

Migrating a Windows PC to Run in VMware Fusion

VMware Fusion 2.0

This technical note describes the process for migrating an existing Windows PC to run as a virtual machine with VMware Fusion™ 2.0. The process uses VMware Converter 3, which is a free downloadable product.

Limitations of this process include:

- The procedure works with the operating systems that VMware Converter supports: Windows Vista, Windows XP, Windows Server 2003, Windows 2000, or Windows NT4 only. It does not work with Linux PCs.
- The Windows PC must contain an NTFS file system with at least 300MB of free space.
- If your copy of Windows was not licensed with a volume-license key, you might need to reactivate it when it is booted up inside VMware Fusion.
- Downloading VMware Converter, although free, requires that you answer a small number of marketing questions.

The procedure consists of the following stages:

- [“Set Up the File Sharing Method and Start Your Source Windows PC”](#)
- [“Install and Start VMware Converter”](#)
- [“Select Your Source Machine”](#)
- [“Import Your Source PC as a VMware Fusion Virtual Machine”](#)
- [“Complete the Converter Import Task Creation”](#)
- [“Create the VMware Fusion Virtual Machine”](#)
- [“Power On the New Virtual Machine for the First Time”](#)
- [“Install VMware Tools”](#)
- [“Moving Virtual Disks into the New Virtual Machine Package \(Optional\)”](#)

Set Up the File Sharing Method and Start Your Source Windows PC

The migration process described in this note requires some type of file sharing between your Windows PC and your Mac. You can use either a network share or a USB 2.0 hard drive formatted for cross-platform compatibility with a FAT32 file system. Using a USB 2.0 hard drive is faster, and likely simpler.

To set up to a USB 2.0 hard drive

Plug a USB 2.0 hard drive into your Windows PC.

To set up file sharing for copying to a network share

You can skip this procedure if you are using a USB hard drive to share data between your Windows PC and your Mac.

- 1 Make sure that your Mac home directory has a Virtual Machines subdirectory.
Create one now if none is present.
- 2 To use a network share, you must enable Windows Sharing on your Mac.
 - a Click System Preferences in the Dock and select Sharing.
 - b Enable Windows sharing, and ensure that your Mac login is shared.

Notice the text near the bottom of the Sharing window:

Windows users can access your computer at \\<XXX.XXX.XXX.XX>\<username>

This sentence shows your home directory's network path, also known as a UNC path or a whack-whack path. Make a note of this path. You use this network path later to allow Converter to write virtual machine files to your Mac home directory.

To access your Mac from your Windows PC

- 1 Log in to your Windows PC as Administrator or as a user with administrative privilege.
- 2 If you plan to use Windows file sharing for copying to a network share, confirm that your Windows PC can mount a Windows file share from the Mac.

Install and Start VMware Converter

Next, download and install VMware Converter onto your Windows PC.

To install and launch VMware Converter

- 1 Download Converter from <http://www.vmware.com/download/converter/> and run the installer.
Disregard any text about running in Enterprise mode. You are running in Starter mode.
- 2 Click **Next**.
- 3 Accept the license agreement, and perform a typical (default) installation.
When you run Converter for the first time, you receive a prompt to enter a license code. You do not need a license because you are running in Starter mode.
- 4 Click **Continue in Starter Mode**.
The Task Manager window appears. It consists of a toolbar, a Task View in the upper part of the window, and a Details View in the lower part.

Select Your Source Machine

You must select your source machine, in this case the Windows PC in which you are running Converter.

To select your source machine

- 1 Click **Import Machine** in the upper-left part of the Converter toolbar to launch the Import wizard.
- 2 On the Source Type page, select **Physical computer**.
- 3 On the Source Login page, select **This local machine** and click **Next**.
When you select **This local machine**, the **Authentication** boxes is dimmed. Converter assumes that you are running with administrative privilege.
- 4 On the Source Data page select the disks to import and click **Next**.

Import Your Source PC as a VMware Fusion Virtual Machine

Indicate to Converter what kind of virtual machine you want.

