

Windows Me TCP/IP Setup

OBJECTIVES

1. Install the TCP/IP protocol.
2. Administer clients, protocols, and services.
3. Administer bindings for the client.
4. Set network client identification and access control.
5. Set print and file sharing.



Networking

RESOURCES

1. Marcraft 8000 Trainer with 64 MB RAM
2. Windows Me operating system (installed)
3. Network Interface Card (installed)
4. Internet access through a network connection or modem
5. Internet Explorer 5.0
6. Windows Me CD-ROM

DISCUSSION

TCP/IP (Transmission Control Protocol/Internet Protocol) is used in many types of local area networks (LANs), but it is also used as the standard communications protocol for the Internet. TCP/IP is the most popular network protocol in use, primarily due to the fact that, unlike other network protocols (IPX/SPX, AppleTalk, etc.) no single vendor owns the rights to it. TCP/IP was originally created by the U.S. Department of Defense Advance Research Projects Agency (DARPA) to provide resilient service on networks that include a wide variety of computer types. Due to its beginnings as a protocol for military computer networks, it is very resistant to hacking. Therefore, it is considered to be the most secure of all the network protocols.

TCP/IP uses a system that assigns a unique number to every node on the network. This number is known as the IP address. All devices on a TCP/IP network need a unique IP address in order to function. An IP address is a set of four numbers that can range in value between 0 and 255, and each number is separated by a period.

It can be very time-consuming to manually assign IP addresses and subnet masks to every computer and device on the network. For this reason, many network administrators assign these IP addresses by automatic Dynamic Host Configuration Protocol (DHCP) addressing. DHCP enables the host server to automatically assign IP addresses and subnet masks every time a client computer begins a network session.

At a Windows workstation, it is relatively simple to modify the TCP/IP parameters. The network configuration can be controlled through the Network control panel. Whether you are working with Windows Me or Windows 2000, the functions of the Network control panel are quite similar. In this control window, you can set the IP addresses, request DHCP service, designate DNS Servers, and set default gateways. You can also manage the bindings, which allows you to designate which clients and services are associated with which network protocols. This control panel also allows you to manage, add, and remove protocols, client interfaces, services, and adapters.



Networking

PROCEDURE

In this lab procedure you will install the TCP/IP protocol. For this lab we will assume that TCP/IP is already installed and you have a good network connection. In this case you will record the current configuration and then remove the TCP/IP protocol; then you will reinstall TCP/IP. After installation you will install, or confirm the installation of the appropriate clients and services, and check the settings of the bindings. At this point you will return TCP to its previous settings. This will include configuring the client's network identification, and setting access and file- and print-sharing parameters. Next you will configure the IP address, WINS, DNS, Proxy Server, Gateway, or DHCP as needed. Finally you will access your network.

NOTE: The actual numbers used in this lab procedure are meant only as examples of a typical setup. During this lab you will enter your own unique information instead of the provided examples. You may acquire the appropriate configuration information by contacting your ISP, network administrator, or instructor.

1. Open the TCP/IP Properties window

- a. Turn on the computer and select Windows Me.
- b. Right-click the My Network Places icon on the desktop, then select Properties from the pop-up menu to open the Network control panel. It should appear similar to Figure 32-1.

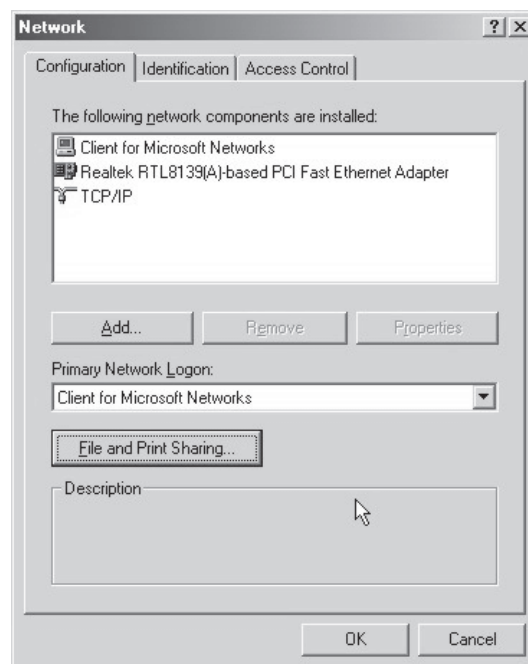


Figure 32-1: The Network Control Panel

- ___ c. Click the Add button to open the *Select Network Component Type* window.
- ___ d. Click on Protocols to highlight it.
- ___ e. Click the Add button to open the *Select Network Protocol* window.
- ___ f. Record the protocols listed in the right-hand window in Table 32-1.
- ___ g. Click the Cancel button twice to return to the *Network Properties* window.
- ___ h. The Configuration tab shows the current protocols, services, and clients installed on your computer. Record each of these items in Table 32-2.
- ___ i. Get the appropriate TCP/IP network configuration information from your ISP network administrator, or instructor, and record this information in the appropriate location in Table 32-3.

