HP-UX DMI 2.0 User's Reference

HP-UX/HP 9000 Computers

HP-UX Desktop Management Interface

Manufacturing Part Number: Not Assigned
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Contents

1 Accessing DMI Information

This chapter describes how to install DMI and the DMI information hierarchy.

Installing DMI

Obtain DMI by downloading System Configuration Repository and DMI from the SCR+DMI website. Go to http://software.hp.com. Then select “Network & System Administration”. Scroll down to the “Desktop Management Interface 2.0 for HP-UX” title and click on it.

You must be logged in as root user to download and install the SCR+DMI filesets.

The SCR+DMI website contains three downloadable depots.

- Download the B6814AA depot (6814AA.tar), if you want to install SCR+DMI software on a PA-RISC Series 700 workstation running HP-UX 10.20.
- Download the B6260AA depot (6260AA.tar), if you want to install SCR+DMI software on a PA-RISC Series 800 workstation or server running HP-UX 10.20.
- Download the B6816AA depot (6816AA.tar), if you want to install SCR+DMI software on a PA-RISC Series 700 or Series 800 workstation or server running HP-UX 11.00.

After downloading the appropriate depot, use swinstall to install the filesets. On the system where you want install the filesets, type:

`/usr/bin/swinstall -s` *`/tmp/depot.tar`*

Substitute the appropriate path and depot name for depot.

You can choose which filesets in the depot to install. If you only want the DMI development kit, for example, you can install only the DMI-PRG and DMI-SHLIBS filesets.

To install all depot filesets, click on Actions, in the swinstall window, and select Mark for Install. This marks all filesets. To install a subset of the depot filesets, select the filesets you want before choosing Actions and Mark for Install. Only the filesets you select will be marked.

The DMI Information Hierarchy

Information about hardware and software components managed by DMI is organized in groups. A group is a collection of attributes about devices, such as disk storage or peripherals or software. An attribute is a piece of data about a device or software in a group. DMI presents device or software group information either as a single line of data or as a table, with a row for each device or software instance and a column for each attribute. For example, a group table for hard disk drives might look like Table 1.

Table 1-1 Example of a Hardware Component Group Table

Index	Disk Storage Access	Disk Storage Media	Disk Storage Removable	Disk Storage Capacity
Drive 1	1	3	Removable	2100
Drive 2	1	3	Removable	8000
Drive 3	2	3	Fixed	24000
Drive 4	2	3	Fixed	24000

In this example, Drive 1 is read and write accessible, is a hard disk, can be removed from the system, and has a capacity of 2,100 kilobytes. Drive 3 is read only and cannot be removed.

HP provides a file for organizing component group data called the Management Information Format (MIF). DMI developers can use this file to create the data base that provides management information on demand or by subscription. DMI users see this kind of information when they use the DMI Browser. The DMI Browser (at /usr/dmi/bin/browser) looks at component group data in the data base and displays the data.

Component Group Descriptions

This document describes the component groups in the most recent HP-UX hardware and software MIF files and the attributes they contain. With this information, system users can determine where in the database they should look for specific information about a hardware or software component. In many cases, DMI software determines what these attribute values are and changes the tables each time the system changes. In other cases, information in the data base is static until someone enters new information.

For detailed information on the provided MIF files and the attributes they contain, see:

- ""HP-UX System Component Information Groups" on page 11," contains descriptions of the HP-UX System MIF component groups and their attributes.
- "The HP-UX Installed Software Definition MIF Groups" on page 43, contains descriptions of the software MIF component groups.

Quick reference information, in the form of diagrams showing all the groups, and their dependencies, is provided in:

- "HP-UX Systems MIF Groups Quick Reference" on page 65
- "HP-UX Software MIF Groups Quick Reference" on page 71

2 HP-UX System Component Information Groups

The following groups are in the HP-UX System MIF. Each group description includes a list and description of the group's attributes. These attributes are managed in the database as a row or a table. If a group represents only one device, it has only one row of attributes and is a scalar group. If it represents more than one device, it is a table, or tabular group, with a row for each device. In a tabular group, at least one attribute for each device is a key attribute -- an attribute that can uniquely identify that device. DMI uses key attributes to retrieve information about the correct device. In the group lists, key attributes are shown in **bold** type.

General System Information

The following groups provide general information about systems.

Component ID

Every MIF begins with a ComponentID group that contains basic manufacturing information about the component. The following list defines the attributes in this scalar group.

Table 2-1 Component ID

Manufacturer	Name of the organization that produced this component.
Product	Product name for this component.
Version	Version number for this component.
Serial number	Serial number of this component.
Installation	Time and date of the last installation of this component. This information is automatically determined during installation.
Verify	A number code that signifies whether the component is installed and working:
	An error occurred; check status mode
	This component does not exist
	Verify is not supported
	(Reserved)
	This component exists, but the functionality is untested
	This component exists, but the functionality is unknown
	This component exists, and is not functioning correctly
	This component exists, and is functioning correctly

General Information

This scalar group includes system administration information about the component. The following list defines the attributes in this group. The system automatically assigns System Name, System Boot Up Time, System Date Time, and Security Token. The user must input all other values using the graphical user interface invoked with the command:

/usr/dmi/bin/hpuxciInstall

Table 2-2 General Information

System Name	Node name of this system.
System Location	Physical location of this system.
System Primary User Name	Name of the system's primary user or owner.
System Primary User Phone	Phone number of the system's primary user or owner.
System Boot Up Time	Time when the system was last booted.
System Date Time	System's current date and time.
System Secondary User Name	Name of the secondary user or owner of this system.
System Secondary User Phone	Phone number of the system's secondary user or owner.
System Primary Pager	Phone number to activate the system's primary pager.
System Secondary Pager	Phone number of the system's secondary user or owner.
Security Token	**Token needed to access this group's data. [Key]**
System Model	The detail hardware model information
System Serial Number	The serial number for this system
System Software Identifier	The software identifier for the system.

Operating System

This tabular group contains information about the operating system software on the system. The following table shows the attributes and information about each operating system that this group contains.

Table 2-3 Operating System

Operating System Index	Numerical index for this group. [Key]
Operating System Name	Name of this operating system.
Operating System Version	Version number of this operating system.
Primary Operating System	Shows “true” if this is the primary operating system.
Operating System Description	A description of this operating system.
Operating System Capability	The capability (32, 64 bits) of this operating system.

Host System

This scalar group contains more detailed system administration information about the host system. The following list defines the attributes in this group.

Table 2-4 Host System

System Uptime	Time in seconds since the host was last started.
Initial Load Device	A numerical index into the Host Device group that corresponds to the device upon which the load software resides.
Initial Load Parameters	Parameters supplied to the load device when requesting the initial operating system configuration from that device.
Number of Users	Number of user sessions currently active on the system.
Number of Processes	Number of process contexts loaded or running on the system.
Max Processes	Maximum number of process contexts this system can support. A value of zero means that the number cannot be determined.
Mounted File System Number	Total number of currently mounted file systems.
Security Token	**Security token for accessing the this group's data. [Key]**
Architecture	The system's architecture.
Language	The system's language.
Timezone	The timezone the system resides in.
Hardware Capability	The hardware capability (32, 64 bits) of the system
Keyboard	The keyboard the system supports.
Graphics Resolution	The system's graphics resolution.
Graphics Planes	The system's graphics planes.
CPU Speed	The CPU's speed.

Host Physical Memory

This scalar group provides information about one of the memory devices in the SNMP Storage group.

Table 2-5 Host Physical Memory

Physical Main Memory Size	Physical main memory the host contains in Megabytes.

