Installing Windows 98 in Windows Virtual PC 7 (Windows Virtual PC)

Before beginning, you will need to have a Windows 98 installation CD and a Windows 98 license key and a bootable CD. A bootable floppy image, VFD, can also be used, but there is no GUI interface exposed to mount a floppy disk.

- 1. Download the Win98SE Boot ISO from here (or create your own)
 - a. http://www.essjae.com/virtualization/win98sebootiso.zip
- 2. Create a new Virtual Machine
 - a. Click the **Start Orb→All Programs→Windows Virtual PC→Windows Virtual PC**. This will open the window **C:\Users\%username%\Virtual Machines.**
 - b. Click Create virtual machine from the menu
 - i. Create virtual machine: Enter a descriptive name and a location for the VM.

Na <u>m</u> e:	Windows 98SE	
Location:	Ellyp c7\\\/in09SE	
<u>cotation</u>	E: wpc/ winsose	Bīowse
Select a loca	tion to store the virtual machine file.	

Figure 1: Create a virtual machine wizard

- ii. Create virtual machine: Click Next to continue.
- iii. Create virtual machine: If the folder specified in Location does not exist, you will be prompted to create it. Click Yes to create the folder.

- c. Create virtual machine: Specify memory and networking options
 - i. Set the RAM to 64 or 128MB. Win98 doesn't need to much. Setting the RAM too high can cause the installation to fail. Click **Next** to continue.
- d. Create a virtual machine: Add a virtual hard disk
 - i. By default, a new dynamically expanding VHD will be created in the same folder specified above in step 2b. Click **Create**.
- e. The Win98 VM has been successfully completed.
- 3. Mount the Windows 98 boot ISO.
 - a. From the C:\Users\%username%\Virtual Machines select the VM created in step 2 above.
 - b. Select Settings from the menu

Setting	Current Value		
Name Memory Hard Disk 1 Hard Disk 2 Hard Disk 3 Undo Disks	Windows 985E 128 MB Windows 985E.vhd None None Disabled	OND Drive O None Open an ISO image I\essjae-website\virtualization\win98seboot.iso Browse	
DVD Drive COM1 COM2 Networking Integration Features Keyboard Cogon Credentials Auto Publish Close	win98seboot.iso None Network adapters:2 Not Available Full screen None Note Show message	C Access a physical drive	
		You can use a CD/DVD drive connected to your computer, from the virtu: machine. You can also attach an image(.iso) file to a virtual machine as a drive.	

Figure 2: VM Settings

- c. Select **DVD Drive** from the **Windows Virtual PC Settings** window.
 - i. Click Browse and locate the Win98SEboot.iso downloaded in step 1. Click OK.
- 4. Start the VM.
 - a. Double-click the Windows 98 VM to start it.

b. If you see a window similar to Figure 3, press *SHIFT+ESC* to reveal the standard boot screen.



Figure 3: Hidden boot screen

c. You should see this prompt:



d. Press Enter to Start computer with CD-ROM support.

5. Partition the VHD

- a. Type *fdisk* and press Enter.
 - i. Press Enter to enable large disk support.
 - ii. Press Enter to Create DOS partition or logical DOS drive
 - iii. Press Enter to Create Primary DOS Partition
 - iv. Press Enter to use the maximum available size
 - v. Press Esc to exit FDISK
- 6. Reboot the VM

- a. Click **Ctrl+Alt+Del** on the VM menu bar to reboot.
- b. If Missing operation system appears, the BIOS boot order needs to be changes.
 - i. Click **Ctrl+Alt+Del** again and as soon VM reboots appears, repeatedly press the **DEL** key until the blue and gray BIOS setup screen appears.

💐 Windows 9	8SE - Windows	Virtual PC				
Action 🔻	Tools 🔻	Ctrl+Alt+Del				
Main	Advanced	Power	BIOS SE Boot	TUP UTILITY Security	Exi	it
→ Boot Di → Hard D → Floppy → CDROM 1	evice Prio isk Drives Drives Drives	rity				
						 ↔ Select Screen ↑↓ Select Item Enter Go to Sub Screen F1 General Help F10 Save and Exit ESC Exit
	v02.10 (C)Copyrigh	t 1985-2	001, American	n Meç	jatrends, Inc.

Figure 4: BIOS setup

- ii. Use the arrow keys to navigate and select **Boot**.
- iii. Press Enter to open the Boot Device Priority menu.
- iv. Move the CD-ROM above the Hard Drive.
 - 1. For 1st Boot Device, press Enter and select CD-ROM. This will swap the Hard Drive and CD-ROM in the boot order.
- v. Press **F10** to save and exit. Press **Enter** to **Ok** the changes, save, exit and reboot the VM.

7. Format the VHD

- a. Press Enter to Start computer with CD-ROM support.
- b. At the A:\> prompt, type *format c:* and press Enter. Type Y and pres Enter to proceed.
- c. Press Enter when prompted for a volume label.
- d. Load smartdrv, type *smartdrv* and press Enter.

- 8. Mount the full Windows 98 installation CD
 - a. From the VM menu bar, click **Tools** -> **Settings** -> **DVD Drive**
 - i. Mount the Windows 98 ISO or capture the physical Windows 98 CD, click OK
- 9. Create a Windows 98 directory on the VHD, this prevents any installation issues where the setup program needs to access the CD-ROM before the Windows 98 CD-Rom drivers are loaded
 - a. Change to the C: drive, type c: and press Enter
 - b. Type *md win98* to create a new directory
 - c. Copy the contents of e:\win98 to c:\win98 (note, if not using the Win98boot.iso from step 1, the drive letter of the CD-ROM may be different. The drive letter used by the CD-ROM is displayed when MSCDEX is loaded at boot)
 - i. Type copy e:\win98 c:\win98
- 10. Run setup.exe from the c:\win98 directory
 - a. Type *cd win98*, press Enter, then type *setup* and press Enter.

See the VPC2007 Tech Ref for complete instructions for installing Windows 98 from this point on. Steps on creating the Windows 98 startup floppy can be skipped.