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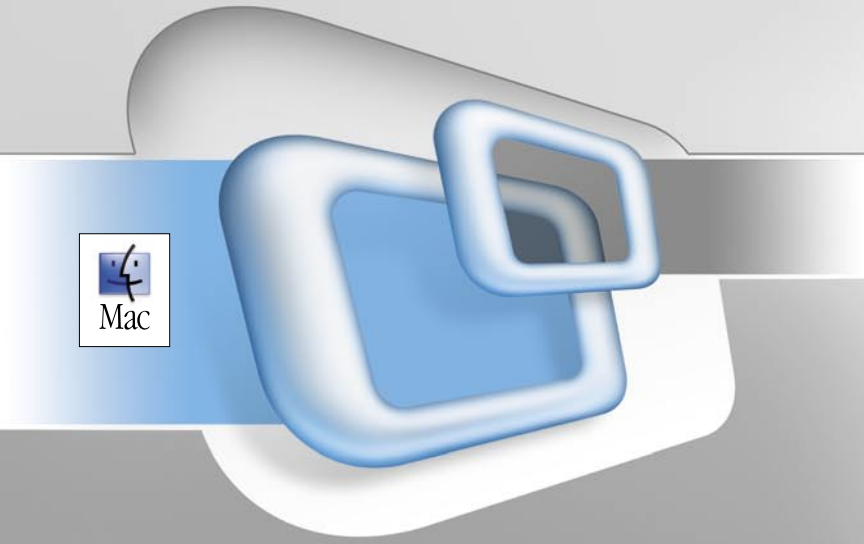

Microsoft® Virtual PC for Mac

VERSION 7

Getting Started

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Before you begin

Introduction

Welcome to the *Getting Started* guide for Microsoft® Virtual PC for Mac Version 7. Each section in this guide describes a specific step in the installation process and corresponds to the same step on the *Installation Overview* pullout guide. Use both resources together to track your progress as you install Virtual PC 7 and Microsoft Windows® for the first time.

This table describes the information included in each section of the guide.

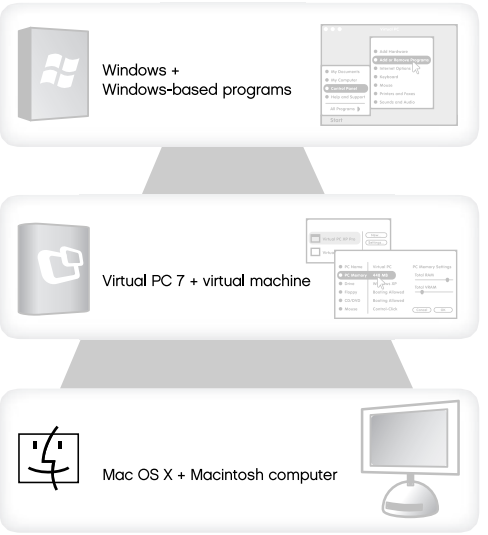
In this section	Learn how to
Before you begin	Identify the components of Virtual PC 7 and prepare to install Virtual PC 7.
Step 1 Install Virtual PC 7	Install Virtual PC 7.
Step 2 Create a virtual machine	Create a virtual machine, install and configure an operating system, import a virtual machine to Virtual PC 7, and transfer documents from a virtual machine to a new virtual machine in Virtual PC 7.
Step 3 Set up your virtual machine	Start and shut down your virtual machine, configure settings for your virtual machine, and establish printer and network connections for your virtual machine.
Step 4 Install Windows-based programs	Install and start Windows-based programs.
More help and support	Get more information about registration and product support for Virtual PC 7 and Windows.

About Virtual PC 7

Virtual PC 7 is a sophisticated software program that allows you to create one or more virtual machines, each running its own operating system, on a single Macintosh computer. The virtual machine emulates a standard *x*86-based computer, including all of the basic hardware components. By using emulated hardware,

each virtual machine works like a separate physical computer. Because each virtual machine has its own operating system, you can run several different operating systems at the same time on a single Macintosh computer.

The following diagram illustrates the relationship of the Virtual PC 7 application to the operating systems.



Virtual machine components

In Virtual PC 7, you can create multiple virtual machines, configure settings for each virtual machine that you create, and manage access to external hardware devices, such as printers and USB devices. The Virtual PC 7 application is the control

center for creating and managing your virtual machines. Each virtual machine that you create has the following components.

A virtual machine configuration document Each virtual machine that you create is represented on your Macintosh by a virtual machine configuration document. A virtual machine configuration document is a file that contains all of the configuration information for a virtual machine, including the virtual machine settings and the virtual hard disk image.

Virtual hard disk image A virtual hard disk image is the hard disk of the virtual machine. Because a virtual machine does not have physical components, it cannot store information on a physical hard disk. Instead, a virtual machine stores information in a virtual hard disk image. By default, the virtual hard disk image is a dynamically expanding file that grows in size as you install applications or store data in it.

An operating system installed on the virtual hard disk image A supported operating system must be installed on the virtual hard disk image. If the version of the Windows operating system that you want to install is not included with Virtual PC 7, you must acquire and install an operating system that is supported.

Important *The supported operating systems are Windows XP Professional, Windows XP Home Edition, and Windows 2000 Professional. Refer to the Read Me for details. The Read Me is included on the Virtual PC 7 Installation CD and in Virtual PC 7 on the Help menu.*

Emulated hardware The virtual machine emulates a standard x86-based computer, including all of the basic hardware components.

What's new in Virtual PC 7

Virtual PC 7 features many improvements in performance and ease of use.

Improved performance Virtual PC 7 is optimized for Mac OS X and features improved graphics and visual display. Programs launch quickly, refresh easily, and are more responsive.

G5 support Run Windows-based programs on Apple's fastest new hardware.

Easy installation Get started quickly with streamlined installation of Virtual PC 7 and a Microsoft Windows operating system.

Easy printing Use the same printer as your Macintosh if you are running Mac OS X version 10.3.*x* (Panther). No special printer configuration is required.

Fast Save Shut down and save the state of your virtual machine in one easy step. When you use the Fast Save feature, all Windows-based programs that are running on your virtual machine when you shut down will be running when you restart your virtual machine.

Help Find new resources and step-by-step instructions in this *Getting Started* guide and Virtual PC 7 Help.

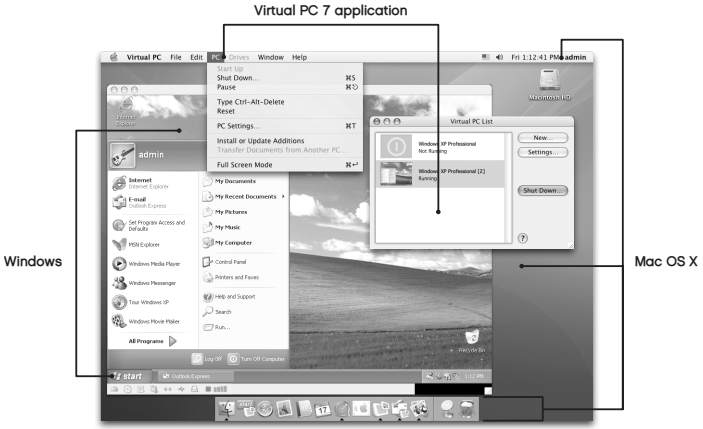
Expanded preferences and settings Customize your virtual machine by using new application preferences and virtual machine settings.

Visual tour of Virtual PC 7

To use Virtual PC 7 and your virtual machine, you must interact with three separate user interfaces:

- Mac OS X
- Virtual PC 7
- Windows

These user interfaces are shown in the following illustration and described in the tour of Virtual PC 7 that follows.



Mac OS X

The visual elements of Mac OS X are the Macintosh desktop, menu bar, and the Dock.

Macintosh desktop Unless you are running Virtual PC 7 in full-screen mode, the Macintosh desktop is always visible on your monitor. When a virtual machine is running, it is visible in the virtual machine window on the Macintosh desktop. You can switch between the virtual machine window and Mac OS X, as you would any application for the Macintosh. Simply minimize the virtual machine window to view the entire Macintosh desktop.

Menu bar The menu bar at the top of the Macintosh desktop changes according to the application that is active. When Mac OS X is active, the **Finder** menu displays to the right of the Apple icon. When Virtual PC 7 is active, the **Virtual PC** menu displays to the right of the Apple icon. To change the active menu bar, click either the Macintosh desktop or the virtual machine window. If Virtual PC 7 is running but the virtual machine window is not visible, you can activate the Virtual PC 7 menu bar by clicking the Virtual PC 7 icon in the Dock.

