HP Integrity Virtual Machines Manager Version 4.0 Release Notes

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Legal Notices

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Table of Contents

About This Document

Thank you for installing HP Integrity Virtual Machines Manager (also called VMMgr, or VM Manager). These release notes describe known issues and other information specific to VM Manager version A.04.00.00.70 (4.0) released in January 2009.

VM Manager is a tool that the VM Host system administrator uses to create, monitor, and evaluate HP Integrity Virtual Machines (Integrity VM). It is a graphical user interface that provides visualization and configuration of Integrity virtual machines and the VM Host.

VM Manager is available from either the HP-UX System Management Homepage (HP SMH) or through seamless integration with VSE Management Software components in the HP Systems Insight Manager (HP SIM) on a central management server (CMS).

Intended Audience

The audience for this document includes system administrators or other persons responsible for the maintenance of a VM Host and its virtual machines. Be sure you are familiar with HP-UX system administration using either HP SMH or HP SIM, and with the HP Integrity Virtual Machines product.

New and Changed Information in This Edition

This document includes release notes pertaining to the latest version of VM Manager released in January 2009 as part of the HP VSE Management Software (`VSEMgmt` bundle) version 4.1 used with HP SIM and also as a standalone product (`VMMGR` bundle) for use with HP SMH.

Typographic Conventions

This document uses the following typographical conventions:

Book Title	Title of a book or other document.
Linked Title	Title that is a hyperlink to a book or other document.
http://www.hp.com	A website address that is a hyperlink to the site.
`Command`	Command name or qualified command phrase.
`user input`	Commands and other text that you type.
`computer output`	Text displayed by the computer.
Enter	The name of a keyboard key. Note that **Return** and **Enter** both refer to the same key. A sequence such as **Ctrl+A** indicates that you must hold down the key labeled **Ctrl** while pressing the **A** key.
`variable`	The name of an environment variable, for example `PATH` or `errno`.
`value`	A value that you may replace in a command or function, or information in a display that represents several possible values.
find(1)	HP-UX manpage. In this example, “find” is the manpage name and “1” is the manpage section.

Document Organization

This document contains the following chapters:

- Chapter 1 (page 9) introduces HP Integrity VM Manager and the features provided with this release.
- Chapter 2 (page 13) describes problems known to exist in this release of HP Integrity VM Manager and, where possible, includes workarounds.

Related Information

You can download the latest version of this document from docs.hp.com.

The following related documents can also be downloaded from the same site:

- *HP Insight Dynamics — VSE and HP VSE Management Software 4.1 Getting Started Guide*
- *HP Integrity Virtual Machines Manager Version 4.0 Getting Started Guide*
- *HP Integrity Virtual Machines Installation, Configuration, and Administration*
- *HP Integrity Virtual Machines Release Notes*

The latest versions of manuals and white papers for HP Insight Dynamics — VSE, the VSE Management Software, and related products can be downloaded from the HP Web:

- Documentation for HP Insight Dynamics — VSE and related HP ProLiant software:
  http://www.hp.com/go/insightdynamics/docs
- Documentation for VSE Management Software and related HP Integrity software:
  http://www.docs.hp.com/en/vse.html

For more information about HP Insight Dynamics — VSE, the VSE Management Software, and VSE-related products and solutions, visit the following HP websites:

- HP Virtual Server Environment: http://www.hp.com/go/vse
- HP Insight Dynamics — VSE: http://www.hp.com/go/insightdynamics

Publishing History

Manufacturing Part Number	Supported VM Manager Version	Publication Date
T8669–90042	A.04.00.00.70 distributed with the HP VSE Management Software (`VSEMgmt` bundle) version 4.1 for use with HP SIM and also distributed with the `VMMGR` bundle for standalone use with HP SMH	January 2009
T8669–90030	A.04.00.00.01 standalone release (`VMMGR` bundle, for standalone use with HP SMH)	October 2008
T8669–90010	A.03.50	May 2008
T2767-90047	A.03.00	June 2007
T2767-90009	A.01.00	February 2006

HP Encourages Your Comments

HP encourages your comments concerning this document. We are truly committed to providing documentation that meets your needs.