Host Logical Memory

This tabular group provides swap memory information about a host. The following list defines the attributes in this group.

Table 2-6 Host Logical Memory

Logical Memory Index	**Index of this group. [Key]**
Swap Space Name	Block special file name or file system directory that identifies this swap space.
Swap Type	Function of this swap space, as follows: Device Local File System Network File System Memory
Swap Priority	Order in which space is taken.
Swap Space Size	Total available space, in kilobytes.
Swap Space Minimum Size	Minimum size for file system, in kilobytes.
Swap Space Maximum Size	Maximum size for file system, in kilobytes. Zero means no maximum limit defined.
Swap Space Reserved Size	Reserved size for file system, in kilobytes.
File System Index	Index to the Host File System group, if swap space created on a file system.
Storage Index	Index to the Host Storage group, if swap space created on a raw device.
Logical Index	Pointer to the Host Logical Volume group, if swap space created on a logical volume.

Host Storage

This tabular group contains all logical storage areas on a host. There is an entry for each local area of storage that is allocated and has fixed resource limits. The amount of storage shown is the amount actually usable. It excludes space used internally for formatting or file system reference information. This table is a useful diagnostic tool for “out of memory” and “out of buffers” failures. It can also be a useful performance monitoring tool for tracking memory, disk, or buffer usage.

The following list defines the attributes in this group.

Table 2-7 Host Storage

Host Storage Index	**A unique value that identifies each logical storage area the host contains. [Key]**
Storage Type	Type of storage performed by a logical storage area: Reserved Other RAM Virtual Memory (paged or swapped) Fixed Disk Removable Disk Floppy Disk Compact Disc RAM Disk
Description	Type and instance of the storage represented by a logical storage area.
Allocation Unit Size	Size of data objects allocated from this pool, in bytes. If this logical storage area is monitoring sectors, blocks, buffers, or packets, this number will commonly be greater than one. Otherwise it will typically be one.
Total Allocation Units	Storage size of this logical storage area, in allocation units.
Allocation Units Used	Amount of allocated storage used in this logical storage area, in allocation units.
Storage Allocation Failures	Number of requests for storage to this logical storage area that could not be honored because of insufficient storage space. (Always 0)

Host Device

This tabular group contains common information for all devices on the host system. It is useful for identifying and diagnosing devices on a system. Some devices also have device-specific tables for more detailed information.

The following list defines the attributes in this group. This group generates events and has an associated event generation group.

Table 2-8 Host Device

Host Device Index	**Unique number for each device on the host. Remains constant from one re-initialization of the agent to the next. [Key]**

Table 2-8 Host Device

Device Type	Number that indicates the device type, as follows: Reserved Other Unknown Processor (Not used) (Not used) Disk Storage Reserved Reserved Reserved Video Audio Coprocessor Keyboard Modem Parallel Port Pointing Serial Port Tape Clock Volatile Memory Non-volatile Memory If the device is a processor (3), an entry in the Processor Table corresponds to the device. If the device is disk storage, an entry in the Disk Storage Table corresponds to the device.
Device Description	Textual description of this device, including the device's manufacturer and revision and, optionally, its serial number.
Device ID	Product ID of the device.

Table 2-8 Host Device

Device Status	Current operational state of the device, indicated by the following numbers: Reserved Unknown (the state is unknown) Running (the device is running with no unusual error conditions) Warning (the device has an unusual error condition but is operational) Testing (the device is being tested and is unavailable for use) Down (the device is not available for any use)
Device Errors	Number of errors detected on the device. (Always 0)
Hardware Path	The hardware path for this device.
Hardware Type	The hardware type for this device.
Device Class	The device class for this device.
Associated Driver	The associated driver for this device.

Standard Event Generation Template

DMI includes standard classes of groups. The Component ID group, the first group in this chapter, is one class. Event Groups, described below, are another class.

An event is a change of state or any other significant condition in a hardware or software device. It can be a problem that needs attention or simply a change that some other device or manager wants to know about. An event generation group provides information about events generated by a specific component group. A component MIF contains a tabular event generation group tailored to each component group that can generate an event.

The following list defines the attributes in a standard event generation group.

Table 2-9 Standard Event Generation Template

Event Type	**Numerical indication of the type of event that has occurred: [Key]**
	Physical device status change
	Initialization failure
	Configuration error
Event Severity	Severity of the event, as follows:
	Monitor
	Information
	OK
	Non-Critical
	Critical
	Non-recoverable
Is Event State-Based?	A state-based event reports a change of state of a device, such as a printer running out of paper. This attribute is “true” if the event is state-based,
Event State Key	If the event is state-based, this attribute is the number of the row in the Event State group associated with the component.
Associated Group	**Name of the group associated with the events defined in this group. Shown graphically in the appendix. [Key]**
Event System	Identifies the part of the component that caused the event, such as the printer’s paper feeder.

Table 2-9 Standard Event Generation Template

Event Subsystem	Identifies more precisely the part of the component that caused the event, such as “bin1” or “bin2”.
Event Solution	Solution to the problem that caused the event: Solution unknown
Instance Data Present	Indicates whether the second event block contains instance-specific data.

Host Processor

This tabular group provides information about the processor in each host. The following list defines the attributes in this group. This group is an event generator and has an associated event generation group like the one shown under “Standard Event Generation Template” on page 22.

Table 2-10 Host Processor

Host Processor Index	**Row number of this processor in the table of processors associated with this processor group. [Key]**
Processor Firmware ID	Product ID of the firmware associated with this processor.
Processor Load	Average percentage of time during the past minute that this processor was not idle.
Processor Allocated	Indicates whether the processor is allocated.

Host Disk Storage

This tabular group provides information about disk storage devices within the system. Disk storage devices that are accessed remotely over a network are not included here.

The following list defines the attributes in this group. This group is an event generator and has an associated event generation group like the one under “Standard Event Generation Template” on page 22.

Table 2-11 Host Disk Storage

Host Disk Storage Index	**Unique number for each storage device contained by the host. [Key]**
Disk Storage Access	Reflects the storage media type, write-protect mechanisms, and device configurations that affect the entire device: Read/Write Read Only
Disk Storage Media	Identifies the media used in this disk storage device: Other Unknown Hard Disk Floppy Disk Optical Disk ROM Optical Disk WORM Optical Disk RW RAM Disk
Disk Storage Removable	Indicates whether the storage media may be removed from the disk storage device: False True
Disk Storage Capacity	Provides the total size of this disk storage device in kilobytes.

Host File System

This tabular group provides information about the file systems in each host. The following list defines the attributes in this group.

Table 2-12 Host File System

Host File System Index	Index into the table of mounted files systems represented by this group. [Key]
Mount Point Name	Name of the root directory of this file system.
Mounted Special Device Name	Name of the special device where this file system is mounted.
Remote Mount Point Name	Name and perhaps the file system name of a local partition that is mounted from a remote server. The field is blank if the file system is local.
File System Type	File system type.
File System Access	Identifies whether the file system is readable and writable or just readable: Read-Write Read only
File System Bootable	Indicates whether a file system is bootable: Not bootable Bootable
Storage Index	Row number in the Host Disk Storage group of the disk on which this file system resides.
Last Full Backup	Date of the last full backup of this file system. (Currently not supported on UNIX systems)
Last Partial Backup	Date of the last partial backup of this file system. (Currently not supported on UNIX systems)
Logical Index	Index to a row in a table.
Total INodes	Total number of inodes in the file system.
Free INodes	Total number of unallocated inodes in the file system.
Data Capacity	Data capacity of the file system in kilobytes.
Free Capacity	Free data capacity of the file system in kilobytes.
Reserved Data Capacity	Reserved data capacity of the file system in kilobytes.

