMX_SAArraySystem` class implements the `HPSA_ArraySystem` class and represents the top-level system. There is one instance per HBA.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Controller/Storage System name and `<physical location>`. Refer to "Physical Location" for more information. For example: "Smart Array in Slot=3" for internal For example:

Property Name	Property Implementation
	"Smart Array Embedded Controller=7" for embedded controller where 7 is the internal identifier for the embedded controller.
CIM_ManagedSystemElement	
OperationalStatus[0]	Overall status of the Array System and attached devices. This is calculated per the algorithm described in the HP Smart Array Profile. 0 (Unknown) 2 (OK) 3 (Degraded) 6 (Error)
StatusDescriptions[0]	More info for OperationalStatus result. This provides a short Description to identify who is contributing to non-OK status. For example: Controller Failure Logical Drive Failure Storage Enclosure Failure Controller Non-Failure Problem Physical Drive Non-Failure Problem Logical Drive Non-Failure Problem Storage Enclosure Non-Failure Problem Array is operating properly Array status is unknown
CIM_LogicalElement	
CIM_EnabledLogicalElement	
EnabledDefault	2 (Enabled)
EnabledState	5 (Not Applicable)
RequestedState	12 (Not Applicable)
CIM_System	
CreationClassName	SMX_SAArraySystem
Name	Controller Serial Number EMBEDDED-<id> will be reported if there is no Serial Number for device is local For example:

Property Name	Property Implementation
	embedded on motherboard.
	`PCISLOT-<Slot number>` will be reported if there is no Serial Number for device is local
	For example: PCI occupies slot.
`NameFormat`	`Other`
CIM_ComputerSystem	

`Dedicated`	`Dedicated[0]:`
	
	3 (Storage)
	
	`Dedicated[1]:`
	
	15 (Block Server)

`IdentifyingDescriptions`	`Other Vendor Specific Name`
`OtherIdentifyingInfo`	Controller Serial Number `EMBEDDED-<id>` will be reported if there is no Serial Number for device is local For example: embedded on motherboard. `PCISLOT-<Slot number>` will be reported if there is no Serial Number for device is local. For example: a PCI occupies slot.
`Identify()`	See HP Smart Array Profile

1-2-2 SMX_SAArrayController Class

The `SMX_SAArrayController` class implements the `HPSA_ArrayController` class and represents the controller. There is one per HBA and may have multiple controllers.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	

Property Name	Property Implementation
ElementName	Controller name and *<physical location>*. Refer to ["Physical Location"](#) for more information. For example: "Smart Array in Slot=3" for internal For example: "Smart Array Embedded Controller=7" for embedded controller where 7 is the internal identifier for the embedded controller.
CIM_ManagedSystemElement	
OperationalStatus[0]	Status for Array Controller. 0 (Unknown) 2 (OK) 6 (Error)
CIM_LogicalElement	
CIM_EnabledLogicalElement	
EnabledDefault	2 (Enabled)
EnabledState	5 (Not Applicable)
RequestedState	12 (Not Applicable)
CIM_System	
CreationClassName	SMX_SAArrayController
Name	Controller Serial Number. EMBEDDED-*<id>* will be reported if there is no Serial Number. For example: embedded on motherboard. PCISLOT-*<Slot number>* will be reported if there is no Serial Number and the controller is in a PCI slot Where: *<Slot number>* is the number of PCI slot.
NameFormat	Other
CIM_ComputerSystem	
Dedicated	Dedicated[0] 0 (Not Dedicated)
HPSA_Arraycontroller	

Property Name	Property Implementation
ADGSupported	See HP Smart Array Profile
AcceleratorBackupPowerSource	See HP Smart Array Profile
BatteryStatus	See HP Smart Array Profile
CacheBoardPresent	See HP Smart Array Profile
CacheHasBattery	See HP Smart Array Profile
CacheParityReadErrors	See HP Smart Array Profile
CacheParityWriteErrors	See HP Smart Array Profile
CacheReadPercent	See HP Smart Array Profile
CacheSerialNumber	See HP Smart Array Profile
CacheSizeTotal	See HP Smart Array Profile
CacheState	See HP Smart Array Profile
CacheStatus	See HP Smart Array Profile
CacheWritePercent	See HP Smart Array Profile
ControllerStatus	See HP Smart Array Profile
ExpandPriority	See HP Smart Array Profile
NumberOfPorts	See HP Smart Array Profile
RebuildPriority	See HP Smart Array Profile
NumberOfInternalPorts	See HP Smart Array Profile
NumberofExternalPorts	See HP Smart Array Profile

1-2-3 SMX_SAStorageVolume Class

The SMX_SAStorageVolume class implements the HPSA_StorageVolume class and represents the Logical Volumes configured on the Smart Array.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	

Property Name	Property Implementation
ElementName	Logical drive number with raid Description For example: `Logical Volume 1 (RAID 1+0)`
CIM_ManagedSystemElement	
Name	VPD Pg83 identifier for the volume.
CIM_LogicalElement	
CIM_EnabledLogicalElement	
EnabledDefault	2 (Enabled)
EnabledState	5 (Not Applicable)
RequestedState	12 (Not Applicable)
CIM_LogicalDevice	
CreationClassName	SMX_SAStorageVolume
DeviceID	Opaque Key
SystemCreationClassName	SMX_SAArraySystem
SystemName	SMX_SAArraySystem.Name
CIM_StorageExtent	
ConsumableBlocks	0
BlockSize	Block Size in bytes
DataRedundancy	1 (RAID 0, RAID 5, RAID 6), RAID 50, RAID 60 2 (RAID 1+0)
DeltaReservation	0
ExtentStatus[0]	This will indicate extended status for the volume. 2 (None) 11 (Rebuild – Volume is currently rebuilding data)
IsBasedOnUnderlyingRedundancy	False

Property Name	Property Implementation
NoSinglePointOfFailure	`True` – RAID 1 or above `False` – RAID 0
NumberOfBlocks	Total Number of blocks on the volume.
PackageRedundancy	`0` (RAID 0) `1` (RAID 1+0, RAID 5) `2` (RAID 6), RAID 50, RAID 60
CIM_Storagevolume	
NameFormat	`2` (VPD83NAA6)
HPSA_Storagevolume	
Accelerator	See HP Smart Array Profile
Deleteable	See HP Smart Array Profile
FaultTolerance	See HP Smart Array Profile
OperationalStatus[0, 1]	Volume status. DMTF defined value will be populated in `index[0]` and extended status will be populated in `index[1]` per HP Smart Array Profile.
OSName	Corresponding OS name for this volume.
StripeSize	See HP Smart Array Profile
Identify()	See HP Smart Array Profile

1-2-4 SMX_SADiskDrive Class

The `SMX_SADiskDrive` class implements the `HPSA_DiskDrive` class and represents the hard drives connected to Smart Array controllers.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Disk location For example: `Port: 1E Box 1 Bay: 5`

Property Name	Property Implementation
CIM_ManagedSystemElement	
Name	Drive Serial Number
OperationalStatus[0]	Drive status, DMTF defined value is populated in index (0) and extended status is populated in index(1) per HP Smart Array Profile
CIM_LogicalElement	
CIM_EnabledLogicalElement	
EnabledDefault	2 (Enabled)
EnabledState	5 (Not Applicable)
RequestedState	12 (Not Applicable)
CIM_LogicalDevice	
CreationClassName	SMX_SADiskDrive
DeviceID	Opaque value
SystemCreationClassName	SMX_SAArraySystem
SystemName	SMX_SAArraySystem.Name
TotalPowerOnHours	Number of service hours logged for the drive
CIM_MediaAccessDevice	
CIM_DiskDrive	
HPSA_DiskDrive	
DriveConfiguration	See HP Smart Array Profile
DriveHasMNPData	See HP Smart Array Profile
DriveInterface	See HP Smart Array Profile
DrivePlacement	See HP Smart Array Profile
DriveRotationalSpeed	See HP Smart Array Profile
NegotiatedDataWidth	See HP Smart Array Profile
NegotiatedSpeed	See HP Smart Array Profile
Identify()	See HP Smart Array Profile

1-2-5 SMX_SAStorageExtent Class

The `SMX_SAStorageExtent` class implements the `HPSA_StorageExtent` class and represents the consumable storage that is available on a disk drive. There is one instance per disk drive.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Disk location For example: `Port: 1E Box 1 Bay: 5`
CIM_ManagedSystemElement	
Name	Serial number of drive
OperationalStatus[0]	Operational Status for the disk drive 0 (Unknown) 2 (OK) 5 (Predictive Failure) 6 (Error)
CIM_LogicalElement	
CIM_EnabledLogicalElement	
EnabledDefault	2 (Enabled)
EnabledState	5 (Not Applicable)
RequestedState	12 (Not Applicable)
CIM_LogicalDevice	
CreationClassName	SMX_SAStorageExtent
DeviceID	Opaque ID
SystemCreationClassName	SMX_SAArraySystem
SystemName	SMX_SAArraySystem.Name
CIM_StorageExtent	
BlockSize	Block size in bytes
ConsumableBlocks	Total number of blocks on disk drive

Property Name	Property Implementation
ExtentStatus[0]	This will indicate extended status for the disk drive Possible values: 2 (None) 11 (Rebuild – disk drive is currently rebuilding data)
NumberOfBlocks	Total number of blocks on disk drive
Primordial	Set to True
TotalPowerOnHours	Total service hours reported disk drive
HPSA_StorageExtent	

1-2-6 SMX_SADiskDriveFirmware Class

The SMX_SADiskDriveFirmware class implements the HPSA_DiskDriveFirmware class and represents the firmware installed on a disk drive. There is one instance per disk drive.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	TargetType value
CIM_ManagedSystemElement	
Name	Disk Drive Firmware
CIM_LogicalElement	
Caption	Disk Drive Firmware
Description	Disk Drive Firmware
CIM_SoftwareIdentity	
ClassificationDescriptions[0]	Disk Drive Firmware
Classifications[0]	10 (Firmware)
InstanceID	Opaque key
Manufacturer	Disk drive vendor string
IdentityInfoType	[0]CIM:SoftwareFamily [1]HPQ:SoftwareCategory

Property Name	Property Implementation
IdentityInfoValue	[0]HPQ:<*TargetType value*> [1]Storage Device
VersionString	Drive firmware as reported from SCSI identify command
HPSA_DiskDriveFirmware	

1-2-7 SMX_SAPhysicalPackage Class

The SMX_SAPhysicalPackage class implements the HPSA_PhysicalPackage class and represents the overall physical package for the array system as a whole. There is one instance per HBA or Storage Subsystem.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Controller/Storage System name and <*physical location*>. Refer to "Physical Location" for more information.
Description	Host Based RAID Controller (For Internal Controller)
CIM_ManagedSystemElement	
Name	See Serial number implementation
CIM_PhysicalElement	
CreationClassName	SMX_SAPhysicalPackage
Manufacturer	Controller vendor string
Model	Controller model string
PartNumber	N/A – Not Available for this implementation
SerialNumber	Controller Serial number for HBA's
Tag	Opaque Key
Version	N/A – Not Available for this implementation
CIM_PhysicalPackage	
RemovalConditions	2 (Not Applicable)
HPSA_PhysicalPackage	

