AIX 5L Version 5.3

Common Information Model Guide

SC23-4942-03

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Note
Before using this information and the product it supports, read the information in Appendix H, “Notices,” on page 129.

Fourth Edition (November 2007)

This edition applies to AIX 5L Version 5.3 and to all subsequent releases of this product until otherwise indicated in new editions.

A reader’s comment form is provided at the back of this publication. If the form has been removed, address comments to Information Development, Department 04XA-905-6B013, 11501 Burnet Road, Austin, Texas 78758-3400. To send comments electronically, use this commercial Internet address: pserinfo@us.ibm.com. Any information that you supply may be used without incurring any obligation to you.

Contents

About this book

This book provides system administrators with complete information about how to perform tasks including installing, configuring, securing, and troubleshooting the Common Information Model.

Highlighting

The following highlighting conventions are used in this book:

Bold	Identifies commands, subroutines, keywords, files, structures, directories, and other items whose names are predefined by the system. Also identifies graphical objects such as buttons, labels, and icons that the user selects.
Italics	Identifies parameters whose actual names or values are to be supplied by the user.
`Monospace`	Identifies examples of specific data values, examples of text similar to what you might see displayed, examples of portions of program code similar to what you might write as a programmer, messages from the system, or information you should actually type.

Case-sensitivity in AIX

Everything in the AIX 5L™ operating system is case-sensitive, which means that it distinguishes between uppercase and lowercase letters. For example, you can use the **ls** command to list files. If you type `LS`, the system responds that the command is ″not found.″ Likewise, **FILEA**, **FiLea**, and **filea** are three distinct file names, even if they reside in the same directory. To avoid causing undesirable actions to be performed, always ensure that you use the correct case.

ISO 9000

ISO 9000 registered quality systems were used in the development and manufacturing of this product.

Chapter 1. Common Information Model overview

The Common Information Model (CIM) is a conceptual information model for describing management properties that is not bound to a particular implementation. This allows for the interchange of management information between management systems and applications through the Common Information Model Object Manager (CIMOM), which is an object management engine that exists between the managed system and the management application. Management applications can be local or remote, but currently CIMOM and the programs that collect management data, or *providers*, must be located on the machine that is being instrumented. Pegasus is one of the open source implementations of the CIMOM that adheres to the Distributed Management Task Force (DMTF) CIM and Web-based Enterprise Management (WBEM) standards. Pegasus is designed to be inherently portable and builds and runs on the AIX®, Linux®, and Microsoft® Windows® operating systems.

The CIM Standard Schema provides the actual model descriptions. The CIM Schema supplies a set of classes with properties and associations that provide a conceptual framework within which it is possible to organize the available information about the managed environment. Platform-specific objects, such as AIX, that must be managed are defined as extensions to this standard CIM model.

Providers collect the management data from the underlying platform resources and populate the CIM objects described in the conceptual CIM model. These objects are then ready to be served by the CIMOM to the client management applications for managing the resources of the underlying platform. This mechanism provides an open-standard way for a management application to manage the resources of the underlying platform.

CIM on AIX includes the following features:

- An open-source implementation of the CIMOM called Pegasus Version 2.9
- A CIM schema, version 2.21.0, that defines an information model for representing system management resources
- Providers that instrument a set of AIX resources and AIX diagnostics events based on CIM schema, version 2.21.1

For additional information about Pegasus and WBEM, see the following Web sites:

- The OpenPegasus Web site at http://www.openpegasus.org/
- The DMTF Web site at http://www.dmtf.org/standards/cim
- The DMTF Web site at http://www.dmtf.org/standards/wbem
- The WBEM Web site at http://www.wbemsolutions.com/tutorials/CIM/cim.html

Chapter 2. Install the Pegasus CIM Server and Providers

AIX ships the following packages to support Pegasus:

- **sysmgt.cimserver.pegasus** installs the Pegasus CIM Server fileset in the **/opt/freeware/cimom/pegasus** directory
- **sysmgt.cim.providers** installs the base providers for the AIX fileset in the **/usr/pegasus/provider** directory
- **sysmgt.cim.smisproviders** installs the SMI-S providers for the AIX fileset in the **/usr/pegasus/provider** directory

You can install these packages from either a Web site or the AIX Base CD by completing the following instructions:

- From the Web, download the installation packages by completing the following:
  1. Go to the IBM® Director Web site at https://www.ibm.com/services/forms/preLogin.do?lang=en_US&source=aixpegcim.
  2. Log in to the Web site.
  3. Scroll down the page until you find the section containing IBM Pegasus CIM Server and Providers for AIX.
  4. Select the options in front of the version of the Pegasus CIM Server you want to download and the corresponding readme file.
  5. Scroll to the bottom of the screen and select **I agree** to accept the terms of the license and continue.
  6. Click **I confirm** and follow the instructions that are displayed and the instructions in the readme file to complete the download.
  7. Click Continue and follow the instructions on your screen and in the readme file to complete the download.
- From the AIX Base CD, it will default installed with the BOS installation.

  You can install the installation packages by using either the System Management Interface Tool (SMIT) or the **installp** command.

  For more information about using the **installp** command, see the installp command in *AIX 5L Version 5.3 Commands Reference, Volume 3*.

  Note: Before continuing with the installation, review the license information.

  To install the packages using SMIT, complete the following:
  1. At the command line, type `smitty`.
  2. Select **Software Installation and Maintenance**>**Install and Update Software**>**Install Software**.
  3. At the Input Device/directory for software field, press the F4 key to view a list of options.
  4. Select the option that reflects the location or media that contains the CIM packages.
  5. At the Software to Install field, press the F4 key to view a list of package options.
  6. Select the **sysmgt.cimserver.pegasus**, **sysmgt.cim.providers**, and **sysmgt.cim.smisproviders** packages by pressing the F7 key.

  To verify that the CIM Server filesets were installed correctly, use the **lslpp** command as follows:

  ```
  lslpp -al sysmgt.cimserver.pegasus.rte
  ```

  – If the installation completed successfully, a message similar to the following is returned:

  ```
  lslpp -l sysmgt.cimserver.pegasus.rte
    Fileset                      Level  State      Description
    ----------------------------------------------------------------------------
  Path: /usr/lib/objrepos  sysmgt.cimserver.pegasus.rte  2.9.0.0    COMMITTED \
      Pegasus CIM Server Runtime Environment
  ```

– If the installation did not complete successfully, a message similar to the following is returned:

```
lslpp: Fileset sysmgt.cimserver.pegasus.rte not installed.
```

To verify that the base providers for AIX filesets were installed correctly, use the **lslpp** command as follows:

```
lslpp -al sysmgt.cim.providers
```

– If the installation completed successfully, a message similar to the following is returned:

```
lslpp -l sysmgt.cim.providers.osbase
  Fileset                      Level  State      Description
  ----------------------------------------------------------------------------
Path: /usr/lib/objrepos  sysmgt.cim.providers.osbase  1.2.8.0   COMMITTED \
    Base Providers for AIX OS
```

– If the installation did not complete successfully, a message similar to the following is returned:

```
lslpp: Fileset sysmgt.cim.providers.osbase not installed.
```

To verify that the SMI-S for AIX filesets were installed correctly, use the **lslpp** command as follows:

```
lslpp -al sysmgt.cim.smisproviders.hba_hdr
```

– If the installation completed successfully, a message similar to the following is returned:

```
lslpp -l sysmgt.cim.smisproviders.hba_hdr
   Fileset                      Level  State      Description
----------------------------------------------------------------------------
Path: /usr/lib/objrepos  sysmgt.cim.smisproviders.hba_hdr    1.2.1.0   COMMITTED \
     SMI-S Providers for AIX OS
```

– If the installation did not complete successfully, a message similar to the following is returned:

```
lslpp: Fileset sysmgt.cim.smisproviders.hba_hdr not installed.
```

Chapter 3. Configure the CIM Server

Your CIM Server requires limited configuration. After you install both fileset packages for the server and the providers, your Pegasus CIM Server is ready for use.

The AIX Pegasus CIM Server is SSL-ready. For more information about enabling the CIM Server to run with SSL, see “Secure your CIM Server” on page 6.

Start and stop the CIM Server

The AIX Pegasus is controlled by SRC, The subsystem name is cimsys and it has three subservers: cimsever, cimlistener and CIM_diagd. For more information about SRC commands, see System Resource Controller.

startsrc -s cimsys
: Start cimsys subsystem and its subservers

stopsrc -s cimsys
: Stop cimsys subsystem and its subservers

lssrc -s cimsys
: Query the status of cimsys subsystem

startsrc -t cimserver
: Start CIM Server

stopsrc -t cimserver
: Stop CIM server

lssrc -t cimserver
: Query the status of CIM Server

The CIM Server runs as a daemon in the background. By default, Basic Authentication is enabled. When Basic Authentication is enabled, the CIM Server authenticates the user ID and password of each request.

To disable Basic Authentication, set `enableAuthentication=false` in the configuration files before starting the CIM Server. If the CIM Server is already running, it must be restarted for the change to take effect. Client requests to the CIM Server must include a user ID and password if Basic Authentication is enabled.

Set resource limits

To maximize the CIM Server’s processing capacity, the root user’s **ulimit** for the Soft DATA segment must be set to -1, which is unlimited.

To set resource limits in SMIT, complete the following:

1. Type `smitty user` at a command prompt.
2. Select **Change/Show Characteristics of a User**.
3. Type `root` in the **User NAME** field.
4. Scroll to the **Soft DATA segment** field and change the value to `-1`.

In order for the change to take effect, you are required to log out and log back in again.

For more information about user and system resource limits, refer to the **ulimit** command in the Commands Reference.

Secure your CIM Server

To properly secure your CIM Server, it is recommended that you enable SSL when you are running the CIM Server. If you prefer to run your CIM Server in an unsecure mode, you can do so by either not enabling SSL, or disabling SSL after you enable it.

Create SSL certificates

To enable your server to run in SSL mode, you need a certificate and two keys: one public key and one private key. Because the private key contains the public key information in OpenSSL, a separate public key is not required. For more information about public and private keys in OpenSSL, see the OpenSSL Web site at http://www.openssl.org.

To create a self-signed test certificate called **cert.pem** and an RSA private key called **file.pem**, run the following commands:

```
cd /opt/freeware/cimom/pegasus/etc
CN="Common Name"
EMAIL="test@email.address"
HOSTNAME=`hostname`
sed -e "s/$CN/$HOSTNAME/" -e "s/$EMAIL/root@$HOSTNAME/" orig/ssl.cnf > ssl1.cnf
/opt/freeware/bin/openssl req -x509 -days 365 -newkey rsa:512 -nodes \
                              -config ssl1.cnf -keyout file.pem -out cert.pem

cp cert.pem client.pem

rm ssl1.cnf
```

The **ssl.cnf** file is a sample configuration file for OpenSSL. Two fields in the file, `CN="Common Name"` and `EMAIL="test@email.address"`, are used to specify the identity to be certified. Use the **sed** command string to replace the placeholder information with your system's information. You can customize the common name and the e-mail address to match your environment.

Output from the **sed** command is directed to the temporary **ssl1.cnf** file.

The default location for the key and certificate files is the **/opt/freeware/cimom/pegasus/etc** directory. If another directory is used, it must be specified using the **cimconfig** command before the CIM Server is started.

For example, if you choose to store the certificate and key files in a directory called **/var/pegasus**, specify the location of these files using the following commands before starting the CIM Server:

- `cimconfig -p -s sslCertificateFilePath=/var/pegasus/cert.pem`
- `cimconfig -p -s sslKeyFilePath=/var/pegasus/file.pem`

The **cp cert.pem client.pem** command creates the **client.pem** trust file, which is a copy of the self-signed test certificate. Its default location is the **/opt/freeware/cimom/pegasus/etc** directory.

Enable the CIM Server with SSL

After the SSL certificates are created, enable the CIM Server with SSL by setting the following parameters to the specified values:

- *enableHttpsConnection*=true
- *enableHttpConnection*=false

These parameters are set in one of the following places:

- the **cimconfig** command. For more information about the **cimconfig** command, see Appendix B, "cimconfig command," on page 113.

- command-line options to the **cimserver** command during the startup of the CIM Server. For more information about the **cimserver** command, see Appendix F, “cimserver command,” on page 125.

Set and configure CIM Server tracing

Tracing should only be used for debugging purposes and is, by default, disabled. You can, however, enable the tracing mechanism by specifying the trace level and the components that you want traced with the *traceLevel* configuration parameter. Choose from one of the following trace levels:

level 0
Tracing is switched off

level 1
Severe trace and log messages (if traceComponents is set to LogMessages)

level 2
Basic logic flow trace messages, minimal data detail

level 3
Intra function logic flow and moderate data detail

level 4
High data detail

level 5
High data detail + Function entry/exit

Trace data is saved in the file specified by the *traceFilePath* configuration parameter. By default, the *traceFilePath* parameter is set to the **/opt/freeware/cimom/pegasus/logs/cimserver.trc** file.

To specify the component or components that you want to trace, use the *traceComponents* parameter. The components that you can specify with this parameter are:

- Authentication
- Authorization
- CIMExportRequestDispatcher
- CIMOMHandle
- CMPIProvider
- CMPIProviderInterface
- Config
- ControlProvider
- CQL
- DiscardedData
- Dispatcher
- ExportClient
- Http
- IndicationGeneration
- IndicationHandler
- IndicationReceipt
- IndicationService
- L10N
- Listener
- LogMessages
- MessageQueueService

- ObjectResolution
- OsAbstraction
- ProviderAgent
- ProviderManager
- ProvManager
- Repository
- Server
- Shutdown
- SSL
- StatisticalData
- Thread
- UserManager
- WQL
- WsmServer
- Xml
- XmlIO

You can also choose to trace all of the components by using the word ALL in place of a specific component name. If the *traceComponents* parameter is not set to any component, tracing is off regardless of the *traceLevel* parameter setting.

You can modify the trace configuration parameters by using one of the following methods:

- In the configuration files before the CIM Server is started.
- As command line options to the **cimconfig** command while the CIM Server is running.

For example, to set the trace level to trace all information with high data detail in the **Thread** and **ProvManager** components, type the following commands:

```
cimconfig -s traceLevel=4
cimconfig -s traceComponents=Thread,ProvManager
```

Similarly, to disable all tracing, type the following command:

```
cimconfig -s traceComponents=
```

For more information about setting configuration parameters with the **cimconfig** command, see Appendix B, “cimconfig command,” on page 113.

Configure logging

The logging utility that is available for the Pegasus CIM Server is initially enabled and cannot be disabled. However, you can configure the utility by choosing the level of logging to use and specifying the directory in which to store the log files.

The following are the available levels of logging:

- TRACE
- INFORMATION
- SEVERE
- FATAL

You can change the logging level during the CIM startup by specifying the logging level with the **logLevel** parameter through one of the following methods:

- In the configuration files before the CIM Server is started

- As an option to the **cimserver** command during the CIM Server startup
- As an option to the **cimconfig** command while the CIM Server is running

For example, if you chose to use the **cimconfig** command method, you would type the following while the CIM Server is running:

```
cimconfig -s logLevel=INFORMATION
```

The log data is saved in the following files:

- **PegasusDebug.Log**
- **PegasusError.log**
- **PegasusStandard.log**
- **PegasusTrace.log**

These files are located in the directory that you specify with the **logdir** configuration parameter. By default, the **logdir** parameter is set to the **/opt/freeware/cimom/pegasus/logs** directory.

Chapter 4. Rebuild the repository

The CIM Repository is located at **/opt/freeware/cimom/pegasus/etc/repository**, and is pre-loaded with the CIM Schema. This repository is the active repository that can be modified with the **cimmof** and **cimmofl** commands.

The server repository can be restored to its original state by rebuild the repository:

- **Rebuild the repository.**

  To restore your repository, completing the following steps:

  1. 1. Run the **rebuild_repository** script by typing the following command:

     Note: The CIM Server will be stopped if it is running before you run this command.

     ```
     /opt/freeware/cimom/pegasus/etc/orig/rebuild_repository [–f] [-m]
     ```

     The **-f** flag is used to remove the active repository, otherwise, you will be asked to confirm this.

     The **-m** flag is used to save the CIM subscriptions.

  2. After the repository is rebuilt, start the CIM Server.

  This option restores the repository to the original state that was shipped with AIX. Any additional classes that were manually added to the repository must be reloaded using the **cimmof** command or the **cimmofl** command. For more information about these commands, see Appendix C, “cimmof command,” on page 115 and Appendix D, “cimmofl command,” on page 119.

Chapter 5. Providers for AIX

The Pegasus CIM Server uses providers to manage system resources. These providers must follow the implementation rules defined by the CIMOM. The Pegasus CIM Server uses its own proprietary C++ provider Application Programming Interface (API), but also works with the Common Manageability Programming Interface (CMPI), a C provider interface. Providers written to the CMPI are interoperable with the Pegasus CIM Server and other CIMOMs without any changes.

For the latest information about the providers supported on AIX, see the readme file available on the IBM Director Web site at https://www14.software.ibm.com/webapp/iwm/web/reg/pick.do?source=dmp. To access the readme file, log in to the Web site, select "IBM Director for AIX and Linux on POWER", and then click Continue. The readme file is listed in the IBM Pegasus CIM Server and Providers for AIX section for the desired Pegasus and Provider version.

For more information about CMPI, see the www.openpegasus.org Web site.

MOF files

A **.mof** file is a text file that defines the class name and attributes of a managed resource. The format adheres to the CIM standard of the DMTF industry consortium. An example of a managed resource is an operating system, and the MOF file can include the following types of attributes:

- Operating system type
- Version
- Date installed
- Number of users

The **.mof** files that define the IBM providers are located in the **/usr/pegasus/provider** directory.

Providers

The following provider types are included in the provider packages and are used by the Pegasus CIM Server:

Instance Providers
: Provide a dynamic list of instances of a class that are available in a CIMOM. For example, an operating system Instance provider returns information about the instance of the operating system that is running on the system.

Association Providers
: Build associations between instances of different classes dynamically. For example, the Pegasus CIM server contains information about the computer system and the operating system. An association provider associates the computer system and the operating system and returns information about this association.

Indication Providers
: Generates indications (events) for the defined error conditions in a specific resource (for example, the operating system).

Configure AIX provider tracing

Tracing should only be used for debugging purposes and is, by default, disabled. You can, however, enable the tracing utility for providers by setting the following environment variables before starting the CIM Server:

Note: You must use the appropriate shell command to set these variables. For example, for a Bourne shell or Korn shell, use the **export** command, and for the C shell, use the **setenv** command.

- **AIX_PROVIDER_TRACE_FILE**=*filepath*, where *filepath* is the file where you want trace data saved.
- **AIX_PROVIDER_TRACE_LEVEL**=*level*, where *level* is one of the trace levels.

Choose from one of the following trace levels:

level 1
Function entry and exit

level 2
Basic flow trace messages, low data detail

level 3
Interfunction logic flow, medium data detail

level 4
All information, high data detail

For example, to set the trace level to trace all information with high data detail using a Korn shell, type the following commands:

```
export AIX_PROVIDER_TRACE_FILE=/tmp/FILE_NAME
export AIX_PROVIDER_TRACE_LEVEL=4
```

Chapter 6. OS Base Providers

The following CIM classes have been implemented by IBM-supplied providers and are shipped in the **sysmgt.cim.providers.osbase** fileset. There are some cases where both an IBMPSG class and an AIX class and provider are given, or both an IBMPSG and IBM AIX class and provider are given. They provide similar functionality but are in different namespaces. The IBMPSG classes are in the ibmsd namespace and the AIX and IBM AIX named classes are in the cimv2 namespace.

