
1 HP Insight Manager WBEM System Fan Provider Overview

Description

The HP Insight Management Web-Based Enterprise Management (WBEM) System Fan provider implements and extends CIM classes described in this document to model the base server. These classes provide computational information and capabilities and serve as an aggregation point to associate one or more elements that make up a base server, such as: `Fans`, `PowerSupplies`, `Processor` and `Memory` (Volatile and/or NonVolatile Storage).

Profile Name	Organization	Version
HP Fan Profile	HP WBEM TC	1.3 (P102)
HP Location Profile	HP WBEM TC	1.0 (P124)
HP Fan Physical Location Profile	HP WBEM TC	1.0 (P115)

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_Fan`
- `SMX_FanCollection`
- `SMX_FanRedundancySet`
- `SMX_MemberOfFanRedundancy`
- `SMX_HostedFanRedundancySet`
- `SMX_MemberOfFanCollection`
- `SMX_HostedFanCollection`
- `SMX_SystemFan`
- `SMX_FanLocation`
- `SMX_FanElementLocation`
- `SMX_FanModule`
- `SMX_SystemPhysicalFan`
- `SMX_RealizesFan`
- `SMX_FanSlot`
- `SMX_FanInSlot`
- `SMX_SystemFanSlot`
- `SMX_FanSpeedSensor`
- `SMX_AssociatedFanSensor`
- `SMX_SystemFanSensor`

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_Fan` Class

The `SMX_Fan` class is used to model fans on servers. Fan numbers for existing instances do not change when other fans are added and removed.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
Caption	<p>Short description of this fan from the name displayed by the MP or iLO and the location.</p> <p>For example: Fan 1 at CabinetFan=01</p>
Description	<p>Description of this fan, including ElementName, FanType and StatusDescription[0].</p> <p>For example: elementname provides cooling for fantype. statusdescription.</p> <p>Where: <elementname> represents the value of ElementName, fantype represents the corresponding string value of the FanType enumeration and statusdescription represents the value of StatusDescriptions[0]</p>
ElementName	<p>Short description of this fan from the name displayed by the MP or iLO and the location.</p> <p>For example: Fan 1 at CabinetFan=01</p>
CIM_ManagedSystemElement	
OperationalStatus[0]	<p>2 (OK) – if fan is operating properly; 3 (Degraded) – if fan is degraded 6 (Error) – if fan has failed</p>
StatusDescriptions[0]	<p>Description of the status of the fan corresponding to the OperationalStatus.</p> <p>For example: Fan is operating properly– if OperationalStatus[0] is 2 (OK); Fan is degraded – if OperationalStatus[0] is 3 (Degraded) Fan has failed – if OperationalStatus[0] is 6 (Error)</p>
HealthState	<p>5 (OK) – if fan is operating properly; 10 (Degraded) - if fan is degraded 20 (Major Failure) – if fan has failed</p>
Name	<p>Short description of this fan from the name displayed by the MP or iLO and the location.</p> <p>For example: Fan 1 at CabinetFan=01</p>
CIM_LogicalDevice	
CreationClassName	SMX_Fan

Property Name	Property Implementation
DeviceID	Unique identifier for this fan instance.
SystemCreationClassName	SMX_ComputerSystem.CreationClassName
SystemName	SMX_ComputerSystem.Name
CIM_EnabledLogicalElement	
EnabledDefault	2 (Enabled)
EnabledState	5 (Not Applicable)
RequestedState	12 (Not Applicable)
CIM_CoolingDevice	
ActiveCooling	TRUE
CIM_Fan	
VariableSpeed	True – if fan supports variable speed False – if fan does not support variable speed or is unknown
HP_Fan	
FanType	Enumeration describing the type of fan. Please refer to the Managed Object Format.
CurrentSpeed	Speed of the fan in CurrentSpeedUnits
CurrentSpeedUnits	Enumeration describing the units for CurrentSpeed. Please refer to the Managed Object Format.
CurrentSpeedUnits	Enumeration describing the units for CurrentSpeed. Please refer to the Managed Object Format.

1-2-2 SMX_FanCollection Class

The SMX_FanCollection class is used to model fan collections on servers. There is one instance of this class on systems modeling fans.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
Caption	Cooling Collection
Description	This is a collection of all devices including fans that provide cooling.

