

3369B: First Look: Getting  
Started with Windows®  
SharePoint® Services 3.0

Microsoft® Virtual PC  
Classroom Setup Guide

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# Introducing Microsoft Virtual PC 2004

This clinic is designed using Microsoft® Virtual PC 2004. 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 clinic, 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 of 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 of 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.

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**Note** Pressing CTRL+ALT+DELETE while working with a virtual machine will display the Windows Security dialog box for the host operating system. If this is not desired, press ESC. To access the Windows Security dialog box for a guest operating system, press HOST+DELETE. This is the only difference in the way the software works in a virtual machine.

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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 a part of this classroom setup guide will configure Virtual PC and the virtual machines that will run on the host. Changing any of the configuration settings might render the demonstrations for this clinic unusable.

## Setup Overview

The host computers must be set up with a default installation of either Windows 2000 Professional or Windows XP Professional. For the purposes of this clinic, 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 for ease of setup. The setup procedures below assume that the host computers can communicate with each other for setup purposes. You should make note of the administrator user name and password, and provide these to the instructor.

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**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, activation, troubleshooting, and performance improvement.

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## Classroom Requirements

This clinic requires a classroom with a minimum of one computer for the instructor. Before class begins, use the following information and instructions to install and configure the computer.

### Hardware

The classroom computers require the following hardware and software configuration.

#### Hardware Level 5

- Pentium IV 2.4 gigahertz (GHz)
- PCI 2.1 bus
- 2 gigabyte (GB) of random access memory (RAM)
- 40-GB hard disk, 7200 RPM
- Digital video disc (DVD) player
- Non-ISA network adapter: 10/100 megabits per second (Mbps) required full duplex
- 16-megabyte (MB) video adapter (32 MB recommended)
- Super VGA (SVGA) monitor (17 inch)
- Microsoft mouse or compatible pointing device
- Sound card with amplified speakers
- Projection display device that supports SVGA 800 x 600, 256 colors

## Software

Please note that, unless otherwise indicated, this software is not included on the Trainer Materials DVD. This course 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 Service Pack 1 (SP1)
- Microsoft Office PowerPoint® 2003 (instructor computer only)

## Classroom Configuration

Each classroom computer will serve as the host for three 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 SEA-DC1, SEA-SRV1, and SEA-CL1.

**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. Set VHDs to read-only.
- ☐ 7. Create a setup share.
- ☐ 8. Install courseware fonts.
- ☐ 9. Install the PowerPoint slides.



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## 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 2000 Professional or Windows XP Professional must be installed on the computer. PowerPoint 2003 must also be installed.

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**Important** The operating systems installed on the virtual machines in this course have not been activated. To receive product keys that will activate the virtual machines, you must contact Microsoft Learning at [mslpkd@microsoft.com](mailto:mslpkd@microsoft.com), and include your program ID number in your e-mail. 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 course.) You will use the product keys to activate all virtual machines that you receive from Microsoft Learning. You will only need 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/Default.aspx>.

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## 1. Install Virtual PC

<b>Task Summary</b> Install Virtual PC.
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**Note** If Virtual PC 2004 is already installed, you may skip this step.

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1. Insert the Microsoft Virtual PC 2004 compact disc (CD) into the CD-ROM drive.
2. If autorun is disabled, navigate to the root of the compact disc, and double-click **Setup.exe**.
3. On the **Welcome to the installation wizard for Microsoft Virtual PC 2004** page, click **Next**.
4. In the **License Agreement** dialog box, select **I accept the terms in the license agreement**, and then click **Next**.
5. In the **Customer Information** dialog box, enter a **Username**, **Organization**, 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

<b>Task Summary</b> Install the virtual disks and configuration files by running the rar files in the Drives folder on the Trainer Materials DVD.
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**Note** If you are downloading from the Download Center: Copy course files and run the executable. Then copy the entire course contents to a DVD, which will be used for the rest of the setup.

If the Base virtual hard disks are available separately, they can be downloaded from the MCT Download Center. You can find this under Base Virtual Hard Disks in the Courses list.

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1. Insert the **Trainer Materials DVD**. If the **Course 3369 (Trainer) EULA** dialog box appears, click **Exit**.
2. Double-click **Base05D.exe** in the **\Setup\Drives** folder of the Trainer Materials DVD.

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**Note** If you experience long delays when opening the files from the DVD, copy the files to your local hard disk, and open the files from there.

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3. In the **Official Microsoft Learning Product 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. Repeat steps 2–4 for **Base05A.exe**.
6. Double-click **3xxxB-SEA-DC1.exe** in the **\Setup\Drives** folder of the Trainer Materials DVD.

7. In the **Official Microsoft Learning Product End-User License Agreement** window, click **Accept** to indicate that you accept the terms in the license agreement.
8. In the **WinRAR self-extracting archive** window, in the **Destination folder** text box, ensure that **C:\Program Files\Microsoft Learning\3xxx\Drives** is listed, and then click **Install**.
  - Please wait while the base virtual hard disk file is extracted. This might take a few minutes.
9. Repeat steps 6–8 to install the following files:
  - **3xxxB-SEA-SRV1.exe**
  - **3xxxB-SEA-CL1.exe**
10. Double-click **3369B-3373B-SEA-DC1.exe** in the **\Setup\Drives** folder of the Trainer Materials DVD.
11. In the **Official Microsoft Learning Product End-User License Agreement** window, click **Accept** to indicate that you accept the terms in the license agreement.
12. In the **WinRAR self-extracting archive** window, in the **Destination folder** text box, ensure that **C:\Program Files\Microsoft Learning\3369-3373\Drives** is listed, and then click **Install**.
  - Please wait while the base virtual hard disk file is extracted. This might take a few minutes.
13. Repeat steps 9–12 to install the following files:
  - **3369B-3373B-SEA-SRV1.exe**
  - **3369B-3373B-SEA-CL1.exe**

### 3. Create a desktop shortcut for Virtual PC

**Task Summary**

Create a shortcut for Virtual PC on the desktop.