Your comments and suggestions regarding product features will help us develop future versions of the Virtual Server Environment Management Software. Use the following e-mail address to

send feedback directly to the VSE Management Software development team: **vse@hpuxweb.fc.hp.com**.

NOTE: HP cannot provide product support through this e-mail address. To obtain product support, contact your HP Support Representative, your HP Services Representative, or your authorized HP reseller. For more information about support services, see the support web site at http://www.hp.com/go/support.

For other ways to contact HP, see the Contact HP web site at http://welcome.hp.com/country/us/en/contact_us.html.

1 HP Integrity Virtual Machines Manager

This chapter provides an overview of the HP Integrity Virtual Machines Manager (VM Manager) and describes the new features provided with version 4.0 (A.04.00).

HP Integrity Virtual Machines Manager

HP Integrity Virtual Machines Manager (VM Manager) is the GUI that you can use from your browser to manage Integrity VM resources. VM Manager allows you to create, configure, and evaluate virtual machines, and to monitor and evaluate data and resources at the level of the VM Host. You can view all of a VM Host's virtual machines and their assigned resources, and you can view all resources assigned to a specific virtual machine or virtual switch. For example, VM Manager provides graphical views of virtual-to-physical network and storage devices so that you can view I/O data, including resource utilization information. VM Manager obtains information about Integrity VM resources through Web-Based Enterprise Management (WBEM) providers installed on the VM Host.

You can access VM Manager from a browser, using either of two Web-based software components:

- HP System Management Homepage (HP SMH)

  VM Manager (`VMMGR` bundle) is installed separately on any given VM Host to manage the Integrity VM Host and virtual machines. You access VM Manager from a browser that can connect over the network to that VM Host.

- HP Systems Insight Manager (HP SIM)

  VM Manager is installed as part of the Virtual Server Environment (VSE) Management Software (`VSEMgmt` bundle) that runs under HP SIM on a server reserved for use as a central management server (CMS). You access VM Manager from a browser that can connect over the network to the CMS. The CMS allows you to manage multiple Integrity VMs (VM Hosts and each of their virtual machines) that are discovered by HP SIM. In this environment, you can use VM Manager in seamless integration with other VSE Management Software components. These interlinking components enhance the functionality and flexibility of your virtual server environment. For example:

  — HP Virtualization Manager provides a framework for visualizing your Virtual Server Environment. All of the systems and workloads that you are authorized to view are displayed in a graphical view. The hierarchical relationships between systems and their current utilization metrics can be seen in a single screen. Using Virtualization Manager, you can manage a pool of multiple-OS, dynamically sizable virtual servers. You use Virtualization Manager to access VM Manager for viewing and modifying VM Host or virtual machine components.

  — HP Global Workload Manager (gWLM) is a multiple-system, multiple-OS workload manager that serves as an intelligent policy engine in VSE. It simplifies the deployment of automated workload management policies across multiple servers, and provides centralized monitoring and reporting and improved server utilization to assist in meeting your service level objectives. Using VM Manager with VSE, you can create, view, and modify gWLM policies for virtual machines.

  — HP Capacity Advisor is capacity analysis and planning software that allows you to optimize the workloads across your VSE for the highest utilization of server resources. From VM Manager, you can cause Capacity Advisor to collect and display data for a VM Host or selected virtual machine. Certain VM Manager views include utilization meters that display current utilization data for a resource; you can click the meter to view a more detailed historical data report. (These meters are visible when using VM Manager with HP SMH, but you cannot click them to obtain a Capacity Advisor report.)

Other components that are integrated with VSE include:

— HP Application Discovery
— HP Instant Capacity Manager
— WBEM providers and other VSE agents

For more information about VSE concepts and terminology, including a complete list of the components in the VSE Management Software suite, see the *HP Insight Dynamics — VSE and HP VSE Management Software 4.1 Getting Started Guide*.