Property Name	Property Implementation
	GroupStatusDescription Where: GroupStatusDescription represents the value of the GroupStatusDescriptions[0] property.
ElementName	Cooling Collection
CIM_SystemSpecificCollection	
InstanceID	Unique identifier for this cooling collection instance.
HP_GroupSystemSpecificCollection	
GroupOperationalStatus[0]	Represents the most severe cooling redundancy status and non-fault tolerant fan operational status: 0 (Unknown) – if fan collection status is unknown; 2 (OK) – if fans are operating properly; 3 (Degraded) – if no SMX_Fan.OperationalStatus[0] for all non-fault tolerant fans report 6 (Error) and SMX_FanRedundancySet.RedundancyStatus for any cooling redundancy sets report 3 (Degraded Redundancy) or 4 (Redundancy Lost) and no cooling redundancy sets report 5 (Overall Failure). 6 (Error) – if SMX_Fan.OperationalStatus[0] for any non-fault tolerant fans report 6 (Error) or SMX_FanRedundancySet.RedundancyStatus for any cooling redundancy sets report 5 (Overall Failure). Note: If the system starts up with a redundancy status set to 4 (Redundancy Lost) and no fans have been removed or failed, the GroupOperationalStatus will be set to 2 (OK) because this is a valid configuration.
GroupStatusDescriptions[0]	Unknown status for fans if GroupOperationalStatus[0] is 0 (Unknown); Fans are operating properly if GroupOperationalStatus[0] is 2 (OK); Fault tolerant fans are degraded if GroupOperationalStatus[0] is 3 (Degraded); Fans have failed if GroupOperationalStatus[0] is 6 (Error)

1-2-3 SMX_FanRedundancySet Class

The SMX_FanRedundancySet class is used to model fan redundancy sets on servers.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	

Caption	<p>Short description of this redundancy set, for example: Cooling Redundancy Set <n></p> <p>Where: <n> represents the number of the redundancy set instance.</p>
Description	<p>Description of this redundancy set</p> <p>For example: Cooling Redundancy Set <n> is collection of fault tolerant fans that provide redundant cooling</p> <p>Where: <n> represents the number of the redundancy set instance.</p>
ElementName	<p>User printable name for this cooling redundancy set.</p> <p>For example: Cooling Redundancy Set <n></p> <p>Where: <n> represents the number of the redundancy set instance.</p>
CIM_SystemSpecificCollection	
InstanceID	Unique identifier for this cooling redundancy instance.
CIM_RedundancySet	
MaxNumberSupported	Represents the maximum number of fans supported for this redundancy set.
MinNumberNeeded	Represents the minimum number of fans needed to function.
TypeOfSet	3 (Load Balanced)
LoadBalanceAlgorithm	0 (Unknown)
RedundancyStatus	<p>0 (Unknown) – if the redundancy status is unknown;</p> <p>2 (Fully Redundant) – if all fans in the set are operating properly and enough to achieve redundancy;</p> <p>3 (Degraded Redundancy) – if there are at least enough fans for the redundancy set to provide cooling, but fans have failed;</p> <p>4 (Redundancy Lost) – if there are not enough fans required to achieve redundancy, but enough for the redundancy set to provide cooling;</p> <p>5 (Overall Failure) – if there are not enough fans operating properly for the redundancy set to provide cooling.</p>

1-2-4 SMX_MemberOfFanRedundancy Class

The SMX_MemberOfFanRedundancy class is used to represent an association between the HP_Fan and HP_FanRedundancySet classes. The following table lists the properties implemented.

Property Name	Property Implementation
Collection	References HP_FanRedundancySet
Member	References HP_Fan

1-2-5 SMX_HostedFanRedundancySet Class

The `SMX_HostedFanRedundancySet` class is used to represent an association between `HP_FanRedundancySet` and the computer system that contains this redundancy set.

The following table lists the properties implemented.

Property Name	Property Implementation
OwningElement	References HP_ComputerSystem
OwnedElement	References HP_FanRedundancySet

1-2-6 SMX_MemberOfFanCollection Class

The `SMX_MemberOfFanCollection` class is used to represent an association between the `HP_Fan` and `HP_FanCollection` classes.

The following table lists the properties implemented.

Property Name	Property Implementation
Collection	References HP_FanCollection
Member	References HP_Fan

1-2-7 SMX_HostedFanCollection Class

The `SMX_HostedFanCollection` class is used to represent an association between `HP_FanCollection` and the computer system that contains this collection.

The following table lists the properties implemented.