Dock The Macintosh Dock can be used with Virtual PC 7 to provide quick access to your virtual machine. You can set the following to display in the Dock: Virtual PC 7, the **Start** menu for the Windows operating system, and Windows-based programs running on each virtual machine.

Virtual PC 7

Use the Virtual PC 7 application to create and manage virtual machines and to configure settings for each virtual machine. The visual elements of the Virtual PC 7 application are the menu bar, Virtual PC List, and the virtual machine window.

Menu bar The menu bar at the top of the Macintosh desktop changes according to the application that is active. When Mac OS X is active, the **Finder** menu displays to the right of the Apple icon. When Virtual PC 7 is active, the **Virtual PC** menu displays to the right of the Apple icon. To change the active menu bar, click either the Macintosh desktop or the virtual machine window. If Virtual PC 7 is running but the virtual machine window is not visible, you can activate the Virtual PC 7 menu bar by clicking the Virtual PC 7 icon in the Dock.

The following table describes each menu in Virtual PC 7.

Use this menu	To
Virtual PC	Quit Virtual PC 7, get your product identification number (PID), register Virtual PC 7, or set application preferences for your virtual machines.
File	Create a new virtual machine, import a virtual machine to Virtual PC 7, transfer documents from a virtual machine created with a previous version of Virtual PC to a new virtual machine in Virtual PC 7, open a virtual machine window, or close a virtual machine window and save its state (Fast Save).

Use this menu	To
Edit	Work with text and capture screens. Use the Type submenu to type Windows-based keyboard combinations (such as CTRL+ALT+DELETE or PRINT SCREEN) with your Macintosh keyboard.
PC	Start up, shut down, or restart (reset) your virtual machine; transfer documents from a virtual machine created with a previous version of Virtual PC; install or update Virtual Machine Additions; or configure settings for each virtual machine, such as printer and network connections and full-screen display.
Drives	Capture, release, and eject CDs, DVDs, and floppy disks or CD, DVD, and floppy disk images.
Window	Start Virtual Disk Assistant, start Virtual PC List, or manage multiple virtual machine windows.
Help	Access Virtual PC 7 Help, visit the Virtual PC 7 product Web site, or check for product updates.

Virtual PC List Virtual PC List displays all of the virtual machines you have created and the current status of each. If you have multiple virtual machines, use Virtual PC List to start, shut down, and change settings for each virtual machine. To start Virtual PC List, in Virtual PC 7, on the **Window** menu, click **Virtual PC List**.

Virtual machine window The virtual machine window on the Macintosh desktop displays your virtual machine. The title bar of the virtual machine window displays the name of the virtual machine that is currently running.

The virtual machine window also includes the Virtual PC 7 toolbar, which is located in the bottom left corner of the virtual machine window. The toolbar provides shortcuts to important virtual machine settings and application preferences; the colored lights indicate activity for the function.

The following table describes each icon on the Virtual PC 7 toolbar.

Use this icon		To
	Virtual hard disk image	Modify or view the settings for your virtual hard disk image, or create a new virtual hard disk image by using Virtual Disk Assistant.
	CD/DVD	Capture or release a CD, DVD, CD image, or DVD image.
	Shared folders	Create a shared folder or modify the settings of a shared folder.
	USB	Install a USB device and assign it to either your virtual machine or your Macintosh.
	Printer	Select the Virtual Machine Additions Printer. This is only available if you are running Mac OS X version 10.3.*x* on your Macintosh.

Use this icon		To
	CPU indicator	View the total CPU usage for the Virtual PC 7 application and modify how Virtual PC 7 performs and responds when Virtual PC is running in the background and other applications are running in the foreground. Virtual PC 7 shares processor resources with each application running on your Macintosh. The load meter indicates the portion of the Macintosh processor that is currently being used by the Virtual PC 7 application. Because the load meter indicates the processor usage of the Virtual PC 7 application rather than the individual virtual machine, the load meter displays the same measurement in each virtual machine when multiple virtual machines are running simultaneously. The load meter functions properly only if Virtual Machine Additions and a supported Windows operating system are installed.
	Floppy disk	Capture or release a floppy disk or floppy disk image. If your Macintosh computer does not have a floppy disk drive, you can capture a floppy disk image by dragging it to this icon. By default, this icon does not appear in the toolbar.
	Network	View or modify the network connection for your virtual machine. By default, this icon does not appear in the toolbar.

The floppy disk and network icons do not appear in the Virtual PC 7 toolbar unless you add them to the toolbar. You can add or remove icons by selecting the Toolbar application preference. To do this, on the **Virtual PC** menu, click **Preferences**.

Windows

The visual elements of the Windows operating system are the Windows desktop and the **Start** menu.

Windows desktop The Windows desktop includes its own taskbar and program-specific menu bars. Each Windows-based program that is running on your virtual machine appears in the Windows taskbar.

Start menu The **Start** button in the lower left corner of the desktop opens the **Start** menu from which you can start Windows-based programs, change settings for the Windows operating system, access files that you have saved, or get help with using Windows.

The following table describes the main elements of the **Start** menu in Windows XP. The elements for Windows 2000 are in parentheses ( ).

Use	To
Control Panel (Settings)	Change the way the Windows operating system looks and behaves; add and remove Windows-based programs; install and troubleshoot hardware; or set the date, time, and time zone for your computer. Control Panel in the Windows operating system is similar to Preferences in Mac OS X.
All Programs (Programs)	Start Windows-based programs.
My Documents (Documents)	Save and open your documents directly from this folder.
My Recent Documents	Open documents that have been recently used.
Search	Search for files, folders, printers, and computers on your network; or search for files, folders, and printers on your virtual machine.
Help and Support (Help)	Access Windows Help and links to updates and support for Windows on the Microsoft Web site.

Before you install Virtual PC 7

This section describes the requirements for installing Virtual PC 7 and creating or importing a virtual machine.

Tip Use the **Installation Overview** to help you with the setup process. This pullout guide provides an overview of the setup process from installing Virtual PC 7 to installing a Windows-based program on your new virtual machine.

What you need before you install Virtual PC 7

Have these items available before you begin the setup process.

System requirements

To install and run Virtual PC 7 on your Macintosh computer, you must have the following:

- 700 MHz or faster native G3, G4, or G5 processor; the processor speed must be a part of the physical computer and cannot be added as a CPU accelerator
- Mac OS X version 10.2.8 (Jaguar) or 10.3.*x* (Panther); Mac OS X version 10.3.*x* is required for the Macintosh G5
- CD-ROM drive
- Minimum of 512 MB RAM
- 3 GB or more of free hard-disk space
- 1024 × 768 or higher-resolution monitor that displays thousands of colors
- Mouse or compatible pointing device

Supported operating systems

The operating systems supported for use with Virtual PC 7 are Windows XP Professional, Windows XP Home Edition, and Windows 2000. Refer to the Read Me content for specific details about the supported operating systems. The Read Me content is included on the Virtual PC 7 Installation CD, and in Virtual PC 7 on the Help menu.

Product keys

The Virtual PC 7 setup process requires you to enter separate product keys for Virtual PC 7 and the Windows operating system. The product key for Virtual PC 7 is located on the back of the Virtual PC 7 media case.

The product key for Windows is a 25-digit number with the format *xxxxx-xxxxx-xxxxx-xxxxx-xxxxx*. This number is typically included with the product packaging. If your copy of Virtual PC 7 includes a Windows operating system, the product key for Windows is located on the back of the Virtual PC 7 media case.

Before you import a virtual machine

Before you import a virtual machine to Virtual PC 7, make sure that the virtual machine has been shut down completely in the version of Virtual PC that was used to create it. Data from a virtual machine with a "Saved" status cannot be migrated to Virtual PC 7. To shut down a virtual machine completely, you must use the **Shut Down** command (**Shut down** option). For more information about importing a virtual machine, see "Migrate data from an earlier version of Virtual PC," p. 42.

Installing the upgrade version of Virtual PC 7

If you purchased an upgrade version of Virtual PC 7, you need to have Virtual PC for Mac version 5.*x* or 6.*x* installed on your Macintosh. It is not possible to upgrade to Virtual PC 7 from versions of Virtual PC earlier than version 5.0.

Step 1 Install Virtual PC 7

Begin installing Virtual PC 7

This section provides instruction for installing Microsoft® Virtual PC for Mac Version 7.

