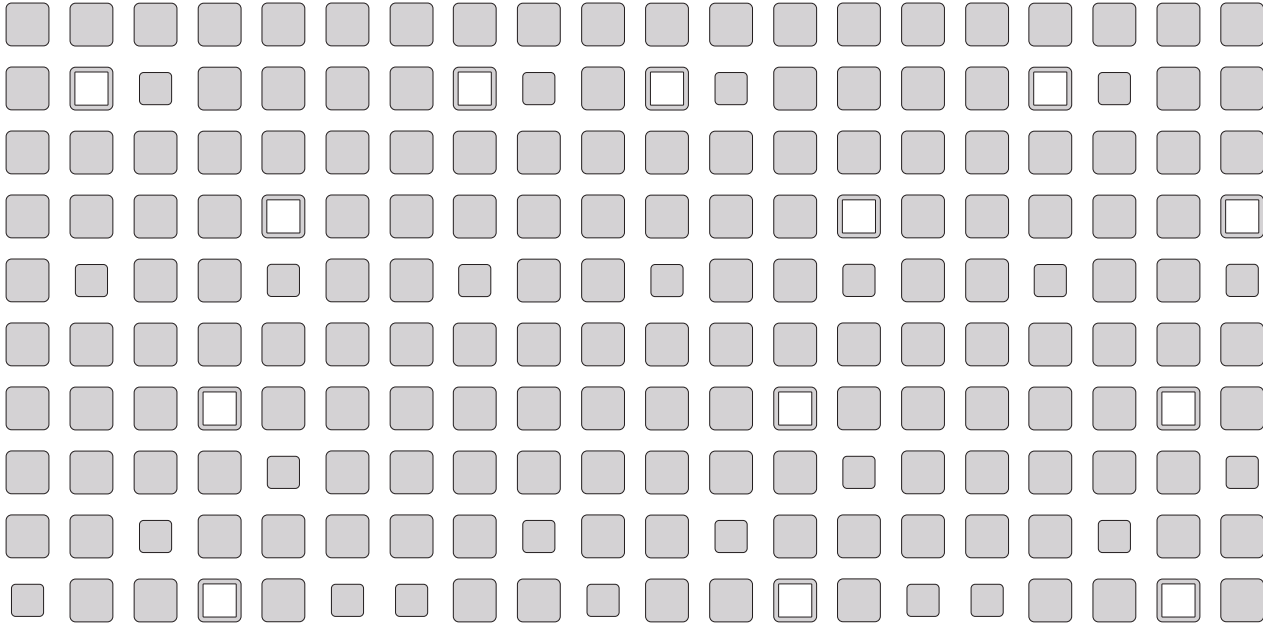


VMware Virtual Machine Importer

User's Manual



VMware, Inc.

3145 Porter Drive
Palo Alto, CA 94304
www.vmware.com

Please note that you will always find the most up-to-date technical documentation on our Web site at <http://www.vmware.com/support/>.

The VMware Web site also provides the latest product updates.

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1

CHAPTER

Introducing VMware Virtual Machine Importer

This chapter includes the following sections:

- [About This Manual on page 6](#)
- [Virtual Machine Importer Overview on page 7](#)
- [Virtual Machine Importer Requirements on page 9](#)

About This Manual

This manual describes how to install and use the VMware™ Virtual Machine Importer to migrate a virtual machine from Microsoft Virtual Server or Virtual PC for use as a VMware Workstation virtual machine.

Document History

This manual is revised with each release of the product or when deemed necessary. A revised version can contain minor or major changes.

Release	Date	Document Format
0.05	June 23, 2005	PDF For Release. Updated <ul style="list-style-type: none"> • Corrected page formatting for TOC and Index.
0.04	February 22, 2005	PDF For Release. Added <ul style="list-style-type: none"> • General copyedits and technical clarifications. Updated <ul style="list-style-type: none"> • Screen shots
0.03	January 27, 2005	PDF For Release. Added <ul style="list-style-type: none"> • New wizard screen Updated <ul style="list-style-type: none"> • Screen shots
0.02	December 28, 2004	PDF For Release. Added <ul style="list-style-type: none"> • Command line, Troubleshooting, Updated <ul style="list-style-type: none"> • name of utility
0.01	October 25, 2004	PDF For Release

Virtual Machine Importer Overview

The Virtual Machine Importer allows you to migrate virtual machines from Microsoft® Virtual Server, and Virtual PC to the following VMware platforms:

- Workstation 5.0
- Legacy Virtual Machines (e.g. virtual machines compatible with Workstation 4.x, GSX Server 3.x, ESX Server 2.x, and ACE 1.0)

The Virtual Machine Importer is a wizard that outputs a completely new VMware virtual machine based on the input virtual machine from Virtual PC. The newly-migrated VMware virtual machine retains the configuration of the Virtual PC original.

