

## REVIEW LESSON

MTA Course: 98-366 Networking Fundamentals

Lesson name: Understanding Network Infrastructures 1.1

Topic: Understand the concepts of the Internet, intranet, and extranet  
(One 50-minute class period)

File name: NetFund\_RL\_1.1

### Lesson Objective

**1.1:** Understand the concepts of the Internet, intranet, and extranet. *This objective may include but is not limited to:* VPN, security zones, firewalls.

### Preparation Details

#### Prerequisite student experiences and knowledge

This MTA Certification Exam Review lesson is written for students who have learned about networking 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.

#### Instructor preparation activities

- Make copies of Student Activity NetFund\_SA\_1.1\_1
- Make copies of Student Activity NetFund\_SA\_1.1\_2

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

- NetFund\_PPT\_1.1
- NetFund\_SA\_1.1\_1
- NetFund\_SA\_1.1\_1\_Key
- NetFund\_SA\_1.1\_2

## **Teaching Guide**

### **Essential Vocabulary**

**Internet**—a public worldwide computer network that anyone can access and use; allows people to communicate and exchange information.

**intranet**—a computer network; includes some of the same technologies as the Internet, but is strictly internal and confidential to the organization and is not connected to the Internet directly.

**extranet**—an extension of a corporate intranet and some combination of public and private networks to facilitate communication with the corporation's suppliers, customers, and associates.

**firewalls**—a computer system or network firewall designed to permit authorized communications while blocking unauthorized access.

**security zone**—business/organization's need for physical and logical boundaries for accessing, controlling, and securing information throughout an organization's network.

**virtual private network (VPN)**—an independent network created with specialized software over a public network such as the Internet that allows secure communication on the private network.

## **Lesson Sequence**

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

1. Student prompt (available in the Microsoft PowerPoint® file): On a sheet of paper, explain how the Internet was created by the US Department of Defense, when the project started, and the impact it has had on society. Then, discuss the uses of a virtual private network (VPN) and relate sample situations where it is used.
2. Have students form groups of three to discuss their answers.
3. Give students a few minutes to respond, allowing them to work until they have finished.
4. As time permits, call on a few students to report to the group with their responses.

### **Lesson activity (30 minutes)**

1. Teacher Instruction (20 minutes)
  - Use the included PowerPoint slideshow to review the Internet, intranets, extranets, virtual private networks, security zones, and firewalls.

## 2. Guided Practice (10 minutes)

- Direct students to complete the worksheet NetFund\_SA\_1.1\_1, identifying the different types of networks and deciding which application types are appropriate for different situations.
- If time allows, you may review all or part of the worksheet, discussing student responses to the questions.

## Assessment/lesson reflection (10 minutes)

1. As indicated in the slideshow, put students in small groups (3–4 students) to complete the network design activity from NetFund\_SA\_1.1\_2.
  - It may be necessary for students to finish outside of class, or to allow additional time during the following class session.
  - If time permits, have groups informally present their designs to the class. Encourage students to discuss the different designs they created.

## Microsoft resources and Web links

- **About.com – Intranets and Extranets**  
[http://compnetworking.about.com/od/filetransferprotocol/Intranets\\_and\\_Extranets.htm](http://compnetworking.about.com/od/filetransferprotocol/Intranets_and_Extranets.htm)
- **History of Things – History of the Internet**  
<http://www.historyofthings.com/history-of-the-internet>
- **How Stuff Works – How Intranets Work**  
<http://communication.howstuffworks.com/how-intranets-work.htm>
- **Microsoft – Security Zones**  
<http://support.microsoft.com/kb/315933>
- **Microsoft – TechNet: Security**  
<http://technet.microsoft.com/en-us/security/default.aspx>
- **Wikipedia – Extranet**  
<http://en.wikipedia.org/wiki/Extranet>
- **Wikipedia – Intranet**  
<http://en.wikipedia.org/wiki/Intranet>
- **Wikipedia – Firewall**  
<http://en.wikipedia.org/wiki/Firewall>