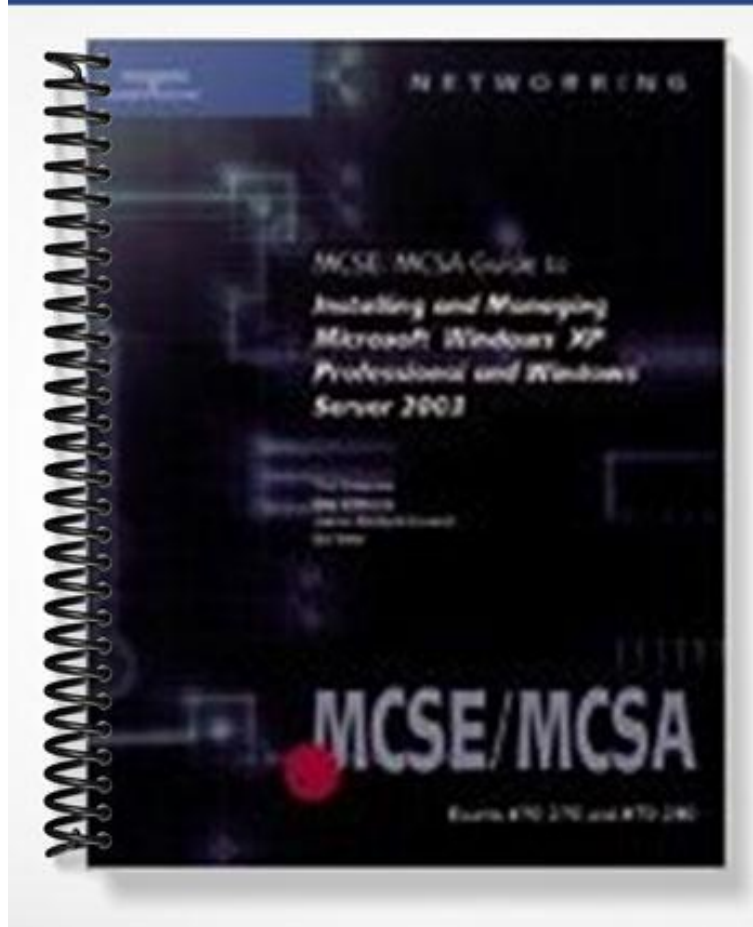


SOLUTIONS MANUAL



CHAPTER 2 SOLUTIONS

REVIEW QUESTIONS

1. Windows XP can be installed on a computer system in a multiboot configuration with what other OSs without requiring special third-party software? (Choose all that apply.)

a. DOS

b. OS/2

c. Linux

d. Windows 95

e. Windows 2000

2. Microsoft supports only problems caused by hardware not on the hardware compatibility list. True or False?

False

3. Which of the following OSs can be upgraded to Windows XP Professional? (Choose all that apply.)

a. Windows 3.x

b. Windows for Workgroups 3.x

c. Windows XP Home Edition

d. Windows 98

e. Windows NT 4.0 Workstation

f. Windows 2000 Server

g. Windows 2000 Professional

4. Which of the following is the correct location for the XP Professional installation files on the installation CD?

a. the root directory of the CD

b. \Support\I386

c. \Install\I86

d. none of the above

5. When sharing an installation folder across the network, you should assign it the _____ permission.

read-only

6. Windows XP can be installed with only the distribution CD if the computer's hardware is configured correctly. True or False?

True

7. How are Windows XP Professional setup boot disks created?

a. by running WINNT32 /OX

b. by running Makeboot.exe

c. by running WINNT32 /B

d. by downloading and running the WinXP_EN_PRO_BF utility

8. Windows XP must be installed on an NTFS partition. True or False?

False

9. Which of the following statements is true? (Choose all that apply.)

a. The entries in a uniqueness database file override those in an answer file when the two are used together.

b. An answer file is used to script text-mode setup, whereas a UDF scripts GUI setup.

c. If you have several installations to do that differ only in the user name, you can use an answer file to customize the settings in the UDF.

d. Answer files can be created by using the Setup Manager Wizard.

10. The maximum volume size for FAT32 partitions is 2 TB. True or False?

False

11. What file system can be used on an installation destination directory for Windows XP Professional if the partition is 4 GB? (Choose all that apply.)