CIM Class	IBM provider
IBMAIX_AFS	"OSBase_AFSProvider" on page 16
IBMAIX_BlockStorageStatisticalData	"OSBase_BlockStorageStatisticalDataProvider" on page 16
IBMAIX_BootOSFromFS	"OSBase_BootOSFromFSProvider" on page 17
IBMAIX_CDFS	"OSBase_CDFSProvider" on page 17
IBMAIX_ComputerSystem	"OSBase_ComputerSystemProvider" on page 18
IBMAIX_CSNetworkPort	"OSBase_CSNetworkPortProvider" on page 18
IBMAIX_CSProcessor	"OSBase_CSProcessorProvider" on page 18
IBMAIX_DFS	"OSBase_DFSProvider" on page 19
IBMAIX_EthernetPort	"OSBase_EthernetPortProvider" on page 19
IBMAIX_FCPort	"OSBase_FCPortProvider" on page 20
IBMAIX_HostedFileSystem	"OSBase_HostedFileSystemProvider" on page 21
IBMAIX_IPProtocolEndpoint	"OSBase_IPProtocolEndpointProvider" on page 21
IBMAIX_JFS	"OSBase_JFSProvider" on page 22
IBMAIX_JFS2	"OSBase_JFS2Provider" on page 22
IBMAIX_LocalLoopbackPort	"OSBase_LoopBackPortProvider" on page 23
IBMAIX_NetworkPortImplementsIPEndpoint	"OSBase_NetworkPortImplementsEndpointProvider" on page 24
IBMAIX_NFS	"OSBase_NFSProvider" on page 23
IBMAIX_OperatingSystemStatisticalData	"OSBase_OperatingSystemStatisticalDataProvider" on page 25
IBMAIX_OSProcess	"OSBase_OSProcessProvider" on page 24
IBMAIX_Processor	"OSBase_ProcessorProvider" on page 26
IBMAIX_PROCFS	"OSBase_PROCFSProvider" on page 25
IBMAIX_RunningOS	"OSBase_RunningOSProvider" on page 26
IBMAIX_TokenRingPort	"OSBase_TokenRingPortProvider" on page 27
IBMAIX_UnixProcess	"OSBase_UnixProcessProvider" on page 27
IBM_AlertIndication	"IBMPSG_IndicationProvider/AIX_IndicationProvider" on page 57
AIX_CardInSlot	"AIX_CardInSlotProvider" on page 28
AIX_Chassis	"AIX_ChassisProvider" on page 28
AIX_DNSSettingData	"AIX_DNSSettingDataProvider" on page 30
AIX_DisplayController	"AIX_DisplayControllerProvider" on page 30
AIX_ElementConformsToProfile	"AIX_ElementConformsToProfileProvider" on page 32
AIX_Fan	"AIX_FanProvider" on page 32
AIX_FileSystemMountSettings	"AIX_FileSystemMountSettingsProvider" on page 33
AIX_FileSystemSettings	"AIX_FileSystemSettingsProvider" on page 33
AIX_IDEController	"AIX_IDEControllerProvider" on page 34
AIX_InstalledOS	"AIX_InstalledOSProvider" on page 35
AIX_InstalledSoftwareElement	"AIX_InstalledSoftwareElementProvider" on page 35
AIX_OperatingSystem/VIOS_OperatingSystem	"OSBase_OperatingSystemProvider" on page 24
AIX_OpticalDrive	"AIX_OpticalDriveProvider" on page 36
AIX_PCIBridge	"AIX_PCIBridgeProvider" on page 37
AIX_PCIDevice	"AIX_PCIDeviceProvider" on page 39
AIX_SerialNumberInformation/ IBMPSG_SerialNumberInformation	"AIX_SerialNumberInformationProvider/IBMPSG_SerialNumberInformationProvider" on page 42
AIX_TCPProtocolEndpoint	"AIX_TCPProtocolEndpointProvider" on page 42

CIM Class	IBM provider
AIX_TapeDrive	“AIX_TapeDriveProvider” on page 43
AIX_TemperatureSensor/IBMPSG TemperatureSensor	“AIX_TemperatureSensorProvider” on page 45
AIX_USBController	“AIX_USBControllerProvider” on page 47
IBMPSG_BaseBoard/AIX_BaseBoard	“IBMPSG_BaseboardProvider/OSBase_BaseBoardProvider” on page 51
IBMPSG_BIOS/AIX_BIOS	“IBMPSG_BIOSProvider/AIX_BIOSProvider” on page 50
IBMPSG_CacheMemory/AIX_CacheMemory	“IBMPSG_CacheMemoryProvider/AIX_CacheMemoryProvider” on page 51
IBMPSG_ComputerSystem	“IBMPSG_ComputerSystemProvider” on page 52
IBMPSG_FRU/AIX_FRU	“IBMPSG_FRUProvider/AIX_FRUProvider” on page 53
IBMPSG_LogicalDisk/AIX_LogicalDisk	“IBMPSG_LogicalDiskProvider/AIX_LogicalDiskProvider” on page 53
IBMPSG_OperatingSystem	“IBMPSG_OperatingSystemProvider” on page 54
IBMPSG_PhysicalDisk/AIX_PhysicalDisk	“IBMPSG_PhysicalDiskProvider/AIX_PhysicalDiskProvider” on page 54
IBMPSG_PhysicalMemory/AIX_PhysicalMemory	“IBMPSG_PhysicalMemoryProvider/AIX_PhysicalMemoryProvider” on page 55
IBMPSG_Processor	“IBMPSG_ProcessorProvider” on page 56
IBMPSG_Slot/AIX_Slot	“IBMPSG_SlotProvider/AIX_SlotProvider” on page 56
IBMPSG_RunningOSP	“OSBase_RunningOSProvider” on page 48
IBMPSG_VoltageSensor/AIX_VoltageSensor	“IBMPSG_VoltageSensorProvider/AIX_VoltageSensorProvider” on page 48

OSBase_AFSProvider

This provider is an instance provider for the AIX_AFS class. It conforms to the CMPI interface to provide information about remote AFS file systems.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
CSCreationClassName	string
CSName	string
CreationClassName	string
Name	string
Root	string
FilesystemSize	uint64
AvailableSpace	uint64
ReadOnly	Boolean
FilesystemType	string

For more information about the properties descriptions, see the IBMAIX_AFS class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_BlockStorageStatisticalDataProvider

This provider is a statistical provider for the IBMAIX_BlockStorageStatisticalData class. It provides statistical data for the block storage system.

The following provider properties are implemented:

Property	Type
TotalIOs	uint64
KBytesTransfered	uint64
IOTimeCounter	uint64
ReadIOs	uint64
ReadHitIOs	uint64
ReadIOTimeCounter	uint64
ReadHitIOTimeCounter	uint64
KBytesRead	uint64
WriteIOs	uint64
WriteHitIOs	uint64
WriteIOTimeCounter	uint64
WriteHitIOTimeCounter	uint64
IdleTimeCounter	uint64
MaintOp	uint64
MaintTimeCounter	uint64

For more information about the properties descriptions, see the IBMAIX_BlockStorageStatisticalData class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_BootOSFromFSProvider

This provider is an instance provider for the IBMAIX_BootOSFromFS class. It conforms to the CMPI interface to provide the association between the current, running operating system and the file system from which the operating system is booted.

When an instance is returned, the properties of the IBMAIX_OperatingSystem and subclasses of CIM_FileSystem classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the IBMAIX_BootOSFromFS class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_CDFSProvider

This provider is an instance provider for the IBMAIX_CDFS class. It conforms to the CMPI interface to provide information about local CDFS file systems.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
CSCreationClassName	string
CSName	string
CreationClassName	string
Name	string

Property	Type
Root	string
FilesystemSize	uint64
AvailableSpace	uint64
ReadOnly	Boolean
FilesystemType	string

For more information about the properties descriptions, see the IBMAIX_CDFS class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_CSNetworkPortProvider

This provider is an instance provider for the IBMAIX_CSNetworkPort class. It conforms to the CMPI interface to provide the association between a computer system and its network ports.

When an instance is returned, the properties of the IBMAIX_ComputerSystem and subclasses of CIM_NetworkPort (Ethernet, TokenRing, FCPort and LoopBackPort) classes listed in their respective providers, are returned.

For more information about the properties descriptions, see the IBMAIX_CSNetworkPort class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_CSProcessorProvider

This provider is an instance provider for the IBMAIX_CSProcessor class. It conforms to the CMPI interface to provide the association between a computer system and the processors that the computer system contains.

When an instance is returned, the properties of the IBMAIX_ComputerSystem and subclasses of IBMAIX_Processor classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the IBMAIX_CSProcessor class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_ComputerSystemProvider

This provider is an instance provider for the IBMAIX_ComputerSystem class. It conforms to the CMPI interface to provide computer system properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
ElementName	string
Status	string
Name	string
CreationClassName	string
NameFormat	string
Dedicated[]	uint16A

Property	Type
OtherDedicatedDescriptions	string
HostingSystemName	string
HostingSystemNameFormat	string

The `HostingSystemName` identifies the managed system for LPARS.

For more information about the properties descriptions, see the IBMAIX_ComputerSystem class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_DFSProvider

This provider is an instance provider for the IBMAIX_DFS class. It conforms to the CMPI interface to provide information about remote DFS file systems.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
CSCreationClassName	string
CSName	string
CreationClassName	string
Name	string
Root	string
FilesystemSize	uint64
AvailableSpace	uint64
ReadOnly	Boolean
FilesystemType	string

For more information about the properties descriptions, see the IBMAIX_DFS class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_EthernetPortProvider

This provider is an instance provider for the IBMAIX_EthernetPort class. It conforms to the CMPI interface to provide the ethernet port properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
Element Name	string
Name	string
Status	string
EnabledState	uint16
OtherEnabledState	string

Property	Type
RequestedState	uint16
EnabledDefault	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
MaxSpeed	uint64 (bps)
Speed	uint64 (bps)
OtherNetworkPortType	string
LinkTechnology	uint16
OtherLinkTechnology	string

For more information about the properties descriptions, see the IBMAIX_EthernetPort class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_FCPortProvider

This provider is an instance provider for the IBMAIX_FCPort class. It conforms to the CMPI interface to provide fibre channel port properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
Element Name	string
Name	string
Status	string
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
MaxSpeed	uint64 (bps)
Speed	uint64 (bps)
OtherNetworkPortType	string
LinkTechnology	uint16
OtherLinkTechnology	string

For more information about the properties descriptions, see the IBMAIX_FCPort class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_HostedFileSystemProvider

This provider is an instance provider for the IBMAIX_HostedFileSystem class. It conforms to the CMPI interface to provide the association between the computer system container and its hosted local and remote file systems.

When an instance is returned, the properties of the IBMAIX_ComputerSystem and subclasses of CIM_FileSystem classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the IBMAIX_HostedFileSystem class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_IPProtocolEndpointProvider

This provider is an instance provider for the IBMAIX_IPProtocolEndpoint class. It conforms to the CMPI interface to provide IP protocol end point properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
ElementName	string
Status	string
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
CreationClassName	string
SystemCreationClassName	string
SystemName	string
CreationClassName	string
Name	string
NameFormat	string
Protocol Type	uint16
OtherTypeDescription	string
IPv4Address	string
IPv6Address	string
SubnetMask	string
PrefixLength	uint8
IPVersionSupport	uint16

For more information about the properties descriptions, see the IBMAIX_IPProtocolEndpoint class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_JFS2Provider

This provider is an instance provider for the IBMAIX_JFS2 class. It conforms to the CMPI interface to provide information about local enhanced journaled file system.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
CSCreationClassName	string
CSName	string
CreationClassName	string
Name	string
Root	string
FilesystemSize	uint64
AvailableSpace	uint64
ReadOnly	Boolean
FilesystemType	string

For more information about the properties descriptions, see the IBMAIX_JFS2 class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_JFSProvider

This provider is an instance provider for the IBMAIX_JFS class. It conforms to the CMPI interface to provide information about local journaled file system.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
CSCreationClassName	string
CSName	string
CreationClassName	string
Name	string
Root	string
FilesystemSize	uint64
AvailableSpace	uint64
ReadOnly	Boolean
FilesystemType	string

For more information about the properties descriptions, see the IBMAIX_JFS class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_LoopBackPortProvider

This provider is an instance provider for the IBMAIX_LoopBackPort class. It conforms to the CMPI interface to provide loopback port properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
ElementName	string
Name	string
Status	string
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
LinkTechnology	uint16
OtherLinkTechnology	string

For more information about the properties descriptions, see the IBMAIX_LoopBackPort class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_NFSProvider

This provider is an instance provider for the IBMAIX_NFS class. It conforms to the CMPI interface to provide information about remote NFS file systems.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
CSCreationClassName	string
CSName	string
CreationClassName	string
Name	string
Root	string
FilesystemSize	uint64
AvailableSpace	uint64
ReadOnly	Boolean
FilesystemType	string

For more information about the properties descriptions, see the IBMAIX_NFS class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_NetworkPortImplementsEndpointProvider

This provider is an instance provider for the IBMAIX_NetworkPortImplementsEndpoint class. It conforms to the CMPI interface to provide the association between the IP protocol end point and the network ports.

When an instance is returned, the properties of the IBMAIX_IPProtocolEndpoint and subclasses of CIM_NetworkPort (ethernet, token-ring, FCport and loopbackport) classes listed in their respective providers, are returned.

For more information about the properties descriptions, see the IBMAIX_NetworkPortImplementsEndpoint class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_OSProcessProvider

This provider is an instance provider for the IBMAIX_OSProcess class. It conforms to the CMPI interface to provide the association between an operating system and the processes running in the operating system.

When an instance is returned, the properties of the IBMAIX_OperatingSystem and subclasses of IBMAIX_UnixProcess classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the IBMAIX_OSProcess class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_OperatingSystemProvider

This provider is an instance provider for the IBMAIX_OperatingSystem/VIOS_OperatingSystem class. It conforms to the CMPI interface to provide AIX operating system properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
Name	string
CSCreationClassName	string
CSName	string
CreationClassName	string
OSType	uint16
Version	string
LastBootUpTime	datetime
LocalDateTime	datetime
CurrentTimeZone	sint16
NumberOfProcesses	uint32
MaxNumberOfProcesses	uint32
TotalVirtualMemorySize	uint64
FreeVirtualMemory	uint64 (in KBytes)

Property	Type
FreePhysicalMemory	uint64 (in KBytes)
TotalVisibleMemorySize	uint64 (in KBytes)
SizedStoredInPagingFiles	uint64 (in KBytes)
FreeSpaceInPagingFiles	uint64 (in KBytes)
MaxProcessorsMemorySize	uint64 (in KBytes)
Distributed	Boolean
CodeSet	string
LanguageEdition	string
DefaultPageSize	uint32

For more information about the properties descriptions, see the IBMAIX_OperatingSystem/ VIOS_OperatingSystem class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_OperatingSystemStatisticalDataProvider

This provider is a statistical provider for the IBMAIX_OperatingSystemStatisticalData class and provides statistical data for the operating system.

The following provider properties are implemented:

Property	Type
CPUUserTime	uint64
CPUSystemTime	uint64
CPUWaitTime	uint64
CPUIdleTime	uint64
RunQueueLength	uint64
BlockQueueLength	uint64
PagesPagedIn	uint64
PagesPagedOut	uint64

For more information about the properties descriptions, see the IBMAIX_OperatingSystemStatisticalData class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_PROCFSProvider

This provider is an instance provider for the IBMAIX_PROCFS class. It conforms to the CMPI interface to provide information about local PROCFS file system.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
CSCreationClassName	string
CSName	string

Property	Type
CreationClassName	string
Name	string
Root	string
FilesystemSize	uint64
AvailableSpace	uint64
ReadOnly	Boolean
FilesystemType	string

For more information about the properties descriptions, see the IBMAIX_PROCFS class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_ProcessorProvider

This provider is an instance provider for the IBMAIX_Processor class. It conforms to the CMPI interface to provide individual process properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
ElementName	string
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
Role	string
Family	uint16
OtherFamilyDescription	string
MaxClockSpeed	uint32 (Mhz)
CurrentClockSpeed	uint32 (Mhz)
LoadPercentage	uint16
Stepping	string
CPU Status	uint16

For more information about the properties descriptions, see the IBMAIX_UnixProcess class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_RunningOSProvider

This provider is an instance provider for the IBMAIX_RunningOS class. It conforms to the CMPI interface to provide the association between the computer system and the operating system.

When an instance is returned, the properties of the IBMAIX_ComputerSystem and subclasses of IBMAIX_OperatingSystem classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the IBMAIX_RunningOS class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_TokenRingPortProvider

This provider is an instance provider for the IBMAIX_TokenRingPort class. It conforms to the CMPI interface to provide token-ring port properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
Element Name	string
Name	string
Status	string
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
MaxSpeed	uint64 (bps)
Speed	uint64 (bps)
OtherNetworkPortType	string
LinkTechnology	uint16
OtherLinkTechnology	string

For more information about the properties descriptions, see the IBMAIX_TokenRingPort class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

OSBase_UnixProcessProvider

This provider is an instance provider for the IBMAIX_UnixProcess class. It conforms to the CMPI interface to provide individual process properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
Name	string
CSCreationClassName	string
CSName	string
CreationClassName	string

Property	Type
OSCreationClassName	string
OSName	string
Handle	string
CreationDate	datetime
KernelModeTime	uint64
UserModeTime	uint64
ParentProcessID	string
RealUserID	uint64
ProcessGroupID	uint64
ProcessTTY	string
ModulePath	string
Parameters[]	string

For more information about the properties descriptions, see the IBMAIX_UnixProcess class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

AIX_CardInSlotProvider

This provider is an instance provider for the AIX_CardInSlot class. It conforms to the CMPI interface to provide the association between the card in the slot and the slot into which the card is inserted.

When an instance is returned, the properties of the CIM_Card and subclasses of AIX_Slot classes, listed in their respective providers, are returned. For more information about the properties descriptions, see the AIX_CardInSlot class in the **/usr/pegasus/provider/mof/cimv2/AIX_Base.mof** file.

AIX_ChassisProvider

This provider is an instance provider for the AIX_Chassis class. It conforms to the CMPI interface to provide chassis properties. The following provider properties are implemented:

Property	Type
Caption	string
InstallDate	datetime
Name	string
OperationalStatus[]	uint16
StatusDescriptions[]	string
Status	string
HealthState	uint16
PrimaryStatus	uint16
DetailedStatus	uint16
OperatingStatus	uint16
CommunicationStatus	uint16
Tag	string
Description	string
CreationClassName	string

Property	Type
ElementName	string
Manufacturer	string
Model	string
SKU	string
SerialNumber	string
Version	string
PartNumber	string
OtherIdentifyingInfo	string
PoweredOn	boolean
ManufactureDate	datetime
VendorEquipmentType	string
UserTracking	string
CanBeFRUed	boolean
RemovalConditions	uint16
Removable	boolean
Replaceable	boolean
HotSwappable	boolean
Height	real32
Depth	real32
Width	real32
Weight	real32
PackageType	uint16
OtherPackageType	string
VendorCompatibilityStrings[]	string
CableManagementStrategy	string
ServicePhilosophy[]	uint16
ServiceDescriptions[]	string
LockPresent	boolean
AudibleAlarm	boolean
VisibleAlarm	boolean
SecurityBreach	uint16
BreachDescription	string
IsLocked	boolean
NumberOfPowerCords	uint16
CurrentRequiredOrProduced	sint16
HeatGeneration	uint16
ChassisTypes[]	uint16
TypeDescriptions[]	string
ChassisPackageType	uint16
ChassisTypeDescription	string
MultipleSystemSupport	uint16

Property	Type
RackMountable	uint16
InputCurrentType	uint16
OtherInputCurrentType	string
InputVoltage	sint32

For more information about the properties descriptions, see the AIX_Chassis class in the **/usr/pegasus/provider/mof/cimv2/AIX_Base.mof** file.

AIX_DNSSettingDataProvider

This provider is an instance provider for the AIX_DNSSettingData class. It conforms to the CMPI interface to provide DNS Setting Data properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
InstanceID	string
ElementName	string
ConfigurationName	string
ChangeableType	uint16
AddressOrigin	uint16
DomainName	string
RequestedHostname	string
UseSuffixWhenRegistering	boolean
RegisterThisConnectionsAddress	boolean
DNSServerAddresses[]	string
DHCPOptionsToUse[]	uint8

For more information about the properties descriptions, see the AIX_DNSSettingData class in the **/usr/pegasus/provider/mof/cimv2/AIX_Base.mof** file.

AIX_DisplayControllerProvider

This provider is an instance provider for the AIX_DisplayController class. It conforms to the CMPI interface to provide Display Controller properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
ElementName	string
InstallDate	datetime

Property	Type
Name	string
OperationalStatus[]	uint16
StatusDescriptions[]	string
Status	string
HealthState	uint16
PrimaryStatus	uint16
DetailedStatus	uint16
OperatingStatus	uint16
CommunicationStatus	uint16
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
TimeOfLastStateChange	datetime
AvailableRequestedStates[]	uint16
TransitioningToState	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
PowerManagementSupported	boolean
PowerManagementCapabilities[]	uint16
Availability	uint16
StatusInfo	uint16
LastErrorCode	uint32
ErrorDescription	string
ErrorCleared	boolean
OtherIdentifyingInfo[]	string
PowerOnHours	uint64
TotalPowerOnHours	uint64
IdentifyingDescriptions[]	string
AdditionalAvailability[]	uint16
MaxQuiesceTime	uint64
LocationIndicator	uint16
TimeOfLastReset	datetime
ProtocolSupported	uint16
MaxNumberControlled	uint32
ProtocolDescription	string

For more information about the properties descriptions, see the AIX_DisplayController class in the **/usr/pegasus/provider/mof/cimv2/AIX_Base.mof** file.

AIX_ElementConformsToProfileProvider

This provider is an instance provider for the AIX_ElementConformsToProfile class. It conforms to the CMPI interface to provide the association between the RegisteredProfile to which the ManagedElement conforms and the ManagedElement that conforms to the RegisteredProfile.

When an instance is returned, the properties of the CIM_RegisteredProfile and subclasses of CIM_ManagedElement classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_ElementConformsToProfile class in the **/usr/pegasus/provider/mof/cimv2/AIX_Base.mof** file.

AIX_FanProvider

This provider is an instance provider for the AIX_Fan class. It conforms to the CMPI interface to provide Fan properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
ElementName	string
InstallDate	datetime
Name	string
OperationalStatus[]	uint16
StatusDescriptions[]	string
Status	string
HealthState	uint16
PrimaryStatus	uint16
DetailedStatus	uint16
OperatingStatus	uint16
CommunicationStatus	uint16
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
TimeOfLastStateChange	datetime
AvailableRequestedStates[]	uint16
TransitioningToState	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
PowerManagementSupported	boolean
PowerManagementCapabilities[]	uint16
Availability	uint16

Property	Type
StatusInfo	uint16
LastErrorCode	uint32
ErrorDescription	string
ErrorCleared	boolean
OtherIdentifyingInfo[]	string
PowerOnHours	uint64
TotalPowerOnHours	uint64
IdentifyingDescriptions[]	string
AdditionalAvailability[]	uint16
MaxQuiesceTime	uint64
LocationIndicator	uint16
ActiveCooling	boolean
VariableSpeed	boolean
DesiredSpeed	uint64
ControlModesSupported[]	uint16
ControlMode	uint16
DesiredControlMode	uint16

For more information about the properties descriptions, see the AIX_Fan class in the **/usr/pegasus/provider/mof/cimv2/AIX_Base.mof** file.

AIX_FileSystemMountSettingsProvider

This provider is an instance provider for the AIX_FileSystemMountSettings class. It conforms to the CMPI interface to provide File System Mount Settings properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
InstanceID	string
ElementName	string
ConfigurationName	string
ChangeableType	uint16
Name	string
MountPoint	string

For more information about the properties descriptions, see the AIX_FileSystemMountSettings class in the **/usr/pegasus/provider/mof/cimv2/AIX_Base.mof** file.

AIX_FileSystemSettingsProvider

This provider is an instance provider for the AIX_FileSystemSettings class. It conforms to the CMPI interface to provide File System Settings properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
InstanceID	string
ElementName	string
ConfigurationName	string
ChangeableType	uint16
Name	string
Label	string

For more information about the properties descriptions, see the AIX_FileSystemSettings class in the **/usr/pegasus/provider/mof/cimv2/AIX_Base.mof** file.