To set up the import for a VMware virtual machine as the destination

- 1 On the Destination Type page, select **VMware standalone virtual machine** and click **Next**.
- 2 In the Virtual Machine Name and Location page, enter a name for your new virtual machine and the location for the VMware virtual machine to be created from your Windows PC.
- 3 Select a temporary name for the virtual machine.
- 4 Select the location, depending on your method of migrating to the Mac:
 - a If you enabled Windows file sharing on your Mac, enter a network path that points at the Virtual Machines subdirectory of your Mac home directory, as shared by the Mac.

Use the network path you noted in [“To set up file sharing for copying to a network share”](#) on page 2. Append **Virtual Machines** to it. For example, `\\<XXX.XXX.XXX.XX>\<username>\Virtual Machines`. This location is where you import the new virtual machine on the host.
 - b If you are using an attached FAT32-formatted USB 2.0 hard drive, enter the path to the USB drive `<drive letter>:\`. For example, `E:\`.

Converter makes a subdirectory in the path you name with the same name as the virtual machine, and put its `.vmx` file and its virtual disk in there.
- 5 Select **Workstation 6.x, VMware Fusion 1.x** as the destination virtual machine type and click **Next**.
If you are using a network share, supply your Mac log credentials on the pop-up menu.
- 6 On the VM Options page, select the kind of virtual disks to make for this virtual machine. **Allow virtual disk files to grow** is the best choice for most users.
- 7 Click **Next**.
- 8 On the Networks page, confirm the network configuration for the new virtual machine and click **Next**.

The Customization page asks if you want to customize the guest operating system of the virtual machine. You do not need to customize, because you are only migrating from a Windows PC to VMware Fusion, and you don't plan to run the source Windows PC and the destination virtual machine at the same time. Running both would require the purchase of an additional Windows license unless you have a volume licensing agreement.
- 9 Click **Next**.
- 10 Deselect the option to install VMware Tools in the new virtual machine at this point.

Later, after the conversion, you install the VMware Fusion version of VMware Tools that is required for features such as Unity view and drag and drop.

NOTE Do not deselect the **Split disk into 2 GB files** check box, as it is the best choice. Dividing disks into 2GB fragments means that they can be safely stored in a FAT32 file system, such as many Mac users have on their external hard disks.

Complete the Converter Import Task Creation

On the final page of the wizard, Converter summarizes what it is about to do. If you are satisfied, select to finish the import, wait for the task to finish, and shut down your Windows PC.

NOTE If you do not shut down your Windows PC before starting up the Fusion virtual machine cloned from it, you will be in violation of your Microsoft license agreement unless you have a volume license. Also, depending on your virtual machines' network configuration, you might get a duplicate computer name warning or even a duplicate IP address warning.

Create the VMware Fusion Virtual Machine

Create a new virtual machine in VMware Fusion, using the virtual disks that Converter imported.

Converter creates a new directory, using the name you selected for the virtual machine, which contains several .vmdk files and a .vmx file. VMware virtual machines' .vmx files are text files that govern how virtual machines are built. You discard the .vmx file Converter creates and replace it with a file that VMware Fusion creates. However, you retain the virtual disk (the .vmdk files).

The new directory is either at the destination on the Mac that you specified by using the network share option, or in the location you specified for the USB 2.0 hard drive.

If you are using the network share option, proceed to [“To prepare the disk files and create the new virtual machine.”](#)

To copy the converted virtual machine to the Mac if you are using a USB 2.0 hard drive

- 1 Disconnect the USB 2.0 hard drive from the Windows PC and attach it to your Mac.
- 2 Copy the folder identified by the virtual machine temporary name to the Virtual Machines folder in your Mac's Documents folder.

To prepare the disk files and create the new virtual machine

- 1 Use Finder to open the new virtual machine subdirectory of your Virtual Machines directory.
- 2 Delete the .vmx file, but leave all other files intact.
- 3 Start VMware Fusion.
- 4 From the Virtual Machine Library window, click the **New** button.
- 5 In the New Virtual Machine Assistant, select **Continue without disk**.
- 6 In the Destination Media panel, select **Use an existing disk**.
- 7 In the file-selection dialog box that appears, navigate to the virtual machine directory from which you deleted the .vmx file.
- 8 Point Fusion to the .vmdk file with the shortest name and click **Choose**.
- 9 Click **Continue** to go to the Choose Operating System panel.
- 10 Indicate which operating system you “will install” in your virtual machine. Your virtual machine already includes a copy of the operating system from your Windows PC, so that is the one to indicate here.
Click **Continue**.
- 11 On the Finish panel click **Finish**.
- 12 Enter the name and location of your virtual machine and click **Save**.

