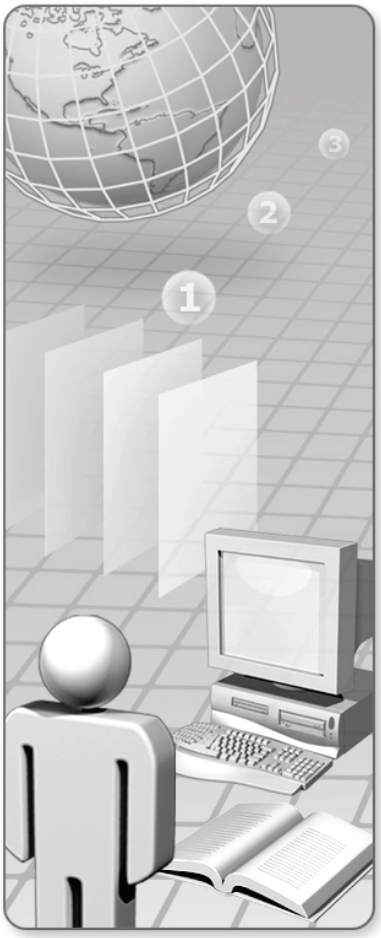
Microsoft®

5061A: Implementing Microsoft® Office SharePoint® Server 2007

Microsoft® Virtual PC Classroom Setup Guide



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Product Number: 5061A

Introducing Microsoft Virtual PC 2004

This learning product is designed using Microsoft® Virtual PC 2004 Service Pack 1 (SP1). Virtual PC is a technology that allows a single computer to act as a host for one or more virtual machines. The virtual machines use a set of virtual devices that might or might not map to the physical hardware of the host computer.

The software that is installed onto the virtual machine is unmodified, full-version, retail software that operates exactly as it does when it is installed onto physical hardware.

The following definitions will help you with the remainder of this document:

- **Virtual PC**: An application from Microsoft that allows you to install and run other operating systems. Virtual PC does not ship with this learning product, but it can be acquired from your MSDN® subscription or can be purchased retail.
- **Host computer**: The physical computer onto which an operating system and the Virtual PC application have been installed.
- **Host operating system**: The operating system that is running on the physical computer.
- **Virtual machine**: The computer that is running inside Virtual PC. In this document, "Virtual PC" refers to the application running on the host, while "virtual machine" refers to the guest operating system and any software that is running inside the Virtual PC application.
- **Guest operating system**: The operating system that is running inside the virtual machine.
- **Host key**: The key that is designated to take the place of the CTRL+ALT combination when logging on to Microsoft Windows®. By default, the host key is the ALT key on the right side of the keyboard. "HOST+DELETE" means RIGHT-ALT+DELETE. The host key can be changed by clicking the File menu in the Virtual PC console and selecting Options. See Virtual PC online help for other uses of the host key.

By default, the virtual machine will run inside a window on the host computer's desktop. However, you can run the virtual machine in full-screen mode by pressing HOST+ENTER. Using the same key combination, you can return to a windowed view.

Note: Pressing CTRL+ALT+DELETE while working with a virtual machine will display the Windows Security dialog box for the host operating system. To close the dialog box, press ESC. To access the Windows Security dialog box for a guest operating system, press HOST+DELETE. Other than this difference, software on a virtual machine behaves as it would behave on a physical computer.

You can configure virtual machines to communicate with the host computer, other virtual machines on the same host computer, other host computers, virtual machines on other host computers, other physical computers on the network, or any combination thereof.

The setup instructions that you will follow as part of this classroom setup guide configure Virtual PC and the virtual machines that run on the host. Changing any of the configuration settings may render the labs for this learning product unusable.

Setup Overview

The host computers must be set up with a default installation of Microsoft Windows 2000 Professional or Windows XP Professional. For the purposes of this learning product, it is not necessary for the host computers to be able to communicate with one another on the network. However, allowing them to communicate with each other is recommended to make setup easier. The setup procedures below assume that the host computers can communicate with each other for setup purposes. You should note the administrator's user name and password for the host computers and provide this information to the instructor.

Important: It is highly recommended that you read the Partner Deployment Guide on the Virtual PC page of the Microsoft Certified Trainer (MCT) secure site. This document contains valuable information on Microsoft Learning's virtual machine implementation and activation, in addition to tips on improving virtual machine performance and troubleshooting.

Classroom Requirements

This learning product requires a classroom with a minimum of one computer for the instructor and one for each student. Before class begins, use the following information and instructions to install and configure all computers.

Hardware

The classroom computers require the following hardware and software configuration.