The Virtual Machine Importer migration process is non-destructive, so you could continue to use the original virtual machine with Virtual PC if you wanted to (but why would you?) However, if you plan to run the new VMware virtual machine on the same network as the original Virtual PC, on one of the virtual machines you must modify the network identity, (network name and IP address) so they can coexist properly.

Benefits

The Virtual Machine Importer provides a smooth migration path for existing Virtual PC systems:

- Avoid reinstalling operating systems and applications.
- Overcome legacy migration barriers — certain legacy systems may be impossible to recreate through reinstallation.

Settings Remain Unchanged

The VMware virtual machine created by Virtual Machine Importer contains an exact copy of the disk state from your Virtual PC source, with the exception of some hardware-dependent drivers and sometimes the mapped drive letters.

Settings from the source computer that remain identical include:

- Operating system configuration (computer name, security ID, user accounts, profiles and preferences, and so forth)
- Applications and data files
- Each disk partition's volume serial number

Since the target and the source virtual machines have the same identities (name, SID, and so on), running both on the same network can result in conflicts. If you are

planning to redeploy the source virtual machine, be aware of this issue and do not run both the source and target virtual machines on the same network at the same time.

You can resolve the duplicate ID problem by using additional tools, such as the Windows 2000 System Preparation Tool (Sysprep). For example, if you use the Virtual Machine Importer to test the viability of running a Virtual PC virtual machine as a VMware virtual machine without first decommissioning the original Virtual PC machine, you need to resolve the duplicate ID problem.

Refer to [Changes to Virtual Hardware on page 29](#) for a discussion of possible migration issues.

Virtual Machine Importer Requirements

Requirements for the Virtual Machine Importer include the following:

The Virtual Machine Importer—Application Requirements

- The Virtual Machine Importer runs on the following Microsoft Windows operating systems: Windows NT, Windows 2000, Windows 2003, Windows XP Professional.

Note: Although the Virtual Machine Importer operates only on Windows, after the migration, you can transfer the virtual machine to the VMware host platform of your choice.

The Virtual PC Virtual Machine—Input Requirements

- Virtual machines can be migrated from Virtual PC version 7 and later.
- Virtual machines from Macintosh versions of Virtual PC are not supported.
- Virtual machines must be turned off (powered down) before attempting the migration process. Suspended virtual machines cannot be migrated.
- The operating system on the source Virtual PC virtual machine must be a Windows guest operating system—but not Windows 9x—supported by the intended VMware platform (e.g. VMware Workstation 4 or 5). Refer to the following for a list of supported operating systems.

[//www.vmware.com/support/guestnotes/doc/index.html](http://www.vmware.com/support/guestnotes/doc/index.html)

Note: Virtual PC virtual machines with Windows 9x, and non-Windows guest operating systems (e.g. Linux, DOS, etc.), are NOT compatible with the VMware Virtual Machine Importer. This is true even when the destination VMware platform otherwise supports that guest operating system.

The VMware Virtual Machine—Output Compatibility

- The resulting VMware virtual machine may be used with Workstation 4.x or Workstation 5.0, depending on the version of Workstation you have installed.

Note: Workstation 4 virtual machines are compatible with VMware GSX Server 3.0, ESX Server 2.x, and ACE 1.0.

Installing the Virtual Machine Importer

This chapter includes the following sections:

- [Installing the Virtual Machine Importer on page 12](#)
- [Uninstalling or Repairing the Virtual Machine Importer on page 16](#)

Installing the Virtual Machine Importer

You can install the VMware Virtual Machine Importer onto a physical machine or virtual machine.