2. Record the current TCP/IP settings

- ___ a. Click the Identification tab.
- ___ b. Record the Computer and Workgroup names in Table 32-4.
- ___ c. Click the Configuration tab.
- ___ d. Click on the TCP/IP for your NIC card to highlight it.
- ___ e. Click the Properties button.
- ___ f. Record whether or not the IP address is obtained automatically from a DHCP server in Table 32-4.
- ___ g. If you entered "Yes" for DHCP, click the Cancel button and skip to Step 3.
- ___ h. At the IP Address tab, record the specified IP Address and Subnet Mask in Table 32-4. It should appear similar to Figure 32-2.

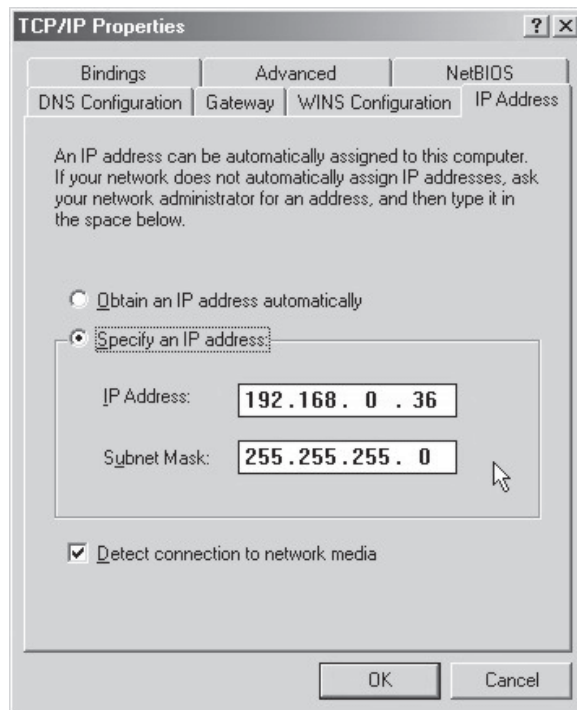


Figure 32-2: The TCP/IP Properties Window

- ___ i. Click the WINS Configuration tab, then record any WINS server information, if any, in Table 32-4.
- ___ j. Click the Gateway tab and list any installed gateways in Table 32-4.
- ___ k. Click the DNS Configuration tab, then record the Host, Domain, DNS Server Search Order, and Domain Suffix Search Order information in Table 32-4.
- ___ l. Click the Cancel button to close the *TCP/IP Properties* window.

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3. Delete the TCP/IP protocol

- ☐ a. Click on TCP/IP to highlight it.
- ☐ b. Click the Remove button.
- ☐ c. Click the OK button.
- ☐ d. When prompted, click the Yes button to restart your computer.

4. Attempt to access the Internet

- ☐ a. Examine the desktop and record any changes in Table 32-5.
- ☐ b. Double-click the Internet Explorer icon on the desktop to start your web browser.
- ☐ c. If IE brings up the cached web page, click the Refresh button in the toolbar to get the connection failure screen.
- ☐ d. Quit Internet Explorer.

5. Install the TCP/IP protocol

- ☐ a. Use the path Start/Settings/ and select Control Panel to open the Control Panel window.
- ☐ b. If the limited view is presented, click the view all Control Panel options hyperlink to see all of the control panels.
- ☐ c. Double-click the Network icon.
- ☐ d. Click the Add button to open the Select Network Component Type window.
- ☐ e. Click on Protocols to highlight it.
- ☐ f. Click the Add button to open the Select Network Protocol window.
- ☐ g. Click on TCP/IP to highlight it.
- ☐ h. Click the OK button to return to the main Network Properties window.
- ☐ i. Click the OK button to close the window.
- ☐ j. When prompted, click the Yes button to restart your computer.

