LESSON 6.1

98-349 Windows Operating System Fundamentals

Understand Backup and Recovery Methods

LESSON 6.1

98-349 Windows Operating System Fundamentals

Lesson Overview

Understand backup and recovery methods.

In this lesson, you will explore:

- Backup management
- Backup options
- Recovery methods

Backup Management

- Windows backup tools:

Tool	Description
File Backup	Windows Backup enables you to make copies of the data files for all the users on the computer.
System Image Backup	Windows Backup enables you to create a system image, which is an exact image of a drive. A system image includes Windows and your system settings, programs, and files.
Previous Versions	Previous Versions are copies of files and folders that Windows automatically saves as part of system protection.
System Restore	System Restore reestablishes the computer's system files to their state at an earlier point in time.

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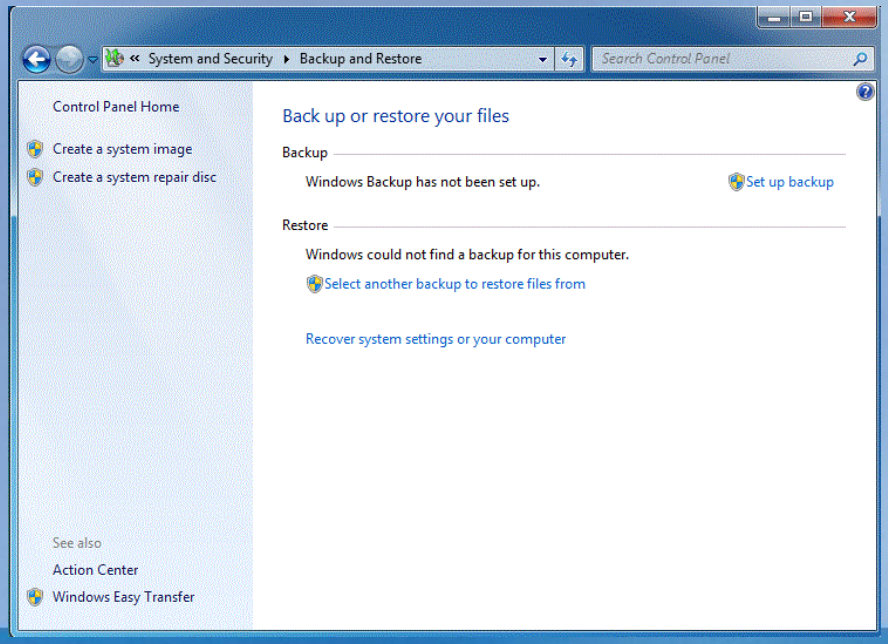
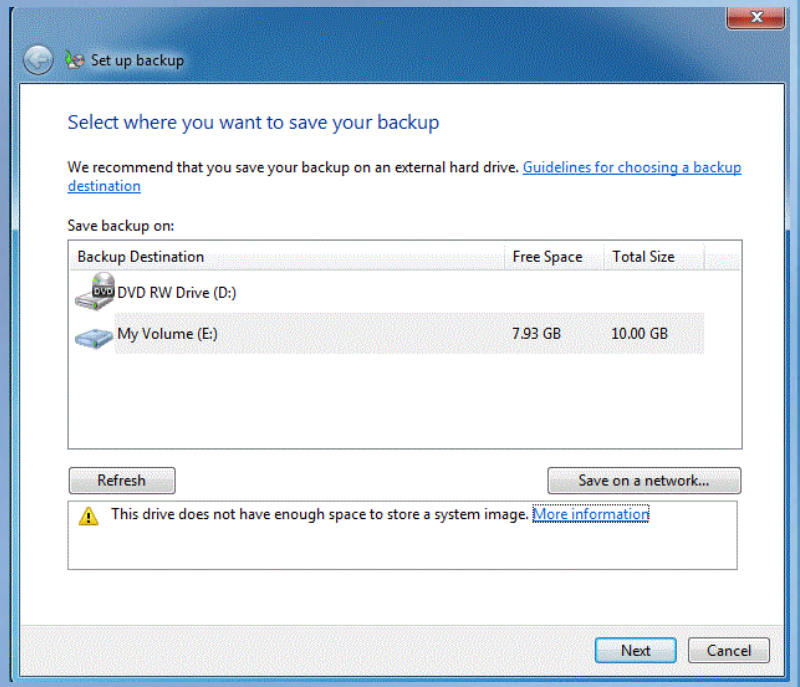
Backup Management

- Use Windows Backup and Restore to back up and recover files and folders.
  - Open Backup and Restore by clicking Start, Control Panel, System And Security, and then Backup And Restore.