1-2-8 SMX_SAArrayControllerPhysicalPackage Class

The `SMX_SAArrayControllerPhysicalPackage` class implements the `HPSA_ArrayControllerPhysicalPackage` class and represents the physical aspects of any Smart Array controller. There is one instance per HBA.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Controller name and *<physical location>*. Refer to "Physical Location" for more information. For example: "Smart Array in Slot=3" for internal For example: "Smart Array Embedded Controller=7" for embedded controller where 7 is the internal identifier for the embedded controller.
CIM_ManagedSystemElement	
Name	Controller Serial number
CIM_ PhysicalElement	
CreationClassName	SMX_SAArrayControllerPhysicalPackage
Manufacturer	Controller vendor string
Model	Controller model string
PartNumber	N/A – Not Available for this implementation
SerialNumber	Controller Serial number
Tag	Opaque Key
Version	N/A – Not Available for this implementation
CIM_PhysicalPackage	
RemovalConditions	2 (Not Applicable)
HPSA_ ArrayControllerPhysicalPackage	

1-2-9 SMX_SADiskPhysicalPackage Class

The `SMX_SADiskPhysicalPackage` class represents the physical aspects of the disk drive. There is one instance per disk drive.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Disk location For example: Port: 1E Box 1 Bay: 5
CIM_ManagedSystemElement	
Name	Disk location For example: Port: 1E Box 1 Bay: 5
CIM_ PhysicalElement	
CreationClassName	SMX_SADiskPhysicalPackage
Manufacturer	Drive vendor string
Model	Drive model string
PartNumber	N/A – Not Available in this implementation
SerialNumber	Drive serial number
Tag	Opaque Key
Version	N/A – Not Available in this implementation
CIM_PhysicalPackage	
HotSwappable	TRUE - Drive is hot swappable FALSE – Drive is not hot swappable
RemovalConditions	2 (Not Applicable)
HPSA_ DiskPhysicalPackage	

1-2-10 SMX_SAStorageEnclosure Class

The SMX_SAStorageEnclosure class implements the HPSA_StorageEnclosure class and represents the physical chassis for an internal or externally attached enclosure.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Port: *<m>* Box: *<n>* Where: *<m>* is the port and *<n>* is the box number.
CIM_ManagedSystemElement	
Name	Port: *<m>* Box: *<n>* Where: *<m>* is the port and *<n>* is the box number.
CIM_PhysicalElement	
CreationClassName	SMX_SAStorageEnclosure
Manufacturer	Enclosure vendor string For example: HP For example: N/A if not available
Model	Enclosure model string For example: PROLIANT 6L6I For example: N/A if not available
PartNumber	N/A – Not Available in this implementation
SerialNumber	Enclosure Serial Number. N/A will be reported if there is no serial number (For example: internal enclosures).
Tag	Opaque key
Version	N/A – Not Available in this implementation
CIM_PhysicalPackage	
RemovalConditions	2 (Not Applicable)
CIM_PhysicalFrame	
CIM_Chassis	
HP_StorageEnclosure	

Property Name	Property Implementation
Location	See HP Storage Enclosure Profile
HPSA_StorageEnclosure	

1-2-11 SMX_SAStorageEnclosureProcessor Class

The SMX_SAStorageEnclosureProcessor class represents the management processor within a Storage Enclosure. This instance contains the operational status for all managed components in the enclosure if applicable.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Port: <m> Box: <n> Where: <m> is the port and <n> is the box number.
CIM_ManagedSystemElement	
OperationalStatus[0,1, 2, 3]	Operational status for enclosure and associated power supplies, fans and sensors. The use of OperationalStatus is described in the HP Storage Enclosure Profile. Index values are populated as follows. Index[0] – Enclosure status: 0 (Unknown) 2 (OK) 3 (Degraded) 6 (Error) Index[1] – Fan status (See Profile) Index[2] – Power Supply status (See Profile) Index[3] – Temp Sensor Status (See Profile) **Note:** Operational status for Fan, Power and Temp Sensor will be not detectedfor internal storage enclosure(s) of the local controller(s) For example: PCI or Embedded.
CIM_LogicalElement	
CIM_EnabledLogicalElement	
EnabledDefault	2 (Enabled)

Property Name	Property Implementation
EnabledState	5 (Not Applicable)
RequestedState	12 (Not Applicable)
CIM_System	
CreationClassName	SMX_SAStorageEnclosureProcessor
Name	Opaque Key
NameFormat	Other
CIM_ComputerSystem	
Dedicated[0]	2 (Other)
IdentifyingDescriptions[0]	Other Vendor Specific Name
OtherDedicatedDescriptions[0]	SDE - indicates Storage Device Enclosure
OtherIdentifyingInfo[0]	Port Number:BoxNumber enclosure is attached to. For example: 1E:1
HPSA_StorageEnclosureProcessor	

1-2-12 SMX_SAPortController Class

The `SMX_SAPortController` class represents the HBA in the host system. There is one instance per HBA.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Controller name and *<physical location>*. Refer to "Physical Location" for more information. For example: "Smart Array in Slot=3" for internal For example: "Smart Array Embedded Controller=7" for embedded controller where 7 is the internal identifier for the embedded controller.
CIM_ManagedSystemElement	
CIM_LogicalElement	

Property Name	Property Implementation
CIM_EnabledLogicalElement	
EnabledDefault	2 (Enabled)
EnabledState	5 (Not Applicable)
RequestedState	12 (Not Applicable)
CIM_LogicalDevice	
CreationClassName	SMX_SAPortController
DeviceID	Controller serial number
SystemCreationClassName	SMX_SAArraySystem
SystemName	SMX_SAArraySystem.Name
CIM_Controller	
CIM_PortController	
ControllerType	1 (Other)
OtherControllerType	SAS/SATA – SAS/SATA HBA
HPSA_PortController	

1-2-13 SMX_SADAPort Class

The SMX_SADAPort class implements the HPSA_DAPort class and represents the front-end port for an HBA in the host system. Direct attached implies that the array controller is attached to a local bus on the host, such as PCI.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Controller name and <physical location>. Refer to "Physical Location" for more information. For example: "Smart Array in Slot=3" for internal For example: "Smart Array Embedded Controller=7" for embedded controller where 7 is the internal identifier for the embedded controller.

Property Name	Property Implementation
CIM_ManagedSystemElement	
OperationalStatus[0]	Port status 0 (Unknown) 2 (OK) 6 (Error)
CIM_LogicalElement	
CIM_EnabledLogicalElement	
EnabledDefault	2 (Enabled)
EnabledState	5 (Not Applicable)
RequestedState	12 (Not Applicable)
CIM_LogicalDevice	
CreationClassName	SMX_SADAPort
DeviceID	Opaque key
SystemCreationClassName	SMX_SAArraySystem
SystemName	SMX_SAArraySystem.Name
CIM_LogicalPort	
UsageRestriction	2 (Front-End Only)
CIM_DAPort	
HPSA_DAPort	

1-2-14 SMX_SAFirmware Class

The SMX_SAFirmware class implements the HPSA_Firmware class and represents the firmware installed on a Smart Array controller.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	TargetType value

Property Name	Property Implementation
CIM_ManagedSystemElement	
Name	Array Controller Firmware
CIM_LogicalElement	
Caption	Array Controller Firmware
Description	Array Controller Firmware
CIM_SoftwareIdentity	
ClassificationDescriptions[0]	Array Controller Firmware
Classifications[0]	10 (Firmware)
InstanceID	Opaque key
Manufacturer	Controller Vendor string
IdentityInfoType	[0]CIM:SoftwareFamily [1]HPQ:SoftwareCategory
IdentityInfoValue	[0]HPQ:<*TargetType value*> [1]Storage Controller
VersionString	Controller firmware version string
HPSA_Firmware	

1-2-15 SMX_SAEnclosureFirmware Class

The SMX_SAEnclosureFirmware class implements the HPSA_EnclosureFirmware class and represents the firmware installed on a Smart Array Enclosure.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	TargetType value
CIM_ManagedSystemElement	
Name	Storage Enclosure Processor Firmware
CIM_LogicalElement	
Caption	Storage Enclosure Processor Firmware

Property Name	Property Implementation
Description	Storage Enclosure Processor Firmware
CIM_SoftwareIdentity	
ClassificationDescriptions[0]	Storage Enclosure Processor Firmware
Classifications[0]	10 (Firmware)
InstanceID	Opaque key
Manufacturer	Enclosure Vendor string
IdentityInfoType	[0]CIM:SoftwareFamily [1]HPQ:SoftwareCategory
IdentityInfoValue	[0]HPQ:*<TargetType value>* [1]StorageDevice
VersionString	Enclosure firmware string
HPSA_EnclosureFirmware	

1-2-16 SMX_SAPrimordialPool Class

The `SMX_SAPrimordialPool` class implements the `HPSA_PrimordialPool` class and represents the total raw storage managed by the array controller. There is one instance per array system.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Controller name and *<physical location>*. Refer to "Physical Location" for more information. For example: "Smart Array in Slot=3" for internal For example: "Smart Array Embedded Controller=7" for embedded controller where 7 is the internal identifier for the embedded controller.
CIM_ManagedSystemElement	
CIM_LogicalElement	
CIM_StoragePool	
InstanceID	Opaque key

Property Name	Property Implementation
PoolID	Controller serial number
Primordial	Always set to TRUE
RemainingManagedSpace	Remaining raw space on controller. This is calculated by summing the remaining space on all drives attached to the controller.
TotalManagedSpace	Total raw space available to controller. This is calculated by summing the total space on all drives connected to this controller.
HPSA_PrimordialPool	

1-2-17 SMX_SAStoragePool Class

The SMX_SAStoragePool class implements the HPSA_StoragePool class and represents any concrete storage pools created on an array controller. There is one instance per array system.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Controller name and *<physical location>*. Refer to "Physical Location" for more information. For example: "Smart Array in Slot=3" for internal For example: "Smart Array Embedded Controller=7" for embedded controller where 7 is the internal identifier for the embedded controller.
CIM_ManagedSystemElement	
CIM_LogicalElement	
CIM_StoragePool	
InstanceID	Opaque key
PoolID	Controller serial number: *<n>* where *n* is the array number as supplied from API.
Primordial	Always set to FALSE
RemainingManagedSpace	Remaining raw space in current pool
TotalManagedSpace	Total raw space managed by this pool

Property Name	Property Implementation
HPSA_StoragePool	

1-2-18 SMX_SAMediaAccessStatData Class

The `SMX_SAMediaAccessStatData` class implements the `HPSA_MediaAccessStatData` and represents the Monitoring and Performance data counters on HP Disk Drives.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
CIM_StatisticalData	
InstanceID	Opaque key
SampleInterval	0
CIM_MediaAccessStatData	
HPSA_MediaAccessStatData	
AbortedCommands	See HP Smart Array Profile
BadTargetErrors	See HP Smart Array Profile
DRQTimeouts	See HP Smart Array Profile
ECCRecoveredReadErrors	See HP Smart Array Profile
ElementName	Disk location For example: Port: 1E Box 1 Bay: 5
FailedReadRecovers	See HP Smart Array Profile
FailedWriteRecovers	See HP Smart Array Profile
FormatErrors	See HP Smart Array Profile
HardReadErrors	See HP Smart Array Profile
HardwareErrors	See HP Smart Array Profile
HardWriteErrors	See HP Smart Array Profile
HotPlugCount	See HP Smart Array Profile

Property Name	Property Implementation
MediaFailures	See HP Smart Array Profile
NotReadyErrors	See HP Smart Array Profile
OtherTimeOuts	See HP Smart Array Profile
SCSIBusFaults	See HP Smart Array Profile
SectorsRead	See HP Smart Array Profile
SectorsWritten	See HP Smart Array Profile
SeekCount	See HP Smart Array Profile
SeekErrors	See HP Smart Array Profile
ServiceHours	See HP Smart Array Profile
SpinUpErrors	See HP Smart Array Profile
RetryRecoveredReadErrors	See HP Smart Array Profile
RetryRecoveredWriteErrors	See HP Smart Array Profile

