hp WBEM solutions

hp technical data sheet

Firmware Revision Instance Provider

Provider Overview

Description

Firmware Revision Instance Provider provides firmware revision information for firmwares present on the system.

The Firmware Revision 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 Firmware Revision Instance Provider allows any client, compliant with the CIM 2.8 Schema, to query for information about the managed system's firmware revisions.

The Firmware Revision Instance Provider implements the firmware revision related CIM classes, proposed in the DMTF CIM 2.8 revision. In addition to the properties that belong to the standard CIM classes, the Firmware Revision 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 Firmware Revision Instance Provider:

- HP_FirmwareIdentity (subclass of CIM_SoftwareIdentity) It contains firmware revision 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 Firmware Revision Instance Provider supports the following standard CIM Operations:

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

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

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

The Firmware Revision 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

HP-UX 11i v1 September 2005 or later

SysMgmtWeb version A.2.2.5 (HP-UX Web Based System Management User Interface)

OpenSSL A.00.09.07e.012 or later

WBEMServices A.02.05 WBEM Services CORE Product

OnlineDiag B.11.11.16.xx containing EMS Version A.04.20 and STM Version A.49.10

Note:

SysMgmtWeb is optional. However, you will not be able to access EVWEB GUI if SysMgmtWeb is not installed on the system.

All the prerequisites are available on the OE media. You can select the SFM dependencies from the OE media while installing the SFM

software as a standalone component

The OnlineDiag bundle is always installed with the OE media.

The A.02.05 WBEM Services CORE Product is compatible only with the A.04.00.xx version of SFM. It is not compatible with the

A.01.00.01 or A.03.00.xx version of SFM.

HP recommends that you install HP Systems Insight Manager (HP SIM) version 5.0.01 to remotely administer indications and instances.

Release history

Supported managed resources

This provider provides firmware revisions information of various firmware entities present on the system.

Please note that the Firmware Revision 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 libfirmwarerevision.1. This is available in /opt/sfm/lib/, along with all the other libraries it uses to implement the Firmware Revision Instance provider. A symbolic link is made in /opt/wbem/providers/lib/libfirmwarerevision.sl to link to the libfirmwarerevision.1 library in /opt/sfm/lib/.
- The CIM MOF files, containing the definitions of the HP-specific MOF classes, (namely HP_FirmwareIdentity.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 Firmware Revision Instance Provider).
- The /opt/sfm/log/ directory will contain log files generated during the execution of the Firmware Revision Instance Provider.

For the list of supported platforms, see the SFM Release Notes at:
http://docs.hp.com/en/diag

Configuring this provider

Firmware Revision 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 utility.

Using this provider

Schema supported by this provider

The "Description" section explains in brief the different MOF classes supported by the Firmware Revision 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 Firmware Revision Instance Provider. The few non-key properties not supported (currently) by the Firmware Revision Instance Provider are not listed below.

Note:

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

Property Name	Property Inheritance	Property Value
FirmwareCategory	HP_FirmwareIdentity	Firmware category: 0=Other 1=Unknown 2=System 3=Storage Controller 4=Storage Device/Drive 5=NIC 6=Mgmt Processor
OtherFirmwareCategory	HP_FirmwareIdentity	For FirmwareCategory=0, descriptive text defining the other firmware category. (recommended max size: 25 chars)

FirmwareState	HP_FirmwareIdentity	Firmware state: 0=Other 1=Unknown 2=Active 3=Backup 4=ActiveOnNextReboot
OtherFirmwareState	HP_FirmwareIdentity	For FirmwareState=0, descriptive text defining the other firmware state. (recommended max size:15 chars)
MinorVersion	HP_SoftwareIdentity	Firmware minor version
MajorVersion	HP_SoftwareIdentity	Firmware major version
RevisionNumber	HP_SoftwareIdentity	Firmware revision
InstanceID	HP_SoftwareIdentity	Provider-unique run-time identifier. Recommended format is: “HP:<CCN>:<PDUV>” where: CCN=Creation Class Name PDUV=Provider Defined Unique Value
VersionString	HP_SoftwareIdentity	Firmware version string. A string representing the complete firmware version information; this string and the numeric major/minor/revision properties are complementary. (recommended max size: 15 chars)
Classifications[]	HP_SoftwareIdentity	10=Firmware 11=BIOS/FCode
BuildNumber	HP_SoftwareIdentity	The BuildNumber of firmware.
Manufacturer	HP_SoftwareIdentity	Firmware origin string. Recommended use: company name of firmware creator (recommended max size: 25 chars)
ClassificationDescriptions[]	HP_SoftwareIdentity	Description for the Classification, set to “Firmware Revision”
TargetType	HP_SoftwareIdentity	Firmware identifier used by version control provider to uniquely identify firmware. Recommended use: Firmware Identifer/ROM family (recommended max size: 15 chars)
OperationalStatus[]	CIM_ManagedSystemElement	This property is set to

		value ‘2’ to indicate “OK”
StatusDescriptions[]	CIM_ManagedSystemElement	This is set to string “OK”
Name	CIM_ManagedElement	Label by which the firmware is known.

Table 3 – Properties / Methods for HP_FirmwareIdentity and parent classes

Intrinsic methods for all the CIM classes supported by Firmware 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 Firmware Revision Instance Provider. This is indicated to the client, via exceptions.	CIMNotSupportedException
deleteInstance	This operation is not supported by the Firmware Revision Instance Provider. This is indicated to the client, via exceptions.	CIMNotSupportedException
createInstance	This operation is not supported by the Firmware Revision 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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