Select a descriptive name for your virtual machine. This name must be different from the temporary name you gave it when you imported it using Converter.

The virtual machine window appears. You can now power on the new virtual machine.

Power On the New Virtual Machine for the First Time

When you power on the virtual machine for the first time in VMware Fusion, you must respond to a number of operating system messages.

To respond to operating system messages at first startup

- 1 The virtual machine should have powered when you saved your virtual machine. If this did not happen, on the virtual machine window, use the big gray button to power on the virtual machine.
- 2 If you receive a warning about the presence of SCSI virtual disks in this virtual machine, the condition is harmless. Select the check box for **Never show this dialog again** and click **OK**.

- 3 Allow the virtual machine to boot up.
- 4 Unless your virtual machine does so automatically, log on as a user with administrative privilege.
A long series of messages appear about newly detected hardware. Let the process complete before you proceed.
Mouse movements in the virtual machine are now somewhat slow, and mouse focus becomes stuck inside the virtual machine when you click in it. Press **ctrl-⌘** to remove input focus from the virtual machine, and click inside the virtual machine's window to put input focus back in. When you install VMware Tools later the mouse issues are resolved.
- 5 Anytime you see a screen asking you to search for drivers, click **Cancel**.
If Windows asks you to reactivate, decline the opportunity to do so for now. It will be much easier to reactivate when VMware Tools has been installed.
- 6 In the Systems Settings Change dialog, click **Yes** to reboot.
- 7 After the reboot, log on again as a user with administrative privilege, if necessary.

Install VMware Tools

VMware Tools is a suite of utilities and drivers that enhance the performance and functionality of the guest operating system. Among other benefits, VMware Tools supplies an accelerated mouse driver.

To install VMware Tools

- 1 Press **ctrl-⌘** to move your mouse focus out of the virtual machine.
- 2 From the Fusion **Virtual Machine** menu, choose **Install VMware Tools**.
The VMware Tools installer starts inside the virtual machine.
VMware Tools installs a number of device drivers.
- 3 If you receive a prompt to install an unsigned driver, click **Continue Anyway** or press **C**.
- 4 Install all the parts of VMware Tools, even those you might not need right now.
You receive a prompt to reboot your virtual machine.
- 5 Click **Yes**.

Your virtual machine is ready for use. You now have convenient mouse operation, the ability to operate in Full Screen view, access to virtual machine files and applications, the use of Unity view, and the use of high-speed USB 2.0 devices. If you install the Boot Camp drivers in your guest operating system, as outlined in the VMware Fusion help, you can use the iSight camera and other Mac-specific devices.

Moving Virtual Disks into the New Virtual Machine Package (Optional)

VMware Fusion treats virtual machines as packages on your Mac, to keep all the appropriate files together. If you want, you can move your virtual disk files, which are currently stored in the subfolder that VMware Converter created, into the virtual machine package you created in [“Create the VMware Fusion Virtual Machine”](#) on page 4.

To move virtual disks into the new virtual machine package

- 1 Shut down any running virtual machines and quit VMware Fusion.
- 2 Navigate to the new virtual machine package you created in [“Create the VMware Fusion Virtual Machine.”](#)
- 3 Right-click or Ctrl-click on the package and select **Show Package Contents**. The package opens in a new window in which you can see the package contents.

- 4 Navigate to the subfolder VMware Converter created when it converted your Windows PC.
Open this subfolder, and select all .vmdk files in the package. The subfolder contains many of them, each smaller than 2GB.
- 5 Drag all the .vmdk files from the subfolder that VMware Converter created into the virtual machine package window.
Your virtual machine's virtual disks now reside in the same package as your virtual machine's configuration file.
- 6 Double-click on your new virtual machine package to start up.

Migration Complete

You have used VMware Converter and VMware Fusion to migrate your old Windows PC to a brand new virtual machine to run on VMware Fusion. All the applications and data from your old Windows PC are now available on your Mac.

If you have comments about this documentation, submit your feedback to: docfeedback@vmware.com

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