Hardware Level 5

- Pentium IV 2.4-gigahertz (GHz) processor
- PCI 2.1 bus
- 2 gigabyte (GB) of random access memory (RAM)
- 40 GB hard disk, 7200 RPM
- DVD drive
- Non–Industry Standard Architecture (ISA) network adapter: 10/100-megabit-per-second (Mbps) required full duplex
- 16-MB video adapter (32 MB recommended)
- Super VGA (SVGA) 17-inch monitor
- Microsoft Mouse or compatible pointing device
- Sound card with amplified speakers
- Projection display device that supports SVGA 1152 x 864 pixels, 256 colors

In addition, the instructor computer must be connected to a projection display device that supports SVGA 1152 x 864 pixels, 256 colors.

Software

Please note that, unless otherwise indicated, this software is not included in the Trainer Materials disc. This learning product was developed and tested on the following software, which is required for the classroom computers:

- Windows XP Professional or Windows 2000 Professional
- Virtual PC 2004 with SP1
- Microsoft Office PowerPoint® 2003 (instructor computer only)

Classroom Configuration

Each classroom computer will serve as the host for virtual machines that will run in Virtual PC 2004. Domain or workgroup membership does not matter. The network configuration of the host computers does not matter. After the setup is complete, all computers will be configured to run the virtual machines named:

- 5061a_LON-DC-01-01
- 5061a_LON-DC-01-02
- 5061a_LON-DC-01-03
- 5061a_LON-DC-01-04
- 5061a_LON-DC-01-05
- 5061a_LON-DC-01-06
- 5061a_LON-DC-01-07
- 5061a_LON-DC-01-08
- 5061a_LON-DC-01-09

Estimated time to set up the classroom: 90 minutes

Instructor Computer Checklist

- ❑ 1. Install Virtual PC.
- ❑ 2. Install the virtual disk files.
- ❑ 3. Create a desktop shortcut for Virtual PC.
- ❑ 4. Add virtual machines.
- ❑ 5. Activate virtual machines.
- ❑ 6. Configure virtual machines to discard changes at shutdown.
- ❑ 7. Set the base VHDs to read-only.
- ❑ 8. Create a setup share.
- ❑ 9. Install courseware fonts.
- ❑ 10. Install the PowerPoint slides.

Instructor Computer Setup

Use the instructions in the following section to set up the classroom manually. Before starting the installation of the instructor computer, Windows XP Professional must be installed on the computer. PowerPoint 2003 must also be installed.

Additionally, the screen resolution must be set to 1152 x 864 pixels.

Important: The operating systems installed on the virtual machines in this learning product have not been activated. To receive product keys that will activate the virtual machines, you must contact Microsoft Learning at mslpkd@microsoft.com, including your program ID number in your e-mail message. It might take up to 24 hours to receive a response. (It is not necessary to contact Microsoft Learning if you have already done so for another learning product.) You will use the product keys to activate all virtual machines that you receive from Microsoft Learning. You will need only one key for each operating system. For more information, please see the “Virtual PC Deployment Guide” section of the following MCT secure site: https://mcp.microsoft.com/mct/vpc/default.aspx.

1. Install Virtual PC

In this task, you will install Virtual PC.

Note: If Virtual PC 2004 is already installed, you can skip this procedure.

1. Insert the Microsoft Virtual PC 2004 CD into the CD-ROM drive.
2. If Autorun is disabled, navigate to the root of the CD and double-click **Setup.exe**.
3. On the **Welcome to the installation wizard for Microsoft Virtual PC 2004** page, click **Next**.
4. On the **License Agreement** page, select **I accept the terms in the license agreement**, and then click **Next**.
5. On the **Customer Information** page, enter a **User Name**, **Company Name**, and the product key for your version of Virtual PC, and then click **Next**.
6. On the **Ready to Install the Program** page, click **Install**.
7. On the **Installation Completed** page, click **Finish**.

2. Install the virtual disk files

In this task, you will install the virtual disks and configuration files by running the self-extracting executable files in the Drives folder in the Trainer Materials disc.

1. Insert the Trainer Materials DVD into the DVD-ROM drive. If the **Course 5061 (Trainer) EULA** dialog box appears, click **I accept the agreement**, click **Next**, and then close the **Course 5061: Implementing Microsoft Office SharePoint Server 2007** window.
2. Double-click **Base05D.exe** in the **Setup\Drives** folder of the Trainer Materials disc.
3. In the **Official Microsoft Learning Products End-User License Agreement** window, click **Accept** to indicate that you accept the terms in the license agreement.
4. In the **WinRAR self-extracting archive** window, in the **Destination folder** text box, ensure that **C:\Program Files\Microsoft Learning\Base** is listed, and then click **Install**.

   Please wait while the base virtual hard disk file is extracted. This might take a few minutes.
5. Double-click **5061a_BaseDiffs.exe** in the **Setup\Drives** folder of the Trainer Materials disc.