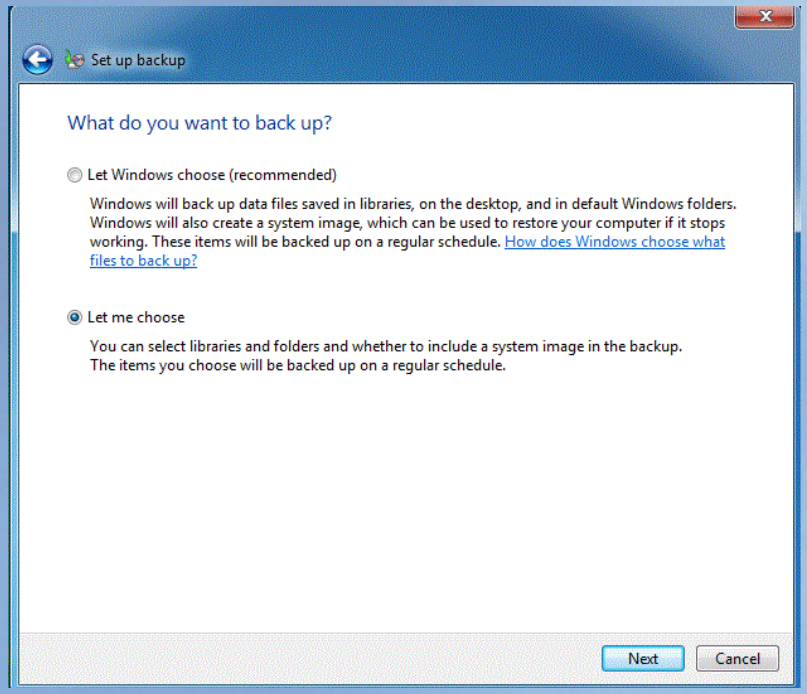
Backup Management (continued)

- It is recommended to save backups to an external drive.
- You cannot save backups to the system drive.
- You can save backups to a network location.
- Windows will issue a warning if there is not enough drive space to store a system image.



Backup Options

- Let Windows Choose (Recommended)—Windows backs up data saved in libraries, desktop, and default Windows folders.
- Let Me Choose—you select from libraries and folders and choose whether to include a system image.
- Backups can be set to run on a regular schedule under both options.



Backup Options (continued)

System backup locations and methods:

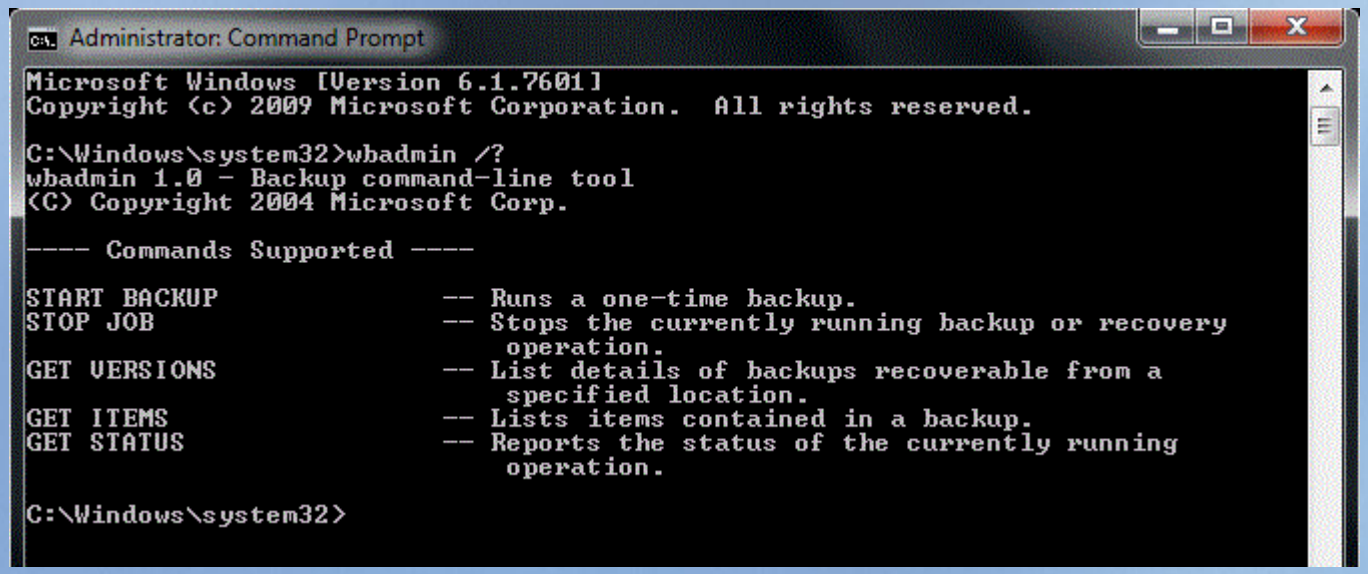
- Local backup—the backup is saved locally to an external drive or media.
- Online backup—the backup is saved to a remote location or service across the Internet, typically through an encrypted session.
- Cloud backup—a variation of an online backup with data saved to a cloud location such as Microsoft SkyDrive.
- Automated backup—Windows Backup and Restore will schedule the backup to run automatically.

