

Installing Microsoft's IE Compatibility VPC Images in Fusion

Microsoft offers, for free download, virtual disk images with Windows XP/Vista and IE6, IE7 or IE8 beta, so that web developers can check compatibility. The images are, of course in Virtual PC 2007 format, and they expire every three months. Judging from [this tutorial](#), it wasn't so hard to import with Fusion 1 and/or older images, but I had a bear of a time with Fusion 2.0RC and the current ones (published August 28, 2008). I started writing instructions, but I'm hoping that at least some of this can be improved by VMware or Microsoft.

Here's how it went.

Preparation

First, you'll need four things:

1. a way to extract the self-extracting archive under OS X (it's a Windows executable). I recommend doing "sudo port install p7zip", if you have [MacPorts](#).
2. a way to convert the image to VMDK. I recommend downloading [Q \(kju\)](#), [here](#): click the "Download Latest Nightly" link in the upper right corner to get a Leopard-compatible version (currently Q-0.9.1d118). Drag it to your Applications folder.
3. the virtual disk image itself. Go to the [Microsoft download page](#), and pick your poison. I used IE6-XPSP3_VPC.EXE.
4. a legitimate Windows XP SP2 install CD or image. (You don't need an extra license.)

Unpack and convert the virtual disk image

1. Open a terminal, and cd to the directory where you downloaded the EXE file.
2. Extract the archive into a .vhd file:

```
7za e IE6-XPSP3_VPC.EXE
```

3. Convert the VHD to VMDK:

```
/Applications/Q.app/Contents/MacOS/qemu-img  
convert -O vmdk -f vpc XP\ SP3\ with\ IE6.vhd XP\ SP3\ with\  
IE6.vmdk
```

Create a new VMware machine that mounts the image

1. Switch to Fusion, and select File | New.
2. Click the "continue without disk" button.
3. Click the "Use an existing virtual disk" radio button, and select the newly-created .VHDK.
4. A dialog pops up, saying "This virtual disk was created with an older VMware product."
5. Click the "Convert" button.
6. After conversion, click the "Continue" button.
7. Choose "Microsoft Windows" as the operating system. ("Windows XP Professional" will then automatically be selected as the version.)
8. Click "Finish" to create the virtual machine, and save it.

Now, the VM will launch for the first time.

Problem #1: Sometimes, at this step, Fusion says "Cannot connect virtual device ide:0". If I continue, it says ide:0 will start disconnected; if I acknowledge that, startup succeeds anyway.

Skip initial driver installation

Once it boots into Windows, it will start discovering all sorts of devices you don't have drivers for:

- Hit ESC to all the "Found New Hardware" and "Insert CD-ROM" dialogs
- Close the "Display Settings: Your computer's resolution..." pop-up
- When you see the "You must restart your system" dialog, answer "No"
- Alt-F4 will close the Notepad window with the EULA

Keep answering all the dialogs until you're back at the main Windows desktop, with nothing running.

Undo some Windows restrictions

1. Press CTRL-ESC and then press "R" to run a command; type "REGEDIT" and press RETURN.
2. Navigate to HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\Policies\Uninstall.
3. On the right is the "NoAddRemovePrograms" value. Press forward-delete to delete it (and click "Yes" to confirm). Close RegEdit.
4. Press CTRL-ESC, R, "SECPOL.MSC", RETURN.
5. Navigate to Local Policies\Security Options.
6. On the right is "Devices: Unsigned driver installation behavior". Change it from "Warn but allow installation" to "Silently succeed". Close Local Security Policy.

Remove Microsoft's Virtual PC drivers

Now you'll need your Windows XP installer CD or image.

1. Press CTRL-Command to escape the guest.
2. On the Fusion menu bar, select Virtual Machine | CD/DVD | Choose Disk Image... and find your ISO (or insert the real CD into your drive).
3. The Windows Installer will autorun. Choose "Exit".
4. Go to Control Panel -> System -> Hardware Tab. (Shortcut: Command-F15, right-arrow, right-arrow). Click the "Device Manager" button.
5. Under MSIE6 -> Batteries, you'll see an Unknown Device, with an exclamation point. Right-click (or use the Action menu) and select "Disable". Confirm "Yes". Close the Device Manager and the System panel.
6. Go to Control Panel -> Add or Remove Programs, and remove the "Virtual Machine Additions" program.
7. When you see the "You must restart your system" dialog, answer "No".
8. Close Add or Remove Programs, and close the Control Panel itself.

Try to install VMware Tools

1. Press CTRL-Command again, and select Virtual Machine | Install VMware Tools.
2. A pop-up appears. Click the "Install" button.
3. In the installation wizard, click "Next", "Complete", "Next", "Install".
4. **Problem #2:** When it tries to install the mouse, it will ask for i8042prt.sys. This is not provided VMware Fusion tools; my other VM doesn't use this driver for the VMware mouse, and I am not sure why it needs it. However, you can point it at C:\WINDOWS\SYSTEM32\DRIVERS and click "OK".
5. **Problem #3:** When it tries to install the printer, it will ask for pscript5.dll, which is not yet installed, and not on the VMWare Tools CD. Just press ESC.

1. When you see the "You must restart your system" dialog, answer "Yes". The guest system restarts.

Go through driver hell

This is another part that I don't understand. My guess is: Fusion doesn't provide the standard USB and sound drivers, on the assumption that they'll be already installed. They're not; maybe VPC's Virtual Machine Additions doesn't require them. The Found Hardware Wizard can find them on the XP CD, but only if they're unpacked; USBUI.DLL isn't even unpacked! It's hidden in DRIVERS.CAB. Maybe it'd be installed by XP setup under normal circumstances?

1. When the guest system restarts, it will begin finding new devices.
2. When you get the "Display Settings: Your computer's resolution..." pop-up, click on it.
3. Windows will ask "Do you want Windows to automatically correct your screen resolution...". Answer "Yes".
4. It will adjust the screen; answer "Yes" to confirm that this worked.
5. You'll eventually see the "Found New Hardware" wizard. Choose "No, not this time", click "Next", and allow it to automatically install the drivers.
6. When it asks you to "Insert disk" for the Windows XP CD, press OK.
7. You'll see a Files Needed dialog. Click on "Browse".
8. **Problem #4: I guess this is a Windows XP bug I've never noticed? Although it's pointed at D:\I386, which contains the file it's looking for (e.g. USBPORT.SY_), it wouldn't have accepted "OK" in the Files Needed dialog. Instead, you have to drop down to "browse" and open the file there.**
9. The "Locate Files" dialog appears. It will be looking for one of:
 - USBPORT.SY_
 - USBHUB.SY_
 - USBCCGP.SY_
 - HIDCLASS.SY_
10. They're there. Really. Just click "Open", and then "OK".
11. You'll get the unsigned driver warning; select "Continue Anyway".
12. Repeat steps 5 through 11 as needed.
13. When you get to a "Copy Error", you're at **Problem #5: VMware depends on USBUI.DLL, but it's not installed.** So:

Digression: unpack one important driver

1. Go to Start -> All Programs -> Accessories -> Windows Explorer
2. Under My Computer, navigate to D:\I386
3. Type "DRIVER.CAB" to get quickly to the DRIVER.CAB file, and press RETURN to open it
4. Select USBUI.DLL. Right-click, and select "Extract".
5. Navigate to Local Disk (C:) under My Computer, and click "Extract" to extract the file there. Close Windows Explorer.

We now return to driver installation

1. Go back to the Found New Hardware wizard, with its Copy Error dialog. Point it at C:\ and click OK.
2. Repeat steps 5 through 11 again as needed.
3. You're done! Wow.