

Installing Windows NT 4 in Windows Virtual PC

Before beginning you will need to have a Windows NT 4 installation CD or ISO and a Windows NT COA or serial number to complete the installation.

1. 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.

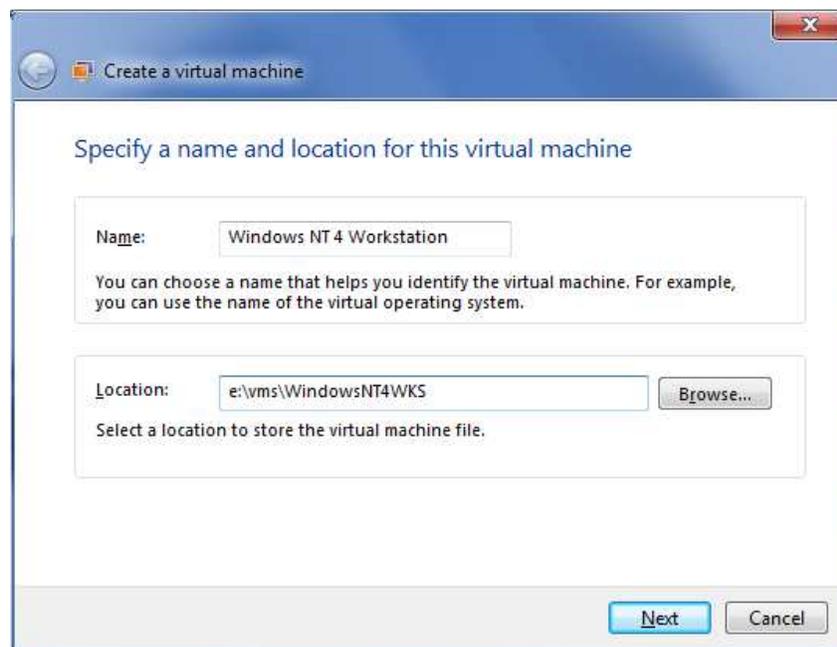


Figure 1: Create a virtual machine wizard

- 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. WinNT doesn't need much for installation. Setting the RAM to 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 1b. **IMPORTANT**: Since Windows NT can't use a disk over 4GB as a boot volume, adjust the size to 4000MB. Click **Create**. If you do not resize the VHD, WinNT setup will fail when copying files later in the installation.

- e. The WinNT VM has been successfully completed.
2. Mount the Windows NT 4 CDROM or 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

- c. Select **DVD Drive** from the **Windows Virtual PC Settings** window.
 - i. Insert and capture your physical WinNT CD or **Browse** and locate your WinNT ISO image.
3. Start the VM
 - a. Double-click the Windows NT 4 Workstation VM to start it.
 - b. Once the VM is started, the VM should begin booting from the CD and load the initial NT4 boot screens.
- If your CD is bootable you should see **the Windows NT Workstation Setup** screen.

