# Configuring the Cisco 200 Software for Use in Windows

This chapter describes how to configure the Cisco 200 software for use with Windows 3.1 or Windows for Workgroups 3.11.

This chapter contains the following sections:

- Before You Start

- Editing Files for Windows 3.x Support

- Windows for Workgroups 3.11 NDIS Support

- What to Do Next

## Before You Start

Before you configure the Cisco 200 software to run in Windows, you should already have completed the following steps:

**Step 1**    Install and configure the connecting router. (Your network administrator should have done this.)

**Step 2**    Install and configure the ISDN Adapter according to the instructions in the *Cisco 200 ISDN Adapter Hardware Installation and Configuration Guide.*

**Step 3**    If you will be using Cisco 200 in Windows for Workgroups 3.11, you should have installed the Windows software **without** network support. Refer to the Microsoft documentation.

**Step 4** If you will be using NetWare virtual loadable modules (VLMs), install the Novell NetWare Client software with Windows support according to the instructions in the NetWare documentation. This will install the NetWare VLMs on your PC. (Your system administrator should know whether you will be using NetWare VLMs.)

**Step 5** Install the Cisco 200 software using the procedures in the chapter "Installing the Cisco 200 Software."

**Note** Do not reboot after installing the Cisco 200 software.

# Editing Files for Windows 3.x Support

Take the following steps to run Cisco 200 software in Windows 3.1 or Windows for Workgroups 3.11.

**Note** Windows for Workgroups allows you to add 32-bit support and network driver interface specification (NDIS) support.

**Step 1** Make sure your NET.CFG file correctly calls out the Ethernet_II Frame Type.

Use any text editor or word processor that can save files to DOS ASCII text, and open the NET.CFG file. Several Ethernet frame types appear following the line:

```
Link Driver CISCO200
```

For Cisco 200 software to function properly, the frame types list should conform with the following rules:

- Frame Ethernet_II should appear first.

- Frame Ethernet_II should be enabled (that is, it should not be commented out with a leading semicolon).

An example Ethernet_II Frame type setting appears below:

```
Link Driver CISCO200
     Frame Ethernet_II
```

If your NET.CFG file matches the example, proceed to Step 2. If your NET.CFG file does not conform with this example, edit the NET.CFG file to match the example above, and save the file as DOS ASCII text.

**Step 2**   Edit your AUTOEXEC.BAT file to make sure it contains the following statements:

```
@CALL drive\path\directory\CONNECT.BAT routername
C:\WINDOWS\SMARTDRV
PROMPT $P$G
PATH C:\WINDOWS;C:\DOS;C:\TOOLS;
PATH drive\path\directory\;%PATH%
SET TEMP=C:\TEMP
C:\DOS\DOSKEY
```

where

- *drive\path\directory\* indicates the path to the CONNECT.BAT file. This will be the directory into which you installed the Cisco 200 software.

- *routername* is the name of the connecting router.

**Step 3**   The following line might have been added to the AUTOEXEC.BAT file during NetWare installation. If it appears in the AUTOEXEC.BAT file, remove it.

```
@CALL C:\NWCLIENT\STARTNET
```

Save the AUTOEXEC.BAT file as ASCII text.

**Step 4**   Edit your CONFIG.SYS file. Make sure it contains the following statement, which the NetWare Client software installation process should have placed there:

```
LASTDRIVE = Z
```

**Step 5**   Reboot the PC. This will bring up the ISDN connection and generate a call.

**Step 6**   Follow the procedures described in your NetWare documentation to log in to the file server.

**Step 7**      Start Windows 3.1 or Windows for Workgroups 3.11.

Windows will show the NetWare support logo, and display a new program group containing the NetWare User Tools. You can use this utility to log on to a file server, add or remove mappings, and capture print queues.

The basic configuration for Windows 3.x support is completed.

- *If you were configuring for Windows 3.1,* the configuration is complete. For information on using the Cisco 200 software, refer to the chapter "Using the Cisco 200."

- *If you were configuring for Windows for Workgroups 3.11,* your configuration might not be complete:

    — If you are not installing a Windows for Workgroups peer-to-peer system, the configuration is complete. If you created a temporary WFWT32 directory, you can delete the directory and all the files in it. For information on using the Cisco 200 software, refer to the chapter "Using the Cisco 200."