Backup Options (continued)

- System imaging is available with Windows.
- A system image includes Windows and your system settings, programs, and files.
- Use a system image to restore the contents of your computer if the hard drive or computer stops working.
- Restoring a computer from a system image must be a complete restoration; you can’t choose individual items to restore, and all your current programs, system settings, and files are replaced.
- Creating a system image is a common recovery method.

Backup Options (continued)

- WBAdmin.exe is a command-line tool that can perform all graphical user interface (GUI)-based backup functions.

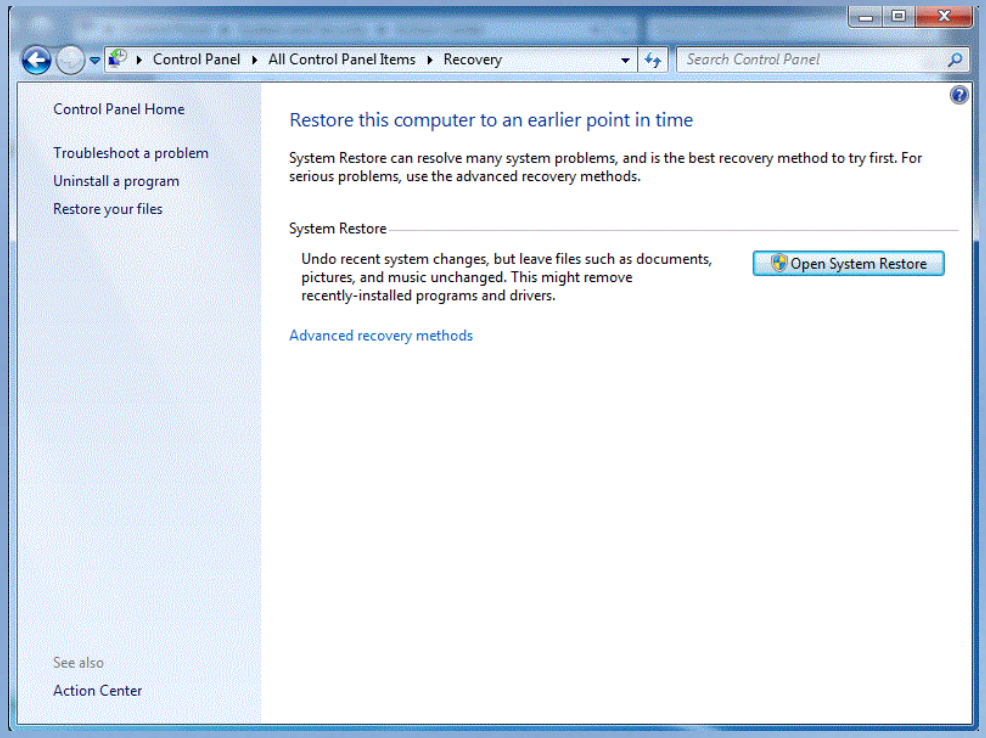


Recovery Methods

- Windows offers multiple options for system recovery.
- System Restore does not affect any existing documents or personal files. Recently installed programs or drivers may be uninstalled.
- System Restore is a great tool for returning the system to a point prior to being infected by malware.
  - The files installed by malicious software will still need to be removed after the restoration.

