IT Essentials 5.0

6.3.2.9 Lab - Configure a NIC to Use DHCP in Windows XP

Introduction

Print and complete this lab.

In this lab, you will configure an Ethernet NIC to use DHCP to obtain an IP address and test connectivity between 2 computers.

Recommended Equipment

- Linksys E2500 router
- Two computers running Window XP Professional
- Ethernet patch cables

Step 1

For Host A, plug one end of the Ethernet patch cable into "Port 1" on the back of the router.

For Host A, plug the other end of the Ethernet patch cable into the network port on the NIC in your computer.

For Host B, plug one end of the Ethernet patch cable into "Port 2" on the back of the router.

For Host B, plug the other end of the Ethernet patch cable into the network port on the NIC in your computer.

Plug in the power cable of the router if it is not already plugged in.

Turn on both computers and log on to Windows in Host A as an administrator.

Click Start > Control Panel > Network Connections.

The "Network Connections" window opens.

S Network Connections				
File Edit View Favorites To	ools Advanced Help			A.
🜀 Back + 🕥 + 🏂 🎾	Search 😥 Folders 🛄 🔹			
Address 🔇 Network Connections				💌 芛 Go
	Name	Туре	Status	Device Name
Network Tasks Create a new connection Change Windows Firewall settings Disable this network device Rename this connection Change settings of this	LAN or High-Speed Internet	LAN or High-Speed Inter LAN or High-Speed Inter LAN or High-Speed Inter	Disabled Network cable unplugged Connected	Cisco Systems VPN Adapter Intel(R) PRO/1000 PL Ne Intel(R) PRO/Wireless 39
connection	~ <			>
Intel(R) PRO/1000 PL Network Connec	tion			

Step 2

Right-click Local Area Connection, and then choose Properties.

The "Local Area Connection Properties" window opens.

🕂 Local Area Connection Properties 🛛 🔹 💽						
General Authentication Advanced						
Connect using:						
Intel(R) PR0/1000 PL Network Conn Configure						
This connection uses the following items:						
<						
Install Uninstall Properties						
Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.						
 ✓ Show icon in notification area when connected ✓ Notify me when this connection has limited or no connectivity 						
OK Cancel						

What is the name and model number of the NIC in the "Connect using:" field?

What are the items listed in the "This connection uses the following items:" field?

Step 3

Select Internet Protocol (TCP/IP).

Click Properties.

The "Internet Protocol (TCP/IP) Properties" window opens.

Internet Protocol (TCP/IP) Properties					
General Alternate Configuration					
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.					
Obtain an IP address automatically					
OUse the following IP address: —	Use the following IP address:				
IP address:					
Subnet mask:	· · · · · ·				
Default gateway:					
 Obtain DNS server address auto 	omatically				
OUse the following DNS server a	ddresses:				
Preferred DNS server:					
Alternate DNS server:					
	Advanced				
	OK Cancel				

What is the IP address, Subnet mask, and Default gateway listed in the fields of the "Use the following IP address:" area?

Select the Obtain an IP address automatically radio button, if it is not already selected.

Select the Obtain DNS server address automatically radio button, if it is not already selected.

Click OK.

The "Internet Protocol (TCP/IP) Properties" window closes.

🕹 Local Area Connection Properties 🛛 🔹 💽					
General Authentication Advanced					
Connect using:					
Intel(R) PR0/1000 PL Network Conn Configure					
This connection uses the following items:					
✓					
Install Uninstall Properties					
Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.					
 Show icon in notification area when connected Notify me when this connection has limited or no connectivity 					
OK Cancel					

Click OK.

Step 4

Check the lights on the back of the NIC. These lights will blink when there is network activity.

Choose Start > Run....

The "Run" window opens.



Type **cmd** and click **OK**.

The "cmd.exe" window opens.

📾 C:\WINDOWS\system32\cmd.exe	- 🗆	×
Microsoft Windows XP [Version 5.1.2600] (C) Copyright 1985-2001 Microsoft Corp.		-
C:\Documents and Settings\glambeth>ipconfig /all		
vindows IP Configuration		
Host Name : glamb Primary Dns Suffix : amer.cisco.com Node Type : Hybrid IP Routing Enabled : No WINS Proxy Enabled : No DNS Suffix Search List : cisco.com		
Ethernet adapter Wireless Network Connection:		
Connection-specific DNS Suffix : cisco.com Description : Intel(R) PRO/Wireless 3945ABG Net k Connection : Intel(R) PRO/Wireless 3945ABG Net Physical Address : 00-13-02-AD-BB-BB Dhep Enabled : : : Yes Autoconfiguration Enabled : : Yes IP Address : : : : : : : : : : : : : : : : : : :	twor 5 PM	
Lease Expires Saturday, February 03, 2007 7:00 AM	:53	-

Type **ipconfig /all**, and then press the **Enter** key.

What is the IP address of the computer?

What is the subnet mask of the computer?

What is the default gateway of the computer?

What are the DNS servers for the computer?

What is the MAC address of the comptuer?

Is DHCP Enabled?

What is the IP address of the DHCP server?

On what date was the Lease Obtained?

On what date does the Lease Expire?

Step 5

Type ping your IP address. For example, ping 192.168.1.103

Network Connections
File Edit View Favorites Tools Advanced Help
Search 💫 - 🏂 🔎 Search 🎼 Folders 📰 -
Address 🔍 Network Connections 🔍 🄁 Go
Network Tr Image: Create connection connection specific DNS Suffix :: Image: Create connection conn
Start C:\WINDOWS\syste Network Connections

Write one of the replies of your ping command.

If the ping was not successful, ask the instructor for assistance.

Step 6

Login to Host B as an administrator and make sure the **Obtain an IP address automatically** and the **Obtain DNS server address automatically** radio buttons are selected.

Click OK > OK.

Open a command window.

Type ipconfig /all.

What is the IP address of the computer?

What is the subnet mask of the computer?

What is the default gateway of the computer?

What are the DNS servers for the computer?

What is the IP address of the DHCP server?

Step 7

Return to "Internet Protocol (TCP/IP) Properties" window.

Select the radio buttons Use the following IP address and Use the following DNS server address.

Enter in the IP address information for the NIC from the previous step.

Click OK > OK.

Open the command window.

Type ping IP address for Host B.

If the ping was not successful, ask the instructor for assistance.

Step 8

From Host B type **ping** *IP* address for Host A.

Was the ping successful?

From Host A type **ping** *IP* address for Host B.

Was the ping successful?

Step 9

Return configurations to the settings at the start of the lab, unless stated otherwise by the instructor.

Select the radio buttons Obtain an IP address automatically and Obtain DNS server address automatically.

Click OK > OK.