    — If you are installing a Windows for Workgroups peer-to-peer system or you want to share services with another Windows for Workgroups PC at the connecting router's location, proceed with the following section, "Windows for Workgroups 3.11 NDIS Support."

# Windows for Workgroups 3.11 NDIS Support

This section provides the instructions for adding support for the Microsoft Network Driver Interface Specification (NDIS) when using Windows for Workgroups 3.11. NDIS is used for peer-to-peer connections or for sharing services with other Windows for Workgroups PCs at the connecting router site.

## Before You Begin

Before you begin to configure your system for Windows for Workgroups 3.11 NDIS support, you should already have completed the "Editing Files for Windows 3.x Support" above and configured your system for Windows for Workgroups.

## Enabling MAC Layer Bridging

If you want to establish a peer-to-peer connection, all connecting parties must have Media Access Control (MAC) Layer Bridging (MLB) enabled.

Check your ISDN.CFG file to make sure that MLB is enabled for NetBEUI traffic on both the sending and receiving PCs (there should be a semicolon at the beginning of the line).

```
; MLB     = DISABLE    ; To use MLB, comment out this line
                       ; by adding a leading semicolon to it
```

Bring up one Cisco 200 PC in listening mode and another in calling mode. To do this, use any text editor or word processor that can save files to DOS ASCII text to edit the CONNECT.BAT files of the two PCs. The ISDN200 lines read as follows:

- For the listening PC:

  ```
  isdn200 -l
  ```

- For the calling PC:

  ```
  isdn200 -c
  ```

See the chapter "Using the Cisco 200" for more information on ISDN200.CFG parameters and the CONNECT.BAT file.
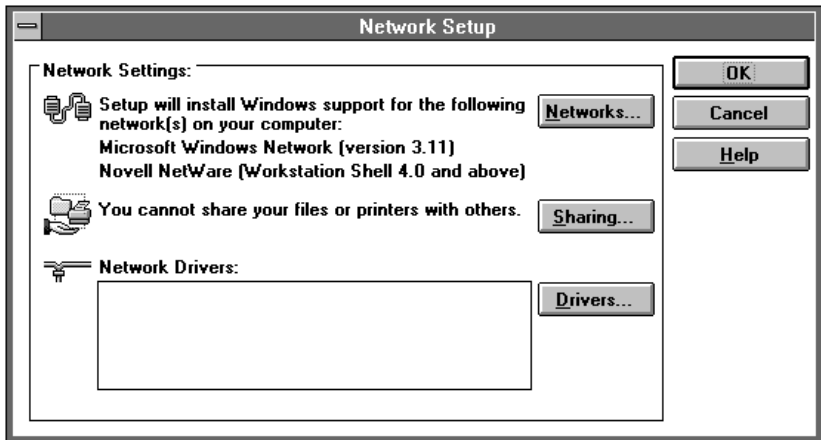
## NDIS Support Installation

To add NDIS support, follow this procedure:

**Step 1**    From the Program Manager, open the Network program group and double-click the **Network Setup** icon.

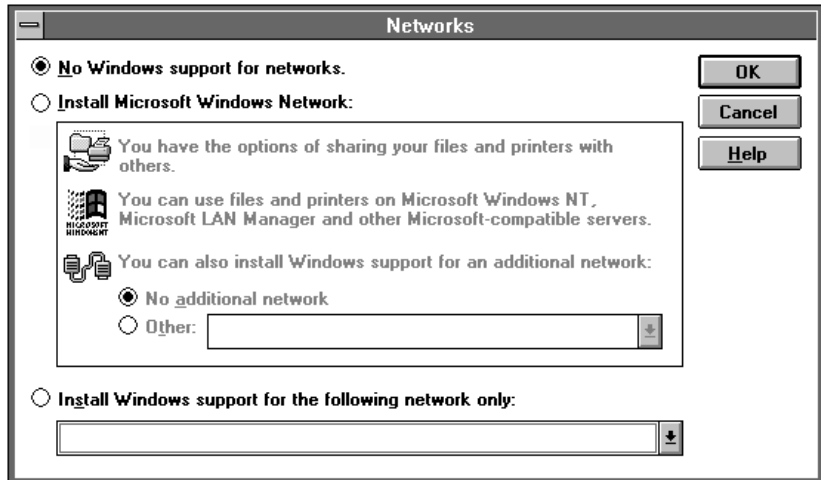The Network Setup dialog box displays. See Figure 3-1.