Important *To install Virtual PC 7, you must log on to your Macintosh as an administrator. If you are installing Virtual PC 7 on Mac OS X version 10.2.8, the order of the screens may vary.*

Insert the Virtual PC 7 Installation CD into the CD drive on your Macintosh. The following installation screen appears.

If the screen does not automatically appear, double-click the Virtual PC 7 CD icon that appears on the Macintosh desktop.

The installation screen has three options:

Install Virtual PC This opens the Virtual PC Installer.

Read Me This opens a document that contains important information regarding Virtual PC 7.

Manuals & Tools This folder contains an electronic copy of this *Getting Started* guide, the installation guide for the version of the Microsoft Windows® operating system included on your Virtual PC 7 Installation CD (if applicable), and a tool for removing Virtual PC 7.

You can review the Read Me or the contents of the Manuals & Tools folder now or later. To open the Virtual PC 7 Installer, double-click **Install Virtual PC**. The **Welcome to the Virtual PC Installer** screen appears.

Overview of the setup process

The Installer guides you through each step of the installation. The diagram on the **Welcome to the Virtual PC Installer** screen provides an overview of the entire Virtual PC 7 setup process from installing Virtual PC 7 to configuring Windows.

Review the Read Me content

Open the Read Me and read it before installing Virtual PC 7. The Read Me provides important information regarding Virtual PC 7. You can print or save the Read Me content.

Accept the End-User License Agreement

The End-User License Agreement (EULA) defines the terms of use for Virtual PC 7. You can print or save the EULA. To accept the terms of the EULA, click **Continue**, and then click **Agree**. If you click **Disagree**, the installation is cancelled.

Select a volume or disk on which to install Virtual PC 7

You must install Virtual PC 7 on the Mac OS X startup volume or disk.

To select the volume or disk on which you want to install Virtual PC 7, click the icon for the volume or disk. The green arrow

points to the volume or disk on which Mac OS X is installed. You must install Virtual PC 7 on this same volume or disk.

Select the type of installation

The Easy Install installation type is the standard for all installations of Virtual PC 7. The **Customize** button provides a customized view of the features to be installed. All options listed are installed.

Your Macintosh computer restarts after Virtual PC 7 is installed. If you do not want to restart your computer, you can cancel the installation process at this time. When you are ready to install Virtual PC 7, insert the Virtual PC 7 Installation CD and repeat the installation process from the beginning.

Authorize the installation of Virtual PC 7

The Installer verifies that the administrator for this Macintosh computer authorizes installing Virtual PC 7.

If you do not know the user name and password or passphrase that were used to install Mac OS X, look for an Administrator account in Accounts in System Preferences. Use that name and the associated password or passphrase. To get help with your administrator name and password or passphrase, click ?

Install software

To install Virtual PC 7 now, click **Continue Installation**. After Virtual PC 7 is successfully installed, click **Restart**. Your Macintosh restarts and the next phase of the Virtual PC 7 setup process begins.

Important *To install the Windows operating system included with Virtual PC 7, do not remove the Virtual PC 7 Installation CD from the CD drive of your Macintosh until you either finish configuring the Windows operating system or are prompted to remove the CD.*

Log on with your Macintosh administrator password or passphrase

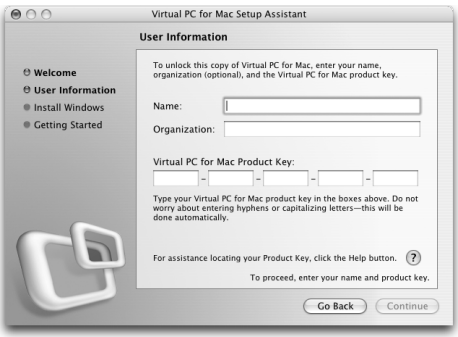
After you restart your Macintosh, log on with your Macintosh administrator password or passphrase before you continue installing Virtual PC 7. If you do not do this, you may be asked to enter the product key for Virtual PC 7 each time you start Virtual PC 7.

Use the Virtual PC for Mac Setup Assistant

After you log in as an administrator, the Virtual PC for Mac Setup Assistant starts. If the Virtual PC for Mac Setup Assistant does not start immediately after you log on as an administrator, double-click the **Applications** folder, and then double-click **Virtual PC**.

Enter user information

Enter your name and the product key for your copy of Virtual PC 7. If you cannot find the product key, look for a sticker on the back of your Virtual PC 7 media case.



A product identification number (PID) is assigned to you. You need this number if you contact Microsoft Product Support Services for technical support. The PID does not appear on any labels so you may want to write it down at this time. You can also

find this number in Virtual PC 7 by doing the following: On the **Virtual PC** menu, click **About Virtual PC**, and then click **Info**.

What's next?

After you receive your PID, you are finished installing and setting up Virtual PC 7. The next step depends on whether your copy of Virtual PC 7 includes a Windows operating system.

If your copy of Virtual PC 7 does not include Windows, proceed to "If Virtual PC 7 does not include Windows," p. 27. If your copy of Virtual PC 7 includes Windows, proceed to "If Virtual PC 7 includes Windows," below.

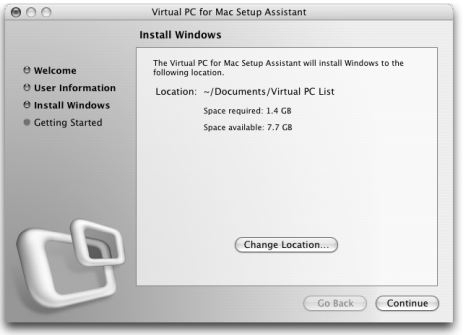
If Virtual PC 7 includes Windows

If the version of Virtual PC 7 that you have just installed includes a Windows operating system, you do not need to create an initial virtual machine. This version of Virtual PC 7 includes a pre-configured virtual machine on which the Windows operating system has been installed but only partially configured. You must first install the virtual machine on your Macintosh and then finish configuring the Windows operating system.

Install your virtual machine

By default, the configuration document (which contains the configuration information and operating system files for your virtual machine) is installed in the User/Documents/Virtual PC List folder on your Macintosh hard disk.

To install the configuration document in the default location, click **Continue**. To install it in another location, click **Change Location**, select the location you want, and then click **Continue**.



Configure Windows

You are now ready to finish the Virtual PC for Mac Setup Assistant and then finish configuring the Windows operating system that is installed on your virtual machine.

Before finishing the Virtual PC for Mac Setup Assistant, you may want to review the information about configuring the Windows operating system. When you finish the Virtual PC for Mac Setup Assistant, you can find this information in this guide and in Virtual PC 7 Help.

To finish the Virtual PC for Mac Setup Assistant and finish configuring Windows, click **Start Windows**.

Proceed to "Configure the Windows operating system," p. 35.

If Virtual PC 7 does not include Windows

If you just installed a version of Virtual PC 7 that does not include a Windows operating system, click **Finish** to finish the Virtual PC for Mac Setup Assistant.

You are now ready to do one of the following:

- Use the Create New PC Assistant to create a virtual machine.

Proceed to "Create a virtual machine," p. 28.

- Import a virtual machine or transfer documents that were created in a Windows-based program from a virtual machine to Virtual PC 7. This process applies only if you created a virtual machine in a version of Virtual PC earlier than Virtual PC 7.

Proceed to "Migrate data from an earlier version of Virtual PC," p. 42.

Tip It is not necessary to create or import a virtual machine at this time. However, before you can use Virtual PC 7, you must either create an initial virtual machine in Virtual PC 7 or import a virtual machine from an earlier version of Virtual PC.

Step 2 Create a virtual machine

Create a virtual machine

To use Microsoft® Virtual PC for Mac Version 7, you must create or import a virtual machine to use with Virtual PC 7. Use the Create New PC Assistant to create a virtual machine if:

- You have just installed a version of Virtual PC 7 that does not include a Windows® operating system and you need to create an initial virtual machine in Virtual PC 7.
- You want to create additional virtual machines in Virtual PC 7.

If the version of Virtual PC 7 that you have just installed includes a Windows operating system, you do not need to create an initial virtual machine. This version of Virtual PC 7 includes a pre-configured virtual machine on which the Windows operating system has been installed but only partially configured. To finish configuring the Windows operating system, proceed to "Configure the Windows operating system," p. 35.

For more information about importing a virtual machine from a previous version of Virtual PC to Virtual PC 7, see "Migrate data from an earlier version of Virtual PC," p. 42.

Install an operating system not included with Virtual PC 7

Use the Create New PC Assistant to create an empty virtual machine and then install an operating system of your choice.