AIX_IDEControllerProvider

This provider is an instance provider for the AIX_IDEController class. It conforms to the CMPI interface to provide IDE Controller properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
ElementName	string
InstallDate	datetime
Name	string
OperationalStatus[]	uint16
StatusDescriptions[]	string
Status	string
HealthState	uint16
PrimaryStatus	uint16
DetailedStatus	uint16
OperatingStatus	uint16
CommunicationStatus	uint16
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
TimeOfLastStateChange	datetime
AvailableRequestedStates[]	uint16
TransitioningToState	uint16
SystemCreationClassName	string
SystemName	string

Property	Type
CreationClassName	string
DeviceID	string
PowerManagementSupported	boolean
PowerManagementCapabilities[]	uint16
Availability	uint16
StatusInfo	uint16
LastErrorCode	uint32
ErrorDescription	string
ErrorCleared	boolean
OtherIdentifyingInfo[]	string
PowerOnHours	uint64
TotalPowerOnHours	uint64
IdentifyingDescriptions[]	string
AdditionalAvailability[]	uint16
MaxQuiesceTime	uint64
LocationIndicator	uint16
TimeOfLastReset	datetime
ProtocolSupported	uint16
MaxNumberControlled	uint32
ProtocolDescription	string

For more information about the properties descriptions, see the AIX_IDEController class in the **/usr/pegasus/provider/mof/cimv2/AIX_Base.mof** file.

AIX_InstalledOSProvider

This provider is an instance provider for the AIX_InstalledOS class. It conforms to the CMPI interface to provide the association between the Computer System Container and An AIX OperatingSystem.

When an instance is returned, the properties of the IBMAIX_ComputerSystem and subclasses of AIX_OperatingSystem classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_InstalledOS class in the **/usr/pegasus/provider/mof/cimv2/AIX_Base.mof** file.

AIX_InstalledSoftwareElementProvider

This provider is an instance provider for the AIX_InstalledSoftwareElement class. It conforms to the CMPI interface to provide the association between the Computer System Container and Installed software element.

When an instance is returned, the properties of the IBMAIX_ComputerSystem and subclasses of CIM_SoftwareElement classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_InstalledSoftwareElement class in the **/usr/pegasus/provider/mof/cimv2/AIX_Base.mof** file.

AIX_OpticalDriveProvider

This provider is an instance provider for the AIX_OpticalDrive class. It conforms to the CMPI interface to provide Optical Drive properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
ElementName	string
InstallDate	datetime
Name	string
OperationalStatus[]	uint16
StatusDescriptions[]	string
Status	string
HealthState	uint16
PrimaryStatus	uint16
DetailedStatus	uint16
OperatingStatus	uint16
CommunicationStatus	uint16
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
TimeOfLastStateChange	datetime
AvailableRequestedStates[]	uint16
TransitioningToState	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
PowerManagementSupported	boolean
PowerManagementCapabilities[]	uint16
Availability	uint16
StatusInfo	uint16
LastErrorCode	uint32
ErrorDescription	string
ErrorCleared	boolean
OtherIdentifyingInfo[]	string
PowerOnHours	uint64
TotalPowerOnHours	uint64
IdentifyingDescriptions[]	string
AdditionalAvailability[]	uint16

Property	Type
MaxQuiesceTime	uint64
LocationIndicator	uint16
Capabilities[]	uint16
CapabilityDescriptions[]	string
ErrorMethodology	string
CompressionMethod	string
NumberOfMediaSupported	uint32
MaxMediaSize	uint64
DefaultBlockSize	uint64
MaxBlockSize	uint64
MinBlockSize	uint64
NeedsCleaning	boolean
MediaIsLocked	boolean
Security	uint16
LastCleaned	datetime
MaxAccessTime	uint64
UncompressedDataRate	uint32
LoadTime	uint64
UnloadTime	uint64
MountCount	uint64
TimeOfLastMount	datetime
TotalMountTime	uint64
UnitsDescription	string
MaxUnitsBeforeCleaning	uint64
UnitsUsed	uint64

For more information about the properties descriptions, see the AIX_OpticalDrive class in the **/usr/pegasus/provider/mof/cimv2/AIX_Base.mof** file.

AIX_PCIBridgeProvider

This provider is an instance provider for the AIX_PCIBridge class. It conforms to the CMPI interface to provide PCI Bridge properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
ElementName	string
InstallDate	datetime
Name	string
OperationalStatus[]	uint16

Property	Type
StatusDescriptions[]	string
Status	string
HealthState	uint16
PrimaryStatus	uint16
DetailedStatus	uint16
OperatingStatus	uint16
CommunicationStatus	uint16
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
TimeOfLastStateChange	datetime
AvailableRequestedStates[]	uint16
TransitioningToState	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
PowerManagementSupported	boolean
PowerManagementCapabilities[]	uint16
Availability	uint16
StatusInfo	uint16
LastErrorCode	uint32
ErrorDescription	string
ErrorCleared	boolean
OtherIdentifyingInfo[]	string
PowerOnHours	uint64
TotalPowerOnHours	uint64
IdentifyingDescriptions[]	string
AdditionalAvailability[]	uint16
MaxQuiesceTime	uint64
LocationIndicator	uint16
TimeOfLastReset	datetime
ProtocolSupported	uint16
MaxNumberControlled	uint32
ProtocolDescription	string
CommandRegister	uint16
Capabilities[]	uint16
CapabilityDescriptions[]	string
DeviceSelectTiming	uint16
ClassCode	uint8

Property	Type
CacheLineSize	uint8
LatencyTimer	uint8
InterruptPin	uint16
ExpansionROMBaseAddress	uint32
SelfTestEnabled	boolean
BaseAddress[]	uint32
SubsystemID	uint16
SubsystemVendorID	uint16
MinGrantTime	uint8
MaxLatency	uint8
BusNumber	uint8
DeviceNumber	uint8
FunctionNumber	uint8
PCIDeviceID	uint16
VendorID	uint16
RevisionID	uint8
BridgeType	uint16
SecondaryLatencyTimer	uint8
SubordinateBusNumber	uint8
SecondayBusNumber	uint8
PrimaryBusNumber	uint8
SecondaryStatusRegister	uint16
SecondaryBusDeviceSelectTiming	uint16
IOLimit	uint8
IOBase	uint8
MemoryLimit	uint16
MemoryBase	uint16
PrefetchMemoryLimit	uint16
PrefetchMemoryBase	uint16
PrefetchLimitUpper32	uint32
PrefetchBaseUpper32	uint32
IOLimitUpper16	uint16
IOBaseUpper16	uint16

For more information about the properties descriptions, see the AIX_PCIBridge class in the **/usr/pegasus/provider/mof/cimv2/AIX_Base.mof** file.

AIX_PCIDeviceProvider

This provider is an instance provider for the AIX_PCIDevice class. It conforms to the CMPI interface to provide PCI Device properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
ElementName	string
InstallDate	datetime
Name	string
OperationalStatus[]	uint16
StatusDescriptions[]	string
Status	string
HealthState	uint16
PrimaryStatus	uint16
DetailedStatus	uint16
OperatingStatus	uint16
CommunicationStatus	uint16
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
TimeOfLastStateChange	datetime
AvailableRequestedStates[]	uint16
TransitioningToState	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
PowerManagementSupported	boolean
PowerManagementCapabilities[]	uint16
Availability	uint16
StatusInfo	uint16
LastErrorCode	uint32
ErrorDescription	string
ErrorCleared	boolean
OtherIdentifyingInfo[]	string
PowerOnHours	uint64
TotalPowerOnHours	uint64
IdentifyingDescriptions[]	string
AdditionalAvailability[]	uint16
MaxQuiesceTime	uint64
LocationIndicator	uint16
TimeOfLastReset	datetime

Property	Type
ProtocolSupported	uint16
MaxNumberControlled	uint32
ProtocolDescription	string
CommandRegister	uint16
Capabilities[]	uint16
CapabilityDescriptions[]	string
DeviceSelectTiming	uint16
ClassCode	uint8
CacheLineSize	uint8
LatencyTimer	uint8
InterruptPin	uint16
ExpansionROMBaseAddress	uint32
SelfTestEnabled	boolean
BaseAddress[]	uint32
SubsystemID	uint16
SubsystemVendorID	uint16
MinGrantTime	uint8
MaxLatency	uint8
BusNumber	uint8
DeviceNumber	uint8
FunctionNumber	uint8
PCIDeviceID	uint16
VendorID	uint16
RevisionID	uint8
BridgeType	uint16
SecondaryLatencyTimer	uint8
SubordinateBusNumber	uint8
SecondayBusNumber	uint8
PrimaryBusNumber	uint8
SecondaryStatusRegister	uint16
SecondaryBusDeviceSelectTiming	uint16
IOLimit	uint8
IOBase	uint8
MemoryLimit	uint16
MemoryBase	uint16
PrefetchMemoryLimit	uint16
PrefetchMemoryBase	uint16
PrefetchLimitUpper32	uint32
PrefetchBaseUpper32	uint32
IOLimitUpper16	uint16
IOBaseUpper16	uint16

For more information about the properties descriptions, see the AIX_PCIDevice class in the **/usr/pegasus/provider/mof/cimv2/AIX_Base.mof** file.

AIX_SerialNumberInformationProvider/ IBMPSG_SerialNumberInformationProvider

This provider is an instance provider for the AIX_SerialNumberInformation class. It conforms to the CMPI interface to provide Serial Number Information properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
ElementName	string
SettingID	string
Identifier	string
Name	string
SerialNumber	string
Manufacturer	string
Model	string
Version	string
OtherIdentifyingInformation	string

For more information about the properties descriptions, see the AIX_SerialNumberInformation class in the **/usr/pegasus/provider/mof/cimv2/AIX_Base.mof** file.

AIX_TCPProtocolEndpointProvider

This provider is an instance provider for the AIX_TCPProtocolEndpoint class. It conforms to the CMPI interface to provide TCP Protocol Endpoint properties.

The following provider properties are implemented:

Property	Type
Caption	string
ElementName	string
InstallDate	datetime
StatusDescriptions[]	string
Status	string
HealthState	uint16
PrimaryStatus	uint16
DetailedStatus	uint16
OperatingStatus	uint16
CommunicationStatus	uint16

Property	Type
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
AvailableRequestedStates[]	uint16
TransitioningToState	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
Description	string
OperationalStatus[]	uint16
EnabledState	uint16
TimeOfLastStateChange	datetime
Name	string
NameFormat	string
ProtocolType	uint16
OtherTypeDescription	string
BroadcastResetSupported	boolean
PortNumber	uint32
ProtocolIFType	uint16

For more information about the properties descriptions, see the AIX_TCPProtocolEndpoint class in the **/usr/pegasus/provider/mof/cimv2/AIX_Base.mof** file.

AIX_TapeDriveProvider

This provider is an instance provider for the AIX_TapeDrive class. It conforms to the CMPI interface to provide Tape Drive properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
ElementName	string
InstallDate	datetime
Name	string
OperationalStatus[]	uint16
StatusDescriptions[]	string
Status	string
HealthState	uint16
PrimaryStatus	uint16
DetailedStatus	uint16
OperatingStatus	uint16

Property	Type
CommunicationStatus	uint16
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
TimeOfLastStateChange	datetime
AvailableRequestedStates[]	uint16
TransitioningToState	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
PowerManagementSupported	boolean
PowerManagementCapabilities[]	uint16
Availability	uint16
StatusInfo	uint16
LastErrorCode	uint32
ErrorDescription	string
ErrorCleared	boolean
OtherIdentifyingInfo[]	string
PowerOnHours	uint64
TotalPowerOnHours	uint64
IdentifyingDescriptions[]	string
AdditionalAvailability[]	uint16
MaxQuiesceTime	uint64
LocationIndicator	uint16
Capabilities[]	uint16
CapabilityDescriptions[]	string
ErrorMethodology	string
CompressionMethod	string
NumberOfMediaSupported	uint32
MaxMediaSize	uint64
DefaultBlockSize	uint64
MaxBlockSize	uint64
MinBlockSize	uint64
NeedsCleaning	boolean
MediaIsLocked	boolean
Security	uint16
LastCleaned	datetime
MaxAccessTime	uint64
UncompressedDataRate	uint32

Property	Type
LoadTime	uint64
UnloadTime	uint64
MountCount	uint64
TimeOfLastMount	datetime
TotalMountTime	uint64
UnitsDescription	string
MaxUnitsBeforeCleaning	uint64
UnitsUsed	uint64
EOTWarningZoneSize	uint32
MaxPartitionCount	uint32
Padding	uint32
MaxRewindTime	uint64

For more information about the properties descriptions, see the AIX_TapeDrive class in the **/usr/pegasus/provider/mof/cimv2/AIX_Base.mof** file.

AIX_TemperatureSensorProvider

This provider is an instance provider for the AIX_TemperatureSensor class. It conforms to the CMPI interface to provide Temperature Sensor properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
ElementName	string
InstallDate	datetime
Name	string
OperationalStatus[]	uint16
StatusDescriptions[]	string
Status	string
HealthState	uint16
PrimaryStatus	uint16
DetailedStatus	uint16
OperatingStatus	uint16
CommunicationStatus	uint16
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
TimeOfLastStateChange	datetime
AvailableRequestedStates[]	uint16

Property	Type
TransitioningToState	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
PowerManagementSupported	boolean
PowerManagementCapabilities[]	uint16
Availability	uint16
StatusInfo	uint16
LastErrorCode	uint32
ErrorDescription	string
ErrorCleared	boolean
OtherIdentifyingInfo[]	string
PowerOnHours	uint64
TotalPowerOnHours	uint64
IdentifyingDescriptions[]	string
AdditionalAvailability[]	uint16
MaxQuiesceTime	uint64
LocationIndicator	uint16
OtherSensorTypeDescription	string
PossibleStates[]	string
CurrentState	string
PollingInterval	uint64
IsLinear	boolean
Hysteresis	uint32
SupportedThresholds[]	uint16
EnabledThresholds[]	uint16
SettableThresholds[]	uint16
ProgrammaticAccuracy	uint32
AccuracyUnits	string
ValueFormulation	uint16
SensorType	uint16
BaseUnits	uint16
UnitModifier	sint32
RateUnits	uint16
CurrentReading	sint32
NominalReading	sint32
NormalMax	sint32
NormalMin	sint32
MaxReadable	sint32
MinReadable	sint32

Property	Type
Resolution	uint32
Tolerance	sint32
Accuracy	sint32
LowerThresholdNonCritical	sint32
UpperThresholdNonCritical	sint32
LowerThresholdCritical	sint32
UpperThresholdCritical	sint32
LowerThresholdFatal	sint32
UpperThresholdFatal	sint32

For more information about the properties descriptions, see the AIX_TemperatureSensor class in the **/usr/pegasus/provider/mof/cimv2/AIX_TemperatureSensor.mof** file.

AIX_USBControllerProvider

This provider is an instance provider for the AIX_USBController class. It conforms to the CMPI interface to provide USB Controller properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
ElementName	string
InstallDate	datetime
Name	string
OperationalStatus[]	uint16
StatusDescriptions[]	string
Status	string
HealthState	uint16
PrimaryStatus	uint16
DetailedStatus	uint16
OperatingStatus	uint16
CommunicationStatus	uint16
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
TimeOfLastStateChange	datetime
AvailableRequestedStates[]	uint16
TransitioningToState	uint16
SystemCreationClassName	string
SystemName	string

Property	Type
CreationClassName	string
DeviceID	string
PowerManagementSupported	boolean
PowerManagementCapabilities[]	uint16
Availability	uint16
StatusInfo	uint16
LastErrorCode	uint32
ErrorDescription	string
ErrorCleared	boolean
OtherIdentifyingInfo[]	string
PowerOnHours	uint64
TotalPowerOnHours	uint64
IdentifyingDescriptions[]	string
AdditionalAvailability[]	uint16
MaxQuiesceTime	uint64
LocationIndicator	uint16
TimeOfLastReset	datetime
ProtocolSupported	uint16
MaxNumberControlled	uint32
ProtocolDescription	string
USBVersion	uint16
InterfaceType	uint16
ControllerVersion	uint16

For more information about the properties descriptions, see the AIX_USBController class in the **/usr/pegasus/provider/mof/cimv2/AIX_Base.mof** file.

OSBase_RunningOSProvider

This provider is an instance provider for the IBMAIX_RunningOS class. It conforms to the CMPI interface to provide the association between the computer system and the operating system.

When an instance is returned, the properties of the IBMAIX_ComputerSystem and subclasses of IBMAIX_OperatingSystem classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the IBMAIX_RunningOS class in the **/usr/pegasus/provider/mof/IBMAIX_OSBase.mof** file.

IBMPSG_VoltageSensorProvider/AIX_VoltageSensorProvider

This provider is an instance provider for the AIX_VoltageSensor class. It conforms to the CMPI interface to provide Voltage Sensor properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
ElementName	string
InstallDate	datetime
Name	string
OperationalStatus[]	uint16
StatusDescriptions[]	string
Status	string
HealthState	uint16
PrimaryStatus	uint16
DetailedStatus	uint16
OperatingStatus	uint16
CommunicationStatus	uint16
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
TimeOfLastStateChange	datetime
AvailableRequestedStates[]	uint16
TransitioningToState	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
PowerManagementSupported	boolean
PowerManagementCapabilities[]	uint16
Availability	uint16
StatusInfo	uint16
LastErrorCode	uint32
ErrorDescription	string
ErrorCleared	boolean
OtherIdentifyingInfo[]	string
PowerOnHours	uint64
TotalPowerOnHours	uint64
IdentifyingDescriptions[]	string
AdditionalAvailability[]	uint16
MaxQuiesceTime	uint64
LocationIndicator	uint16
OtherSensorTypeDescription	string

Property	Type
PossibleStates[]	string
CurrentState	string
PollingInterval	uint64
IsLinear	boolean
Hysteresis	uint32
SupportedThresholds[]	uint16
EnabledThresholds[]	uint16
SettableThresholds[]	uint16
ProgrammaticAccuracy	uint32
AccuracyUnits	string
ValueFormulation	uint16
SensorType	uint16
BaseUnits	uint16
UnitModifier	sint32
RateUnits	uint16
CurrentReading	sint32
NominalReading	sint32
NormalMax	sint32
NormalMin	sint32
MaxReadable	sint32
MinReadable	sint32
Resolution	uint32
Tolerance	sint32
Accuracy	sint32
LowerThresholdNonCritical	sint32
UpperThresholdNonCritical	sint32
LowerThresholdCritical	sint32
UpperThresholdCritical	sint32
LowerThresholdFatal	sint32
UpperThresholdFatal	sint32

For more information about the properties descriptions, see the AIX_VoltageSensor class in the **/usr/pegasus/provider/mof/cimv2/AIX_VoltageSensor.mof** file.

IBMPSG_BIOSProvider/AIX_BIOSProvider

This provider is an instance provider that writes to the CMPI interface and provides information about the system and device firmware on the system.

The following provider properties are implemented:

Property	Type
SMBIOSBIOSVersion	string

Property	Type
Version	string
Manufacturer	string
PrimaryBIOS	boolean
Name	string
Version	string
TargetOperatingSystem	uint16
Description	string
ElementName	string
Caption	string
CreationClassName	string
SMBIOSPresent	boolean

For more information about the properties descriptions, see the IBMPSG_BIOS class in the **/usr/pegasus/provider/mof/IBMPSG_Base.mof** file or the AIX_BIOS class in the **/usr/pegasus/provider/mof/AIX_Base.mof** file.

IBMPSG_BaseboardProvider/OSBase_BaseBoardProvider

This provider is an instance provider that writes to the CMPI interface and provides information about the baseboard. This provider is used by the IBM Director agent.

The following provider properties are implemented:

Property	Type
PoweredOn	boolean
Tag	string
CreationClassName	string
ElementName	string
Manufacturer	string
Model	string
SerialNumber	string
Name	string
Caption	string
Description	string
ElementName	string

For more information about the properties descriptions, see the IBMPSG_BaseBoard class in the **/usr/pegasus/provider/mof/IBMPSG_BaseBoard.mof** file.

IBMPSG_CacheMemoryProvider/AIX_CacheMemoryProvider

This provider is an instance provider that writes to the CMPI interface and provides information about cache memory on the system.

The following provider properties are implemented:

Property	Type
SystemCreationClassName	string
SystemName	string
CreationClassName	string
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
OtherEnabledState	string
Status	string
Caption	string
Description	string
InstalledSize	uint32

For more information about the properties descriptions, see the IBMPSG_CacheMemory class in the **/usr/pegasus/provider/mof/IBMPSG_Base.mof** file or the AIX_CacheMemory class in the **/usr/pegasus/provider/mof/AIX_Base.mof** file.

IBMPSG_ComputerSystemProvider

This provider is an instance provider that writes to the CMPI interface and provides information about the computer system.

The following provider properties are implemented:

Property	Type
Model	string
NameFormat	string
CreationClassName	string
Name	string
PrimaryOwnerName	string
PrimaryOwnerContact	string
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
Status	string
Caption	string
Description	string
ElementName	string
LPARID	string

For more information about the properties descriptions, see the IBMPSG_ComputerSystem class in the **/usr/pegasus/provider/mof/IBMPSG_ComputerSystem.mof** file.

IBMPSG_FRUProvider/AIX_FRUProvider

This provider is an instance provider that writes to the CMPI interface and provides information about the FRUs on the system.

The following provider properties are implemented:

Property	Type
FRUNumber	string
IdentifyingNumber	string
Vendor	string
Description	string
Name	string
Caption	string
ElementName	string

For more information about the properties descriptions, see the IBMPSG_FRU class in the **/usr/pegasus/provider/mof/IBMPSG_Base.mof** file or the AIX_FRU class in the **/usr/pegasus/provider/mof/AIX_Base.mof** file.

IBMPSG_LogicalDiskProvider/AIX_LogicalDiskProvider

This provider is an instance provider that writes to the CMPI interface and provides information about the logical disks on the system. This provider is used by the IBM Director agent.

The following provider properties are implemented:

Property	Type
DataOrganization	uint16
Purpose	string
Access	uint16
BlockSize	uint64
NumberOfBlocks	uint64
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
Availability	uint16
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
Name	string
Caption	string
Description	string
ElementName	string

For more information about the properties descriptions, see the IBMPSG_LogicalDisk class in the **/usr/pegasus/provider/mof/IBMPSG_Base.mof** file or the AIX_LogicalDisk class in the **/usr/pegasus/provider/mof/AIX_Base.mof**.