Follow these steps to install the VMware Virtual Machine Importer:

1. Ensure the Virtual Machine Importer requirements have been met.
Refer to [Virtual Machine Importer Requirements on page 9](#) for specific information.

2. Obtain the latest version of the VMware Virtual Machine Importer.
Check with your VMware Sales representative or the vmware.com website.

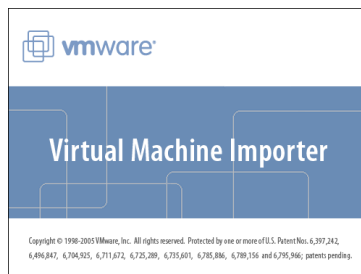
Caution: Copy the program and run the installer locally. Do not run the Virtual Machine Importer installer through Terminal Services.

3. Start the VMware Virtual Machine Importer installer.

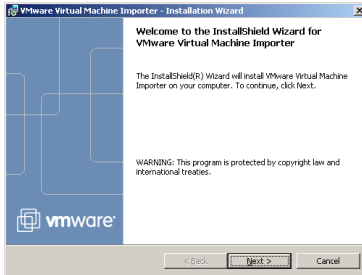
With the Virtual Machine Importer installer software on the Application CD or downloaded to a local location:

- a. Navigate through your file manager interface, such as Windows Explorer, to the folder that contains the installer file.
- b. Double-click the `VMware-VMimporter-1.0.0-<xxxx>.exe` file, where **<xxxx>** is the name of the build.

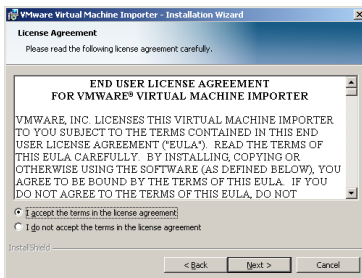
A splash screen appears momentarily.



- Confirm the Virtual Machine Importer Wizard. Click **Next**.

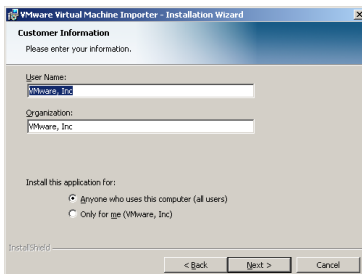


- Acknowledge the license agreement.



Click the **I accept the terms in the license agreement** radio button and click **Yes**.

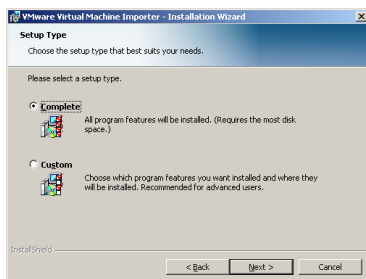
- Enter your user information and click **Next**.



- Type your name.
- Type your company's name.
- Select the appropriate radio button for Virtual Machine Importer users on your system.

This controls whether everyone on the machine can use the Virtual Machine importer, or just the account from which you are running the installer.

- Click **Next**
7. Select the setup type and click **Next**.



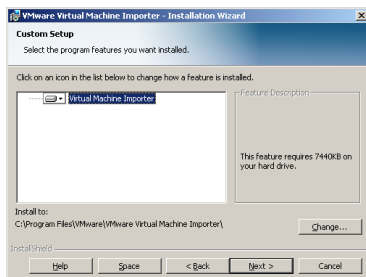
The choices are:

Complete — Installs all the Virtual Machine Importer components in the default path on the active storage disk.

Custom — Installs the complete Virtual Machine Importer installation, but allows you to select the installation path and review and select from the available disk drives for sufficient storage space.

Note: If you select Custom setup:

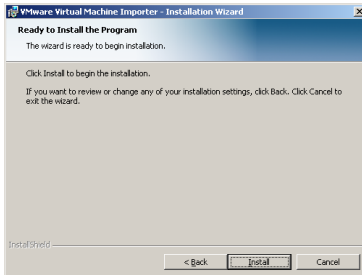
- Change the install path, as appropriate. Click **Change**.
Accept the default folder or select a folder by clicking **Browse** button. If the selected directory does not exist, the installer creates it for you.
- To review or change the installation disk, click **Space**.



Make changes or selections as needed and click **OK**.

