



hp WBEM solutions



hp technical  
data sheet

## 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

- HP I64VMS WBEMPROVIDERS V1.7-16 (May 2009)
- HP I64VMS WBEMPROVIDERS V2.0-4 (June 2010)
- HP I64VMS WBEMPROVIDERS V2.1-4 (August 2010)
- HP I64VMS WBEMPROVIDERS V2.2-3 (February 2011)

## 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 HP WBEM Providers will set up this provider. Ensure HP WBEM Services is already installed.

On installation, executable binaries, configuration files and MOF definition and registration files will be available in their respective directory, as follows:

- The CIM MOF file, 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 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 this provider. By editing the "Severity" property in the SYS\$SPECIFIC:[WBEMPROVIDERS]FMLOGGERCONFIG.TXT file different levels of messages in the SYS\$SPECIFIC:[WBEM\_SERVICES]CIMSERVER.LOG can be generated. The valid values are TRACE, DEBUG, INFORMATIONAL, WARNING, ERROR, CRITICAL, STOPLOGGING.

### 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.

**table 1: HP\_FirmwareIdentity Instance Provider properties**

Property name	Property inheritance	Property value (and data source)
uint16 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
string OtherFirmwareCategory	Inherited from HP_FirmwareIdentity	For FirmwareCategory=0, descriptive text defining the other firmware category. (recommended max size: 25 chars)
uint16 FirmwareState	Inherited from HP_FirmwareIdentity	Firmware state: 0=Other 1=Unknown 2=Active 3=Backup 4=ActiveOnNextReboot
string OtherFirmwareState	Inherited from HP_FirmwareIdentity	For FirmwareState=0, descriptive text defining the other firmware state.(recommended max size:15chars)
uint16 MinorVersion	Inherited from HP_SoftwareIdentity	Firmware minor version.
uint16 MajorVersion	Inherited from HP_SoftwareIdentity	Firmware major version.

uint16 RevisionNumber	Inherited from HP_SoftwareIdentity	Firmware revision.
string InstanceID [key]	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.
string 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)
uint16 Classifications[]	Inherited from HP_SoftwareIdentity	10=Firmware 11=BIOS/Fcode
uint16 BuildNumber	Inherited from HP_SoftwareIdentity	The BuildNumber of firmware.
string Manufacturer	Inherited from HP_SoftwareIdentity	Firmware origin string. Recommended use: company name of firmware creator (recommended max size: 25 chars).
string ClassificationDescriptions[]	Inherited from HP_SoftwareIdentity	Description for the Classification, set to "Firmware Revision"
string TargetType	Inherited from HP_SoftwareIdentity	Firmware identifier this could be "system"/"MP"/"BMC" (recommended max size: 15 chars).
uint16 OperationalStatus[]	Inherited from CIM_ManagedSystemElement	This property is set to value '2' to indicate "OK".
string StatusDescriptions[]	Inherited from CIM_ManagedSystemElement	This is set to string "OK".
String Name	Inherited from CIM_ManagedElement	Firmware NAME could be "System Firmware"/"Baseboard Management Controller" /"Management Processor".
string Description	CIM_Managed Element	Description of Firmware

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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 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
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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.dmf.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.

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