Depending on a variety of factors, including the speed of your Macintosh and the operating system you are installing, it may

take some time to install your own operating system. Times can range from 30 minutes to over 2 hours.

To create an empty virtual machine

1. If you have not already done so, in Virtual PC 7, on the **File** menu, click **New**.
2. Click **Install your own operating system**, and then click **Begin**.
3. Click **Continue**.
4. In the **Operating System** list, click the operating system you want to install on your virtual machine. If the operating system you want to install is not listed, select **Unspecified**.
5. Based on the operating system you selected, the possible formats for the virtual hard disk image are displayed. Under **Hard Disk Format**, do one of the following:
   - To select the default format for the virtual hard disk image, click **Continue**.

     The default format is the recommended format for your operating system.
   - To select a different format, click a format, and then click **Continue**.

     Some file formats are not compatible with certain operating systems. Incompatible formats for the selected operating system are dimmed and cannot be selected.
6. In the **Name** box, type the name for your virtual machine.

   You can either accept the name that is provided, or you can create your own name. For best results, use the name of the operating system that you are installing, for example, Windows XP Professional.

7 To install the configuration document (which contains the configuration information and operating system files for your virtual machine), do one of the following:

- To accept the default location, click **Create**.

  By default, the configuration information and operating system files for your virtual machine are installed in the User/Documents/Virtual PC List folder on your Macintosh hard disk.

- To select a different location, click **Change Location**, select a location, and then click **Create**.

To continue, follow the steps to install an operating system.

To install an operating system

1 On the **Install Your Operating System** screen, click **Start PC**.

A black screen displays the following message "OS not found. Install an OS on this hard drive."

2 With Virtual PC in the foreground, insert the CD that contains the operating system into the CD drive of your Macintosh.

The CD is now captured for use by Virtual PC 7. If the CD is not automatically captured, in Virtual PC 7, on the **Drives** menu, click **Capture Disc**.

If you have an operating system that requires installing from a floppy disk, you need either a floppy disk drive on your Macintosh computer or a floppy disk image that contains the installation information. For more information about using floppy disk images, see Virtual PC 7 Help.

3 In Virtual PC 7, on the **PC** menu, click **Reset**.

4 To confirm that you want to restart the virtual machine, click **Reset** again.

5 When the text "Press any key to boot from CD." appears on the screen, immediately press any key on your keyboard.

Tip You must press a key on your keyboard quickly, without pausing. Otherwise, the black screen with the message "OS not found. Install an OS on this hard drive." appears again, and you will need to click **Reset** on the **PC** menu in Virtual PC 7.

If you are installing an unsupported operating system, refer to the instructions that came with your software.

If you are installing Windows, wait while the Windows setup program installs the necessary files. This process may take some time.

After the files are installed, the **Welcome to Setup** screen appears for Windows. Use your keyboard instead of your mouse device to complete each task in the Windows installation that follows.

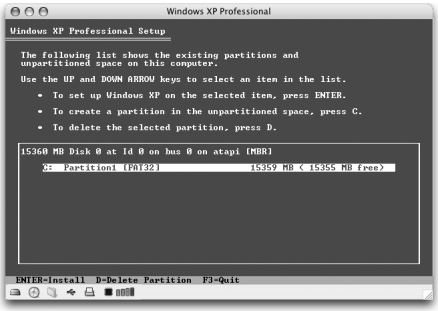
To continue the installation of Windows

1 When you see the **Welcome to Setup** screen, press RETURN. To cancel the installation, press F3.

2 To accept the terms of the End-User License Agreement (EULA), press F8. To cancel the installation, press ESC.

3 Select a partition for the virtual hard disk image and then press RETURN.

Accept the partition that is selected by default, which you selected when you created the virtual hard disk image, unless you are certain you want to do otherwise. Your screen should look something like the following:



4 Press RETURN.

The file system that is selected by default reflects the partition option you selected in the Create New PC Assistant. Use the file system that is selected by default unless you are sure that you need to select a different file system. To select a different file system, use the arrow keys on your keyboard to select the file system, and then press RETURN.

Caution Do not convert your file system to the NTFS file system unless you are certain that you want to use the NTFS file system. You cannot convert back to a FAT file system once you have an NTFS file system. FAT32 provides the best compatibility with Virtual PC 7.

The following illustration shows the list of available file systems.

The Windows operating system files continue copying to your virtual hard disk image. There may be numerous progress screens, and this process may take some time.

When the installation is complete, proceed to "Configure the Windows operating system," p. 35.

Install a version of Windows included with Virtual PC 7

Use the Create New PC Assistant to install the virtual machine and Windows operating system included with Virtual PC 7. Do not use this option to install any other operating system. To install a different operating system, follow the instructions in "Install an operating system not included with Virtual PC 7," p. 28.

To install a version of Windows included with Virtual PC 7

1. If you have not already done so, in Virtual PC 7, on the **File** menu, click **New**.
2. On the **Select a Setup Method** screen, click **Install from a Virtual PC for Mac CD**, and then click **Begin**.
3. If you have not already done so, insert the Virtual PC 7 Installation CD into your CD drive, and then click **Continue**.
4. In the **Name** box, type the name for your virtual machine, such as Windows XP Professional.

   You can either accept the name that is provided, or you can create your own name. The default is the name of the operating system you are installing, for example, Windows XP Professional.
5. To install the configuration information and operating system files for your virtual machine, do one of the following:
   - To accept the default location, click **Install**.

     By default, the configuration information and operating system files for your virtual machine are installed in the User/Documents/Virtual PC List folder on your Macintosh hard disk.
   - To select a different location, click **Change Location**, select a location, and then click **Install**.
6. On the **Getting Started** screen, click **Start Windows**.

Important *To install the version of Windows that is included with Virtual PC for Mac version 5.x or 6.x , you must create a new virtual machine in the earlier version of Virtual PC, install the Windows operating system, and then import the virtual machine to Virtual PC 7. The Windows operating system that*

you install must be supported in Virtual PC 7. The operating systems supported for use with Virtual PC 7 are Windows XP Professional, Windows XP Home Edition, and Windows 2000. Refer to the Read Me content for specific details about the supported operating systems. The Read Me content is included on the Virtual PC 7 Installation CD, and in Virtual PC 7 on the Help menu.

For more information about importing a virtual machine, see "Migrate data from an earlier version of Virtual PC," p. 42.

Configure the Windows operating system

Whether you installed your own operating system or the Windows operating system included on the Virtual PC 7 Installation CD, you need to configure or finish configuring the Windows operating system. The Windows setup assistant walks you through the configuration process. This section provides pointers to information you will need for some steps in the setup process. It does not cover every setup screen.

Procedures and sample configuration screens in this section are for an installation of Windows XP Professional. The process is similar for configuring Windows XP Home Edition and Windows 2000.

Product key information for Windows

You already provided the product key for Virtual PC 7. Because the Windows operating system is a separate Microsoft product, you need to provide the product key for the Windows operating system, as well.

The product key for Windows is a 25-digit number with the format *xxxxx-xxxxx-xxxxx-xxxxx-xxxxx*. This number is typically included with the product packaging. If your copy of Virtual PC 7 includes a Windows operating system, the product key for Windows is located on the back of the Virtual PC 7 media case.

Computer name

The Windows setup assistant suggests a computer name. This computer name is different from the name you use with Mac OS X or the name of your virtual machine, which appears on the virtual machine title bar and in Virtual PC List. This name is used only to identify your virtual machine on a business or home network and on the Internet.

If you are on a business network, check with the network administrator to determine your computer name. If you are on a home network in which printers or other devices are shared among multiple computers, select a unique name to distinguish your virtual machine from other computers or devices on your home network.

Even if you are not on a network, you should enter a computer name because some Internet service providers (ISPs) require that you use a specific computer name to identify your computer and to validate your Internet account.

If you are asked to enter a description for your computer, enter a description that will help you identify it on a network.

Administrator password

Most versions of the Windows operating system require an administrator password. As the administrator for this virtual machine, you need to assign it a password, which will control access to this virtual machine. While it is possible for others to

use this virtual machine and the Macintosh computer, there are certain tasks that can be performed only by the administrator. To limit the number of passwords you must remember, you can use the same administrator password that you use for your Macintosh computer.

Network settings

The setup assistant may look for network settings, and you may need to select a type of network configuration. The types of network configurations are:

Typical These network settings have been preconfigured to perform the majority of tasks in the Windows operating system. This option is the recommended setting and is selected by default.

