



MP Instance Provider

Provider Overview

The Management Processor Instance Provider provides information related to Management Processor of the system.

Description

The MP Instance Provider is a Web-Based Enterprise Management (WBEM) Instance Provider that provides firmware revision information from HP servers based on PA RISC architecture and HP Integrity Servers, running HPUX. This provider is compliant with the Common Information Model (CIM) 2.8 Schema, proposed by the Distributed Management Task Force (DMTF).

The MP Instance Provider allows any client, compliant with the CIM 2.8 Schema, to query for information about the managed system's management processor.

The MP Instance Provider implements MP related CIM classes, proposed in the DMTF CIM 2.8 revision. In addition to the properties that belong to the standard CIM classes, the MP Instance Provider serves information that is specific to HP Servers, by implementing HP-specific CIM classes, derived from the standard DMTF classes.

The following MOF classes are handled by the MP Instance Provider:

- HP_ManagementProcessor

HP_ManagementProcessor (subclass of CIM_ComputerSystem) contains MP related information.

The MOF classes mentioned above (i.e. all MOF classes prefixed with "HP_") are HP-specific extensions to the CIM Schema, and are registered in the "root/cimv2" namespace.

For all the MOF classes mentioned above, the MP Instance Provider supports the following standard CIM Operations:

- enumerateInstanceNames()
- enumerateInstances()
- getInstance()

The following CIM operations are not supported by the MP Instance Provider:

- createInstance()
- deleteInstance()
- modifyInstance()

MP Instance Provider is not a CIM Method Provider, and does not support extrinsic method invocation on instances on any of the MOF classes mentioned above. The invocation of any of these methods will result in a CIM_ERR_NOT_SUPPORTED exception.

Requirements

For the list of software requirements for using this provider, see the SFM Release Notes at: <http://docs.hp.com/en/diag>

Release History

Supported Managed Resources

This provider provides information related to the MP present on the system.

Please note that the MP Instance Provider provides only the information about the above resources. It does not provide any management, diagnostic or configuration capabilities for the above resources.

Setting up this Provider

Installing this Provider

The installation of the bundle SysFaultMgmt will set up this provider.

Ensure that the appropriate version of HPWBEM services and OnlineDiag are installed as mentioned in the requirements section.

Use swinstall to install the product: "swinstall -s Fully_Qualified_Depot_Name SysFaultMgmt"

On installation, the shared-library files, executable binaries, configuration files and MOF definition and registration files will be available in the /opt/sfm/ directory, as follows:

- The provider library is libmpprovider.1. This is available in /opt/sfm/lib/, along with all the other libraries it uses to implement the MP Instance provider. A symbolic link is made in /opt/wbem/providers/lib/libmpprovider.sl to link to the libmpprovider.1 library in /opt/sfm/lib/.
- The CIM MOF files, containing the definitions of the HP-specific MOF classes, (namely HP_ManagementProcessor.mof) will be available in /opt/sfm/schemas/mof. This directory will also include the provider registration file, namely SFMProvidersR.mof. Note: All the HP-specific MOF classes will be registered under the "root/cimv2" namespace.
- The /opt/sfm/conf/ directory will contain the (XML) configuration files of the System Fault Management Product.
- The /opt/sfm/msgcat/ directory will contain the catalog files for all the supported locales. (This is used for the localization of the message strings in MP Instance Provider).
- The /opt/sfm/log/ directory will contain log files generated during the execution of the MP Instance Provider.

For the list of supported platforms, see the SFM Release Notes at:

<http://docs.hp.com/en/diag>

Configuring this Provider

MP Provider uses a common configuration file along with Memory Instance Provider and EMSWrapper Indication Provider. So editing the configuration file will affect the other two providers as well. The configuration file can be found in - /opt/sfm/conf/FMLoggerConfig.xml

The file specifies the logging threshold severity, and the location of the log-file. The contents of the file are as follows:

```
<SFMConfig>
  <LoggerConfig>
    <Severity> WARNING </Severity>
    <Target> /opt/sfm/log/sfm.log </Target>
  </LoggerConfig>
</SFMConfig>
```

In order to change the logging configuration, the following steps are to be followed:

1. Edit the configuration file /opt/sfm/conf/FMLoggerConfig.xml to change the threshold logging level and/or target.

a) Threshold: Possible values are (in increasing severity)

INFORMATIONAL

WARNING

ERROR

CRITICAL

NOTE The INFORMATIONAL logging severity will generate a lot of log-messages. It is strongly advised not to use this severity level for a long time, for the generated log-files may use a lot of disk space. The default (and recommended) threshold in the runtime environment is WARNING.

b) Target: Possible values include:

(i) STDOUT: All log messages are delivered to console.

