

REVIEW LESSON

MTA Course: 98-365 Windows Server® Administration Fundamentals

Lesson name: Windows Server Administration Fundamentals 1.3

Topic: Understand server installation options

(One 50-minute class period)

File name: WinServerFund_RL_1.3

Lesson Objective

1.3: Understand server installation options. *This objective may include but is not limited to:* choosing correct OS version; partitioning; F8 options; server core vs. full; interactive install; unattended install; automated install using Windows® Deployment Services (WDS); upgrade vs. clean install; and firmware updates including BIOS.

Preparation Details**Prerequisite student experiences and knowledge**

This MTA Certification Exam Review lesson is written for students who have learned about Windows Server Administration 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 Microsoft® resources and Web links at the end of this review lesson.

Students should have successfully performed a Windows Server 2008® R2 installation.

Students should understand the concept of BIOS and communications with the OS.

Instructor preparation activities

- Make copies of Student Activity WinServerFund_SA_1.3.
- Instructor should have access to an existing Server 2008 R2 machine or virtual machine for demonstration purposes of server installation options.
- The instructor should have access to an existing Windows 7® workstation with Windows Automated Installation Kit installed. The instructor should also create an image of the existing station in order to demonstrate the Windows System Image Manager.
- Flash Drive/CD bootable device to demonstrate ImageX.exe

Resources, software, and additional files needed for this lesson

- WinServerFund_PPT_1.3
- WinServerFund_SA_1.3
- WinServerFund_SA_1.3_Key

Teaching Guide**Essential Vocabulary**

basic input/output system (BIOS)—on PC compatible computers this includes the set of essential software routines that configures and tests hardware at startup, supports the transfer of data among hardware devices, including the date and time.

firmware—software routines stored in the read-only memory (ROM) of a device. Examples include startup routines and low-level input/output instructions.

partition—A logically distinct portion of a storage device that functions as though it is a physically separate unit.

unattended installation—A process of automating operating system installations by providing the setup/install file with a configuration file or “answer file” to perform and answer normal install tasks and questions.

Windows Deployment Services (WDS)— Windows Deployment Services enables you to deploy Windows operating systems over the network so that you do not have to install each operating system directly from a CD or DVD. Windows Deployment Services is the updated and redesigned version of Remote Installation Services (RIS) from Windows Server 2003.

Lesson Sequence**Activating prior knowledge/lesson staging (Anticipatory Set: 10 minutes)**

1. Student prompt (PowerPoint® slide 3): Allow students to work in pairs. On a piece of paper, have the students answer: What is an unattended installation and what is required to perform an unattended installation?
2. Give students a few minutes to respond, allowing them to work until they have finished.
3. As time permits, call on a few students to report to the group with their responses.

Lesson activity (40 minutes)**1. Teacher Instruction (20 minutes)**

- Use the included PowerPoint slideshow to review the different requirements and options for performing installations.
- At the end of the slideshow, ask the students to answer the review questions. Small-group discussions or a “think-pair-share” approach may be beneficial.
 - Show the question and give the students 1 minute to process the question and come up with answers.
 - Then give the students 2 minutes to discuss answers with a partner.
 - Finally, have each pair of students share their answers with the whole group.
 - Repeat for each additional review question.

2. Guided Practice (20 minutes).

- Direct students to complete WinServerFund_SA_1.3. Due to time restraints, students have the option to perform the optional Tab activity on their own.
- If time allows, you may review all or part of the worksheet, discussing student responses to the questions.

Assessment/lesson reflection (10 minutes)

1. Use a “ticket out the door” to encourage the students to process the review and to give an opportunity for additional questions. The last slide in the PowerPoint facilitates this exercise.
 - **Note:** A “ticket out the door” is an informal assessment strategy used to provide closure and give the instructor an additional opportunity to check for understanding. Students complete the exercise and give it to the instructor as they leave the room. This ensures that every student participates.
2. At the bottom of the page, tell students to write down any questions they have or any topics about which they would like more assistance.
3. After class, look through the student responses and follow up with any student requiring additional help.

Microsoft resources and Web links

- **Microsoft: Windows Server 2008 R2: System Requirements**
<http://www.microsoft.com/windowsserver2008/en/us/system-requirements.aspx>
- **Microsoft: Windows Server 2008 R2: Editions Overview**
<http://www.microsoft.com/windowsserver2008/en/us/r2-editions-overview.aspx>
- **Microsoft TechNet: Windows Deployment Services Getting Started Guide**
[http://technet.microsoft.com/en-us/library/cc771670\(W.S.10\).aspx](http://technet.microsoft.com/en-us/library/cc771670(W.S.10).aspx)
- **Microsoft TechNet: What Is Unattended Installation?**
[http://technet.microsoft.com/en-us/library/cc785644\(W.S.10\).aspx](http://technet.microsoft.com/en-us/library/cc785644(W.S.10).aspx)

Suggested best practices

- It is beneficial to demonstrate the installation of Windows Server 2008 R2 in a virtual environment during the lecture portion, reacquainting the students with the installation process. For the purposes of demonstration, the installation does not need to be completed. The instructor can toggle between the presentation and installation to highlight the few screens the students will encounter during the install process.
- If possible, demonstrate restoring an image to a blank hard drive. This emphasizes the relevance of using an imaging tool for either backing up systems or duplicating multiple systems with increased efficiency.
- Windows Complete Backup is a helpful tool.