Host HFS Tuning Parameters

This tabular group provides file system parameters for host file systems (HFS). The following list defines the attributes in this group.

Table 2-13 Host HFS Tuning Parameters

Host HFS Tuning Parameters Index	Index to this group. [Key]
Host File System Index	Index to the Host File System group.
Long File Name Flag	Indicates whether long file names are enabled: Unknown Long file names supported Long file names not supported
Large File Feature	Indicates whether file system supports large files: Unknown Large files supported Large files not supported
Minifree	Minimum percentage of free disk spaces allowed.
Block Size	Primary block size of file system.
Fragment Size	Fragment block size of file system.
Bytes per Inode	Density of inodes in file system.
Sectors per Track	Number of sectors per track on the disk.
Tracks per Cylinder	Number of tracks per cylinder on the disk.
Disk Cylinders per Cylinder Group	Number of disk cylinders per cylinder group.
Disk Revolutions per Second	Number of disk revolutions per second.
Rotational Delay	Number of milliseconds to service a transfer completion interrupt and initiate a new transfer on the same disk.

Process Information

This tabular group provides information about the processes currently running on a host. The following list defines the attributes in this group.

Table 2-14 Process Information

Process ID	**Process ID of a currently executing process and the index to the Process Table. [Key]**
Parent Process ID	ID of the parent process of this currently executing process.
Process Group ID	Group ID of this currently executing process.
Real User ID	ID of the real user of this currently executing process.
Process TTY	TTY associated with this currently executing process.
Process Name	Name of this currently executing process.
Module Path	Command path of the currently executing process.
Parameters	Operating system parameters provided to the currently executing process.
Process State	Identifies the state of the currently executing process as follows: Nonexistent Sleeping Waiting Running Intermediate Terminated Stopped Growing
Process Priority	Schedule priority of the currently executing process.
Process Nice Value	Nice value of the currently executing process. The nice value is used to compute the process' priority among competing processes.
Process CPU Time	Percentage of CPU time the currently executing process is consuming.

Table 2-14 Process Information

Process System Time	Number of seconds the currently executing process has spent executing operating system code.
Process User Time	Number of seconds the currently executing process has spent executing user code.
Process Real Total	Number of kilobytes of total real space the currently executing process has used.
Process Real Text	Number of kilobytes of real text space used by the process.
Process Real Data	Number of kilobytes of real data space the currently executing process is using.
Process Real Stack	Number of kilobytes of real stack size the currently executing process is using.
Process Virtual Text	Number of kilobytes of virtual text space the currently executing process is using.
Process Virtual Data	Number of kilobytes of virtual data space the currently executing process is using.
Process Virtual Stack	Number of kilobytes of virtual stack space the currently executing process is using.
Process Virtual Shared Memory	Number of kilobytes of virtual shared memory the currently executing process is using.
Process Virtual Memory Mapped File Size	Number of kilobytes of virtual space for memory mapped files the currently executing process is using.

Kernel Configure Group

This group contains the kernel configure parameters and their values as defined `/stand/system`.

Table 2-15 Kernel Configure Group

Kernel Configure Group Index	Index of Kernel Configure Group [Key]
Parameter Name	Name of kernel configure parameter
Parameter Value	Value of the kernel configure parameter

Host Device File

This group contains the device files for the devices that exist on the host.

Table 2-16 Host Device File

Host Device File Index	Index of Device File Group. [Key]
Device File Type	Type of the device file: Unknown Block Character
Device File Name	Name of the device file.
Host Device Group Index	Pointer to the Host Device Group

Logical Volume Manager

Separate disk storage devices and partitions on a host can be combined logically and treated as one large volume. This combination of disks and partitions becomes a logical volume to the DMI and looks like one large storage device. In the MIF it is called a Logical Volume Manager (LVM) group. The LVM group consists of the Host Volume group, the Host Logical Volume group, the Host Physical Volume group, and the Host LVM Configuration group.

- “Host Volume Group” on page 31
- “Host Logical Volume” on page 33
- “Host Physical Volume” on page 35
- “Host Physical Volume Group” on page 36
- “Host LVM Configuration” on page 36

Host Volume Group

This tabular group defines the LVM Volume group and the logical storage parameters. The following list defines the attributes in this group. This group is an event generator and has an event generation group like the one shown under “Standard Event Generation Template” on page 22.

Table 2-17 Host Volume Group

Host Volume Group Index	Index of volume group. [Key]
Volume Group Name	Name assigned to a volume group.
Volume Group Access Permission	Whether a volume group is writable: Read only Read/Write
Volume Group Status	Whether a volume group is available: Available Unavailable
Physical Extent Size	Size in Megabytes of the fundamental physical extent in the logical volume.
Volume Group Capacity	Number of physical extents in the volume group.
Volume Group Allocated	Number of physical extents allocated in the volume group.
Volume Group Free Space	Number of free physical extents in the volume group.
Max Number of Physical Volume	Maximum number of definable physical volumes in the volume group.
Max Number Physical Extent per Physical Volume	Maximum number of allocatable physical extents in the physical volume.
Number of Defined Physical Volume	Number of physical volumes defined in the volume group.
Number of Active Physical Volume	Number of physical volumes active in the volume group.
Max Number of Logical Volume	Maximum number of definable logical volumes in the volume group.
Number of Defined Logical Volume	Number of logical volumes currently defined in the volume group.

Table 2-17 Host Volume Group

Number of Active Logical Volume	Number of logical volumes currently active in the volume group.
Number of Physical Volume Group	Total number of physical volumes in the volume group.

Host Logical Volume

An LVM logical volume is a virtual disk partition that the file system or user applications can recognize. It appears like a physical disk to upper layer components. This tabular group provides information about logical volumes.

The following list defines the attributes in group. This group is an event generator and has an associated event generation group like the one under “Standard Event Generation Template” on page 22

Table 2-18 Host Logical Volume

Host Logical Volume Index	Index number for this logical volume in the volume group. [Key]
Logical Volume Name	Name of the logical volume.
Logical Volume Access Permission	Shows whether the logical volume is writable: Read only Read/Write
Logical Volume Status	Availability status of the logical volume: Available/Stale Available/Syncd Available Unavailable
Logical Extent Size	Size of the logical extent in Megabytes.
Logical Volume Capacity	Number of logical extents in the logical volume.
Mirror Copy Number	Number of the mirrored copy of the logical volume.
Volume Group Index	Pointer for the logical volume to the Host Volume Group.
Consistency Recovery	Consistency recovery method for the Mirrored Logical Volume: MWC NOMWC NONE
Schedule Policy	Access scheduling policy for the Logical Volume: Striped Sequential Parallel
Stripe Number	Number of stripes for the Logical Volume.

Table 2-18 Host Logical Volume

Stripe Size	Size of stripes for the Logical Volume.
Bad Block Relocation	Switch for the bad block relocation feature: OFF ON
Allocation Policy	Logical Volume allocation policy: Non-Strict Non-Strict/Contiguous Strict Strict/Contiguous PVG-Strict PVG-Strict/Contiguous
Staled Logical Extent	Counter of staled logical extents in the Logical Volume. This counter is valid only if the Logical Volume is mirrored.
Read Access Number	Counter of read accesses to the Logical Volume. Value obtained from pstat.
Write Access Number	Counter of write accesses to the Logical Volume. Value obtained from pstat.

Host Physical Volume

An LVM host physical volume is a disk storage device that is part of an LVM logical volume. This tabular group provides information about the physical volumes in a logical volume.