6. In the **Official Microsoft Learning Products End-User License Agreement** window, click **Accept** to indicate that you accept the terms in the license agreement.
7. In the **WinRAR self-extracting archive** window, in the **Destination folder** text box, ensure that **C:\Program Files\Microsoft Learning\5061\Drives** is listed, and then click **Install**.

   Please wait while the virtual hard disk file is extracted. This might take a few minutes.
8. Repeat steps 5–7 to install the following files:
   - **5061a_LabDiffs.exe**
   - **5061a_AllFiles.exe**
9. Using Windows Explorer, browse to the **C:\Program Files\Microsoft Learning\5061\Drives** folder.
10. Right-click **5061A_CourseDiff.vhd**, and then click **Properties**.
11. In the **5061A_CourseDiff.vhd Properties** dialog box, clear the **Read-only** check box, and then click **OK**.

3. Create a desktop shortcut for Virtual PC

1. Navigate to the **C:\Program Files\Microsoft Virtual PC** folder.
2. Right-click and drag **Virtual PC.exe** to the desktop.
3. From the shortcut menu, click **Create Shortcuts Here**.

4. Add virtual machines

In this task, you will use the New Virtual Machine Wizard to add the virtual machine to the Virtual PC console.

1. Double-click the **Virtual PC** shortcut on the desktop.
2. On the **Welcome to the New Virtual Machine Wizard** page, click **Next**. (If the wizard does not start automatically, click **New**.)
3. On the **Options** page, select **Add an existing virtual machine**, and then click **Next**.
4. Click **Browse** and then navigate to the **C:\Program Files\Microsoft Learning\5061\Drives** folder. Click **5061a_LON-DC-01-01.vmc**, click **Open**, and then click **Next**.
5. On the **Completing the New Virtual Machine Wizard** page, verify that **When I click Finish, open Settings** is selected, and then click **Finish**.

6. In the **Settings for 5061a_LON-DC-01-01** dialog box, select **Networking**, verify that the value of the **Number of network adapters** setting is **1**, verify that **Local only** is selected in the **Adapter 1** list, and then click **OK**.

> **Important:** Do not change the RAM allocation for the virtual machine. Doing so may cause the lab exercises or practices to become unstable or to cease functioning.

7. For each of the virtual machines listed below, in the **Virtual PC** console, click **New**, and then follow steps 2 through 6.

   - **5061a_LON-DC-01-02**
   - **5061a_LON-DC-01-03**
   - **5061a_LON-DC-01-04**
   - **5061a_LON-DC-01-05**
   - **5061a_LON-DC-01-06**
   - **5061a_LON-DC-01-07**
   - **5061a_LON-DC-01-08**
   - **5061a_LON-DC-01-09**

5. Activate virtual machines

In this task, you will activate Windows operating systems within the virtual machines.

> **Important:** In some rare cases, a virtual machine might stop responding sometime between its first launch and first shutdown. This is due to a known issue in Virtual PC 2004 and its interaction with newer processors.
>
> If this occurs, close the virtual machine and select **Turn Off and Save Changes**, ensuring that the **Commit Changes to the Virtual Hard Disk** check box is selected. The problem will rectify itself and not recur the next time the virtual machine is started.
>
> It is recommended that you save the virtual machines after activating them, so that in the future you can set up the classroom without needing to activate them again.
>
> This section requires the use of the product keys supplied by Microsoft Learning. For instructions on obtaining these product keys, see the **Important** note at the beginning of the Instructor Computer Setup section.

1. In the Virtual PC console, select **5061a_LON-DC-01-01**, and then click **Start**.

2. If the **Error – 5061a_LON-DC-01-01** dialog box appears, click the **Don't show this message again** check box and then click **OK**
3. Log on to the virtual machine as **Administrator**, with a password of **Pa$$w0rd**.

> **Note:** Pressing CTRL+ALT+DELETE while working with a virtual machine will display the Windows Security dialog box for the host—not the guest—operating system. To log on to the guest operating system running in the virtual machine, press HOST+DELETE (generally RIGHT-ALT+DELETE).

4. In the **Windows Product Activation** alert box, click **Yes**.
5. On the **Let's activate Windows** page, select the **Yes, I want to telephone a customer service representative to activate Windows** option, and then click **Next**.
6. On the **Activate Windows by phone** page, click the **Change Product Key** button.

> **Note:** You might need to scroll down the window to see this button.

7. On the **Change Product Key** page, enter the learning product-specific product key provided by Microsoft Learning, and then click **Update**.
8. On the **Activate Windows by phone** page, in the **Step 1** list, select your location.
9. Dial the telephone number that is displayed in **Step 2**.
10. Follow the telephone instructions to activate Windows. This will take a few minutes.
11. After logon is completed, in the **Virtual PC** window, from the **Action** menu, select **Close**.
12. In the **Close** window, select **Shut down Windows Server 2003 and save changes**, verify that **Commit changes to the virtual hard disk** is selected, and then click **OK**.

