

Getting Started with VMware Fusion

VMware Fusion for Mac OS X

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vmware[®]

You can find the most up-to-date technical documentation on the VMware Web site at:

<http://www.vmware.com/products/fusion/support.html>

The VMware Web site also provides the latest product updates.

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Contents

Introduction	5
Definition of a Virtual Machine	5
What You Can Do with VMware Fusion	5
System Requirements for VMware Fusion	6
Install VMware Fusion	7
Upgrade VMware Fusion	8
Start VMware Fusion	9
Getting Up and Running	9
Create a Windows Virtual Machine with Windows Easy Install	9
Create a Virtual Machine from the Boot Camp Partition	11
Migrate an Existing PC to a Virtual Machine	13
Import an Existing Parallels Desktop or Microsoft Virtual PC 7.0 Virtual Machine	13
Supported Guest Operating Systems	13
Using Mac Keyboards in a Virtual Machine	14
Suspend a Virtual Machine	15
VMware Fusion Resources	15

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Getting Started with VMware Fusion

Introduction

With VMware Fusion™, you can run personal computer (PC) applications and devices on your Intel-based Mac. Designed for the Mac user, VMware Fusion takes advantage of the security, flexibility, and portability of virtual machines to run Windows and other x86 operating systems at the same time as Mac OS X.

Definition of a Virtual Machine

A virtual machine is a software file that behaves just as a physical computer does. A virtual machine contains a display, a hard disk, one or more processors, memory, and all the other hardware that goes into a typical physical machine, but all of the components are virtualized. That is, these elements of a virtual machine are all created by software and stored in files on your Mac.

The virtual machine runs in a window on your Mac. You install an operating system and applications in the virtual machine and operate it as you would a physical computer.

The Mac that you run a virtual machine on is called a host. In this context, the virtual machine is called a guest.

What You Can Do with VMware Fusion

With VMware Fusion, Mac users can:

- **Run Windows and Linux applications on a Mac.** You can run your favorite applications at the same time as Mac applications using virtual machines running Windows and Linux operating systems, without rebooting your Mac.
- **Create virtual machines.** The New Virtual Machine Assistant guides you through the process of creating a virtual machine, including Windows Easy Install and Linux Easy Install.

- **Migrate your Windows PC to a virtual machine easily.** The integrated Migration Assistant helps you convert your physical PC to a virtual machine to run on your Mac.
- **Import virtual machines.** You can import virtual machines created with Parallels Desktop or Microsoft Virtual PC for Mac directly to VMware Fusion.
- **Graduate from Boot Camp.** VMware Fusion can use an existing Boot Camp partition, or, you can import your Boot Camp partition into a virtual disk, letting you reclaim your Boot Camp space. VMware Fusion eliminates the need to reboot to access your Windows applications and files.
- **Keep your Windows safe.** You can take multiple snapshots—pictures in time—of your virtual machines, keeping them safe in case of any problem. VMware Fusion AutoProtect takes automatic, periodic snapshots to keep your virtual machines safe from unexpected harm. VMware Fusion includes a 12-month complimentary subscription to McAfee VirusScan Plus.
- **Get the most out of your Mac.** Run 64-bit virtual machines, including server operating systems like Windows Server, Linux Server, Mac OS X Server, and Mac OS X Lion in virtual machines. Many modern Mac systems are powerful enough to provide great performance and productivity, even when running multiple virtual machines.
- **Run multiple operating systems while protecting the integrity of your Mac.** You can safely run virtual machines isolated from the Mac by using the hardware-level security and fault isolation of virtualization solutions.

System Requirements for VMware Fusion

Verify that you have the following minimum system requirements for installing and using VMware Fusion.

- Any Mac with a 64-bit Intel processor (Intel Core 2 Duo or newer).
- Mac OS X 10.6.8 or later, Mac OS X 10.8 recommended.

- Mac OS X Server
- Operating system installation media (disk or disk image) for virtual machines. Windows operating systems are available separately from Microsoft and other retailers.
- 2GB of memory, 4GB recommended.
- 750MB of free disk space for VMware Fusion, and at least 5GB of free disk space for each virtual machine.

NOTE Make sure that you have enough memory to run Mac OS X, plus the memory required for each guest operating system and for applications on the Mac and in the virtual machine.

Install VMware Fusion

Install VMware Fusion by dragging the VMware Fusion disk image to your Mac Applications folder.

NOTE Verify that you have the administrator password for your Mac.

To install VMware Fusion

- 1 Obtain the VMware Fusion disk image using one of the following methods:
 - Download the VMware Fusion disk image from the VMware Fusion Web site.

The VMware Fusion disk image is saved to your default download directory.