Property Name	Property Implementation
Antecedent	References HP_ComputerSystem
Dependent	References HP_FanCollection

1-2-8 SMX_SystemFan Class

The `SMX_SystemFan` class is used to represent an association between `HP_Fan` and the computer system that contains this fan.

The following table lists the properties implemented.

Property Name	Property Implementation
GroupComponent	References HP_ComputerSystem
PartComponent	References HP_Fan

1-2-9 SMX_FanLocation Class

The SMX_FanLocation class is used to model fan locations on servers.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
Caption	Short description of this fan location, including the name displayed by the MP or iLO. For example on HP ProLiant: Fan 1 at CabinetFan=01
Description	Description of this fan location, including the name displayed by the MP or iLO. For example on HP ProLiant: The location of the Fan 1. Please refer to the fan position CabinetFan=01 printed on the system.
ElementName	User displayable name of this fan location, including the name displayed by the MP or iLO. For example on HP ProLiant: Fan 1 at CabinetFan=01
CIM_Location	
Name	Unique identifier for this fan location instance.
PhysicalPosition	Opaque identifier for the physical position of this fan
HP_Location	
ElementLocationTag	Location string based on ElementLocationTagDesc. For example, on HP ProLiant: CabinetFan=01
ElementLocationTagDesc	On HP ProLiant: 0 (HoodTag)
LocationInfoDesc	Array of location descriptions: On ProLiant: 4 (Socket)
LocationInformation	Array of string descriptions of the location based on LocationInfoDesc

1-2-10 SMX_FanElementLocation Class

The `SMX_FanElementLocation` class is used to represent an association between the `CIM_Location` and `CIM_ManagedElement` classes.

The following table lists the properties implemented.

Property Name	Property Implementation
Element	References <code>CIM_ManagedElement</code>
PhysicalLocation	References <code>CIM_Location</code>

1-2-11 SMX_FanModule Class

The `SMX_FanModule` class is used to model physical fans on servers. Fan numbers for existing instances do not change when other fans are added and removed.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
Caption	Short description of this fan from the name displayed by the MP or iLO and location. For example: Fan 1 at CabinetFan=01
Description	Description of this fan module, including <code>ElementName</code> , type and status. For example: <ElementName> provides cooling for FanType. <StatusDescription> Where: <ElementName> represents the value of <code>ElementName</code> , <code>FanType</code> represents the corresponding string value of the <code>FanType</code> enumeration and <StatusDescription> represents the value of <code>StatusDescriptions[0]</code> .
ElementName	Name of this fan from the name displayed by the MP or iLO and location. For example: Fan 1 at CabinetFan=01
CIM_ManagedSystemElement	
OperationalStatus[0]	2 (OK) – if fan is operating properly; 3 (Degraded) – if fan is degraded; 6 (Error) – if fan has failed

Property Name	Property Implementation
StatusDescriptions[0]	Description of the status of the fan corresponding to the OperationalStatus. For example: Fan is operating properly – if OperationalStatus[0] is 2 (OK); Fan is degraded – if OperationalStatus[0] is 3 (Degraded) Fan has failed – if OperationalStatus is 6 (Error)
HealthState	5 (OK) – if fan is operating properly; 10 (Degraded) if fan is degraded 20 (Major Failure) – if fan has failed
Name	Name of this fan module. For example: Fan 1 at CabinetFan=01
CIM_PhysicalElement	
CreationClassName	SMX_FanModule
Tag	Unique identifier for this fan instance.
CIM_PhysicalPackage	
RemovalConditions	0 (Unknown) 3 (Removable when off) 4 (Removable when on or off)
PackageType	7 (Fan)

1-2-12 SMX_SystemPhysicalFan Class

The SMX_SystemPhysicalFan class implements the HP_SystemPhysicalFan class and association the HP_ComputerSystemChassis instance with HP_FanModule.

The following table lists the properties implemented.

Property Name	Property Implementation
GroupComponent	References HP_ComputerSystemChassis
PartComponent	References HP_FanModule

1-2-13 SMX_RealizesFan Class

The SMX_RealizesFan class implements the HP_RealizesFan class and associates the HP_Fan instance with HP_FanModule instances.

The following table lists the properties implemented.

Property Name	Property Implementation
Antecedent	References HP_FanModule
Dependent	References HP_Fan

1-2-14 SMX_FanSlot Class

The SMX_FanSlot class is used to model physical fan slots on servers.

The following table lists the properties implemented.

