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Study Guide

Installing, Configuring and Administering
Microsoft Windows XP Professional

Demo Version 2.0

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LIST OF ACRONYMS

ACL	Access Control List
ACPI	Advanced Configuration And Power Interface
AD	Active Directory
APM	Advanced Power Management
APIPA	Automatic Private Internet Protocol Addressing
CA	Certificate Authority
CAL	Client Access License
DHCP	Dynamic Host Control Protocol
DNS	Domain Name System
EAP	Extensible Authentication Protocol
EFS	Encrypting File System
FEK	File Encryption Key
GPO	Group Policy Object
GPT	Group Police Template
HCL	Hardware Compatibility List
IAS	Internet Authentication Services
ICF	Internet Connection Firewall
ICS	Internet Connection Sharing
IPSec	Internet Protocol Security
L2TP	Layer Two Tunnelling Protocol
LDAP	Lightweight Directory Access Protocol
LPD	Line Printer Daemon
MMC	Microsoft Management Console
NAT	Network Address Translation
NFS	Network File System
NTFS	NT File System
ODBC	Open Database Connectivity
OSI	Open Systems Interconnection (Model)
OU	Organizational Unit
PCMCIA	Personal Computer Memory Card Interface Adapter
PnP	Plug and Play
PPP	Point To Point Protocol

PPTP	Point To Point Tunnelling Protocol
PXE	Preboot Execution Environment
RAS	Remote Access Service
RIPrep	Remote Installation Preparation
RIS	Remote Installation Services
RRAS	Routing And Remote Access Service
SAM	Security Accounts Manager
SMP	Symmetric Multiprocessing
SMS	Systems Management Server
Sysprep	System Preparation
TFTP	Trivial File Transfer Protocol
UDF	Unique Database File
UNC	Universal Naming Convention
VPN	Virtual Private Network
WDM	Windows32 Driver Model

Installing, Configuring, and Administering Microsoft Windows XP Professional

Exam Code: 070-270

Certifications:

Microsoft Certified Professional (MCP)	
Microsoft Certified Systems Administrator (MCSA)	Core
Microsoft Certified Systems Engineer (MCSE)	Core

Prerequisites:

A+ certification or equivalent knowledge

Net+ certification or equivalent knowledge

About This Study Guide

This Study Guide provides all the information required to pass the Microsoft 70-270 exam – Installing, Configuring, and Administering Microsoft Windows XP Professional. It however, does not represent a complete reference work but is organized around the specific skills that are tested in the exam. Thus, the information contained Study Guide is specific to the 70-270 exam and not to Windows XP Professional. It includes the information required to answer questions related to Windows 2000 Professional, Windows 2000 Server, Windows NT 4.0, and UNIX that may be asked during the exam. Topics covered in this Study Guide includes installing Windows XP Professional; implementing and conducting administration of resources; implementing, managing, and troubleshooting hardware devices and drivers; monitoring and optimizing system performance and reliability; configuring and troubleshooting the desktop environment; implementing, managing, and troubleshooting network protocols and services; and implementing, monitoring, and troubleshooting security.

Intended Audience

This Study Guide is targeted specifically at people who wish to take the Microsoft MCSE exam 70-270, Installing, Configuring, and Administering Microsoft Windows XP Professional. This information in this Study Guide is specific to the exam and is not a complete reference work.

How To Use This Study Guide

To benefit from this Study Guide we recommend that you:

- Study each chapter carefully until you fully understand the information. This will require regular and disciplined work

Note: Remember to pay special attention to these note boxes as they contain important additional information that is specific to the exam.

- Perform all labs that are included in this Study Guide to gain practical experience, referring back to the text so that you understand the information better. Remember, it is easier to understand how tasks are performed by practicing those tasks rather than trying to memorize each step.
- Be sure that you have studied and understand the entire Study Guide before you take the exam.

Good luck!

1. Installing and Deploying Windows XP Professional

You can install Windows XP Professional directly from the CD-Rom or from a network share. The Windows XP Professional installation process consists of four stages:

Stage 1: Hard Drive Preparation. In text mode Setup checks the hard drive for consistency and errors. It allows you to format and create the Windows XP Professional partition if you need to and copies setup files to the hard drive. Setup then reboots the computer.

Stage 2: Setup Wizard. The graphical user interface Setup Wizard gathers information from you; such as regional settings, your name and organization, the Windows XP Professional CD-key, and computer name. Creates the local Administrator user account and requests a password for it.

Stage 3: Installing Network Components. After the Setup Wizard has gathered the necessary information from you in Stage 2, it begins the network components installation. It detects your network adapter card; allows you to choose which network components, such as the network client, file and printer sharing and protocols, to install; allows you to join a workgroup or domain; and installs the components you have chosen.

Stage 4: Completing the installation. The Setup Wizard completes the installation by installing the start-menu items and applying and saving the configuration settings you chose in the previous stages. It then deletes the temporary setup files and reboots the computer.

Typical Network Settings

When you install Microsoft Windows XP Professional, you can either install the 'Typical Network Settings' or 'Customized Network Settings'. The Typical Network Settings installs:

- Client for Microsoft Networks
- File and Printer Sharing
- TCP/IP
- DHCP

1.1 System Requirements

Before installing Windows XP Professional, you must ensure that the computer meets the minimum system requirements as indicated in Table 1.1.

TABLE 1.1: Windows XP Professional System Requirements

Hardware	Minimum requirement
Processor	Intel Pentium 2 233 MHz (300 MHz recommended)
Memory	64 MB Ram (128 MB Ram recommended)
Hard disk space	2 GB with an additional 1.5 GB free space (2 GB free space recommended)
Networking	Network adapter card
Display	Video display adapter card and VGA monitor
I/O devices	Keyboard and mouse or other pointing device

Note: Windows XP Professional offers support for a maximum of 2 processors and a maximum of 4 GB Ram

1.2 Installing Windows XP Professional from the CD-Rom

When installing Windows XP Professional from the CD-Rom you can either boot directly from the CD-Rom or, if your computer system does not support booting from the CD-Rom, you can create boot disks.