IBMPSG_OperatingSystemProvider

This provider is an instance provider that writes to the CMPI interface and provides information about the operating system.

The following provider properties are implemented:

Property	Type
CodeSet	string
LanguageEdition	string
CSCreationClassName	string
CSName	string
CreationClassName	string
Name	string
OSType	uint16
OtherTypeDescription	string
Version	string
LastBootUpTime	datetime
LocalDateTime	datetime
CurrentTimeZone	sint16
NumberOfLicensedUsers	uint32
NumberOfUsers	uint32
NumberOfProcesses	uint32
TotalVirtualMemorySize	uint64
FreeVirtualMemory	uint64
FreePhysicalMemory	uint64
TotalVisibleMemorySize	uint64
SizeStoredInPagingFiles	uint64
FreeSpaceInPagingFiles	uint64
MaxProcessMemorySize	uint64
Distributed	boolean
MaxProcessesPerUser	uint32
EnabledState	uint16

For more information about the properties descriptions, see the IBMPSG_OperatingSystem class in the **/usr/pegasus/provider/mof/IBMPSG_OperatingSystem.mof** file.

IBMPSG_PhysicalDiskProvider/AIX_PhysicalDiskProvider

This provider is an instance provider that writes to the CMPI interface and provides information about the physical disks on the system.

The following provider properties are implemented:

Property	Type
MaxMediaSize	uint64
DefaultBlockSize	uint64
UnitsDescription	string
MaxUnitsBeforeCleaning	uint64
UnitsUsed	uint64
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
Status	string
Caption	string
Description	string
ElementName	string

For more information about the properties descriptions, see the IBMPSG_PhysicalDisk class in the **/usr/pegasus/provider/mof/IBMPSG_Base.mof** file or the AIX_PhysicalDisk class in the **/usr/pegasus/provider/mof/IBMPSG_Base.mof** file.

IBMPSG_PhysicalMemoryProvider/AIX_PhysicalMemoryProvider

This provider is an instance provider that writes to the CMPI interface and provides information about the physical memory on the system. This provider is used by the IBM Director agent.

The following provider properties are implemented:

Property	Type
Capacity	uint64
DeviceLocator	string
PartNumber	string
SerialNumber	string
Capacity	uint64
Tag	string
CreationClassName	string
ElementName	string
SerialNumber	string
Version	string
PartNumber	string
Name	string

Property	Type
Caption	string
Description	string
ElementName	string

For more information about the properties descriptions, see the IBMPSG_PhysicalMemory class in the **/usr/pegasus/provider/mof/IBMPSG_Base.mof** file or the AIX_PhysicalMemory class in the **/usr/pegasus/provider/mof/AIX_Base.mof** file.

IBMPSG_ProcessorProvider

This provider is an instance provider that writes to the CMPI interface and provides information about the processors on the system.

The following provider properties are implemented:

Property	Type
Role	string
Family	uint16
OtherFamilyDescription	string
MaxClockSpeed	uint32
CurrentClockSpeed	uint32
LoadPercentage	uint16
Stepping	string
CPUStatus	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
Name	string
Status	string
Caption	string
Description	string
ElementName	string

For more information about the properties descriptions, see the IBMPSG_Processor class in the **/usr/pegasus/provider/mof/IBMPSG_Processor.mof** file.

IBMPSG_SlotProvider/AIX_SlotProvider

This provider is an instance provider that writes to the CMPI interface and provides information about the slots on the system.

The following provider properties are implemented:

Property	Type
ConnectorType[]	uint16
SupportsHotPlug	boolean
OtherTypeDescription	string
Tag	string
CreationClassName	string
ElementName	string
Caption	string
Description	string
ElementName	string

For more information about the properties descriptions, see the IBMPSG_Slot class in the **/usr/pegasus/provider/mof/IBMPSG_Base.mof** file or the AIX_Slot class in the **/usr/pegasus/provider/mof/AIX_Base.mof** file.

IBMPSG_IndicationProvider/AIX_IndicationProvider

This provider generates CIM indications of the class type IBMP_CSServiceEventIndication. This indication is generated when the errors are serviced by a service representative. The EventID property contains the resource name that was serviced.

The following provider properties are implemented:

Property	Type
Description	string
SystemCreationClassName	string
SystemName	string
IndicationIdentifier	string
IndicationTime	dateTime
AlertingManagedElement	string
EventID	string
AlertType	uint16
PerceivedSeverity	uint16
UniqueSystemID	string
Trending	uint16
OtherAlertType	string
ProbableCause	uint16
ProbableCauseDescription	string
RecommendedActions	string

The CIM indication class type IBM_AlertIndication is derived by POWER_HWEventIndication, which implement the following attributes:

Property	Type
POWER_Category	string
POWER_FRU	string
POWER_SRC_SRN	string
POWER_AdditionalWords[]	string
POWER_FailureCause	unit16
Serviceability_OriginCategory	unit16

The following subclasses are derived from POWER_HWEventIndication to represent the different hardware and severity events:

POWER_CryptoAdapterINFOEventIndication
POWER_CryptoAdapterPENDEventIndication
POWER_CryptoAdapterPERFEventIndication
POWER_CryptoAdapterPERMEventIndication
POWER_CryptoAdapterTEMPEventIndication
POWER_CryptoAdapterUNKNOWNEventIndication
POWER_DTCECHWDiagnosticsEventIndication
POWER_DTExternalEnvironmentDiagnosticsEventIndication
POWER_DTFanDiagnosticsEventIndication
POWER_DTIOAdapterDiagnosticsEventIndication
POWER_DTIOSubsystemDiagnosticsEventIndication
POWER_DTMemoryDiagnosticsEventIndication
POWER_DTOtherSubsystemDiagnosticsEventIndication
POWER_DTPlatformFirmwareDiagnosticsEventIndication
POWER_DTPowerCoolingDiagnosticsEventIndication
POWER_DTPowerSupplyDiagnosticsEventIndication
POWER_DTProcessorDiagnosticsEventIndication
POWER_DTSurveillanceErrorDiagnosticsEventIndication
POWER_FCAdapterINFOEventIndication
POWER_FCAdapterPENDEventIndication
POWER_FCAdapterPERFEventIndication
POWER_FCAdapterPERMEventIndication
POWER_FCAdapterTEMPEventIndication
POWER_FCAdapterUNKNOWNEventIndication
POWER_FirmwareReplacedFRUEventIndication
POWER_HWEventIndication
POWER_IDEDiskINFOEventIndication
POWER_IDEDiskPENDEventIndication
POWER_IDEDiskPERFEventIndication
POWER_IDEDiskPERMEventIndication
POWER_IDEDiskTEMPEventIndication

POWER_IDEDiskUNKNOWNEventIndication
POWER_InfiniBandINFOEventIndication
POWER_InfiniBandPENDEventIndication
POWER_InfiniBandPERFEventIndication
POWER_InfiniBandPERMEventIndication
POWER_InfiniBandTEMPEventIndication
POWER_InfiniBandUNKNOWNEventIndication
POWER_MenugoalSysPlanarEventIndication
POWER_NetworkAdapterINFOEventIndication
POWER_NetworkAdapterPENDEventIndication
POWER_NetworkAdapterPERFEventIndication
POWER_NetworkAdapterPERMEventIndication
POWER_NetworkAdapterTEMPEventIndication
POWER_NetworkAdapterUNKNOWNEventIndication
POWER_OpticalDeviceINFOEventIndication
POWER_OpticalDevicePENDEventIndication
POWER_OpticalDevicePERFEventIndication
POWER_OpticalDevicePERMEventIndication
POWER_OpticalDeviceTEMPEventIndication
POWER_OpticalDeviceUNKNOWNEventIndication
POWER_PFCECHWCorrectedAfterIPLEventIndication
POWER_PFCECHWCorrectedAfterIPLPerfEventIndication
POWER_PFCECHWDegradedPerformanceEventIndication
POWER_PFCECHWLossOfRedundancyEventIndication
POWER_PFCECHWPredictiveErrorEventIndication
POWER_PFExternalEnvironmentCorrectedAfterIPLEventIndication
POWER_PFExternalEnvironmentCorrectedAfterIPLPerfEventIndication
POWER_PFExternalEnvironmentDegradedPerformanceEventIndication
POWER_PFExternalEnvironmentLossOfRedundancyEventIndication
POWER_PFExternalEnvironmentPredictiveErrorEventIndication
POWER_PFFanCorrectedAfterIPLEventIndication
POWER_PFFanCorrectedAfterIPLPerfEventIndication
POWER_PFFanDegradedPerformanceEventIndication
POWER_PFFanLossOfRedundancyEventIndication
POWER_PFFanPredictiveErrorEventIndication
POWER_PFIOAdapterCorrectedAfterIPLEventIndication
POWER_PFIOAdapterCorrectedAfterIPLPerfEventIndication
POWER_PFIOAdapterDegradedPerformanceEventIndication
POWER_PFIOAdapterLossOfRedundancyEventIndication
POWER_PFIOAdapterPredictiveErrorEventIndication
POWER_PFIOSubsystemCorrectedAfterIPLEventIndication
POWER_PFIOSubsystemCorrectedAfterIPLPerfEventIndication

POWER_PFIOSubsystemDegradedPerformanceEventIndication
POWER_PFIOSubsystemLossOfRedundancyEventIndication
POWER_PFIOSubsystemPredictiveErrorEventIndication
POWER_PFMemoryCorrectedAfterIPLEventIndication
POWER_PFMemoryCorrectedAfterIPLPerfEventIndication
POWER_PFMemoryDegradedPerformanceEventIndication
POWER_PFMemoryLossOfRedundancyEventIndication
POWER_PFMemoryPredictiveErrorEventIndication
POWER_PFOtherSubsystemCorrectedAfterIPLEventIndication
POWER_PFOtherSubsystemCorrectedAfterIPLPerfEventIndication
POWER_PFOtherSubsystemDegradedPerformanceEventIndication
POWER_PFOtherSubsystemLossOfRedundancyEventIndication
POWER_PFOtherSubsystemPredictiveErrorEventIndication
POWER_PFPlatformFirmwareCorrectedAfterIPLEventIndication
POWER_PFPlatformFirmwareCorrectedAfterIPLPerfEventIndication
POWER_PFPlatformFirmwareDegradedPerformanceEventIndication
POWER_PFPlatformFirmwareLossOfRedundancyEventIndication
POWER_PFPlatformFirmwarePredictiveErrorEventIndication
POWER_PFPowerCoolingCorrectedAfterIPLEventIndication
POWER_PFPowerCoolingCorrectedAfterIPLPerfEventIndication
POWER_PFPowerCoolingDegradedPerformanceEventIndication
POWER_PFPowerCoolingLossOfRedundancyEventIndication
POWER_PFPowerCoolingPredictiveErrorEventIndication
POWER_PFPowerSupplyCorrectedAfterIPLEventIndication
POWER_PFPowerSupplyCorrectedAfterIPLPerfEventIndication
POWER_PFPowerSupplyDegradedPerformanceEventIndication
POWER_PFPowerSupplyLossOfRedundancyEventIndication
POWER_PFPowerSupplyPredictiveErrorEventIndication
POWER_PFProcessorCorrectedAfterIPLEventIndication
POWER_PFProcessorCorrectedAfterIPLPerfEventIndication
POWER_PFProcessorDegradedPerformanceEventIndication
POWER_PFProcessorLossOfRedundancyEventIndication
POWER_PFProcessorPredictiveErrorEventIndication
POWER_PFSurveillanceErrorCorrectedAfterIPLEventIndication
POWER_PFSurveillanceErrorCorrectedAfterIPLPerfEventIndication
POWER_PFSurveillanceErrorDegradedPerformanceEventIndication
POWER_PFSurveillanceErrorLossOfRedundancyEventIndication
POWER_PFSurveillanceErrorPredictiveErrorEventIndication
POWER_SASAdapterINFOEventIndication
POWER_SASAdapterPENDEventIndication
POWER_SASAdapterPERFEventIndication
POWER_SASAdapterPERMEventIndication

POWER_SASAdapterTEMPEventIndication
POWER_SASAdapterUNKNOWNEventIndication
POWER_SCSIAdapterINFOEventIndication
POWER_SCSIAdapterPENDEventIndication
POWER_SCSIAdapterPERFEventIndication
POWER_SCSIAdapterPERMEventIndication
POWER_SCSIAdapterTEMPEventIndication
POWER_SCSIAdapterUNKNOWNEventIndication
POWER_SCSIDiskINFOEventIndication
POWER_SCSIDiskPENDEventIndication
POWER_SCSIDiskPERFEventIndication
POWER_SCSIDiskPERMEventIndication
POWER_SCSIDiskTEMPEventIndication
POWER_SCSIDiskUNKNOWNEventIndication
POWER_SCSIEnclosureINFOEventIndication
POWER_SCSIEnclosurePENDEventIndication
POWER_SCSIEnclosurePERFEventIndication
POWER_SCSIEnclosurePERMEventIndication
POWER_SCSIEnclosureTEMPEventIndication
POWER_SCSIEnclosureUNKNOWNEventIndication
POWER_SerialAdapterINFOEventIndication
POWER_SerialAdapterPENDEventIndication
POWER_SerialAdapterPERFEventIndication
POWER_SerialAdapterPERMEventIndication
POWER_SerialAdapterTEMPEventIndication
POWER_SerialAdapterUNKNOWNEventIndication
POWER_UECECHWDegradedPerformanceEventIndication
POWER_UECECHWLossOfFunctionEventIndication
POWER_UECECHWLossOfRedundAndPerfEventIndication
POWER_UECECHWLossOfRedundancyEventIndication
POWER_UECECHWUnrecoverableErrorEventIndication
POWER_UEExternalEnvironmentDegradedPerformanceEventIndication
POWER_UEExternalEnvironmentLossOfFunctionEventIndication
POWER_UEExternalEnvironmentLossOfRedundAndPerfEventIndication
POWER_UEExternalEnvironmentLossOfRedundancyEventIndication
POWER_UEExternalEnvironmentUnrecoverableErrorEventIndication
POWER_UEFanDegradedPerformanceEventIndication
POWER_UEFanLossOfFunctionEventIndication
POWER_UEFanLossOfRedundAndPerfEventIndication
POWER_UEFanLossOfRedundancyEventIndication
POWER_UEFanUnrecoverableErrorEventIndication
POWER_UEIOAdapterDegradedPerformanceEventIndication

POWER_UEIOAdapterLossOfFunctionEventIndication
POWER_UEIOAdapterLossOfRedundAndPerfEventIndication
POWER_UEIOAdapterLossOfRedundancyEventIndication
POWER_UEIOAdapterUnrecoverableErrorEventIndication
POWER_UEIOSubsystemDegradedPerformanceEventIndication
POWER_UEIOSubsystemLossOfFunctionEventIndication
POWER_UEIOSubsystemLossOfRedundAndPerfEventIndication
POWER_UEIOSubsystemLossOfRedundancyEventIndication
POWER_UEIOSubsystemUnrecoverableErrorEventIndication
POWER_UEMemoryDegradedPerformanceEventIndication
POWER_UEMemoryLossOfFunctionEventIndication
POWER_UEMemoryLossOfRedundAndPerfEventIndication
POWER_UEMemoryLossOfRedundancyEventIndication
POWER_UEMemoryUnrecoverableErrorEventIndication
POWER_UEOtherSubsystemDegradedPerformanceEventIndication
POWER_UEOtherSubsystemLossOfFunctionEventIndication
POWER_UEOtherSubsystemLossOfRedundAndPerfEventIndication
POWER_UEOtherSubsystemLossOfRedundancyEventIndication
POWER_UEOtherSubsystemUnrecoverableErrorEventIndication
POWER_UEPlatformFirmwareDegradedPerformanceEventIndication
POWER_UEPlatformFirmwareLossOfFunctionEventIndication
POWER_UEPlatformFirmwareLossOfRedundAndPerfEventIndication
POWER_UEPlatformFirmwareLossOfRedundancyEventIndication
POWER_UEPlatformFirmwareUnrecoverableErrorEventIndication
POWER_UEPowerCoolingDegradedPerformanceEventIndication
POWER_UEPowerCoolingLossOfFunctionEventIndication
POWER_UEPowerCoolingLossOfRedundAndPerfEventIndication
POWER_UEPowerCoolingLossOfRedundancyEventIndication
POWER_UEPowerCoolingUnrecoverableErrorEventIndication
POWER_UEPowerSupplyDegradedPerformanceEventIndication
POWER_UEPowerSupplyLossOfFunctionEventIndication
POWER_UEPowerSupplyLossOfRedundAndPerfEventIndication
POWER_UEPowerSupplyLossOfRedundancyEventIndication
POWER_UEPowerSupplyUnrecoverableErrorEventIndication
POWER_UEProcessorDegradedPerformanceEventIndication
POWER_UEProcessorLossOfFunctionEventIndication
POWER_UEProcessorLossOfRedundAndPerfEventIndication
POWER_UEProcessorLossOfRedundancyEventIndication
POWER_UEProcessorUnrecoverableErrorEventIndication
POWER_UESurveillanceErrorDegradedPerformanceEventIndication
POWER_UESurveillanceErrorLossOfFunctionEventIndication
POWER_UESurveillanceErrorLossOfRedundAndPerfEventIndication

POWER_UESurveillanceErrorLossOfRedundancyEventIndication
POWER_UESurveillanceErrorUnrecoverableErrorEventIndication
POWER_USBAdapterINFOEventIndication
POWER_USBAdapterPENDEventIndication
POWER_USBAdapterPERFEventIndication
POWER_USBAdapterPERMEventIndication
POWER_USBAdapterTEMPEventIndication
POWER_USBAdapterUNKNOWNEventIndication
POWER_USBDisketteINFOEventIndication
POWER_USBDiskettePENDEventIndication
POWER_USBDiskettePERFUNKNOWNEventIndication
POWER_USBDiskettePERMEventIndication
POWER_USBDisketteTEMPEventIndication
POWER_USBDisketteUNKNOWNEventIndication
POWER_iSCSITOEINFOEventIndication
POWER_iSCSITOEPENDEventIndication
POWER_iSCSITOEPERFEventIndication
POWER_iSCSITOEPERMEventIndication
POWER_iSCSITOETEMPEventIndication
POWER_iSCSITOEUNKNOWNEventIndication

For more information about the properties descriptions, see the **/usr/pegasus/provider/mof/IBMPSG_AlertIndication.mof** file or the **/usr/pegasus/provider/mof/AIX_AlertIndication.mof** file.

Chapter 7. Systems Management Architecture for Server Hardware Providers

The following CIM classes implement the Systems Management Architecture for Server Hardware (SMASH) Profile. These providers are shipped in the **sysmgt.cim.smisproviders.hhr** fileset.

CIM Class	IBM provider
AIX_CPUAssociatedCacheMemory	"AIX_CPUAssociatedCacheMemoryProvider"
AIX_CPUElementCapabilities	"AIX_CPUElementCapabilitiesProvider"
AIX_CPUSystemDevice	"AIX_CPUSystemDeviceProvider"
AIX_EthernetDeviceSAPImplementation	"AIX_EthernetDeviceSAPImplementationProvider" on page 66
AIX_EthernetHostedAccessPoint	"AIX_EthernetHostedAccessPointProvider" on page 66
AIX_EthernetLANEndpoint	"AIX_EthernetLANEndpointProvider" on page 66
AIX_EthernetPort	"AIX_EthernetPortProvider" on page 67.
AIX_EthernetSystemDevice_EthernetPort	"AIX_EthernetSystemDevice_EthernetPortProvider" on page 69
AIX_IPHostedAccessPoint	"AIX_IPHostedAccessPointProvider" on page 69
AIX_IPRemoteServiceAccessPoint	"AIX_IPRemoteServiceAccessPointProvider" on page 69
AIX_MemRealizes	"AIX_MemRealizesProvider" on page 70
AIX_MemSystemDevice	"AIX_MemSystemDeviceProvider" on page 70
AIX_Memory	"AIX_MemoryProvider" on page 71
AIX_ProcessorCapabilities	"AIX_ProcessorCapabilitiesProvider" on page 73

AIX_CPUAssociatedCacheMemoryProvider

This provider is an instance provider for the AIX_CPUAssociatedCacheMemory class. It conforms to the CMPI interface to provide the association between the CPU L2 Cache and the CPU.

When an instance is returned, the properties of the AIX_CacheMemory and subclasses of AIX_Processor classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_CPUAssociatedCacheMemory class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMASH.mof** file.

AIX_CPUElementCapabilitiesProvider

This provider is an instance provider for the AIX_CPUElementCapabilities class. It conforms to the CMPI interface to provide the association between the Processer and the Processer Capabilities.

When an instance is returned, the properties of the AIX_Processor and subclasses of AIX_ProcessorCapabilities classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_CPUElementCapabilities class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMASH.mof** file.

AIX_CPUSystemDeviceProvider

This provider is an instance provider for the AIX_CPUSystemDevice class. It conforms to the CMPI interface to provide the association between the Computer System Container and the CPU, available to the CS.

When an instance is returned, the properties of the IBMAIX_ComputerSystem and subclasses of AIX_Processor classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_CPUSystemDevice class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMASH.mof** file.

AIX_EthernetDeviceSAPImplementationProvider

This provider is an instance provider for the AIX_EthernetDeviceSAPImplementation class. It conforms to the CMPI interface to provide the association between the Ethernet Port and the Ethernet LAN Endpoint.

When an instance is returned, the properties of the AIX_EthernetPort and subclasses of AIX_EthernetLANEndpoint classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_EthernetDeviceSAPImplementation class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMASH.mof** file.

AIX_EthernetHostedAccessPointProvider

This provider is an instance provider for the AIX_EthernetHostedAccessPoint class. It conforms to the CMPI interface to provide the association between the Computer System Container and the LANEndpoint, available to the CS.

When an instance is returned, the properties of the IBMAIX_ComputerSystem and subclasses of AIX_EthernetLANEndpoint classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_EthernetHostedAccessPoint class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMASH.mof** file.