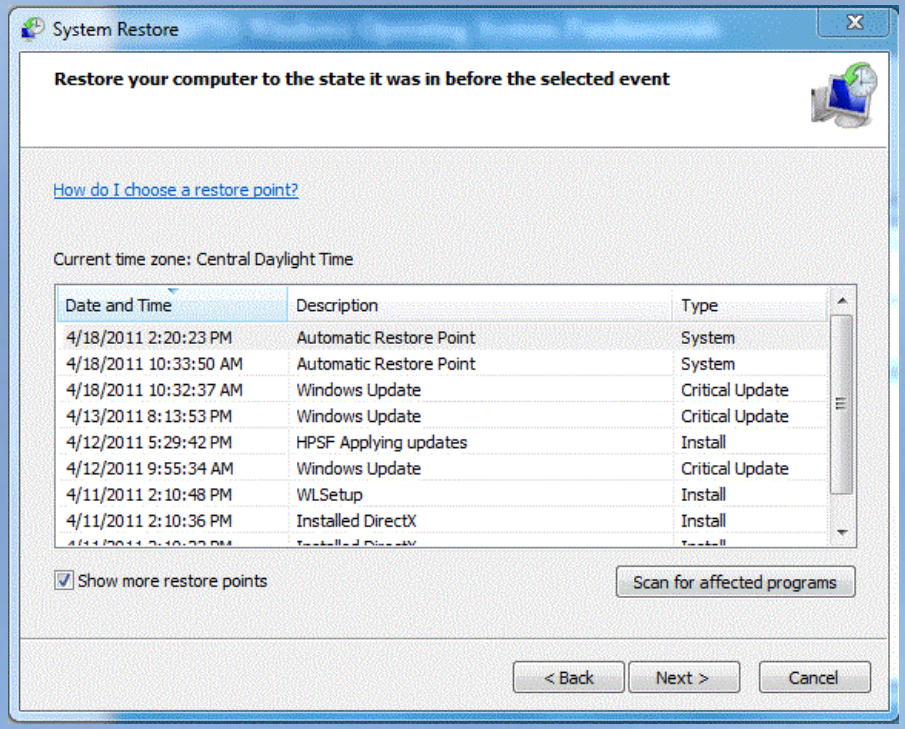
Recovery Methods (continued)

- System restore points



Recovery Methods (continued)

- System restore points

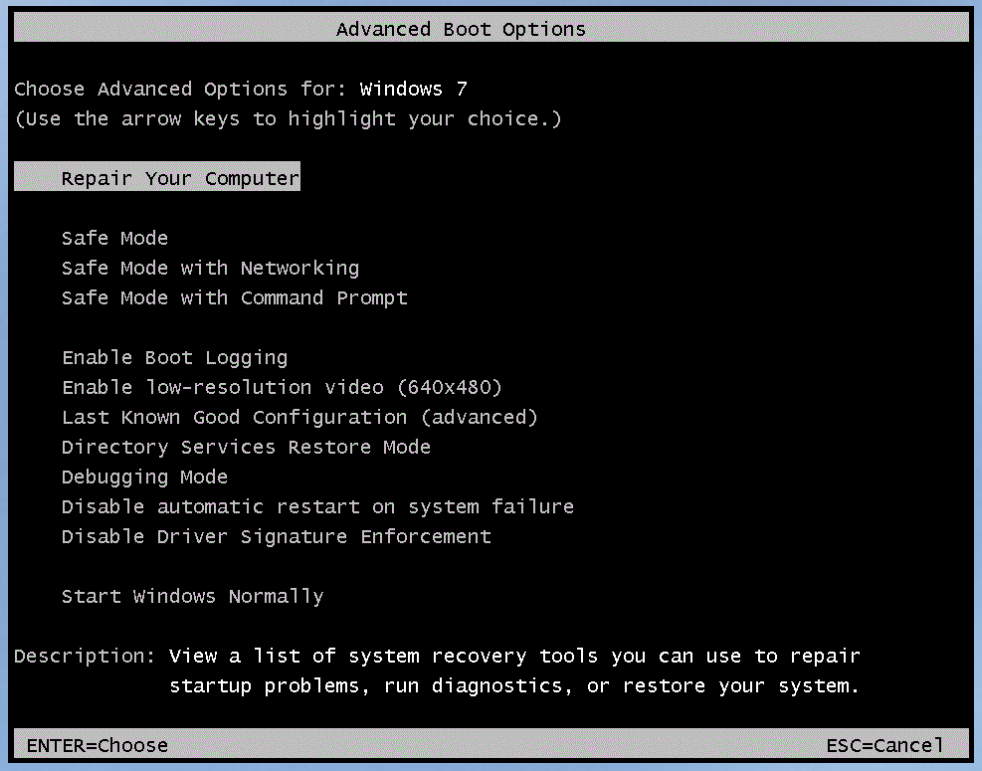


Recovery Methods (continued)

- Boot the system into the Advanced Boot Options menu by pressing the F8 key during startup but before the Windows logo appears.
- Two common boot options:
  - Safe Mode—a troubleshooting option for Windows that starts the computer in a limited state. Only the basic files and drivers necessary to run Windows are started.
  - Last Known Good Configuration—starts Windows with the last registry and driver configuration that worked successfully.

Recovery Methods (continued)

- Recovery boot options



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Complete Student Activity 6.1

LESSON 6.2

98-349 Windows Operating System Fundamentals

Understand Maintenance Tools and Updates

LESSON 6.2

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Lesson Overview

Understand maintenance tools and updates.

