

Lab 7.3.3.a Examining Cached DNS Information on a DNS Server

Objective

- View the cached DNS information on a Windows DNS server after making a DNS request that is looked up.

Background / Preparation

In this lab, you will examine the information that is cached in a local DNS server after it has performed a lookup. You will see the configured Root servers on the DNS server. You will also see the cached top level, second level, and host records within each level after the lookup is complete. It is important to understand that the entire process of finding the information using the various levels of the DNS hierarchy only takes fractions of a second to complete.

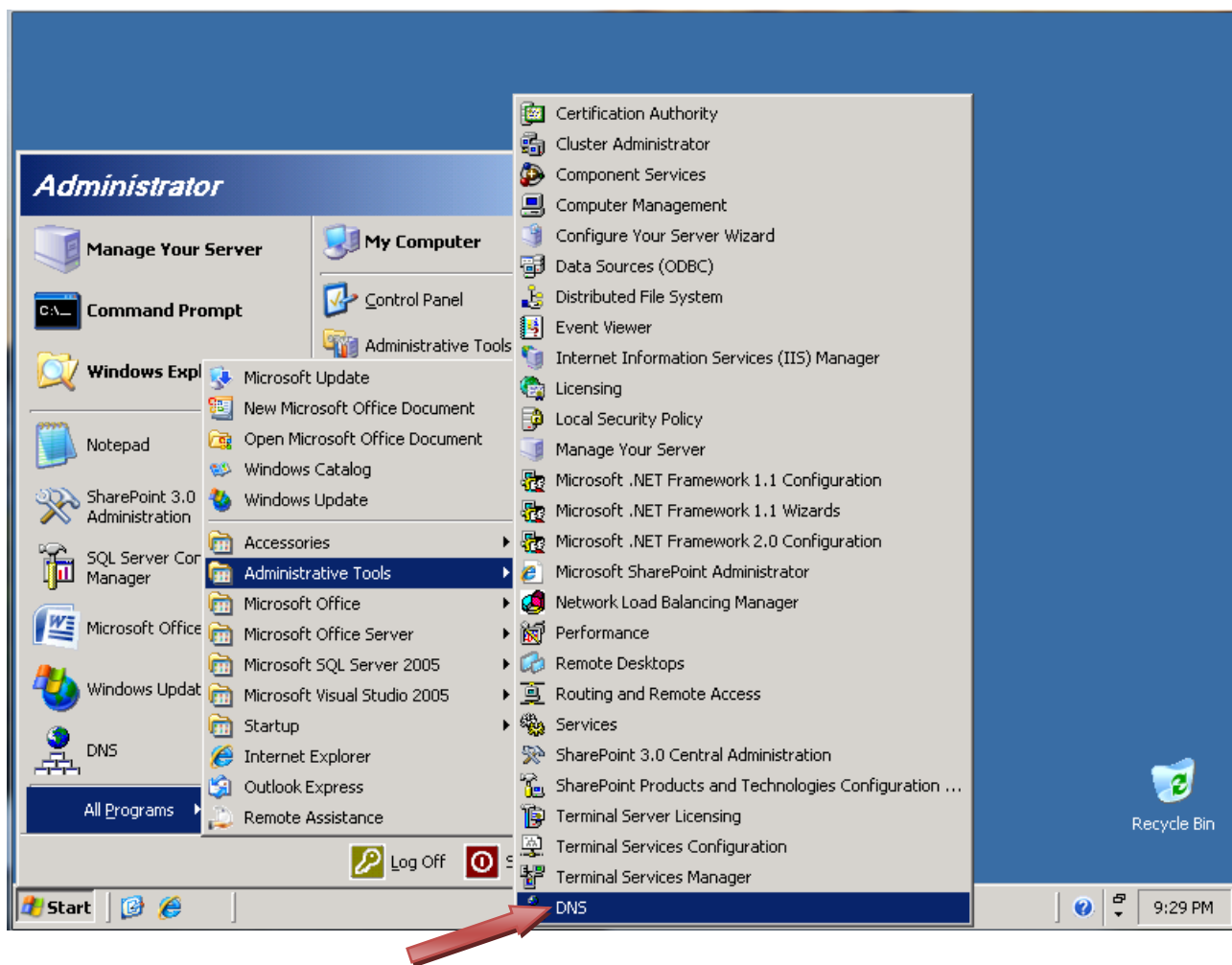
The following resources are required:

- Windows 2003 Server with DNS running
- Administrative access to server
- Internet connectivity

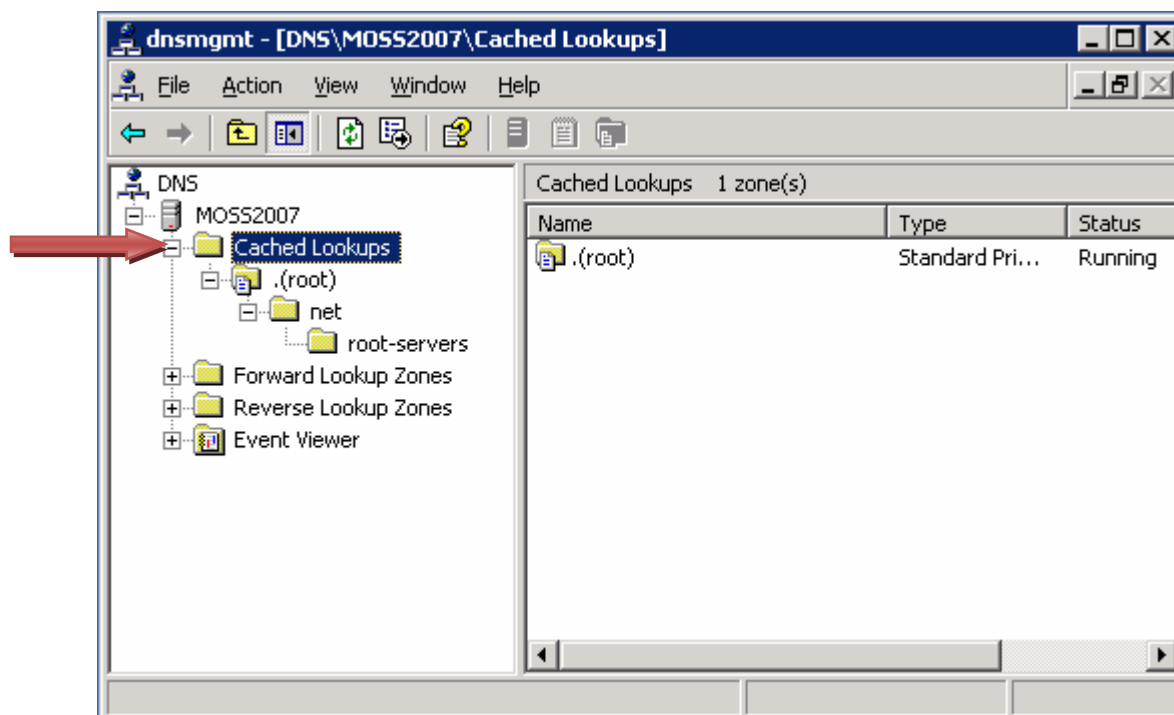
NOTE: If you do not have access to a Windows DNS server, the instructor may demonstrate this lab. If the equipment is not available to perform the lab, or if it cannot be demonstrated, read through the steps of the lab to gain a better understanding of DNS and how DNS servers operate.