- a. FAT
 - b. FAT32**
 - c. NTFS**
 - d. HPFS
12. Which of the following commands prevents regenerating SIDs after restarting during a Windows XP installation?
- a. SYSPREP -noreboot
 - b. SYSPREP -audit
 - c. SYSPREP -factory
 - d. SYSPREP -nosidgen**
13. To map a network drive from a DOS computer, which command do you use?
- a. Net Start
 - b. Net Logon
 - c. Net Use**
 - d. Net Connect
14. The _____ WINNT32 switch is used to prevent Dynamic Update from running.
- /dudisable**
15. At what point in the installation do you have the option of converting the file system to NTFS?
- a. after selecting the installation partition**
 - b. after agreeing to the end user license agreement
 - c. at the end of the GUI portion of installation
 - d. after Setup has been completed
16. The Unattend.txt file included as a sample on the Windows XP Professional CD can be used as is to perform an upgrade of Windows NT Workstation. True or False?

True

17. Unattended installation scripts can be created to perform which of the following functions? (Choose all that apply.)
- a. duplicating an existing system's configuration**
 - b. creating a read-only installation in which viewers can step through the installation but not make any configuration changes**
 - c. automating only the GUI portion of Setup**
 - d. providing custom defaults but allowing the installer to change settings**
 - e. duplicating the settings of a Windows NT Workstation system
18. No matter which OS you use to start a network installation of Windows XP, what is the one action you must perform?
- a. Install TCP/IP.
 - b. Map a network drive to the Windows XP share.**
 - c. Format a 4 GB partition with FAT32.
 - d. Use Sys C: to repair the MBR.
19. You're preparing for a network installation of Windows XP. Which of the following is not required to perform this task? (Choose all that apply.)
- a. Copy the \Support directory from the installation CD to the server supplying the installation files.**
 - b. Share the installation directory with read-only permissions.
 - c. Boot the destination client computer on the network.
 - d. Run WINNT32 /N on the network server.**
20. You want to change the menu description for Windows XP in the boot loader menu. What file do you edit to make the change?
- a. Dosnet.inf
 - b. Unattend.txt
 - c. Boot.ini**
 - d. Winnt.ini

CASE PROJECTS

Case Project 2-1

a and c. A Sysprep.inf file and the SYSPREP utility are useful for deploying Windows XP Professional quickly to multiple computers. SYSPREP can be used with a Sysprep.inf file, which contains the same information and uses the same structure and syntax as the Unattend.txt file created by the Setup Manager. When a customized Sysprep.inf file is provided to the target system, the installation process will not prompt for setup information. A uniqueness database file is used with a command-line automated setup with WINNT32. WINNT32 is the 32-bit Setup tool. Because only DOS is present on the systems to begin with, WINNT is used.

Case Project 2-2

The Setup Manager can be used to create several types of answer files:

- Duplicating the current system's configuration
- Fully automated (no user interaction)
- Read-only (user can view settings on each page but no changes can be made)
- GUI (text-mode portion is automated)
- Provide defaults (recommended settings are defined, but user can change during setup)
- Hide some configuration pages

The fully automated answer file would be useful when deploying numerous identical systems so that the least amount of administrator action on each client is required. The read-only answer file is useful when training users. A GUI automated answer file is useful when similar deployments are desired but the hardware varies on each client. The provide defaults answer file is useful when deploying a few similar clients that each require a slight variation of the installation settings. The hide configuration pages answer file is useful when you're getting help from other users and administrators to perform installations and you want to force some settings but allow the installer to manipulate all others. This answer file is especially useful when client computers vary in hardware.

Case Project 2-3

The updates that students perform will vary based on the Microsoft Web site. You can verify the updates by viewing the properties of My Computer to check for the service packs listed under the System heading of the General tab. At the time of this writing, Service Pack 2 should be installed.

Case Project 2-4

After performing this activity, students should have a Microsoft Virtual PC installed using the answer file created in Activity 2-3. Verify that the following answer file contents have been placed on the student's floppy disk in two files named Unattend.txt and Winnt.sif.

[Data]

AutoPartition=1

MsDosInitiated="0"

UnattendedInstall="Yes"

[Unattended]

UnattendMode=FullUnattended

OemSkipEula=Yes

OemPreinstall=No

TargetPath=\WINDOWS

[GuiUnattended]

AdminPassword="PasswordMK1"

EncryptedAdminPassword=NO

OEMSkipRegional=1

TimeZone=20

OemSkipWelcome=1

[UserData]

ProductKey=12345-12345-12345-12345-12345

FullName="Anyone"

OrgName="Dover Leasing"

ComputerName=DCXPMK1

[TapiLocation]

CountryCode=1

[Identification]

JoinWorkgroup=WORKGROUP

[Networking]

InstallDefaultComponents=Yes

Case Project 2-5

After performing this project, verify that the student's XP Professional system installed in Case Project 2-4 is removed. The student should have an unpartitioned hard drive or Virtual PC disk.