AIX_EthernetLANEndpointProvider

This provider is an instance provider for the AIX_EthernetLANEndpoint class. It conforms to the CMPI interface to provide Ethernet LAN Endpoint properties.

The following provider properties are implemented:

Property	**Type**
Caption	string
ElementName	string
InstallDate	datetime
StatusDescriptions[]	string
Status	string
HealthState	uint16
PrimaryStatus	uint16
DetailedStatus	uint16
OperatingStatus	uint16
CommunicationStatus	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
AvailableRequestedStates[]	uint16
TransitioningToState	uint16
SystemCreationClassName	string

Property	Type
SystemName	string
CreationClassName	string
Description	string
OperationalStatus[]	uint16
EnabledState	uint16
TimeOfLastStateChange	datetime
Name	string
NameFormat	string
ProtocolType	uint16
OtherTypeDescription	string
BroadcastResetSupported	boolean
LANID	string
LANType	uint16
OtherLANType	string
MACAddress	string
AliasAddresses[]	string
GroupAddresses[]	string
MaxDataSize	uint32
ProtocolIFType	uint16

For more information about the properties descriptions, see the AIX_EthernetLANEndpoint class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMASH.mof** file.

AIX_EthernetPortProvider

This provider is an instance provider for the AIX_EthernetPort class. It conforms to the CMPI interface to provide Ethernet Port properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
ElementName	string
InstallDate	datetime
Name	string
OperationalStatus[]	uint16
StatusDescriptions[]	string
Status	string
HealthState	uint16
PrimaryStatus	uint16
DetailedStatus	uint16
OperatingStatus	uint16

Property	Type
CommunicationStatus	uint16
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
TimeOfLastStateChange	datetime
AvailableRequestedStates[]	uint16
TransitioningToState	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
PowerManagementSupported	boolean
PowerManagementCapabilities[]	uint16
Availability	uint16
StatusInfo	uint16
LastErrorCode	uint32
ErrorDescription	string
ErrorCleared	boolean
OtherIdentifyingInfo[]	string
PowerOnHours	uint64
TotalPowerOnHours	uint64
IdentifyingDescriptions[]	string
AdditionalAvailability[]	uint16
MaxQuiesceTime	uint64
LocationIndicator	uint16
MaxSpeed	uint64
RequestedSpeed	uint64
UsageRestriction	uint16
OtherPortType	string
Speed	uint64
OtherNetworkPortType	string
PortNumber	uint16
LinkTechnology	uint16
OtherLinkTechnology	string
PermanentAddress	string
FullDuplex	boolean
AutoSense	boolean
SupportedMaximumTransmissionUnit	uint64
ActiveMaximumTransmissionUnit	uint64
PortType	uint16

Property	Type
NetworkAddresses[]	string
MaxDataSize	uint32
Capabilities[]	uint16
CapabilityDescriptions[]	string
EnabledCapabilities[]	uint16
OtherEnabledCapabilities[]	string

For more information about the properties descriptions, see the AIX_EthernetPort class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMASH.mof** file.

AIX_EthernetSystemDevice_EthernetPortProvider

This provider is an instance provider for the AIX_EthernetSystemDevice_EthernetPort class. It conforms to the CMPI interface to provide the association between the Computer System Container and the EthernetPort, available to the CS.

When an instance is returned, the properties of the IBMAIX_ComputerSystem and subclasses of AIX_EthernetPort classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_EthernetSystemDevice_EthernetPort class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMASH.mof** file.

AIX_IPHostedAccessPointProvider

This provider is an instance provider for the AIX_IPHostedAccessPoint class. It conforms to the CMPI interface to provide the association between Antecedent represents the scoping system and Dependent represents an instance of AIX_IPProtocolEndpoint or AIX_IPRemoteServiceAccess Point.

When an instance is returned, the properties of the IBMAIX_ComputerSystem and subclasses of CIM_ServiceAccessPoint classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_IPHostedAccessPoint class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMASH.mof** file.

AIX_IPRemoteServiceAccessPointProvider

This provider is an instance provider for the AIX_IPRemoteServiceAccessPoint class. It conforms to the CMPI interface to provide IP Remote Service Access Point properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
InstallDate	datetime
OperationalStatus[]	uint16
StatusDescriptions[]	string
Status	string
HealthState	uint16

Property	Type
PrimaryStatus	uint16
DetailedStatus	uint16
OperatingStatus	uint16
CommunicationStatus	uint16
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
TimeOfLastStateChange	datetime
AvailableRequestedStates[]	uint16
TransitioningToState	uint16
OtherInfoFormatDescription	string
OtherAccessContext	string
SystemCreationClassName	string
SystemName	string
CreationClassName	string
Name	string
AccessContext	uint16
AccessInfo	string
InfoFormat	uint16
ElementName	string

For more information about the properties descriptions, see the AIX_IPRemoteServiceAccessPoint class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMASH.mof** file.

AIX_MemRealizesProvider

This provider is an instance provider for the AIX_MemRealizes class. It conforms to the CMPI interface to provide the association between Antecedent represents an instance of AIX_PhysicalMemory and Dependent represents the instance of AIX_Memory.

When an instance is returned, the properties of the AIX_PhysicalMemory and subclasses of AIX_Memory classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_MemSystemDevice class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMASH.mof** file.

AIX_MemSystemDeviceProvider

This provider is an instance provider for the AIX_MemSystemDevice class. It conforms to the CMPI interface to provide the association between the Computer System Container and the Memory, available to the CS.

When an instance is returned, the properties of the IBMAIX_ComputerSystem and subclasses of AIX_Memory classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_MemSystemDevice class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMASH.mof** file.

AIX_MemoryProvider

This provider is an instance provider for the AIX_Memory class. It conforms to the CMPI interface to provide Memory properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
ElementName	string
InstallDate	datetime
OperationalStatus[]	uint16
StatusDescriptions[]	string
Status	string
HealthState	uint16
PrimaryStatus	uint16
DetailedStatus	uint16
OperatingStatus	uint16
CommunicationStatus	uint16
EnabledState	uint16
OtherEnabledState	string
RequestedState	uint16
EnabledDefault	uint16
TimeOfLastStateChange	datetime
AvailableRequestedStates[]	uint16
TransitioningToState	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
PowerManagementSupported	boolean
PowerManagementCapabilities[]	uint16
Availability	uint16
StatusInfo	uint16
LastErrorCode	uint32
ErrorDescription	string
ErrorCleared	boolean
OtherIdentifyingInfo[]	string
PowerOnHours	uint64
TotalPowerOnHours	uint64

Property	Type
IdentifyingDescriptions[]	string
AdditionalAvailability[]	uint16
MaxQuiesceTime	uint64
LocationIndicator	uint16
DataOrganization	uint16
Purpose	string
Access	uint16
BlockSize	uint64
NumberOfBlocks	uint64
ConsumableBlocks	uint64
IsBasedOnUnderlyingRedundancy	boolean
SequentialAccess	boolean
ExtentStatus[]	uint16
NoSinglePointOfFailure	boolean
DataRedundancy	uint16
PackageRedundancy	uint16
DeltaReservation	uint8
Primordial	boolean
Name	string
NameFormat	uint16
NameNamespace	uint16
OtherNameNamespace	string
OtherNameFormat	string
Usage	uint16
OtherUsageDescription	string
ClientSettableUsage[]	uint16
Volatile	boolean
ErrorMethodology	string
StartingAddress	uint64
EndingAddress	uint64
ErrorInfo	uint16
OtherErrorDescription	string
CorrectableError	boolean
ErrorTime	datetime
ErrorAccess	uint16
ErrorTransferSize	uint32
ErrorData[]	uint8
ErrorDataOrder	uint16
ErrorAddress	uint64
SystemLevelAddress	boolean
ErrorResolution	uint64

Property	Type
AdditionalErrorData[]	uint8

For more information about the properties descriptions, see the AIX_Memory class in the /usr/pegasus/provider/mof/cimv2/AIX_SMASH.mof file.

AIX_ProcessorCapabilitiesProvider

This provider is an instance provider for the AIX_ProcessorCapabilities class. It conforms to the CMPI interface to provide Processor Capabilities properties.

The following provider properties are implemented:

Property	Type
Caption	string
Description	string
InstanceID	string
ElementName	string
ElementNameEditSupported	boolean
MaxElementNameLen	uint16
RequestedStatesSupported[]	uint16
ElementNameMask	string
StateAwareness[]	uint16
NumberOfProcessorCores	uint16
NumberOfHardwareThreads	uint16

For more information about the properties descriptions, see the AIX_ProcessorCapabilities class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMASH.mof** file.

Chapter 8. Host Bus Adapter and Host Discovered Resources Providers

The following CIM classes implement the Host Bus Adapter (HBA) Profile and Host Discovered Resources (HDR) Profile that are part of the SMI-S (Storage Management Infrastructure Standard) Version 1.2. These providers are shipped in the **sysmgt.cim.smisproviders.hba_hdr** fileset.

CIM Class	IBM provider
AIX_FCCard	"SMIS_FCCardProvider"
AIX_FCLogicalDisk	"SMIS_FCLogicalDiskProvider" on page 76
IBMAIX_FCPort	"SMIS_FCPortProvider" on page 76
IBMAIX_FCPortController	"SMIS_FCPortControllerProvider" on page 77
IBMAIX_FCPortStatistics	"SMIS_FCPortStatisticsProvider" on page 78
IBMAIX_FCProduct	"SMIS_FCProductProvider" on page 78
IBMAIX_FCSCSIProtocolEndpoint	"SMIS_FCSCSIProtocolEndpointProvider" on page 79
AIX_FCSoftwareIdentity_Driver	"SMIS_FCSoftwareIdentity_DriverProvider" on page 79
AIX_FCSoftwareIdentity_Firmware	"SMIS_FCSoftwareIdentity_FirmwareProvider" on page 80
IBMAIX_FCControlledBy	"SMIS_FCControlledByProvider" on page 80
IBMAIX_FCDeviceSAPImplementation	"SMIS_FCDeviceSAPImplementationProvider" on page 80
IBMAIX_FCElementStatisticalData	"SMIS_FCElementStatisticalDataProvider" on page 80
IBMAIX_FCElementSoftwareIdentity	"SMIS_FCElementSoftwareIdentityProvider" on page 81
IBMAIX_FCInstalledSoftwareIdentity	"SMIS_FCInstalledSoftwareIdentityProvider" on page 81
IBMAIX_FCProductPhysicalComponent	"SMIS_FCProductPhysicalComponentProvider" on page 81
IBMAIX_FCRealizes	"SMIS_FCRealizesProvider" on page 81
IBMAIX_FCSystemDevice	"SMIS_FCSystemDeviceProvider" on page 82
AIX_FCHostedAccessPoint	"SMIS_FCHostedAccessPointProvider" on page 82
AIX_FCSystemDevice_LogicalDevice	"SMIS_FCSystemDevice_LogicalDeviceProvider" on page 82
AIX_FCSCSIInitiatorTargetLogicalUnitPath	"SMIS_FCSCSIInitiatorTargetLogicalUnitPathProvider" on page 82

SMIS_FCCardProvider

This provider is an instance provider for the AIX_FCCard class. It conforms to the CMPI interface to provide information about a Fibre Channel Device Package.

The following provider properties are implemented:c

Property	Type
Tag	string
Manufacturer	string
Model	string
Caption	string
CreationClassName	string

Property	Type
Description	string
ElementName	string
Name	string
SerialNumber	string
Version	string
RemovalConditions	uint16

SMIS_FCLogicalDiskProvider

This provider is an instance provider for the AIX_FCLogicalDisk class. It conforms to the CMPI interface to provide information about a Fibre Channel logical disk.

The following provider properties are implemented:

Property	Type
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
Description	string
Caption	string
Name	string
ElementName	string
NameFormat	uint16
NameNamespace	uint16
OperationalStatus[ ]	uint16A
IdentifyingDescriptions[ ]	stringA
OtherIdentifyingInfo[ ]	stringA
Primordial	boolean
Status	string

SMIS_FCPortProvider

This provider is an instance provider for the IBMAIX_FCPort class. It conforms to the CMPI interface to provide information about a Fibre Channel Port Device.

The following provider properties are implemented:

Property	Type
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
PermanentAddress	string

Property	Type
Caption	string
Description	string
ElementName	string
Name	string
OperationalStatus[ ]	uint16A
StatusDescriptions[ ]	stringA
Status	string
EnabledState	uint16
Availability	uint16
AdditionalAvailability	uint16
Speed	uint64
MaxSpeed	uint64
UsageRestriction	uint16
PortType	uint16
OtherNetworkPortType	string
PortNumber	uint16
LinkTechnology	uint16
SupportedMaximumTransmissionUnit	uint64
SupportedCOS[ ]	uint16A
SupportedFC4Types[ ]	uint16A
ActiveFC4Types[ ]	uint16A

SMIS_FCPortControllerProvider

This provider is an instance provider for the IBMAIX_FCPortController class. It conforms to the CMPI interface to provide information about a Fibre Channel Port Controller.

The following provider properties are implemented:

Property	Type
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
ControllerType	uint16
Caption	string
Description	string
ElementName	string
Name	string
OperationalStatus[ ]	uint16A
StatusDescriptions[ ]	stringA
Status	string

Property	Type
EnabledState	uint16
Availability	uint16
AdditionalAvailability	uint16
MaxNumberControlled	uint32

SMIS_FCPortStatisticsProvider

This provider is an instance provider for the IBMAIX_FCPortStatistics class. It conforms to the CMPI interface to provide statistics about a Fibre Channel Port Device.

The following provider properties are implemented:

Property	Type
ElementName	string
InstanceID	string
BytesTransmitted	uint64
BytesReceived	uint64
PacketsTransmitted	uint64
PacketsReceived	uint64
CRCErrors	uint64
LinkFailures	uint64
PrimitiveSeqProtocolErrCount	uint64
LossOfSignalCounter	uint64
InvalidTransmissionWords	uint64
LIPCount	uint64
NOSCount	uint64
ErrorFrames	uint64
DumpedFrames	uint64
LossOfSyncCounter	uint64
StatisticTime	datetime

SMIS_FCProductProvider

This provider is an instance provider for the IBMAIX_FCProduct class. It conforms to the CMPI interface to provide product information for a Fibre Channel adapter. An FCProduct maps to an FCPhysicalPackage.

The following provider properties are implemented:

Property	Type
ElementName	string
Name	string
IdentifyingNumber	string
Vendor	string
Version	string

Property	Type
Caption	string
Description	string

SMIS_FCSCSIProtocolEndpointProvider

This provider is an instance provider for the IBMAIX_FCSCSIProtocolEndpoint class. It conforms to the CMPI interface to provide SCSI protocol information over Fibre Channel port.

The following provider properties are implemented:

Property	Type
SystemCreationClassName	string
SystemName	string
CreationClassName	string
Name	string
ConnectionType	uint16
ProtocolIFType	uint16
Role	uint16
Caption	string
Description	string
ElementName	string
OperationalStatus[ ]	uint16A
StatusDescriptions[ ]	stringA
Status	string
EnabledState	uint16
NameFormat	string
ProtocolType	uint16
TargetRelativePortNumber	uint32

SMIS_FCSoftwareIdentity_DriverProvider

This provider is an instance provider for the AIX_FCSoftwareIdentity_Driver class. It conforms to the CMPI interface to provide information on the driver inventory on a Fibre Channel Adapter.

The following provider properties are implemented:

Property	Type
InstanceID	string
Manufacturer	string
Classifications[ ]	uint16A
Description	string
ElementName	string
Name	string
VersionString	string

Property	Type
Caption	string
TargetOperatingSystems[ ]	stringA

SMIS_FCSoftwareIdentity_FirmwareProvider

This provider is an instance provider for the AIX_FCSoftwareIdentity_Firmware class. It conforms to the CMPI interface to provide information on the firmware inventory on a Fibre Channel Adapter.

The following provider properties are implemented:

Property	Type
InstanceID	string
Manufacturer	string
Classifications[ ]	uint16A
Description	string
ElementName	string
Name	string
VersionString	string
Caption	string
TargetOperatingSystems[ ]	stringA

SMIS_FCControlledByProvider

This provider is an instance provider for the IBMAIX_FCControlledBy class inherited from the CIM_ControlledBy class. It conforms to the CMPI interface to provide the association between a port controller and a port.

For more information about the properties descriptions, see the IBMAIX_FCControlledBy class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HBA_HDR.mof** file.

SMIS_FCDeviceSAPImplementationProvider

This provider is an instance provider for the IBMAIX_FCDeviceSAPImplementation class inherited from the CIM_DeviceSAPImplementation class. It conforms to the CMPI interface to provide the association between a SCSI protocol endpoint and a port.

When an instance is returned, the properties of the IBMAIX_FCDeviceSAPImplementation class are returned including references to the individual IBMAIX_FCPort and IBMAIX_FCSCSIProtocolEndpoint instances.

For more information about the properties descriptions, see the IBMAIX_FCDeviceSAPImplementation class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HBA_HDR.mof** file.

SMIS_FCElementStatisticalDataProvider

This provider is an instance provider for the IBMAIX_FCElementStatisticalData class inherited from the CIM_ElementStatisticalData class. It conforms to the CMPI interface to provide the association between a port and a port statistic.

When an instance is returned, the properties of the IBMAIX_FCElementStatisticalData class are returned including references to the individual IBMAIX_FCPort and IBMAIX_FCPortStatistics instances.

For more information about the properties descriptions, see the IBMAIX_FCElementStatisticalData class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HBA_HDR.mof** file.

SMIS_FCElementSoftwareIdentityProvider

This provider is an instance provider for the IBMAIX_FCElementSoftwareIdentity class inherited from the CIM_ElementSoftwareIdentity class. It conforms to the CMPI interface to provide the association between a port controller and a software identity.

When an instance is returned, the properties of the IBMAIX_FCElementSoftwareIdentity class are returned including references to the individual IBMAIX_FCPortController and IBMAIX_FCSoftwareIdentity instances.

For more information about the properties descriptions, see the IBMAIX_FCElementSoftwareIdentity class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HBA_HDR.mof** file.

SMIS_FCInstalledSoftwareIdentityProvider

This provider is an instance provider for the IBMAIX_FCInstalledSoftwareIdentity class inherited from the CIM_InstalledSoftwareIdentity class. It conforms to the CMPI interface to provide the association between a computer system and a software identity.

When an instance is returned, the properties of the IBMAIX_FCInstalledSoftwareIdentity class are returned including references to the individual IBMAIX_ComputerSystem and IBMAIX_FCSoftwareIdentity instances.

For more information about the properties descriptions, see the IBMAIX_FCInstalledSoftwareIdentity class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HBA_HDR.mof** file.

SMIS_FCProductPhysicalComponentProvider

This provider is an instance provider for the IBMAIX_FCProductPhysicalComponent class inherited from the CIM_ProductPhysicalComponent class. It conforms to the CMPI interface to provide the association between a product and a physical package.

When an instance is returned, the properties of the IBMAIX_FCProductPhysicalComponent class are returned including references to the individual IBMAIX_FCProduct and AIX_FCCard instances.

For more information about the properties descriptions, see the IBMAIX_FCProductPhysicalComponent class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HBA_HDR.mof** file.

SMIS_FCRealizesProvider

This provider is an instance provider for the IBMAIX_FCRealizes class inherited from the CIM_Realizes class. It conforms to the CMPI interface to provide the association between a physical package and a port controller.

When an instance is returned, the properties of the IBMAIX_FCRealizes class are returned including references to the individual AIX_FCCard and IBMAIX_FCPortController instances.

For more information about the properties descriptions, see the IBMAIX_FCRealizes class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HBA_HDR.mof** file.

SMIS_FCSystemDeviceProvider

This provider is an instance provider for the IBMAIX_FCSystemDevice class inherited from the CIM_SystemDevice class. It conforms to the CMPI interface to provide the association between a computer system and a port controller.

When an instance is returned, the properties of the IBMAIX_FCSystemDevice class are returned including references to the individual IBMAIX_ComputerSystem and IBMAIX_FCPortController instances.

For more information about the properties descriptions, see the IBMAIX_FCSystemDevice class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HBA_HDR.mof** file.

SMIS_FCHostedAccessPointProvider

This provider is an instance provider for the AIX_FCHostedAccessPoint class inherited from the CIM_HostedAccessPoint class. It conforms to the CMPI interface to provide the association between a computer system and a SCSI logical port.

When an instance is returned, the properties of the AIX_FCHostedAccessPoint class are returned including references to the individual IBMAIX_FCSCSIProtocolEndpoint and IBMAIX_ComputerSystem instances.

For more information about the properties descriptions, see the IBMAIX_FCSCSIProtocolEndpoint class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HBA_HDR.mof** file.

SMIS_FCSystemDevice_LogicalDeviceProvider

This provider is an instance provider for the AIX_FCSystemDevice_LogicalDevice class inherited from the CIM_SystemDevice class. It conforms to the CMPI interface to provide the association between a computer system and a FC logical device.

When an instance is returned, the properties of the AIX_FCSystemDevice_LogicalDevice class are returned including references to the individual IBMAIX_ComputerSystem and AIX_FCLogicalDisk instances.

For more information about the properties descriptions, see the AIX_FCSystemDevice_LogicalDevice class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HBA_HDR.mof** file.

SMIS_FCSCSIInitiatorTargetLogicalUnitPathProvider

This provider is an instance provider for the AIX_FCSCSIInitiatorTargetLogicalUnitPath class inherited from the CIM_SCSIInitiatorTargetLogicalUnitPath class. It conforms to the CMPI interface to provide the association between a host driver and a SCSI logical unit.

When an instance is returned, the properties of the AIX_FCSCSIInitiatorTargetLogicalUnitPath class are returned including references to the individual AIX_FCLogicalDisk and IBMAIX_FCSCSIProtocolEndpoint instances.

For more information about the properties descriptions, see the AIX_FCSCSIInitiatorTargetLogicalUnitPath class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HBA_HDR.mof** file.

Chapter 9. Host Hardware RAID Providers

The following CIM classes implement the Host Hardware RAID (HHR) Profile of SMI-S (Storage Management Infrastructure) standard version 1.3. These providers are shipped in the **sysmgt.cim.smisproviders.hhr** fileset.