The following list defines the attributes in this group. This group is an event generator and has an associated event generation group like the one under “Standard Event Generation Template” on page 22

Table 2-19 Host Physical Volume

Host Physical Volume Index	Index of the host Physical Volume in this system. [Key]
Physical Volume Name	Name of a physical volume in the system.
Alternate Physical Volume Name	Path name of an alternate physical volume that is linked to a physical volume, if one is.
Storage Index	Pointer to a Host Disk Storage group.
Volume Group Index	Numerical pointer to Host Volume group.
Physical Volume Group Index	Pointer to a Host Physical Volume group.
Physical Volume Status	Availability of a Physical Volume: Available Unavailable
Physical Extent Size	Size in Megabytes of a physical extent in a Physical Volume.
Physical Volume Capacity	Number of physical extents in the whole Physical Volume.
Allocated Physical Extent	Number of physical extents in the allocated physical volume space of a Host Physical Volume.
Free Physical Extent	Number of physical extents in the free physical volume space of a Host Physical Volume.
Staled Physical Extent Number	Counts the number of staled physical extents in a Host Physical Volume.

Host Physical Volume Group

This is the HP-UX LVM Physical Volume Group. This tabular group has pointers to the LVM Physical Volume table. The following list defines the attributes in this group.

Table 2-20 Host Physical Volume Group

Host Physical Volume Group Index	Numerical index of the Physical Volume group. [Key]
Physical Volume Group Name	Name of a Physical Volume Group in the system.
Volume Group Index	Pointer to the Volume Group table

Host LVM Configuration

This is a tabular group of LVM configuration information, including logical volumes and physical volumes. It describes the relationship between a logical volume and physical volumes.

The following list defines the attributes in this group. This group is an event generator and has an associated event generation group like the one under “Standard Event Generation Template” on page 22.

Table 2-21 Host LVM Configuration

Host LVM Configuration Index	Index for this table. [Key]
Logical Volume Index	Pointer to the Host Logical Volume entity.
Physical Volume Index	Pointer to the Host Physical Volume entity.
Logical Volume Mirror Copy	Index of a mirrored Logical Volume.

Network Configuration Groups

The following groups provide information about the network to which the system connects.

Network Interface

This tabular group describes the available network interface on an HP system. The following list defines the attributes in this group.

Table 2-22 Network Interface

Network Interface Index	**Index into the network interface rows. [Key]**
Interface Name	Name of network interface defined for the HP-UX system.
IP Address	IP address assigned to this interface in dot notation format or as the host name that appears in /etc/hosts.
Subnet Mask	Subnet mask for this interface in dot notation format.
Broadcast Address	Broadcast address assigned to this interface in dot notation format.
Interface State	Current status of the interface: Unknown Up Down
DHCP Enabled	Whether DCHP is enabled or not: Unknown Disabled Enabled
Station Address	Interface station address (MAC address).
Interface Card Hardware Path	Hardware path of the network interface card.
Hostname	The name of the host system.

Static Routing Definition

This tabular group is the static part of the routing information definitions. Information is read from the file /etc/rc.config.d/netconf. The following list defines the attributes in this group.

Table 2-23 Static Routing Definition

Static Routing Definition Index	**Index into the static routing definition rows. [Key]**
Route Destination	Hostname that appears in /etc/hosts or the IP address followed by <host>, <net>, or <default>. May also be in dot notation format.
Route Mask	Route mask in dot notation format.
Route Gateway	Hostname that appears in the /etc/hosts file.
Route Count	Number of gateways to the route destination: Unknown Local Remote
Route Argument	Argument list for the /usr/sbin/route command.

DNS Configuration

This scalar group provides the DNS configuration, obtained from the /etc/resolv.conf file. The following list defines the attributes in this group.

Table 2-24 DNS Configuration

Domain Name	Local domain name.
Search	Search list for host-name lookup.
Server IP Address(es)	Specifies the Internet (IP) address or addresses in dot notation format of the name server(s) that the resolver should query. Up to nine name servers.

NIS Configuration

This scalar group obtains information from the /etc/rc.config.d/namesvrs file. The following list defines the attributes in this group.

Table 2-25 NIS Configuration

Domain Name	NIS domain name.
Master Server	NIS Master Server Flag: Unknown This node is not the NIS master server. This node is the NIS master server.
Slave Server	NIS slave server flag: Unknown This node is not the NIS slave server. This node is the NIS slave server.
Server Wait Flag	Makes the host wait for a response for the NIS server: Unknown Wait No Wait

NTP Configuration

This scalar group contains only NTP server addresses. It contains the following attribute.

Table 2-26 NTP Configuration

Server Address	The hostname that appears in the /etc/hosts file or an IP address in dot notation format.

System Contact Information

This tabular group is a place where administrative contact information for the system can be maintained. It can hold multiple contact records, such as backup administrator contact information. The following list defines the attributes in this group. The system automatically assigns Contact Index and Security Token. The user must input all other values using the graphical user interface invoked with the command:

`/usr/dmi/bin/hpuxciInstall`

Table 2-27 System Contact Information

Contact Index	**Index for this table. [Key]**
Contact Name	Name of the administrator or other contact.
Contact Type	Identifies the contact mechanism, as follows: Other Unknown Telephone Cellular Telephone Pager Alphameric pager Beeper FAX E-mail Voice Mail Audible Alarm Visible Alarm WWW URL
Contact Information	Information needed to use the contact type devices, such as telephone number, e-mail address, etc.
Security Token	**Security token needed to access the contact data. [Key]**

3 The HP-UX Installed Software Definition MIF Groups

The following sets of groups are in the HP-UX Installed Software Definition MIF.

General Groups

This section covers the general software description groups:

Component ID

This scalar group provides manufacturing information about the software that this MIF defines. The following list defines the attributes in the HP-UX Installed Software Definition Component ID group.

Table 3-1 Component ID

Manufacturer	The name of the organization that produced this software.
Product	Name of this software.
Version	Version number for this software.
Serial number	Serial number of this software.
Installation	The time and date of the last installation of this software. This information is automatically determined during installation.
Verify	A number code that signifies whether the software is installed and working: An error occurred; check status mode. This software does not exist. The verify is not supported. (Reserved) This software exists but the functionality is untested. This software exists but the functionality is unknown. This software exists but is not functioning correctly. This software exists and is functioning correctly.

Software Location

This scalar group defines the location of the software. The following list defines the attributes in this group.

Table 3-2 Software Location

Path	Software collection location identifier on a host.
Catalog	Along with “Path', identifies a single installed software object.
Dfiles	Directory within the catalog/ directory that holds files that store attributes of the installed software.
Layout Version	(Included for future use.)
Pfiles	Directory in the catalog/product_control_directory/ directory that contains control files for each product.

Vendors

This tabular group provides information about the vendors associated with products and bundles in this software. The following list defines the attributes in this group.

Table 3-3 Vendors

Tag	**Short identifying name of a vendor. [Key]**
Index	**Unique value for each occurrence of a vendor. [Key]**
Title	Longer vendor name for presentation purposes.
Description	More detailed description of the vendor.

Bundle Groups

This section covers the groups that describe software bundles.

Bundles

This tabular group defines a software object that is a grouping of other software objects, such as all or parts of other bundles and products. The following list defines the attributes in this table.