Chapter 2

Installing XP Professional

At a Glance

Instructor's Manual Table of Contents

- Overview
- Objectives
- Teaching Tips
- Quick Quizzes
- Class Discussion Topics
- Additional Projects
- Additional Resources

Lecture Notes

Overview

A key responsibility of network administrators is to install and maintain user client environments. The tasks of installing and maintaining clients include installing or upgrading the client operating system, configuring devices and device drivers, applying service patches, providing security, and maintaining application software. To pass the MCSA/MCSE exams, you need to be able to perform these tasks using the Windows XP Professional operating system. In this chapter, you learn how to perform and automate Windows XP installations and upgrades and apply postinstallation updates and product activation.

Chapter Objectives

- Evaluate upgrade options
- Plan an installation or upgrade
- Describe the available installation options
- Describe how to use advanced installation and setup options
- Work with the WINNT and WINNT32 command options
- Describe partitioning, volume licensing, and activating Windows XP
- Install Windows XP Professional

Lab Notes

The lab activities in this chapter focus on installing and activating Windows XP Professional as well as using remote installation tools such as `Setupmgr` and `Sysprep`. If you are using a dual-boot configuration, you will need a second hard partition or hard drive with at least 4 GB of free space for the students to perform a Windows XP Professional installation. In addition, each student will need a Windows XP Professional CD with a unique product code. If you are using Microsoft Virtual PC, the student lab computers will need to have 4 – 6 GB of free space to hold the XP Professional virtual disk files.

The following lab activities are required to prepare the student's Windows XP Professional system for work in later chapters:

- Activity 2-1
- Activity 2-6

Activity 2-6 requires access to the Internet to activate Windows XP Professional. Prior to performing this activity you must determine the IP address settings necessary for the student XP Professional system to access the Internet. If using Microsoft Virtual PC, the student computers should be set up to use the local network card as their virtual adapter. If student computers need to be kept isolated from the classroom network, you can use the Shared

Networking (NAT) option to allow the virtual machine to access the Internet through the local computer as described in appendix D.

If using Microsoft Virtual PC, the case projects in this chapter provide additional opportunities for students to perform an automated installation using the answer file they create in Activity 2-4. If wish to have students perform the additional case projects they will need to do the following activities:

- Activity 2-3
- Activity 2-4

Teaching Tips

Upgrading Versus Installing

1. Provide an overview of upgrading Windows XP Professional versus performing a clean installation. Mention the advantages and disadvantages of each approach. Stress that clean installations are easier to automate.

Upgrading

1. Discuss the situations where upgrading might be the best option. Using the list on page 34 of the text as a guide, list the OSs that can be upgraded to Windows XP Professional.

Teaching Tip	Because Microsoft no longer supports Windows 95, it's effectively off the Microsoft radar. An upgrade from Windows 95 won't retain as much information as an upgrade from Windows 98, but it's still possible.
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Teaching Tip	You can upgrade to Windows XP Home Edition only from Windows 98, Windows 98 SE, or Windows Me. An upgrade install can't be performed from any Server version of Windows.
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2. Mention that upgrading from Windows 2000 is straightforward. Discuss how an upgrade from Windows 2000 is performed.
3. Describe the issues that must be considered when upgrading from Windows 95, 98, 98SE, and ME. Stress that compressed backups created from these legacy versions of Windows with the native Windows Backup utility aren't compatible with the Windows XP Professional Backup utility.
4. If the classroom is equipped to do so, illustrate on the classroom computer the first few steps involved in upgrading any of the above listed OSs to Windows XP Professional.
5. Discuss the utilities available that can be used to retain system setting and user data during an upgrade.

6. Explain the importance of installing and/or upgrading drivers to make sure that they are Windows-XP compatible. Mention that the most common driver-related issues have to do with the video drivers on the system.
7. Using the list on page 35 of the text as a guide, describe the conditions that should be met prior to upgrading a system to Windows XP Professional.