**Figure 3-1      Network Setup Dialog Box**



**Step 2**     Click **Networks.**

The Networks dialog box displays. See Figure 3-2.

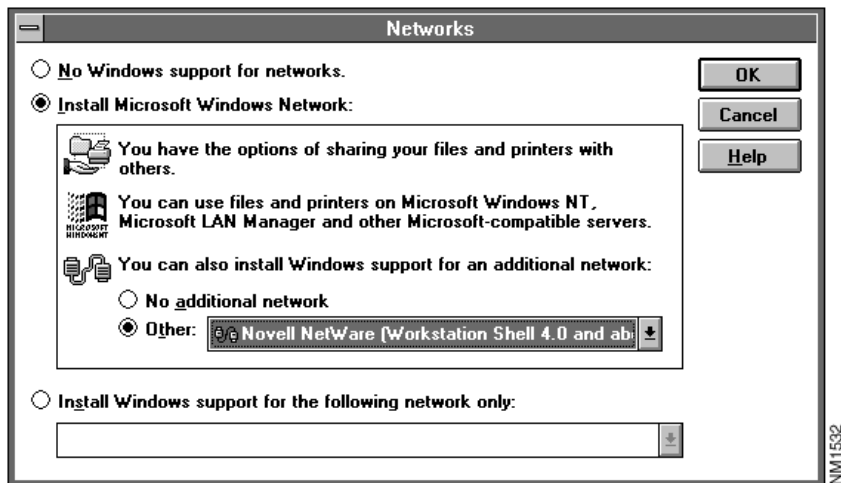**Figure 3-2**       **Networks Dialog Box**



**Step 3**    Click **Install Microsoft Windows Network.**

**Step 4**    Click **Other.**

**Step 5**     Using the drop-down list, scroll to the Novell NetWare (Workstation Shell 4.0
or above) option and click. See Figure 3-3.

**Figure 3-3     Networks Dialog Box:  Installing Windows Support for an Additional
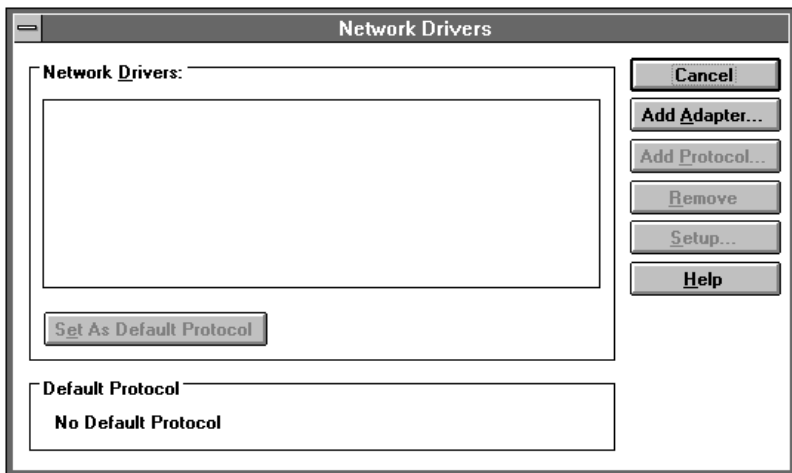Network**



**Step 6**     Click **OK.**

The Network Setup dialog box displays. See Figure 3-1.

## Adding Network Driver

**Step 1**    Click the **Drivers** button.

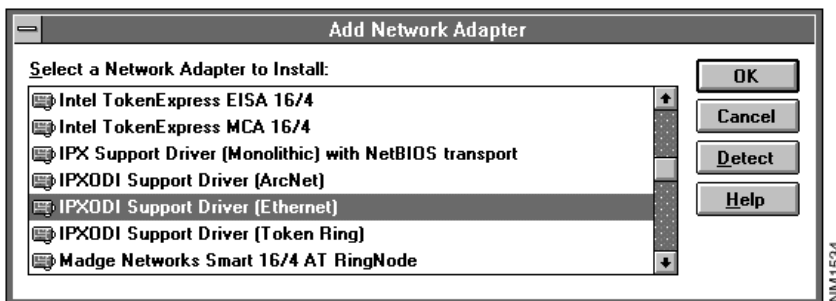The Network Drivers dialog box displays. See Figure 3-4. No network driver will show as installed.