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

### 4. Add virtual machines

**Task Summary**

Use the New Virtual Machine Wizard to add the virtual machine to the Virtual PC console.

1. Double-click the **Shortcut to Virtual PC** shortcut on the desktop.
2. On the **Welcome to the New Virtual Machine Wizard** page, click **Next**. (If the wizard does not automatically start, click **New**.)
3. On the **Options** page, select **Add an existing virtual machine**, and then click **Next**.
4. In the **Name and location** box, type **C:\Program Files\Microsoft Learning\3369-3373\Drives\3369B-3373B-SEA-DC1.vmc**, 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 3369B-3373B-SEA-DC1** 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**.

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

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7. Repeat steps 2–6 for the following virtual machines:
  - **3369B-3373B-SEA-SRV1.vmc**
  - **3369B-3373B-SEA-CL1.vmc**

## 5. Activate virtual machines

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### **Important** Potential virtual machine blue screen

In some rare cases, a virtual machine might display a blue screen sometime between its first launch and its first shutdown. This is due to a known issue between 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 will not recur the next time that the virtual machine is started.

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**Note** We recommend that after activating the virtual machines, you save them, so that in the future, you can set up the classroom without needing to activate them again.

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**Note** 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.

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#### **Task Summary**

Activate Windows operating systems within the virtual machines.

1. In the Virtual PC console, select **3369B-3373B-SEA-DC1**, and then click **Start**.  
If a dialog box appears notifying that the parent drive has been changed, select **Don't show this message again**, and then click **OK**.
2. Log on to the virtual machine as **Administrator**, with a password of **Pa\$\$w0rd**.

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**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 RIGHT-ALT+DELETE.

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3. In the **Windows Product Activation** alert box, click **Yes**.

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

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**Note** You might need to scroll down the window to see these buttons.

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6. On the **Change Product Key** page, enter the course-specific product key provided by Microsoft Learning, and then click **Update**.
7. On the **Activate Windows by phone** page, in the **Step 1** drop-down list, select your location.
8. Dial the telephone number that is displayed in **Step 2**.
9. Follow the telephone instructions to activate Windows. This will take a few minutes.
10. After logon is completed, in the **Virtual PC** window, from the **Action** menu, select **Close**.
11. In the **Close** window, select **Shut down Windows Server 2003 and save changes** or **Shut down Windows XP and save changes**, verify that **Commit changes to the virtual hard disk** is selected, and then click **OK**.
12. Repeat steps 1–11 for the following virtual machines:
  - **3369B-3373B-SEA-SRV1**
  - **3369B-3373B-SEA-CL1**

## 6. Set VHDs to read-only

### Task Summary

Set the read-only attribute on all of the base 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**.
4. Repeat steps 2–3 for the **Base05A.vhd** file.
5. Navigate to **C:\Program Files\Microsoft Learning\3xxx\Drives**.
6. Right-click the **3xxxB-SEA-DC1.vhd** file, and then click **Properties**.
7. Under **Attributes**, select the **Read-only** check box, and then click **OK**.
8. Repeat steps 6–7 for the following files:
  - **3xxxB-SEA-SRV1.vhd**
  - **3xxxB-SEA-CL1.vhd**

## 7. Create a setup share

**Task Summary**

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 Professional) or **Sharing and Security** (on Windows XP).
2. On the **Sharing** tab, select **Share this Folder**, type **Base\_Drives** in the **Share name** text box, and then click **OK**.
3. In Windows Explorer, right-click **C:\Program Files\Microsoft Learning\3369-3373\Drives**, and then click **Sharing** (on Windows 2000 Professional) or **Sharing and Security** (on Windows XP).
4. On the **Sharing** tab, select **Share this Folder**, type **3369\_Drives** in the **Share name** text box, and then click **OK**.
5. In Windows Explorer, right-click **C:\Program Files\Microsoft Learning\3xxx\Drives**, and then click **Sharing** (on Windows 2000 Professional) or **Sharing and Security** (on Windows XP).
6. On the **Sharing** tab, select **Share this Folder**, type **3xxxB\_Drives** in the **Share name** text box, and then click **OK**.

## 8. Install courseware fonts

**Task Summary**

Install courseware fonts by running Fonts.exe.

1. Click **Start**, and then click **Run**.
2. In the **Run** text box, type **X:\Setup\Fonts.exe** (where X is the drive letter of your DVD-ROM drive), and then click **OK**.
3. In the **Courseware fonts** dialog box, click **Yes**.
4. In the **Courseware fonts** message box, click **OK**.

## 9. Install the PowerPoint slides

**Task Summary**

Install PowerPoint slides by running **3369\_ppt.msi**.

1. Click **Start**, and then click **Run**.
2. In the **Run** text box, type **X:\Setup\3369\_ppt.msi** (where X is the drive letter of your DVD-ROM drive), and then click **OK**.

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## 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.

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**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 via a burned DVD or 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 DVD, you will need to activate them on each student computer.

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## 1. Install Virtual PC

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**Note** If Virtual PC 2004 is already installed, you may skip this step.

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- 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 C:\Program Files\Microsoft Learning\Base.
2. Copy the entire contents of the 3369\_Drives folder from the instructor computer share to C:\Program Files\Microsoft Learning\3369-3373\Drives.
3. Copy the entire contents of the 3xxxB\_Drives folder from the instructor computer share to C:\Program Files\Microsoft Learning\3xxx\Drives.

## 3. Create a desktop shortcut 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.