Double-click the VMware Fusion .dmg file to mount it.
 - Insert the VMware Fusion USB install drive.
 - Insert the VMware Fusion DVD.
- 2 Drag the VMware Fusion icon onto the Applications folder icon.

VMware Fusion installs. Installation of VMware Fusion does not modify existing virtual machines.

Upgrade VMware Fusion

If you are upgrading VMware Fusion, you must uninstall the version that is installed on your Mac. Installing, upgrading, and uninstalling of VMware Fusion does not modify existing virtual machines.

NOTE Verify that all of your virtual machines are shut down and that VMware Fusion is not running.

To upgrade VMware Fusion

- 1 Drag the previous version of VMware Fusion to the trash.
VMware Fusion is located in the Applications folder on your Mac.
- 2 Obtain the VMware Fusion disk image using one of the following methods:
 - Download the VMware Fusion disk image from the VMware Fusion Web site.
The VMware Fusion disk image is saved to your default download directory.
Double-click the VMware Fusion .dmg file to mount it.
 - Insert the VMware Fusion USB install drive.
 - Insert the VMware Fusion DVD.
- 3 Drag the VMware Fusion icon onto the Applications folder icon.

When the upgrade is finished, you must upgrade VMware Tools in every virtual machine. A VMware Tools upgrade requires that you restart the virtual machine.

Start VMware Fusion

NOTE Verify that you have the administrator password for your Mac.

To start VMware Fusion

- 1 In the Applications folder, double-click **VMware Fusion**.
The Virtual Machine Library window appears. From this window, you can start working with virtual machines.
- 2 (Optional) To save VMware Fusion in the Dock, right-click the icon, and select **Options > Keep in Dock**.

Getting Up and Running

You can use one of the following methods to start using VMware Fusion quickly:

- [Create a Windows Virtual Machine with Windows Easy Install](#)
- [Create a Virtual Machine from the Boot Camp Partition](#)
- [Migrate an Existing PC to a Virtual Machine](#)
- [Import an Existing Parallels Desktop or Microsoft Virtual PC 7.0 Virtual Machine](#)

Create a Windows Virtual Machine with Windows Easy Install

When you create a Windows virtual machine, you can use the VMware Fusion Windows Easy Install feature to install Windows and VMware Tools in your virtual machine. VMware Fusion creates your virtual machine, selects the default Windows installation options, and installs VMware Tools, which loads the drivers required to optimize your virtual machine's performance. You can also have Windows Easy Install make your Mac home

folder and other folders available to this virtual machine, so that you can share files between the virtual machine and your Mac. Alternatively, you can isolate your virtual machine from your Mac and other virtual machines.

Windows Easy Install is available for the following Windows operating systems:

- Windows 7, Windows Vista, Windows XP, Windows 2000
- Windows Server 2008, Windows Server 2003, Windows 2000 Server

If you are not using one of these Windows operating systems in your virtual machine, or if you want to install the operating system manually, see the VMware Fusion Help for details about creating virtual machines.

NOTE You must have a valid Windows product key. It is on the sticker attached to the packaging for the Windows operating system CD-ROM. The product key is not provided by VMware. Windows CDs included with a previous physical computer might be locked to that machine and might not work.

To create a Windows virtual machine using Windows Easy Install

- 1 Insert the Windows CD-ROM into the optical drive.
- 2 Select **File > New**.

The New Virtual Machine Assistant starts.

- 3 In the Introduction panel, make sure that **Install this operating system** is selected, and click **Continue**.
- 4 In the Windows Easy Install panel, type your **Display Name** or **Account Name**, **Password** (optional), and **Windows Product Key**.

The entry in the **Display Name** field (Windows XP and earlier) appears in information boxes as the name that your Windows software is registered to. It is not the Windows user name. The entry in the **Password** field is the password for the Windows administrator account only.

- 5 In the Sharing panel, indicate how the new virtual machine should handle basic file sharing.
- 6 In the Finish panel, click **Finish**.

VMware Fusion installs Windows. This process can take up to 45 minutes. After installing Windows, VMware Fusion installs VMware Tools, and restarts the virtual machine.

Create a Virtual Machine from the Boot Camp Partition

Boot Camp is Apple software that enables a Mac to run Windows operating systems. Boot Camp requires that you choose between Mac or Windows at boot time. Boot Camp creates separate Mac and Windows partitions on your hard disk to create a dual-boot environment. You can use your Windows Boot Camp partition as a VMware Fusion virtual machine. This feature gives you the following abilities:

- Use your Boot Camp virtual machine and your Mac without rebooting to switch between them.
- Share files between your Boot Camp virtual machine and your Mac, through shared folders, and by dragging and dropping files or cutting and pasting text.

NOTE You must have administrator privileges to use the Boot Camp as a virtual machine.

