

Objectives

- ◆ In this session, you will learn to:
 - ◆ Install Microsoft Windows.
 - ◆ Upgrade Windows from a given version to a later version.
 - ◆ Add devices to an installation of Microsoft Windows.
 - ◆ Optimize an installation of Microsoft Windows.

Install Microsoft Windows

- ◆ Before installing Microsoft Windows, you need to understand the following:
 - ◆ Windows system requirements
 - ◆ Hardware compatibility
 - ◆ Installation methods
 - ◆ Installation options
 - ◆ Windows update
 - ◆ Microsoft product activation

Windows System Requirements



Windows 2000 Professional

Requirements

- Pentium 133 MHz or greater
- 32 MB RAM required (64 MB recommended)
- Hard disk: 2 GB with 1 GB free space
- VGA video adapter
- Keyboard, mouse



Windows XP Professional

- 233 MHz minimum (300 MHz recommended), various processors
- 64 MB RAM required (128 MB recommended)
- Hard disk: 1.5 GB free space
- Super VGA video adapter
- Keyboard, mouse



Windows XP Home

- 233 MHz minimum (300 MHz recommended), various processors
- 64 MB RAM required (128 MB recommended)
- Hard disk: 1.5 GB free space
- Super VGA video adapter
- Keyboard, mouse



Windows XP Media Center

Media Center PC

Hardware Compatibility

- ◆ Options for checking hardware compatibility are:
 - ◆ Check all hardware manual
 - ◆ Perform Microsoft tests for different versions
 - ◆ Windows Marketplace Tested Products List
 - ◆ Microsoft Windows Setup Advisor

Installation Methods

- ◆ Installation methods for Windows are:
 - ◆ Local source
 - ◆ Network source
 - ◆ Unattended
 - ◆ System imaging

Installation Options

- ◆ Installation options for Windows are:
 - ◆ Disk and file system
 - ◆ Regional, date and time settings
 - ◆ Computer name
 - ◆ Network settings
 - ◆ Workgroup or domain membership
 - ◆ Internet connection
 - ◆ Local accounts

Windows Update

Microsoft.com Home | Site Map

Search Microsoft.com for: Go

Windows Update

Windows Family | Windows Marketplace | Office Family | Microsoft Update

Windows Update Home

[Install Updates \(0\)](#)

Select by Type

- [High Priority \(0\)](#)
- [Software, Optional \(7\)](#)
- [Hardware, Optional \(2\)](#)

Options

- [Review your update history](#)
- [Restore hidden updates](#)
- [Change settings](#)
- [FAQ](#)
- [Get help and support](#)

Customize your results

Select High-Priority Updates

To help protect your computer against security threats and performance problems, we strongly recommend you install all high-priority updates.