In this lesson, you will explore:

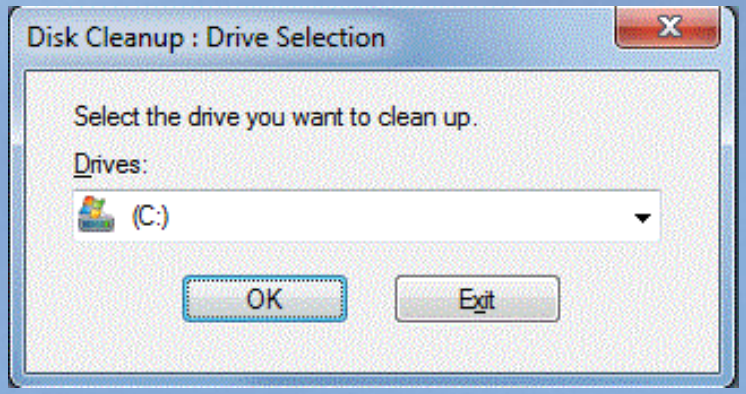
- System maintenance and scheduling
- Action Center
- Update management

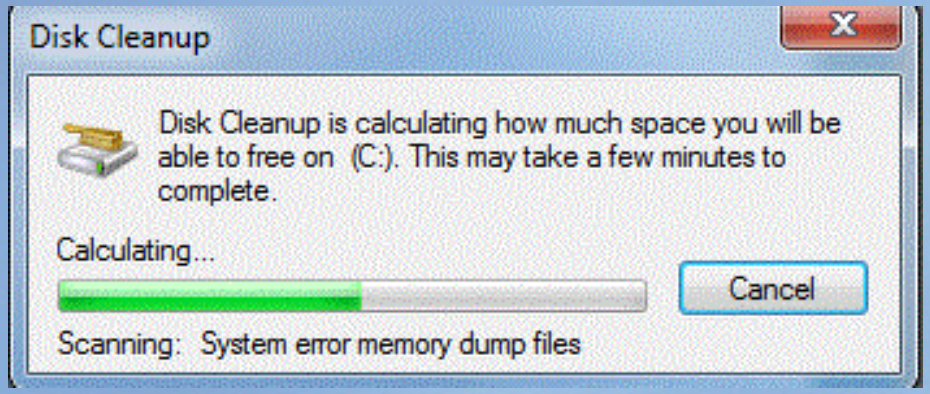
System Maintenance and Scheduling

- Microsoft Windows provides several tools for system maintenance.
- Performance can be improved by maintaining the operating system.
- Most common maintenance tasks deal with the file system.
- File system maintenance tools:
  - Disk Cleanup
  - Disk Defragmenter

Disk Cleanup

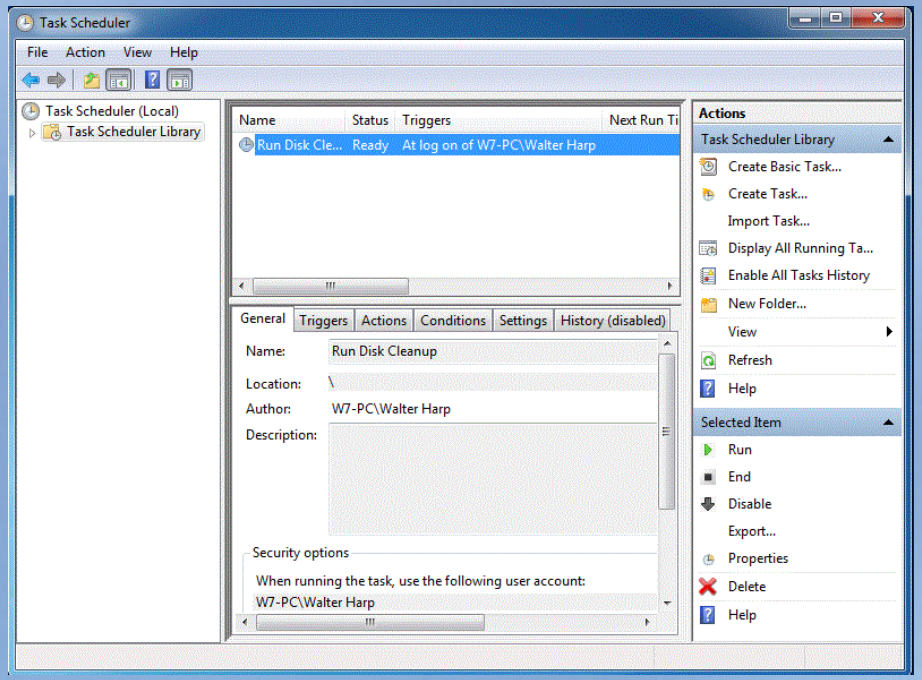
- Frees space by finding and removing files that are no longer needed.
- Started by clicking Start and then typing **Disk Cleanup** in the Search Programs And Files field.
- Select the drive to clean up and click OK.
- Disk Cleanup searches the volume to identify files that can be removed.