Table 3-4 Bundles

Bundle Software Specification	Software specification that uniquely identifies a bundle. [Key]
Tag	Short name associated with a bundle.
Architecture	Vendor-defined string to distinguish variations of a bundle.
Location	Value set when installing software and used for resolving software specifications for installed software.
Qualifier	Used to identify a bundle or set of bundle versions using a logical name.
Revision	Vendor-defined string describing the revision of a bundle.
Vendor Tag	Short identifying name of the vendor that supplied the bundle.
Create Time	Time that the catalog information for this bundle was first written, in seconds.
Description	More detailed description of the bundle.
Modification Time	Time that the catalog information for this bundle was last written.
Size	Sum of the sizes in bytes of all files and control files contained within the software bundle.
Title	Longer name associated with the software bundle.
Copyright	Copyright notice for the bundle.
Directory	Vendor-defined directory commonly associated with a bundle.
Instance Identifier	Single attribute that distinguishes versions of products and bundles with the same tag in an exported catalog.
Is Locatable	Indicates whether any contents in a bundle have the “Is Locatable” attributes set to true.
Layout Version	Included for future use.
Machine Type	Used to determine machine compatibility.

Table 3-4 Bundles

Number	Used to store such vendor-defined values as part number, order number, or serial number.
Operating System Name	For example, HP-UX; used to determine operating system software compatibility.
Operating System Release	For example, B.11.00_32; used to determine release number compatibility.
Operating System Version	Used to determine software version compatibility.
Is Patch	Indicates whether this bundle is a patch.
Install Software	Location of the source from which the bundle was installed.
Data Model Revision	POSIX version compatibility for packaging and installation.
Install Date	Date when the bundle was installed on the system.

Bundle Contents

This tabular group provides the software specifications that define a bundle's contents. The following list defines the attributes in this group.

Table 3-5 Bundle Contents

Bundle Software Specification	**Software specification of the bundle. [Key]**
Index	**Unique value for each specification of bundle and content. [Key]**
Content	The software specification of the bundle's content.

Product and Subproduct

This section covers the groups that describe products and subproducts:

Products

This tabular group defines a software object used to define a set of related software. The following list defines the attributes in this group.

Table 3-6 Products

Product Software Specification	**Uniquely identifies the product. [Key]**
Tag	Short name associated with the product.
Architecture	Vendor-defined string used to distinguish variations of the product.
Location	Path beneath which the relocatable files of the product are stored. A specific product location refers to all filesets of that product installed at that location. Used for resolving installed software specifications.
Qualifier	Specified by user when installing software to identify a product or set of products using a logical name.
Revision	Product revision identified by the vendor.
Vendor Tag	Short identifying name of the vendor that supplied the product.
Create Time	Time that the catalog information was first written, in seconds since the Epoch (Jan. 1, 1970).
Description	More detailed description of the product.
Modification Time	Time that the catalog information was last written.
Size	Sum of the sizes in bytes of all files and control files in the product.
Title	Longer name associated with the product.
All Filesets	A list of all filesets defined for the product.
Control Directory	Name of the product control directory below which the control files for the product are stored within an exported catalog.
Copyright	Copyright notice for the product.
Directory	Vendor-defined directory commonly associated with the product.
Instance Identifier	Single attribute that distinguishes versions of products with the same tag.
Is Locatable	Indicates whether any of the filesets in the product have the “Is Locatable” attributes set to “true”.

Table 3-6 Products

Post Kernel Path	Path to the script that is run after kernel filesets have been installed.
Layout Version	Included for future use.
Machine Type	Identifier to determine machine compatibility.
Number	Used to store such vendor-defined values as part number, order number, or serial number.
Operating System Name	Identifier used to determine operating system software compatibility.
Operating System Release	Identifier used to determine operating system software release compatibility.
Operating System Version	Identifier used to determine operating system software version compatibility.
Is Patch	Indicates whether this product is a patch.
Install Source	Indicates the source from which the product was installed.
Data Model Revision	POSIX version compatibility for the packaging and installation.
Install Date	Date when the product was installed on the system.

Product Contents

This tabular group contains the subproduct software specifications, fileset software specifications, and control file names that make up a product definition. The following list defines the attributes in this group.

Table 3-7 Product Contents

Product Software Specification	**Product software specification. [Key]**
Index	**Unique value for each specification of product and content. [Key]**
Content	Subproduct software specification, fileset software specification, or control file name.
Content Type	Content type: control file subproduct fileset

Product Control Files

This tabular group defines the vendor-supplied control scripts. The following list defines the attributes in this group.

Table 3-8 Product Control Files

Product Software Specification	**Product associated with the control file. [Key]**
Tag	**Control file unique identifier. [Key]**
Cksum	Used to verify the integrity of a file.
Compressed Cksum	Used to verify the integrity of a compressed file.
Compressed Size	Size of a compressed file.
Compression State	Indicates whether a file is uncompressed but can be compressed in a distribution, compressed, or uncompressed and cannot be compressed in a distribution.
Compression Type	Compression method used to compress the file.
Revision	File revision level.
Size	File size in bytes.
Source	In a Product Specification File (PSF), the pathname of the file or control file to be placed in the distribution by swpackage.
Interpreter	Interpreter used by SD utilities to execute control files.
Path	Filename of the control file.
Result	Result of the execution of the control script: none, success, failure, or warning.

Subproducts

This tabular group defines a software object that is a grouping of filesets and other subproducts within a product. The following list defines the attributes in this group.

Table 3-9 Subproducts

Subproduct Software Specification	Specification that uniquely identifies the subproduct. [Key]
Tag	Short name associated with the subproduct.
Create Time	Time that the catalog information for this subproduct was first written, in seconds since the Epoch (Jan. 1, 1970).
Description	Description of the subproduct.
Modification Time	Time that the catalog information for this subproduct was last written.
Size	Sum of the sizes in bytes of all files and control files in the subproduct.
Title	Longer name associated with the subproduct for display purposes.
Contents	List of tag values that defines the list of filesets and subproducts grouped into this subproduct.
Install Source	Location of the source which the subproduct was installed from.
Data Model Revision	POSIX version compatibility for packaging and installation.
Install Date	Date when the subproduct was installed on the system.
Is Patch	Indicates whether this subproduct is a patch.

Fileset Groups

This section covers the groups that describe filesets:

Filesets

This tabular group defines the files that make up the lowest level of software object that can be specified as input to the SD utilities. The following list defines the attributes in this group.

Table 3-10 Filesets

Fileset Software Specification	Specification that uniquely identifies the fileset. [Key]
Tag	Short name associated with the fileset.
Create Time	Time that the catalog information for this fileset was first written, in seconds since the Epoch (Jan. 1, 1970).
Description	Description of the fileset.
Modification Time	Time that the catalog information for this fileset was last written.
Size	Sum of the sizes in bytes of all files and control files in the fileset.
Title	Longer name associated with the fileset.
Control Directory	Fileset directory below which control files are stored.
Is Kernel	Indicator whether the fileset is a kernel fileset.
Is Locatable	Indicator whether a fileset may be relocated during installation.
Is Reboot	Indicator whether the host on which the fileset is configured should be rebooted after installation.
Location	Directory below which relocatable files are stored.
Media Sequence List	List of values that identify the medium on which the files for this fileset are found.
Revision	Fileset revision.
State	Current status of the fileset: configured, installed, corrupt, removed, available, or transient.
Data Model Revision	POSIX version compatibility for the packaging and installation.
Instance Identifier	Single attribute that distinguishes versions of filesets with the same Tag.
Install Date	Date timestamp of day, month, year and time when the software was installed on the system.
Architecture	Vendor-defined string used to distinguish variations of the fileset.

