



## Firmware Revision Instance Provider

### Provider Overview

#### Description

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

The Firmware Revision Instance Provider is a Web-Based Enterprise Management (WBEM) Instance Provider that retrieves firmware revision information from HP Integrity Servers, running HP OpenVMS. This provider is compliant with the Common Information Model (CIM) 2.8 Schema, proposed by the Distributed Management Task Force (DMTF). The provider requires HP WBEM Services for OpenVMS installed on the system.

The Firmware Revision Instance Provider allows any client, compliant with the CIM 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
- HP\_FirmwareIdentity (subclass of CIM\_SoftwareIdentity) 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

The Provider requires HP WBEM Services OpenVMS

#### 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 retrieves only the information about the above resources. It does not retrieve any management, diagnostic or configuration capabilities for the above resources.

#### Setting up this

## provider

### Installing this provider

The installation of the WBEM Providers software will set up this provider. Ensure HP WBEM Services is already installed.

On installation, the configuration files and MOF definition and registration files will be available in the SYS\$COMMON:[WBEMPROVIDERS] directory, as follows:

- The CIM MOF files, containing the definitions of the HP-specific MOF classes, (namely HP\_FirmwareRevision.mof) will be available in SYS\$COMMON:[WBEMPROVIDERS.MOF]. This directory will also include the provider registration file, namely HP\_FirmwareRevisionR.mof. Note: All the HP-specific MOF classes will be registered under the "root/cimv2" namespace.
- The SYS\$SPECIFIC:[WBEMPROVIDERS] directory will contain the (XML) configuration files of the WBEM Providers Product.
- The WBEM Services SYS\$SPECIFIC:[WBEM\_Services]CIMSERVER\_STARTUP.LOG log file will contain logs generated during the execution of the Firmware Revision Instance Provider.

### Configuring this provider

This provider does not accept specific configuration adjustments (beyond standard WBEM support).

### 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 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.

**table 1: Firmware Revision Instance Provider properties**

<i>Property name</i>	<i>Property inheritance</i>	<i>Property value (and data source)</i>
FirmwareCategory	Inherited from HP_FirmwareIdentity	Firmware category: 0=Other 1=Unknown 2=System 3=Storage Controller 4=Storage Device/Drive 5=NIC 6=Mgmt Processor
OtherFirmwareCategory	Inherited from HP_FirmwareIdentity	For FirmwareCategory=0, descriptive text defining the other firmware category. (recommended max size: 25 chars)
FirmwareState	Inherited from HP_FirmwareIdentity	Firmware state: 0=Other 1=Unknown 2=Active 3=Backup 4=ActiveOnNextReboot
OtherFirmwareState	Inherited from HP_FirmwareIdentity	For FirmwareState=0, descriptive text defining the other firmware state.(recommended max size:15chars)

MinorVersion	Inherited from HP_SoftwareIdentity	Firmware minor version.
MajorVersion	Inherited from HP_SoftwareIdentity	Firmware major version.
RevisionNumber	Inherited from HP_SoftwareIdentity	Firmware revision.
InstanceID	Inherited from HP_SoftwareIdentity	Returns GenInfoSysPUser_E from the DMI General Information Group. The provider does not support modification of this property's value. This property is set by DMI. If DMI is not present, this value will be set to an empty string. Provider-unique run-time identifier. Recommended format is: "HP:<CCN>:<PDUV>" where: CCN=Creation Class Name PDUV=Provider Defined Unique Value.
VersionString	Inherited from 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[]	Inherited from HP_SoftwareIdentity	10=Firmware 11=BIOS/Fcode
BuildNumber	Inherited from HP_SoftwareIdentity	Not Supported.
Manufacturer	Inherited from HP_SoftwareIdentity	Firmware origin string. Recommended use: company name of firmware creator (recommended max size: 25 chars).
ClassificationDescriptions[]	Inherited from HP_SoftwareIdentity	Description for the Classification, set to "Firmware Revision"
TargetType	Inherited from HP_SoftwareIdentity	Firmware identifier this could be "system"/"MP"/"BMC" (recommended max size: 15 chars).
OperationalStatus[]	Inherited from CIM_ManagedSystemElement	This property is set to value '2' to indicate "OK".
StatusDescriptions[]	Inherited from CIM_ManagedSystemElement	This is set to string "OK".
Name	Inherited from CIM_ManagedElement	Firmware NAME could be "System Firmware"/"Baseboard Management Controller" /"Management Processor".

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***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.*

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<b><i>Method name</i></b>	<b><i>description</i></b>	<b><i>exceptions thrown</i></b>
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	CIMNotSupportedException

createInstance	is indicated to the client, via exceptions. This operation is not supported by the Firmware Revision Instance Provider. This is indicated to the client, via exceptions.	CIMNotSupportedException
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**indications generated by this provider**

This Provider does not generate any indications.

**Related Documentation**

- **WBEM information**
  - For a CIM tutorial, go to <http://www.dmtf.org/education/tutorials>
  - For information about HP WBEM Services go to [http://h71000.www7.hp.com/openvms/products/wbem/wbem\\_index.html](http://h71000.www7.hp.com/openvms/products/wbem/wbem_index.html).
  - HP WBEM Providers Release Notes bundled with the WBEM Providers kit.
  - HP WBEM Providers Installation and Administrator's Guide bundled with the WBEM Providers kit.

For additional information on HP products and services, visit us at <http://www.hp.com>.

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