**Figure 3-4**    **Network Drivers Dialog Box**

**Step 2**    Click **Add Adapter.**

The Add Network Adapter dialog box, which contains a list of available NDIS drivers, displays. See Figure 3-5.
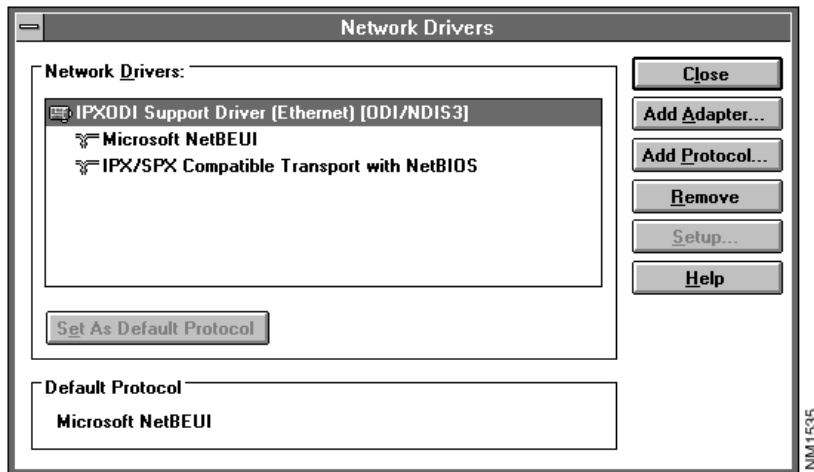
**Figure 3-5**        **Add Network Adapter Dialog Box**



**Step 3**    Select the **IPXODI Support Driver (Ethernet)** option. This is the Microsoft ODI-to-NDIS converter.

**Step 4**    Click **OK.**

The Network Drivers dialog box displays. See Figure 3-6.

**Figure 3-6**        **Network Drivers Dialog Box**



**Step 5**    Select the **IPX/SPX Compatible Transport with NetBIOS** option.

**Step 6**    The IPX/SPX Compatible Transport with NetBIOS emulates the native Novell NetWare IPX/SPX network protocol. To avoid a conflict between the two protocols, you should remove the IPX/SPX Compatible Transport with NetBIOS. Click **Remove.**

## Adding TCP/IP

**Step 1**    Click the **Add Protocol** button.

The Add Network Protocol dialog box displays. See Figure 3-7.

**Figure 3-7**    **Add Network Protocol Dialog Box**
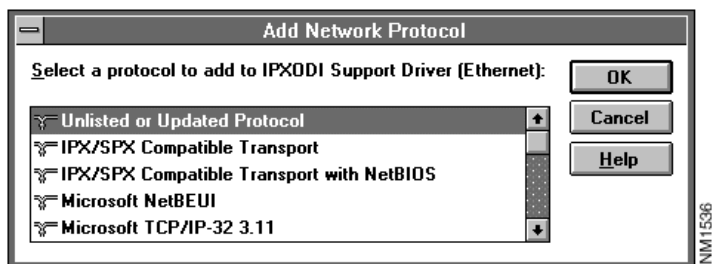


**Step 2**    To add TCP/IP, select the **Microsoft TCP/IP-32 3.11a** option from the list of available protocols.

If the **Microsoft TCP/IP-32 3.11a** option does not appear, proceed to Step 4.
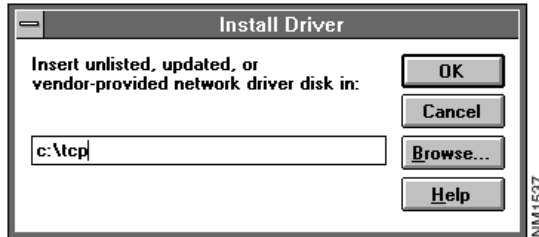
**Step 3**    Click **OK**.

The Network Drivers dialog box displays. Proceed to the section "Configuring TCP/IP."