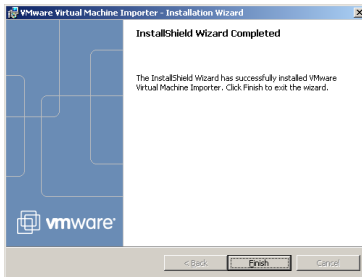
- Accept the custom changes. Click **Next**.

- Proceed with the installation at the **Ready to Install the Program** screen. Click **Next**.

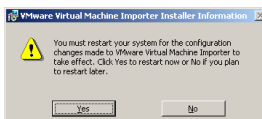


Various messages appear to indicate the progress of the installation.

- When the installation is complete, click **Finish**.



- You may have to restart your system before you can use the Virtual Machine Importer.

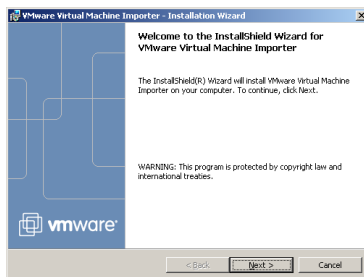


You have completed Virtual Machine Importer installation.

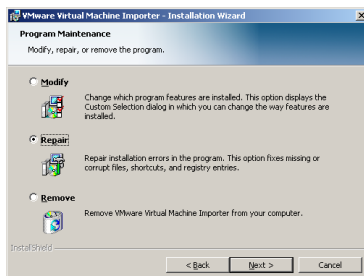
Uninstalling or Repairing the Virtual Machine Importer

To uninstall or reinstall the VMware Virtual Machine Importer:

1. Start the VMware Virtual Machine Importer installer.
2. Confirm the Virtual Machine Importer Wizard and click **Next**.



3. Select from **Modify**, **Repair** or **Remove**.

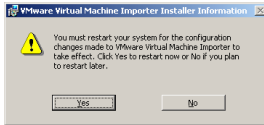


Modify — This option allows you to reconfigure the current installation. Refer to the Custom setup described in the step [Select the setup type and click Next. on page 14.](#)

Repair — This option verifies and reinstalls any damaged components of the Virtual Machine Importer

Remove — This option uninstalls the Virtual Machine Importer.

4. Depending on the changes, the installer may ask you to reboot your machine.



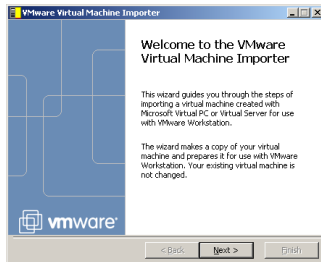
You have completed the Virtual Machine Importer modification, repair or removal.

Using the Virtual Machine Importer

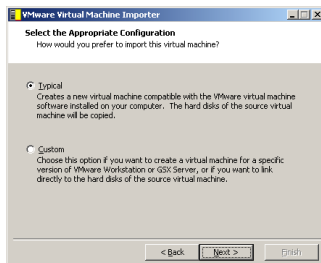
Use the VMware Virtual Machine Importer to migrate a new VMware virtual machine from a Microsoft® Virtual PC virtual machine in a few simple steps.

To migrate a Virtual PC virtual machine:

1. Ensure the Virtual PC virtual machine is powered off.
Note: You cannot migrate a virtual machine while it is operating.
2. Launch the Virtual Machine Importer to start the wizard.
Start > Programs > VMware > Virtual Machine Importer
3. Confirm the Virtual Machine Importer wizard and click **Next**.

*Welcome to the Virtual Machine Importer*

4. Select the configuration and click **Next**.



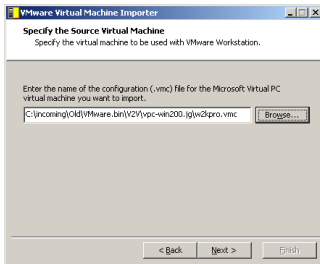
Typical—This configuration is appropriate for most use.

Custom—Custom configurations are useful for two instances:

- You run Workstation 5, but you need to create a legacy virtual machine, for use with VMware Workstation 4, GSX 3.x, ESX 2.x, or ACE1.0.
- You run Workstation 5, and you prefer not to make a copy of the virtual disks of the source machine. For example, you may be low on disk space.

Caution: Do not use this no-copy custom configuration if you plan to use the source virtual machine in Virtual PC again. When you open a migrated shared disk in Virtual PC, then all work performed in VMware Workstation after migration becomes permanently lost.

