

# Windows Me Internet Domain Names

## OBJECTIVES

1. Examine the navigation functions of the Microsoft Internet Explorer (IE) web browser.
2. Visit Internet sites by FQDN.
3. Visit Internet sites by IP address.
4. Visit Internet sites by URL.
5. Use the TCP/IP utility NETSTAT to view the address of an Internet connection, including the port number.
6. Use the TCP/IP utility TRACERT to view a trace of your connection.



Networking

## RESOURCES

1. Marcraft 8000 Trainer with 64 MB RAM
2. Windows Me operating system (installed)
3. Internet access through a network connection or modem
4. Internet Explorer (installed)

## DISCUSSION

The Domain Name System (DNS) was created in 1984 in order to make navigation on the Internet easier. DNS allows you to enter the logical name (e.g. `www.microsoft.com`), which is easy to remember and will rarely change, instead of the formal IP address (e.g. `207.68.137.36`), which may change quite frequently. You experience DNS in action every time you visit an Internet web page. The page's readable Internet address will usually appear in the Address bar of the browser. Since computers on the web actually connect by means of numeric IP addresses and not by name, DNS must map a particular Internet address (e.g., `www.mic-inc.com`) to a specific IP address number (e.g. `206.61.210.100`).

When you enter the address `www.microsoft.com`, you will first be directed to a root DNS server that knows all of the .COM entries on the Internet. The root DNS server provides the IP addresses of all of the DNS servers providing services to the `microsoft.com` domain. Now you will be put in contact with one of the `microsoft.com` DNS servers to get the IP address for the `www.microsoft.com` web server.

DNS uses a human-readable name called a Fully Qualified Domain Name (FQDN). An FQDN includes a computer's host name and the associated domain name. For example, given a local host server with a name of "accounting", and your network with a domain name of "mic-inc.com", the FQDN would be "accounting.mic-inc.com"; or if the host is a World Wide Web server, the FQDN would be usually be "www.mic-inc.com".

*NOTE: Although DNS names are not case sensitive, they are usually written in lowercase.*

## PROCEDURE - 40

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The FQDN suffix, technically known as the Top-level Domain, defines the type of organization or country of origin associated with an address. Generally, commercial site addresses end with .com, government sites end with .gov, military sites end with .mil, educational institutions end with .edu, and non-profit organization end in .org. Sites from locations outside the United States end with a two-letter suffix, such as .uk for the United Kingdom (Britain) and .ca for Canada.

The format for reading the host and domain information from the IP address is defined when you use a subnet mask. For example, by using the most typical subnet mask, a Class C (255.255.255.0), you instruct TCP/IP to read the first three sets of numbers in the IP address as the domain name, and the last set would designate the address of a host computer on the network. For example, if ftp.microsoft.com is associated with the IP address 207.68.137.36, the first three numbers (207.68.137.xxx) would designate the commercial domain "microsoft.com", and the last number (xxx.xxx.xxx.36) would designate the host FTP server "ftp".

DNS will map an FQDN to the IP address of a specific server or host computer. But in order to reach a specific file on the web site you must enter a string of information called a Uniform Resource Locator (URL). For example, the URL **http://www.yale.edu:80/admissions/index.html** provides the following information:

http://	This host server uses the Hyper-Text Transfer Protocol.
www	This is a World Wide Web server.
yale	This web server provides services for Yale University.
edu	This is an educational institution.
:80	This is the number of the port accessed on this server.
/admissions	This is the name of the subdirectory being accessed; in this case, the Admissions Department.
/index.html	This is the name of the file to be displayed.



Networking

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## PROCEDURE

In this lab procedure you will navigate a browser to a web site using an FQDN, an IP address and a URL. You will then download a file and examine the connection address using the NETSTAT and TRACERT TCP/IP utilities.

*NOTE: Over time, the IP addresses and hyperlinks used in this lab are subject to change. Try to follow along as best you can using the links provided.*

### 1. Run the Internet Explorer browser

- ☐ a. Boot to the Windows Me desktop.
- ☐ b. Click the Internet Explorer icon on the quick launch tool bar.

### 2. Navigate the World Wide Web using an FQDN

- ☐ a. Click in the Address box to highlight the current address.
- ☐ b. Type **www.cisco.com** into the box and press the ENTER key. This homepage should be similar to Figure 40-1.