Step 1: Use the Windows Server DNS Administrative Tool

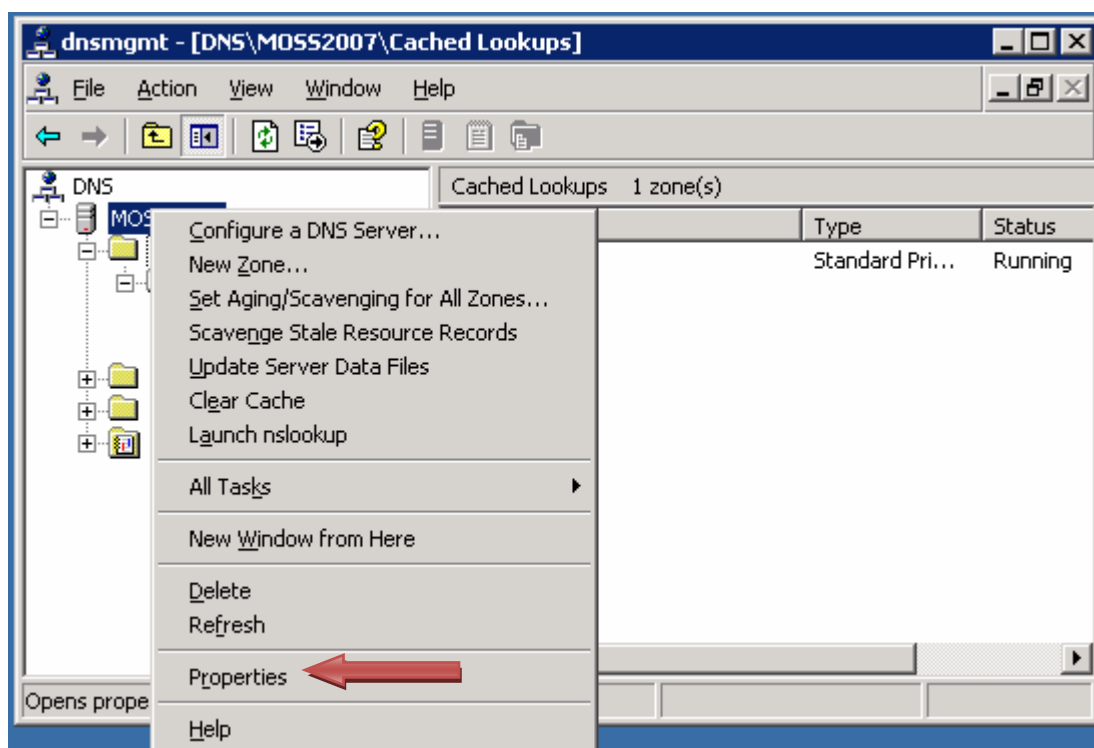
- a. Click **Start > All Programs > Administrative Tools**, and then click **DNS** to launch the DNS administrative tool.



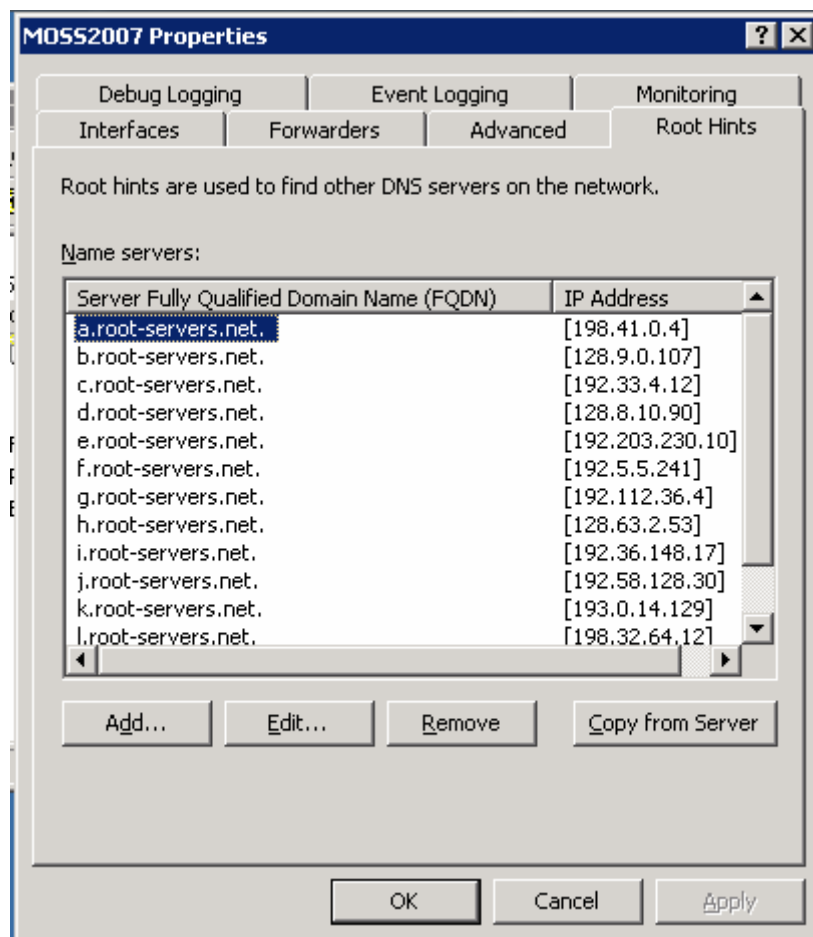
- b. Expand the **Cached Lookups** folder and all subfolders to see that there are no cached lookups.