Important *For best results, select the* **Typical** *option. If you use custom network settings, you may compromise the performance of Virtual PC 7.*

Custom This option is for advanced users who want to customize their network settings. If you change the network settings, always use Dynamic Host Configuration Protocol (DHCP) unless you are using a domain or your network administrator tells you to use a setting other than DHCP. DHCP is a Transmission Control Protocol/Internet Protocol (TCP/IP) that allows a network connected to the Internet to automatically assign a temporary IP address to a host when the host connects to the network. For more information about custom network settings, check with your network administrator.

Workgroups

In some versions of Windows, you may need to indicate if your virtual machine is a member of a domain or a workgroup. Use the following descriptions to decide if your virtual machine needs to be a member of either a domain or a workgroup:

Workgroup A workgroup is made up of one or more computers with the same workgroup name. Workgroups share information, such as files and folders, and hardware resources such as printers. You do not need special permissions to join a workgroup. You can join a workgroup by entering the workgroup name. You can use the workgroup name that is provided, or you can create your own. If you are not in a workgroup, leave the default setting in the workgroup or domain box.

Domain A domain is a collection of computers on a network that share common information, and is managed by a network administrator. To join a domain, you must have a user account that allows you to add a computer account to the domain.

Important *If you are unsure or are not part of a business network, do not select* **Domain***. Use the default setting. You can join your virtual machine to a domain later, after you finish installing Windows.*

Connecting to the Internet

By default in Virtual PC 7, virtual machines connect to the Internet and networks by using Shared Networking. Shared Networking uses the Internet and network connections that have been set up for your Macintosh.

Important *Shared Networking requires Windows to be configured to connect through a network, even when your Macintosh may connect to the Internet and networks though a dial-up modem, DSL, cable, or other Macintosh connection. If you configure Windows to connect to the Internet directly, you may compromise the performance of Virtual PC 7.*

The following table shows which options to select for use with Shared Networking.

When the options are	Select this option
Digital subscriber (DSL) line or cable modem Local area network (LAN)	Local area network (LAN)
Local area network or home network Directly to the Internet	Local area network or home network
Use a username and password to connect Always connected to the Internet	Always connected to the Internet If the **User Name and Password to Connect to the Internet** screen appears, your Macintosh may not be connected to the Internet. In Virtual PC 7, your virtual machine uses the network settings of the Macintosh to connect to the Internet. After you configure Windows, establish a connection to the Internet for your Macintosh. For more information about Internet connections on the Macintosh, see Mac OS X Help.

After you configure Windows, you can optionally connect your virtual machine to the Internet independently of your Macintosh, by setting your virtual machine to use Virtual Switch networking. Additionally, you may need to make changes to the network settings in the Windows operating system. For more information about Virtual Switch networking, see Virtual PC 7 Help.

High-speed Internet connection

If you are prompted to select high-speed connection settings, such as an Internet Protocol (IP) address, always select the **Obtain IP automatically** and **Obtain DNS automatically** check boxes.

Important *If you change the network settings, always use Dynamic Host Configuration Protocol (DHCP) unless you are using a domain or your network administrator tells you to use a setting other than DHCP. DHCP is a Transmission Control Protocol/Internet Protocol (TCP/IP) that allows a network connected to the Internet to assign a temporary IP address to a host automatically when the host connects to the network. Do not use a static IP address with Virtual PC 7 unless you are using Virtual Switch networking on a network that requires static addresses. Consult your network administrator for more information.*

Windows desktop

The configuration process is complete when you see the Windows desktop in the virtual machine window, as shown in the following illustration. In Windows 2000, the desktop and **Start** menu look slightly different.

When you have finished configuring Windows, proceed to "Set up your virtual machine," p. 53.

Migrate data from an earlier version of Virtual PC

If you have an earlier version of Virtual PC installed, you may have data that you want to use in Virtual PC 7. There are two ways to migrate data from an earlier version of Virtual PC to Virtual PC 7. Use the following table to help you decide which command to use.

If the data is stored on a virtual machine that runs	Use one of these commands	To
A supported operating system, and was created by using Virtual PC for Mac version 5.0 or later	**Import PC from a Previous Version** — or — **Import from a Previous Version**	Import the entire virtual machine to Virtual PC 7. This includes the Windows operating system, Windows-based programs, and documents that were created by using Windows-based programs.
An unsupported or unrecognized operating system	**Transfer Documents from an Existing PC** — or — **Transfer Documents from Another PC**	Copy only the documents that were created by using Windows-based programs. The command does not migrate the entire virtual machine. To use the **Transfer** commands, you must first create a virtual machine in Virtual PC 7 that runs a supported operating system. You can then copy the documents from the existing (source) virtual machine to the new (destination) virtual machine. You can also use the **Transfer** commands if you do not want to import a virtual machine. The data can then be available in both the earlier version of Virtual PC and Virtual PC 7.

Important *The operating systems supported for use with Virtual PC 7 are Windows XP Professional, Windows XP Home Edition, and Windows 2000. Refer to the Read Me content for specific details about the supported operating systems. The Read Me content is included on the Virtual PC 7 Installation CD, and in Virtual PC 7 on the Help menu.*

Before migrating data

Shutting down Before you import a virtual machine or transfer data from a source virtual machine to Virtual PC 7, verify that the source virtual machine has been shut down completely in the version of Virtual PC in which the virtual machine was created. For example, if you are importing a virtual machine created by using Virtual PC for Mac version 6.1, you need to quit Virtual PC 7, start Virtual PC 6.1, and then shut down the virtual machine in Virtual PC 6.1. You cannot run an earlier version of Virtual PC while you are running Virtual PC 7.

Checking virtual machine status Data from a virtual machine with a "saved state" status cannot be migrated to Virtual PC 7. The status of each virtual machine is shown in Virtual PC List. If the status of the virtual machine you want to import or from which you want to transfer documents indicates that the virtual machine is "Not Running," it has been completely shut down. If the status is "Running," "Running (Paused)," or "Saved," you must use the **Shut Down** command (**Shut down** option) to completely shut down your virtual machine. To completely shut down a virtual machine, in Virtual PC List, click the virtual machine, click **Shut Down**, and then click the **Shut down** option.

Virtual Machine Additions If Virtual Machine Additions are not installed on the source virtual machine, you cannot use the **Shut down** option. Instead, you must shut down your virtual machine from within the Windows operating system. To do this, on the **Start** menu in Windows, click **Shut Down** or **Turn Off**. In Windows XP Professional, the **Start** menu displays the **Shut Down** option if you are connected to a domain and **Turn Off** if you are not connected to a domain. The virtual machine shuts down without saving the state of the Windows operating system. Any data that is not saved prior to shutting down is lost. For more information about shutting down a virtual machine, see "Shut down a virtual machine," p. 54.

Important *To prevent data loss, it is a good practice to duplicate your virtual machine before importing it to Virtual PC 7. For more information about duplicating a virtual machine, see Virtual PC 7 Help.*

Import a virtual machine

Use one of the **Import** commands to import a virtual machine that runs a supported Windows operating system. These commands support virtual machines that were created by using Virtual PC for Mac version 5.0 or later.

The following table includes important version-specific information.

If the virtual machine that you want to import was created by using	Notes
Virtual PC for Mac version 6.*x*	The original virtual machine settings are also imported. If the Undo Drives setting is selected for the virtual machine that you want to import, you can choose to either discard or commit the changes in the Undo file before importing, or you can carry forward the associated Undo file.
Virtual PC for Mac version 5.*x*	The original virtual machine settings are not imported. Instead, when the virtual machine is imported, the original settings are cleared and Virtual PC 7 automatically uses default settings as for a new virtual machine. The Undo file for the Undo Drives setting is not imported for virtual machines created by using Virtual PC 5.*x*. Before importing, you must start the virtual machine that you want to import and discard or commit the changes stored in the Undo file.

Caution If you import your virtual machine to Virtual PC 7, you cannot access it in an earlier version of Virtual PC.

To import a virtual machine

1. In Virtual PC 7, on the **File** menu, point to **Migrate Data**, and then click **Import PC from Previous Version**.

Tip Alternatively, on the File menu, click New, click Import from a previous version, and then click Begin.

2. On the **Import a PC** screen, select the virtual machine that you want to import.

   By default, the configuration documents for virtual machines are saved in the Virtual PC List folder.

3. Click **Import**.

Caution If you import a virtual machine that runs an unsupported operating system, a message appears that describes the potential consequences. If you are sure that you want to continue, click **Continue**.