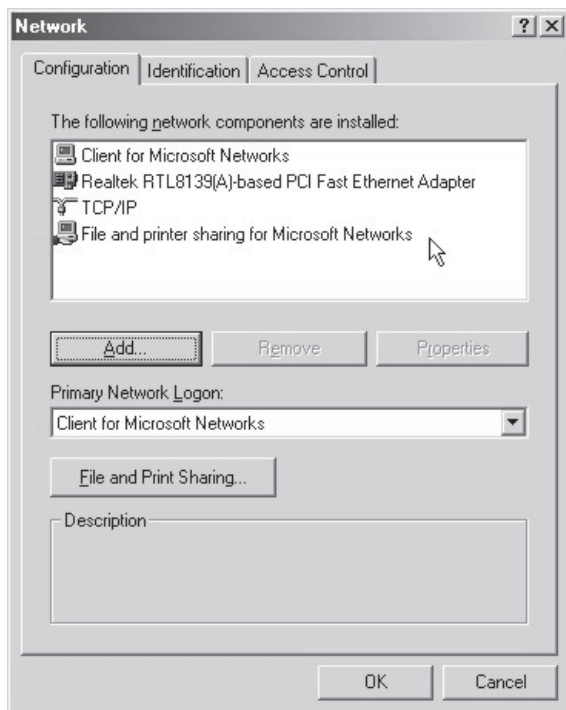


Figure 32-3: Network Properties After Installing File- and Print-Sharing

6. Confirm the installation of the appropriate clients and bindings

- ☐ a. Close any open windows.
- ☐ b. Right-click the My Network Places icon on the desktop, and then select Properties from the pop-up menu to open the Network control panel.
- ☐ c. Click on TCP/IP to highlight it, and then click the Properties button.
- ☐ d. Click the Bindings tab.
- ☐ e. Record all bindings listed in Table 32-6.
- ☐ f. Click the Cancel button to close the TCP/IP Properties window.

7. Install print- and file-sharing

- ☐ a. Click the Add button to open the Select Network Component Type window.
- ☐ b. Click on Service to highlight it.
- ☐ c. Click the Add button to open the Select Network Protocol window.
- ☐ d. Make certain that "File and printer sharing for Microsoft Networks" is highlighted, then click the OK button. *Your Network* window should now appear similar to Figure 32-3.
- ☐ e. Click the File and Print Sharing button to open the File and Print Sharing window, and make certain that both check boxes are marked.
- ☐ f. Click the OK button.

8. Configure all TCP/IP settings

- ☐ a. If you are using DHCP you may skip to Step 8i.
- ☐ b. Click on TCP/IP to highlight it, and then click the Properties button.
- ☐ c. Click the Specify an IP address radio button to select it.
- ☐ d. Use the settings you recorded in Table 32-4 and enter them in the appropriate IP Address and Subnet Mask boxes.
- ☐ e. Click the WINS tab and, if necessary, restore the WINS settings from Table 32-4.
- ☐ f. Click the Gateway tab and, if necessary, restore the Gateway settings from Table 32-4.
- ☐ g. Click the DNS Configuration tab and, if necessary, restore the DNS settings from Table 32-4.
- ☐ h. Click the OK button twice to confirm your settings.
- ☐ i. If asked for the Windows Me Installation CD, place it in the CD-ROM drive and continue.
- ☐ j. When asked to restart your computer, click the Yes button.



TABLES

Table 32-1

Network Protocols:	

Table 32-2

Current Configuration	

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Table 32-3

Current TCP/IP Configuration	
Computer Name:	
Workgroup or Domain Name:	
Is the IP address obtained automatically from DHCP?	
IP Address:	
Subnet Mask:	
WINS Resolution:	
Installed Gateway:	
Host:	
Domain:	
DNS Server Search Order:	
Domain Suffix Search Order:	

Table 32-4

Computer and Workgroup Names	
Computer Name:	
Workgroup or Domain Name:	
Is the IP address obtained automatically from DHCP?	
IP Address:	
Subnet Mask:	
WINS Resolution:	
Installed Gateway:	
Host:	
Domain:	
DNS Server Search Order:	
Domain Suffix Search Order:	

Table 32-5

Changes in Desktop:	
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Table 32-6

TCP/IP Bindings:	
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LAB QUESTIONS

1. Which protocol is used to set the IP address?
2. For whom was TCP/IP created?
3. What system is used to automatically assign IP addresses and subnet masks to every computer and device on the network?
4. Which control panel is used to administer your network connection?
5. Name two advantages to using the TCP/IP protocol?

**Feedback**