Information about HP SMH is available from the following HP SMH website:

http://www.hp.com/go/smh

Information about HP SIM is available from the following HP SIM website:

http://www.hp.com/go/hpsim

New In this Release

Version A.04.00 of the HP Integrity Virtual Machines Manager adds the following new features and capabilities:

- Support of HP-UX 11i v3 as a VM Host, including features of HP-UX 11i v3, such as long user names, hostnames, PIDs, and agile storage device naming.
- Support of HP Integrity VM version 4.0 (in addition to all earlier versions of Integrity VM that are still supported).

NOTE: This version of VM Manager is compatible with HP Integrity Virtual Machines version 4.1 but does not support the new features provided by that version of the product.

The releases of an operating system that are supported on guests vary from version to version of HP Integrity Virtual Machines. For information about supported VM guest operating systems, see the version of the *HP Integrity Virtual Machines Installation, Configuration, and Administration* manual that corresponds to the version of HP Integrity Virtual Machines being used.

- Accelerated Virtual I/O (AVIO) support for the following:
  — HP-UX 11i v3 operating system.
  — File backing stores for HP-UX 11i v2 and HP-UX 11i v3 guests (this means that an AVIO DVD can read from an ISO image file).
  — AVIO virtual network devices for Windows and Linux guests. This requires that compatible Windows and Linux drivers be installed on the guest and additional patches be installed on the Integrity VM versions 3.5 or 4.0. The Windows guest AVIO drivers are included in the VMGuestSW bundle available from the software depot at the following website:

    http://software.hp.com

    Search for "VMGuestSW" and select the link for Integrity Virtual Machines (HP-UX 11i v3 VM Host).

    At the time of publication of this document, the Linux guest AVIO drivers are not yet available.

    The Integrity VM version 3.5 patches are PHSS_38297 and PHSS_38298. The Integrity VM version 4.0 patches (for HP-UX 11i v3) are PHSS_38566, PHSS_38567, PHSS_38611, PHSS_38631. Integrity VM version 4.0 supports Windows and Linux guest AVIO networking with the Integrity VM version 4.0 patches.

- Support of legacy and agile storage device addressing, the latter being introduced with HP-UX 11i v3. Legacy addressing uses the device special file (DSF) path as defined in HP-UX 11i v2 and earlier versions of HP-UX. The new agile device model uses worldwide device

identifiers (WWIDs) to uniquely identify logical unit (LUN) devices (a LUN is the logical unit that refers to the physical storage device). The WWID is a device attribute that is independent of the device's location in a SAN or in an adapter/controller access path. With a multipath device, the WWID allows one persistent DSF and one LUN hardware path to represent the device, regardless of the number of legacy hardware paths. Therefore, an agile device address remains the same (is persistent) when changes are made to the access path. This enables VM Manager to display one DSF for each multipath device instead of displaying a separate DSF for each path to the device (as done when using the legacy addressing scheme).

The VM Manager **VM Host Storage** and **VM Properties Storage** tabs display the new agile, multipath device special file (DSF) supported with HP-UX 11i v3 VM Hosts as well as the legacy addresses. The Create Virtual Machine wizard **Add Storage Device** and the **Modify→Add Storage Device to Virtual Machine...** screens give you the option of listing devices (that are to be added) by either their agile or their legacy addressing specification. With HP-UX 11i v2 or earlier VM Hosts, VM Manager storage device listings remain the same, showing only the legacy specifications.

- Support of a browser screen for selecting a backing file or directory for a storage device being added to a new or existing virtual machine. This saves the user from having to remember the file or directory name and from potentially specifying the file names incorrectly. This feature is implemented from the Create Virtual Machine wizard's **Add Storage Device** screen and the **Modify→Add Storage Device to Virtual Machine** screen.
- When using VM Manager to add a storage device to a virtual machine, choices for file and directory backing devices can include devices entered into the `hpvmdevmgmt` device database without association with a particular virtual machine. This is useful, for example, to populate the database with entries for OS installation DVD images that might be used when creating and provisioning several virtual machines. When you use VM Manager to add a virtual DVD to a virtual machine, the image file shows up in the list of storage backing devices you can choose from. You do not have to type the name of the image file or browse for it.