CIM Class	IBM provider
AIX_RAIDCard	"SMIS_RAIDCard" on page 84
AIX_RAIDComputerSystem	"SMIS_RAIDComputerSystem" on page 84
AIX_RAIDControlledBy	"SMIS_RAIDControlledByProvider" on page 90
AIX_RAIDControllerSAPAvailableForElement	"SMIS_RAIDControllerSAPAvailableForElementProvider" on page 90
AIX_RAIDDeviceSAPImplementation	"SMIS_RAIDDeviceSAPImplementationProvider" on page 91
AIX_RAIDDiskDrive	"SMIS_RAIDDiskDriveProvider" on page 84
AIX_RAIDDiskSAPAvailableForElement	"SMIS_RAIDDiskSAPAvailableForElementProvider" on page 85
AIX_RAIDElementSoftwareIdentity	"SMIS_RAIDElementSoftwareIdentityProvider" on page 85
AIX_RAIDHostedAccessPoint	"SMIS_RAIDHostedAccessPointProvider" on page 85
AIX_RAIDLogicalDisk	"SMIS_RAIDLogicalDiskProvider" on page 85
AIX_RAIDLogicalIdentity	"SMIS_RAIDLogicalIdentityProvider" on page 86
AIX_RAIDMediaPresent	"SMIS_RAIDMediaPresentProvider" on page 86
AIX_RAIDPackageInSlot	"SMIS_RAIDPackageInSlotProvider" on page 86
AIX_RAIDPortController	"SMIS_RAIDPortControllerProvider" on page 86
AIX_RAIDProduct	"SMIS_RAIDProductProvider" on page 87
AIX_RAIDProductPhysicalComponent	"SMIS_RAIDProductPhysicalComponentProvider" on page 87
AIX_RAIDProtocolControllerForUnit	"SMIS_RAIDProtocolControllerForUnitProvider" on page 87
AIX_RAIDRealizes	"SMIS_RAIDRealizesProvider" on page 87
AIX_RAIDSASPort	"SMIS_RAIDSASPortProvider" on page 88
AIX_RAIDSCSIInitiatorTargetLogicalUnitPath	"SMIS_RAIDSCSIInitiatorTargetLogicalUnitPathProvider" on page 88
AIX_RAIDSCSIProtocolController	"SMIS_RAIDSCSIProtocolControllerProvider" on page 88
AIX_RAIDSCSIProtocolEndpoint	"SMIS_RAIDSCSIProtocolEndpointProvider" on page 89
AIX_RAIDSPIPort	"SMIS_RAIDSPIPortProvider" on page 89
AIX_RAIDSoftwareIdentity	"SMIS_RAIDSoftwareIdentityProvider" on page 89
AIX_RAIDStorageExtent	"SMIS_RAIDStorageExtentProvider" on page 90
AIX_RAIDSystemComponent	"SMIS_RAIDSystemComponentProvider" on page 91
AIX_RAIDSystemDevice_LogicalDisk	"SMIS_RAIDSystemDevice_LogicalDiskProvider" on page 91
AIX_RAIDSystemDevice_PortController	"SMIS_RAIDSystemDevice_PortControllerProvider" on page 91
AIX_RAIDSystemDevice_ProtocolController	"SMIS_RAIDSystemDevice_ProtocolControllerProvider" on page 91

SMIS_RAIDCard

This provider is an instance provider for the AIX_RAIDCard class. It conforms to the CMPI interface to provide information about a RAID Card.

The following properties are implemented:

Property	Type
Tag	string
CreationClassName	string
ElementName	string
Description	string
HostingBoard	boolean
Manufacturer	string
Model	string
SerialNumber	string
PartNumber	string

SMIS_RAIDComputerSystem

This provider is an instance provider for the AIX_RAIDComputerSystem class. It conforms to the CMPI interface to provide information about a RAID Computer System.

The following properties are implemented:

Property	Type
CreationClassName	string
Dedicated[]	uint16
ElementName	string
IdentifyingDescription[]	string
Name	string
NameFormat	string
OperationalStatus[]	uint16
OtherIdentityingInfo[]	string

SMIS_RAIDDiskDriveProvider

This provider is an instance provider for the AIX_ RAIDDiskDrive class. It conforms to the CMPI interface to provide information about a RAID Disk Drive.

The following properties are implemented:

Property	Type
SystemCreationClassName	string
CreationClassName	string
SystemName	string

Property	Type
DeviceID	string
Name	string
OperationalStatus[]	uint16
EnabledState	uint16
RequestedState	uint16

SMIS_RAIDDiskSAPAvailableForElementProvider

Each instance of this class provides the association between RAIDDiskDrive and RAIDSCSIProtocolEndpoint. When an instance is returned,the properties of the AIX_RAIDDiskSAPAvailableForElement class are returned including references to the individual AIX_RAIDDiskDrive and AIX_RAIDSCSIProtocolEndpoint instances.

For more information about the properties descriptions, see the AIX_RAIDDiskSAPAvailableForElement class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HHR.mof** file.

SMIS_RAIDElementSoftwareIdentityProvider

Each instance of this class provides the association between RAIDSoftwareIdentity and the RAIDComputerSystem that represents the RAIDPortController. When an instance is returned, the properties of the AIX_RAIDElementSoftwareIdentity class are returned including references to the individual AIX_RAIDSoftwareIdentity and AIX_RAIDComputerSystem instances.

For more information about the properties descriptions, see the AIX_RAIDElementSoftwareIdentity class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HHR.mof** file.

SMIS_RAIDHostedAccessPointProvider

Each instance of this class provides the association between a computer system that represents a RAID port controller and a ServiceAccessPoint.When an instance is returned, the properties of the AIX_RAIDHostedAccessPoint class are returned including references to the individual AIX_RAIDComputerSystem and AIX_RAIDSCSIProtocolEndpoint instances.

For more information about the properties descriptions, see the AIX_RAIDHostedAccessPoint class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HHR.mof** file.

SMIS_RAIDLogicalDiskProvider

This provider is an instance provider for the AIX_RAIDLogicalDisk class. It conforms to the CMPI interface to provide information about a RAID Logical Disk.

The following properties are implemented:

Property	Type
SystemCreationClassName	string
CreationClassName	string
SystemName	string
DeviceID	string
ElementName	string
Name	string

Property	Type
NameFormat	uint16
NameNamespace	uint16
ExtentStatus[]	uint16
OperationalStatus[]	uint16
BlockSize	uint64
NumberOfBlocks	uint64
ConsumableBlocks	uint64
IsBasedOnUnderlyingRedundancy	boolean
DataRedundancy	uint16
PackageRedundancy	uint16

SMIS_RAIDLogicalIdentityProvider

Each instance of this class provides the association between a computer system that represents a RAID port controller and a RAID port controller itself. When an instance is returned, the properties of the AIX_RAIDLogicalIdentity class are returned including references to the individual AIX_RAIDComputerSystem and AIX_RAIDPortController instances.

For more information about the properties descriptions, see the AIX_RAIDLogicalIdentity class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HHR.mof** file.

SMIS_RAIDMediaPresentProvider

Each instance of this class provides the association between RAIDStorageExtent and the RAIDDiskDrive. When an instance is returned, the properties of the AIX_RAIDMediaPresent class are returned including references to the individual AIX_RAIDStorageExtent and AIX_RAIDDiskDrive instances.

For more information about the properties descriptions, see the AIX_RAIDMediaPresent class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HHR.mof** file.

SMIS_RAIDPackageInSlotProvider

Each instance of this class provides the association between a Slot and RAIDCard. When an instance is returned, the properties of the AIX_RAIDPackageInSlot class are returned including references to the individual AIX_Slot and AIX_RAIDCard instances.

For more information about the properties descriptions, see the AIX_RAIDPackageInSlot class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HHR.mof** file.

SMIS_RAIDPortControllerProvider

This provider is an instance provider for the AIX_RAIDPortController class. It conforms to the CMPI interface to provide information about a RAID Port Controller.

The following properties are implemented:

Property	Type
SystemCreationClassName	string
SystemName	string

Property	Type
CreationClassName	string
DeviceID	string
ControllerType	uint16
OtherControllerType	string
Description	string

SMIS_RAIDProductProvider

This provider is an instance provider for the AIX_RAIDProduct class. It conforms to the CMPI interface to provide information about a RAID Product.

The following properties are implemented:

Property	Type
Vendor	string
Name	string
IdentifyingNumber	string
ElementName	string
Version	string

SMIS_RAIDProductPhysicalComponentProvider

Each instance of this class provides the association between RAIDProduct and RAIDCard. When an instance is returned, the properties of the AIX_RAIDProductPhysicalComponent class are returned including references to the individual AIX_RAIDProduct and AIX_RAIDCard instances.

For more information about the properties descriptions, see the AIX_RAIDProductPhysicalComponent class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HHR.mof** file.

SMIS_RAIDProtocolControllerForUnitProvider

Each instance of this class provides the association between RAIDSCSIProtocolController and the StorageVolume. When an instance is returned, the properties of the AIX_RAIDProtocolControllerForUnit class are returned including references to the individual AIX_RAIDSCSIProtocolController and AIX_StorageVolume instances.

For more information about the properties descriptions, see the AIX_RAIDProtocolControllerForUnit class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HHR.mof** file.

SMIS_RAIDRealizesProvider

Each instance of this class provides the association between a RAID card and a RAID port controller. When an instance is returned,the properties of the AIX_RAIDRealizes class are returned including references to the individual AIX_RAIDCard and AIX_RAIDPortController instances.

For more information about the properties descriptions, see the AIX_RAIDRealizes class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HHR.mof** file.

SMIS_RAIDSASPortProvider

This provider is an instance provider for the AIX_RAIDSASPort class. It conforms to the CMPI interface to provide information about a RAID SAS Port.

The following properties are implemented:

Property	Type
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
Description	string
StatusInfo	uint16
Status	string
Availability	uint16
RequestedState	uint16
IdentifyingDescriptions[]	string
OtherIdentifyingInfo[]	string

SMIS_RAIDSCSIInitiatorTargetLogicalUnitPathProvider

Each instance of this class provides SCSI logical unit path information over RAID port. When an instance is returned, the properties of the AIX_RAIDSCSIInitiatorTargetLogicalUnitPath class are returned including references to the individual AIX_RAIDSCSIProtocolEndpoint(Iniatior), AIX_RAIDSCSIProtocolEndpoint(Target) and AIX_RAIDLogicalDisk instances.

For more information about the properties descriptions, see the AIX_RAIDSCSIInitiatorTargetLogicalUnitPath class in the /usr/pegasus/provider/mof/cimv2/AIX_SMIS_HHR.mof file.

SMIS_RAIDSCSIProtocolControllerProvider

This provider is an instance provider for the AIX_RAIDSCSIProtocolController class. It conforms to the CMPI interface to provide information about a RAID SCSI Protocol Controller.

The following properties are implemented:

Property	Type
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
ElementName	string
Description	string
Caption	string
Name	string
NameFormat	uint16

Property	Type
OtherNameFormat	string
EnabledDefault	uint16
EnabledState	uint16
OperationalStatus[]	uint16
RequestedState	uint16

SMIS_RAIDSCSIProtocolEndpointProvider

This provider is an instance provider for the AIX_RAIDSCSIProtocolEndpoint class. It conforms to the CMPI interface to provide information about a RAID SCSI Protocol Endpoint.

The following properties are implemented:

Property	Type
SystemCreationClassName	string
SystemName	string
CreationClassName	string
Role	uint16
Name	string
ProtocolIFType	uint16
ConnectionType	uint16

SMIS_RAIDSoftwareIdentityProvider

This provider is an instance provider for the AIX_RAIDSoftwareIdentity class. It conforms to the CMPI interface to provide information about a RAID Software Identity.

The following properties are implemented:

Property	Type
InstanceID	string
Manufacturer	string
Classifications	uint16A
VersionString	string
Description	uint16
Name	string
BuildNumber	uint16
SystemCreationClassName	string
CreationClassName	string

SMIS_RAIDSPIPortProvider

This provider is an instance provider for the AIX_RAIDSPIPort class. It conforms to the CMPI interface to provide information about a RAID SPI Port.

The following properties are implemented:

Property	Type
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
Description	string
StatusInfo	uint16
Status	string
Availability	uint16
RequestedState	uint16
IdentifyingDescriptions[]	string
OtherIdentifyingInfo[]	string

SMIS_RAIDStorageExtentProvider

This provider is an instance provider for the AIX_RAIDStorageExtent class. It conforms to the CMPI interface to provide information about a RAID Storage Extent.

The following properties are implemented:

Property	Type
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
Description	string
BlockSize	uint64
NumberOfBlocks	uint64
Primordial	boolean
OperationalStatus[]	uint16

SMIS_RAIDControlledByProvider

Each instance of this class provides the association between a RAID port and a RAID port controller. When an instance is returned, the properties of the AIX_RAIDControlledBy class are returned including references to the individual AIX_RAIDPort and AIX_RAIDPortController instances.

For more information about the properties descriptions, see the AIX_RAIDControlledBy class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HHR.mof** file.

SMIS_RAIDControllerSAPAvailableForElementProvider

Each instance of this class provides the association between RAIDSCSIProtocolController and RAIDSCSIProtocolEndpoint. When an instance is returned,the properties of the AIX_RAIDControllerSAPAvailableForElement class are returned including references to the individual AIX_RAIDSCSIProtocolController and AIX_RAIDSCSIProtocolEndpoint instances.

For more information about the properties descriptions, see the AIX_RAIDControllerSAPAvailableForElement class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HHR.mof** file.

SMIS_RAIDDeviceSAPImplementationProvider

Each instance of this class provides the association between RAIDLogicalPort and RAIDSCSIProtocolEndpoint. When an instance is returned,the properties of the AIX_RAIDDeviceSAPImplementation class are returned including references to the individual AIX_RAIDLogicalPort and AIX_RAIDSCSIProtocolEndpoint instances.

For more information about the properties descriptions, see the AIX_RAIDDeviceSAPImplementation class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HHR.mof** file.

SMIS_RAIDSystemComponentProvider

Each instance of this class provides the association between a hosting computer system and a computer system that represents a RAID port controller. When an instance is returned, the properties of the AIX_RAIDSystemComponent class are returned including references to the individual IBMAIX_ComputerSystem and AIX_RAIDComputerSystem instances.

For more information about the properties descriptions, see the AIX_RAIDSystemComponent class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HHR.mof** file.

SMIS_RAIDSystemDevice_LogicalDiskProvider

Each instance of this class provides the association between RAIDLogicalDisk and the scoping system. When an instance is returned, the properties of the AIX_RAIDSystemDevice_LogicalDisk class are returned including references to the individual AIX_RAIDLogicalDisk and IBMAIX_ComputerSystem instances.

For more information about the properties descriptions, see the AIX_RAIDSystemDevice_LogicalDisk class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HHR.mof** file.

SMIS_RAIDSystemDevice_PortControllerProvider

Each instance of this class provides the association between a hosting computer system and a RAID port controller. When an instance is returned, the properties of the AIX_RAIDSystemDevice_PortController class are returned including references to the individual IBMAIX_ComputerSystem and AIX_RAIDPortController instances.

For more information about the properties descriptions, see the AIX_RAIDSystemDevice_PortController class in the /usr/pegasus/provider/mof/cimv2/AIX_SMIS_HHR.mof file.

SMIS_RAIDSystemDevice_ProtocolControllerProvider

Each instance of this class provides the association between a RAIDComputerSystem and a RAIDSCSIProtocolController. When an instance is returned, the properties of the AIX_RAIDSystemDevice_ProtocolController class are returned including references to the individual RAIDComputerSystem and RAIDSCSIProtocolController instances.

For more information about the properties descriptions, see the AIX_RAIDSystemDevice_ProtocolController class in the **/usr/pegasus/provider/mof/cimv2/AIX_SMIS_HHR.mof** file.

Chapter 10. Virtual Block Services Providers

The sysmgt.cim.smisproviders.vblksrv fileset ships the AIX implementation for Virtual Block Services: the storage virtualisation on VIOS using the Storage Virtualizer Profile described by Storage Management Infrastructure Standard (SMI-S) Version 1.2.

CIM Class	IBM provider
AIX_AllocatedFromConcretePool	“AIX_AllocatedFromConcretePoolProvider” on page 94
AIX_ConcretePool	“AIX_ConcretePoolProvider” on page 94
AIX_ConcretePoolCapabilities	“AIX_ConcretePoolCapabilitiesProvider” on page 94
AIX_ConcretePoolSetting	“AIX_ConcretePoolSettingProvider” on page 95
AIX_HostedStorageConf	“AIX_HostedStorageConfProvider” on page 95
AIX_PhysicalPackage	“AIX_PhysicalPackageProvider” on page 95
AIX_PrimordialPool	“AIX_PrimordialPoolProvider” on page 96
AIX_PrimordialPoolCapabilities	“AIX_PrimordialPoolCapabilitiesProvider” on page 96
AIX_PrimordialPoolComponent	“AIX_PrimordialPoolComponentProvider” on page 97
AIX_PrimordialPoolSetting	“AIX_PrimordialPoolSettingProvider” on page 97
AIX_SASHostedAccessPoint	“AIX_SASHostedAccessPointProvider” on page 97
AIX_SASInitPortSystemDevice	“AIX_SASInitPortSystemDeviceProvider” on page 98
AIX_SASInitReferencedProfile	“AIX_SASInitReferencedProfileProvider” on page 98
AIX_SASSATAHostedAccessPoint	“AIX_SASSATAHostedAccessPointProvider” on page 98
AIX_SASSATAInitPortSystemDevice	“AIX_SASSATAInitPortSystemDeviceProvider” on page 98
AIX_SASSATAInitReferencedProfile	“AIX_SASSATAInitReferencedProfileProvider” on page 98
AIX_SPIInitDeviceSAPImplementation	“AIX_SPIInitDeviceSAPImplementationProvider” on page 99
AIX_SPIInitPort	“AIX_SPIInitPortProvider” on page 99
AIX_SPIInitRegisteredProfile	“AIX_SPIInitRegisteredProfileProvider” on page 99
AIX_SPIInitSystemDevice	“AIX_SPIInitSystemDeviceProvider” on page 100
AIX_SPITargetPort	“AIX_SPITargetPortProvider” on page 100
AIX_SPITargetProtocolController	“AIX_SPITargetProtocolControllerProvider” on page 100
AIX_SPITargetReferencedProfile	“AIX_SPITargetReferencedProfileProvider” on page 101
AIX_SPITargetSAPAvailableForElement	“AIX_SPITargetSAPAvailableForElementProvider” on page 101
AIX_SPITargetSystemDevice	“AIX_SPITargetSystemDeviceProvider” on page 101
AIX_SVElementConformsToProfile	“AIX_SVElementConformsToProfileProvider” on page 101
AIX_StorageConf	“AIX_StorageConfProvider” on page 102
AIX_SystemLogicalDisk	“AIX_SystemLogicalDiskProvider” on page 102
AIX_SystemStorageVolume	“AIX_SystemStorageVolumeProvider” on page 102
AIX_TargetSCSIEndpoint	“AIX_TargetSCSIEndpointProvider” on page 102
AIX_iSCSIEthIPDeviceSAPImplementation	“AIX_iSCSIEthIPDeviceSAPImplementationProvider” on page 103
AIX_iSCSIEthernetPort	“AIX_iSCSIEthernetPortProvider” on page 103
AIX_iSCSIHostedAccessPoint	“AIX_iSCSIHostedAccessPointProvider” on page 104

CIM Class	IBM provider
AIX_iSCSIInitRegisteredProfile	“AIX_iSCSIInitRegisteredProfileProvider” on page 104
AIX_iSCSITCPBindsTo	“AIX_iSCSITCPBindsToProvider” on page 104
AIX_iSCSITCPHostedAccessPoint	“AIX_iSCSITCPHostedAccessPointProvider” on page 104
AIX_iSCSITCPProtocolEndpoint	“AIX_iSCSITCPProtocolEndpointProvider” on page 105

AIX_AllocatedFromConcretePoolProvider

This provider is a provider for the AIX_AllocatedFromConcretePool class. It conforms to the CMPI interface to provide the association between the AIX_ConcretePool and AIX_StorageVolume.

When an instance is returned, the properties of the AIX_ConcretePool and AIX_StorageVolume classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_AllocatedFromConcretePool in the **/usr/pegasus/provider/mof/cimv2/AIX_BlockService.mof** file.

AIX_ConcretePoolProvider

This provider is a provider for the AIX_ConcretePool class. It conforms to the CMPI interface to provide information about Concrete Pool.

The following provider properties are implemented:

Property	Type
InstanceID	string
PoolID	string
Primordial	boolean
TotalManagedSpace	uint64
RemainingManagedSpace	uint64

For more information about the properties descriptions, see the AIX_ConcretePool in the **/usr/pegasus/provider/mof/cimv2/AIX_BlockService.mof** file.

AIX_ConcretePoolCapabilitiesProvider

This provider is a provider for the AIX_ConcretePoolCapabilities class. It conforms to the CMPI interface to provide information about Concrete Pool Capabilities.

The following provider properties are implemented:

Property	Type
InstanceID	string
ElementName	string
ElementType	uint16
NoSinglePointOfFailure	boolean
NoSinglePointOfFailureDefault	boolean
DataRedundancyMax	uint16

Property	Type
DataRedundancyMin	uint16
DataRedundancyDefault	uint16
PackageRedundancyMax	uint16
PackageRedundancyMin	uint16
PackageRedundancyDefault	uint16

For more information about the properties descriptions, see the AIX_ConcretePoolCapabilities in the **/usr/pegasus/provider/mof/cimv2/AIX_BlockService.mof** file.

AIX_ConcretePoolSettingProvider

This provider is a provider for the AIX_ConcretePoolSetting class. It conforms to the CMPI interface to provide information about Concrete Pool Setting.