1-2-19 SMX_SAStorageSetting Class

The `SMX_SAStorageSetting` class implements the `HPSA_StorageSetting` class and represents the current raid configuration for a storage volume. There is one instance per storage volume.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	RAID *<n>* Where: *<n>* is the RAID Description. For example: RAID 0 For example: RAID 1+0 For example: RAID 5 For example: RAID 6
CIM_SettingData	
InstanceID	Opaque key
CIM_StorageSetting	

Property Name	Property Implementation
ChangeableType	0 (Not Changeable)
DataRedundancyGoal	1 (RAID 0, RAID 4, RAID 5, RAID 6, RAID 50, RAID 60) 2 (RAID 1, RAID 1+0, RAID 5+1)
DataRedundancyMax	1 (RAID 0, RAID 4, RAID 5, RAID 6, RAID 50, RAID 60) 2 (RAID 1, RAID 1+0, RAID 5+1)
DataRedundancyMin	1 (RAID 0, RAID 4, RAID 5, RAID 6, RAID 50, RAID 60) 2 (RAID 1, RAID 1+0, RAID 5+1)
DeltaReservationGoal	0
DeltaReservationMax	0
DeltaReservationMin	0
NoSinglePointOfFailure	False – RAID 0 True – RAID 1+0, RAID 5, RAID 6, RAID 50, RAID 60
PackageRedundancyGoal	0 (RAID 0) 1 (RAID 1, RAID 1+0, RAID 4, RAID 5, RAID 6,) 2 (RAID 6, RAID 50, RAID 60)
PackageRedundancyMax	0 (RAID 0) 1 (RAID 1+0, RAID 5, RAID 5+1) 2 (RAID 6, RAID 50, RAID 60)
PackageRedundancyMin	0 (RAID 0) 1 (RAID 1, RAID 1+0, RAID 4, RAID 5, RAID 5+1) 2 (RAID 6, RAID 50, RAID 60)
HPSA_StorageSetting	

1-2-20 SMX_SADriveCage Class

The SMX_SADriveCage class implements the HPSA_DriveCage class and represents the drive cage assembly and back plane within a storage enclosure. There may be multiple instances within a duplexed enclosure.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Port *<n>* Where: *<n>* is the name of the port this drive cage is connected. For example: Port J3
CIM_ManagedSystemElement	
Name	Serial Number of drive cage N/A – when serial number is not available
CIM_PhysicalElement	
CreationClassName	SMX_SADriveCage
Manufacturer	Drive Cage Vendor string
Model	Drive Cage Model string
PartNumber	N/A – Not available in this implementation
Tag	Opaque key
SerialNumber	Enclosure Serial number
Version	N/A – Not available in this implementation
CIM_PhysicalPackage	
RemovalConditions	2 (Not Applicable)
HP_DriveCage	
BackplaneSpeed	See HP Smart Array profile
DriveBays	See HP Smart Array profile
DuplexLocation	See HP Smart Array profile
HPSA_DriveCage	

1-2-21 SMX_SASCSIProtocolEndpoint Class

The SMX_SASCSIProtocolEndpoint class implements the HPSA_SCSIProtocolEndpoint class and represents an access point to storage resources.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Controller name and *<physical location>*. Refer to "Physical Location" for more information. For example: "Smart Array in Slot=3" for internal For example: "Smart Array Embedded Controller=7" for embedded controller where 7 is the internal identifier for the embedded controller.
CIM_ManagedSystemElement	
CIM_LogicalElement	
CIM_EnabledLogicalElement	
EnabledDefault	2 (Enabled)
RequestedState	12 (Not Applicable)
CIM_ServiceAccessPoint	
CreationClassName	SMX_SASCSIProtocolEndpoint
Name	HBA Serial Number
SystemCreationClassName	SMX_SAArraySystem
SystemName	SMX_SAArraySystem.Name
CIM_ProtocolEndpoint	
ProtocolIFType	1 (Other)
OtherTypeDescription	SCSI
CIM_SCSIProtocolEndpoint	
ConnectionType	1 (Other)
OtherConnectionType	PCI

Property Name	Property Implementation
Role	0 (Unknown) 2 (Initiator) 3 (Target) 4 (Both Initiator and Target)
HPSA_SCSIProtocolEndpoint	

1-2-22 SMX_SASCSIProtocolController Class

The `SMX_SASCSIProtocolController` class implements the `HPSA_SCSIProtocolController` class and represents a view a SCSI resources on the array controller.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Controller name and *<physical location>*. Refer to "Physical Location" for more information. For example: "Smart Array in Slot=3" for internal For example: "Smart Array Embedded Controller=7" for embedded controller where 7 is the internal identifier for the embedded controller.
CIM_ManagedSystemElement	
OperationalStatus[0]	Operational status of the controller 0 (Unknown) 2 (OK) 6 (Error)
CIM_LogicalElement	
CIM_EnabledLogicalElement	
EnabledDefault	2 (Enabled)
EnabledState	5 (Not Applicable)
RequestedState	12 (Not Applicable)

Property Name	Property Implementation
CIM_LogicalDevice	
CreationClassName	SMX_SASCSIProtocolController
DeviceID	Opaque key
SystemCreationClassName	SMX_SAArraySystem
SystemName	SMX_SAArraySystem.Name
CIM_ProtocolController	
MaxUnitsControlled	0
CIM_ SCSIProtocolController	
HPSA_ SCSIProtocolController	

1-2-23 SMX_SARedundancySet Class

The SMX_SARedundancySet class implements the HPSA_RedundancySet class and represents controller redundancy if there is more than one controller in a redundant configuration. For example: an MSA500 with two controllers.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Storage System name and location
CIM_Collection	
CIM_SystemSpecificCollection	
InstanceID	Opaque key
CIM_RedundancySet	
LoadBalanceAlgorithm	2 (No Load Balancing)
RedundancyStatus	2 (Fully Redundant) 4 (Redundancy Lost)
TypeOfSet[0]	4 (Sparing)
HPSA_RedundancySet	

1-2-24 SMX_SAStorageRedundancySet Class

The `SMX_SAStorageRedundancySet` class implements the `HPSA_StorageRedundancySet` class and represents disk sparing aspect of a RAID configuration. There is an instance for every logical drive that has spare drives configured.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Storage Redundancy Set
CIM_Collection	
CIM_SystemSpecificCollection	
InstanceID	Opaque key
CIM_RedundancySet	
LoadBalanceAlgorithm	2 (No Load Balancing)
MaxNumberSupported	0
MinNumberNeeded	0
RedundancyStatus	2 (Fully Redundant) 4 (Redundancy Lost)
TypeOfSet[0]	5 (Limited Sparing)
CIM_StorageRedundancySet	
HPSA_StorageRedundancySet	

1-2-25 SMX_SAStorageSpecificCollection Class

The `SMX_SAStorageSpecificCollection` class implements the `HPSA_StorageSpecificCollection` class and represents a collection of smart array controllers that have been grouped together to report consolidated status.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
Caption	Storage Array Consolidated Status
Description	Storage Array Consolidated Status

Property Name	Property Implementation
ElementName	Storage Array Consolidated Status
CIM_Collection	
CIM_SystemSpecificCollection	
InstanceID	Opaque key
HP_GroupSystemSpecificCollection	
GroupOperationalStatus[0]	Consolidated status for all array controllers. Refer to section 9.10 of the HP Smart Array profile for details on how this is calculated and status example.
GroupStatusDescriptions[0]	Description of GroupOperationStatus
HPSA_ StorageSpecificCollection	

1-2-26 SMX_SADriveCageLocation Class

The SMX_SADriveCageLocation class implements the HPSA_DriveCageLocation class and represents a location string for the drive cage.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
Caption	Drive Cage
Description	Drive Cage
ElementName	Drive Cage
CIM_Location	
Name	Opaque key
PhysicalPosition	Opaque key
HP_Location	
ElementLocationTag	Duplex Top, Duplex Bottom, Non Duplex
ElementLocationTagDesc	22 (Drive Cage)

Property Name	Property Implementation
LocationInformation[0]	HBA Port identifier For example: `J3` For example: `2I` For example: `1E`
LocationInfoDesc[0]	`Port`
HPSA_DriveCageLocation	

1-2-27 SMX_SAArraySystemLocation Class

The `SMX_SAArraySystemLocation` class implements the `HPSA_ArraySystemLocation` class and represents a location string for the array system.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
Caption	Smart Array in `<physical location>` Refer to ["Physical Location"](#) for more information.
Description	Same as Caption.
ElementName	Same as Caption.
CIM_Location	
Name	Opaque key
PhysicalPosition	Opaque key
HP_Location	
ElementLocationTag	PCI Slot Number – when 'Adapter' is specified in `ElementLocationTagDesc`
ElementLocationTagDesc	23 (Adapter) – for internal HBA's
LocationInformation[0]	Array of text values representing the location components that describe this Ethernet Controller Physical location. `LocationInfoDesc[0]` per `LocationInfornation[0]`. Refer to the `LocationInfoDescription` array to determine what type of location information is represented.

Property Name	Property Implementation
LocationInfoDesc[0]	3 (PCI Slot) – for internal HBA's
HPSA_ArraySystemLocation	

1-2-28 SMX_SADiskDriveLocation Class

The SMX_SADiskDriveLocation class implements the HPSA_DiskDriveLocation class and represents a location string for the disk drive.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
Caption	Controller name, Drive Type and Disk Location For example: Smart Array E500 Physical Drive – Port: 1E Box 1 Bay: 5
Description	Controller name, Drive Type and Disk Location For example: Smart Array E500 Physical Drive - Port: 1E Box 1 Bay: 5
ElementName	Controller name, Drive Type and Disk Location For example: Smart Array E500 Physical Drive - Port: 1E Box 1 Bay: 5
CIM_Location	
Name	Opaque key
PhysicalPosition	Opaque key
HP_Location	
ElementLocationTag	Bay Number of Disk Drive - When 'Bay' is specified in ElementLocationTagDesc.
ElementLocationTagDesc	20 (Bay)– when firmware supports Bay numbering
HPSA_DiskDriveLocation	

1-2-29 SMX_SAArrayControllerLocation Class

The `SMX_SAArrayControllerLocation` class implements the `HPSA_ArrayControllerLocation` class and represents a location string for the array controller.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
Caption	Smart Array in *<physical location>* Refer to "Physical Location" for more information.
Description	Same as Caption.
ElementName	Same as Caption.
CIM_Location	
Name	Opaque key
PhysicalPosition	Opaque key
HP_Location	
ElementLocationTag	For Internal HBA's: PCI Slot Number For example: 3 – for adapter in PCI Slot 3 For example: 0 – for Embedded adapter
ElementLocationTagDesc	23 (Adapter) – for Internal HBA's
LocationInformation[0]	Array of text values representing the location components that describe this Ethernet Controller Physical location. `LocationInfoDesc[0]` per `LocationInfornation[0]`. Refer to the `LocationInfoDescription` array to determine what type of location information is represented.
LocationInfoDesc[0]	`1(MezzanineSlot)`—for internal HBA on a Mezzanine Card 3 (PCI Slot) – for internal HBA in a PCI slot 17(Embedded Device) – for internal HBA embedded on Motherboard
HPSA_ArrayControllerLocation	