Teaching Tip	Once Windows has been installed, the Windows Update utility is generally the best way to make sure that a system's drivers are up to date and compatible with the OS. Additionally, Microsoft maintains an online catalog of devices that are known to be compatible with Windows XP.
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Windows XP Upgrade Advisor

1. Explain that the Windows XP upgrade advisor is a utility that inspects your computer to determine whether the hardware and software are compatible with Windows XP. Mention that it can only be used on systems that already have a Windows OS installed.

Performing a Clean Installation

1. Explain that a clean installation does not preserve any files or settings. Mention that a clean installation can be performed on a system with a blank hard drive, over an existing OS, or in such a way as to create a multiboot system.
2. Using the list on page 36 of the text, explain the conditions under which you can perform a clean installation of Windows XP Professional.
3. Introduce and discuss the concepts of attended and unattended installations.

Volume Licensing

1. Provide a brief overview of licensing. Explain the type of license that is received when purchasing software "off the shelf".
2. Explain that volume licensing is preferable when Windows XP Professional must be installed on many systems. Discuss the number of licenses that can be obtained.

Performing Attended Installations

1. Discuss the types of attended installations that can be used. Mention the considerations that might force you to choose a network based installation over a CD installation, and vice-versa.
2. Using the list on page 37 of the text as a guide, discuss the information that is gathered by the Windows XP Professional installation program during installation.

Booting Multiple Operating Systems

1. Discuss the concept of dual-booting or multi-booting. Define the terms *format*, *partition*, and *volume*.
2. Stress that, when installing OSs for dual-booting or multi-booting, they should be installed in “chronological” order. Discuss the OSs that can be set up to dual- or multi-boot with Windows XP.
3. Discuss the purpose and function of a *boot loader*.
4. Explain the file system issues that must be considered when setting up a system to dual- or multi-boot.

Teaching Tip	The <i>Boot.ini</i> file is a text file that creates the Windows XP boot loader menu. This file, located on drive C: or the first hard drive partition on the disk, is flagged as hidden and read-only, so you must change the attributes before you can see or edit this file. To remove an OS from the boot loader or edit its entry in the boot loader menu, you have to edit the <i>Boot.ini</i> file manually. If you plan to make changes, creating a backup of the original is always a good idea in case you cause an error. Additionally, the Startup options in Control Panel can be used to modify these parameters in Windows NT, 2000, and 2003.
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Installing From the CD

1. Provide an overview of installing Windows XP from a CD. Mention the various ways that the installation may be initiated.

Starting the Installation from a Bootable CD

1. Explain that the Windows XP CD is self-booting. Mention that this is the most common installation method for individual installations.
2. Explain that, in order to use this installation method, the BIOS settings must allow for booting from a CD. Mention that, after the installation is complete, it is a good idea to disable booting from CD in the computer’s CMOS.

Starting the Installation from Setup Boot Disks

1. Provide an overview of the process of starting a Windows XP installation from a setup boot disk. Explain the situations when this would be the preferred method of installation.
2. Discuss how setup boot disks can be obtained.

Starting the Installation from an Existing OS

1. Explain how a Windows XP installation can be initiated from within an existing OS. If the classroom is equipped to do so, illustrate on the classroom computer.

Setup Option Differences

1. Provide a brief overview of setup option differences.

Text-mode Setup Method

1. Explain that the text-mode setup method is used when you initialize the setup from any method other than starting Setup from a preexisting Windows OS.

GUI Setup Method

1. Explain that the GUI setup method uses an initialization Setup Wizard to preselect or predefine several setup options. Mention that the first choice is to perform an upgrade or a clean installation.
2. Describe the setup process if an upgrade is selected. Explain that the text-only portion of the installation is performed without prompts.
3. Describe the setup process if a clean installation is selected. Mention the advanced options that can be selected, as describe in the list on page 39 of the text.

Teaching Tip	You should click the check box that allows you to select the destination partition manually during Setup. Otherwise, Setup automatically selects the first partition on the first drive in the system. This location isn't always the best choice if your first hard drive has insufficient space or if you're installing XP as the second OS in a multiboot system.
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4. Explain how Dynamic Update can be used to speed up the installation process. Mention that if it is not used, the updates can be applied via Windows Update after the installation is complete.
5. Using the list on page 40 of the text as a guide, discuss the requirements for performing Activity 2-1.

Activity 2-1: Attended Installation of Windows XP

This activity will walk students through performing an attended installation of Windows XP Professional that will be used for activities throughout the course. If you have time, you may wish to work through the installation with them using the steps listed on pages 40 through 43 of the text as a guide. If using a dual-boot configuration with a removable hard disk, explain how to insert their blank disk and boot their systems from the CD drive. If using Microsoft Virtual PC, review the process of creating a new virtual machine as described in Appendix D.