Disk Cleanup (continued)

- Scheduling Disk Cleanup to run regularly using Task Scheduler can save you the trouble of having to remember to run it.



Disk Defragmenter

- After a period of time, most hard drives can become fragmented.
  - Fragmentation is the scattering of parts of a file over different areas of the disk.
  - It occurs as files on a disk are deleted and new files are added.
  - It slows disk access and degrades the overall performance of disk operations.
- Disk Defragmenter consolidates fragmented files on your hard drive to improve system performance.
- It is recommended to run Disk Defragmenter after you have cleaned your drives using Desk Cleanup.
- Open Disk Defragmenter typing **Disk Defragmenter** in the Search Programs And Files box.

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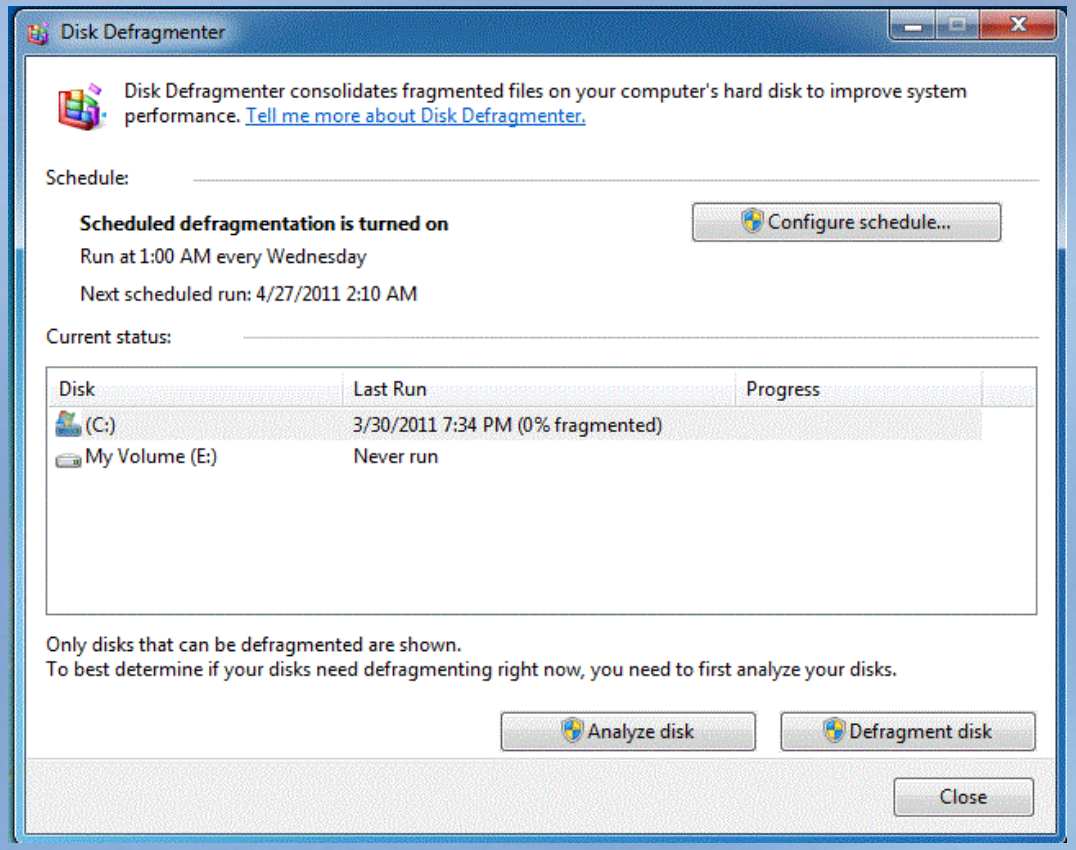
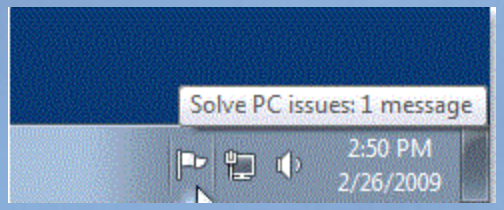
Disk Defragmenter (continued)