Table 3-10 Filesets

Machine Type	Identifier to determine machine compatibility.
Operating System Name	Identifier used to determine operating system software compatibility.
Operating System Release	Identifier used to determine operating system software release compatibility.
Operating System Version	Identifier used to determine operating system software version compatibility.
Install Source	Location of source from where software was installed.
Is Patch	A Boolean value indicating whether this software object is a patch.
Is Sparse	This fileset denotes a fileset that is not complete, but one that has been qualified as an update (as opposed to a patch).
Patch State	Characterizes the current state of an installed patch.
Applied To	Specifies the software on which this patch fileset has been applied.
Superseded By	Lists what patch superseded this patch.
Save Files Directory	The value that was used by swinstall during the installation of this patch fileset, to save the patched files.

Fileset Contents

This tabular group contains the control file names that make up a fileset definition. The following list defines the attributes in this group.

Table 3-11 Fileset Contents

Fileset Software Specification	**Fileset software specification. [Key]**
Index	**Unique value for each specification of a fileset and a control file. [Key]**
Content	Control file name.
Content Type	Content type: control file

Fileset Dependencies

This tabular group provides a list of software specifications that define a fileset's dependencies. The following list defines the attributes in this group.

Table 3-12 Fileset Dependencies

Fileset Software Specification	**Fileset software specification. [Key]**
Index	**Unique value for each fileset/dependency pair. [Key]**
Dependency	Dependency software specification.
Dependency Type	Dependency type: corequisite exrequisite prerequisite

Fileset Control Files

This tabular group defines the vendor-supplied control scripts that are executed at various steps by the software administration utilities. The following list defines the attributes in this group.

Table 3-13 Fileset Control Files

Fileset Software Specification	**Software specification of fileset associated with the control file. [Key]**
Tag	**Control file short identifier. [Key]**
Cksum	Cksum of the control file.
Compressed Cksum	Cksum of a compressed control file.
Compressed Size	Size of a compressed control file.
Compression State	Compression state: Uncompressed but can be compressed in a distribution, already compressed, or uncompressed and cannot be compressed in a distribution.
Compression Type	Method used to compress the file.
Revision	File revision level.
Size	Size of the control file in bytes.
Source	Pathname in a PSF of the file or control file to be placed in the distribution by the swpackage utility.
Interpreter	Name of the interpreter used to execute control files.
Path	Filename of the control file
Result	Result of the execution of the control file: none, success, failure, or warning.

Fileset Files

This tabular group provides the names of the files and directories that make up a fileset. The following list defines the attributes in this group.

Table 3-14 Fileset Files

Fileset Software Specification	**The associated fileset's software specification. [Key]**
Path	**Pathname of the fileset. [Key]**
Cksum	Cksum of a file.
Compressed Cksum	Cksum of a compressed file.
Compressed Size	Size of a compressed file.
Compression State	Compression state: Uncompressed but can be compressed in a distribution, already compressed, or uncompressed and cannot be compressed in a distribution.
Compression Type	Method used to compress the file.
Revision	File revision level.
Size	File size in bytes.
Source	Pathname in a PSF of a file or control file to be placed in the distribution by the swpackage utility.
Gid	Numeric group ID of the file.
Group	File's group name.
Is Volatile	Indicates a file whose contents can change or that can be removed after it has been installed.
Link Source	Pathname of the target of the link.
Major	Applies to a character or block special file.
Minor	Applies to a character or block special file.
Mode	File permissions.
Mtime	Time of the last data modification of the file.
Owner	Name of the file owner.

Table 3-14 Fileset Files

File Type	File type: f - regular file d - directory h - hard link s - symbolic link p - named pipe FIFO b - block special device c - character special device
Uid	Numeric user ID of the file.
Archive Path	The path name to the archive this file should be added to.

Fileset Ancestors

This tabular group specifies the ancestor software for a fileset. The following list defines the attributes in this group.

Table 3-15 Fileset Ancestors

Fileset Software Specification	**The list of software specifications that define a filesest's ancestors. [Key]**
Index	**Unique value for each fileset/content pair. [Key]**
Ancestor Software Specification	One ancestor's software specification for this fileset.

Fileset Supersedes

This tabular group defines the list of software specifications that define a fileset's supersedes values. The following list defines the attributes in this group.

Table 3-16 Fileset Supersedes

Fileset Software Specification	**The software specification of the fileset. [Key]**
Index	**Unique value for each occurrence of a fileset/supersedes pair. [Key]**
Supersedes Software Specification	One supersede's software specification for this fileset.

Fileset Applied Patches

This tabular group defines the list of software specifications that have been applied to the fileset. The following list defines the attributes in this group.

Table 3-17 Fileset Applied Patches

Fileset Software Specification	**The software specification of the fileset. [Key]**
Index	**Unique value for each occurrence of a fileset/content pair. [Key]**
Applied Patch Software Specification	One applied patch's software specification for the fileset.

Category Groups

This section covers the groups that describe categories:

Categories

This tabular group describes the attributes of the category tags to be used for classifying bundles, products, subproducts, or filesets. Can be used independent of patches. The following list defines the attributes in this group.

Table 3-18 Categories

Tag	**Unique, meaningful, short name used to identify a category. [Key]**
Index	**Unique value for each occurrence of a category. [Key]**
Title	A longer name for the category, used for presentation purposes.
Description	A more detailed description of the category.
Revision	Used to determine which category object definition to maintain in a software collection when one being installed or copied does not match the one already in the software collection for that category tag.

Bundle Category Tag

This tabular group defines the list of category tags that have been assigned to a bundle. The following list defines the attributes in this group.

Table 3-19 Bundle Category Tag

Bundle Software Specification	The software specification of the bundle.
Index	**Unique value for each specification of a bundle/category pair. [Key]**
Category Tag	One category tag, among the list, for this bundle.

Product Category Tags

This tabular group defines the list of category tags that have been assigned to a product. The following list defines the attributes in this group.

Table 3-20 Product Category Tags

Product Software Specification	**The software specification of the product. [Key]**
Index	**Unique value for each occurrence of a category/tag pair. [Key]**
Category Tag	One category tag, among the list, for this product.

Subproduct Category Tags

This tabular group defines the list of category tags that have been assigned to this product. The following list defines the attributes in this group.

Table 3-21 Subproduct Category Tags

Subproduct Software Specification	**The software specification of this subproduct. [Key]**
Index	**Unique value for each occurrence of a subproduct/category tag pair. [Key]**
Category Tag	One category tag, among the list, for this subproduct.

Fileset Category Tags

This tabular group defines the list of category tags that have been assigned to this fileset. The following list defines the attributes in this group.

Table 3-22 Fileset Category Tags

Fileset Software Specification	**The software specification of this fileset. [Key]**
Index	**Unique value for each occurrence of a fileset/category tag pair. [Key]**
Category Tag	One category tag, among the list, for this fileset.

