

REVIEW LESSON

MTA Course: 10753 Windows Operating System Fundamentals

Lesson name: Windows Operating System Fundamentals 6.1

Topic: Understand backup and recovery methods (One 50-minute class period)

File name: 10753_WindowsOS_RL_6.1

Lesson Objective

6.1: Connect devices. *This objective may include but is not limited to:* understanding local, online, and automated backup methods; understanding backup options; understanding System Restore, recovery boot options such as Last Known Good Configuration, and various Safe Mode options.

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_6.1.
- The instructor should have access to an existing system running Windows 7 Professional or a virtual machine with Windows 7 Professional installed for the purposes of demonstrating backup and recovery methods.

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

- 10753_WindowsOS_SA_6.1
- 10753_WindowsOS_SA_6.1_key
- 10753_WindowsOS_PPT_6.1

Teaching Guide

Essential Vocabulary

cloud backup—a variation of an online backup with data saved to a cloud location such as Microsoft SkyDrive®.

local backup—a duplicate copy of a program, a disk, or data, made either for archiving purposes or for safeguarding valuable files from loss if the active copy is damaged or destroyed. Typically the data is saved to an external drive or media.

online backup—a duplicate copy of a program, a disk, or data, made either for archiving purposes or for safeguarding valuable files from loss if the active copy be damaged or destroyed. It is saved to a remote location or service across the Internet typically through an encrypted session.

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.

system image—an exact copy of a drive. By default, a system image includes the drives required for Windows to run. It also includes Windows and your system settings, programs, and files.

Lesson Sequence

Activating prior knowledge/lesson staging (5 minutes):

Direct students to answer each question in their notes.

1. What is included in a system image backup? (A complete image of the drive. A system image includes Windows and your system settings, programs, and files.)
2. What advanced option allows you to start Windows with the last registry and driver configuration that worked successfully? (Last Known Good Configuration.)
3. How are previous versions used? (You can use previous versions to restore files or folders that you accidentally modified or deleted, or that were damaged.)

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 backup and recovery methods.
2. Guided practice (20 minutes)
 - a. Direct the students to complete the Student Activity document 10753_WindowsOS_SA_6.1.

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: Backup and restore: frequently asked questions**
<http://windows.microsoft.com/en-US/windows7/Back-up-and-restore-frequently-asked-questions>
- **Microsoft: System repair and recover**
<http://windows.microsoft.com/en-US/windows7/help/system-repair-recovery>
- **Microsoft: Backup and recovery strategies for IT pros**
<http://windows.microsoft.com/en-US/windows7/Backup-and-recovery-strategies-for-IT-pros>
- **Microsoft: What is a system image?**
<http://windows.microsoft.com/en-US/windows7/What-is-a-system-image>
- **Microsoft: TechNet: What is Imagex?**
[http://technet.microsoft.com/en-us/library/cc722145\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/cc722145(WS.10).aspx)
- **Microsoft: What is safe mode?**
<http://windows.microsoft.com/en-US/windows7/what-is-safe-mode>
- **Microsoft: Advanced startup options including safe mode**
<http://windows.microsoft.com/en-US/windows7/Advanced-startup-options-including-safe-mode>

Suggested best practices:

System backups and restores are time-consuming. It is not feasible to have the students perform a system restore or create a system image. If a demonstration or virtual system is available, begin a system backup to show the amount of time a system backup typically requires. It is also important to discuss the variables that affect backup duration, such as the following:

- The speed of the computer
- The speed of connection between the computer and the external device
- The amount of data being archived