Be sure to have students use their student number as part of their Windows XP system name. For example, use WINXPxx, where xx represents the student's assigned number.

Teaching Tip	If the computer has new hardware, especially drive controllers (such as brand new SCSI or IDE controller technology), the Windows XP installation CD might not include drivers for this new hardware. During this phase of the text-mode setup, the status line at the bottom of the screen displays a prompt to press F6 if you need to install any OEM drivers.
Teaching Tip	Make sure the students understand that they must be careful when they are at the stage of the setup where they can delete partitions. At this stage of installation, if the partitions are changed, the changes are made immediately to the drive's configuration.
Teaching Tip	NTFS is the recommended file system for Windows XP and supports volumes (partitions) up to 2 TB. FAT can support partitions up to 4 GB. If a partition larger than 2 GB is used (even though its maximum volume size is 4 GB) and FAT is selected, Setup automatically formats the partition with FAT32. FAT32 has the same features as FAT but can support volumes up to 32 GB (that is, its maximum file size is still 4 GB).
Teaching Tip	Quick format only erases the directory structure. If the destination partition was preformatted, you can choose the quick option. However, if you're using a new hard drive, have just created a new partition, or are overwriting an existing partition, use the normal format. If you have the time, it is preferable to use normal format.
Teaching Tip	Joining a workgroup results in a slightly different end-of-installation process than when you're joining a domain.

Activating Windows XP

1. Provide an overview of the process of activating Windows XP. Stress that Microsoft products must be activated within a given time frame in order to keep the software functional.
2. Discuss the benefits and drawbacks of activation. Stress that significant hardware changes might invalidate an existing activation. Explain that activation ensures that the product is registered and valid.
3. Discuss the ways that activation can be completed. Mention that activation over the internet is the quickest method.
4. Explain that activation is mandatory, but registration is optional.

Upgrading to Multiple Processors

1. Provide an overview of the requirements for upgrading to multiple processors on a Windows XP Professional system. Stress that you must update the hardware abstraction layer (HAL) before installing a second CPU.
2. Mention that the instructions and documentation for updating the HAL can be found online for Windows 2000 systems, and that these instructions are valid for use on Windows XP as well.

Installing over the Network

1. Discuss the situations where it is appropriate to install Windows XP over a network. Explain that this method is more efficient when the installation must be run on many systems.
2. Discuss the process of initiating a Windows XP Professional installation over a network. Explain that there must be an existing OS (or a boot disk) with network connectivity and access privileges to the Windows XP Professional distribution files through a network share.
3. Explain that the network share containing the installation files should have read-only access. Mention that the installation is launched by running the WINNT or WINNT32 command. Discuss the ways that these two commands can be run.

Teaching Tip

From DOS (and OSs installed over DOS), drive letters are mapped by using the command-line syntax of net use *x*: \\servername\directory (*x* is the drive letter to which you want to map the shared network directory, *servername* is the name of the server where the files are stored, and *directory* is the name of the installation directory). In Windows 95, 98, and NT, drive letters are mapped with the Tools, Map Network Drive command in Windows Explorer.

Activity 2-2: Network Installation Setup

Explain that this activity is performed on the students' Windows Server 2003 system. If using Microsoft Virtual PC, students may leave their Windows XP Professional system running and start their Windows Server 2003 system. This activity requires quite a bit of time and disk space and it is not a prerequisite to performing the other activities and case projects in this chapter. If you do not choose to have the students perform this activity independently, illustrate this process on the classroom computer, using the steps listed on pages 45 through 47 of the text as a guide.

• Quick Quiz 1

1. The Windows XP _____ is a utility that inspects your computer to determine whether the hardware and software are compatible with Windows XP

Answer: Upgrade Advisor

2. A(n) _____ is a space set aside on a disk and assigned a drive letter that can occupy all or part of the disk.
Answer: partition or volume.
3. True or False: The Windows XP Professional CD is self-booting.
Answer: True
4. True or False: Activation is considered optional.
Answer: False

Automating an Installation

1. Provide an overview of the methods that might be used to automate an installation. Discuss the reasons why automated installations may be a preferable installation method.
2. Describe unattended installations. Explain how the *answer file* is used to enable the automation.
3. Describe remote installations. Explain that Microsoft Remote Installation Services (RIS) is used to control the installation process from configuration files on a Windows Server 2003 server.
4. Describe imaged installations. Explain that they may be useful when the destination system has specific and well-known hardware and software setup requirements.
5. Discuss the importance of planning when automating installations.