A HP-UX Systems MIF Groups Quick Reference

This appendix provides a graphical view of the groups in the HP-UX Software MIF. It is a quick reference view of the attributes in each group and their data types. For easy reference, HP-UX System MIF groups are presented in four divisions:

Component Information Groups

Component ID
Manufacturer String (64)
Product String (64)
Version String (64)
Serial Number String (64)
Installation Date
Verify Enum (Verify_Type)

General Information
System Name String (64)
System Location String (64)
System Primary User Name String 64)
System Primary User Phone String (64)
System Boot Up Time (Date)
System Date Time (Date)
System Secondary User Name String(64)
System Secondary User Phone String(64)
System Primary Pager String(64)
System Secondary Pager String(64)
Security Token OctetString(64) **[Key]**
System Model String(64)
System Serial Number String(64)
System Software Identifier String(64)

System Information Groups

Operating System
Operating System Index Integer
Operating System Name String (64)
Operating System Version String (64)
Primary Operating System (BOOL)
Operating System Description String (128)
Operating System Capability String (64)

Host Physical Memory
Physical Main Memory Size Integer

Host Logical Memory
Logical Memory Index Integer **[Key]**
Swap Space Name DisplayString (256)
Swap Type Enum
Swap Priority Integer
Swap Space Size Int(64)
Swap Space Minimum Size Int(64)
Swap Space Maximum Size Int(64)
Swap Space Reserved Size Int(64)
File System Index Integer
Storage Index Integer
Logical Index Integer

Event Generation
Event Type Enum
Event Severity Enum
Is Event State-Based? BOOL
Event State [Key] Integer
Associated Group String (64) **[Key]**
Event System String (64) *
Event Subsystem String (64) *
Event Solution Enum
Instance Data Present BOOL

Host Processor
Host Processor Index Integer **[Key]**
Processor Firmware ID String (64)
Processor Load Integer
Processor Allocated BOOL

Host System
System Uptime Int(64)
Initial Load Device Integer
Initial Load Parameters String (128)
Number of Users (Gauge)
Number of Processes (Gauge)
Max Processes Integer
Mounted File Systems Gauge
Security Token OctetString (64) **[Key]**
Architecture String(64)
Language String(64)
Timezone String(64)
Hardware Capability String(64)
[Key]board String(64)
Graphics Resolution String(64)
Graphics Planes Integer
CPU Speed Integer

Host Storage
Host Storage Index Integer **[Key]**
Storage Type Enum
Description DisplayString (256)
Allocation Units Size Int (64)
Total Allocation Units Int (64)
Allocation Units Used Int (64)
Storage Allocation Failures Counter

Host Device
Host Device Index Integer **[Key]**
Device Type Enum
Device Description String (64)
Device ID String (64)
Device Status Enum
Device Errors Counter
Hardware Path String(64)
Hardware Type String(64)
Device Class String(64)
Associated Driver String(64)

Host Disk Storage
Host Disk Index Integer **[Key]**
Disk Storage Access Enum
Disk Storage Media Enum
Disk Storage Removable Integer
Disk Storage Capacity Integer

* Type determined by instrumentation

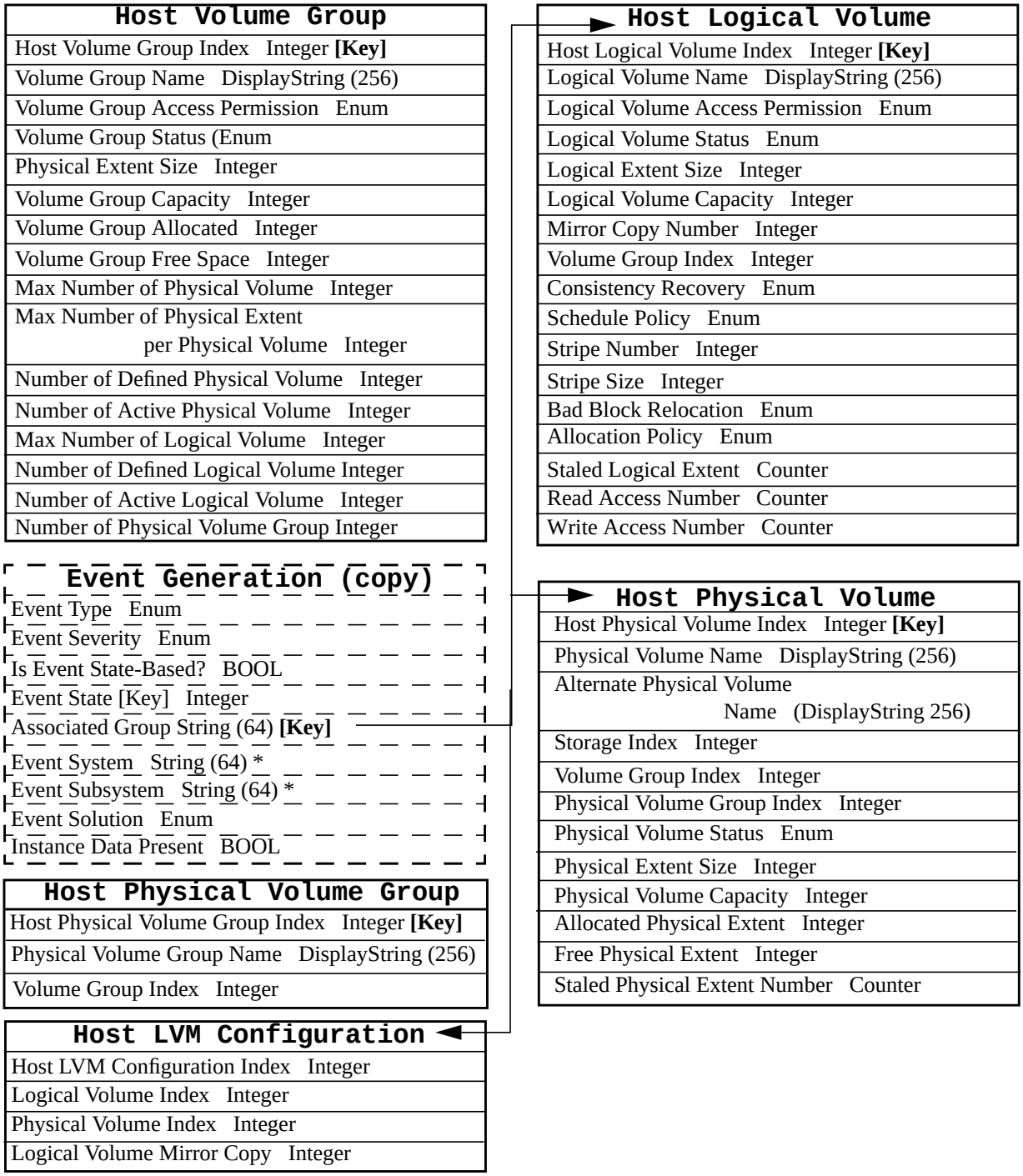
Host File System
Host File System Index Integer **[Key]**
Mount Point Name DisplayString (256)
Mounted Special Device Name DisplayString (256)
Remote Mount Point Name DisplayString (256)
File System Type String (128)
File System Access Enum
File System Bootable Enum
Storage Index Integer
Last Full Backup Date
Last Partial Backup Date
Logical Index Integer
Total INodes Int(64)
Free INodes Int (64)
Data Capacity Int(64)
Free Capacity Int(64)
Reserved Data Capacity Int(64)

Host Disk Storage (Copy)
Host Disk Index Integer **[Key]**
Disk Storage Access Enum
Disk Storage Media Enum
Disk Storage Removable Integer
Disk Storage Capacity Integer

Host HFS Tuning Parameters
Host HFS Tuning Parameters Index Integer **[Key]**
Host File System Index Integer
Long File Name Flag Enum
Large File Feature Enum
Minifree Integer
Block Size Integer
Fragment Size Integer
Bytes per Inode Integer
Sectors per Track Integer
Tracks per Cylinder Integer
Disk Cylinders per Cylinder Group Integer
Disk Revolutions per Second Integer
Rotational Delay Integer

Process Information
Process ID String (6) **[Key]**
Parent Process ID String (6)
Process Group ID String (6)
Real User ID Int (64)
Process TTY DisplayString (32)
Process Name DisplayString (256)
Module Path DisplayString (2048)
Parameters DisplayString (1024)
Process State Enum
Process Priority Int (64)
Process Nice Value Integer
Process CPU Time Integer
Process System Time Int (64)
Process User Time Int (64)
Process Real Total Int (64)
Process Real Text Int (64)
Process Real Data Int (64)
Process Real Stack Int (64)
Process Virtual Text Int (64)
Process Virtual Data Int (64)
Process Virtual Stack Int (64)
Process Virtual Shared Memory Int (64)
Process Virtual Memory Mapped File Size Int (64)