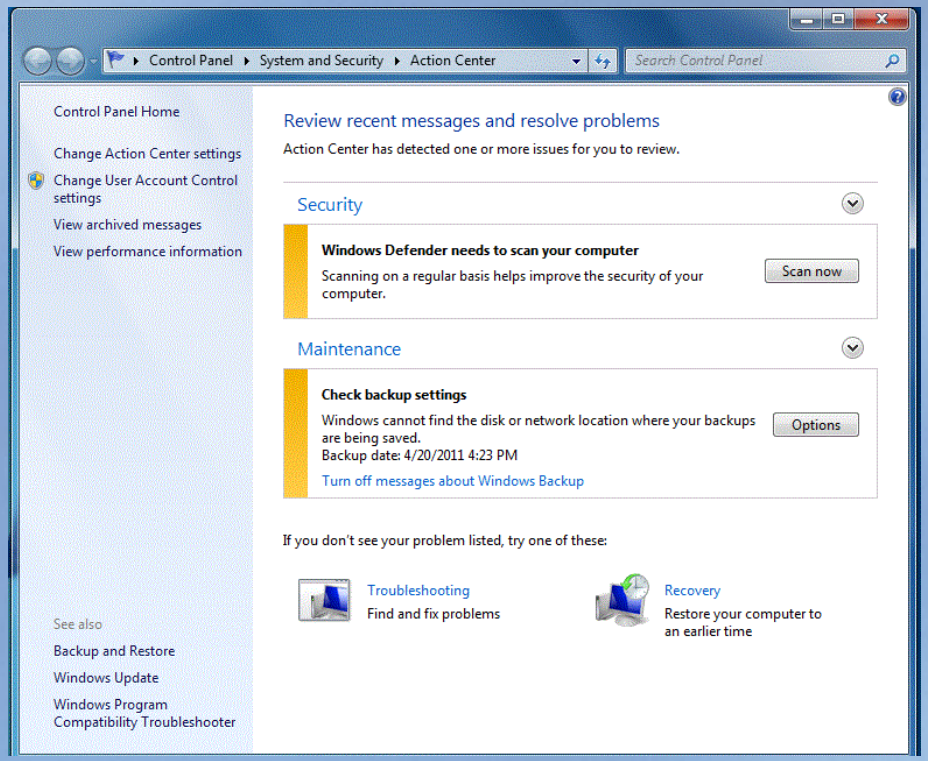
Action Center

- Lists important messages about security and maintenance settings that need your attention.
  - Red items in Action Center are labeled Important and indicate significant issues that should be addressed soon, such as an outdated antivirus program.
  - Yellow items are suggested tasks that you should consider addressing, such as recommended maintenance tasks.
- Action Center can attempt to resolve issues that arise.
- Action Center items will be displayed in the notification area.



Action Center (continued)

- Configure notifications by clicking the Change Action Center Settings link.



Update Management

- The process for updating software after release.
- Microsoft provides periodic software updates.
- Every Microsoft product group includes a sustaining engineering team responsible for developing updates to resolve problems.
- The update process is as follows:
  1. Microsoft is made aware of a security vulnerability or other problem.
  2. The issue is evaluated and verified by the Microsoft Security Response Center.
  3. The product groups sustaining team creates and tests an update.
  4. Microsoft distributes the software update through the Microsoft Download Center and other services.

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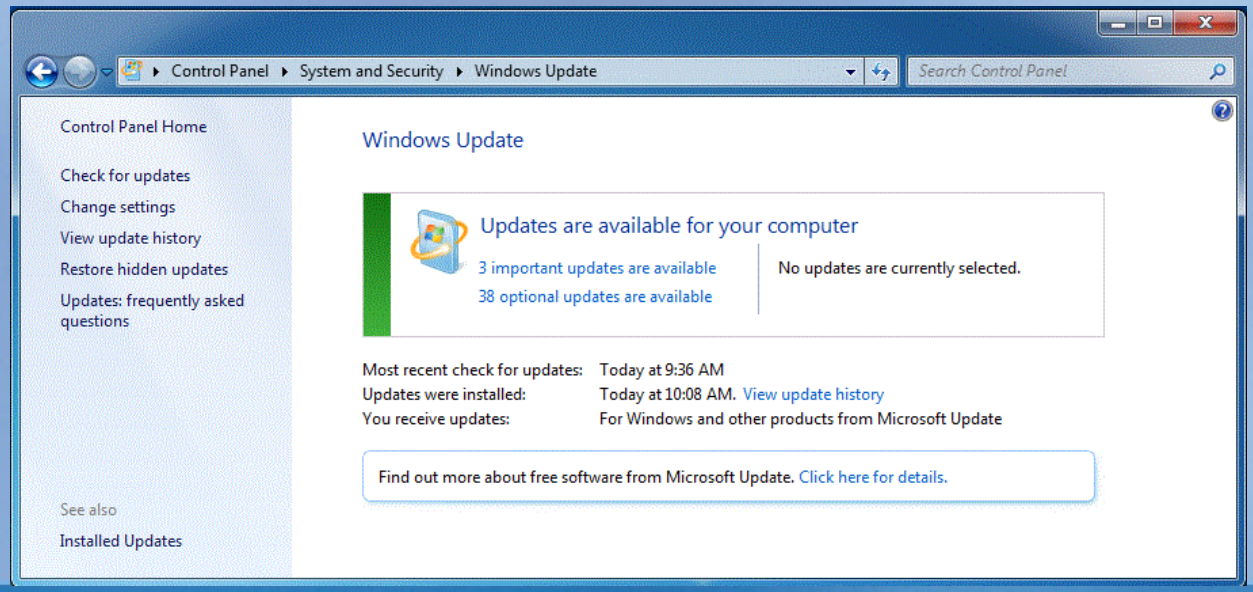
Update Management

