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)

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.

![Figure 1: Create a virtual machine wizard](image)

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

   ![Figure 2: VM Settings](image)

   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 \textit{SHIFT+ESC} to reveal the standard boot screen.

![Figure 3: Hidden boot screen](image)

c. You should see this prompt:

![Microsoft Windows 98 Startup Menu](image)

d. Press \textit{Enter} to \textit{Start computer with CD-ROM support}.

5. Partition the VHD

   a. Type \textit{fdisk} and press \textit{Enter}.
      
      i. Press \textit{Enter} to enable large disk support.

      ii. Press \textit{Enter} to \textit{Create DOS partition or logical DOS drive}

      iii. Press \textit{Enter} to \textit{Create Primary DOS Partition}

      iv. Press \textit{Enter} to use the maximum available size

      v. Press \textit{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.

   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 press **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.