Unattended Installations

1. Explain how the answer file is used to automate an installation. Discuss how the *UDF* can be used to streamline the unattended installation.
2. Explain how an unattended installation can be initiated.

Teaching Tip	If you're planning to perform a clean installation on a computer that doesn't have an OS installed, and you want to install from a CD in unattended mode, the answer file must be available on a floppy disk and named <i>Winnt.sif</i> . This file has the same sections and entries as <i>Unattend.txt</i> .
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3. Illustrate the default contents of a *Unattend.txt* file.
4. Discuss the ways that the *Unattend.txt* can be edited.

5. Explain that the *Setup Manager Wizard* is available through the *Windows Support Tools Setup Wizard*, or it can be found in the *Deploy.cab* file in the `\Support\Tools` directory on the distribution CD.
6. Discuss the types of installation scripts that the *Setup Manager Wizard* can be used to create. Explain that it can be used to create and edit unattended installation files as well. Using the list on page 49 of the text as a guide, list the types of unattended installation files that can be created with the *Setup Manager Wizard*.

UDFs

1. Explain the reasons why UDFs are used during installation. Reiterate that they work in conjunction with the answer file, and explain that they override parameters in the answer file as needed.
2. Explain that you can create a UDF in a text editor such as DOS Edit or Windows Notepad. Illustrate the contents of a typical UDF file.

Activity 2-3: Installing Windows XP Support and Deployment Tools

Explain that this lab is to be performed on the students' Windows XP Professional system. It is necessary to perform this activity prior to Activity 2-4. If using a dual-boot configuration, the students will need to restart their computers using the Windows XP Professional system installed in Activity 2-1. If you do not choose to have the students perform this activity independently, illustrate this process on the classroom computer, using the steps listed on page 50 of the text as a guide. This activity will work the same when using either Microsoft Virtual PC or a dual-boot configuration.

Activity 2-4: Creating an Answer File and a UDF

This activity requires completing Activity 2-3. Students should use the assigned student number in place on the "1" in step 14. If you do not choose to have the students perform this activity independently, illustrate this process on the classroom computer, using the steps listed on pages 51 through 53 of the text as a guide. This activity will work the same when using either Microsoft Virtual PC or a dual-boot configuration.

Students must perform this activity prior to working on Case Project 2-4.

Remote Installation Services (RIS)

1. Explain that *Remote Installation Services (RIS)* is a Windows Server 2003 service that allows OSs to be automatically installed onto target systems (clients) over the network with nothing more in the target system than a NIC and possibly a boot disk. Discuss the types of OSs that can be installed using this service.
2. Discuss the types of clients that RIS can install to.

3. Explain that RIS takes advantage of DHCP to perform system installations without requiring the installer to be present, and that it requires that DHCP, DNS, and Active Directory be active on a domain. Using the steps listed on page 53 of the text as a guide, describe the basic steps involved in using RIS.
4. Explain that RIS can be used to install just the basic OS or to deploy systems that have all necessary applications installed and all critical settings configured. Stress that a key factor in a successful RIS deployment is installing applications correctly. Mention that a common mistake is to install applications so that only the local administrator has access, and describe how to avoid this mistake.
5. Mention that RIS installations can generate a large amount of network traffic.
6. Explain that when new target clients are in a different subnet than the RIS and DHCP servers, it's important to correctly configure the network's routers to forward DHCP requests from the clients to the DHCP server.

Using Remote Installation Preparation (RIPrep)

1. Explain how RIPrep is used to create RIS distributable images of a fully configured prototype computer.

Imaged Installations

1. Provide an overview of imaged installations. Explain that, although you could install XP on one workstation and then use an imaging program to copy that installation to other computers, each computer would have the same name, product ID, and internal security identifier. Stress that this would be a violation of the license agreement.

Using SYSPREP

1. Provide an overview of the *SYSprep* utility. Explain that each system must have closely matching, if not almost identical, core hardware configurations. Stress that SYSPREP cannot be used to upgrade a system; it can be used only to perform a full-image installation on an empty partition or to overwrite an existing OS.
2. Describe the three files used by SYSPREP, and indicate where they should be located.
3. Describe the process involved in using SYSPREP; refer to the steps listed on page 55 of the text as a guide.
4. Discuss the purpose of the *Sysprep.inf* file.
5. Explain that SYSPREP is also used with RIS to create images that RIS uses to deploy OSs to remote computers.
6. Using the list on pages 55 and 56 as a guide, discuss the command line options that may be used with the SYSPREP utility.