The following provider properties are implemented:

Property	Type
InstanceID	string
ElementName	string
NoSinglePointOfFailure	boolean
DataRedundancyMax	uint16
DataRedundancyMin	uint16
DataRedundancyGoal	uint16
PackageRedundancyMax	uint16
PackageRedundancyMin	uint16
UseReplicationBuffer	uint16
InitialSynchronization	uint16
SpaceLimit	uint64

For more information about the properties descriptions, see the AIX_ConcretePoolSetting in the **/usr/pegasus/provider/mof/cimv2/AIX_BlockService.mof** file.

AIX_HostedStorageConfProvider

This provider is a provider for the AIX_HostedStorageConf class. It conforms to the CMPI interface to provide the association between the AIX_ComputerSystem and AIX_StorageConf.

When an instance is returned, the properties of the AIX_ComputerSystem and AIX_StorageConf classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_HostedStorageConf in the **/usr/pegasus/provider/mof/cimv2/AIX_BlockService.mof** file.

AIX_PhysicalPackageProvider

This provider is a provider for the AIX_PhysicalPackage class. It conforms to the CMPI interface to provide information about Physical Package.

The following provider properties are implemented:

Property	Type
Tag	string
CreationClassName	string
Manufacturer	string
Model	string
RemovalConditions	uint16

For more information about the properties descriptions, see the AIX_PhysicalPackage in the **/usr/pegasus/provider/mof/cimv2/AIX_BlockService.mof** file.

AIX_PrimordialPoolProvider

This provider is a provider for the AIX_PrimordialPool class. It conforms to the CMPI interface to provide information about Primordial Pool.

The following provider properties are implemented:

Property	Type
InstanceID	string
PoolID	string
Primordial	boolean
TotalManagedSpace	uint64
RemainingManagedSpace	uint64

For more information about the properties descriptions, see the AIX_PrimordialPool in the **/usr/pegasus/provider/mof/cimv2/AIX_BlockService.mof** file.

AIX_PrimordialPoolCapabilitiesProvider

This provider is a provider for the AIX_PrimordialPoolCapabilities class. It conforms to the CMPI interface to provide information about Primordial Pool Capabilities.

The following provider properties are implemented:

InstanceID	string
ElementName	string
ElementType	uint16
NoSinglePointOfFailure	boolean
NoSinglePointOfFailureDefault	boolean
DataRedundancyMax	uint16
DataRedundancyMin	uint16
DataRedundancyDefault	uint16
PackageRedundancyMax	uint16
PackageRedundancyMin	uint16
PackageRedundancyDefault	uint16

For more information about the properties descriptions, see the AIX_PrimordialPoolCapabilities in the **/usr/pegasus/provider/mof/cimv2/AIX_BlockService.mof** file.

AIX_PrimordialPoolComponentProvider

This provider is a provider for the AIX_PrimordialPoolComponent class. It conforms to the CMPI interface to provide the association between the AIX_PrimordialPool and AIX_LogicalDisk.

When an instance is returned, the properties of the AIX_PrimordialPool and AIX_LogicalDisk classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_PrimordialPoolComponent in the **/usr/pegasus/provider/mof/cimv2/AIX_BlockService.mof** file.

AIX_PrimordialPoolSettingProvider

This provider is a provider for the AIX_PrimordialPoolSetting class. It conforms to the CMPI interface to provide information about Primordial Pool Setting.

The following provider properties are implemented:

Property	Type
InstanceID	string
ElementName	string
NoSinglePointOfFailure	boolean
DataRedundancyMax	uint16
DataRedundancyMin	uint16
DataRedundancyGoal	uint16
PackageRedundancyMax	uint16
PackageRedundancyMin	uint16
UseReplicationBuffer	uint16
InitialSynchronization	uint16
SpaceLimit	uint64

For more information about the properties descriptions, see the AIX_PrimordialPoolSetting in the **/usr/pegasus/provider/mof/cimv2/AIX_BlockService.mof** file.

AIX_SASHostedAccessPointProvider

This provider is a provider for the AIX_SASHostedAccessPoint class. It conforms to the CMPI interface to provide the association between the AIX_ComputerSystem and AIX_SASSATAInitPort.

When an instance is returned, the properties of the AIX_ComputerSystem and AIX_SASSATAInitPort classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_SASHostedAccessPoint in the **/usr/pegasus/provider/mof/cimv2/AIX_SASInitPort.mof** file.

AIX_SASInitPortSystemDeviceProvider

This provider is a provider for the AIX_SASInitPortSystemDevice class. It conforms to the CMPI interface to provide the association between the AIX_ComputerSystem and AIX_SASInitPort.

When an instance is returned, the properties of the AIX_ComputerSystem and AIX_SASInitPort classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_SASInitPortSystemDevice in the **/usr/pegasus/provider/mof/cimv2/AIX_SASInitPort.mof** file.

AIX_SASInitReferencedProfileProvider

This provider is a provider for the AIX_SASInitReferencedProfile class. It conforms to the CMPI interface to provide the association between the AIX_SVRegisteredProfile and AIX_SASInitRegisteredProfile.

When an instance is returned, the properties of the AIX_SVRegisteredProfile and AIX_SASInitRegisteredProfile classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_SASInitReferencedProfile in the **/usr/pegasus/provider/mof/PG_InterOp/AIX_RegisteredProfile.mof** file.

AIX_SASSATAHostedAccessPointProvider

This provider is a provider for the AIX_SASSATAHostedAccessPoint class. It conforms to the CMPI interface to provide the association between the AIX_ComputerSystem and AIX_SASSATASCSIProtocolEndpoint.

When an instance is returned, the properties of the AIX_ComputerSystem and AIX_SASSATASCSIProtocolEndpoint classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_SASSATAHostedAccessPoint in the **/usr/pegasus/provider/mof/cimv2/AIX_SASSATAInitPort.mof** file.

AIX_SASSATAInitPortSystemDeviceProvider

This provider is a provider for the AIX_SASSATAInitPortSystemDevice class. It conforms to the CMPI interface to provide the association between the AIX_ComputerSystem and AIX_SASSATAInitPort.

When an instance is returned, the properties of the AIX_ComputerSystem and AIX_SASSATAInitPort classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_SASSATAInitPortSystemDevice in the **/usr/pegasus/provider/mof/cimv2/AIX_SASSATAInitPort.mof** file.

AIX_SASSATAInitReferencedProfileProvider

This provider is a provider for the AIX_SASSATAInitReferencedProfile class. It conforms to the CMPI interface to provide the association between the AIX_SVRegisteredProfile and AIX_SASSATAInitRegisteredProfile.

When an instance is returned, the properties of the AIX_SVRegisteredProfile and AIX_SASSATAInitRegisteredProfile classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_SASSATAInitReferencedProfile in the **/usr/pegasus/provider/mof/PG_InterOp/AIX_RegisteredProfile.mof** file.

AIX_SPIInitDeviceSAPImplementationProvider

This provider is a provider for the AIX_SPIInitDeviceSAPImplementation class. It conforms to the CMPI interface to provide the association between the AIX_SPIInitPort and AIX_SPIInitSCSIProtocolEndpoint.

When an instance is returned, the properties of the AIX_SPIInitPort and AIX_SPIInitSCSIProtocolEndpoint classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_SPIInitDeviceSAPImplementation in the **/usr/pegasus/provider/mof/cimv2/AIX_SPIInitPort.mof** file.

AIX_SPIInitPortProvider

This provider is a provider for the AIX_SPIInitPort class. It conforms to the CMPI interface to provide information about SPI Initiator Port on VIOS.

The following provider properties are implemented:

Property	Type
Name	string
OperationalStatus	uint16
StatusDescriptions	string
EnabledState	uint16
RequestedState	uint16
EnabledDefault	uint16
TransitioningToState	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
Caption	string
Description	string
UsageRestriction	uint16
PhysicalLocationCode	string

For more information about the properties descriptions, see the AIX_SPIInitPort in the **/usr/pegasus/provider/mof/cimv2/AIX_SPIInitPort.mof** file.

AIX_SPIInitRegisteredProfileProvider

This provider is a provider for the AIX_SPIInitRegisteredProfile class. It conforms to the CMPI interface to provide information to define the reference profile SPIInitPort.

The following provider properties are implemented:

Property	Type
InstanceID	string
Caption	string
Description	string

Property	Type
ElementName	string
RegisteredVersion	string
RegisteredName	string
RegisteredOrganization	uint16
OtherRegisteredOrganization	string
AdvertiseTypes	uint16
AdvertiseTypeDescriptions	string

For more information about the properties descriptions, see the AIX_SPIInitRegisteredProfile in the /usr/pegasus/provider/mof/PG_InterOp/AIX_RegisteredProfile.mof file.

AIX_SPIInitSystemDeviceProvider

This provider is a provider for the AIX_SPIInitSystemDevice class. It conforms to the CMPI interface to provide the association between the AIX_ComputerSystem and AIX_SPIInitPort.

When an instance is returned, the properties of the AIX_ComputerSystem and AIX_SPIInitPort classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_SPIInitSystemDevice in the **/usr/pegasus/provider/mof/cimv2/AIX_SPIInitPort.mof** file.

AIX_SPITargetPortProvider

This provider is a provider for the AIX_SPITargetPort class. It conforms to the CMPI interface to provide information about Parallel SCSI Target Port on VIOS.

The following provider properties are implemented:

Property	Type
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
OperationalStatus	uint16
StatusDescriptions	string
Name	string
PhysicalLocationCode	string

For more information about the properties descriptions, see the AIX_SPITargetPort in the **/usr/pegasus/provider/mof/cimv2/AIX_SPITargetPortPack.mof** file.

AIX_SPITargetProtocolControllerProvider

This provider is a provider for the AIX_SPITargetProtocolController class. It conforms to the CMPI interface to provide information about SPI Port for the interface with vtscsi.

The following provider properties are implemented:

Property	Type
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
StatusDescriptions	string
OperationalStatus	uint16

For more information about the properties descriptions, see the AIX_SPITargetProtocolController in the **/usr/pegasus/provider/mof/cimv2/AIX_SPITargetPortPack.mof** file.

AIX_SPITargetReferencedProfileProvider

This provider is a provider for the AIX_SPITargetReferencedProfile class. It conforms to the CMPI interface to provide the association between the AIX_SPITargetRegisteredProfile and AIX_SVRegisteredProfile

When an instance is returned, the properties of the AIX_SPITargetRegisteredProfile and AIX_SVRegisteredProfile classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_SPITargetReferencedProfile in the **/usr/pegasus/provider/mof/PG_InterOp/AIX_RegisteredProfile.mof** file.

AIX_SPITargetSAPAvailableForElementProvider

This provider is a provider for the AIX_SPITargetSAPAvailableForElement class. It conforms to the CMPI interface to provide the association between the AIX_SPITargetSCSIProtocolEndpoint and AIX_SPITargetProtocolController.

When an instance is returned, the properties of the AIX_SPITargetSCSIProtocolEndpoint and AIX_SPITargetProtocolController classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_SPITargetSAPAvailableForElement in the **/usr/pegasus/provider/mof/cimv2/AIX_SPITargetPortPack.mof** file.

AIX_SPITargetSystemDeviceProvider

This provider is a provider for the AIX_SPITargetSystemDevice class. It conforms to the CMPI interface to provide the association between the AIX_ComputerSystem and AIX_SPITargetPort

When an instance is returned, the properties of the AIX_ComputerSystem and AIX_SPITargetPort classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_SPITargetSystemDevice in the **/usr/pegasus/provider/mof/cimv2/AIX_SPITargetPortPack.mof** file.

AIX_SVElementConformsToProfileProvider

This provider is a provider for the AIX_SVElementConformsToProfile class. It conforms to the CMPI interface to provide the association between the AIX_ComputerSystem and AIX_SVRegisteredProfile

When an instance is returned, the properties of the AIX_ComputerSystem and AIX_SVRegisteredProfile classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_SVElementConformsToProfile in the **/usr/pegasus/provider/mof/cimv2/AIX_RegisteredProfile.mof** file.

AIX_StorageConfProvider

This provider is a provider for the AIX_StorageConf class. It conforms to the CMPI interface to provide information about storage configuration service.

The following provider properties are implemented:

Property	Type
EnabledState	uint16
RequestedState	uint16
EnabledDefault	uint16
TransitioningToState	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
Name	string

For more information about the properties descriptions, see the AIX_StorageConf in the **/usr/pegasus/provider/mof/cimv2/AIX_BlockService.mof** file.

AIX_SystemLogicalDiskProvider

This provider is a provider for the AIX_SystemLogicalDisk class. It conforms to the CMPI interface to provide the association between the AIX_ComputerSystem and AIX_LogicalDisk.

When an instance is returned, the properties of the AIX_ComputerSystem and AIX_LogicalDisk classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_SystemLogicalDisk in the **/usr/pegasus/provider/mof/cimv2/AIX_BlockService.mof** file.

AIX_SystemStorageVolumeProvider

This provider is a provider for the AIX_SystemStorageVolume class. It conforms to the CMPI interface to provide the association between the AIX_ComputerSystem and AIX_StorageVolume.

When an instance is returned, the properties of the AIX_ComputerSystem and AIX_StorageVolume classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_SystemStorageVolume in the **/usr/pegasus/provider/mof/cimv2/AIX_BlockService.mof** file.

AIX_TargetSCSIEndpointProvider

This provider is a provider for the AIX_TargetSCSIEndpoint class. It conforms to the CMPI interface to provide information about physical volume viewed as scsi protocol endpoint.

The following provider properties are implemented:

Property	Type
RequestedState	uint16
EnabledDefault	uint16
TransitioningToState	uint16
SystemCreationClassName	string
SystemName	string
CreationClassName	string
Name	string

For more information about the properties descriptions, see the AIX_TargetSCSIEndpoint in the **/usr/pegasus/provider/mof/cimv2/AIX_BlockService.mof** file.

AIX_iSCSIEthIPDeviceSAPImplementationProvider

This provider is a provider for the AIX_iSCSIEthIPDeviceSAPImplementation class. It conforms to the CMPI interface to provide the association between the AIX_iSCSIEthernetPort and AIX_iSCSIIPProtocolEndpoint.

When an instance is returned, the properties of the AIX_iSCSIEthernetPort and AIX_iSCSIIPProtocolEndpoint classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_iSCSIEthIPDeviceSAPImplementation in the **/usr/pegasus/provider/mof/cimv2/AIX_iSCSIInitPort.mof** file.

AIX_iSCSIEthernetPortProvider

This provider is a provider for the AIX_iSCSIEthernetPort class. It conforms to the CMPI interface to provide information about iSCSI Initiator Port on VIOS.

The following provider properties are implemented:

Property	Type
SystemCreationClassName	string
SystemName	string
CreationClassName	string
DeviceID	string
OperationalStatus	uint16
StatusDescriptions	string
Name	string
PhysicalLocationCode	string

For more information about the properties descriptions, see the AIX_iSCSIEthernetPort in the **/usr/pegasus/provider/mof/cimv2/AIX_iSCSIInitPort.mof** file.

AIX_iSCSIHostedAccessPointProvider

This provider is a provider for the AIX_iSCSIHostedAccessPoint class. It conforms to the CMPI interface to provide the association between the AIX_iSCSIInitiatorProtocolEndpoint and AIX_ComputerSystem

When an instance is returned, the properties of the AIX_iSCSIInitiatorProtocolEndpoint and AIX_ComputerSystem classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_iSCSIHostedAccessPoint in the **/usr/pegasus/provider/mof/cimv2/AIX_iSCSIInitPort.mof** file.

AIX_iSCSIInitRegisteredProfileProvider

This provider is a provider for the AIX_iSCSIInitRegisteredProfile class.

It conforms to the CMPI interface to provide information to define the reference profile iSCSIInitPort.

The following provider properties are implemented:

InstanceID	string
Caption	string
Description	string
ElementName	string
RegisteredVersion	string
RegisteredName	string
RegisteredOrganization	uint16
OtherRegisteredOrganization	string
AdvertiseTypes	uint16
AdvertiseTypeDescriptions	string

For more information about the properties descriptions, see the AIX_iSCSIInitRegisteredProfile in the **/usr/pegasus/provider/mof/PG_InterOp/AIX_RegisteredProfile.mof** file.

AIX_iSCSITCPBindsToProvider

This provider is a provider for the AIX_iSCSITCPBindsTo class. It conforms to the CMPI interface to provide the association between the AIX_iSCSITCPProtocolEndpoint and AIX_iSCSIInitiatorProtocolEndpoint

When an instance is returned, the properties of the AIX_iSCSITCPProtocolEndpoint and AIX_iSCSIInitiatorProtocolEndpoint classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_iSCSITCPBindsTo in the **/usr/pegasus/provider/mof/cimv2/AIX_iSCSIInitPort.mof** file.

AIX_iSCSITCPHostedAccessPointProvider

This provider is a provider for the AIX_iSCSITCPHostedAccessPoint class. It conforms to the CMPI interface to provide the association between the AIX_iSCSITCPProtocolEndpoint and AIX_ComputerSystem

When an instance is returned, the properties of the AIX_iSCSITCPProtocolEndpoint and AIX_ComputerSystem classes, listed in their respective providers, are returned.

For more information about the properties descriptions, see the AIX_iSCSITCPHostedAccessPoint in the **/usr/pegasus/provider/mof/cimv2/AIX_iSCSIInitPort.mof** file.

AIX_iSCSITCPProtocolEndpointProvider

This provider is a provider for the AIX_iSCSITCPProtocolEndpoint class. It conforms to the CMPI interface to provide information about the ProtocolEndpoint dedicated to running TCP for iSCSI Initiator Port on VIOS.

The following provider properties are implemented:

Property	**Type**
SystemCreationClassName	string
SystemName	string
CreationClassName	string
Name	string

For more information about the properties descriptions, see the AIX_iSCSITCPProtocolEndpoint in the **/usr/pegasus/provider/mof/cimv2/AIX_iSCSIInitPort.mof** file.

Chapter 11. Metrics Providers

The sysmgt.cim.providers.metrics fileset ships the AIX implementation for AIX Metrics instrumentation, and it provides a set of CIM providers to collect metrics on the AIX operating system for a selection of managed elements according to the DMTF Base Metric Profile.

CIM Class	IBM provider
AIX_MetricVal	"AIX_MetricValProvider"
AIX_MetricDef	"AIX_MetricDefProvider"
AIX_MetricSvc	"AIX_MetricSvcProvider" on page 108
AIX_MetricSvcCap	"AIX_MetricSvcCapProvider" on page 108
AIX_DynMetricsProfile	"AIX_DynMetricsProfileProvider" on page 109
AIX_MetricDefForME	"AIX_MetricDefForMEProvider" on page 109
AIX_MetricValForME	"AIX_MetricValForMEProvider" on page 109
AIX_MetricSvcToCap	"AIX_MetricSvcToCapProvider" on page 109
AIX_MetricSvcAffectsDef	"AIX_MetricSvcAffectsDefProvider" on page 110
AIX_MetricInst	"AIX_MetricInstProvider" on page 110
AIX_HostedMetricSvc	"AIX_HostedMetricSvcProvider" on page 110
AIX_SystemConformsToDynMetrics	"AIX_SystemConformsToDynMetricsProvider" on page 110

AIX_MetricValProvider

This provider is an instance provider for the AIX_MetricVal class. It represents each instance represents the value of a metric.

The following provider properties are implemented:

Property	Type
MetricDefinitionId	string
MetricValue	string
Volatile	string
InstanceID	string
TimeStamp	datetime
Duration	datetime

For more information about the properties descriptions, see AIX_SystemConformsToDynMetrics class in the **/usr/pegasus/provider/mof/cimv2/AIX_DynMetrics.mof** file.

AIX_MetricDefProvider

This provider is an instance provider for the AIX_MetricDef class. It represents the definitional aspects of a metric.

The following provider properties are implemented:

Property	Type
ChangeType	uint16
DataType	uint16
ElementName	string
GatheringType	uint16
Id	string
IsContinuous	string
TimeScope	uint16
ProgrammaticUnits	string

For more information about the properties descriptions, see AIX_SystemConformsToDynMetrics class in the **/usr/pegasus/provider/mof/cimv2/AIX_DynMetrics.mof** file.

AIX_MetricSvcProvider

This provider is an instance/method provider for the AIX_MetricDef class. It describes the capabilities of the associated metrics service.

The following provider properties are implemented:

Property	Type
SystemCreationClassName	string
CreationClassName	string
SystemName	string
Name	string
ElementName	string

The following methods are implemented:

- ControlMetrics
- ControlMetricsByClass

For more information about the properties descriptions, see AIX_SystemConformsToDynMetrics class in the **/usr/pegasus/provider/mof/cimv2/AIX_DynMetrics.mof** file.

AIX_MetricSvcCapProvider

This provider is an instance/method provider for the AIX_MetricSvcCap class. It describes the capabilities of the associated metrics service

The following provider properties are implemented:

Property	Type
InstanceID	string
ControllableMetrics[]	stringA
ControllableManagedElements[]	stringA
MetricControlTypes[]	stringA

Property	Type
ManagedElementControlTypes[]	stringA
SupportedMethods[]	stringA

For more information about the properties descriptions, see AIX_MetricSvcCap class in the **/usr/pegasus/provider/mof/cimv2/AIX_DynMetrics.mof** file.

AIX_DynMetricsProfileProvider

This provider is an instance provider for the AIX_DynMetricsProfile class. It identifies the Base Metric Profile.

The following provider properties are implemented:

Property	Type
InstanceID	string
RegistredOrganisation	uint16
RegistredName	string
RegistredVersion	string
AdvertiseType[]	uint16A

For more information about the properties descriptions, see AIX_DynMetricsProfile class in the **/usr/pegasus/provider/mof/cimv2/AIX_DynMetrics.mof** file.

AIX_MetricDefForMEProvider

Each instance of this class provides represents the association between the definition and the managed element it applies to. When an instance is returned, the properties of the AIX_MetricDefForME class are returned including references to the individual CIM_ManagedElement and AIX_MetricDef instances.

For more information about the properties descriptions, see AIX_MetricDefForME class in the **/usr/pegasus/provider/mof/cimv2/AIX_DynMetrics.mof** file.

AIX_MetricValForMEProvider

Each instance of this class provides the association between a managed element and the metric values being maintained for it. When an instance is returned, the properties of the AIX_MetricValForME class are returned including references to the individual CIM_ManagedElement and AIX_MetricVal instances.