- Browse (or type the path) to the source Virtual PC virtual machine. Click **Next**.



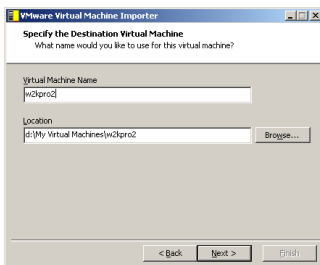
Specify the Source Virtual Machine

The Virtual Machine Importer inspects the file momentarily.



The Input File is Inspected

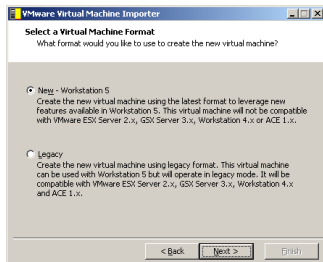
- Browse (or type the path) to the location you want to create a VMware virtual machine and click **Next**.



Specify the Target Virtual Machine

- If you did not select **Custom** in step 4, skip to step 9.

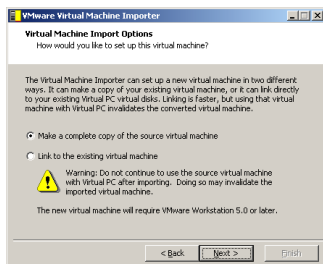
Select the format of the virtual machine and click **Next**.



- Click **New** if you want to use the virtual machine only with Workstation 5.0.
- Click **Legacy** if you want to use the virtual machine with Workstation 4, ESX 2.x, GSX Server 3.x or ACE 1.x.

Click **Next**.

8. Select the import options for the new virtual machine and click **Next**.

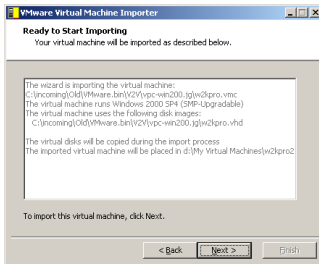


- **Make a complete copy of the source virtual machine**—This creates a VMware virtual machine with no dependencies on the original Virtual PC virtual machine.
- **Link to the existing virtual machine**—This creates a VMware virtual machine that shares the virtual disk of the source Virtual PC virtual machine in an ongoing manner.

Caution: Linking to the disk file is faster and uses less disk space than making a complete copy, but choosing this option means your work performed in VMware applications is permanently lost if you ever use the source virtual machine in Virtual PC again.

Click **Next**.

9. Review the settings and click **Next**.

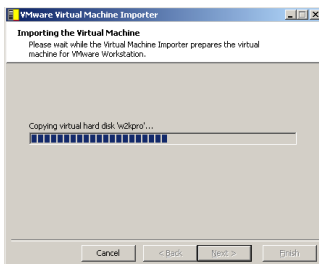


Ready to Start Migration

Review the description of the migration settings.

- If you need to change something, click **Back**.
- If you are satisfied with the settings, click **Next**.

The Virtual Machine Importer creates a VMware virtual machine from the source Virtual PC file.

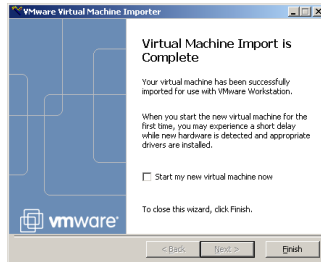


Converting the Virtual Machine

A progress bar appears. To stop the migration, click **Cancel**.

Note: The migration process can take a significant time, often more than a minute per gigabyte of disk space of the migrated virtual machine.

When the migration is complete, the Virtual Machine Importer displays a completion dialog.



Virtual Machine Migration Has Completed

10. If you want to use your new virtual machine immediately, check the box for **Start my virtual machine now**. The Virtual Machine Importer then launches VMware Workstation when it closes.
11. Click **Finish**.

4

CHAPTER

The Virtual Machine Importer Command Line

Use the VMware Virtual Machine Importer from the Windows command line, using the following syntax:

```
v2vapp [options] [sourceVMpath] [targetVMname] [targetVMpath]
```

The options are shown in this table:

Option	Name	Description
-a	(auto)	launch the VM after migration
-f	(fast)	attach redo log directly to the Virtual PC disks. This requires Workstation 5.
-lxxx	(log)	write logfile to xxx

Troubleshooting the Virtual Machine Importer

This chapter outlines known issues with the VMware Virtual Machine Importer.