   Otherwise, click **Cancel**, and then transfer Windows-based documents by using one of the **Transfer** commands. For more information, see "Transfer documents from a virtual machine," p. 49.

4. To import a virtual machine, click **Convert**.

When the import process is complete, the operating system appears in the virtual machine window.

After you import a virtual machine

If you imported a virtual machine that uses Windows XP or Windows 2000, Windows will check for new hardware the first time you start the virtual machine in Virtual PC 7. Because Virtual PC 7 emulates different hardware than previous versions of Virtual PC, the hardware settings for your virtual machine must be updated in the Windows operating system.

This process can take 10 to 30 minutes, depending on how your system is configured. During this time, your keyboard and mouse device may not function properly. Do not restart the virtual machine unless you are prompted to do so.

If you imported a virtual machine that uses Windows XP, you may need to complete the steps in the following table.

If your virtual machine uses	You may need to
Windows XP	Reactivate Windows XP
Windows XP and was created by using Virtual PC version 6.1	Reenter your product key for Windows XP

Virtual Machine Additions Before you can use a virtual machine that runs Windows in Virtual PC 7, you must update Virtual Machine Additions. If you are not automatically prompted to update Virtual Machine Additions, you can update them manually by doing the following: With the virtual machine running, on the **PC** menu, click **Install or Update Additions**. When you finish updating Virtual Machine Additions, you must restart your virtual machine.

Transfer documents from a virtual machine

You can transfer only those documents that were created in Windows-based programs.

Use one of the **Transfer** commands if either of the following applies:

- You want to copy documents from a virtual machine that runs an unsupported or unrecognized operating system.
- You want your data to be available in both an earlier version of Virtual PC and in Virtual PC 7.

Before using the **Transfer** commands, you must first do the following:

1. Make sure the source virtual machine has been shut down by using the **Shut Down** command (**Shut down** option). In Virtual PC List, the status of that virtual machine must be "Not Running."

   If you do not have Virtual Machine Additions installed, you can shut down a virtual machine by using the **Start** menu in Windows. On the **Start** menu, click **Shut Down** or **Turn Off**. In Microsoft Windows XP Professional, the **Start** menu displays the **Shut Down** option if you are connected to a domain and **Turn Off** if you are not connected to a domain. This option does not automatically save the current state of the Windows operating system. All data that is not saved prior to shutting down is lost.
2. Quit all versions of Virtual PC except Virtual PC 7.
3. If you do not already have one, create a new (destination) virtual machine in Virtual PC 7 that runs a supported Windows operating system. For more information, see "Create a virtual machine," p. 28.

4. Install Virtual Machine Additions on the destination virtual machine. For more information, see "Install Virtual Machine Additions," p. 58.
5. Install the Windows-based programs that were used to create the documents you want to transfer. For more information, see "Install Windows-based programs," p. 70.

To transfer documents from a virtual machine to Virtual PC 7

1. In Virtual PC 7, start the destination virtual machine.
2. On the **PC** menu, click **Transfer Documents from Another PC**.

Tip Alternatively, if the destination virtual machine is not already running, on the **File** menu, point to **Migrate Data**, and then click **Transfer Documents from Existing PC**. You will be prompted to start a destination virtual machine if you have not already started one.

3. Click the source virtual machine. If you do not see the source virtual machine, look in the Virtual PC List folder.
4. Click **Transfer**.

   The source virtual machine is now mounted on the Macintosh desktop and is automatically shared with the new destination virtual machine. You can now transfer documents from the source virtual machine to the destination virtual machine, as described in the following steps.

5 On the destination virtual machine, on the **Start** menu in Windows, click **My Computer**.

6 Under **Network Drives**, double-click the drive associated with the source virtual machine.

If there are multiple drives listed under **Network Drives**, choose the one that has the same name as the mounted virtual hard disk image on the Macintosh desktop.

7 In the folder in which you have saved your document, click the documents you want to transfer. To select all of the documents, hold down the SHIFT key and click the first and last documents. To select or deselect one document at a time, hold down the CONTROL+OPTION keys and click the document.

Tip By default, Windows XP Professional saves documents in the My Documents folder. To open the My Documents folder, double-click **Documents and Settings**, double-click the folder that is named with your user name, and then double-click **My Documents**. If the documents you want are not in this location, explore the virtual machine until you find them. You can also use Search (on the Windows **Start** menu) to find your documents.

8 On the **Edit** menu of the folder in which you have saved your documents, click **Copy to Folder**.

9 In **Copy Items**, select the folder where you want to save your documents on your destination virtual machine, and then click **Copy**.

10 If you have documents in multiple locations on your source virtual machine, repeat steps 7–9 for each group of documents you want to transfer.

11 After you have transferred all of your documents, drag the source virtual machine disk image from the Macintosh desktop to the Trash.

Step 3 Set up your virtual machine

Start and shut down a virtual machine

Now that you have created a virtual machine, the next step is to familiarize yourself with your new virtual machine and configure settings and connections as you would for a physical computer. Before you can configure your virtual machine, you need to know how to start and shut it down completely.

Start Virtual PC 7

To start or shut down a virtual machine, Microsoft® Virtual PC for Mac Version 7 must be running. Like any application for the Macintosh, you can start Virtual PC 7 by double-clicking the application icon in the Applications folder.

Tip The first time you use Virtual PC 7, you must start it by double-clicking the Virtual PC 7 icon in the Applications folder. Afterward, you can start Virtual PC 7 from the Macintosh Dock by using the Keep in Dock command in Mac OS X, or you can have Virtual PC 7 start automatically when you log on to your Macintosh computer by using the Login application preference in Virtual PC 7. For more information about the Keep in Dock command, see Mac OS X Help. For more information about the Login application preference in Virtual PC 7, see "Application preferences," p. 59.

Start a virtual machine

When Virtual PC 7 is running, you can use either the **PC** menu or Virtual PC List to start a virtual machine. If you have created multiple virtual machines, you must use Virtual PC List to select which virtual machine to start; you can also use Virtual PC List to start a single virtual machine.

To start a virtual machine by using the PC menu

- In Virtual PC 7, on the **PC** menu, click **Startup**.

To start a virtual machine by using Virtual PC List

1. In Virtual PC 7, on the **Window** menu, click **Virtual PC List**.
2. Do one of the following:
   - Double-click the virtual machine that you want to start.
   - Click the virtual machine that you want to start, and then click **Start Up**.

Tip You can also start a virtual machine by using the Macintosh Dock. For more information, see "Virtual machine settings," p. 61.

Shut down a virtual machine

The **Shut Down** command in Virtual PC 7 provides three options for shutting down a virtual machine.

To shut down a virtual machine by using the Shut Down command

1. Do one of the following in Virtual PC 7:
   - If you have only one virtual machine, on the **PC** menu, click **Shut Down**.

- If you have multiple virtual machines, on the **Window** menu, click **Virtual PC List**. Click the virtual machine that you want to shut down, and then click **Shut Down**.

2 Do one of the following:

- To save the current state of the virtual machine, click **Save PC's state**.

  The **Save PC's state** option saves the current state of the operating system so that the next time you start the virtual machine, it will appear the same as when you shut it down. Any program or file that is open when you shut down using this option will be open when you restart the virtual machine.

Tip You can also use the Fast Save method to shut down and save the state of your virtual machine. To use the Fast Save method, click the red Close button on the virtual machine window; or in Virtual PC 7, on the **Virtual PC** menu, click **Quit Virtual PC**. When you use the Fast Save method to shut down, Virtual PC 7 quits and all open virtual machines and the state of their Windows-based programs are saved in their current state.

- To shut down the virtual machine, click **Shut down**.

  The **Shut down** option safely shuts down a virtual machine that is running Windows®. This option does not automatically save the current state of the Windows operating system. All data that is not saved prior to shutting down will be lost.

Use this option when making changes to your virtual machine such as turning the Undo Drives setting on or off, or when mounting a virtual hard disk image. You must also use this option before importing a virtual machine, transferring documents from a virtual machine to Virtual PC 7, or making a duplicate of a virtual machine. A Windows operating system and Virtual Machine Additions must be installed on the virtual machine in order for this option to be available.

Tip If you do not have Virtual Machine Additions installed, you can shut down a virtual machine by using the **Start** menu in Windows. On the **Start** menu, click **Shut Down** or **Turn Off**. In Microsoft Windows XP Professional, the **Start** menu displays the **Shut Down** option if you are connected to a domain and **Turn Off** if you are not connected to a domain. This method does not automatically save the current state of the Windows operating system. All data that is not saved prior to shutting down will be lost.