Term	Definition
Security update	A broadly released fix for a specific product, addressing a security vulnerability.
Critical update	A broadly released fix for a specific problem, addressing a critical, non-security related bug.
Update	A broadly released fix for a specific problem, addressing a non-critical, non-security related bug.
Hotfix	A single package composed of one or more files used to address a problem in a product.
Service pack	A cumulative set of hotfixes, security updates, critical updates, and updates since the release of the product, including many resolved problems that have not been made available through any other software updates

Update Management (continued)

- Windows Updates—additions to software that can help prevent or fix problems, improve how your computer works, or enhance your computing experience.
- Windows Updates can be managed by clicking Start and typing **Windows Update** in the Search Programs And Files field.



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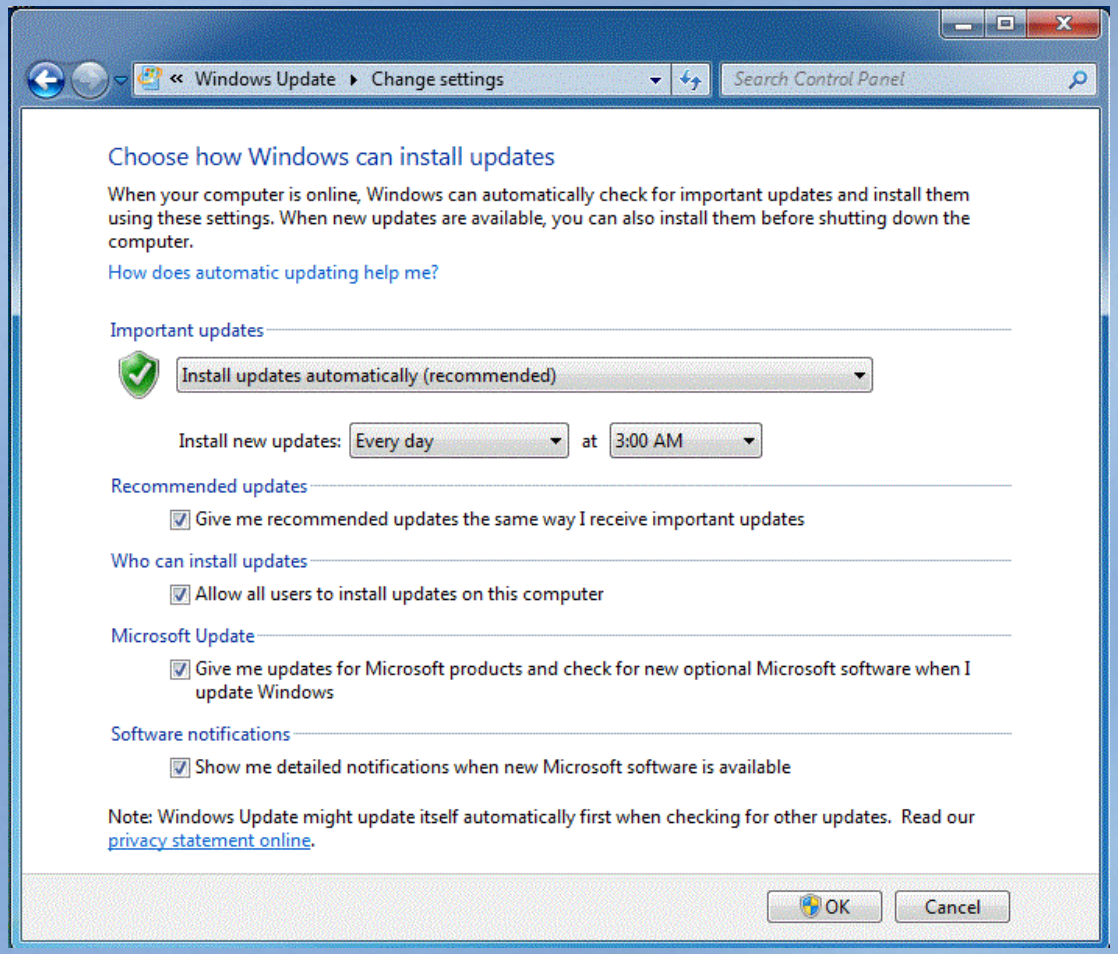
Update Management (continued)



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