Activity 2-5: Using the SYSPREP Utility

1. Provide a description of this activity, as described in the book. If you do not choose to have the students perform this activity independently, illustrate this process on the classroom computer, using the steps listed on page 56 of the text as a guide.

Activity 2-6: Activating Windows XP Professional

1. Explain that Windows XP Professional needs to be activated within 14 days of installation. To perform this activity, the student's Windows XP Professional system needs to be able to access the Internet. Provide students with the IP Address configuration they will need to access the Internet from their XP Professional systems. You may wish to have students verify Internet access by using Internet Explorer. You can demonstrate this process by going through the steps listed on page 57 of the text as a guide.

Running WINNT and WINNT32

1. Provide a brief overview of the WINNT and WINNT32 commands.

WINNT

1. Provide an overview of the WINNT command. Explain that it is designed to be run from DOS and OSs that rely on DOS. Also mention that it is designed for standard and automated installations with few additional options.
2. Discuss the syntax used with the WINNT command. Using the list on pages 57 and 58 of the text as a guide, discuss the parameters that may be used with the WINNT command.

WINNT32

1. Provide an overview of the WINNT32 command. Explain that it is designed to be run from 32-bit operating systems, including Windows XP. Also mention that WINNT32 is designed for standard and automated installations and offers several options for source and destination locations as well as debug logging.
2. Discuss the syntax used with the WINNT32 command. Referring to the list on pages 58 and 59 of the text as a guide, discuss the parameters that may be used with the WINNT32 command.

Removing Windows XP Professional

1. Explain the Windows XP provides a rollback feature, but it is supported only when performing an upgrade from Windows 95/98/OSR2/SE/Me. Mention that this feature provides protection during installation.
2. Explain how the rollback feature can be accessed via the *Add or Remove Programs* applet. If the classroom is equipped to do so, illustrate on the classroom computer (obviously, don't actually perform a rollback).

3. Explain that, if you did not upgrade from Windows 9x, there is no simple uninstall or rollback capability available in Windows XP.
4. Explain that the easiest method of removing Windows XP is to destroy the installation and start fresh with another OS. Using the steps on page 60 of the text as a guide, discuss how this is accomplished.

Quick Quiz 2

1. In an unattended installation a(n) _____ is used to provide responses to all the setup prompts.
Answer: answer file
2. The _____ works with the answer file, allowing you to override some settings in the answer file to further streamline the unattended installation.
Answer: uniqueness database file (UDF)
3. True or False: RIS requires that DHCP, DNS, and Active Directory be active on a domain.
Answer: True
4. _____ is a utility for creating RIS distributable images of a fully configured prototype computer.
Answer: Remote Installation Preparation (RIPrep)
5. True or False: If you upgrade from Windows XP Home to Windows XP Professional, the rollback utility can be used to restore Windows XP Home.
Answer: False

Class Discussion Topics

1. Ask the students if they have ever installed or upgraded an operating system before. With which operating systems have they performed these tasks? What was their experience in doing so?
2. Which unattended installation method do the students feel is the most efficient, both in terms of time and effort, and in terms of difficulty? Which method do they think that they would be most likely to use in a business environment?

Additional Projects

1. Have the students research what log files are created and stored during a Windows XP Professional installation. Have them determine what information these log files contain, and how this information can be used to troubleshoot an installation.

2. Have the students research online to find two or three disk imaging utilities. Have them record descriptions, prices, and any other information that they can find on these utilities. When they are done, compile the student's results into a master list that can be distributed to the class.