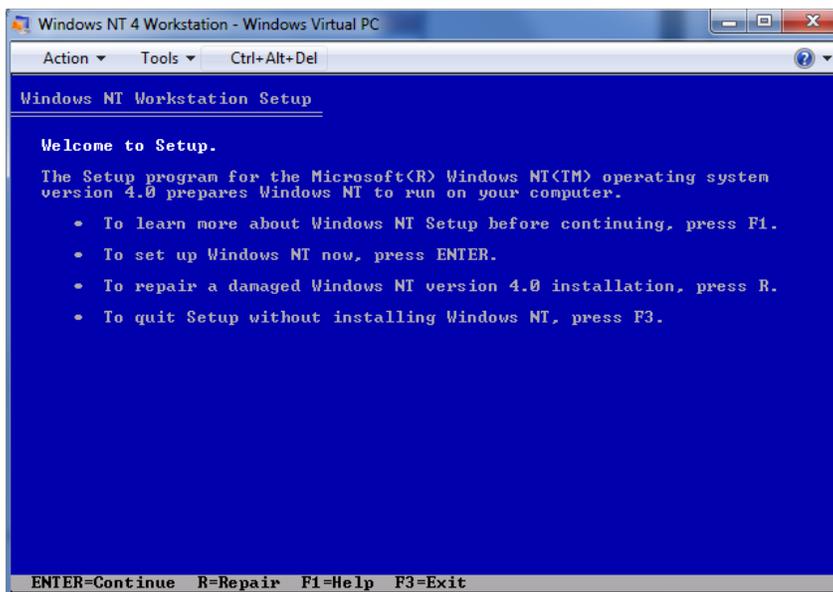


Figure 3: Windows NT Workstation Setup

4. Setup Windows NT

- a. Press **Enter** to begin the Windows NT setup.
- b. Press **Enter** again to continue after the setup recognizes the IDE-CDROM/PCI IDE controller.
 - i. If you did not adjust the size the VHD to 4GB or less, you will get a message that your hard disk is over 1024 cylinders, press **Enter** to continue and will need to stop the setup as WinNT will not install correctly with the default size VHD.
- c. Press **C** to continue at the hard disk is new or empty prompt.
- d. Use **PAGE DOWN** to scroll to the end of the EULA, and then press **F8** to agree.
- e. Press **Enter** to select the components detected by setup.
- f. Press **C** to create a partition.
 - i. Press **Enter** to install to **Unpartitioned space 3997 MB**.
 - ii. Select **NTFS** and press **Enter** to format.
- g. Press **Enter** to use the default folder **\WINNT**.
- h. Press **Enter** to let setup examine your hard drive.

5. Remove the CDROM/ISO

- a. When the first portion of the setup is complete, press **Enter** to restart the VM. If you changed the default boot order, you must remove the CD/ISO before restarting, otherwise the setup will restart from the beginning of the installation.
- b. WinNT setup will convert the file system, reboot, and restart again.

6. Windows NT Setup

- a. Once the graphical setup portion starts, click **Next** to continue.
- b. Setup Options: click **Next** to continue.
- c. Enter a name and click **Next** to continue.
- d. Enter the **CD key** and click **Next** to continue.
- e. Enter a name for the computer and click **Next** to continue.
- f. Enter and confirm the administrator password and click **Next** to continue.
- g. Select **No, do not create an emergency repair disk** and click **Next** to continue.
- h. Click **Next** to **install the most common components**.
- i. Click **Next** to **install Windows NT Networking**.
- j. Click **Next** to accept the defaults for networking.
- k. Click **Start Search** to locate the network adapter.
 - i. Setup will find the **DEC PCI Fast Ethernet DECchip 21140**, this is the correct NIC emulated by Virtual PC. Click **Next** to continue.
 - ii. Click **Next** to accept the networking protocols.
 - iii. Click **Next** again to install the selected components.

- iv. Click **Continue** when prompted for the DEC adapter setup.
 - v. Click **Yes** to use DHCP, unless you've specifically selected the host's NIC from the networking options and require a static IP for your network environment.
 - vi. Click **Next** to start the Windows NT network.
 - vii. Click **Next** to accept the domain/workgroup settings. Click **Finish**.
- l. Select your **time zone** and click **Close**.
- m. Click **OK** to accept the **Detected Display**.
- n. Select **True Color** and **1024x768**, then click **Test**.
- i. Click **OK** to test.
 - ii. Click **Yes** if you saw the test display. Click **OK** to save the display settings. Click **OK** to close **Display Properties**.
- o. Windows NT 4.00 has been successfully installed.
- i. Click **Restart Computer**.
7. Installation of the OS is complete. Depending on the service pack level of the installation source, a service pack update may be required to use the VPC2007 Additions. VPC 2007 Additions can be downloaded here: <http://www.essjae.com/virtualization/vmadditions2007.zip> or the entire VPC 2007 installer can be downloaded directly from Microsoft and the Additions can be extracted manually.
8. Installing the VPC2007 Additions
- a. Log in to Windows NT
 - b. From the VM menu bar, click **Tools→Settings**.
 - i. Click **DVD Drive**, select **Open an ISO image** and **Browse** to the ISO location.
 - ii. Select the VMAdditions.ISO
 - iii. Click **OK**.
 - c. If you receive a message, **Wrong OS or OS version for application**, you need to upgrade your service pack. It's likely you have IE2 on your NT, which makes it difficult to do most anything on the Internet. The best solution here is to download to the host, then use Windows sharing to access the SP and IE from the host.
 - i. Windows NT SP6a does not seem to be available from Microsoft any longer, if you cannot find it anywhere else, it is available on my website here: <http://www.essjae.com/virtualization/nt4sp6.iso> (disclaimer, this file may be removed at Microsoft's request at any time)
 - ii. IE6 for NT4SP6a: <http://www.microsoft.com/downloads/details.aspx?FamilyID=1e1550cb-5e5d-48f5-b02b-20b602228de6&DisplayLang=en>