(ii) The complete path to the file where the log messages are to be written

NOTE: The current implementation of the logging mechanism assumes that the path to the log file (target specified in the configuration file) already exists. i.e., if the target is specified as "/abc/def/ghi.log", the

path "/abc/def/" should already exist, and should be writeable by root-user.

2. Run /opt/sfm/bin/sfmconfig command, to specify the changed configuration file. i.e.

```
$ /opt/sfm/bin/sfmconfig -c /opt/sfm/conf/FMLoggerConfig.xml
```

Note that the complete path of the configuration file must be provided to the sfmconfig command.

Using this Provider

Schema Supported by this Provider

The "Description" section explains in brief the different MOF classes supported by MP Instance Provider. The following tables list all the supported properties corresponding to these MOF classes, along with the properties inherited from the standard CIM MOF classes, as per CIM 2.8 schema specifications.

Note: All key properties corresponding to the CIM classes are supported by the MP Instance Provider. The few non-key properties not supported (currently) by the MP Instance Provider are not listed below.

Note:

1. All key properties corresponding to the CIM classes are supported by the MP Instance Provider.
2. The non-key properties that are not supported by the MP Instance Provider are not listed below.

Property Name	Property Inheritance	Property Value
ControllerType	HP_ManagementProcessor	uint16 The Management Processor model/type: 0=Unknown 1=Other 2=PCI Board, RILOE II 3=Embedded iLO 4=Embedded iLO2 5=Embedded Integrity MP 6=Embedded Integrity iLO 7=Embedded Integrity iLO2 See section 7.1.1
OtherControllerType	HP_ManagementProcessor	string Describing text when ControllerType property is set to 1=Other
UniqueIdentifier	HP_ManagementProcessor	string An identifier which uniquely distinguishes the management processor controller from any other MP hardware
IPAddress	HP_ManagementProcessor	string The IP Address(es) of the management processor controller's network interface controller (NIC). See section 7.1.3
URL	HP_ManagementProcessor	string The Uniform Resource Locator(s) of the management processor controller's user interface. See section 7.1.4
Dedicated	CIM_ComputerSystem	uint16 Value = 14, 'Management'
CreationClassName	CIM_System	Key
Name	CIM_System	Key

EnabledState	CIM_EnabledLogicalElement	uint16 The operating state of the MP: 2=Enabled 3=Disabled
OperationalStatus[]	CIM_ManagedSystemElement	uint16 [0] = Overall MP status: 0=Unknown 2=OK 3=Degraded 6=Error

Table 3 – Properties / Methods for HP_ManagementProcessor and parent classes

Intrinsic methods for all the CIM classes supported by MP Instance Provider

This Table describes the intrinsic methods supported by this provider. It has three columns. The first is the method name, the second is a description of the provider's actions based on invoking that method, and the third is a list of any exceptions that could result from invoking the method. Each row describes a method.

Method Name	Description	Exceptions Thrown
enumerateInstances	Returns all instances of class with values of supported properties. (See tables above.)	
enumerateInstanceNames	Returns object path of all instances of class.	
getInstance	Returns an instance that matches the keys with values of supported properties. (See table above.)	
modifyInstance	This operation is not supported by the MP Instance Provider. This is indicated to the client, via exceptions.	CIMNotSupportedException
deleteInstance	This operation is not supported by the MP Instance Provider. This is indicated to the client, via exceptions.	CIMNotSupportedException
createInstance	This operation is not supported by the MP Instance Provider. This is indicated to the client, via exceptions.	CIMNotSupportedException

Indications generated by this Provider This Provider does not generate any indications.

Links to more information

WBEM information

For a CIM tutorial, go to <http://www.dmtf.org/education/cimtutorial.php>

System Fault Management Administrator's Guide at:

<http://docs.hp.com/en/diag>

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