Property Name	Property Implementation
CIM_ManagedElement	
Caption	Short description of this fan slot, to include the number and location. For example: Fan 1 at CabinetFan=01
Description	Description of the fan slot. For example: Fan 1 at CabinetFan=01
ElementName	Name of the fan slot. For example: Fan 1 at CabinetFan=01
CIM_ManagedSystemElement	
OperationalStatus[0]	2 (OK) – if fan slot is operating properly;
StatusDescriptions[0]	Fan slot is operating properly – if OperationalStatus[0] is 2 (OK);
HealthState	5 (OK) – if fan is operating properly;
Name	Name of the fan slot. For example: Fan 1 at CabinetFan=01
CIM_PhysicalElement	
CreationClassName	SMX_FanSlot
Tag	Unique identifier for this fan slot.
CIM_PhysicalPackage	
ConnectorLayout	6 (Slot)

Property Name	Property Implementation
Number	< n > Where: < n > represents the number of the fan slot.

1-2-15 SMX_SystemFanSlot Class

The SMX_SystemFanSlot class implements the HP_FanSlot class and association the HP_ComputerSystemChassis instance with HP_FanSlot.

The following table lists the properties implemented.

Property Name	Property Implementation
GroupComponent	References HP_ComputerSystemChassis
PartComponent	References HP_FanSlot

1-2-16 SMX_FanInSlot Class

The SMX_FanInSlot class implements the HP_FanInSlot class and associates the HP_FanSlot instance with HP_FanModule instances.

The following table lists the properties implemented.

Property Name	Property Implementation
Antecedent	References HP_FanSlot
Dependent	References HP_FanModule

1-2-17 SMX_FanSpeedSensor

SMX_FanSpeedSensor implements CIM_NumericSensor and is used to model fan tachometer sensors on Servers.

Property Name	Property Implementation
CIM_ManagedElement	
Caption	Short description of the fan speed sensor from the name displayed by the MP or iLO and the location. For example: Fan speed sensor for Fan 1 at CabinetFan=01
Description	Description of the fan speed sensor including name displayed by the MP or iLO, the location, and status. For example: Fan 1 detects fan speed. Located at CabinetFan=01. Fan speed sensor is operating properly.

Property Name	Property Implementation
ElementName	<p>Short description of the fan speed sensor from the name displayed by the MP or iLO and the location.</p> <p>For example: Fan speed sensor for Fan 1 at CabinetFan=01</p>
CIM_ManagedSystemElement	
OperationalStatus[0]	2 (OK) – if fan sensor is operating properly
StatusDescriptions[0]	Fan speed sensor is operating properly—if OperationalStatus[0] is 2 (OK)
HealthState	5 (OK) – if fan sensor is operating properly
Name	<p>Name of fan speed sensor from the name displayed by the MP or iLO and the location.</p> <p>For example: Fan speed sensor for Fan 1 at CabinetFan=01</p>
CIM_LogicalDevice	
CreationClassName	SMX_FanSpeedSensor
DeviceID	Unique identifier for fan slot.
SystemCreationClassName	HP_ComputerSystem.CreationClassName
SystemName	HP_ComputerSystem.Name
CIM_EnabledLogicalElement	
EnabledDefault	2 (Enabled)
EnabledState	5 (Not Applicable)
RequestedState	12 (Not Applicable)
CIM_Sensor	
SensorType	5 (Tachometer)
CurrentState	Normal
PossibleStates	<p>Array can contain any of the following values:</p> <p>PossibleStates[0] = "Normal";</p>
CIM_NumericSensor	
CurrentReading	Current reading of fan speed sensor

Property Name	Property Implementation
BaseUnits	19 (RPM) 65 (Percentage)
RateUnits	0 (None)
UnitModifier	0

1-2-18 SMX_SystemFanSensor

SMX_SystemFanSensor is used to represent an association between SMX_FanSensor and the computer system that contains this fan sensor.

Property Name	Property Implementation
GroupComponent	References HP_ComputerSystem
PartComponent	References SMX_FanSensor

1-2-19 SMX_AssociatedFanSensor

SMX_AssociatedFanSensor is used to represent an association between HP_Fan and the SMX_FanSpeedSensor that is reporting the speed of the fan.

Property Name	Property Implementation
Antecedent	References SMX_FanSpeedSensor
Dependent	References SMX_Fan

1-3 Provider Indications

Indications Generated by the Provider The following tables describe the SMX WBEM System Fan Provider indications that are implemented for HP ProLiant server platforms, where available.

Note: HP ProLiant does not support Fan Degraded and Fan Redundancy Failed indications.