- [Virtual Machine Importer Installation Issues on page 28](#)
- [Virtual Machine Migration Issues on page 29](#)
- [Technical Support Resources on page 31](#)

Virtual Machine Importer Installation Issues

This section describes some known issues with the Virtual Machine Importer installation.

- [Virtual Machine Importer Installation Wizard Interrupted](#)

Virtual Machine Importer Installation Wizard Interrupted

Installation can fail with a message saying installation was Interrupted.

Possible Workarounds:

- Verify that you do not have a previous installation of the Virtual Machine Importer.
 - Remove Virtual Machine Importer if present in Add/Remove Programs.
 - Remove any references to Virtual Machine Importer from the registry entry:
`HKEY_LOCAL_MACHINE\SOFTWARE\VMware, Inc.`
- Delete any previous failed installation source files or folders from your %temp% directory, or set the temp directory to another folder during the install.

Virtual Machine Migration Issues

This section describes some known issues with the Virtual Machine Importer migration process.

- [Changes to Virtual Hardware](#)
- [Virtual Machine Importer Fails to Migrate Virtual PC with More Than Six PCI devices](#)
- [Virtual PC Shared Folder Settings Not Migrated](#)
- [Windows NT4 NIC Not Migrated Correctly](#)
- [Failed to Impersonate Client](#)
- [No Keyboard/Mouse in Migrated virtual Machine](#)

Changes to Virtual Hardware

Most migrated applications should function correctly in the VMware virtual machine because their configuration and data files are located at identical paths as the source virtual machine. However, applications might not work if they depend on the specific characteristics of the underlying hardware—such as the serial number or the device manufacturer.

When troubleshooting after migration, keep in mind the following hardware changes:

- The CPU model and serial number (if activated) may be different. They correspond to the physical computer hosting the VMware virtual machine.
- The network interface card (NIC) is different (AMD™ PCNet™ or VMXnet NIC) with a different MAC address. Each interface's IP address has to be individually reconfigured.
- The graphics card is different (VMware SVGA card).
- The number of disks and partitions is the same, but each disk device has a different model and manufacturer strings.
- The primary disk controllers are likely to be different from the source machine's.
- Applications that depend on devices that are not available from within a virtual machine may not work.

Virtual Machine Importer Fails to Migrate Virtual PC with More Than Six PCI devices

The Virtual Machine Importer supports migration of only six PCI devices. If you have a Virtual PC image with more than six PCI devices, the Virtual Machine Importer does not migrate all of them.

Workaround: remove the default audio controller or another virtual PCI device you don't require before you migrate a Virtual PC image with the Virtual Machine Importer.

Virtual PC Shared Folder Settings Not Migrated

The Virtual Machine Importer does not support the migration of shared folders.

Workaround: Recreate shared folders in your VMware virtual machine after migration.

Windows NT4 NIC Not Migrated Correctly

If your Virtual PC virtual machine does not have an AMD PCI NEW Ethernet adapter, it can migrate improperly.

Workaround: After you migrate a Windows NT4 virtual machine, install a new virtual NIC followed by VMware Tools.

Failed to Impersonate Client

After the selection of `.vmc` file Wizard finishes with error: `Failed to impersonate client before deleting drive letter.`

Workaround: TBD

No Keyboard/Mouse in Migrated virtual Machine

After migrating a Virtual PC virtual machine to VMware, the mouse and keyboard do not work in the new machine. Mouse and keyboard are not available in the guest operating system, but they are available in the BIOS.

Workaround: Reset the virtual machine reboot.

Technical Support Resources

If you have problems while running the Virtual Machine Importer, please submit a support request using the support request form on the VMware Web site at:

www.vmware.com/requestsupport.

Additional Resources

Refer to the following for additional information.

General VMware Web site — www.vmware.com

Log case issues Web site — www.vmware.com/support

New features requests email address — V2V@vmware.com

Education services email — education@vmware.com

Technical support Web site — www.vmware.com/support

Consulting services email — consulting@vmware.com

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