- To turn off the virtual machine, click **Turn off PC**.

  The **Turn off PC** option is equivalent to unplugging a physical computer and should not be used unless the virtual machine is not responding and the **Shut down** option does not work. If your virtual machine is not running Windows, use this option instead of the **Shut down** option to shut down your virtual machine.

3. If the Undo Drives setting is set for the virtual machine that you are shutting down, click one of the following three options:

- To discard the changes to your virtual machine, click **Discard hard disk changes**.

  This discards all changes that you made prior to shutting down. This includes documents that you created or programs that you installed. Because these changes were saved in a separate Undo file, the virtual hard disk image is not altered. When you restart the virtual machine, a new Undo file is created.

- To implement the changes to your virtual machine, click **Save hard disk changes**.

  This saves changes that you made to your virtual machine directly in the virtual hard disk image. The next time you start your virtual machine, the changes are implemented and a new Undo file is created.

- To save the changes in the Undo file, click **Carry forward undoable changes**.

  This saves the changes that you made in the Undo file, rather than in the virtual hard disk image. The virtual hard disk image is not altered. When you restart your virtual machine, new changes are added to this Undo file.

For more information about the Undo Drives setting, see Virtual PC 7 Help.

Tip If multiple virtual machine windows are open, click the window of the virtual machine you want to shut down. The other virtual machines will be paused in the background and display a status of "Running (Paused)" in Virtual PC List. You can then shut down by using the **PC** menu, or select the virtual machine with the "Running" status in Virtual PC List and click **Shut Down**.

Install Virtual Machine Additions

Virtual Machine Additions provide system integration features for use with the Windows operating system. When you create a virtual machine and install a version of Windows that was purchased separately from Virtual PC 7, you need to install Virtual Machine Additions before using your virtual machine.

If your version of Virtual PC 7 includes a Windows operating system, Virtual Machine Additions are preinstalled and you do not need to install them. Proceed to "Configure application preferences and virtual machine settings," on the next page.

If you import a virtual machine from a previous version of Virtual PC for Mac, you will need to update Virtual Machine Additions for that virtual machine.

Virtual Machine Additions provide the following:

Mouse integration Allows the mouse to move freely between Macintosh and Windows operating systems.

Shared folders Allows you to share information between your Macintosh and your virtual machine, or among multiple virtual machines.

Performance enhancements Adds optimized video drivers to increase the performance of Windows.

Drag-and-drop operations Allows you to copy files between the Macintosh and Windows operating systems.

Time synchronization Synchronizes the clock in the Windows operating system with the clock in the Macintosh operating system.

Dock application support Allows you to start a virtual machine by using the Macintosh Dock. For more information about starting a virtual machine by using the Dock, see "Virtual machine settings," p. 61.

Easy printing Allows you to use the same printer as your Macintosh if you are running Mac OS X version 10.3.*x* (Panther). No special configuration is required.

To install Virtual Machine Additions

1. Start the virtual machine on which you want to install Virtual Machine Additions.
2. Hold down the COMMAND (⌘) key and point to the **PC** menu; then release the COMMAND (⌘) key.
3. On the **PC** menu, click **Install or Update Additions**.
4. Follow the instructions in the **Virtual Machine Additions** wizard.
5. When you are finished, restart the virtual machine.

Configure application preferences and virtual machine settings

After you create your virtual machine, you need to configure it. In Virtual PC 7, you can set both application preferences and virtual machine settings.

Application preferences

Application preferences apply to all of the virtual machines that you created in Virtual PC 7. They are set for the Virtual PC 7 application rather than the individual virtual machine. Application preferences control behavior such as sound, CPU usage, visual

display, and other behavior that applies to all virtual machines in Virtual PC 7.

The following table provides a description of each application preference.

Select	To
Alert Behavior	Determine if alert messages will be displayed. In Virtual PC 7, many alert messages contain a **Don't show again** option. If you select this option, the alert will not display again in Virtual PC 7. However, if you want alerts in Virtual PC 7 to be displayed, you can click **Reset** in the Alert Behavior preference and the alerts will display.
PC Behavior	Suspend activity in background virtual machines while the active virtual machine is used. Restart, the next time you start Virtual PC 7, all virtual machines that were running when you last closed Virtual PC 7. Click **Restore PCs at launch** to set all virtual machines to restart.
Full Screen Mode	Determine the behavior of the video settings on your Macintosh when running a virtual machine in full-screen mode. Virtual PC 7 menus and toolbars are not accessible when the virtual machine is running in full-screen mode, unless you press the COMMAND (⌘) key. To return to the normal screen mode, press the COMMAND (⌘) and RETURN keys simultaneously.

Select	To
Virtual Switch	Determine which Ethernet adapter to use with a virtual machine that is set to run with the Virtual Switch network option.
Sound	Set the behavior of system sounds on all virtual machines.
CPU Usage	Determine how to divide processing resources between Virtual PC 7 and other applications that are running simultaneously when Virtual PC 7 is not the active application on the Macintosh.
Scripting	Add the **AppleScript** menu to the Apple menu bar.
Toolbar	Select the items that will appear on the Virtual PC 7 toolbar.
Login	Set Virtual PC 7 to start automatically when you log on to your Macintosh computer.

To configure application preferences

1. In Virtual PC 7, on the **Virtual PC** menu, click **Preferences**.
2. Click the application preference that you want to configure.

For more information about application preferences, see Virtual PC 7 Help.

Virtual machine settings

Virtual machine settings are unique to each virtual machine that you create in Virtual PC 7. These settings are set for each virtual machine rather than the Virtual PC 7 application. Virtual machine settings control behavior such as printing, connecting to a

network, using USB devices, and other behavior that applies to individual virtual machines running in Virtual PC 7.

The following table provides a description of each virtual machine setting.

Select	To
PC Name	Give a name to the virtual machine, which will appear in Virtual PC List.
PC Memory	Select how much RAM and VRAM will be allocated when this virtual machine is running.
Drive 1, 2, and 3	Assign additional virtual hard disk images to a virtual machine. Drive 1 is the default primary drive.
Undo Drives	Save all changes made to a virtual machine in a separate Undo file so that the virtual hard disk image of the virtual machine remains in its original state.
Shared Folders	Create a shared folder to easily transfer files between your Macintosh and a virtual machine.
Mouse	Customize the key combination on your keyboard to enable a single-button mouse to "right-click."
Keyboard	Assign special computer keys, such as the Windows key, to your Macintosh keyboard.
Com Ports 1 and 2	Assign a physical serial device or file to a virtual machine's emulated serial ports.
Networking	Select either the Shared Networking or Virtual Switch networking option.
USB	Allow a physical USB device to be used with a virtual machine.

Select	To
Dock	Display Windows-based programs that are currently running in the Dock. If you have multiple virtual machines, the programs running on each virtual machine will appear in the Dock. To determine which virtual machine is running the program, use your mouse device to point to the program you want. The name of the virtual machine will appear above the program icon. Display the Windows **Start** menu in the Macintosh Dock. This version of the Windows **Start** menu is not a fully functional menu, but rather, a quick way of starting a virtual machine and Windows-based programs by using the Dock. Clicking on this icon in the Dock will first open Virtual PC 7 and then the virtual machine for which this setting is selected. If you have multiple virtual machines, only the programs that are installed on the virtual machine for which this setting is selected will appear in the **Start** menu. This setting can only be selected by one virtual machine at a time. You must install Virtual Machine Additions in order to have Dock integration with Virtual PC 7.
Printing	Select the Virtual Machine Additions Printer. This is available only if you are running Mac OS X version 10.3.*x* on your Macintosh.

To configure virtual machine settings

1. Do one of the following in Virtual PC 7:
   - If you have one virtual machine, on the **PC** menu, click **PC Settings**.
   - If you have multiple virtual machines, on the **Window** menu, click **Virtual PC List**. Click the virtual machine you want to configure, and then click **Settings**.
2. Click the virtual machine setting that you want to configure.

For more information about virtual machine settings, see Virtual PC 7 Help.

The following sections describe how to set up the printer and network connections for your virtual machine.

Printing

In Microsoft Virtual PC 7, there are several ways to establish a printer connection for your virtual machine. The method you choose depends on the operating system that is installed on your Macintosh and whether the printer you want to use is a printer directly connected to your Macintosh or a printer on a network.

Use the following table to determine the printer connection that is best for you.