1-2-30 SMX_SAStorageCapabilities Class

The `SMX_SAStorageCapabilities` class implements the `HPSA_StorageCapabilities` class and represents the possible Capabilities of a storage pool.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	For Primodial Pools: Controller name and `<physical location>`. Refer to "Physical Location" for more information. For example: "Smart Array in Slot=3" for internal For example: "Smart Array Embedded Controller=7" for embedded controller where 7 is the internal identifier for the embedded controller. For Concrete Pools: Controller name and `<physical location>`, Array Identifier For example: Smart Array in Slot=3:0
CIM_Capabilities	
InstanceID	Key: Opaque key
CIM_StorageCapabilities	
DataRedundancyDefault	1 (When number of drives is an odd number) 2 (When number of drives is an even number – For example: Pool can be configured for mirroring)
DataRedundancyMax	1 (When number of drives is an odd number) 2 (When number of drives is an even number – For example: Pool can be configured for mirroring)
DataRedundancyMin	1
DeltaReservationDefault	0
DeltaReservationMax	0
DeltaReservationMin	0
ElementType	5 (Storage Pool)

Property Name	Property Implementation
NoSinglePointOfFailure	True - When number of drives > 1 (For example: Pool can be configured for redundancy) False – When number of drives <= 1
NoSinglePointOfFailureDefault	True - When number of drives > 1 (For example: Pool can be configured for redundancy) False – When number of drives <= 1
PackageRedundancyDefault	0 (When number of drives <= 1) 1 (When number of drives = 2 or 3) 2 (When number of drives > 3)
PackageRedundancyMax	0 (When number of drives <= 1) 1 (When number of drives = 2 or 3) 2 (When number of drives > 3)
PackageRedundancyMin	0
HPSA_StorageCapabilities	

1-2-31 SMX_SAProduct Class

The SMX_SAProduct class implements the HPSA_Product class and represents the top level marketing information for the array system.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Controller name and <physical location>. Refer to "Physical Location" for more information. For example: "Smart Array in Slot=3" for internal For example: "Smart Array Embedded Controller=7" for embedded controller where 7 is the internal identifier for the embedded controller.
CIM_Product	
IdentifyingNumber	Opaque key

Property Name	Property Implementation
Name	String representing the `Marketing name`.
Vendor	HP
Version	Firmware version of HBA or Storage System.
HPSA_Product	

1-2-32 SMX_SAStorageEnclosureLocation Class

The `SMX_SAStorageEnclosureLocation` class implements the `HPSA_StorageEnclosureLocation` class and represents a location string for the enclosure.

The following table lists the properties implemented.

Property Name	Property Implementation
ElementName	Enclosure location `Port: <m> Box: <n>` Where: *<m>* is the port and *<n>* is the box number.
Caption	Enclosure location `Port: <m> Box: <n>` Where: *<m>* is the port and *<n>* is the box number.
Description	Enclosure location `Port: <m> Box: <n>` Where: *<m>* is the port and *<n>* is the box number.
Name	Key
PhysicalPosition	Key
ElementLocationTag	`Unknown` for Undetermined `External` for external enclosures `Internal` for drive cages located within the host chassis
ElementLocationTagDesc	19 (Box)
HPSA_StorageEnclosureLocation	

1-2-33 SMX_SAArraySystemRedundancySet (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
SameElement	SMX_SARedundancySet
SystemElement	SMX_SAArraySystem

1-2-34 SMX_SAStorageVolumeStorageSetting (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
ManagedElement	SMX_SAStorageVolume
SettingData	SMX_SAStorageSetting
IsCurrent	1 (Set to Is Current)
IsDefault	1 (Set to Is Default)

1-2-35 SMX_SAPrimordialPoolStorageCapabilities (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Capabilities	SMX_SAStorageCapabilities
ManagedElement	SMX_SAPrimordialPool

1-2-36 SMX_SAStoragePoolStorageCapabilities (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Capabilities	SMX_SAStorageCapabilities
ManagedElement	SMX_SAStoragePool

1-2-37 SMX_SAArraySystemStorageEnclosureProcessor (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_SAArraySystem

Property Name	Property Implementation
PartComponent	SMX_SAStorageEnclosureProcessor

1-2-38 SMX_SAArraySystemSCSIProtocolController (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_SAArraySystem
PartComponent	SMX_SASCSIProtocolController

1-2-39 SMX_SAArraySystemPortController (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
SameElement	SMX_SAArraySystem
SystemElement	SMX_SAPortController

1-2-40 SMX_SAArraySystemDiskDrive (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_SAArraySystem
PartComponent	SMX_SADiskDrive

1-2-41 SMX_SAArraySystemStorageVolume (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_SAArraySystem
PartComponent	SMX_SAStorageVolume

1-2-42 SMX_SAArraySystemStorageExtent (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation

GroupComponent	SMX_SAArraySystem
PartComponent	SMX_SAStorageExtent

1-2-43 SMX_SAArraySystemSPIPort (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_SAArraySystem
PartComponent	SMX_SASPIPort

1-2-44 SMX_SAArraySystemDAPort (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_SAArraySystem
PartComponent	SMX_SADAPort

1-2-45 SMX_SAArraySystemPrimordialPool (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_SAArraySystem
PartComponent	SMX_SAPrimordialPool

1-2-46 SMX_SAArraySystemStoragePool (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_SAArraySystem
PartComponent	SMX_SAStoragePool

1-2-47 SMX_SAComputerSystemArraySystem (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	HP_ComputerSystem
PartComponent	SMX_SAArraySystem

1-2-48 SMX_SAArraySystemArrayController (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_SAArraySystem
PartComponent	SMX_SAArrayController

1-2-49 SMX_SAStorageEnclosureStorageEnclosureProcessor (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_SAStorageEnclosure
Dependent	SMX_SAStorageEnclosureProcessor

1-2-50 SMX_SAProductPhysicalPackage (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_SAProduct
PartComponent	SMX_SAPhysicalPackage

1-2-51 SMX_SAStorageEnclosureDriveCage (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_SAStorageEnclosure
PartComponent	SMX_SADriveCage

1-2-52 SMX_SAPhysicalPackageArrayControllerPhysicalPackage (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_SAPhysicalPackage
PartComponent	SMX_SAArrayControllerPhysicalPackage

1-2-53 SMX_SAPhysicalPackageDiskPhysicalPackage (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_SAPhysicalPackage
PartComponent	SMX_SADiskPhysicalPackage

1-2-54 SMX_SAPhysicalPackageStorageEnclosure (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_SAPhysicalPackage
PartComponent	SMX_SAStorageEnclosure

1-2-55 SMX_SADriveCageDiskPhysicalPackage (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_SADriveCage
PartComponent	SMX_SADiskPhysicalPackage

1-2-56 SMX_SAStoragePoolStorageExtent (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_SAStoragePool

Property Name	Property Implementation
PartComponent	SMX_SAStorageExtent

1-2-57 SMX_SAPrimordialPoolStorageExtent (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_SAPrimordialPool
PartComponent	SMX_SAStorageExtent

1-2-58 SMX_SAStorageSpecificCollectionArraySystem (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Collection	SMX_SAStorageSpecificCollection
Member	SMX_SAArraySystem

1-2-59 SMX_SAArrayControllerRedundancySet (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Collection	SMX_SARedundancySet
Member	SMX_SAArrayController

1-2-60 SMX_SAStorageRedundancySetStorageExtent (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Collection	SMX_SAStorageRedundancySet
Member	SMX_SAStorageExtent

1-2-61 SMX_SAArraySystemFirmware (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
InstalledSoftware	SMX_SAFirmware
System	SMX_SAArraySystem

1-2-62 SMX_SASCSIProtocolControllerStorageVolume (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_SASCSIProtocolController
Dependent	SMX_SAStorageVolume
DeviceAccess	2 (Read Write)
DeviceNumber	Device LUN number

1-2-63 SMX_SAFirmwareArraySystem (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_SAFirmware
Dependent	SMX_SAArraySystem
ElementSoftwareStatus	ElementSoftwareStatus[0]: 2 (Current) ElementSoftwareStatus[1]: 6 (Installed)

1-2-64 SMX_SAStorageEnclosureProcessorEnclosureFirmware (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_SAEnclosureFirmware

Property Name	Property Implementation
Dependent	SMX_SAStorageEnclosureProcessor
ElementSoftwareStatus	ElementSoftwareStatus[0]: 2 (Current) ElementSoftwareStatus[1]: 6 (Installed)

1-2-65 SMX_SADiskDriveDiskDriveFirmware (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_SADiskDriveFirmware
Dependent	SMX_SADiskDrive
ElementSoftwareStatus	ElementSoftwareStatus[0]: 2 (Current) ElementSoftwareStatus[1]: 6 (Installed)

1-2-66 SMX_SADiskDriveStorageExtent (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_SADiskDrive
Dependent	SMX_SAStorageExtent

1-2-67 SMX_SADiskPhysicalPackageDiskDrive (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_SADiskPhysicalPackage
Dependent	SMX_SADiskDrive

1-2-68 SMX_SAStoragePoolStorageVolume (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_SAStoragePool
Dependent	SMX_SAStorageVolume
SpaceConsumed	Bytes consumed by volume

1-2-69 SMX_SAPrimordialPoolStoragePool (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_SAPrimordialPool
Dependent	SMX_SAStoragePool
SpaceConsumed	Bytes consumed by storage pool

1-2-70 SMX_SASpareExtentStorageExtent (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_SAStorageExtent
Dependent	SMX_SAStorageExtent

1-2-71 SMX_SASpareExtentStorageRedundancySet (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_SAStorageExtent
Dependent	SMX_SAStorageRedundancySet

1-2-72 SMX_SAStorageExtentStorageVolume (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_SAStorageExtent
Dependent	SMX_SAStorageVolume

1-2-73 SMX_SADAPortSCSIProtocolEndpoint (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_SADAPort
Dependent	SMX_SASCSIProtocolEndpoint

1-2-74 SMX_SASPIPortSCSIProtocolEndpoint (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_SASPIPort
Dependent	SMX_SASCSIProtocolEndpoint

1-2-75 SMX_SAStorageGroupHostedCollection (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	HP_ComputerSystem
Dependent	SMX_SAStorageSpecificCollection

1-2-76 SMX_SAPhysicalPackageArraySystem (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_SAPhysicalPackage
Dependent	SMX_SAArraySystem

1-2-77 SMX_SAArrayControllerPhysicalPackageArrayController (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_SAArrayControllerPhysicalPackage

Property Name	Property Implementation
Dependent	SMX_SAArrayController

1-2-78 SMX_SADiskDriveMediaAccessStatData (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
ManagedElement	SMX_SADiskDrive
Stats	SMX_SAMediaAccessStatData

1-2-79 SMX_SAArrayControllerPhysicalPackageArrayControllerLocation (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Element	SMX_SAArrayControllerPhysicalPackage
PhysicalLocation	SMX_SAArrayControllerLocation

1-2-80 SMX_SAPhysicalPackageArraySystemLocation (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Element	SMX_SAPhysicalPackage
PhysicalLocation	SMX_SAArraySystemLocation

1-2-81 SMX_SADriveCageDriveCageLocation (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Element	SMX_SADriveCage
PhysicalLocation	SMX_SADriveCageLocation

1-2-82 SMX_SADiskPhysicalPackageDiskDriveLocation (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Element	SMX_SADiskPhysicalPackage
PhysicalLocation	SMX_SADiskDriveLocation

1-2-83 SMX_SASCSIProtocolEndpointSCSIProtocolController (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
AvailableSAP	SMX_SASCSIProtocolEndpoint
ManagedElement	SMX_SASCSIProtocolController

1-2-84 SMX_SAStorageEnclosureEnclosureLocation (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Element	SMX_SAStorageEnclosure
PhysicalLocation	SMX_SAStorageEnclosureLocation

1-2-85 SMX_TSASSCSIProtocolEndpoint

SMX_TSASSCSIProtocolEndpoint implements the HPSA_TSASSCSIProtocolEndPoint class and represents each port on SAS Drive. The following table lists the associations implemented for this class.