[Review and install updates](#) Total: 0 updates , 0 KB , 0 minutes

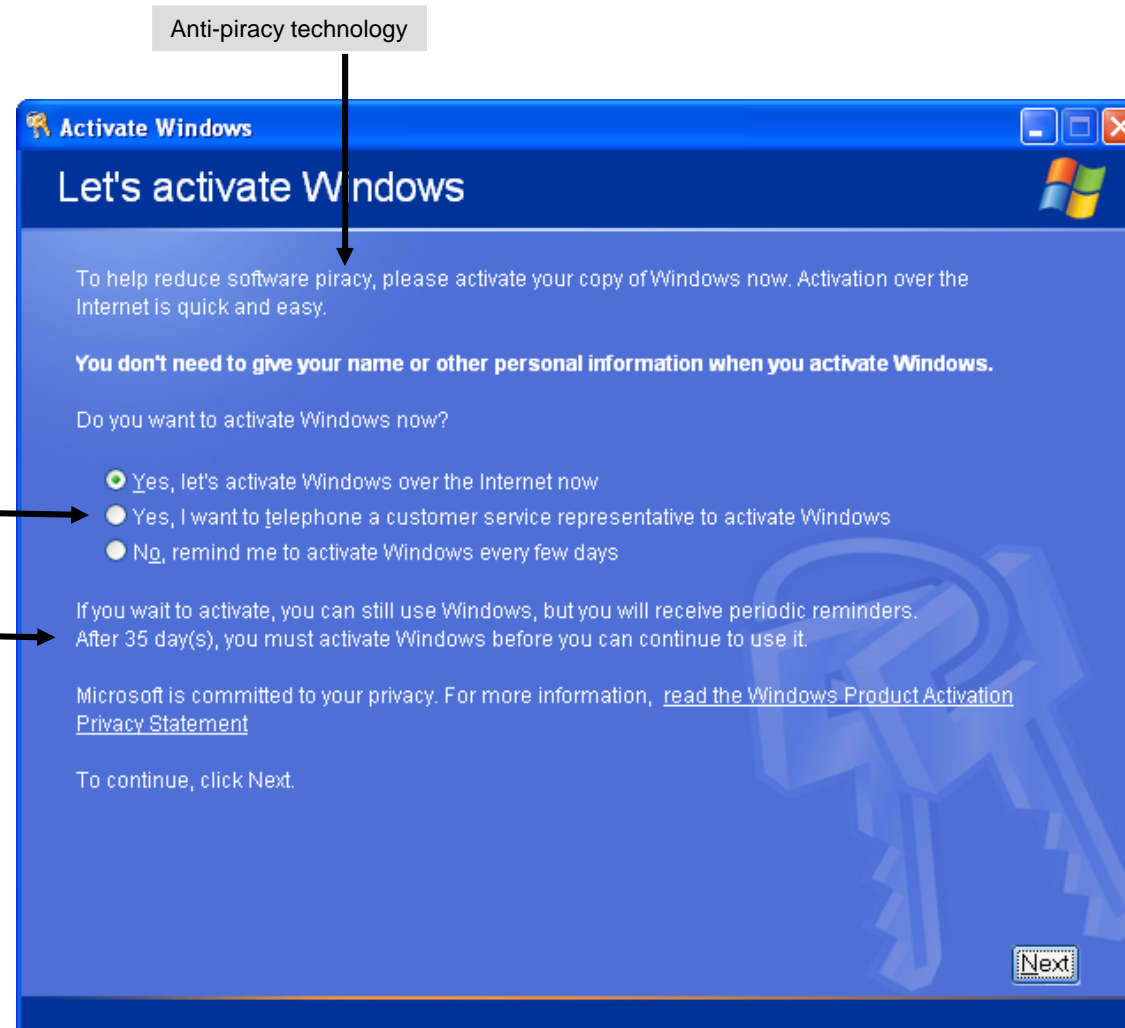
High-priority updates
No high-priority updates for your computer are available. To select other updates, use the options to the left.

Obtain latest updates

3 categories of updates

Obtain latest updates

Microsoft Product Activation



Activity 8-1

Activity on Installing Windows XP Home

Upgrade Windows

- ◆ Before updating Windows, you need to understand the following:
 - ◆ Supported upgrade paths
 - ◆ Hardware upgrade compatibility
 - ◆ Software upgrade compatibility

Supported Upgrade Paths

- ◆ Following is the supported upgrade path for Windows:

Current Operating System	Can Be Upgraded To
Windows 95	Windows 98, Windows 2000 Professional
Windows 98 / 98 SE / Me	Windows 2000 Professional, Windows XP Professional
Windows NT Workstation 4.0	Windows 2000 Professional, Windows XP Professional
Windows 2000 Professional	Windows XP Professional, Windows Vista
Windows XP Home Edition	Windows XP Professional
Windows XP Professional	Windows Vista

Hardware Upgrade Compatibility

- ◆ To find hardware upgrade compatibility you need to:
 - ◆ Check against tested products list
 - ◆ Run Windows setup advisor
 - ◆ Setup will run compatibility check

Software Upgrade Compatibility

- ◆ To find software upgrade compatibility you need to:
 - ◆ Check against tested products list
 - ◆ Run Windows setup advisor
 - ◆ Setup will run compatibility check
 - ◆ Legacy applications might need compatibility fixes
 - ◆ Select compatibility mode after upgrade

Add Devices to Windows

- ◆ Before adding devices to Windows, you need to understand the following:
 - ◆ Driver signing
 - ◆ Unsigned driver installation options
 - ◆ Installation permissions

Driver Signing

- ◆ A signed device driver is:
 - ◆ A driver that has been tested and verified for a particular operating system.
 - ◆ A driver includes piece of encrypted data, called a digital signature.
 - ◆ A driver which cannot be altered.
 - ◆ A driver does not overwrite files.

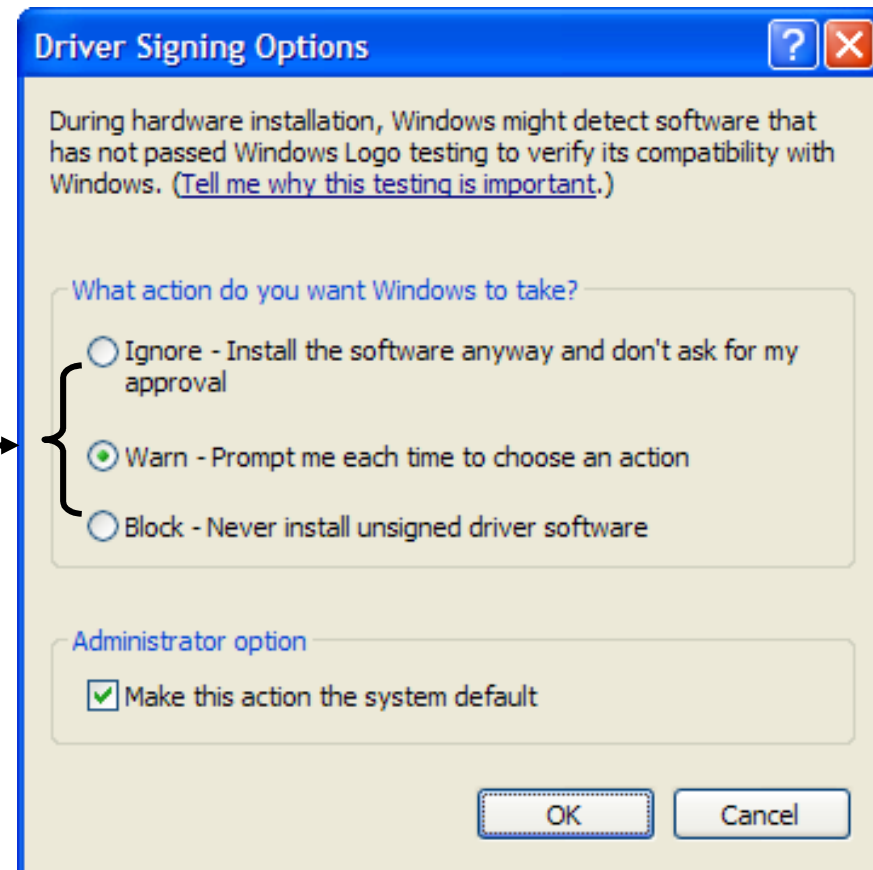


Unsigned Driver Installation Options

◆ There are three driver-signing options:

- ◆ Ignore
- ◆ Warn
- ◆ Block

Driver-signing
options



Installation Permissions

◆ Installation permissions are:

- ◆ Administrators can install permanent devices



permanent
devices

- ◆ Users can install Plug and Play devices only



Plug and Play
devices

Activity 8-6

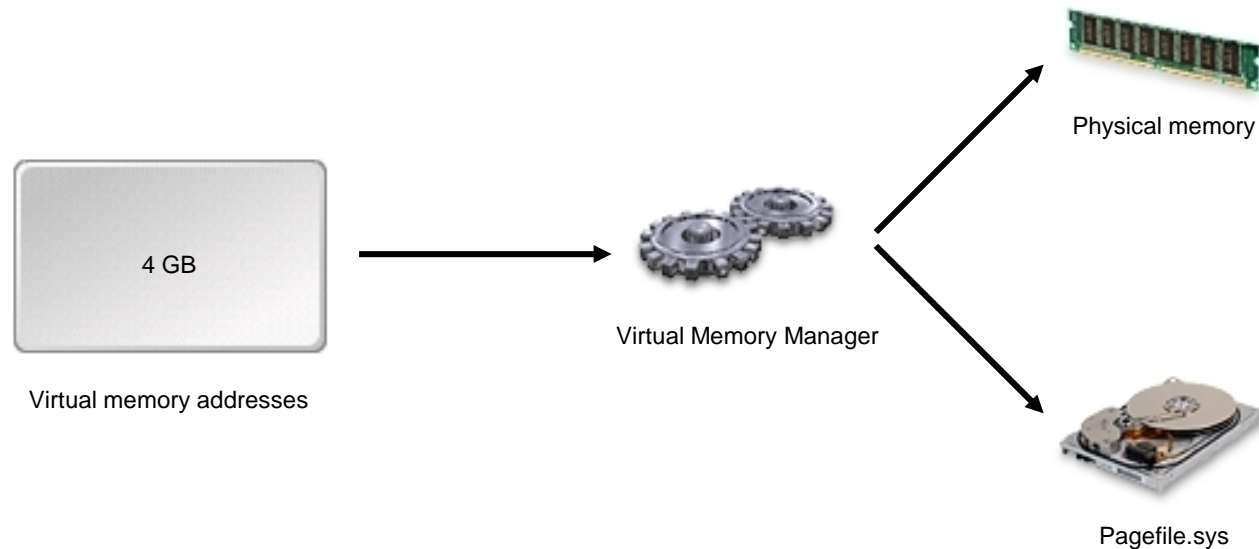
Activity on Configuring Driver Signing Verification

Optimize Windows

- ◆ Before optimizing Windows, you need to understand the following:
 - ◆ Virtual memory
 - ◆ The virtual memory process
 - ◆ Windows services
 - ◆ The windows XP boot process
 - ◆ Temporary files
 - ◆ Windows optimization software tools

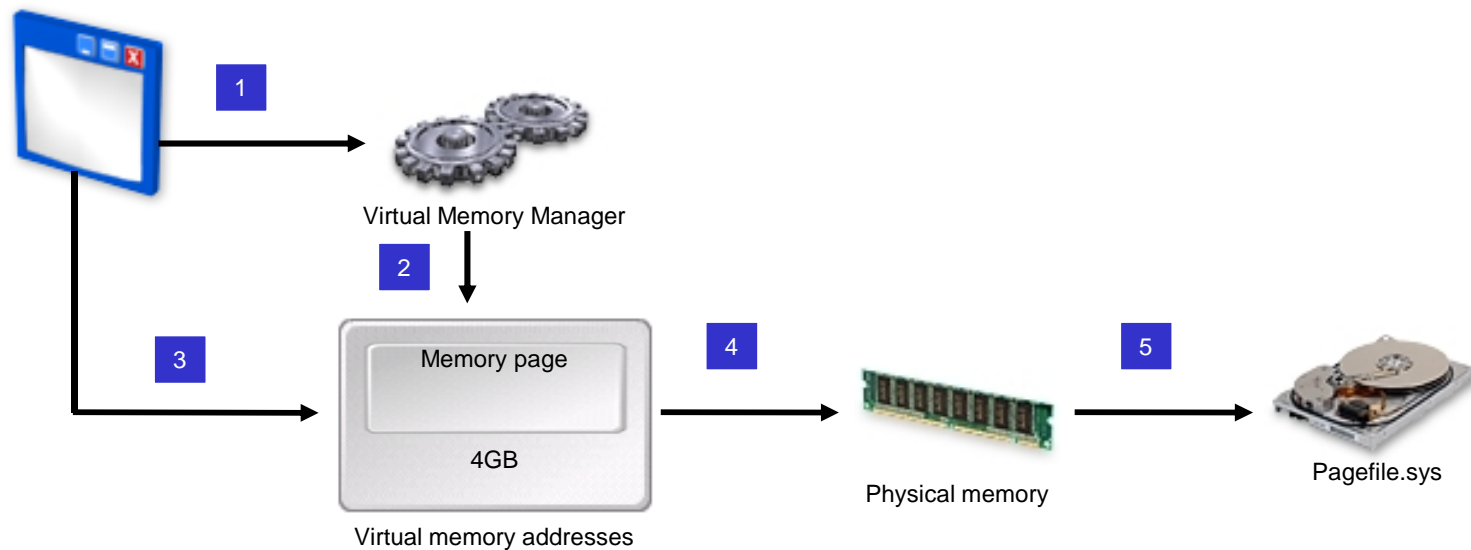
Virtual Memory

- ◆ **Virtual memory** is the ability of the computer system to use a portion of the hard disk as if it were physical RAM.



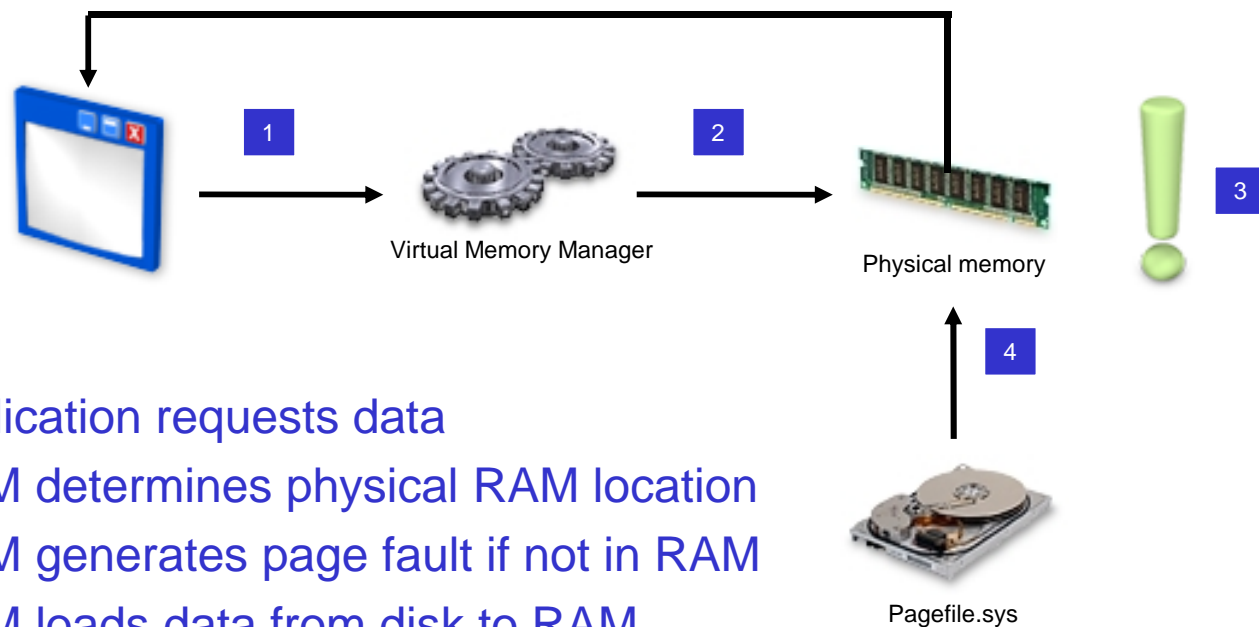
The Virtual Memory Process

- ◆ Following are the steps to store data in virtual memory:
 1. Application requests memory
 2. VMM assigns memory page
 3. Application stores data
 4. VMM maps to physical RAM
 5. VMM moves data to pagefile when RAM full



The Virtual Memory Process (Contd..)

- ◆ Following are the steps for retrieving data from virtual memory:



1. Application requests data
2. VMM determines physical RAM location
3. VMM generates page fault if not in RAM
4. VMM loads data from disk to RAM
5. Application retrieves data

Windows Services

- ◆ A **Windows service** is a background process that performs a specific operation.
- ◆ Startup type of Windows services can be:
 - ◆ Automatic
 - ◆ Manual
 - ◆ Disable

Windows Services (Contd..)

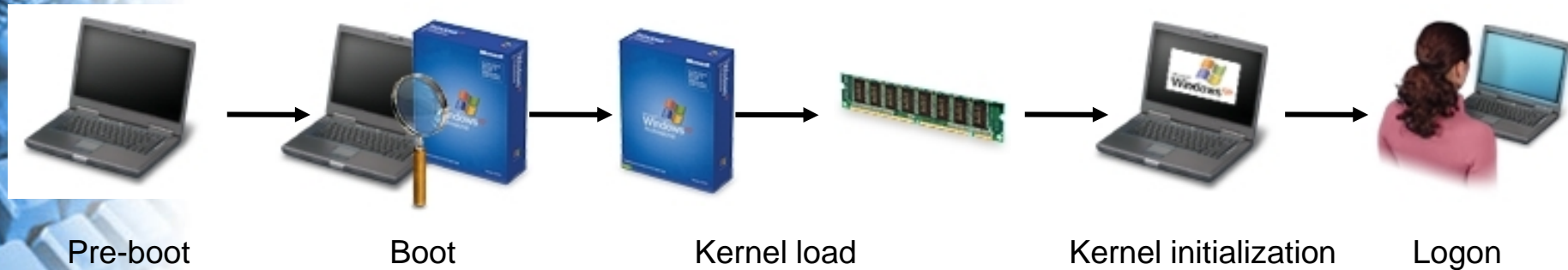
Windows services startup Type

Windows services

Name	Status	Startup Type	Log On As
.NET Runtime Optimization Service v2...		Manual	Local System
Alerter		Disabled	Local Service
Application Layer Gateway Service		Manual	Local Service
Application Management		Manual	Local System
ASP.NET State Service		Manual	Network Service
Ati HotKey Poller	Started	Automatic	Local System
Automatic Updates	Started	Automatic	Local System
Background Intelligent Transfer Service		Manual	Local System
ClipBook		Disabled	Local System
COM+ Event System	Started	Manual	Local System
COM+ System Application		Manual	Local System
Computer Browser		Disabled	Local System
Cryptographic Services	Started	Automatic	Local System
DCOM Server Process Launcher	Started	Automatic	Local System
DHCP Client	Started	Automatic	Local System
Distributed Link Tracking Client	Started	Automatic	Local System
Distributed Transaction Coordinator		Manual	Network Service
DNS Client	Started	Automatic	Network Service

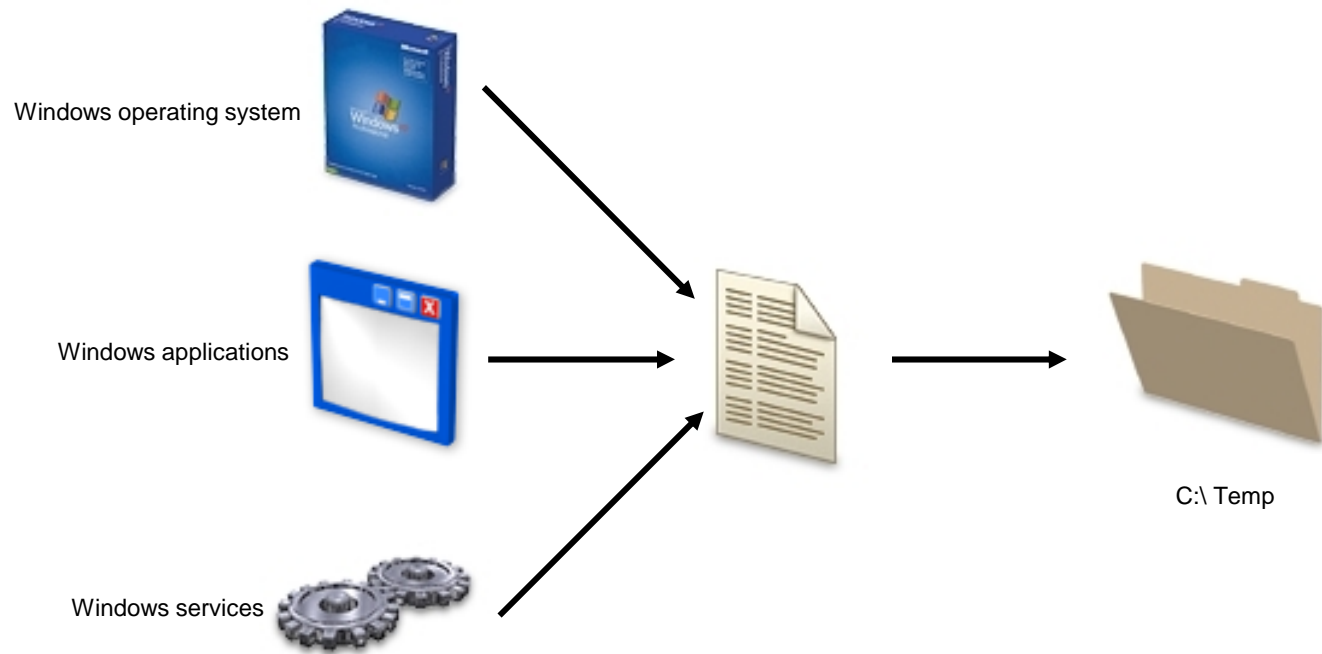
The Windows XP Boot Process

- ◆ The sequences occur during the Windows XP Professional boot process are:
 - ◆ Pre-boot sequence
 - ◆ Boot sequence
 - ◆ Kernel load sequence
 - ◆ Kernel initiation sequence
 - ◆ Logon sequence



Temporary Files

- ◆ Temporary files:
 - ◆ Contains temporary information required by Windows operating system, applications, and services.
 - ◆ Often have an extension of *.tmp or *.temp.
 - ◆ May store in a folder called \Windows\Temp or \Tmp.



Activity 8-8

Activity on Viewing Windows Temporary Files

Windows Optimization Software Tools

- ◆ Software tools to optimize Windows performance are:
 - ◆ Virtual memory
 - ◆ Hard drives
 - ◆ Temporary files
 - ◆ Windows services
 - ◆ Startup
 - ◆ Applications

Activity 8-10

Activity on Disabling the Remote Registry Service

Summary

- ◆ In this session, you learned that:
 - ◆ Before installing Microsoft Windows you need to find what are the Windows system requirements.
 - ◆ There are various Windows installation methods, such as Local and Network source.
 - ◆ Installation options includes disk and file system, regional, date and time settings, computer name and network settings.
 - ◆ Windows provide update options, such as supported upgrade path, hardware and software compatibility.
 - ◆ Virtual memory stores and allows retrieve data from memory.
 - ◆ Pre-boot, boot, Logon, kernel load and initiation sequence occur during Windows booting process.