I am running Mac OS X	My printer is	Recommended printer connection for your virtual machine
Version 10.3.*x*	Connected directly to my Macintosh	Use the Virtual Machine Additions Printer.
	On a network	Use the Virtual Machine Additions Printer.
Version 10.2.8	Connected directly to my Macintosh	Connect to the USB printer independently of the Macintosh.
	On a network	For more information about connecting to a network, see your network administrator.

Important *In Virtual PC 7, the virtual machine does not automatically capture USB printers for use. To use a USB printer with a virtual machine, you must first capture the USB printer for use by the virtual machine. For more information about using USB devices with a virtual machine, see Virtual PC 7 Help.*

If you are running Mac OS X version 10.3.*x* on your Macintosh

If your Macintosh is already set up to print from either a printer connected directly to it or a printer on a network, use the Virtual Machine Additions Printer driver as the printer connection for your virtual machine. The Virtual Machine Additions Printer driver uses the printer connections that have already been established for your Macintosh and requires no additional configuration. The Virtual Machine Additions Printer driver can be used only with a virtual machine that is running a supported operating system.

The driver for the Virtual Machine Additions Printer is automatically installed with Virtual Machine Additions. To use the Virtual Machine Additions Printer driver, Virtual Machine Additions must be either:

- Installed for a new virtual machine that contains a version of Windows XP purchased separately from Virtual PC.
- Updated for a virtual machine that has been imported.

Virtual Machine Additions and the Virtual Machine Additions Printer driver are automatically installed on your virtual machine if you install the version of Windows that is included with Virtual PC 7.

Tips Before you can use the Virtual Machine Additions Printer driver, you must first set up a printer for your Macintosh and verify that it is working properly.

If other printers are installed in the Windows operating system of the virtual machine, you must select the Virtual Machine Additions Printer as your default printer.

The Virtual Machine Additions Printer is the recommended and easiest printer connection, but you can also connect your virtual machine to a USB printer independently of the Macintosh or use emulated printing.

If you are running Mac OS X version 10.2.8 on your Macintosh

If the printer you want to use is a USB printer that is directly connected to your Macintosh, you can establish a separate USB printer connection for your virtual machine that is independent of the USB printer connection for your Macintosh. This means that the USB printer and the necessary printer drivers must be installed in the Windows operating system on your virtual machine in addition to being installed on your Macintosh.

If the printer you want to use is on a network, see your network administrator for more information about connecting to a network.

It is also possible to use emulated printing as the printer connection for your virtual machine. However, the emulated printing connection is not recommended and should be used only if no other printing option is available.

For more information about setting up a printer for your virtual machine, see Virtual PC 7 Help.

Networking

In Virtual PC 7, the Networking setting provides the following two options for establishing a connection to the Internet:

Shared Networking By using the Shared Networking option, you can connect a virtual machine to the Internet by using the Internet connection of the Macintosh computer. This option works well for standard networking tasks such as browsing the Web; reading e-mail; or accessing shared resources such as printers, files, or File Transfer Protocol (FTP) sites. The Shared Networking option is automatically set as the default network option.

Important *Use Shared Networking when Airport or other 802.x wireless connections are active.*

Virtual Switch The Virtual Switch option is designed for advanced networking tasks such as joining a network domain, or running a Hypertext Transfer Protocol (HTTP) or FTP server with predefined port numbers or a remote login (rlogin). If you use this option, the virtual machine becomes a fully functional network node that can communicate with other virtual machines running on the same Macintosh computer or other computers on the network.

Important *To use the Virtual Switch option, you must have a router or method of obtaining individual unique Internet Protocol (IP) addresses. Virtual Switch may require changing networking settings within the operating system of the virtual machine and may be dependent on how a particular network is configured.*

For more information about selecting the networking option, see Virtual PC 7 Help.

Step 4 Install Windows-based programs

Install Windows-based programs

You can install programs that run on the Microsoft® Windows® operating system by using an automated installer or by using the **Start** menu in Windows.

To install a Windows-based program by using an automated installer

1. Start the virtual machine on which you want to install the program.
2. Insert the installation CD for the program into the CD drive of your Macintosh.

   The active CD icon on the toolbar in Microsoft Virtual PC for Mac Version 7 indicates that the virtual machine has captured the CD. If the virtual machine does not capture the CD, in Virtual PC 7, on the **Drives** menu, click **Capture Disc**.

   To install a program from a floppy disk if your Macintosh does not have a floppy disk drive, use a floppy disk image. For more information about using floppy disk images, see Virtual PC 7 Help.
3. Double-click the installer icon and follow the directions on the screen.

To install a Windows-based program by using the Start menu in Windows

1. Start the virtual machine on which you want to install the program.
2. Insert the installation CD for the program into the CD drive of your Macintosh.

   The active CD icon on the Virtual PC 7 toolbar indicates that the virtual machine has captured the CD. If the virtual machine does not capture the CD, in Virtual PC 7, on the **Drives** menu, click **Capture Disc**.

   To install a program from a floppy disk if your Macintosh does not have a floppy disk drive, use a floppy disk image. For more information about using floppy disk images, see Virtual PC 7 Help.
3. In **Windows**, on the taskbar, click the **Start** button in the lower-left corner.
4. On the **Start** menu, click **Control Panel**.

   If Control Panel is not visible, click **Settings**, and then click **Control Panel**.
5. Double-click **Add or Remove Programs**, and then click **Add New Programs**.
6. Click **CD or Floppy**.
7. Follow the instructions in the **Install Program From Floppy Disk or CD-ROM** wizard.
8. To eject the CD, in Virtual PC 7, on the **Drives** menu, click **Eject Disc**.

Start Windows-based programs

In Windows, the **Start** menu provides an easy way to access programs and documents.

To start a Windows-based program by using the Start menu in Windows

1. Start your virtual machine.
2. On the taskbar in Windows, click **Start**, point to **All Programs** or **Programs**, and then click the program you want.

Tip You can also start a Windows-based program by using the Macintosh Dock. For more information, see "Virtual machine settings," p. 61.

For more information about using Windows-based programs, see Virtual PC 7 Help, or on the **Start** menu in Windows, click **Help and Support** or **Help**.

More help and support

Online Help

The following table describes where to find the Help that is available for Microsoft® Virtual PC for Mac Version 7, and Microsoft Windows® XP Professional, Windows XP Home Edition, and Windows 2000.

To access online Help for	Do this
Virtual PC 7	In Virtual PC 7, on the **Help** menu, click **Virtual PC Help**.
Macintosh OS X	In Macintosh OS X, with the Finder in the foreground, on the **Help** menu, click **Help**.
Windows XP Professional and Windows XP Home Edition	In Windows XP, on the **Start** menu, click **Help and Support**. Use Search to search the Windows XP Help topics and the Microsoft Knowledge Base for solutions.
Windows 2000	In Windows 2000, on the **Start** menu, click **Help**.
Windows-based programs	On the **Help** menu of an open program, click the appropriate help option. Read the documentation included with your Windows operating system.

Product support

Technical support for Virtual PC 7 and the Windows operating system is available on the Microsoft Web site.

Virtual PC 7 Visit the Macintosh support area of the Microsoft Web site at http://www.microsoft.com/mac/.

Windows XP and Windows 2000 Visit the product support area of the Microsoft Web site at http://www.microsoft.com/support/.

For the most recent listing of telephone numbers for Microsoft Product Support Services, visit the product support area of the Microsoft Web site at http://www.microsoft.com/support/.

Microsoft Product Support Services are subject to changes in price, terms, and conditions without notice. Support options, hours, and cost in your country may differ from the United States. Check with your local subsidiary for details.

Product identification number (PID)

If you call Microsoft Product Support Services you may be asked for your product identification number (PID) for Virtual PC 7.

To find your product identification number (PID)

1. In Virtual PC 7, on the **Virtual PC** menu, click **About Virtual PC**.
2. Click the **Info** tab.
3. The Product ID is under **Registration Information**.

Check for updates

You can get product updates for Virtual PC 7 and the Windows operating system on the Web.

For updates of Virtual PC 7, do one of the following:

- In Virtual PC 7, on the **Help** menu, click **Check for Updates**.
- Visit the Macintosh support area of the Microsoft Web site at http://www.microsoft.com/mac/.

For updates of Windows XP and Windows 2000, visit the update area of the Microsoft Web site at http://www.microsoft.com/.

Register Virtual PC 7

To register your copy of Virtual PC 7, in Virtual PC 7, on the **Virtual PC** menu, click **Online Registration**.

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