Property Name	Property Implementation
CIM_ManagedElement	
ElementName	Protocol Endpoint for <xxx> Where <xxx> is the value populated in the ElementName property of the instance of SMX_TSASPort associated to this instance via the association SMX_TSASPortTSASSCSIPE
Caption	Protocol Endpoint for <xxx> Where <xxx> is the value populated in the ElementName property of the

Property Name	Property Implementation
	instance of `SMX_TSASPort` associated to this instance via the association `SMX_TSASPortTSASSCSIPE`
CIM_ManagedSystemElement	
Name	SMX DiskDrive.DeviceID:<unique value>
	Where `<SMX DiskDrive.DeviceID>` is the `DeviceID` property of the instance of `SMX_DiskDrive` associated to this instance via the association `SMX_DiskDriveTSASSCSIPE`, and unique value is a unique value across all instances of `SMX_TSASSCSIProtocolEndpoint`. For example, a dual port disk has two instances of `SMX_TSASSCSIProtocolEndpoint` with the name properties set to:- PH77MW3991:0:0 - PH77MW3991:0:1
CIM_ServiceAccessPoint	
SystemCreationClassName	SMX ArraySystem
SystemName	The property value of `HP_ArraySystem.nam`
CreationClassName	SMX TSASSCSIProtocolEndpoint
CIM_EnabledLogicalElement	
EnabledDefault	2 (Enabled)
RequestedState	12 (Not Applicable)
CIM_ SCSIProtocolEndpoint	
ProtocolIFType	1 (Other)
OtherTypeDescription	SCSI
Role	3 (Target)
HPSA_TSASSCSIProtocolEndpoint	
Path	Redundancy path status: 0 (Unknown)2 (Active)3 (Passive)5 (Path Error)

1-2-86 SMX_ISASSCSIProtocolEndpoint

`SMX_ISASSCSIProtocolEndpoint` implements `HPSA_ISASSCSIProtocolEndpoint` and `HPSA_ISASSCSIProtocolEndpoint` represents each port on the smart array controller. The following table lists the associations implemented for this class.

Property Name	Property Implementation
CIM_ManagedElement	
Caption	Protocol Endpoint for <*xxx*> Where: <*xxx*> is the value populated in the ElementName property of the instance of SMX_TSASPort associated to this instance via the association SMX_TSASPortTSASSCSIPE
ElementName	Protocol Endpoint for <*xxx*> Where: <*xxx*> is the value populated in the ElementName property of the instance of SMX_TSASPort associated to this instance via the association SMX_TSASPortTSASSCSIPE
CIM_ManagedSystemElement	
Name	The same value as the DeviceID property of the instance of SMX_ISASPort associated to this instance through the association SMX_ISASPortISASSCSIPE.
CIM_ServiceAccessPoint	
SystemCreationClassName	SMX ArraySystem
SystemName	The property value of HPSA_ArraySystem.name
CreationClassName	SMX TSASSCSIProtocolEndpoint
ProtocolIFType	1 (other)
OtherTypeDescription	SCSI
Role	2 (initiator)

1-2-87 SMX_TSASPort

The following table lists the associations implemented for this class.

Property Name	Property Implementation
CIM_ManagedElement	
Caption	Port <*unique_index*> Where: <*unique_index*> is a unique index across all ports on a single drive
ElementName	Port <*unique_index*> Where: <*unique_index*> is a unique index across all ports on a single

Property Name	Property Implementation
	drive
CIM_ManagedSystemElement	
OperationalStatus	2 (OK) For multi-path supported firmware implementations, the status of the port is OK, and the status of the path is the only element that can be detected.
CIM_EnabledLogicalElement	
EnabledDefault	2 (Enabled)
EnabledState	5 (Not Applicable)
RequestedState	12 (Not Applicable)
CIM_LogicalDevice	
SystemnCreationClassName	SMX ArraySystem
SystemName	The property value of HP_ArraySystem.name
CreationClassName	SMX_TSASPort
DeviceID	The same value as the SMX_TSASSCSIProtocolEndpoint.Name property of the instance associated through SMX_ISASPortISASSCSIPE.
CIM_LogicalPort	
UsageRestriction	4 (Not restricted)
PortType	94 (SAS)
CIM_SASPort	
PermanentAddress	Not supported

1-2-88 SMX_ISASPort

The following table lists the associations implemented for this class.

Property Name	Property Implementation
CIM_ManagedElement	
Caption	Port <port #> Where: <port #> is the port number For example:

Property Name	Property Implementation
	1E, 2E, and so on
ElementName	Port *<port #>* Where: *<port #>* is the port number For example: 1E, 2E, and so on
CIM_ManagedSystemElement	
OperationalStatus	2 (OK) For multi-path supported firmware implementations, the status of the port is OK, and the status of the path is the only thing that can be detected.
CIM_EnabledLogicalElement	
EnabledDefault	2 (Enabled)
RequestedState	12 (Not Applicable)
CIM_LogicalDevice	
SystemnCreationClassName	SMX ArraySystem
SystemName	The property value of HP_ArraySystem.name
CreationClassName	SMX_ISASPort
DeviceID	SMX PortController.DeviceIDport # Where: SMX_PortController.deviceID is the DeviceID property of the instance of SMX_PortController associated to this instance via the association SMX_PortControllerISASPort, and port # is the port number for the port. This is the same value that is concatenated to the caption and related properties. An example of a array controller with two external ports is: PH77MW3991:1E PH77MW3991:2E
CIM_LogicalPort	
UsageRestriction	4 (Not restricted)
PortType	94 (SAS)
CIM_SASPort	
PermanentAddress	Not supported

1-2-89 SMX_ISASPortISASSCSIProtocolEndPoint (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_ISASPort
Dependent	SMX_ISASSCSIProtocolEndpoint

1-2-90 SMX_ArraySystemISASSCSIProtocolEndPoint (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_ArraySystem
Dependent	SMX_ISASSCSIProtocolEndpoint

1-2-91 SMX_ArraySystemISASPort (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_ArraySystem
PartComponent	SMX_ISASPort

1-2-92 SMX_PortControllerISASPort (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_PortController
Dependent	SMX_ISASPort

1-2-93 SMX_ArraySystemTSASSCSIProtocolEndpoint (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_ArraySystem

Property Name	Property Implementation
Dependent	SMX_TSASSCSIProtocolEndpoint

1-2-94 SMX_TSASPortTSASSCSIProtocolEndpoint (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Antecedent	SMX_TSASPort
Dependent	SMX_TSASSCSIProtocolEndpoint

1-2-95 SMX_ArraySystemTSASPort (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
GroupComponent	SMX_ArraySystem
PartComponent	SMX_TSASPort

1-2-96 SMX_DiskDriveTSASSCSIProtocolEndpoint (Association)

The following table lists the associations implemented for this class.

Property Name	Property Implementation
AvailableSAP	SMX_TSASSCSIProtocolEndpoint
ManagedElement	SMX_DiskDrive

1-2-97 SMX_SCSIInitiatorTargetLogicalUnitPath

The following table lists the associations implemented for this class.

Property Name	Property Implementation
Initiator	SMX_ISASSCSIProtocolEndpoint
Target	SMX_TSASSCSIProtocolEndpoint

1-3 Provider Indications

Indications Generated by the Provider

The following tables describe the SMX WBEM Smart Array Provider indications that are implemented for HP ProLiant server platforms where available.

1-3-1 HP_DeviceIndication: Physical Drive Status Changed to OK

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	2 (Informational)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A physical drive status has changed from a non-OK state to OK.
AlertingManagedElement	WBEM Path of SMX_SADiskDrive class
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	201
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	No action is recommended.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Physical Drive status OK
EventCategory	6 (Primary Storage)
ProbableCause	1 (Other)
ProbableCauseDescription	Physical Drive Status Changed to OK
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType

Property Name	Property Implementation
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>*.*<minor>*.*<build>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name if, one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWFirmwareVersion	Physical Disk firmware version string
HWLogicalLocation	Physical Disk Location string For example: Port:1E Box: 1 Bay 5
HWPhysicalLocation	Physical Location of the Failed Drive (Bay Number)

Property Name	Property Implementation
HWSerialNumber	Physical Disk Serial Number
HP_DeviceIndication	
DeviceModel	Physical Disk Model string
DeviceControllerLogicalLocation	Controller Location For example: `SmartArray 642 in Slot 2`

VariableNames[]	`FailureDescription`
	`DriveInterface`
	`LastFailureDescription`

VariableTypes[]	String (1) uint16 (4)
VariableValues[]	`FailureDescription` – short description of the failure Drive interface `HPSA_DiskDrive.DriveInterface` `LastFailureDescription` – last failure reason string from the drive. `HPSA_DiskDrive.OperationalStatus[1]`

1-3-2 HP_DeviceIndication: Physical Drive Status Changed to ERROR

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	Severity 5 (Major)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	`A physical drive status has changed to Error.`
AlertingManagedElement	WBEM Path of `SMX_SADiskDrive` class
AlertingElementFormat	2 (CIMObjectPath)

Property Name	Property Implementation
AlertType	5 (Device Alert)
EventID	202
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	`HP Smart Array (`
RecommendedActions	`Check for failed or removed physical drives.`
SystemName	Name of the computer system generating the indication
SystemCreationClassName	`CreationClassName` of the computer system generating the indication
HP_AlertIndication	
Summary	`Physical drive status Error`
EventCategory	6 (Primary Storage)
ProbableCause	86 (Disk Failure)
ProbableCauseDescription	`Physical Drive Status Changed to Error`
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	`SMX_OperatingSystem.OSType`
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>*.*<minor>*.*<build>*
ProviderVersion	For example: `2.2.0.0`
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication

Property Name	Property Implementation
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWFirmwareVersion	Physical Disk firmware version string
HWLogicalLocation	Physical Disk Location string For example: Port:1E Box: 1 Bay 5
HWPhysicalLocation	Physical Location of the Failed Drive (Bay Number)
HWSerialNumber	Physical Disk Serial Number
VariableNames[]	FailureDescription DriveInterface LastFailureDescription
VariableTypes[]	String (1) uint16 (4)
VariableValues[]	FailureDescription – short description of the failure Drive interface HPSA_DiskDrive.DriveInterface LastFailureDescription – last failure reason string from the drive. HPSA_DiskDrive.OperationalStatus[1]

Property Name	Property Implementation
HP_DeviceIndication	
DeviceModel	Physical Disk Model string
DeviceControllerLogicalLocation	Controller Location For example: `SmartArray 642 in Slot 2`

1-3-3 HP_DeviceIndication: Physical Drive Status Changed to REBUILDING

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	2 (Informational)
IndicationTime	Time of indication
CIM_AlertIndication	

Description	`A physical drive status has changed to`
	`Rebuilding. Data is now being rebuilt onto this`
	`drive from the RAID set.`