Additional Resources

1. Windows Catalog:
<http://www.microsoft.com/windows/catalog/>
2. Dual booting and multibooting articles:
<http://windows.about.com/cs/dualboot/>
3. Windows XP Professional Upgrade Center:
<http://www.microsoft.com/windowsxp/pro/upgrading/default.mspx>
4. Windows XP Upgrade Advisor:
<http://www.microsoft.com/windowsxp/pro/upgrading/advisor.mspx>
5. Windows XP Professional Upgrading Versus Clean Installation:
http://www.microsoft.com/resources/documentation/Windows/XP/all/reskit/en-us/Default.asp?url=/resources/documentation/Windows/XP/all/reskit/en-us/prba_dwp_ogli.asp
6. Windows XP Professional Volume Licensing Discounts for Organizations:
<http://www.microsoft.com/windowsxp/pro/howtobuy/pricingvolume.mspx>
7. How to Edit the Boot.ini file in Windows XP:
<http://support.microsoft.com/default.aspx?scid=kb;EN-US;q289022>
8. Microsoft's Windows XP Professional Install step by step:
<http://www.windowsreinstall.com/winxppro/installxpcdoldhdd/indexfullpage.htm>
9. Windows XP Professional Utility: Setup Disks for Floppy Boot Install:
<http://www.microsoft.com/downloads/details.aspx?FamilyID=55820edb-5039-4955-bcb7-4fed408ea73f&displaylang=en>
10. Windows XP Product Activation:
<http://www.microsoft.com/windowsxp/evaluation/features/activation.mspx>
11. Automating Windows XP Installations Articles:
<http://labmice.techtarget.com/windowsxp/Install/unattend.htm>
12. Customizing Unattended Installations:
http://www.microsoft.com/resources/documentation/Windows/XP/all/reskit/en-us/Default.asp?url=/resources/documentation/windows/xp/all/reskit/en-us/prbc_cai_khud.asp
13. How to use the Sysprep tool to automate successful deployment of Windows XP:
<http://support.microsoft.com/default.aspx?scid=kb;en-us;302577&sd=tech>

Key Terms

- **Answer file:** A text file, also called a response file, containing a set of instructions for installing Windows XP.

- **Boot loader:** The software that shows all OSs currently available and, through a menu, allows users to choose which one should be booted.
- **Clean installation:** The installation method in which an OS is installed without regard for preexisting OSs. In other words, all settings and configurations are set to the OS defaults.
- **Dual-boot system:** A computer configured to use two OSs. *See also* multiboot system.
- **Format:** The process of rewriting the track and sector information on a disk; it removes all data previously on the disk.
- **Hardware abstraction layer (HAL):** One of the few components of the Windows XP architecture that's written in hardware-dependent code. It's designed to protect hardware resources.
- **Multiboot system:** A computer that hosts two or more OSs that can be started by selecting one from a boot menu or boot manager during each startup. *See also* dual-boot system.
- **Network adapter:** Another name for a network card, this piece of hardware enables communication between the computer and the network.
- **Partition:** A space set aside on a disk and assigned a drive letter. A partition can take up all or part of the space on a disk.
- **Product activation:** A new Microsoft requirement to prevent software piracy by registering an installation of Windows XP with the signature of its supporting hardware. With this mechanism, a product fails if it's not registered within a specified time period. To be activated, a product must be registered with a correlated product key and hardware signature.
- **Setup boot disks:** The disks Windows XP uses to initiate the installation process on computer systems that don't have an existing OS, don't have a CD-ROM that supports bootable CDs, or don't have network access to a Windows XP distribution file share. These disks can be created by downloading and running the WinXP_EN_PRO_BF utility.
- **Setup Manager Wizard:** The Windows XP tool that provides a GUI for creating an answer file.
- **SYSPREP:** The Windows XP utility used to clone a system.
- **Unattended installation:** A Windows XP installation that uses a script and does not require user interaction.
- **Uniqueness database file (UDF):** A text file that contains a partial set of instructions for installing Windows XP; used to supplement an answer file when only minor changes are needed that don't require a new answer file.
- **Upgrade:** The installation method in which data and configuration settings from previous OSs remain intact. The level or amount of retained data varies based on the existing OS type.
- **WINNT:** The 16-bit Windows XP installation program.
- **WINNT32:** The 32-bit Windows XP installation program.

Chapter 2

Lab Activity Answer Sheet

Name: _____

Activity 2-1: Attended Installation of Windows XP

In the space below, record the following installation information:

Disk partition size:

Disk partition format:

Computer name:

NIC:

Activity 2-2: Network Installation Setup

In the space below, record the size of your Windows XP I286 folder:

Activity 2-3: Installing Windows XP Support and Deployment Tools

In the space below, record at least 5 Windows XP deployment tools:

Activity 2-4: Creating and Answer File and UDF

In the space below, record the contents of your unattend.bat file.:

Activity 2-5: Using the SYSPREP Utility

In the space below, record the information you are required to enter when re-starting your system in step 7:

Activity 2-6: Activating Windows XP Professional

In the space below, record the steps you performed to activate your Windows XP Professional system: