

Module 2

Windows Installation and Requirements

Objectives

1. 1.1 Compare and contract the requirements of various Microsoft Operating Systems
2. 1.2 Install and configure the operating system

WINDOWS OS REQUIREMENTS

Windows XP Versions

1. Windows XP Home Edition
2. Windows XP Professional Edition
3. Windows XP Media Center Edition
4. Windows XP Tablet PC Edition
5. Windows XP Professional x64 Edition

Windows XP

	Minimum	Recommended
Processor speed	Pentium 233 MHz	300 MHz
Processors supported	32-bit up to 32 processors 64-bit up to 256 processors	
Memory	64 MB	128 MB – 32-bit 256 MB – Best
Graphics card	Super VGA (800 x 600)	DirectX 10 capable and WDDM 1.0 driver support
HDD capacity	1.5 GB – 32-bit 6 GB – 64-bit	
Other	CD-ROM, Keyboard, Mouse	

Windows Vista

1. Windows Vista Home Basic
2. Windows Vista Home Premium
3. Windows Vista Business
4. Windows Vista Ultimate
5. Windows Vista Enterprise

Windows Vista

	Minimum	Recommended
Processor speed	1 GHz	2 GHz Dual Core
Memory	1 GB	2 GB – 32-bit 4 GB – 64-bit
Graphics card	DirectX 9.0 capable Aero-capable graphics	DirectX 10 capable and WDDM 1.0 driver support
Graphics memory	128 MB	128 MB
HDD capacity	40 GB – 15 GB of free space	
Other	DVD-ROM, Keyboard, Mouse, Internet Capable	

Windows 7 Versions

1. **Windows 7 Starter** – Used on netbook computers to make networking easy
2. **Windows 7 Home Premium** – Used on home computers to easily share media
3. **Windows 7 Professional** – Used on work computers to secure critical information, routine tasks easier to complete, can participate in domains, and supports XP mode
4. **Windows 7 Ultimate** – Used on computers to combine the ease of use of Windows 7 Home Premium with the business capabilities of Windows 7 Professional and provides added data security
5. **Windows 7 Enterprise** – Takes advantage of all the features that are available in Windows 7 Professional, plus DirectAccess, BranchCache, Federated Search, BitLocker, BitLocker-to-Go, AppLocker, and Virtual Desktop Infrastructure

Windows 7 Requirements

	Minimum	Recommended
Processor speed	1 GHz	1 GHz
Processors supported	32-bit up to 32 processors 64-bit up to 256 processors	
Memory	512 MB	1 GB – 32-bit 2 GB – 64-bit
Graphics card	DirectX 9.0 capable	DirectX 10 capable and WDDM 1.0 driver support
Graphics memory	32 MB	128 MB
HDD capacity	16 GB – 32-bit 20 GB – 64-bit	
Other	DVD-ROM, Keyboard, Mouse, Internet Capable	

Windows 7 RAM Limits

1. Maximum limit for 32-bit editions is 4GB
2. For 64-bit editions, the amount of memory that the OS can address depends on which edition you are running:
 - A. Starter: 8GB
 - B. Home Basic: 8GB
 - C. Home Premium: 16GB
 - D. Professional: 192GB
 - E. Enterprise: 192GB
 - F. Ultimate: 192GB

Windows 8 Versions

1. **Windows 8** – Contains features aimed at the home market segment and provides all of the basic new Windows 8 features including the Start screen, live tiles, Windows Store, Internet Explorer 10, Microsoft account integration, and more
2. **Windows 8 Pro** – Targeted towards enthusiasts and business users and includes all the features of Windows 8 plus the ability to receive Remote Desktop connections, the ability to participate in a Windows Server domain, Encrypting File System, Group Policy, and BitLocker
3. **Windows 8 Enterprise** – Provides all the features in Windows 8 Pro with additional features for IT organizations like remote desktop
4. **Windows RT** – Only be available pre-installed on ARM-based devices such as tablet PCs and only runs third-party software bought from Windows Store

Windows 8 Requirements

	Minimum	Recommended
Processor speed	1 GHz with support for PAE, NX, and SSE2	1 GHz
Processors supported	32-bit up to 32 processors 64-bit up to 256 processors	
Memory	1 GB – 32-bit 2 GB – 64-bit	4 GB
Graphics card	DirectX 9 graphics device with WDDM driver	DirectX 10 capable
Display	1024 x 768	1366 x 768 multi-touch
HDD capacity	16 GB – 32-bit 20 GB – 64-bit	
Other	DVD-ROM, ReadyBoost, ReadyDrive, HomeGroup, BitLocker, XP Mode, USB 3.0	

Windows Vista/7 User Interface Changes

Confused users:

1. New GUI
2. Everything looks and feels like you are running Internet Explorer
3. Familiar things like File Explorer, Network Center, and Control Panel are sufficiently different

User experience

Biggest end user changes are in the UI:

1. Personalization with Aero Themes and slideshows
2. Major changes to the Taskbar – Pinning, Jump Lists, Live Previews, and more
3. Notification area clean-up
4. Libraries in Windows Explorer
5. Windows Aero desktop effects: Aero Peek, Aero Snaps, Aero Shake

User Experience

1. Bundled apps (all upgraded)
 - A. Calculator
 - B. Paint
 - C. WordPad
 - D. Sticky Notes, etc.
2. Missing apps
 - A. Windows Live Essentials fills the gaps

INSTALLATION

Planning the Installation

1. Verify minimum/recommended requirements
2. Check hardware compatibility list (HCL)
3. Decide whether to install the 32-bit or 64-bit version
4. Decide how to partition hard drive and what file system to use
5. Decide whether to configure PC as a workstation in a workgroup or as part of a domain
6. If using RAID, have drivers on hand to load at the beginning of installation

Verifying Hardware



Compatibility Center

Home

Apps

Devices



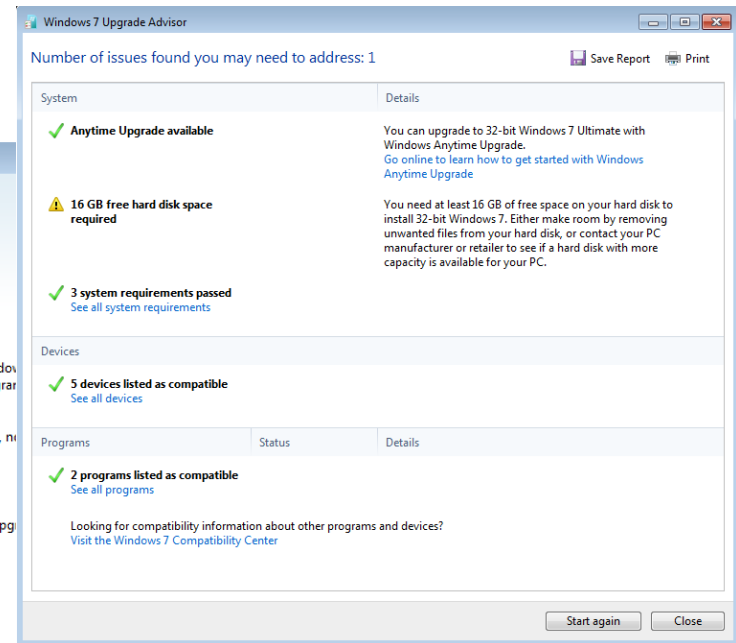
Thank you for downloading

Windows 7 Upgrade Advisor

If your download does not start after 30 seconds, Click here

Install Instructions

1. Download and run Windows7UpgradeAdvisorSetup Advisor
 - If your PC is running Windows XP, setup will make it installed. If it's not found, setup will help you install it.
2. Plug in and turn on any USB devices or other devices, disks, and scanners, that you regularly use with the PC.
3. Run the Windows 7 Upgrade Advisor from your start menu or desktop



Download, install, and run the Upgrade Advisor to check compatibility issues before installing Windows 7

Installing Windows 7

Setup has been simplified:

1. Clean install in 15-20 minutes
2. Upgrade: Averages a couple of hours
3. Multiboot or dual boot
4. Unattended install
5. Remote Installation

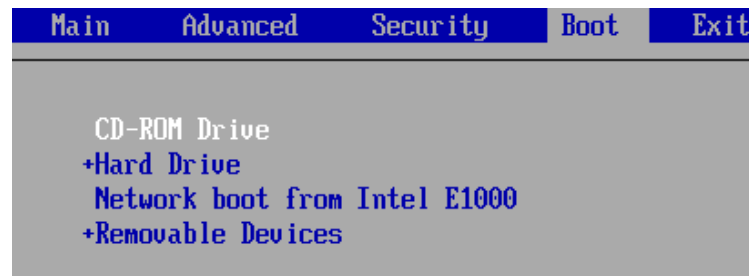
Hard Drive Partitions and File Systems

1. Ensure that partitions on hard drive are adequate to install Windows 7
 - A. At least a 16 GB partition is required for installation
2. Supported file systems:
 - A. FAT32
 - B. NTFS

Boot Up

Set the boot options in the BIOS:

1. DVD
2. External USB drive
3. Network or PXE (Preboot eXecution Environment) allows you to boot a device virtually without using a local storage device or OS



BIOS Boot Menu

Clean Install

1. Best option
2. Delete and recreate new partitions
3. Upgrade to NTFS (over 32GB its your only choice)



DVD Installation Windows

Upgrading

1. If you have a problem upgrade usually won't fix it
2. You can upgrade from
 - A. Windows Vista (in some cases)
 - B. Lower version of Windows 7
 - C. You cannot upgrade from any other version

Prepare System Before Upgrading

1. Clean up hard drive
2. Perform any needed hardware or software upgrades
3. Back up important files
4. Scan hard drive for viruses
5. Uncompress drive (if compressed)
6. Uninstall incompatible hardware or software

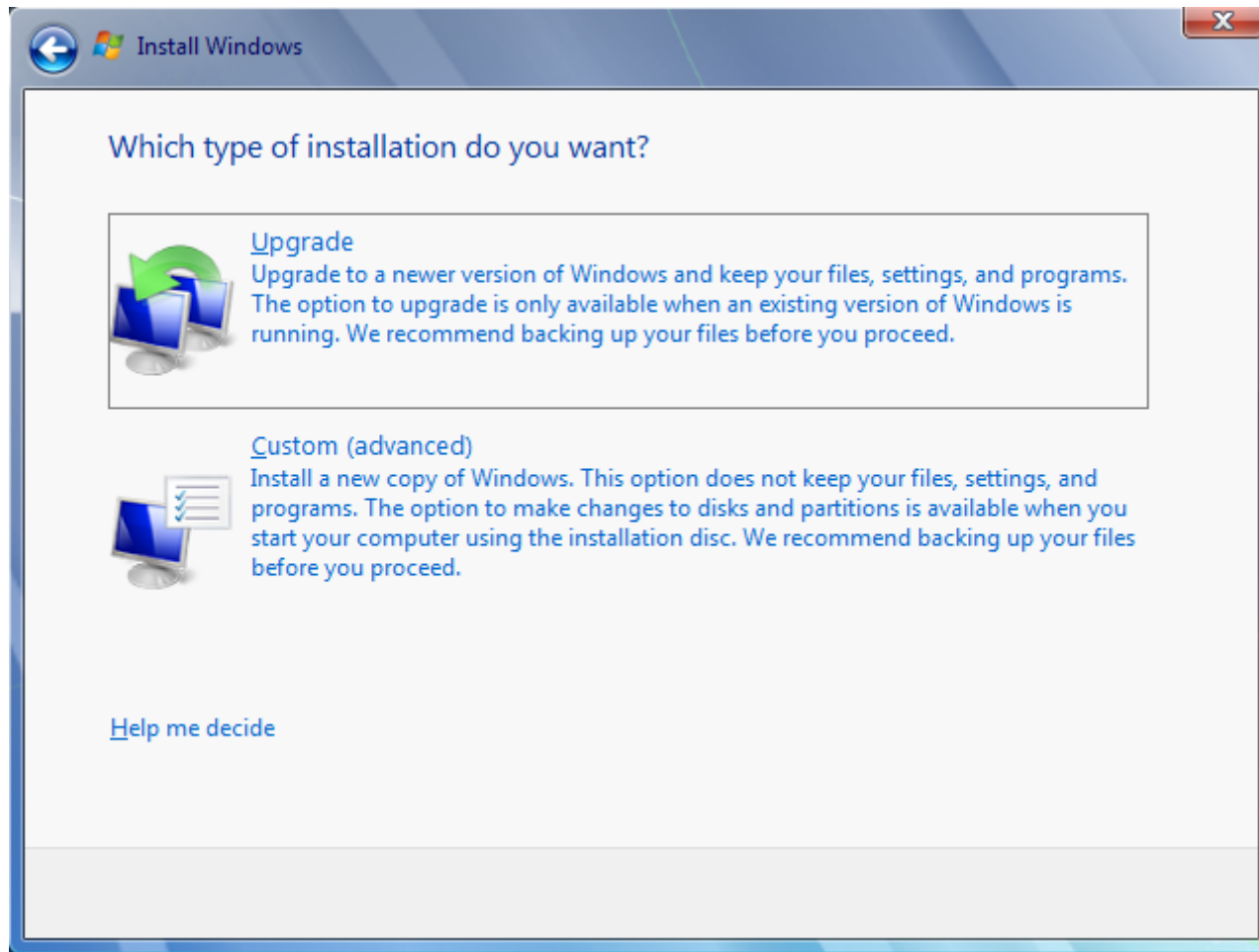
Setting Up a Dual Boot

1. Start installation as a clean install with another OS installed
2. Choose to install on a different partition than the other OS
3. Windows recognizes that another OS is installed and sets up the Startup menu
4. Sets up the first active partition with a file system that both OSs understand
5. You must have earlier OS versions installed first

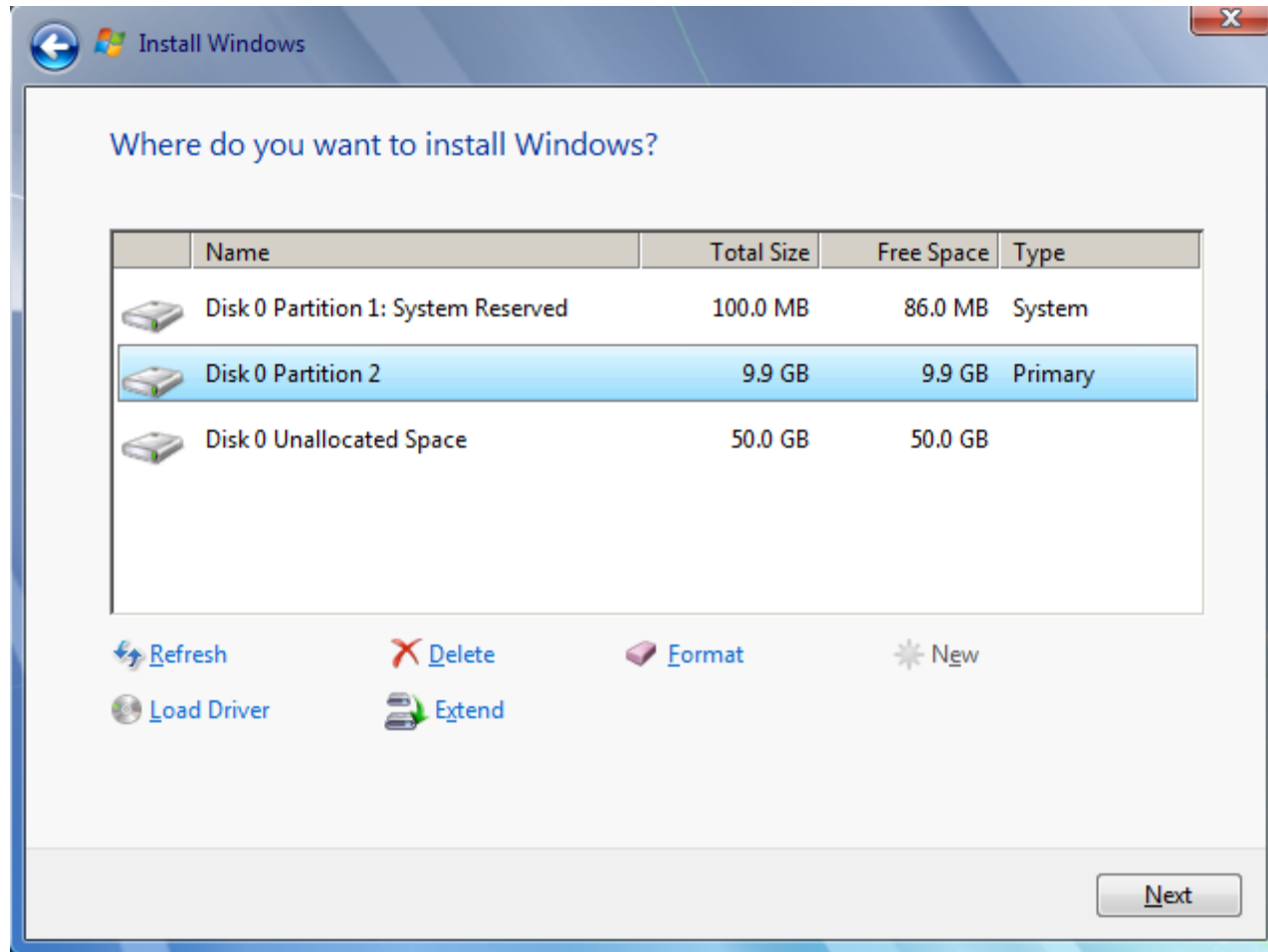
Unattended Installation

1. Reduces the amount of hands-on time spent on each computer
2. Uses the **Windows Automated Installation Kit** (Windows AIK)
3. The **System Preparation Tool** (Sysprep), automates the deployment of Windows operating system
 - A. Once you have performed the initial setup steps on a single computer, you can run the Sysprep tool to prepare the sample computer for cloning and automate the deployment on other computers

Use the Custom (Advanced) Install for a clean install of Windows.

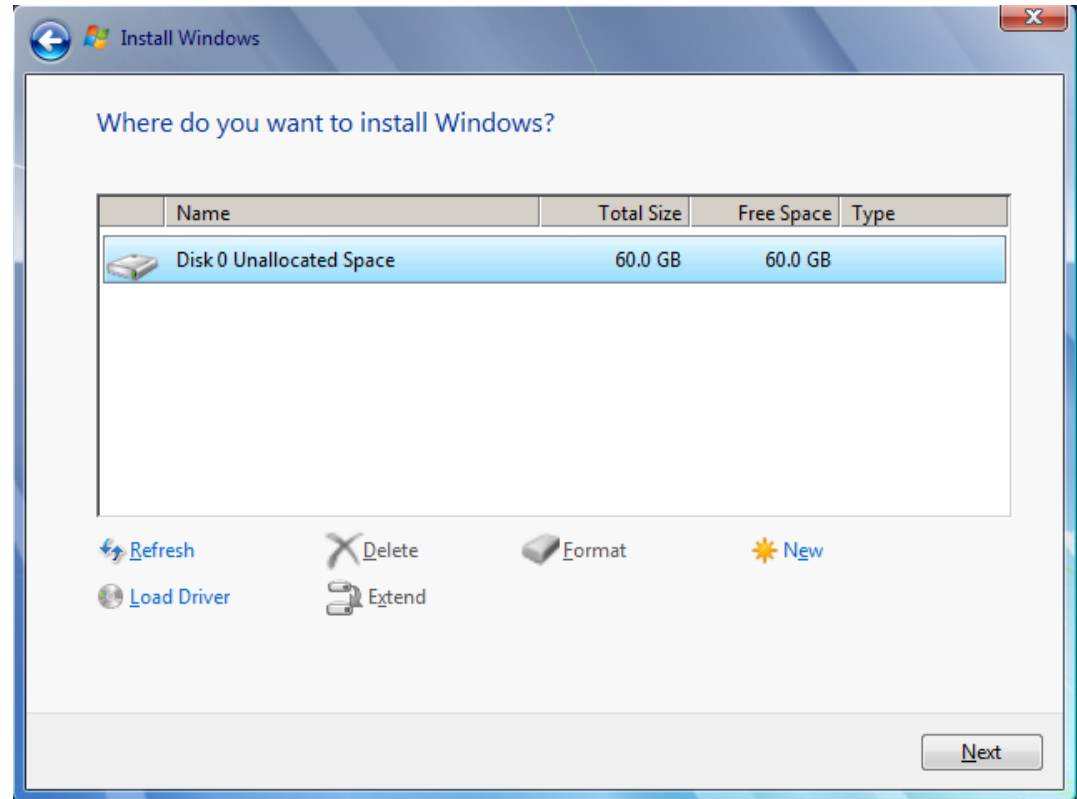


Delete Used OS Partitions

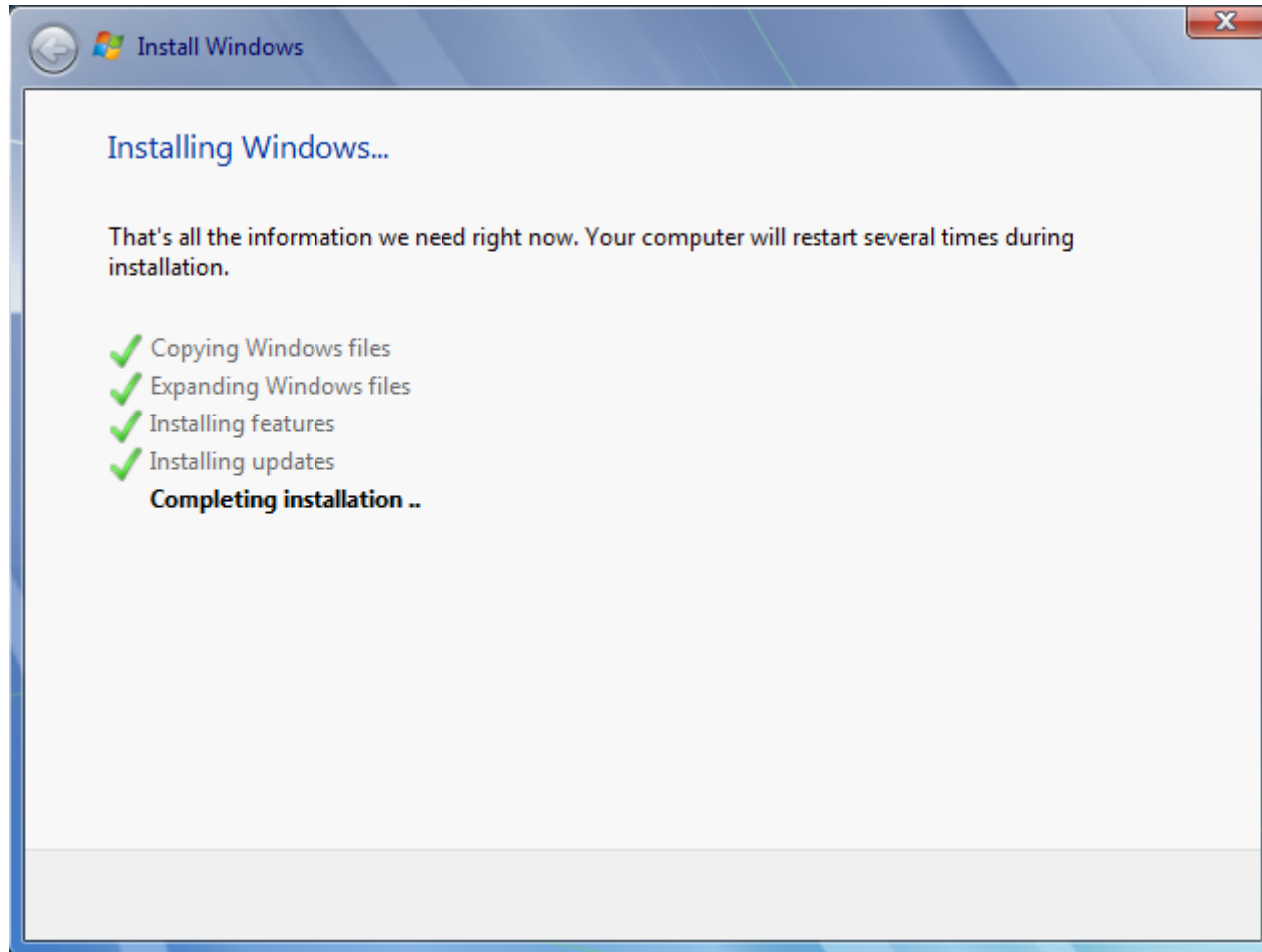


Start Fresh

To ensure all previous data has been erased before loading the OS, perform a **Full Format** on the drive




Installation



Create a User Account and PC Name


Set Up Windows

 **Windows 7 Professional**

Choose a user name for your [account](#) and name your computer to distinguish it on the network.

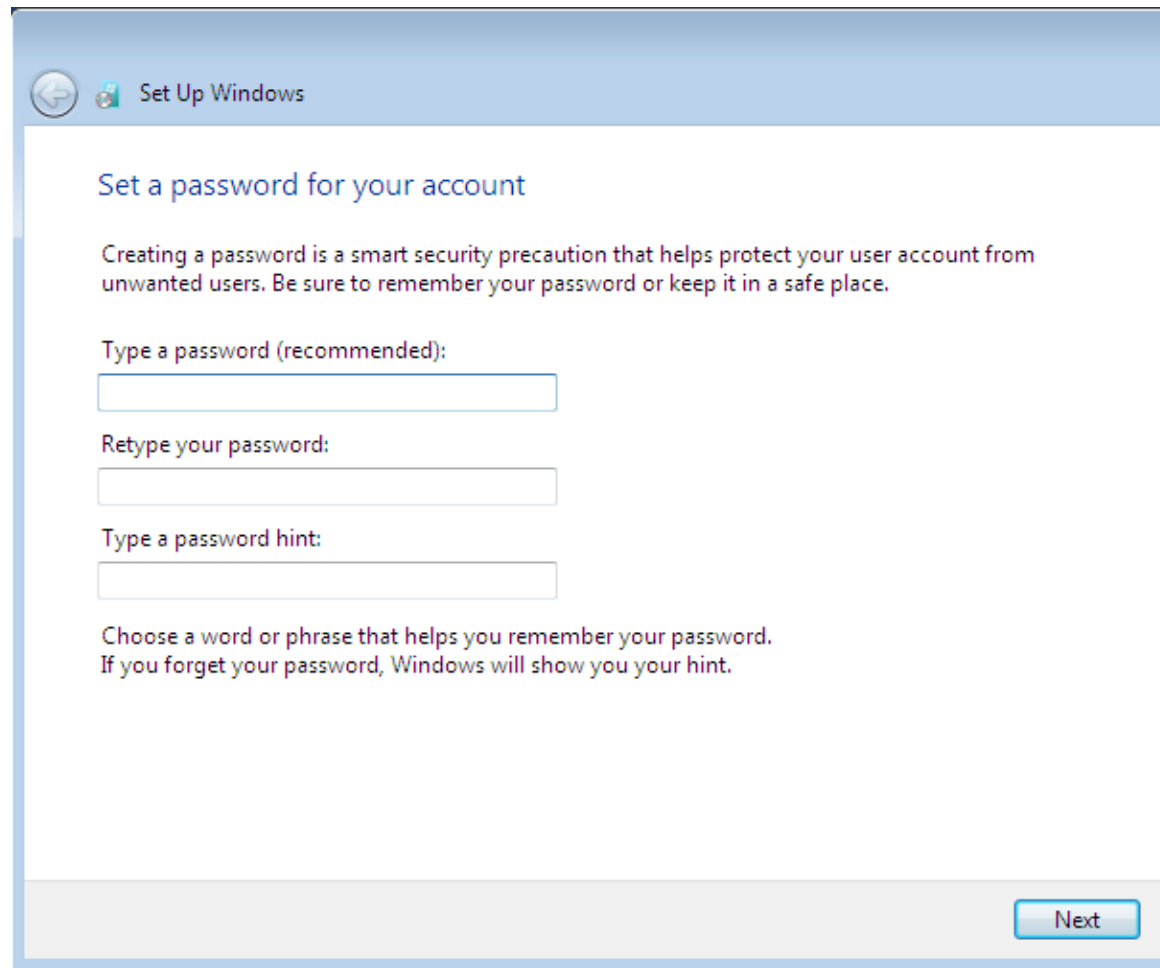
Type a user name (for example, John):

Type a [computer name](#):

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Next

Create a Password



The screenshot shows a Windows installation window titled "Set Up Windows". The main heading is "Set a password for your account". Below this, a message states: "Creating a password is a smart security precaution that helps protect your user account from unwanted users. Be sure to remember your password or keep it in a safe place." There are three input fields: "Type a password (recommended):", "Retype your password:", and "Type a password hint:". Each field is followed by a text box. At the bottom right, there is a "Next" button.

Set Up Windows

Set a password for your account

Creating a password is a smart security precaution that helps protect your user account from unwanted users. Be sure to remember your password or keep it in a safe place.

Type a password (recommended):

Retype your password:

Type a password hint:

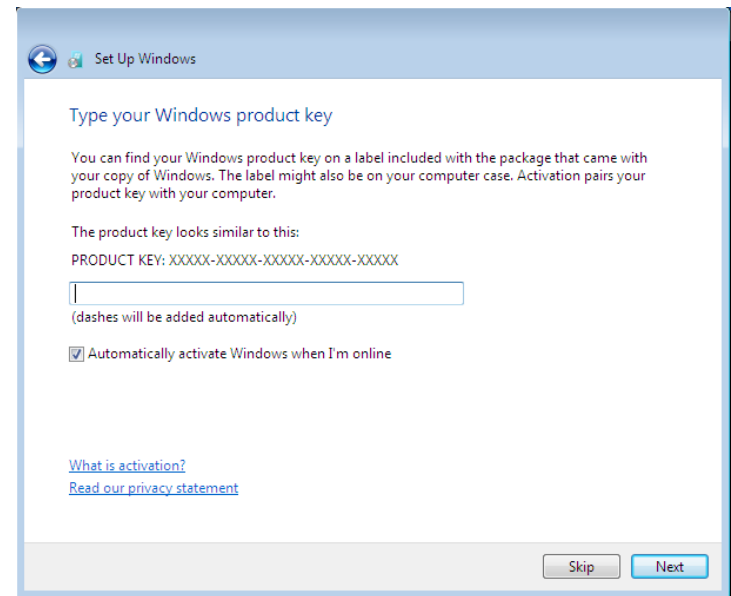
Choose a word or phrase that helps you remember your password.
If you forget your password, Windows will show you your hint.

Next

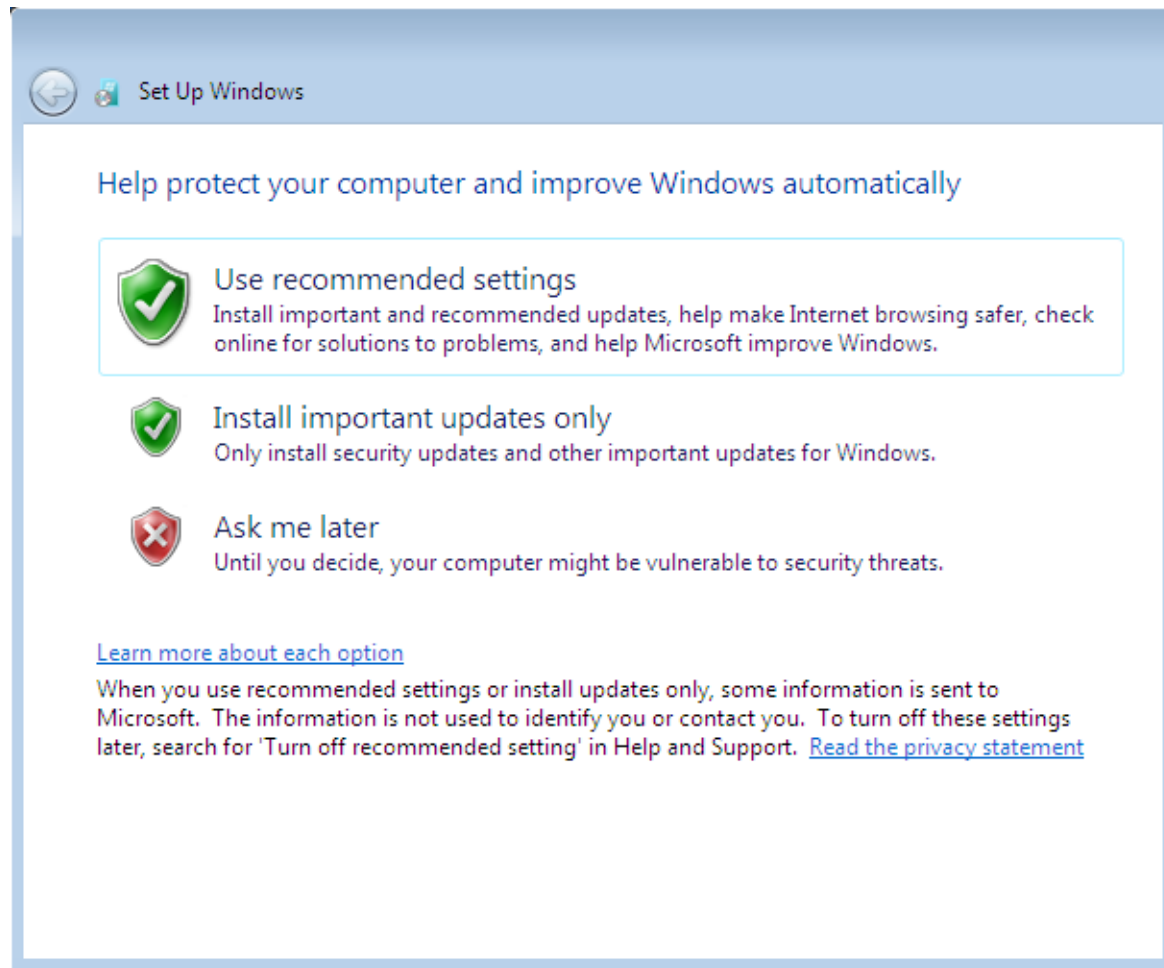
Product Activation

Prevents unlicensed use of Microsoft software products on more than one computer

1. Retail and OEM versions must activate
2. You will have to reactive if you change 4 pieces of hardware



Setup Updates



Set Time and Date

Set Up Windows

Review your time and date settings

Time zone:

(UTC-08:00) Pacific Time (US & Canada)


☒ Automatically adjust clock for Daylight Saving Time

Date:

May, 2013

Su	Mo	Tu	We	Th	Fr	Sa
28	29	30	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1
2	3	4	5	6	7	8

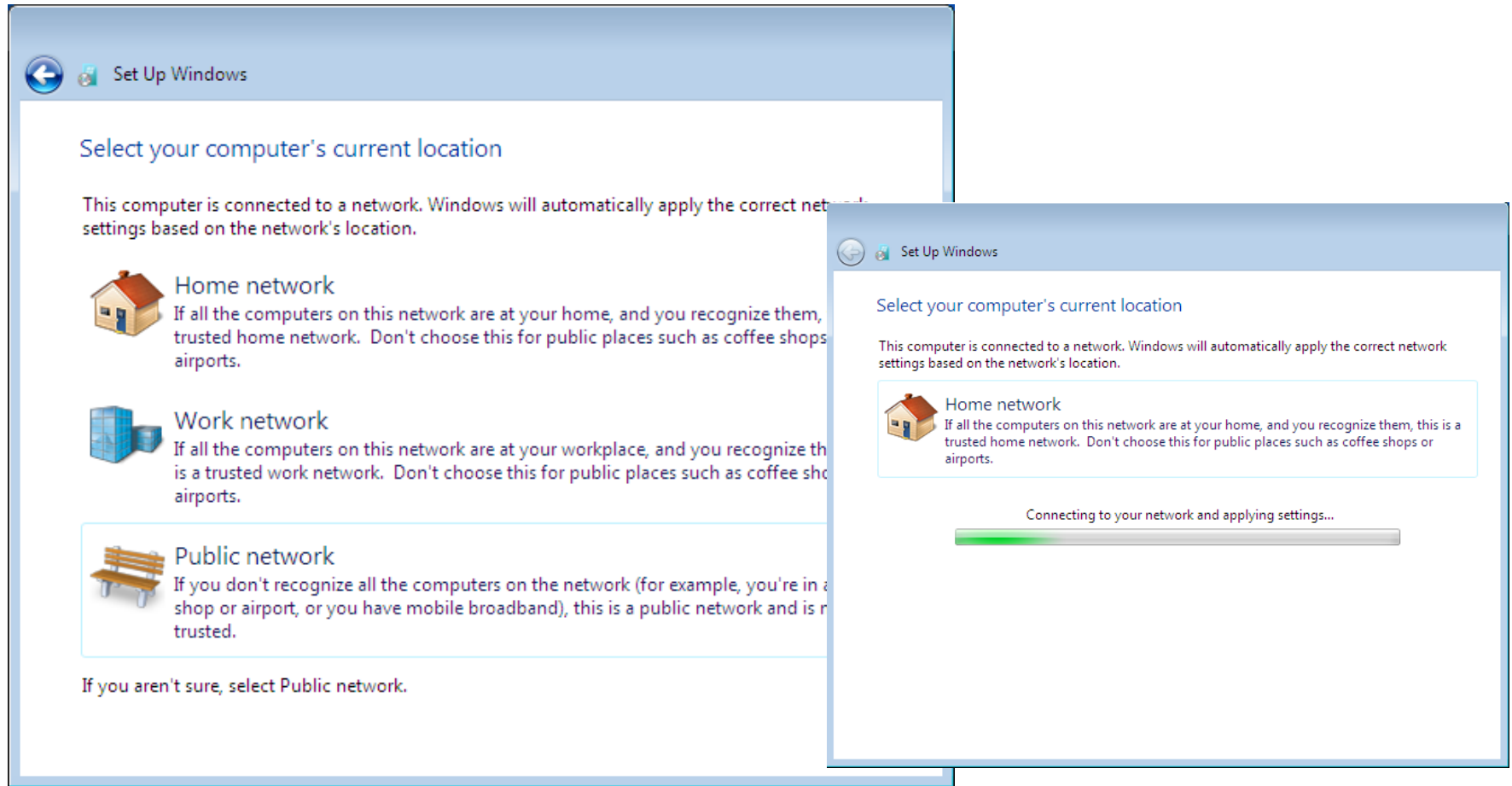
Time:



12:16:55 PM

Next

Identify the Network

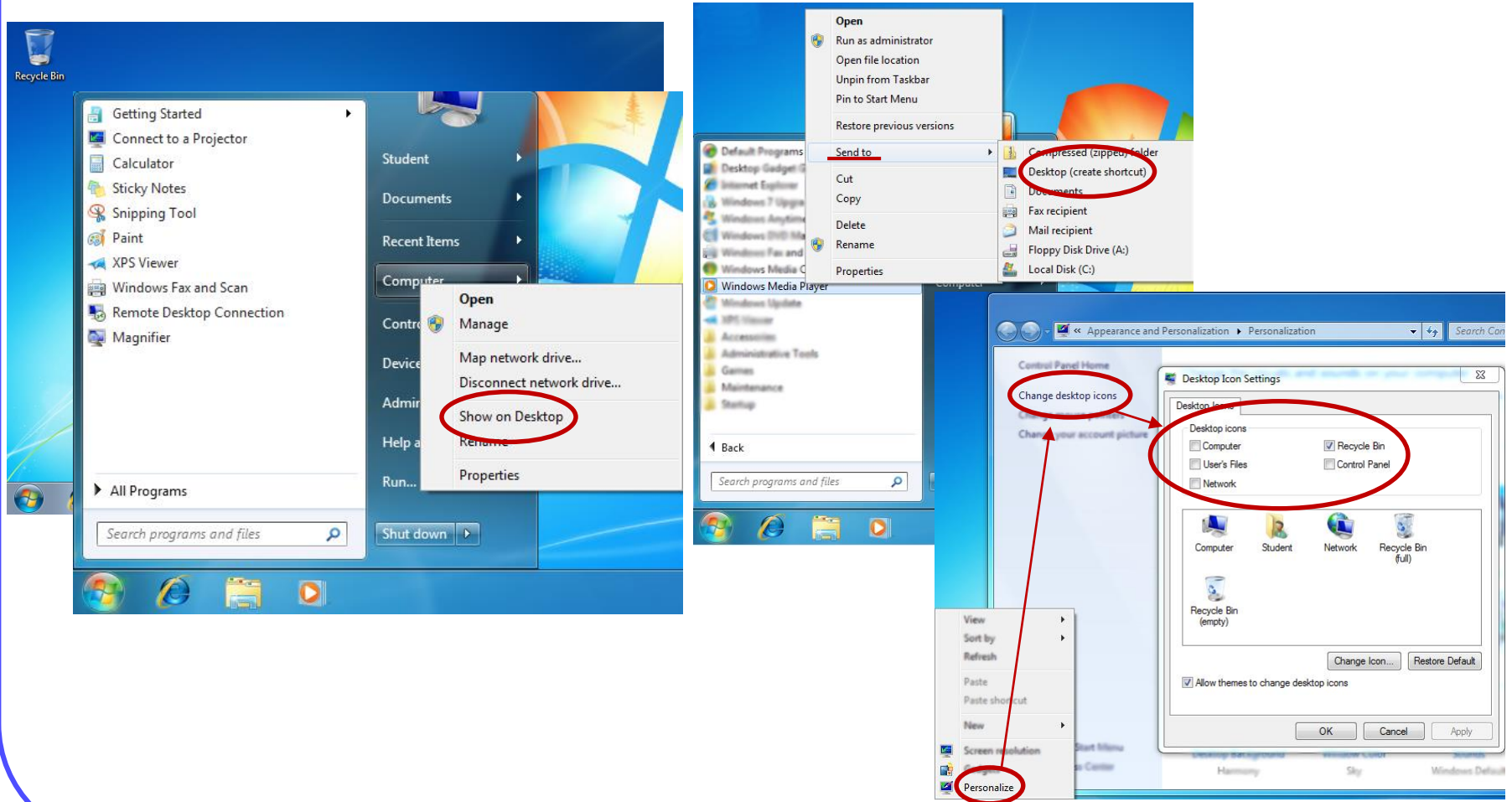


THE DESKTOP

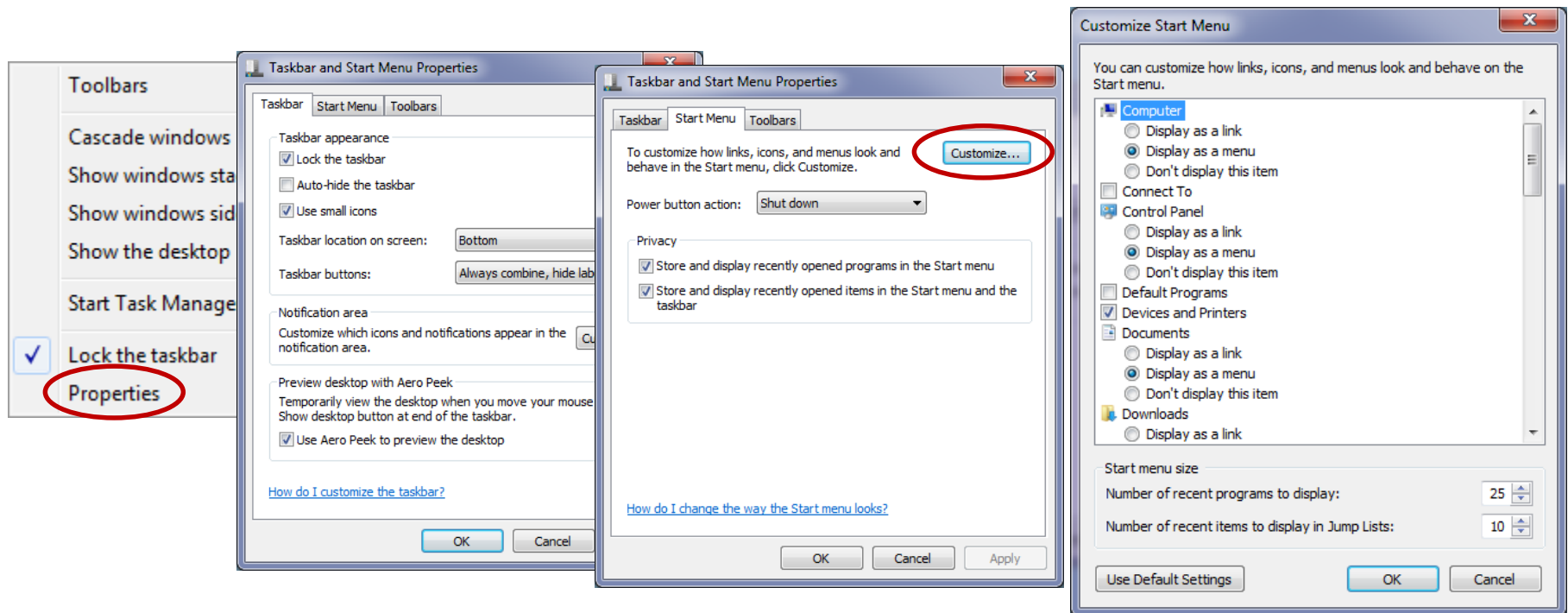
Welcome Screen



Adding Icons to the Desktop

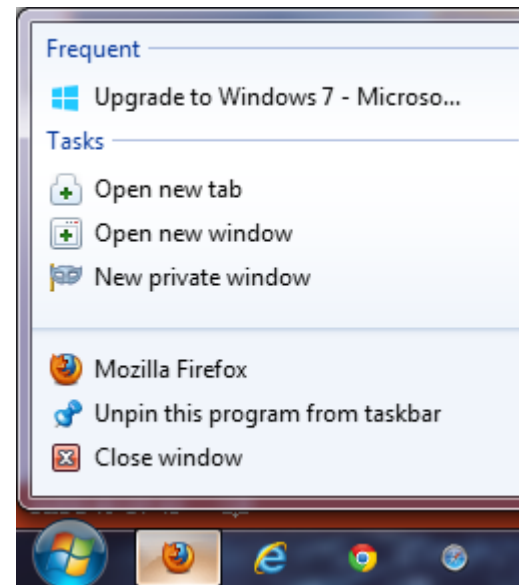
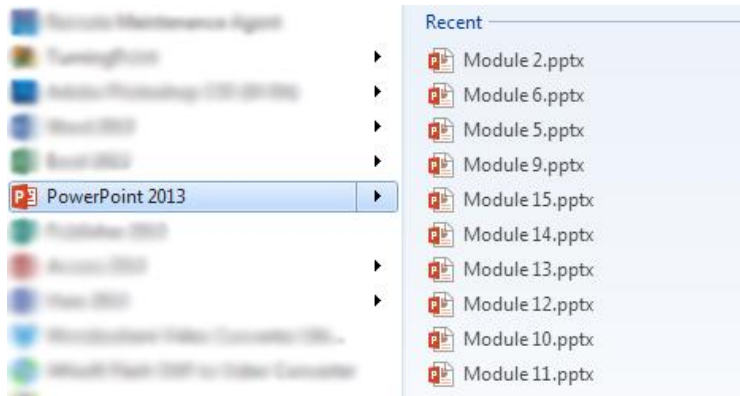


Customize the Taskbar and Start Menu



Jump Lists

1. Contextual menus pop-up when hovering over an icon in the Start menu
2. Also appears when right-clicking on an icon in the taskbar

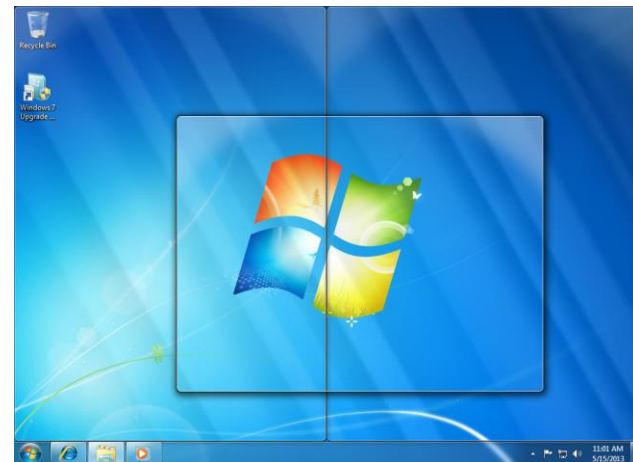
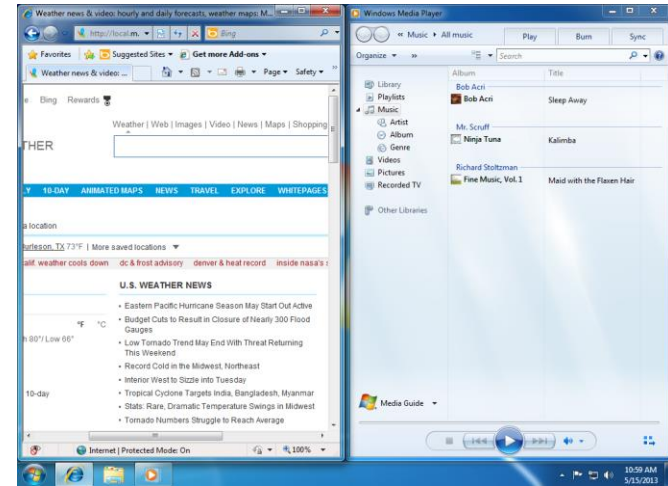


Areo Glass

1. Affects the Windows interface and how it functions
2. It can be found on:
 - A. Windows Vista Home Premium
 - B. Windows Vista Business
 - C. Windows Vista Enterprise
 - D. Windows Vista Ultimate
 - E. Windows 7 Home Premium
 - F. Windows 7 Professional
 - G. Windows 7 Ultimate
 - H. Windows 7 Enterprise

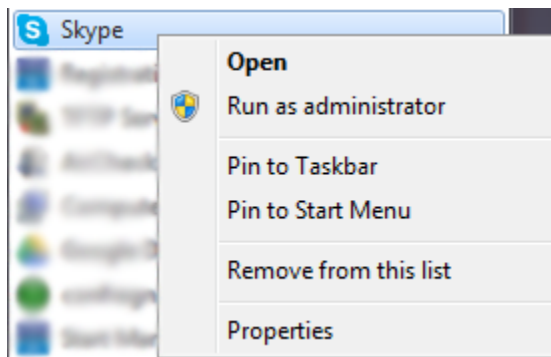
Areo Glass

1. Snap (Win + arrows)
2. Peek (Win + space)
3. Shake (Win + Home)
4. 3D Flip (Win + Tab)



Task Bar & System Tray

1. Thumbnails
2. Previewing
3. Pinning



Useful Keyboard Shortcuts

1. **Win+Home**: Clear all but the active window
2. **Win+Space**: All windows become transparent so you can see through to the desktop
3. **Win+Up arrow**: Maximize the active window
4. **Win+Up arrow** : Minimize the window/Restore the windows if it is maximized
5. **Win+Left/Right arrows**: Dock the window to each side of the monitor (if you have dual monitors, adding Shift to the mix will move the window to the adjacent monitor)
6. **Win+T**: Focus and scroll through items on the taskbar
7. **Win+P**: Adjust presentation setting for your display
8. **Shift+Click a taskbar item**: open a new instance of that application

Summary

In this module we discussed:

1. Windows operating systems requirements
2. Installation requirements
3. Activation and initial setup
4. Customizing the desktop
5. New features
6. Useful keyboard shortcuts

Glossary & Terms

- **Pinning** - Permanently display an item in the taskbar or start menu.
- **Jump Lists** - A list of recently opened documents for a particular program.
- **Live Previews** - Show you the live contents of a document or graphic without having to open it.
- **Aero Peek** - It turns all windows transparent, so you can see how many windows are currently open.
- **Aero Snap** - Automatically makes a window snap to half the screen size, full screen or minimize.
- **Aero Shake** – Minimizes or restores all open windows except the current/active window.
- **Windows Live Essentials** – Addon programs for Windows like Movie Maker and Live Mail.
- **HCL** - Hardware Compatibility List

Glossary & Terms

- **RAID** - Redundant Array of Independent Disks
- **Upgrade Advisor** – A program that checks for compatibility issues between the OS and hardware.
- **Dual boot** – Allows multiple operating systems to be install and started from a single computer.
- **Unattended install** – Uses Windows AIK and Sysprep to automate installation.
- **Remote Installation** – Install Windows from a remote location.
- **PXE** - Preboot eXecution Environment
- **Windows AIK** - Windows Automated Installation Kit
- **Sysprep** - System Preparation Tool
- **OEM** - Original Equipment Manufacturer