

REVIEW LESSON

MTA Course: 98-366 Networking Fundamentals
Lesson name: Understanding Protocols and Services
Topic: Understand names resolution
(One 50-minute class period)
File name: NetFund_RL_3.4

Lesson Objective

3.4: Understand names resolution. *This objective may include but is not limited to:* DNS, WINS, name resolution process steps.

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_3.4

Resources, software, and additional files needed for this lesson

- NetFund_PPT_3.4
- NetFund_SA_3.4
- NetFund_SA_3.4_Key

Teaching Guide

Essential Vocabulary

DNS server—a server that maintains a database of mappings of DNS domain names to various types of data, such as IP addresses.

domain name system (DNS)—a hierarchical, distributed database that contains mappings of DNS domain names to various types of data, such as IP addresses. DNS enables the specification of computers and services by user-friendly names, and it also enables the discovery of other information stored in the database.

domain name resolution—the resolving of hostnames to their mapped IP address by converting domain names to their corresponding IP address.

host name—the name of a computer or device on a network. Users specify computers on the network by their host names. To find another computer, its host name must either appear in the hosts file or be known by a DNS server. For most Windows®-based computers, the host name and the computer name are the same.

host name resolution—the process of resolving a host name to a destination IP address.

Lmhosts file—a local text file that maps NetBIOS names to IP addresses for hosts that are located on remote subnets.

NetBIOS name—a 16-byte name of a process using NetBIOS.

NetBIOS name resolution—the process of resolving a NetBIOS name to an IPv4 address.

Windows Internet Name Service (WINS) —the Microsoft® implementation of a NetBIOS name server.

Lesson Sequence

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

1. Student prompt (see PowerPoint® slide 3):
 - a. List the host name of 4 of your favorite websites, such as www.microsoft.com.
 - b. Visit <http://www.hcidata.info/host2ip.htm>
 - c. Enter the host names, one at a time, and click on the “Find IP Address” button.
 - d. Record the IP address for each site.
 - e. Describe the process of how the computer finds the IP address from a host name.

- f. Describe the process of how the computer finds a host name from an IP address.
2. Give students a few minutes to complete the task.
3. Have the students share description of the processes.

Lesson activity (30 minutes)

1. Teacher Instruction

Use the included PowerPoint presentation to review DNS, WINS, names resolution, name resolution process steps

Assessment/lesson reflection (10 minutes)

1. Students complete the Student Activity NetFund_SA_3.4
2. As time permits, call on a few students to report to the group with their responses.

Microsoft resources and Web links

- **CompTechDoc: Name Resolution**
<http://www.comptechdoc.org/os/windows/wintcp/wtcpname.html>
- **Informit: Name Resolution**
<http://www.informit.com/articles/article.aspx?p=102617&seqNum=5>
- **Microsoft: Domain Name Resolution, Web Services and IIS**
<http://www.microsoft.com/technet/prodtechnol/WindowsServer2003/Library/IIS/77e6f873-a30e-4c6b-8ab6-26aaa6c8754e.mspx?mfr=true>
- **Microsoft: Host Name Resolution**
<http://technet.microsoft.com/en-us/library/bb727005.aspx>
- **Microsoft: Name Resolution**
<http://technet.microsoft.com/en-us/library/cc751138.aspx>
- **TCPIP Guide: DNS Name Resolution**
http://www.tcpipguide.com/free/t_DNSNameResolutionProcess-2.htm
- **Wikipedia: Name Server**
http://en.wikipedia.org/wiki/Name_server

Additional notes to the instructor

- This site could be used as an alternative to the one listed in the Anticipatory Set:
<http://www.webyield.net/domainquery.html>