1.2.1 Booting from the CD-Rom.

In your system BIOS set the CD-Rom drive as the **First Bootable Device**. This is usually set in the **BIOS Feature Setup**. While you are in the BIOS Setup you should also check that **Boot Sector Virus Protection** is disabled. The Boot Sector Virus protection prevents any attempt is made to write to the hard drive's boot sector or partition table. When BIOS detects an attempt to write to the boot sector it stops the computer and display an error message. The Windows XP Professional Setup program must write to the boot sector, therefore the **Boot Sector Virus Protection** must be disabled.

Once you have configured the BIOS, place the Windows XP Professional Installation disk in the CD-Rom drive and reboot the computer. During the boot process you will be prompted to **press any key to boot from CD-Rom**. Once you have pressed a key the Installation of Windows XP Professional will begin.

1.2.2. Booting from boot disks.

If your computer system does not support booting from the CD-Rom, you will have to create boot disks on a computer that has an operating system installed on it already. Unlike the Windows 2000 Installation CD, the Windows XP Professional Installation CD does not contain a *makeboot.exe* utility. The Windows XP Professional *makeboot* utility must be downloaded from the Microsoft website at <http://www.microsoft.com/downloads/release.asp?releaseid=33291>. This file can be used to create the Windows XP Professional boot disks and requires 6 high density floppy disks. These disks can then be used to boot the computer and will load the necessary drivers required to access the CD-Rom drive.

Note: Boot disks operate in a **16-bit DOS mode** environment. You therefore cannot use *winnt32.exe* to install Windows XP Professional as *winnt32.exe* is **32-bit** application. You must use *winnt.exe*, which is the 16-bit equivalent of *winnt32.exe*, instead.

1.3 Installing Windows XP Professional over the network.

To install Windows XP Professional over the network you must copy the **i386** folder from the Windows XP Professional Installation CD to a shared folder on the network. You must prepare the client computer by creating a 1.5 GB FAT32 partition (2 GB recommended) that Windows XP Professional will copy the installation files to.

Note: This partition must be formatted with the FAT32 file system and not the NTFS file system as network boot disks, which operate in a MS-DOS mode environment, cannot access a NTFS formatted partition.

You must also ensure that the computer has a can connect to the network share when it has booted. To be able to boot to the network share the computer must have a **PXE compliant** network adapter. If the computer cannot be booted over the network you will have to create a network boot disk for the computer. A boot disk can be created by using the *rbfg.exe* utility. If you must use a boot disk to boot the computer, you will have to run *winnt.exe* to install Windows XP Professional. Boot disks operate in a **16-bit DOS mode**

environment. You therefore cannot use *winnt32.exe* to install Windows XP Professional as *winnt32.exe* is **32-bit** application.

1.4 Performing an unattended installation.

Microsoft allows for the automated installation of Windows XP Professional through unattended installations. There are three mechanisms through which an unattended installation can be performed. These are through:

- unattended answer files;
- disk imaging using the System Preparation Tool; and
- remote Installation Services

1.4.1 Using an unattended answer file.

The first mechanism you can use to perform an unattended installation of Windows XP Professional is to use an **answer file** (See Figure 1.1). An answer file is an automated script that supply's the Windows XP Professional Setup program with all the information it would require during the installation.

You can use **Setup Manager** to create and modify an answer file. Setup Manager is located in the *deploy.cab* file in the *support/tools* folder on the Windows XP Professional Installation CD and can be extracted to your computer by double-clicking on the *deploy.cab* file. This will display the files contained in the *deploy.cab* file. Right-click on the files and select **Extract** on the menu that pops up.

You can use Setup Manager to create an answer file for an unattended installation, a sysprep install, and for a Remote Installation Services. You can also choose the level of automation. This can be:

- **Provide Defaults:** The answer file provides defaults that the user can see and allows the user to accept or change these settings during the installation.
- **Fully Automated:** No input is required from the user and the user cannot alter any of the settings.
- **Hide Pages:** All pages that the answer file provides answers for are hidden from the user.

Note: Full product has 239 pages.

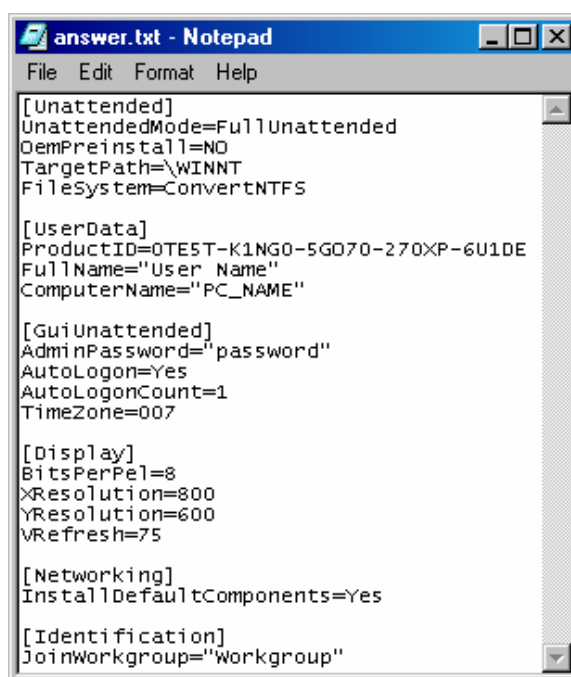


Figure 1.1: An example of an answer file.