  You can make unassociated file or directory backing devices available to VM Manager if the VM Host is running HP Integrity VM version 4.0 or later. At the VM Host command line, add a file or directory to the device management database as a guest device (`gdev`) by specifying the `hpvmdevmgmt` command with the `USAGE` attribute either `USAGE=DISK` or `USAGE=DVD`. As a result, the VM Manager Create Virtual Machine wizard **Add Storage Device** and **Modify→Add Storage Device to Virtual Machine...** screens include the file in the list of backing devices you can choose from. The file is listed as a backing device for either a virtual disk or a virtual DVD, depending on the value of the `USAGE` attribute. If you add a file to the database without specifying the `USAGE` attribute, the file is not included in the list of possible backing devices. If you add a directory to the database, it is included in the list as a possible backing device for a virtual DVD. Do not specify the `USAGE` attribute for a directory; the attribute is not needed for a directory.

  To ensure that a device database entry is preserved in the database for future selection, even when the associated virtual device is removed from the virtual machine, or even when all virtual machines using the entry as a backing device are deleted from the VM Host, you can specify the `PRESERVE` attribute as `PRESERVE=YES`.

  When you create a file as a backing device for a disk, specifying the size (`-S`) attribute with the `hpvmdevmgmt` command, you can ensure that the file is included in the list of possible backing devices on the previously-mentioned VM Manager screens by specifying the `-A` attribute as well. Specifying these two attributes automatically sets `USAGE=DISK` and `PRESERVE=YES`.

- By default, the VM Manager **VM Host Storage** and **VM Properties Storage** tabs display only the specific storage devices that are being used as backing devices. For a multipath device, the default view shows only the device special file (DSF) path, as specified when the

virtual storage device was created. A new **Show physical host bus adapters** check box available on each of these tabs allows you to change the view to include the complete storage bus structure, host bus adapters, and multipath storage configurations. The default, simpler view renders more quickly and helps you discern more easily the associations between virtual machines and devices, especially when many multipath storage devices exist on the VM Host. The complex view displays all DSF versions of the same device, including (on an HP-UX 11i v3 VM Host) the persistent DSF. The complex view is identical to the view displayed by the **VM Host Storage** and **VM Properties Storage** tabs in earlier versions of VM Manager.

- Support for HP Integrity VM entitlement caps, if supported by the version of Integrity VM running on the VM Host. The VM Manager Create Virtual Machine wizard's **Specify Processors** screen and the **Modify→Virtual Machine vCPU Entitlement** screen allow you to specify a cap for the vCPU or specific processor speed entitlement.
- Support for guests running up to 8 virtual CPUs (vCPUs) and for selection of a minimum and maximum of virtual CPUs, if supported by the version of Integrity VM running on the VM Host. With HP Integrity Virtual Machines Version 4.0, the VM Manager Create Virtual Machine wizard's **Specify Processors** screen and the **Modify→Virtual Machine Processor Count** screen allow you to specify a minimum and maximum number of vCPUs as you create or modify a virtual machine.
- Support for a VM graceful stop timeout value that specifies the amount of time HP Integrity VM waits for I/O activity to complete before stopping a virtual machine (if this feature is supported by the version of Integrity VM running on the VM Host). The value is displayed on the VM Manager **VM Properties General** tab but must be set by using the `hpvmmodify` command at the VM Host command line.
- Improved **VM Properties General** tab, which includes better organization of information and more details.
- Improved Create Virtual Machine wizard **Next Steps** screen, with information organized more clearly and in proper order.

2 VM Manager Limitations and Known Issues

This chapter includes the following information in the sections indicated:

Information	Section
Limitations and restrictions	"Limitations and Restrictions" (page 13)
Known major issues that affect functionality or usability of VM Manager and any ways you can work around these issues	"Major Issues" (page 13)
Known minor issues that do not affect functionality or usability significantly and any ways you can work around these issues	"Minor Issues" (page 13)
Known errors, omissions, and limitations in the VM Manager documentation (including help).	"Documentation Errors and Limitations" (page 15)

Any limitations or issues that are HP SMH specific are noted as such.

Limitations and Restrictions

This section describes limitations or restrictions in this release of VM Manager.

Version 4.0 VM Provider Should Not Be Installed on a VM Host with Integrity VM Version 3.5 or Earlier

Applies to: Both VSE/HP SIM VM Manager and HP SMH Standalone VM Manager

The version of the VM Provider installed on the VM Host must be equal to or greater than the version of the Integrity VM product installed on the VM Host. However, due to a backward compatibility defect, you should not install a version 4.0 VM Provider on a VM Host with Integrity VM version 3.5 or earlier. The version 4.0 VM Provider does not work properly with VM Manager or VSE.

Workaround This defect will be fixed in a subsequent release of the VM Provider. The version 4.0 VM Provider works properly on a VM Host with version 4.0 of Integrity VM, and the version 3.5 VM Provider works properly on a VM Host with version 3.5 of Integrity VM.

Major Issues

This section describes known issues that significantly affect functionality or usability of VM Manager. For this release, there are no major issues identified for the VM Manager.

Minor Issues

This section describes known issues that do not have a significant impact on functionality or usability of VM Manager. Suggestions for working around these issues are included.

VM Manager Screens Might Incorrectly Identify or Omit USB Backing Devices

Applies to: Both VSE/HP SIM VM Manager and HP SMH Standalone VM Manager

Integrity VM 4.0 allows a USB DVD or CD drive to be used as the backing devices for a virtual DVD or CD in a virtual machine. However, in the HP-UX 11i v3 September 2008 Operating Environment Update Release (OEUR) and earlier, the drivers for the USB devices are not completely integrated into the HP-UX 11i v3 agile mass storage stack. They have neither a persistent device special file nor a LUN hardware path. In addition, they have an `ioscan`

description that might not correctly indicate the type of device. For example, `ioscan` might report "USB SCSI Stack Adaptor" as the description of a USB DVD drive. If a USB device is used as the backing device for a virtual DVD, it appears on the **VM Host Storage** or **VM Properties Storage** tab with the same description given it by `ioscan`. Although that description might not indicate that the device is a DVD drive, the device is tagged with a DVD icon to indicate that it is a CD or DVD drive.

Additionally, because the device has no agile address, in the **Add Storage Device** dialog used with the **Modify→Add Storage Device** menu item and in the Create Virtual Machine wizard, a USB DVD or CD drive is displayed in the list of potential backing devices only when the "legacy addressing" radio button is selected. It does not appear when the "agile addressing" radio button is selected (the default value on first entry to the dialog).

Workaround You can remove this limitation by installing new USB drivers and additional patches available at the following HP IT Resource Center website:

http://www.itrc.hp.com

For HP-UX 11i v3, install patch PHKL_37815 and its co-requisite patches on HP-UX 11i v3 OEUR 0809. For HP-UX 11i v2, install patch PHKL_37814 and its co-requisite patches. These patches collectively integrate USB into the mass storage stack for HP-UX 11i v3 and v2 respectively, and they add additional functionality such as support for USB 2.0.

The USB change will be automatically included in all HP-UX 11i v3 OEUR releases after 0809.

For more information about HP-UX 11i v2 patches, see the following *Update to USB Driver Support on HP-UX 11i v2* document:

http://www.docs.hp.com/en/13702/3-UpdatetoUSBDriverSupportonHPUX11iv2.pdf

As of the date of publication of this document, the update information for the HP-UX 11i v3 patches had not yet been posted at the HP Technical Documentation website (http://docs.hp.com).

Storage Tabs Might Display Duplicate Lines Between Agile and Legacy Physical Storage Device Representations

Applies to: Both VSE/HP SIM VM Manager and HP SMH Standalone VM Manager

For a VM Host with Integrity VM Version 4.0, if the VM Manager **VM Host Storage** or **VM Properties Storage** tab has the **Show physical host bus adapters** checkbox selected, the right-hand side of the display includes lines associating two boxes representing the same physical storage device, one with the agile persistent device special file (DSF), such as `/dev/rdisk/disk4`, and the other with the legacy DSF, such as `/dev/rdsk/c2t0d0`.

If a virtual machine contains a virtual storage device that uses the persistent DSF, while another virtual machine on the same VM Host uses the legacy DSF for a virtual storage device using the same physical backing store, either virtual storage device might be displayed in the **VM Host Storage** or **VM Properties Storage** tab with duplicate lines between the two box representations of the physical storage device.

Workaround When configuring virtual storage devices, consistently use either the persistent DSF or the legacy DSF for any physical device in all its uses as a backing device. HP recommends using the persistent DSF. Its path independence automatically expedites load balancing and failover.

VM Properties General tab Meters Might Incorrectly Report No Data

Applies to: Both VSE/HP SIM VM Manager and HP SMH Standalone VM Manager

The “VM CPU Utilization”, “Network I/O”, and “Storage I/O” meters on the **VM Properties General** tab might display `No data` while the corresponding meters on the **VM Host Virtual Machines** tab do display data. (The meter on the **VM Host Virtual Machines** tab that displays VM CPU Utilization is actually labeled as the “VM vCPU Utilization” meter.)

Workaround The values shown by the meters on the **VM Host Virtual Machines** tab are correct.

Documentation Errors and Limitations

This section describes errors, omissions, and limitations in the *HP Integrity Virtual Machines Manager Version 4.0 Getting Started Guide* and the VM Manager help.

VM Manager Software Versions Specified in Publishing History Table of Getting Started Guide

When the *HP Integrity Virtual Machines Manager Version 4.0 Getting Started Guide* was released for the HP Insight Software DVDs, the exact software version number of VM Manager was not known; therefore, it was not specified in the Publishing History table in the preface. The correct software version is A.04.00.00.70. In addition, the software version for the October 2008 release of VM Manager (for standalone use with HP SMH only) was incorrectly specified in that table as A.04.00.01. It should have been specified as A.04.00.00.01.

Limitations for Japanese Online Help

Applies to: Both VSE/HP SIM VM Manager and HP SMH Standalone VM Manager

There are known problems with the search facility in the Japanese-localized help provided with this release of VSE software affecting VM Manager and other VSE components. Using the search field in the Japanese help may not return a correct list of matching help topics. The same problem exists with VM Manager (the `VMMGR` bundle) provided for standalone use with HP SMH.

Workaround Alternatively, HP recommends using the “Index” link included in the left navigation under VM Manager's list of topics. If you are using VM Manager with VSE, you can also the “VSE Master Index” link included in the top section of the left navigation.

AVIO Patches/Drivers Information in Help Is Not Up to Date

Applies to: Both VSE/HP SIM VM Manager and HP SMH Standalone VM Manager

The **Features and Capabilities** help page includes information about AVIO patches and drivers that is out of date; this information will be updated with the next release of VM Manager. The *HP Integrity Virtual Machines Manager Version 4.0 Getting Started Guide* has the correct information in the preface. The up to date information is as follows:

Support for AVIO virtual network devices for Windows and Linux guests requires that compatible Windows and Linux drivers be installed on the guest and additional patches be installed on the Integrity VM versions 3.5 or 4.0. The Windows guest AVIO drivers are included in the VMGuestSW bundle available from the software depot at the following website:

http://software.hp.com

Search for “VMGuestSW” and select the link for Integrity Virtual Machines (HP-UX 11i v3 VM Host).

NOTE: The *HP Integrity Virtual Machines Manager Version 4.0 Getting Started Guide* and *HP Integrity Virtual Machines Manager Version 4.0 Release Notes* released for the HP Insight Software DVDs has incorrect information about the location of Windows guest AVIO drivers. This error has since been corrected for the web releases of these two documents. The correct location is the software depot site indicated in the preceding paragraph.

At the time of publication of this document, the Linux guest AVIO drivers are not yet available.

The Integrity VM version 3.5 patches are PHSS_38297 and PHSS_38298. The Integrity VM version 4.0 patches (for HP-UX 11i v3) are PHSS_38566, PHSS_38567, PHSS_38611, PHSS_38631. Integrity

VM version 4.0 supports Windows and Linux guest AVIO networking with these Integrity VM version 4.0 patches.

Information About Utilization Meter Labels Is Incorrect in Help

Applies to: Both VSE/HP SIM VM Manager and HP SMH Standalone VM Manager

The following statements in the indicated help pages are incorrect or incomplete and will be corrected with the next version of VM Manager, as noted:

- **Set WBEM Credentials** page:

  Incorrect statement: For example, if a certificate is missing, utilization meters are labeled "No Perm.".

  Correct statement: For example, if a certificate is missing, utilization meters are labeled `No Data`.

- **Error Messages and Troubleshooting** page:

  Incomplete statement (one of the possible causes for the `No Data` label): The VM Host has no WBEM credentials for collecting the data from the virtual machine.

  Complete statement: The VM Host lacks or has invalid WBEM credentials for collecting the data from the virtual machine.

- **Error Messages and Troubleshooting** page:

  Incorrect statement (possible causes for the `No Perm` label): `No Perm.` indicates that the VM Host has incorrect WBEM credentials for collecting the data from the virtual machine.

  Correct statement: `No Perm.` indicates that the VM Host has invalid or missing WBEM credentials for collecting the data from the virtual machine.

Documentation on Discrepancies Between Capacity Advisor CPU Data and VM Manager CPU Utilization Meter Data

Applies to: Both VSE/HP SIM VM Manager and HP SMH Standalone VM Manager

The following appears in a note in the "Collecting and Viewing Utilization Data" section of the *HP Integrity Virtual Machines Manager Version 4.0 Getting Started Guide* but was not included in the online help:

Data reported by certain VM Manager CPU utilization meters might vary from the data collected by Capacity Advisor as displayed in the Profile Viewer and historical utilization reports. The data from VM Manager meters is reliable for most purposes. For capacity planning, refer to the data collected by the Capacity Advisor Profile Viewer and historical utilization reports. For more information about how Capacity Advisor data might vary from VM Manager data, see the section entitled "Data Handling for Virtual Machines" in Chapter 3 of the *HP Capacity Advisor Version 4.1 User's Guide*.

NOTE: Another source of discrepancy is the difference in the way Capacity Advisor and VM Manager present CPU data. Capacity Advisor Profile Viewer and historical utilization reports present CPU data in absolute terms (specifying the number of physical cores used) while VM Manager presents CPU data in terms of percentages (specifying the percentage of available CPU resources being used). For example, the VM Manager "VM Host CPU Utilization" meter displayed on the **VM Host Virtual Machines** and **VM Properties General** tabs displays the percentage of the total VM Host physical CPU capacity used by the virtual machine in question. Capacity Advisor tabulates similar data but presents it in different terms. For example, on a VM Host that has 16 physical cores, if a VM has 4 vCPUs each currently using 50% of a physical core, CapAd would report that the VM is consuming 2 VM Host cores. The VM Manager "VM Host CPU utilization" meter would report that the VM is consuming 12.5% of the VM Host's CPU capacity.

Inaccuracies in Related Information Section on Help "Assistance" Topic

Applies to: Both VSE/HP SIM VM Manager and HP SMH Standalone VM Manager

The Related Information section provided on the standalone (HP SMH) VM Manager and the VSE Management Software help "Assistance" topic include misinformation about online sources for documentation. The pages refer to a non-existent Product Information link at the following locations:

- HP Virtual Server Environment (http://hp.com/go/vse)
- HP Insight Dynamics — VSE (http://www.hp.com/go/insightdynamics)

This should be corrected to instruct the reader to access the online documentation directly at the following websites:

- Documentation for HP Insight Dynamics — VSE and related HP ProLiant software: http://www.hp.com/go/insightdynamics/docs
- Documentation for VSE Management Software and related HP Integrity software: http://www.docs.hp.com/en/vse.html

NOTE: The list of manuals listed in the Related Information section of these help pages omits the following manual:

HP Integrity Virtual Machines Manager Version 4.0 Release Notes