1-3-1 Provider Indication Common Properties

Property Name	Property Implementation
CIM_Indication	
IndicationIdentifier	GUID string generated at the time of indication.
IndicationTime	Time of indication.
CIM_AlertIndication	

Property Name	Property Implementation
EventTime	Time of the event or time of the indication if event time unknown.
SystemName	SMX_ComputerSystem.Name
SystemCreationClassName	SMX_ComputerSystem.CreationClassName
HP_AlertIndication	
ProviderVersion	Provider Version in the format <i>vv.uu.ff</i> . For example: 01.05.00
NetworkAddresses	Contains a list of all the IP addresses of the computer system generating the indication.
OSType	On ESX, 39 (VM) On Linux, 36 (Linux)
OSVersion	The operating system version of the computer system generating the indication in the following format: major.minor.build
SystemFirmwareVersion	Array of firmware versions 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[]	If Synergy is enabled, this will contain the logical UUID for the system.
SystemVirtualSerialNumber[]	If Synergy is enabled, this will contain the logical Serial Number for the system.
EnclosureName	HP_BladeEnclosureCS.Name
RackName	Rack name, if one exists
RackUUID	Rack Unique Identifier, if one exists
BladeName	HP_ComputerSystem.Name
BladeBay	HP_BladeCSLocation.LocationInformation[0]

The following indications are implemented for Proliant server platforms where available. System Fan indications are described below.

1-3-2 HP_DeviceIndication: Fan Removed

Property Name	Property Implementation
CIM_Indication	
PerceivedSeverity	2 (Information)
CIM_AlertIndication	
Description	A fan has been removed <Fan> Where: <Fan> is the fan number that was removed.
AlertingManagedElement	WBEM Path of the SMX_Fan instance.
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	1
ProviderName	HP Cooling
RecommendedActions	Check the fan configuration and ensure that this fan was removed intentionally.
HP_AlertIndication	
Summary	Fan removed
EventCategory	23 (System Cooling)
ProbableCause	1 (Other)
ProbableCauseDescription	Fan Removed

1-3-3 HP_DeviceIndication: Fan Inserted

Property Name	Property Implementation
CIM_Indication	
PerceivedSeverity	2 (Information)
CIM_AlertIndication	
Description	A fan has been inserted. <FanCaption> Where: <FanCaption> is the SMX_Fan.Caption for the fan that has been inserted.

Property Name	Property Implementation
AlertingManagedElement	WBEM Path of SMX_Fan instance representing the inserted fan.
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	2
ProviderName	HP Cooling
RecommendedActions	No action is recommended.
HP_AlertIndication	
Summary	Fan inserted
EventCategory	23 (System Cooling)
ProbableCause	1 (Other)
ProbableCauseDescription	Fan inserted

1-3-4 HP_DeviceIndication: Fan Failed

Property Name	Property Implementation
CIM_Indication	
PerceivedSeverity	5 (Major)
CIM_AlertIndication	
Description	A fan has failed. <FanCaption> Where: <FanCaption> is the SMX_Fan.Caption for the fan that has failed.
AlertingManagedElement	WBEM Path of SMX_Fan instance representing the failed fan.
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	3
ProviderName	HP Cooling
RecommendedActions	Check the failed fan and replace if necessary.
HP_AlertIndication	

Property Name	Property Implementation
Summary	Fan failed
EventCategory	23 (System Cooling)
ProbableCause	94 (Fan Failure)
ProbableCauseDescription	Fan Failed

1-3-5 HP_DeviceIndication: Fan Repaired

Property Name	Property Implementation
CIM_Indication	
PerceivedSeverity	2 (Information)
CIM_AlertIndication	
Description	<p>A fan has been repaired. The fan is now operating properly. <FanCaption></p> <p>Where: <FanCaption> is the SMX_Fan.Caption for the fan that has been repaired.</p>
AlertingManagedElement	Wbem Path of SMX_Fan instance representing the failed fan.
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	4
ProviderName	HP Cooling
RecommendedActions	No action is recommended.
HP_AlertIndication	
Summary	Fan repaired
EventCategory	23 (System Cooling)
ProbableCause	1 (Other)
ProbableCauseDescription	Fan Repaired

1-3-6 HP_DeviceIndication: Fan Degraded

Important:

This indication is not supported on HP ProLiant systems because the fans do not report a degraded status.