To create a virtual machine from the Boot Camp partition

- 1 Start VMware Fusion.
- 2 Create a virtual machine in the Virtual Machine Library for Boot Camp.

Boot Camp setup	Action
You are running VMware Fusion on a Mac with Boot Camp and you have no virtual machines on your Mac.	From the VMware Fusion Home pane, click Boot Camp . This process creates a Boot Camp virtual machine in the Virtual Machine Library and starts it.
You are running VMware Fusion on a Mac with Boot Camp and you have virtual machines on your Mac, for example, virtual machines created with Parallels Desktop.	VMware Fusion displays the Virtual Machine Library with a Boot Camp virtual machine. From the Virtual Machine Library, select the Boot Camp virtual machine and click Start Up .

- 3 Type your Mac password to access the Boot Camp partition.

VMware Fusion creates a virtual machine from your Boot Camp partition and starts Windows. After Windows boots from your Boot Camp virtual machine, VMware Fusion starts the installation of VMware Tools to enable full virtual machine functionality and optimize performance for your Boot Camp partition when used as a virtual machine.

- 4 Follow the onscreen instructions and restart your virtual machine when prompted.
- 5 When the VMware Tools installation is complete, restart the guest operating system.

The first time you power on your Boot Camp virtual machine after installing VMware Tools, you must reactivate Windows.

Migrate an Existing PC to a Virtual Machine

To move from a physical PC to VMware Fusion, use the Migration Assistant. To access the Migration Assistant, select **File > Migrate Your PC**. After you install the VMware Fusion PC Migration Agent on your PC, the Migration Assistant can make a network connection and convert the Windows PC to a VMware Fusion virtual machine.

For information about migrating your physical PC to a virtual machine, see the VMware Fusion Help.

Import an Existing Parallels Desktop or Microsoft Virtual PC 7.0 Virtual Machine

You can import your existing virtual machine to VMware Fusion.

To import an existing virtual machine

- 1 Start VMware Fusion.
- 2 Select **File > Import**.
- 3 Select your virtual machine and click **Open**.

For more information about importing existing virtual machines, see the VMware Fusion Help.

Supported Guest Operating Systems

VMware Fusion supports over 60 guest operating systems, including Windows 3.1 through Windows 7, Mac OS X Server, Linux, Solaris, and FreeBSD. For the most recent list of guest operating systems that VMware products support, see the VMware Compatibility Guide site: <http://www.vmware.com/resources/compatibility/search.php>.

For instructions about how to install the most common guest operating systems, see the *VMware Guest Operating System Installation Guide*: <http://partnerweb.vmware.com/GOSIG/home.html>.

Using Mac Keyboards in a Virtual Machine

PC and Mac keyboards differ, so you must press certain key combinations to enable certain PC commands on a Mac keyboard.

PC Keyboard	Apple External Keyboard	MacBook and MacBook Pro Built-In Keyboard
Print Screen	F13	
Scroll Lock	F14	
Pause/Break	F15	
Backspace	delete	delete
delete  (Forward Delete)	delete 	fn+delete
Insert	help (early models)	
Num Lock	clear	fn+num lock F6
Command (Windows logo key—between Ctrl and Alt keys)		
Alt	alt option	alt option

NOTE On the MacBook and MacBook Pro built-in keyboards, the function keys are not accessible unless you press Fn plus the desired Function key.

Suspend a Virtual Machine

The VMware Fusion suspend feature lets you quickly save the entire current state of your virtual machine, including all running applications, so you can return to this state without restarting your virtual machine. To suspend a virtual machine, click **Virtual Machine > Suspend**.

NOTE You cannot suspend a Boot Camp virtual machine.

VMware Fusion Resources

In addition to this document, you can find information about using VMware Fusion at the following sources:

- **VMware Fusion Help.** To learn how to use a Fusion feature or what a Fusion feature does, perform a search from the **Help** menu.
- **VMware Fusion Support.** For self-help resources, including self-paced video tutorials about how to get the most out of VMware Fusion, see the VMware support portal at <http://www.vmware.com/products/fusion/support.html>.
- **VMware Knowledge Base.** The VMware Knowledge Base provides troubleshooting information, solutions to error messages, and some best practice information for most VMware products. To find information on a specific problem you encounter in VMware Fusion, select VMware Fusion in the product list and search for your problem by key word at <http://kb.vmware.com>.
- **VMware Fusion FAQ.** For answers to frequently asked questions about VMware Fusion, go to <http://www.vmware.com/products/fusion/faqs.html>.
- **VMware Fusion Community Forum.** The VMware Fusion Community Forum is a site where VMware Fusion users can exchange information, questions, and comments with each other to get the most out of VMware Fusion. You can join the community at <http://www.vmware.com/community/forum.jspa?forumID=371>.

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