Logical Volume Manager Groups



Network Configuration Groups

Network Interface
Network Interface Index Integer **[Key]**
Interface Name DisplayString (8)
IP Address DisplayString (64)
Subnet Mask DisplayString (16)
Broadcast Address DisplayString (16)
Interface State Enum
DHCP Enabled Enum
Station Address DisplayString (16)
Interface Card Hardware Path DisplayString (256)
Hostname DisplayString (256)

NIS Configuration
Domain Name DisplayString (256)
Master Server Enum
Slave Server Enum
Server Wait Flag Enum

System Contact Information
Contact Index Integer **[Key]**
Contact Name String (64)
Contact Type Enum
Contact Information String (512)
Security Token OctetString (64) **[Key]**

Kernel Configure
Kernel Configure Index Integer **[Key]**
Parameter Name DisplayString(256)
Parameter Value DisplayString(256)

Host Device
Host Device File Index Integer **[Key]**
Device File Type Enum
Device File Name DisplayString(1024)
Host Device Group Index Integer

Static Routing Definition
Static Routing Definition Index Integer **[Key]**
Route Destination DisplayString (64)
Route Mask DisplayString (64)
Route Gateway DisplayString (16)
Route Count Enum
Route Argument DisplayString (1024)

DNS Configuration
Domain Name DisplayString (256)
Search DisplayString (256)
Server IP Address(es) DisplayString (256)

NTP Configuration
Server Address DisplayString (256)

B HP-UX Software MIF Groups Quick Reference

This appendix provides a graphical view of the groups in the HP-UX Software MIF. It is a quick reference view of the attributes in each group and their data types. For easy reference, HP-UX Software MIF groups are presented in five divisions:

General Groups

ComponentID
Manufacturer String (64)
Product String (64)
Version String (64)
Serial Number String (64)
Installation Date
Verify Enum

Software Location
Path String (256)
Catalog String (256)
Dfiles String (64)
Layout Version String (64)
Pfiles String (64)

Vendors
Tag String (64) **[Key]**
Index Integer **[Key]**
Title String (256)
Description String (8096)

Bundle Groups

Bundle Contents
Bundle Software Specification String (1024) **[Key]**
Index Integer **[Key]**
Content String (1024)

Bundles
Bundle Software Specification String (1024) **[Key]**
Tag String (64)
Architecture String (64)
Location String (1024)
Qualifier String (64)
Revision String (64)
Vendor Tag String (64)
Create Time String (16)
Description String (8096)
Modification Time String (16)
Size String (32)
Title String (256)
Copyright String (8096)
Directory String (256)
Instance Identifier String (16)
Is Locatable String (8)
Layout Version String (64)
Machine Type String (64)
Number String(64)
Operating System Name(64)
Operating System Release String (64)
Operating System Version String (64)
Is Patch String(8)
Install Source String(128)
Data Model Revision String(8)
Install Date String(16)

Product and Subproduct Groups

Products
Product Software Specification String (1024) **[Key]**
Tag String (64)
Architecture String (64)
Location String (1024)
Qualifier String (64)
Revision String (64)
Vendor Tag String (64)
Create Time String (16)
Description String (8096)
Modification Time String (16)
Size String (32)
Title String (256)
All Filesets String (8096)
Control Directory String (256)
Copyright String (8096)
Directory String (256)
Instance Identifier String (16)
Is Locatable String (8)
Post Kernel Path String (256)
Layout Version String (64)
Machine Type String (64)
Number String (64)
Operating System Name String (64)
Operating System Release String(64)
Operating System Version String (64)
Is Patch String(8)
Install Source String(128)
Data Model Revision String(8)
Install Date String(16)

Product Contents
Product Software Specification String (1024) **[Key]**
Index Integer **[Key]**
Content String (1024)
Content Type Enum

Product Control Files
Product Software Specification String (1024) **[Key]**
Tag String (64) **[Key]**
Cksum String (16)
Compressed Cksum String (16)
Compressed Size String (16)
Compression State String (16)
Compression Type String (64)
Revision String (64)
Size String (16)
Source String (256)
Interpreter String (256)
Path String (256)
Result String (16))

Subproducts
Subproduct Software Specification String (1024) **[Key]**
Tag String (64)
Create Time String (16)
Description String (8096)
Modification Time String (16)
Size String (32)
Title String (256)
Contents String (8096)
Install Source String(128)
Data Model Revision String(8)
Install Date String(16)
Is Patch String(8)

Fileset Groups

Filesets
Fileset Software Specification String (1024) **[Key]**
Tag String (64)
Create Time String (16)
Description String (8096)
Modification Time String (16)
Size String (32)
Title String (256)
Control Directory String (256)
Is Kernel String (8)
Is Locatable String (8)
Is Reboot String (8)
Location String (1024)
Media Sequence List String (1024)
Revision String (64)
State String (16)
Data Model Revision String(8)
Instance Identifier String(16)
Install Date String(16)
Architecture String(64)
Machine Type String(64)
Operating System Name String(64)
Operating System Release String(64)
Operating System Version String(64)
Install Source String(128)
Is Patch String(8)
Is Sparse String(8)
Patch State STring(16)
Applied To String(1024)
Superseded By String(1024)
Saved Files Directory(256)

Fileset Ancestors
Fileset Software Specification String (1024)
Index Integer
Ancestor Software Specification String (1024)

Fileset Contents
Fileset Software Specification String (1024) **[Key]**
Index Integer **[Key]**
Content String (1024)
Content Type Enum

Fileset Dependencies
Fileset Software Specification String (1024) **[Key]**
Index Integer **[Key]**
Dependency String (1024)
Dependency Type Enum

Fileset Control Files
Fileset Software Specification String (1024) **[Key]**
Tag String (64) **[Key]**
Cksum String (16)
Compressed Cksum String (16)
Compressed Size String (16)
Compression State String (16)
Compression Type String (64)
Revision String (64)
Size String (16)
Source String (256)
Interpreter String (256)
Path String (256)
Result String (16))

Fileset Files
Fileset Software Specification String (1024) **[Key]**
Path String (256) **[Key]**
Cksum String (16)
Compressed Cksum String (16)
Compressed Size String (16)
Compression State String (16)
Compression Type String (64)
Revision String (64)
Size String (16)
Source String (256)
Gid String (16)
Group String (256)
Is Volatile String (8)
Link Source String (256)
Major String (16)
Minor String (16)
Mode String (16)
Mtime String (16)
Owner String (256)
File Type String (8)
Uid String (16)
Archive Path String(16)

Fileset Supersedes
Fileset Software Specification String (1024) **[Key]**
Index Integer **[Key]**
Supersedes Software Specification String (1024)

Fileset Applied Patches
Fileset Software Specification String (1024) **[Key]**
Index Integer **[Key]**
Applied Patch Software Specification String (1024)

Category Groups

Categories
Tag String (64) **[Key]**
Index Integer **[Key]**
Title String (256)
Description String (8096)
Revision String (64)

Product Category Tags
Product Software Specification String (1024) **[Key]**
Index Integer **[Key]**
Category Tag String (1024)

Bundle Category Tags
Bundle Software Specification String (1024) **[Key]**
Index Integer **[Key]**
Category Tag String (1024)

Subproduct Category Tags
Subproduct Software Specification String(1024) **[Key]**
Index Integer **[Key]**
Category Tag String (1024)

Fileset Category Tags
Fileset Software Specification String (1024) **[Key]**
Index Integer **[Key]**
Category Tag String (1024)