- c. Next, to verify that the server has been configured to use the Root servers on the Internet, right-click the DNS server and click **Properties**.

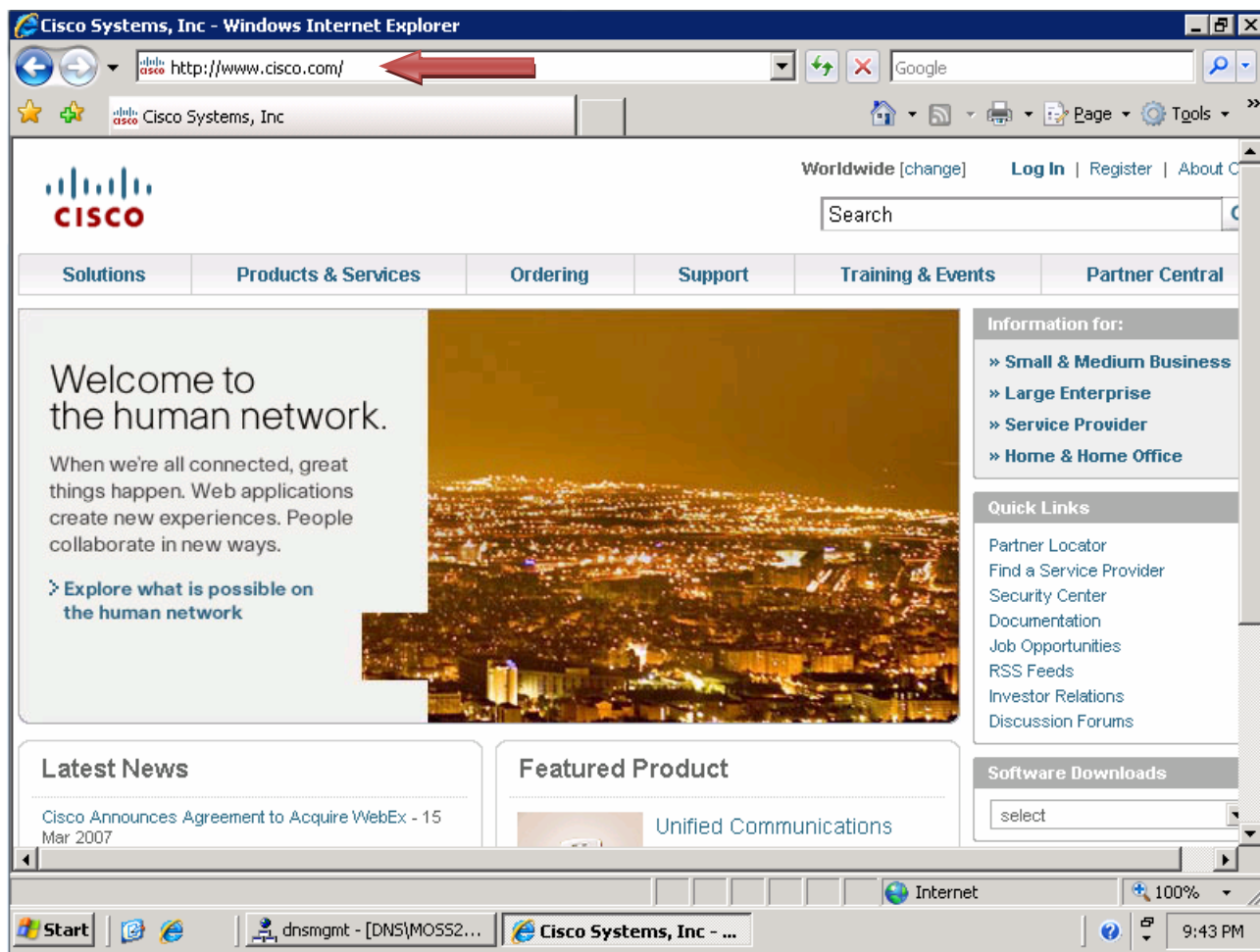


- d. From the **Properties** dialog box, select the **Root Hints** tab and verify the presence of the Root servers. Click **OK** to close the **Properties** dialog box.



Step 2: Perform a DNS lookup

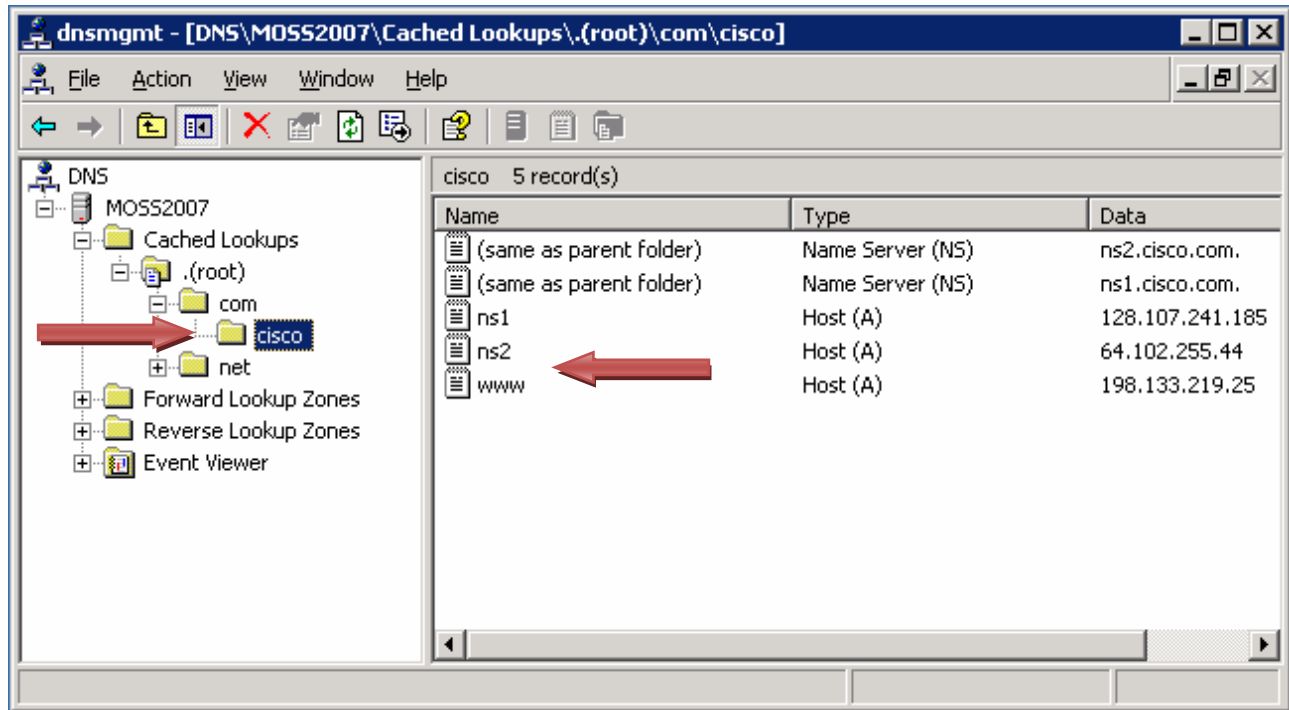
On the DNS server, open Internet Explorer and browse to <http://www.cisco.com>. Once the web page opens, close the web browser.



Step 3: Examine the Cached DNS entries

- Switch back to the DNS Administrative tool.
- From the **Cached Lookups** root folder, click the **Refresh** button on the toolbar.
- Expand all the subfolders below the **Cached Lookups** folder to reveal the cached DNS entries.

Notice that you now have a folder structure that expands down to Cisco. Within the Cisco folder notice the two Name Server type records, which identify the two name servers that manage the Cisco.com DNS zone. Also notice the Host record for www that maps to 198.133.219.25.



Step 4: Reflection

- The DNS server had to do a query to the cisco.com domain name servers to resolve the server name (www.cisco.com) to an IP address. What do you think would happen the next time this website is visited again within a few minutes?

- What would happen if there are no requests for this website for a longer period of time?