AlertingManagedElement	WBEM Path of `SMX_SADiskDrive` class
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	203
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	`HP Smart Array`(
RecommendedActions	`No action is recommended.`
SystemName	Name of the computer system generating the indication
SystemCreationClassName	`CreationClassName` of the computer system generating the indication
HP_AlertIndication	

Property Name	Property Implementation
Summary	`Physical drive is now rebuilding.`
EventCategory	6 (Primary Storage)
ProbableCause	1 (Other)
ProbableCauseDescription	`Physical Drive Status Changed to Rebuilding`
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	`SMX_OperatingSystem.OSType`
OSVersion	The operating system version of the computer system generating the indication in the following format: `<major>.<minor>.<build>`
ProviderVersion	For example: `2.2.0.0`
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	`HP_BladeCSLocation.LocationInformation[0]`
BladeName *	`HP_ComputerSystem.Name`
EnclosureName *	`HP_BladeEnclosureCS.Name`
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment

Property Name	Property Implementation
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWFirmwareVersion	Physical Disk firmware version string
HWLogicalLocation	Physical Disk Location string For example: `Port:1E Box: 1 Bay 5`
HWPhysicalLocation	Physical Location of the Failed Drive (Bay Number)
HWSerialNumber	Physical Disk Serial Number

VariableNames[]	`FailureDescription`
	`DriveInterface`
	`LastFailureDescription`

VariableTypes[]	String (1) uint16 (4)
VariableValues[]	`FailureDescription` – short description of the failure Drive interface `HPSA_DiskDrive.DriveInterface` `LastFailureDescription` – last failure reason string from the drive. `HPSA_DiskDrive.OperationalStatus[1]`
HP_DeviceIndication	
DeviceModel	Physical Disk Model string
DeviceControllerLogicalLocation	Controller Location For example: `SmartArray 642 in Slot 2`

1-3-4 HP_DeviceIndication: Physical Drive Status Changed to PREDICTIVE FAILURE

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication

Property Name	Property Implementation
PerceivedSeverity	5 (Major)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A physical drive status has changed to Predictive Failure.
AlertingManagedElement	WBEM Path of SMX_SADiskDrive class
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	204
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array (
RecommendedActions	Replace drive immediately to avoid loss of data.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Physical drive status Predictive Failure.
EventCategory	6 (Primary Storage)
ProbableCause	86 (Disk Failure)
ProbableCauseDescription	Physical Drive Status Changed to Predictive Failure.
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>*.*<minor>*.*<build>*
ProviderVersion	For example: 2.2.0.0

Property Name	Property Implementation
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name if one exists
RackUID *	Rack Unique Identifier if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWFirmwareVersion	Physical Disk firmware version string
HWLogicalLocation	Physical Disk Location string For example: Port:1E Box: 1 Bay 5
HWPhysicalLocation	Physical Location of the Failed Drive (Bay Number)
HWSerialNumber	Physical Disk Serial Number
VariableNames[]	FailureDescription DriveInterface LastFailureDescription

Property Name	Property Implementation
VariableTypes[]	String (1) uint16 (4)
VariableValues[]	FailureDescription – short description of the failure Drive interface HPSA_DiskDrive.DriveInterface LastFailureDescription – last failure reason string from the drive. HPSA_DiskDrive.OperationalStatus[1]
HP_DeviceIndication	
DeviceModel	Physical Disk Model string
DeviceControllerLogicalLocation	Controller Location For example: SmartArray 642 in Slot 2

1-3-5 HPSA_StorageVolumeIndication : Logical Drive Status Changed to OK

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	2 (Informational)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A logical drive status has changed from a non-OK state to OK.
AlertingManagedElement	WBEM Path of SMX_SAStorageVolume Class
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	101
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array

Property Name	Property Implementation
RecommendedActions	No action is recommended.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Logical drive status OK
EventCategory	6 (Primary Storage)
ProbableCause	1 (Other)
ProbableCauseDescription	Logical Drive Status Changed to OK
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>.<minor>.<build>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name

Property Name	Property Implementation
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWLogicalLocation	Logical drive number and RAID Level For example: LogicalDrive1 (RAID 1+0).
VariableNames[]	FailureDescription
VariableTypes[]	String (1)
VariableValues[]	FailureDescription short description of the failure
HP_DeviceIndication	
HPSA_StorageVolumeIndication	
DeviceOperationalStatus	Current OperationalStatus values for Storage Volume DeviceOperationalStatus[0]: SMX_SAStorageVolume.OperationalStatus[0] DeviceOperationalStatus[1]: SMX_SAStorageVolume.OperationalStatus[1] (This index is only populated if there is additional Vendor unique status available)
DeviceOperationalStatusPrevious	Previous OperationalStatus values for Storage Volume DeviceOperationalStatusPrevious[0]: SMX_SAStorageVolume.OperationalStatus[0] DeviceOperationalStatusPrevious[1]: SMX_SAStorageVolume.OperationalStatus[1] (This index is only populated if there is additional Vendor unique status available)

1-3-6 SMX_SAStorageVolumeIndication: Logical Drive Status Changed to ERROR

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	5 (Major)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A logical drive status has changed to Error.
AlertingManagedElement	WBEM Path of SMX_SAStorageVolume class
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	102
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	Check for failed or removed physical drives.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Logical drive status error
EventCategory	6 (Primary Storage)
ProbableCause	86 (Disk Failure)
ProbableCauseDescription	Logical Drive Status Changed to Error
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType

Property Name	Property Implementation
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>.<minor>.<build>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWLogicalLocation	Logical drive number & RAID Level. For example: LogicalDrive1 (RAID 1+0).
VariableNames[]	FailureDescription
VariableTypes[]	String (1)

Property Name	Property Implementation
VariableValues[]	FailureDescription short description of the failure
HP_DeviceIndication	
SMX_SAStorageVolumeIndication	
DeviceOperationalStatus	Current OperationStatus values for Storage Volume DeviceOperationalStatus[0]: SMX_SAStorageVolume.OperationalStatus[0] DeviceOperationalStatus[1]: SMX_SAStorageVolume.OperationalStatus[1] (This index is only populated if there is additional Vendor unique status available)
DeviceOperationalStatusPrevious	Previous OperationStatus values for Storage Volume DeviceOperationalStatusPrevious[0]: SMX_SAStorageVolume.OperationalStatus[0] DeviceOperationalStatusPrevious[1]: SMX_SAStorageVolume.OperationalStatus[1] (This index is only populated if there is additional Vendor unique status available)

1-3-7 SMX_SAStorageVolumeIndication: Logical Drive Status Changed to Degraded

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	2 (Info)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A logical drive is in a degraded state. Device is still servicing I/O but redundancy may be degraded or lost.
AlertingManagedElement	WBEM Path of SMX_SAStorageVolume class
AlertingElementFormat	2 (CIMObjectPath)

Property Name	Property Implementation
AlertType	5 (Device Alert)
EventID	103
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	Check status of physical drives. Degraded status may be caused by failed or missing physical drives, or a data recovery operation on one or more physical drives.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Logical drive in degraded state
EventCategory	6 (Primary Storage)
ProbableCause	86 (Disk Failure)
ProbableCauseDescription	Logical State Changed to Degraded
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>*.*<minor>*.*<build>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication

Property Name	Property Implementation
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWLogicalLocation	Logical drive number & RAID Level. For example: LogicalDrive 1 (RAID 1+0).
VariableNames[]	FailureDescription
VariableTypes[]	String (1)
VariableValues[]	FailureDescription short description of the failure
HP_DeviceIndication	
SMX_SAStorageVolumeIndication	
DeviceOperationalStatus	Current OperationStatus values for Storage Volume DeviceOperationalStatus[0]: SMX_SAStorageVolume.OperationalStatus[0] DeviceOperationalStatus[1]: SMX_SAStorageVolume.OperationalStatus[1] (This index is only populated if there is additional Vendor unique status available)

Property Name	Property Implementation

DeviceOperationalStatusPrevious	Previous `OperationStatus` values for Storage Volume
	
	`DeviceOperationalStatusPrevious[0]`:
	`SMX_SAStorageVolume.OperationalStatus[0]`
	`DeviceOperationalStatusPrevious[1]`:
	`SMX_SAStorageVolume.OperationalStatus[1]`
	
	(This index is only populated if there is additional Vendor unique status available)

1-3-8 HP_DeviceIndication: Controller Status Changed to OK

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	2 (Info)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	`A Smart Array controller status has changed from non-OK to OK.`
AlertingManagedElement	WBEM Path to `SMX_SAArrayController` class.
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	1
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	`HP Smart Array`
RecommendedActions	`No action is recommended.`
SystemName	Name of the computer system generating the indication
SystemCreationClassName	`CreationClassName` of the computer system generating the indication
HP_AlertIndication	
Summary	`Controller status OK`

Property Name	Property Implementation
EventCategory	6 (Primary Storage)
ProbableCause	1 (Other)
ProbableCauseDescription	`Array Controller Status Changed to OK`
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	`SMX_OperatingSystem.OSType`
OSVersion	The operating system version of the computer system generating the indication in the following format: *`<major>.<minor>.<build>`*
ProviderVersion	For example: `2.2.0.0`
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	`HP_BladeCSLocation.LocationInformation[0]`
BladeName *	`HP_ComputerSystem.Name`
EnclosureName *	`HP_BladeEnclosureCS.Name`
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment

Property Name	Property Implementation
HP_HardwareIndication	
HWFirmwareVersion	Array Controller firmware version string
HWLogicalLocation	Array Controller Location string For example: `Smart Array P600 in Slot 5`
HWManufacturer	Array Controller Manufacturer
HWSerialNumber	Array Controller Serial Number

VariableNames[]	`FailureDescription`
	`CacheSizeTotal`
	`CacheSerialNumber`

VariableTypes[]	String (1) uint32 (5)

VariableValues[]	`FailureDescription` – short description of the failure
	`CacheSizeTotal HPSA_ArrayController.CacheSizeTotal`
	`CacheSerialNumber`
	`HPSA_ArrayController.CacheSerialNumber`

HP_DeviceIndication	
DeviceModel	Array Controller Model string

1-3-9 HP_DeviceIndication: Controller Status Changed to ERROR

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	5 (Major)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	`A Smart Array controller status has changed to Error.`

Property Name	Property Implementation
AlertingManagedElement	WBEM Path to SMX_SAArrayController class.
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	2
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array (
RecommendedActions	Check controller status and run diagnostics.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Controller status Error
EventCategory	6 (Primary Storage)
ProbableCause	24 (I/O device error)
ProbableCauseDescription	Array Controller Status Changed to Error
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>.<minor>.<build>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication

Property Name	Property Implementation
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWFirmwareVersion	Array Controller firmware version string
HWLogicalLocation	Array Controller Location string For example: Smart Array P600 in Slot 5
HWManufacturer	Array Controller Manufacturer
HWSerialNumber	Array Controller Serial Number
VariableNames[]	FailureDescription CacheSizeTotal CacheSerialNumber
VariableTypes[]	String (1) uint32 (5)
VariableValues[]	FailureDescription – short description of the failure CacheSizeTotal HPSA_ArrayController.CacheSizeTotal CacheSerialNumber HPSA_ArrayController.CacheSerialNumber

Property Name	Property Implementation
HP_DeviceIndication	
DeviceModel	Array Controller Model string