> **Note:** If the **w3wp.exe – Application Error** message box appears, click **OK**. If Windows restarts unexpectedly, log on to the virtual machine as **Administrator**, with a password of **Pa$$w0rd**. Then repeat step 11.

13. Repeat steps 1–12 for the following virtual machines:
    - **5061a_LON-DC-01-02.vmc**
    - **5061a_LON-DC-01-03.vmc**
    - **5061a_LON-DC-01-04.vmc**

- **5061a_LON-DC-01-05.vmc**
- **5061a_LON-DC-01-06.vmc**
- **5061a_LON-DC-01-07.vmc**
- **5061a_LON-DC-01-08.vmc**
- **5061a_LON-DC-01-09.vmc**

6. Configure virtual machines to discard changes at shutdown

In this task, you will configure the virtual machines to discard changes when shut down between modules.

> **Note:** After the virtual machines are activated, configure them to discard changes at shutdown to enforce modularity. Saving state between modules might cause errors. Discarding changes between modules also speeds up shutdown of the virtual machines.

1. In the Virtual PC console, select **5061a_LON-DC-01-01**, and then click **Settings**.
2. Select the **Close** setting.
3. Select **Automatically close without a message** and then select **Turn off and delete changes**. Click **OK**.
4. Repeat steps 1-3 for the following virtual machines:
   - **5061a_LON-DC-01-02**
   - **5061a_LON-DC-01-03**
   - **5061a_LON-DC-01-04**
   - **5061a_LON-DC-01-05**
   - **5061a_LON-DC-01-06**
   - **5061a_LON-DC-01-07**
   - **5061a_LON-DC-01-08**
   - **5061a_LON-DC-01-09**

7. Set VHDs to read-only

In this task, you will set the read-only attribute on all the VHD files.

1. Navigate to **C:\Program Files\Microsoft Learning\Base**.
2. Right-click the **Base05D.vhd** file, and then click **Properties**.

3. Under **Attributes**, select the **Read-only** check box, and then click **OK**.

8. Create a setup share

In this task, you will Share virtual machine files for installing on student computers.

1. In Windows Explorer, right-click **C:\Program Files\Microsoft Learning\Base**, and then click **Sharing** (on Windows 2000 or Windows Server 2003) or **Sharing and Security** (on Windows XP).
2. On the **Sharing** tab, select **Share this Folder**, type **Base_Drives** in the **Share name** box, and then click **OK**.
3. In Windows Explorer, right-click **C:\Program Files\Microsoft Learning\5061\Drives**, and then click **Sharing** (on Windows 2000) or **Sharing and Security** (on Windows XP).
4. On the **Sharing** tab, select **Share this Folder**, type **5061_Drives** in the **Share name** box, and then click **OK**.

9. Install courseware fonts

In this task, you will install courseware fonts by running Fonts.exe.

1. In the Trainer Materials disc, in the **\Setup** folder, double click **Fonts.exe** and then click **OK**.
2. In the **Courseware fonts** dialog box, click **Yes**.
3. In the **Courseware fonts** message box, click **OK**.

10. Install the PowerPoint slides

In this task, you will install the PowerPoint slides for the learning product by running 5061_ppt.msi.

- In the Trainer Materials disc, in the **\Setup** folder, double-click **5061_ppt.msi**.

Student Computer Checklist

- ☐ 1. Install Virtual PC.
- ☐ 2. Install the virtual disk files.
- ☐ 3. Create a desktop shortcut for Virtual PC.
- ☐ 4. Add virtual machines.

Student Computer Setup

To set up the student computers, complete the items in the Student Computer Checklist.

> **Caution:** These instructions assume network connectivity between the instructor computer and the student computers. If you do not have connectivity, we recommend copying the activated virtual machines to the student computers by means of a burned DVD or universal serial bus (USB) drive, for example, to avoid the need to activate the virtual machines on each student computer. If you use the original virtual machines from the Trainer Materials disc, you will need to activate them on each student computer.

1. Install Virtual PC

> **Note:** If Virtual PC 2004 SP1 is already installed, you can skip this step.

- See detailed instructions in the Instructor Computer Setup section.

2. Install the virtual disk files

1. Copy the entire contents of the **Base_Drives** folder from the instructor computer share to the **C:\Program Files\Microsoft Learning\Base** folder.
2. Copy the entire contents of the **5061_Drives** folder from the instructor computer share to the **C:\Program Files\Microsoft Learning\5061\Drives** folder.

3. Create a desktop short cut for Virtual PC

- See detailed instructions in the Instructor Computer Setup section.

4. Add virtual machines

- See detailed instructions in the Instructor Computer Setup section.