Property Name	Property Implementation
CIM_Indication	
PerceivedSeverity	4 (Minor)
CIM_AlertIndication	
Description	A fan has degraded. <FanCaption> Where: <FanCaption> is the SMX_Fan.Caption for the fan that has degraded.
AlertingManagedElement	Wbem Path of SMX_Fan instance representing the degraded fan.
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	9
ProviderName	HP Cooling
RecommendedActions	Check the degraded fan and replace if necessary.
HP_AlertIndication	
Summary	Fan degraded
EventCategory	23 (System Cooling)
ProbableCause	1 (Other)
ProbableCauseDescription	Fan Degraded

1-3-7 HP_DeviceIndication: Fan Redundancy Reduce

Property Name	Property Implementation
CIM_Indication	
PerceivedSeverity	2 (Information)
CIM_AlertIndication	
Description	A fault tolerant fan is no longer providing cooling for a cooling redundancy set. <RedundancySetCaption> Where: <RedundancySetCaption> represents the SMX_FanRedundancySet.Caption for the redundancy set with reduced redundancy.
AlertingManagedElement	Wbem Path of SMX_FanRedundancySet instance representing the

Property Name	Property Implementation
	redundancy set with reduced redundancy.
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	5
ProviderName	HP Cooling
RecommendedActions	No action is recommended.
HP_AlertIndication	
Summary	Cooling redundancy reduced
EventCategory	23 (System Cooling)
ProbableCause	88 (Loss of Redundancy)
ProbableCauseDescription	Cooling Redundancy has been Reduced

1-3-8 DeviceIndication: Fan Redundancy Lost

Property Name	Property Implementation
CIM_Indication	
PerceivedSeverity	4 (Minor)
CIM_AlertIndication	
Description	Cooling redundancy has been lost. <RedundancySetCaption> Where: <RedundancySetCaption> represents the SMX_FanRedundancySet.Caption for the redundancy set that lost redundancy.
AlertingManagedElement	WBEM Path of SMX_FanRedundancySet instance representing the redundancy set where redundancy was lost.
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	6
ProviderName	HP Cooling
RecommendedActions	Check the fan configuration and check the status of the cooling redundancy. Ensure the system is being cooled adequately. Add or replace fans if necessary.

Property Name	Property Implementation
HP_AlertIndication	
Summary	Cooling redundancy lost
EventCategory	23 (System Cooling)
ProbableCause	88 (Loss of Redundancy)
ProbableCauseDescription	Cooling Redundancy has been Lost

1-3-9 HP_DeviceIndication: Fan Redundancy Restored

Property Name	Property Implementation
CIM_Indication	
PerceivedSeverity	2 (Information)
CIM_AlertIndication	
Description	<p>Cooling redundancy for the system has been restored. (<i>RedundancySetCaption</i>)</p> <p>Where: <i>RedundancySetCaption</i> is SMX_FanRedundancySet.Caption of the cooling redundancy set with restored redundancy.</p>
AlertingManagedElement	Wbem Path of SMX_FanRedundancySet instance representing the cooling redundancy set with restored redundancy.
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	8
ProviderName	HP Cooling
RecommendedActions	No action is recommended.
HP_AlertIndication	
Summary	Cooling redundancy restored
EventCategory	23 (System Cooling)
ProbableCause	1 (Other)
ProbableCauseDescription	Cooling Redundancy has been Restored

1-3-10 HP_DeviceIndication: Fan Redundancy Failed

Important:

This indication is not supported on HP ProLiant systems because redundancy set failure, which is failure beyond redundancy lost, will cause system shutdown.

Property Name	Property Implementation
CIM_Indication	
PerceivedSeverity	5 (Major)
CIM_AlertIndication	
Description	Cooling redundancy for the system has failed. (<i>RedundancySetCaption</i>) Where: <i>RedundancySetCaption</i> is SMX_FanRedundancySet.Caption of the cooling redundancy set with failed redundancy.
AlertingManagedElement	Wbem Path of SMX_FanRedundancySet instance representing the cooling redundancy set with failed redundancy.
AlertingElementFormat	2 (CIMObjectPath)
AlertType	5 (Device Alert)
EventID	10
ProviderName	HP Cooling
RecommendedActions	Check the fan configuration and check the status of the cooling redundancy. Ensure the system is being cooled adequately. Add or replace fans if necessary.
HP_AlertIndication	
Summary	Cooling redundancy failed
EventCategory	23 (System Cooling)
ProbableCause	88 (Loss of Redundancy)
ProbableCauseDescription	Cooling Redundancy has Failed