

## REVIEW LESSON

MTA Course: 10753 Windows Operating System Fundamentals

Lesson name: Windows Operating System Fundamentals 6.2-6.3

Topic: Understand maintenance tools; understand updates (One 50-minute class period)

File name: 10753\_WindowsOS\_RL\_6.2-6.3

### Lesson Objectives

**6.2:** Understand maintenance tools. *This objective may include but is not limited to:* understanding Disk Defragmenter, Disk Cleanup, Task Scheduler, Action Center, and System Information.

**6.3:** Understand updates. *This objective may include but is not limited to:* understanding Windows® updates, Microsoft® updates, and hotfixes.

### Preparation Details

#### Prerequisite student experiences and knowledge:

This MTA Certification Exam Review lesson is written for students who have learned about Microsoft Windows fundamentals. Students who do not have the prerequisite knowledge and experiences cited in the objective will find additional learning opportunities using resources such as those listed in the “Resources” section at the end of this review lesson.

#### Instructor preparation activities:

- Make copies of the Student Activity document 10753\_WindowsOS\_SA\_6.2-6.3.
- The instructor should have access to an existing system running Windows 7 Professional or a virtual machine with Windows 7 Professional installed for the purpose of demonstrating how to use libraries.

#### Resources, software, and additional files needed for this lesson:

- 10753\_WindowsOS\_SA\_6.2-6.3
- 10753\_WindowsOS\_SA\_6.2-6.3\_key
- 10753\_WindowsOS\_PPT\_6.2-6.3

## **Teaching Guide**

### **Essential Vocabulary**

**critical update**—a broadly released fix for a specific problem, addressing a critical, non-security-related bug.

**fragmentation**—the scattering of parts of a file over different areas of the disk. Fragmentation 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, although usually not severely.

**hotfix**—a single package composed of one or more files used to address a problem in a product. Hotfixes address a specific customer situation, are available only through a support relationship with Microsoft, and may not be distributed outside the customer organization without written legal consent from Microsoft. The terms *Quick Fix Engineering (QFE) update*, *patch*, and *update* have been used in the past as synonyms for *hotfix*.

**service packs**—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. Service packs also may contain a limited number of customer-requested design changes or features. Service packs are broadly distributed and tested by Microsoft, more than any other software updates.

**security update**—a broadly released fix for a specific product, addressing a security vulnerability. A security update is often described as having a severity.

**software notifications**—messages that will inform the user periodically about new programs that can enhance your experiences with the computer and the Internet.

**update**—a broadly released fix for a specific problem, addressing a non-critical, non-security-related bug.

**Windows updates**—additions to software that can help prevent or fix problems, improve how your computer works, or enhance your computing experience.

## **Lesson Sequence**

### **Activating prior knowledge/lesson staging (5 minutes):**

Direct students to answer each question in their notes.

1. What is fragmentation? (Fragmentation is the scattering of parts of a file over different areas of the disk.)
2. Which Windows tool allows you to configure applications to run automatically? (Task Scheduler)
3. What is Disk Defragmenter used for? (It consolidates fragmented files on your hard drive to improve system performance.)

**Lesson activity (40 minutes):**

1. Teacher instruction (20 minutes; see the “Suggested best practices” section below regarding this presentation.)
  - a. Use the included Microsoft PowerPoint® presentation to review maintenance tools and updates.
2. Guided practice (20 minutes)
  - a. Direct the students to complete the Student Activity document 10753\_WindowsOS\_SA\_6.2-6.3.

**Assessment/lesson reflection (5 minutes):**

1. In the same notes that they created for the “Activating prior knowledge/lesson staging” section at the beginning of the class, direct students to check their initial answers and make any changes if necessary.
2. Instruct students to write and submit any questions they have or any topics about which they would like more assistance.
3. After class, look through student responses and follow up with any student requiring additional help.

**Resources:**

- **Microsoft: Improve performance by defragmenting your hard disk**  
*<http://windows.microsoft.com/en-US/windows7/Improve-performance-by-defragmenting-your-hard-disk>*
- **Microsoft: Delete files using Disk Cleanup**  
*<http://windows.microsoft.com/en-us/windows7/Delete-files-using-Disk-Cleanup>*
- **Microsoft: Schedule Disk Cleanup to run regularly**  
*<http://windows.microsoft.com/en-US/windows7/Schedule-Disk-Cleanup-to-run-regularly>*
- **Microsoft TechNet: Update Management Process**  
*<http://technet.microsoft.com/en-us/library/cc700845.aspx>*
- **Microsoft: Windows Update**  
*<http://windows.microsoft.com/en-US/windows7/products/features/windows-update>*

**Suggested best practices:**

- Discuss the importance of update management. Provide examples of when updates should be applied immediately. It is important to stress that service pack updates are not always supported by third-party software developers at release time.
- Due to time constraints, students will not be able to perform any update procedures during the class.