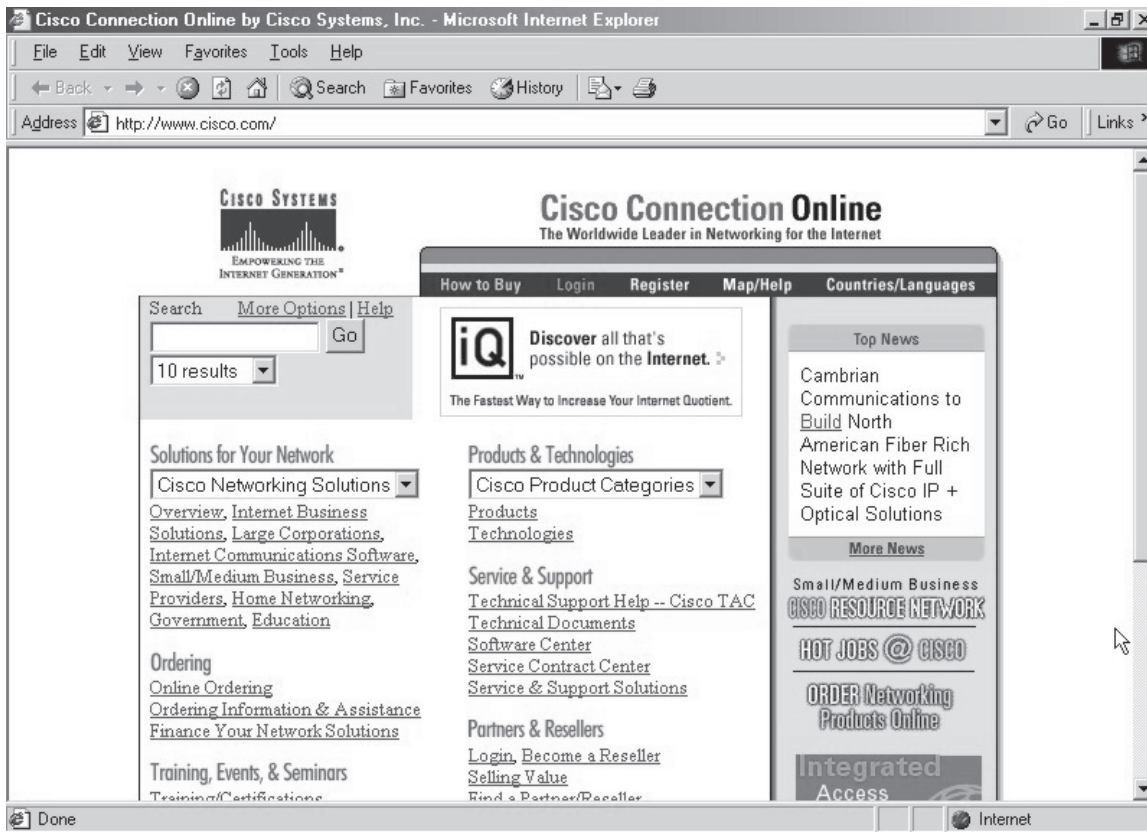


Figure 40-1: The Cisco Homepage

- \_\_\_ c. Record the address shown in the Address box in Table 40-1.
- \_\_\_ d. Locate and click the link to the Map/Help page.
- \_\_\_ e. Record the address shown in the Address box in Table 40-2.
- \_\_\_ f. Click in the Address box to highlight the current address.
- \_\_\_ g. Type **www.windowsupdate.com** into the box and press the ENTER key.
- \_\_\_ h. Record the address shown in the Address box in Table 40-3.

### 3. Navigate the World Wide Web using an IP address

- \_\_\_ a. Click in the Address box to highlight the current address.
- \_\_\_ b. Type **206.61.210.100** into the box and press the ENTER key. This homepage should be similar to Figure 40-2.
- \_\_\_ c. Record the name of the company, and the FQDN address shown in the Address box in Table 40-4.
- \_\_\_ d. Click in the Address box to highlight the current address.
- \_\_\_ e. Type **198.133.219.25** into the box and press the ENTER key.

## PROCEDURE - 40



Figure 40-2:  
The Marcraft  
Homepage

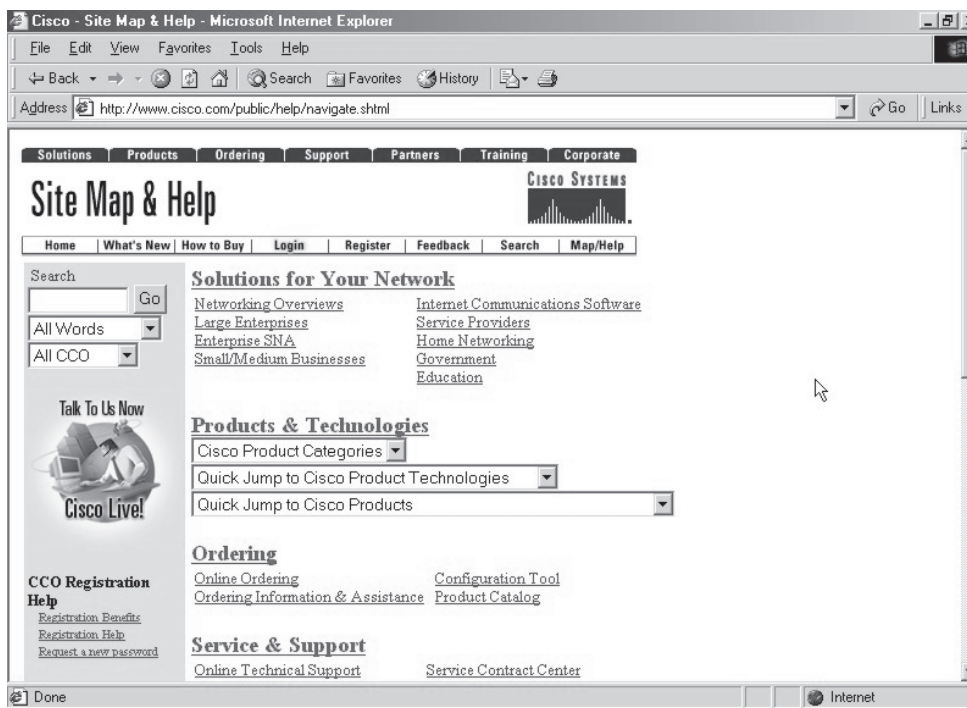


Figure 40-3: The Cisco Site Map

#### 4. Navigate the World Wide Web using a URL

- Click in the Address box to highlight the current address.
- Type the address you recorded in Table 40-2 into the box and press the ENTER key. The web page should be similar to Figure 40-3.

5. Establish an active Internet connection by downloading a file
- \_\_\_ a. Click in the Address box to highlight the current address.
  - \_\_\_ b. Type **www.tucows.com** into the box and press the ENTER key to go to the Tucows download site.
  - \_\_\_ c. Click the link labeled Games.
  - \_\_\_ d. Choose the your region from the list, then click the link for the nearest mirror server.
  - \_\_\_ e. In the Games navigation bar to the left, click the link labeled Download Software.
  - \_\_\_ f. In the Action section, click the link labeled First Person Shooters.
  - \_\_\_ g. Click the link labeled Download Now for the first listed file.
  - \_\_\_ h. Click the OK button and then click the Save button to begin downloading the file.

6. Open the Command Prompt window and run the NETSTAT utility
- \_\_\_ a. Minimize windows to view the desktop and double-click the MS-DOS Prompt shortcut to open it.
  - \_\_\_ b. Type **netstat** at the prompt and press the ENTER key.
  - \_\_\_ c. Record the Foreign Addresses of all connections in Table 40-5.
  - \_\_\_ d. Type **netstat -n** at the prompt and press the ENTER key. The window should appear similar to Figure 40-4.
  - \_\_\_ e. Record the Foreign Address of all connections in Table 40-6.

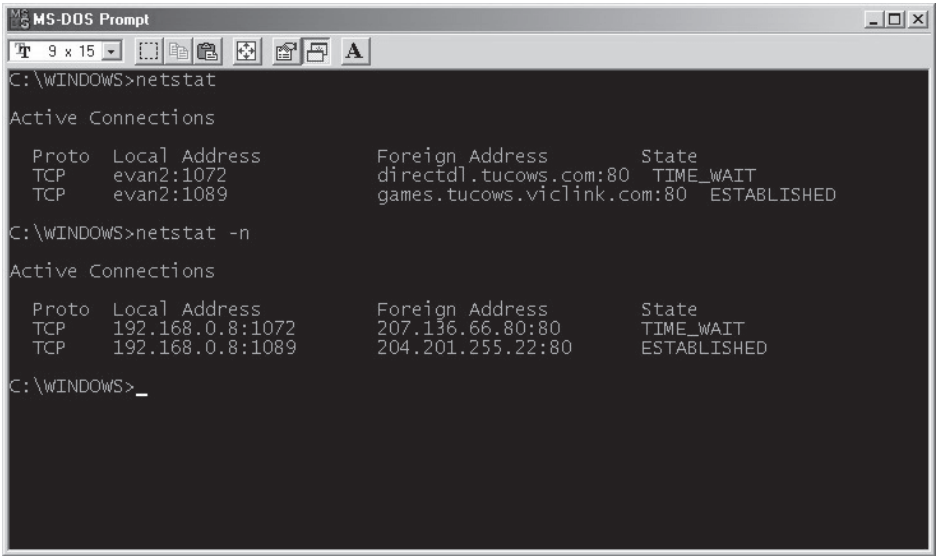


Figure 40-4: The NETSTAT Information

7. Run the TRACERT utility
- \_\_\_ a. Type **tracert -h 10 FQDN** at the command prompt, where *FQDN* is the bottom FQDN address you recorded in Table 40-5. Press the ENTER key.
  - \_\_\_ b. Record the IP address associated with the FQDN you just entered in Table 40-7.
  - \_\_\_ c. Close the MS-DOS Prompt window, and cancel or finish the download.
  - \_\_\_ d. Close all open windows, and shut down the computer.

TABLES

Table 40-1

Cisco Homepage Address:	
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Table 40-2

Map/Help Page Address:	
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Table 40-3

## PROCEDURE - 40

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<b>Windows Update Page Address:</b>	
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**Table 40-4**

<b>Company Name:</b>	
<b>FQDN Address:</b>	

**Table 40-5**

NETSTAT Connections	
<b>Foreign Addresses:</b>	

**Table 40-6**

NETSTAT -N Connections	
<b>Foreign Addresses:</b>	

**Table 40-7**

<b>FQDN IP Address:</b>	.
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### Feedback

## LAB QUESTIONS

1. What two parts make up an FQDN?
2. Name three common domain suffixes.
3. What additional information does a URL show, compared to an FQDN?
4. What does a subnet mask do?
5. What happens in the DNS system when you enter a FQDN address in your web browser's Address box?