For more information about the properties descriptions, see AIX_MetricValForME class in the **/usr/pegasus/provider/mof/cimv2/AIX_DynMetrics.mof** file.

AIX_MetricSvcToCapProvider

Each instance of this class provides the association between the metrics service and its capabilities. When an instance is returned, the properties of the AIX_MetricSvcToCap class are returned including references to the individual CIM_ManagedElement and CIM_Capabilities instances.

For more information about the properties descriptions, see AIX_MetricSvcToCap class in the **/usr/pegasus/provider/mof/cimv2/AIX_DynMetrics.mof** file.

AIX_MetricSvcAffectsDefProvider

Each instance of this class provides the association between a service and the definitions it controls. When an instance is returned, the properties of the AIX_MetricSvcAffectsDef class are returned including references to the individual AIX_MetricSvc and AIX_MetricDef instances.

For more information about the properties descriptions, see AIX_MetricSvcAffectsDef class in the **/usr/pegasus/provider/mof/cimv2/AIX_DynMetrics.mof** file.

AIX_MetricInstProvider

Each instance of this class provides the association between the metric value and its definition. When an instance is returned, the properties of the AIX_MetricInst class are returned including references to the individual AIX_MetricDef and AIX_MetricVal instances.

For more information about the properties descriptions, see AIX_MetricInst class in the **/usr/pegasus/provider/mof/cimv2/AIX_DynMetrics.mof** file.

AIX_HostedMetricSvcProvider

Each instance of this class provides the association between a service and the system on which the functionnality is located. When an instance is returned, the properties of the AIX_HostedMetricSvc class are returned including references to the individual AIX_MetricSvc and IMBAIX_ComputerSystem instances.

For more information about the properties descriptions, see AIX_HostedMetricSvc class in the **/usr/pegasus/provider/mof/cimv2/AIX_DynMetrics.mof** file.

AIX_SystemConformsToDynMetricsProvider

Each instance of this class provides the association between the registred profile and the service. When an instance is returned, the properties of the AIX_SystemConformsToDynMetrics class are returned including references to the individual CIM_ManagedElement and CIM_RegistredProfile instances.

For more information about the properties descriptions, see AIX_SystemConformsToDynMetrics class in the **/usr/pegasus/provider/mof/cimv2/AIX_DynMetrics.mof** file.

Appendix A. cimauth command

Purpose

Adds, modifies, removes or lists CIM user authorizations.

Syntax

cimauth -a -u *username* **-n** *namespace* [**-R**] [**-W**]

cimauth -m -u *username* **-n** *namespace* [**-R**] [**-W**]

cimauth -r -u *username* [**-n** *namespace*]

cimauth -l

Description

The **cimauth** command provides a command line interface to manage CIM user authorizations on a namespace.

This command does not configure or list CIM user password information. For more information on managing users, see the cimuser command.

The **cimauth** command can be used to remove authorizations of one user on one namespace or all the namespaces on which the user has authorizations. If no namespace is specified, then authorizations on all the namespaces for the specified user will be removed.

Specifying no options with the **cimauth** command will show the usage of the command.

Flags

- a	Adds authorizations for a user on a namespace.
- l	Displays the authorizations of all CIM users.
- m	Modifies the authorizations for a user on a namespace.
- n *namespace*	Specifies the namespace for which you are adding authorizations to users. A namespace is a logical unit for grouping classes and instances to control their scope and visibility. These namespaces are not physical locations, but are similar to logical databases containing specific classes and instances.
- r	Removes the authorizations for a user on a namespace.
- R	Grants read authorization.
- u *username*	Specifies the user name for which you are adding, deleting, or modifying authorizations.
- W	Grants write authorization.

Return values

0	The command completed successfully.
1	The command did not complete successfully. An explanatory error message is written to stderr.

Examples

1. To add read-write authorization to the user named **guest** on the **root/system** namespace, type the following:

   ```
   cimauth -a -u guest -n root/system -R -W
   ```

2. To add read authorization to the user named **guest** on the **root/cimv2** namespace, type the following:

   ```
   cimauth -a -u guest -n root/cimv2
   ```

3. To add read access only to the user named **guest** on the **root/system** namespace, type the following:

   ```
   cimauth -m -u guest -n root/system -R
   ```

4. To remove all access granted to the user named **guest** on the **root/system** namespace, type the following:

   ```
   cimauth -r -u guest -n root/system
   ```

5. To display the list of authorized user names, namespaces and authorizations, type the following:

   ```
   cimauth -l
   ```

Related information

The cimuser command.

Appendix B. cimconfig command

Purpose

Obtains, sets, unsets, or lists CIM Server configuration properties.

Syntax

cimconfig -g *name* [**-c**] [**-p**] [**-d**]

cimconfig -s *name=value* [**-c**] [**-p**]

cimconfig -u *name* [**-c**] [**-p**]

cimconfig -l [**-c** | **-p**]

Description

The **cimconfig** command provides a command line interface to manage CIM Server configuration properties. An error message is returned if the CIM Server is not running. Specifying no flags with the **cimconfig** command displays the command's usage statement.

Flags

-c
Indicates that the action taken applies to the current configuration property value. This flag must be used in conjunction with one of the **-g**, **-s**, **-u**, or **-l** flags.

-d
Indicates that the action taken applies to the default configuration property value. This flag must be used in conjunction with the **-g** flag.

-g *name*
Displays the current, planned, or default value of the specified configuration property depending on whether the **-c**, **-p**, or **-d** flag is specified. If no other flag is specified, the current value of the specified configuration property is displayed.

-l
Lists the names of all the configuration properties when used without any other flag. When this flag is paired with the **-c** flag, a paired listing of all the current configuration properties and their values is displayed. When this flag is paired with the **-p** flag, a paired listing of all the planned configuration properties and their values is displayed.

-p
Indicates that the action taken applies to the planned configuration property value. This flag must be used in conjunction with one of the **-g**, **-s**, **-u**, or **-l** flags.

-s *name=value*
Sets the current or planned value of the specified configuration property to the specified value, depending on whether the **-c** or **-p** flag is specified. If no other flag is specified, the current value of the specified configuration property is set to the specified value. The *name* parameter is the name of the configuration property, and *value* is the new value for the configuration property. An error message is returned if the specified property cannot be set dynamically.

-u *name*

Resets the current or planned value of the specified configuration property to the default value depending on whether the **-c** or **-p** flag is specified. If no other flag is specified, the current value of the specified configuration property is reset to the default value. An error message is returned if the specified property cannot be updated dynamically.

Exit status

0	The command completed successfully.
1	The command did not complete successfully, and an explanatory message is written to stderr.

Examples

1. To view the current value for the **port** configuration property, type one of the following commands:

   ```
   cimconfig -g port
   cimconfig -g port -c
   ```

2. To view the planned value of the **traceLevel** configuration property, type the following:

   ```
   cimconfig -g traceLevel -p
   ```

3. To change the current value of the **traceLevel** configuration property to the value 2, type one of the following commands:

   ```
   cimconfig -s traceLevel=2
   cimconfig -s traceLevel=2 -c
   ```

4. To change the planned value of the **traceLevel** property to a value of 3, type the following:

   ```
   cimconfig -s traceLevel=3 -p
   ```

5. To reset the current value of the **traceLevel** property to the default value, type one of the following commands:

   ```
   cimconfig -u traceLevel
   cimconfig -u traceLevel -c
   ```

6. To reset the planned value of the **traceLevel** property to the default value, type the following:

   ```
   cimconfig -u traceLevel -p
   ```

7. To list all of the current configuration properties and their values, type the following:

   ```
   cimconfig -l -c
   ```

8. To list all of the planned configuration properties and their values, type the following:

   ```
   cimconfig -l -p
   ```

Appendix C. cimmof command

Purpose

Compiles MOF files into the CIM repository through the CIM Server.

Syntax

cimmof -h

cimmof [**-w**] [**-l** *path*] [**-n** *namespace*] *file...file*

Description

The **cimmof** command is the command line interface to the Managed Object Format (MOF) Compiler. The MOF Compiler is a utility that compiles MOF files (using the MOF format defined by the DMTF CIM Specification) into CIM classes and instances that are stored in the CIM Repository.

Notes:

1. A superuser or user with write access to the default or specified namespace is the only user who can run the **cimmof** command to compile MOFs in the CIM Repository.
2. Superclasses must be compiled before subclasses. Otherwise, the compile will fail.
3. It is strongly recommended that MOF files include all necessary subclasses, so they can compile properly even if certain classes are not in the CIM Repository.

The **cimmof** command can be used to compile MOF files at any time after installation. If no input file is specified, stdin is used as the input.

The MOF Compiler requires that the input MOF files be in the current directory or that a fully qualified path be given. To simplify the specification of multiple MOF files in the **cimmof** command line, the MOF Compiler allows compiling from files containing a list of MOF files using the **include** pragma, similar to the following:

- #pragma include (″application.mof″)
- #pragma include (″server.mof″)

MOF files using the include pragma must be in the current directory or in a directory specified by the **-l** flag.

The **-n** *namespace* flag can be used to specify a namespace in which the CIM classes and instances will be compiled. A namespace is a logical unit for grouping classes and instances to control their scope and visibility. These namespaces are not physical locations, but are similar to logical databases containing specific classes and instances. If this flag is not specified, the default namespace is **root/cimv2**, except for the provider registration schemas.

For provider registration schemas, if the **-n** flag is not specified, the default namespace is **root/PG_InterOp**. If the **-n** flag is specified, the namespace specified must be **root/PG_InterOp**, otherwise, the following error message is returned:

```
The requested operation is not supported.
```

For provider MOF files, the namespace specified must match one of the namespaces specified in the **PG_ProviderCapabilities** class schema definition.

Flags

-h	Displays the command usage and the version number of the MOF compiler.
-I *path*	Specifies the path to the included MOF files. This path can be relative or absolute. If the input MOF file has #pragma includes, and the included files do not reside in the current directory, this option must be used to specify a path to them.
-n *namespace*	Specifies the namespace and overrides the default CIM Repository namespace. Any namespace specified here must be a valid CIM namespace. For provider registration schemas, specify the **root/PG_InterOp** namespace.
-w	Suppresses warning messages. When MOF files are compiling, if there are CIM elements such as classes or instances defined in the MOF files that already exist in the CIM Repository, the **cimmof** command returns warning messages. Use this flag to suppress those warning messages.

Exit status

0	The command completed successfully.
1	The command did not complete successfully, and an error message is written to stderr.

Standard Error

Error	**Description**
Error trying to create Repository in path localhost:5988: Cannot connect to: localhost:5988 Failed to set DefaultNamespacePath.	The CIM Server is not running. Start the CIM Server and run the **cimmof** command again.
Line number	An error was found at the line number line in the MOF file that the MOF compiler is parsing.
Operation cannot be carried out since the specified superclass does not exist.	The MOF compiler compiled a MOF file with one or more superclasses that are not in the CIM Repository.

Examples

1. To compile an MOF file named **processinfo.mof** into the default namespace in the CIM Repository, type the following:

   ```
   cimmof processinfo.mof
   ```

2. To compile the MOF file name **processinfo.mof** into the **root/application** namespace, type the following:

   ```
   cimmof -n root/application processinfo.mof
   ```

3. To compile the **CIMSchema25.mof** file defined in the **./MOF** directory that also contains #pragma includes for other MOF files in the **./MOF** directory, type the following:

   ```
   cimmof -w -I ./MOF MOF/CIMSchema25.mof
   ```

4. To list the arguments to the **cimmof** command and display the version of the MOF Compiler, type the following:

```
cimmof -h
```

Related information

The cimserver command.

Appendix D. cimmofl command

Purpose

Compiles MOF files into the CIM repository. Run this command while the CIM Server is not running.

Syntax

cimmofl -h

cimmofl [**-w**] [**-I** *path*] [**-n** *namespace*] *file...file*

Description

The **cimmofl** command is the command line interface to the Managed Object Format (MOF) Compiler. The MOF Compiler is a utility that compiles MOF files (using the MOF format defined by the DMTF CIM Specification) into CIM classes and instances that are stored in the CIM Repository. To see changes that are made to the repository, you must restart the CIM server.

Notes:

1. A superuser or user with write access to the default or specified namespace is the only user who can run the **cimmofl** command to compile MOFs in the CIM Repository.
2. Superclasses must be compiled before subclasses. Otherwise, the compile will fail.
3. It is strongly recommended that MOF files include all necessary subclasses, so they can compile properly even if certain classes are not in the CIM Repository.

The **cimmofl** command can be used to compile MOF files at any time after installation. If no input file is specified, stdin is used as the input.

The MOF Compiler requires that the input MOF files be in the current directory or that a fully qualified path be given. To simplify the specification of multiple MOF files in the **cimmofl** command line, the MOF Compiler allows compiling from files containing a list of MOF files using the **include** pragma, similar to the following:

- #pragma include (″application.mof″)
- #pragma include (″server.mof″)

MOF files using the include pragma must be in the current directory or in a directory specified by the **-I** flag.

The **-n** flag can be used to specify a namespace in which the CIM classes and instances will be compiled. A namespace is a logical unit for grouping classes and instances to control their scope and visibility. These namespaces are not physical locations, but are similar to logical databases containing specific classes and instances. If this flag is not specified, the default namespace is **root/cimv2**, except for the provider registration schemas.

For provider registration schemas, if the **-n** flag is not specified, the default namespace is **root/PG_InterOp**. If the **-n** flag is specified, the namespace specified must be **root/PG_InterOp**, otherwise, the following error message is returned:

```
The requrested operation is not supported.
```

For provider MOF files, the namespace specified must match one of the namespaces specified in the **PG_ProviderCapabilities** class schema definition.

Flags

-h	Displays the command usage and the version number of the MOF compiler.
-I *path*	Specifies the path to the included MOF files. This path can be relative or absolute. If the input MOF file has #pragma includes, and the included files do not reside in the current directory, this option must be used to specify a path to them.
-n *namespace*	Specifies the namespace and overrides the default CIM Repository namespace. Any namespace specified here must be a valid CIM namespace. For provider registration schemas, specify the **root/PG_InterOp** namespace.
-w	Suppresses warning messages. When MOF files are compiling, if there are CIM elements such as classes or instances defined in the MOF files that already exist in the CIM Repository, the **cimmofl** command returns warning messages. Use this flag to suppress those warning messages.

Exit status

0	The command completed successfully.
1	The command did not complete successfully, and an error message is written to stderr.

Standard Error

Error	**Description**
Error trying to create Repository in path localhost:5988 Cannot connect to: localhost:5988 Failed to set DefaultNamespacePath.	The CIM Server is not running. Start the CIM Server and run the **cimmofl** command again.
Line number	An error was found at the *line number* line in the MOF file that the MOF compiler is parsing.
Operation cannot be carried out since the specified superclass does not exist.	The MOF compiler compiled an MOF file with one or more superclasses that are not in the CIM Repository.

Examples

1. To compile an MOF file named **processinfo.mof** into the default namespace in the CIM Repository, type the following:

   ```
   cimmofl processinfo.mof
   ```

2. To compile the **processinfo.mof** file into the **root/application** namespace, type the following:

   ```
   cimmofl -n root/application processinfo.mof
   ```

3. To compile the **CIMSchema25.mof** file defined in the **./MOF** directory that also contains #pragma includes for other MOF files in the **./MOF** directory, type the following:

   ```
   cimmofl -w -I ./MOF MOF/CIMSchema25.mof
   ```

4. To list the arguments to the **cimmofl** command and display the version of the MOF Compiler, type the following:

```
cimmofl -h
```

Related information

The cimserver command.

Appendix E. cimprovider command

Purpose

Disables, enables, removes and lists registered CIM providers or CIM provider modules and module status

Syntax

cimprovider -d -m *module*

cimprovider -e -m *module*

cimprovider -r -m *module* [**-p** *provider*]

cimprovider -l [**-s** | **-m** *module*]

Description

The **cimprovider** command provides a command line interface to disable, enable, unregister, and list registered CIM providers. If a CIM provider is disabled, the CIM Server rejects any requests to the provider. If a CIM provider is enabled, the CIM Server forwards requests to the provider. If a CIM provider is unregistered, the CIM server will no longer have information about the provider.

In order to use the **cimprovider** command, the CIM Server has to be running and the specified provider or provider module, which is a grouping of providers in the same shared library, must be registered with Web-based Enterprise Management (WBEM) Services.

To list all providers in all modules, issue a **cimprovider -l** command, followed by the **cimprovider -l -m** for each listed module.

Specifying no options with the **cimprovider** command displays the command usage.

Note: The **-l** flag is available to any user, however, all other flags are available only to superusers.

Flags

-d

Disables the specified CIM provider module, placing all of its contained providers in the Stopped state. When a specified provider module is in the disabled state, any new requests to its contained providers are rejected.

If a user attempts to disable a module that is already disabled, an error message is returned and no action is taken.

-e

Enables the specified CIM provider module, placing all of its contained providers in the OK state. Providers contained in the enabled provider module are available to accept new requests.

If a user attempts to enable a module that is already enabled or attempts to enable a module that is disabling, an error message is returned and no action is taken.

-l	Displays all the registered provider modules when it is not used with the **-m** *module* option. Displays all the providers in the specified provider module when used with the **-m** *module* option.
-m *module*	Specifies the provider module for the operation.
-p *provider*	Specifies the provider for the operation.
-r	Removes, or un-registers, the specified provider module and all of its contained providers. If a provider is specified, only that provider is removed. Other providers in the same provider module are not affected. To re-register a provider or provider module, the registration schema for that provider or provider module must be reloaded using the **cimmof** command.
-s	Displays the status of provider modules.

Exit status

0	The command completed successfully.
1	The command did not complete successfully, and an explanatory message is written to stderr.

Examples

1. To disable the **OperatingSystemProvider** provider module and all of its contained providers, type the following:

   ```
   cimprovider -d -m OperatingSystemProvider
   ```

2. To enable the **OperatingSystemProvider** provider module and all of its contained providers, type the following:

   ```
   cimprovider -e -m OperatingSystemProvider
   ```

3. To remove the **OperatingSystemProvider** provider module and all of its contained providers, type the following:

   ```
   cimprovider -r -m OperatingSystemProvider
   ```

4. To remove the **PG_OperatingSystemProvider** provider that is contained within the **OperatingSystemProvider** provider module, type the following:

   ```
   cimprovider -r -m OperatingSystemProvider -p PG_OperatingSystemProvider
   ```

5. To list the registered provider modules, type the following:

   ```
   cimprovider -l
   ```

6. To list the registered provider modules and their status, type the following:

   ```
   cimprovider -l -s
   ```

7. To list the registered providers contained within the **OperatingSystemProvider** provider module, type the following:

   ```
   cimprovider -l -m OperatingSystemProvider
   ```

Related information

The cimmof and cimserver commands.

Appendix F. cimserver command

Purpose

Starts and stops the CIM Server.

Syntax

cimserver [[**-v** | **-h** | **-s**] | [*configProperty=value* . . .]]

Description

The **cimserver** command allows you to start and stop the CIM Server.

Flags

-h	Prints the usage statement for this command.
-s	Stops the CIM Server.
-v	Displays the CIM Server version number.

Parameters

configProperty=value	Starts the CIM Server with the *configProperty* set to *value*. Separate multiple *configProperty=value* pairs with a blank space. This command line option overrides existing or default values in the **cimserver_current.conf** and **cimserver_planned.conf** configuration files.

Exit status

0	The command completed successfully.
>0	The command did not complete successfully, and an explanatory message is written to stderr.

Examples

To start the CIM Server with a trace of level 4 on all components, type the following:

```
cimserver traceLevel=4 traceComponent=ALL
```

Related information

The cimconfig command.

Appendix G. cimuser command

Purpose

Adds, modifies, removes or lists authorized users of the Pegasus CIM Server.

Syntax

cimuser -a -u *username* [**-w** *password*]

cimuser -m -u *username* [**-w** *password*] [**-n** *newpassword*]

cimuser -r -u *username*

cimuser -l

Description

The **cimuser** command allows you to manage CIM users by adding, deleting, listing, and modifying the passwords of users you authorize to use the Pegasus CIM Server.

The default location of the CIM password file is **/opt/freeware/cimom/pegasus/etc/cimserver.passwd**, but can be changed by setting the passwordFilePath property using the **cimconfig** command. For more information about **cimconfig**, see Appendix B, “cimconfig command,” on page 113.

If you are completing a task that requires a password and you do not specify the password with the **-w** *password* flag, you will be prompted to enter the password. This password must be no more than 8 characters. If more than 8 characters are entered, only the first 8 characters will be recognized as the password.

When adding a new CIM user, the CIM user must be a valid user on the local system. There is no default authorization permissions set for newly added users. For more information on adding authorization information, see Appendix A, “cimauth command,” on page 111.

Specifying no options with the **cimuser** command will display the usage statement.

Flags

- a	Adds a CIM user.
- l	Lists all current CIM users.
- m	Modifies the password for the user specified in the **- u** *username* option.
- n *newpassword*	Identifies the new password for the user specified in the **- u** *username* option.
- r	Removes a CIM user. Any authorizations for the specified user will be deleted.
- u *username*	Identifies the user you want to add, remove, or for whom you want to modify the password.
- w *password*	Identifies the password for the user specified in the **- u** *username* option.

Return values

The **cimuser** command returns one of the following values:

0	The command completed successfully.
1	An error occurred. An explanatory message is written to stderr.

Examples

1. To add a new user named **guest** with a password of **guest**, type the following:

   ```
   cimuser -a -u guest -w guest
   ```

2. To add a new user named **guest** without specifying the password in the command, type the following:

   ```
   cimuser -a -u guest
   Please enter your password:
   Please re-enter your password:
   ```

   Because you did not specify the password in the initial command string with the **- w** *password* option, you are prompted to enter and re-enter the password.

3. To change the password for user **guest** to **bar**, type the following:

   ```
   cimuser -m -u guest -w guest -n bar
   ```

4. To remove the user named **guest**, type the following:

   ```
   cimuser -r -u guest
   ```

Related information

The cimauth command, the cimconfig command.

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Common Information Model Guide

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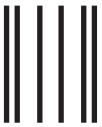

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