1-3-10 HP_DeviceIndication: Controller Redundancy state has been set to Active

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	3 (Warning)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A Smart Array controller redundancy state has changed from Standby to Active.
AlertingManagedElement	WBEM Path to SMX_SAArrayController class.
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	3
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	Check status of all controllers. An array controller may have failed causing this controller to become active.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Controller redundancy state set to Active
EventCategory	6 (Primary Storage)
ProbableCause	1 (Other)

Property Name	Property Implementation
ProbableCauseDescription	Array Controller Redundancy State Changed to Active
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: *\<major\>.\<minor\>.\<build\>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name if one exists
RackUID *	Rack Unique Identifier if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWFirmwareVersion	Array Controller firmware version string

Property Name	Property Implementation
HWLogicalLocation	Array Controller Location string For example: `Smart Array P600 in Slot 5`
HWManufacturer	`SAEnclosureFirmware`
HWSerialNumber	Array Controller Serial Number

VariableNames[]	`FailureDescription`
	`CacheSizeTotal`
	`CacheSerialNumber`

VariableTypes[]	String (1) uint32 (5)

VariableValues[]	`FailureDescription` – short description of the failure
	`CacheSizeTotal HPSA_ArrayController.CacheSizeTotal`
	`CacheSerialNumber`
	`HPSA_ArrayController.CacheSerialNumber`

HP_DeviceIndication	
DeviceModel	Array Controller Model string

1-3-11 HP_DeviceIndication: Controller Redundancy has been lost

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	3 (Warning)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A Smart Array controller has detected that redundancy has been lost due to failure or loss of communication with partner controller.
AlertingManagedElement	WBEM Path to `SMX_SAArrayController` class.
AlertingElementFormat	2 (CIMObjectPath)

Property Name	Property Implementation
AlertType	5 (Device Alert)
EventID	4
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	Check status of the partner array controller.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Controller redundancy lost
EventCategory	6 (Primary Storage)
ProbableCause	1 (Other)
ProbableCauseDescription	Array Controller Redundancy has been Lost
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>.<minor>.<build>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication

Property Name	Property Implementation
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWFirmwareVersion	Array Controller firmware version string
HWLogicalLocation	Array Controller Location string For example: Smart Array P600 in Slot 5
HWManufacturer	Array Controller Manufacturer
HWSerialNumber	Serial Number
VariableNames[]	FailureDescription CacheSizeTotal CacheSerialNumber
VariableTypes[]	String (1) uint32 (5)
VariableValues[]	FailureDescription – short description of the failure CacheSizeTotal HPSA_ArrayController.CacheSizeTotal CacheSerialNumber HPSA_ArrayController.CacheSerialNumber

Property Name	Property Implementation
HP_DeviceIndication	
DeviceModel	Array Controller Model string

1-3-12 HP_DeviceIndication: Controller Redundancy has been restored

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	2 (Info)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	Controller has detected that Redundancy has been restored and can communicate with partner controller.
AlertingManagedElement	WBEM Path to SMX_SAArrayController class.
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	5
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	No action is recommended.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Controller redundancy restored
EventCategory	6 (Primary Storage)
ProbableCause	1 (Other)

Property Name	Property Implementation
ProbableCauseDescription	Array Controller Redundancy has been Restored
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>*.*<minor>*.*<build>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName*	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWFirmwareVersion	Array Controller firmware version string

Property Name	Property Implementation
HWLogicalLocation	Array Controller Location string For example: `Smart Array P600 in Slot 5`
HWManufacturer	Array Controller Manufacturer
HWSerialNumber	Array Controller Serial Number

VariableNames[]	`FailureDescription`
	`CacheSizeTotal`
	`CacheSerialNumber`

VariableTypes[]	String (1) uint32 (5)

VariableValues[]	`FailureDescription` – short description of the failure
	`CacheSizeTotal HPSA_ArrayController.CacheSizeTotal`
	`CacheSerialNumber`
	`HPSA_ArrayController.CacheSerialNumber`

HP_DeviceIndication	
DeviceModel	Array Controller Model string

1-3-13 HP_DeviceIndication: Controller Battery Status Change - OK

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	2 (info)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A Smart Array controller Battery status has changed from non-OK to OK.
AlertingManagedElement	WBEM Path to `SMX_SAArrayController` class.
AlertingElementFormat	2 (CIMObjectPath)

Property Name	Property Implementation
AlertType	5 (Device Alert)
EventID	6
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	No action is recommended.
SystemName	Name of the computer system generating the indication
SystemCreationClass	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Controller battery status OK
EventCategory	6 (Primary Storage)
ProbableCause	1 (Other)
ProbableCauseDescription	Controller Battery Status Changed to OK
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>.<minor>.<build>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication

Property Name	Property Implementation
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWFirmwareVersion	Array Controller firmware version string
HWLogicalLocation	Array Controller Location string For example: Smart Array P600 in Slot 5
HWManufacturer	Array Controller Manufacturer
HWSerialNumber	Array Controller Serial Number
VariableNames[]	FailureDescription CacheSizeTotal CacheSerialNumber
VariableTypes[]	String (1) uint32 (5)
VariableValues[]	FailureDescription – short description of the failure CacheSizeTotal HPSA_ArrayController.CacheSizeTotal CacheSerialNumber HPSA_ArrayController.CacheSerialNumber

Property Name	Property Implementation
HP_DeviceIndication	
DeviceModel	Array Controller Model string

1-3-14 HP_DeviceIndication: Controller Battery Status Changed to not fully charged

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	3 (Warning)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A Smart Array controller Battery status has changed to Not Fully Charged.
AlertingManagedElement	WBEM Path to SMX_SAArrayController class.
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	7
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	Check battery operation, allow time to the battery to be fully charged.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Controller Battery Status set to Not fully Charged.
EventCategory	6 (Primary Storage)
ProbableCause	99 (low battery)

Property Name	Property Implementation
ProbableCauseDescription	Controller Battery Status Changed to Not Fully Charged
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: *\<major>*.*\<minor>*.*\<build>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWFirmwareVersion	Array Controller firmware version string

Property Name	Property Implementation
HWLogicalLocation	Array Controller Location string
	For example: `Smart Array P600 in Slot 5`
HWManufacturer	Array Controller Manufacturer
HWSerialNumber	Array Controller Serial Number

VariableNames[]	`FailureDescription`
	`CacheSizeTotal`
	`CacheSerialNumber`

VariableTypes[]	String (1) uint32 (5)

VariableValues[]	`FailureDescription` – short description of the failure
	`CacheSizeTotal HPSA_ArrayController.CacheSizeTotal`
	`CacheSerialNumber`
	`HPSA_ArrayController.CacheSerialNumber`

HP_DeviceIndication	
DeviceModel	Array Controller Model string

1-3-15 HP_DeviceIndication: Controller Battery Status Changed to FAILED

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	5 (major)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	`A Smart Array controller battery status changed to Failed.`
AlertingManagedElement	WBEM Path to `SMX_SAArrayController` class.
AlertingElementFormat	2 (CIMObjectPath)

Property Name	Property Implementation
AlertType	5 (Device Alert)
EventID	8
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	Check battery connection and replace if necessary.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Controller battery status Failed
EventCategory	6 (Primary Storage)
ProbableCause	92 (battery failure)
ProbableCauseDescription	Controller Battery Status Changed to Failed
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>*.*<minor>*.*<build>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication

Property Name	Property Implementation
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When `ImpactedDomain` is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWFirmwareVersion	Array Controller firmware version string
HWLogicalLocation	Array Controller Location string For example: `Smart Array P600 in Slot 5`
HWManufacturer	Array Controller Manufacturer
HWSerialNumber	Array Controller Serial Number
VariableNames[]	FailureDescription CacheSizeTotal CacheSerialNumber
VariableTypes[]	String (1) uint32 (5)
VariableValues[]	FailureDescription – short description of the failure CacheSizeTotal HPSA_ArrayController.CacheSizeTotal CacheSerialNumber HPSA_ArrayController.CacheSerialNumber

Property Name	Property Implementation
HP_DeviceIndication	
DeviceModel	Array Controller Model string

1-3-16 HP_DeviceIndication: Controller Cache Status - OK

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	2 (Info)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A Smart Array controller Cache status has changed from non-OK to OK.
AlertingManagedElement	WBEM Path to SMX_SAArrayController class.
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	9
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	No action is recommended.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Controller cache status OK
EventCategory	6 (Primary Storage)
ProbableCause	1 (Other)
ProbableCauseDescription	Controller Cache Status Changed to OK

Property Name	Property Implementation
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: $<major>.<minor>.<build>$
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWFirmwareVersion	Array Controller firmware version string
HWLogicalLocation	Array Controller Location string For example: Smart Array P600 in Slot 5
HWManufacturer	Array Controller Manufacturer
HWSerialNumber	Array Controller Serial Number
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name if one exists

Property Name	Property Implementation
RackUID *	Rack Unique Identifier if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemGUID	Platform GUID of the computer system generating the indication
VariableNames[]	FailureDescription CacheSizeTotal CacheSerialNumber
VariableTypes[]	String (1) uint32 (5)
VariableValues[]	FailureDescription – short description of the failure CacheSizeTotal HPSA_ArrayController.CacheSizeTotal CacheSerialNumber HPSA_ArrayController.CacheSerialNumber
HP_DeviceIndication	
DeviceModel	Array Controller Model string

1-3-17 HP_DeviceIndication: Controller Cache Status - Temporarily Disabled

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	2 (Info)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A Smart Array controller Cache status has changed to Temporarily Disabled. This may be caused by a rebuild or configuration change. Normal operation will return after background operations have completed.
AlertingManagedElement	WBEM Path to SMX_SAArrayController class.
AlertingElementFormat	2 (CIMObjectPath)

Property Name	Property Implementation
AlertType	5 (Device Alert)
EventID	10
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	No action is recommended.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Array controller cache status temporarily disabled
EventCategory	6 (Primary Storage)
ProbableCause	35 (Performance Degraded)
ProbableCauseDescription	Array Controller Cache Status Changed to Temporarily Disabled
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>.<minor>.<build>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication

Property Name	Property Implementation
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When `ImpactedDomain` is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWFirmwareVersion	Array Controller firmware version string
HWLogicalLocation	Array Controller Location string For example: `Smart Array P600 in Slot 5`
HWManufacturer	Array Controller Manufacturer
HWSerialNumber	Array Controller Serial Number
VariableNames[]	FailureDescription CacheSizeTotal CacheSerialNumber
VariableTypes[]	String (1) uint32 (5)
VariableValues[]	FailureDescription – short description of the failure CacheSizeTotal HPSA_ArrayController.CacheSizeTotal CacheSerialNumber HPSA_ArrayController.CacheSerialNumber

Property Name	Property Implementation
HP_DeviceIndication	
DeviceModel	Array Controller Model string

1-3-18 HP_DeviceIndication: Controller Cache Status - Permanently Disabled

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	3 (Warning)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A Smart Array controller Cache status has changed to Permanently Disabled. The controller has detected a problem with the cache and has disabled the cache permanently.
AlertingManagedElement	WBEM Path to SMX_SAArrayController class.
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	11
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	Check the cache controller error code and run diagnostics.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Array controller cache status permanently disabled
EventCategory	6 (Primary Storage)

Property Name	Property Implementation
ProbableCause	35 (Performance Degraded)
ProbableCauseDescription	`Array Controller Cache Status Changed to Permanently Disabled`
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	`SMX_OperatingSystem.OSType`
OSVersion	The operating system version of the computer system generating the indication in the following format: `<major>.<minor>.<build>`
ProviderVersion	For example: `2.2.0.0`
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When `ImpactedDomain` is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	`HP_BladeCSLocation.LocationInformation[0]`
BladeName *	`HP_ComputerSystem.Name`
EnclosureName *	`HP_BladeEnclosureCS.Name`
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment

Property Name	Property Implementation
HP_HardwareIndication	
HWFirmwareVersion	Array Controller firmware version string
HWLogicalLocation	Array Controller Location string For example: `Smart Array P600 in Slot 5`
HWManufacturer	Array Controller Manufacturer
HWSerialNumber	Array Controller Serial Number

VariableNames[]	`FailureDescription`
	`CacheSizeTotal`
	`CacheSerialNumber`

VariableTypes[]	String (1) uint32 (5)

VariableValues[]	`FailureDescription` – short description of the failure
	`CacheSizeTotal HPSA_ArrayController.CacheSizeTotal`
	`CacheSerialNumber`
	`HPSA_ArrayController.CacheSerialNumber`

HP_DeviceIndication	
DeviceModel	Array Controller Model string

1-3-19 HP_DeviceIndication: Enclosure Power Supply Status changed to Non Redundant

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	3 (Warning)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	`A Storage Enclosure Power Subsystem status has changed to non-redundant.`

Property Name	Property Implementation
AlertingManagedElement	WBEM Path of SMX_SAStorageEnclosureProcessor
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	301
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	Check status of all enclosure power supplies. Ensure that power supplies have not failed. Add or replace power supplies as necessary.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Power Supply status Non-Redundant
EventCategory	17 (Primary Storage Power)
ProbableCause	89 (Power Supply Failure)
ProbableCauseDescription	Redundant Power Supply Status Changed to Non-Redundant
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>.<minor>.<build>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication

Property Name	Property Implementation
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWLogicalLocation	Enclosure Location string For example: Port 1I Box 1
HWSerialNumber	Enclosure Serial Number
HP_DeviceIndication	
DeviceModel	Enclosure Model string

1-3-20 HP_DeviceIndication: Enclosure Power Supply Status changed to OK (Redundant)

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	2 (Info)
IndicationTime	Time of indication

Property Name	Property Implementation
CIM_AlertIndication	
Description	A Storage Enclosure Power Subsystem has changed to Fully Redundant.
AlertingManagedElement	WBEM Path of SMX_SAStorageEnclosureProcessor
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	302
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	No action is recommended.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Redundant power supply status OK
EventCategory	17 (Primary Storage Power)
ProbableCause	1 (Other)
ProbableCauseDescription	Redundant Power Supply Status Changed to OK
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>.<minor>.<build>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication

Property Name	Property Implementation
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name if one exists
RackUID *	Rack Unique Identifier if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWLogicalLocation	Enclosure Location string For example: Port 1I Box 1
HWSerialNumber	Enclosure Serial Number
HP_DeviceIndication	
DeviceModel	Enclosure Model string

1-3-21 HP_DeviceIndication: Enclosure Power Supply Status changed to Redundant Degraded

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication

Property Name	Property Implementation
PerceivedSeverity	3 (Warning)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A Storage Enclosure Power Subsystem status has changed to Degraded Redundancy.
AlertingManagedElement	WBEM Path of SMX_SAStorageEnclosureProcessor
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	303
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	Check status of all enclosure power supplies. Ensure that power supplies have not failed. Add or replace power supplies as necessary.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Power supply status Redundant Degraded
EventCategory	17 (Primary Storage Power)
ProbableCause	89 (Power supply failure)
ProbableCauseDescription	Redundant Power Supply Degraded
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>*.*<minor>*.*<build>*
ProviderVersion	For example: 2.2.0.0

Property Name	Property Implementation
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When `ImpactedDomain` is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWLogicalLocation	Enclosure Location string For example: `Port 1I Box 1`
HWSerialNumber	Enclosure Serial Number
HP_DeviceIndication	
DeviceModel	Enclosure Model string

1-3-22 HP_DeviceIndication: Enclosure Temperature sensor Status changed to OK

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	2 (Info)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A Storage Enclosure Temperature sensor status changed from non-OK to OK.
AlertingManagedElement	WBEM Path of SMX_SAStorageEnclosureProcessor
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	307
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array (
RecommendedActions	No action is recommended.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Temperature sensor status OK
EventCategory	24 (Primary Storage Cooling)
ProbableCause	1 (Other)
ProbableCauseDescription	Temperature Status Changed to OK
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType

Property Name	Property Implementation
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>.<minor>.<build>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWLogicalLocation	Enclosure Location string For example: Port 1I Box 1
HWSerialNumber	Enclosure Serial Number
HP_DeviceIndication	

Property Name	Property Implementation
DeviceModel	Enclosure Model string

1-3-23 HP_DeviceIndication: Enclosure Temperature sensor Status Changed to Warning

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	3 (Warning)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A Storage Enclosure Temperature sensor status changed to Warning Condition. This indicates the enclosure temperature is above normal, otherwise enclosure is still operating normally.
AlertingManagedElement	WBEM Path of SMX_SAStorageEnclosureProcessor
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	308
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	Ensure that the system is adequately ventilated. Check for proper room temperature and internal/external airflow. Add or repair fans and air baffling if necessary.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Temperature sensor status Warning Condition
EventCategory	24 (Primary Storage Cooling)

Property Name	Property Implementation
ProbableCause	51 (Temperature Unacceptable)
ProbableCauseDescription	`Temperature Status Changed to Warning Condition`
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	`SMX_OperatingSystem.OSType`
OSVersion	The operating system version of the computer system generating the indication in the following format: `<major>.<minor>.<build>`
ProviderVersion	For example: `2.2.0.0`
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When `ImpactedDomain` is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	`HP_BladeCSLocation.LocationInformation[0]`
BladeName *	`HP_ComputerSystem.Name`
EnclosureName *	`HP_BladeEnclosureCS.Name`
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	

Property Name	Property Implementation
HWLogicalLocation	Enclosure Location string For example: `Port 1I Box 1`
HWSerialNumber	Enclosure Serial Number
HP_DeviceIndication	
DeviceModel	Enclosure Model string

1-3-24 HP_DeviceIndication: Enclosure Temperature sensor Status Changed to Critical

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	5 (major)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A Storage Enclosure Temperature sensor status has changed to Critical. An enclosure temperature is reaching the maximum allowed temperature for normal operation. A shutdown is imminent. Action is required before loss of data occurs.
AlertingManagedElement	WBEM Path of SMX_SAStorageEnclosureProcessor
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	309
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	Ensure that the system is adequately ventilated. Check for proper room temperature and internal/external airflow. Add or repair fans and air baffling if necessary.
SystemName	Name of the computer system generating the indication

Property Name	Property Implementation
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Temperature sensor status Critical
EventCategory	24 (Primary Storage Cooling)
ProbableCause	51 (Temperature Unacceptable)
ProbableCauseDescription	Temperature Status Changed to Critical
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>.<minor>.<build>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists

Property Name	Property Implementation
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWLogicalLocation	Enclosure Location string For example: Port 1I Box 1
HWSerialNumber	Enclosure Serial Number
HP_DeviceIndication	
DeviceModel	Enclosure Model string

1-3-25 HP_DeviceIndication: Enclosure Fan Status Changed to OK

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	2 (Info)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A Storage Enclosure Fan status has changed from a non-OK state to OK.
AlertingManagedElement	WBEM Path of SMX_SAStorageEnclosureProcessor
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	304
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array

Property Name	Property Implementation
RecommendedActions	No action is recommended.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Fan status OK
EventCategory	24 (Primary Storage Cooling)
ProbableCause	1 (Other)
ProbableCauseDescription	Fan Status Changed to OK
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>.<minor>.<build>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name

Property Name	Property Implementation
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWLogicalLocation	Enclosure Location string For example: Port 1I Box 1
HWSerialNumber	Enclosure Serial Number
HP_DeviceIndication	
DeviceModel	Enclosure Model string

1-3-26 HP_DeviceIndication: Enclosure Fan Status changed to Degraded

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	3 (Warning)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A Storage Enclosure Fan status has changed to Degraded. An enclosure has detected there may a problem with one or more of the fans.
AlertingManagedElement	WBEM Path of SMX_SAStorageEnclosureProcessor
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	305

Property Name	Property Implementation
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	Ensure that the system is adequately ventilated. Check for proper room temperature and internal/external airflow. Add or repair fans and air baffling if necessary.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Fan status Degraded
EventCategory	24 (Primary Storage Cooling)
ProbableCause	94 (Fan failure)
ProbableCauseDescription	Fan Degraded
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>.<minor>.<build>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication
SystemGUID	Platform GUID of the computer system generating the indication
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.

Property Name	Property Implementation
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWLogicalLocation	Enclosure Location string For example: Port 1I Box 1
HWSerialNumber	Enclosure Serial Number
HP_DeviceIndication	
DeviceModel	Enclosure Model string

1-3-27 HP_DeviceIndication: Enclosure Fan Status change to Failure

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication
PerceivedSeverity	5 (major)
IndicationTime	Time of indication
CIM_AlertIndication	
Description	A Storage Enclosure Fan status changed to Failure. An enclosure has detected a failure in the fan subsystem and there is insufficient fan capability to ensure normal operation.

Property Name	Property Implementation
AlertingManagedElement	WBEM Path of SMX_SAStorageEnclosureProcessor
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	306
EventTime	Time of the event or time of the indication if event time unknown
ProviderName	HP Smart Array
RecommendedActions	Ensure that the system is adequately ventilated. Check for proper room temperature and internal/external airflow. Add or repair fans and air baffling if necessary.
SystemName	Name of the computer system generating the indication
SystemCreationClassName	CreationClassName of the computer system generating the indication
HP_AlertIndication	
Summary	Fan status Error
EventCategory	24 (Primary Storage Cooling)
ProbableCause	94 (Fan failure)
ProbableCauseDescription	Fan Failure
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication
OSType	SMX_OperatingSystem.OSType
OSVersion	The operating system version of the computer system generating the indication in the following format: *<major>.<minor>.<build>*
ProviderVersion	For example: 2.2.0.0
SystemFirmwareVersion	Firmware version of the computer system generating the indication
SystemSerialNumber	Serial number of the computer system generating the indication
SystemProductID	Product ID of the computer system generating the indication
SystemModel	Model name of the computer system generating the indication

Property Name	Property Implementation
SystemGUID	Platform GUID of the computer system generating the indication
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name, if one exists
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_HardwareIndication	
HWLogicalLocation	Enclosure Location string For example: Port 1I Box 1
HWSerialNumber	Enclosure Serial Number
ImpactedDomain	3 (Enclosure) for c-Class blade systems 4 (System) for all other systems **Note:** When ImpactedDomain is 3 (Enclosure) the properties that follow and are indicated with an asterisk (*) below will be populated.
BladeBay *	HP_BladeCSLocation.LocationInformation[0]
BladeName *	HP_ComputerSystem.Name
EnclosureName *	HP_BladeEnclosureCS.Name
RackName *	Rack name, if one exists

Property Name	Property Implementation
RackUID *	Rack Unique Identifier, if one exists
SystemVirtualSerialNumber	Conditional property containing the virtual system serial number string when running in a Virtual Connect environment
SystemVirtualUUID	Conditional property containing the virtual system UUID when running in a Virtual Connect environment
HP_DeviceIndication	
DeviceModel	Enclosure Model string

1-4 Physical Location

The Physical Location is a string representing the Smart Array device physical location. 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>
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 Mezzanines lot num)