**Step 4**    Select the **Unlisted or Updated Protocol** option. See Figure 3-7.

**Step 5**    Enter the path to the temporary directory in which you expanded the WFWT32 file. See Figure 3-8.
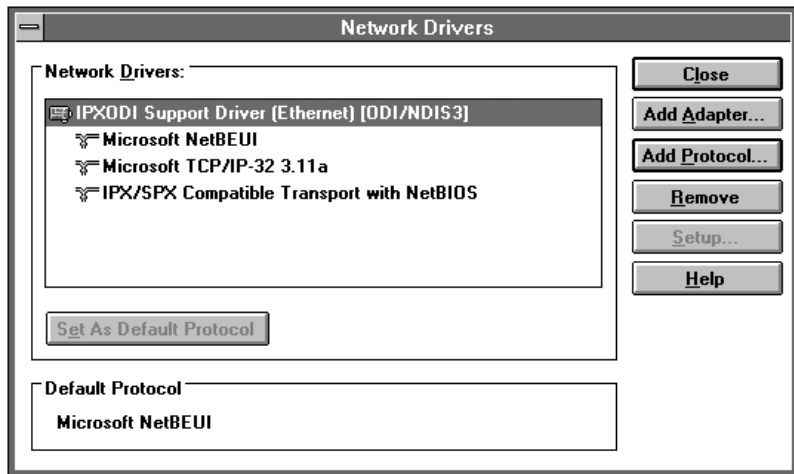
**Figure 3-8**       **Install Driver Directory Dialog Box**



**Step 6**    Click **OK**.

The Network Drivers Dialog Box displays.

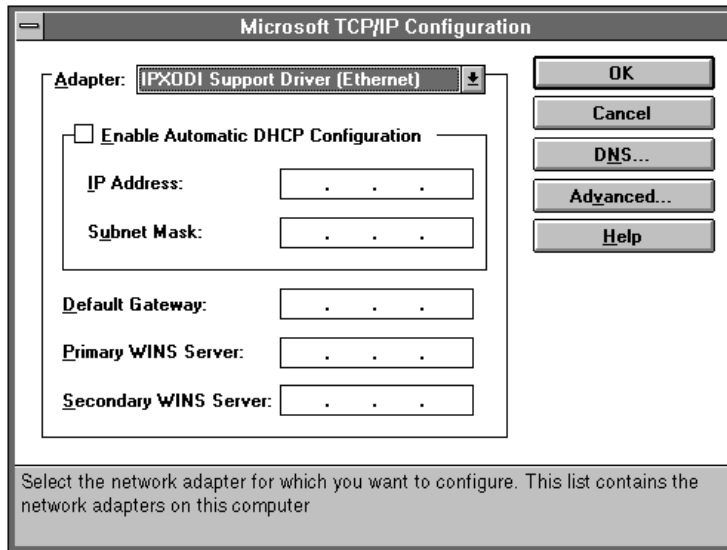## Configuring TCP/IP

**Step 1** Select the **Microsoft TCP/IP-32 3.11a** driver and click the **Setup** button. See Figure 3-9.

**Figure 3-9**      **Select the TCP/IP 32 3.11a Driver**

The Microsoft TCP/IP Configuration dialog box displays. See Figure 3-10.

**Figure 3-10    Microsoft TCP/IP Configuration Dialog Box**



**Step 2**    Specify your IP address, subnetwork mask, and connecting router (listed here as default gateway).

**Step 3**    Click **OK.** The Network Drivers dialog box displays.

**Step 4**    Click **Close.** The Network Setup dialog box displays.

**Step 5**     Click **OK**.

Windows will modify your WIN.INI, SYSTEM.INI, PROTOCOL.INI, AUTOEXEC.BAT, and NET.CFG files. Two dialog boxes appear. See Figure 3-11 and Figure 3-12.

**Figure 3-11**     **Windows Setup Dialog Boxes: Modified NET.CFG File**
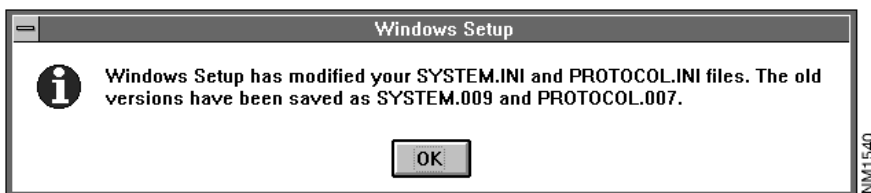


**Step 6**     Click **OK.**

**Figure 3-12**     **Windows Setup Dialog Boxes: Modified System Files**



**Step 7**     Click **OK.**

**Step 8**     If you have previously installed these files, Windows for Workgroups will ask if you are sure you want to replace them. The Enhanced Protocol Warning dialog box displays. See Figure 3-13.

**Figure 3-13       Enhanced Protocol Warning Dialog Box**
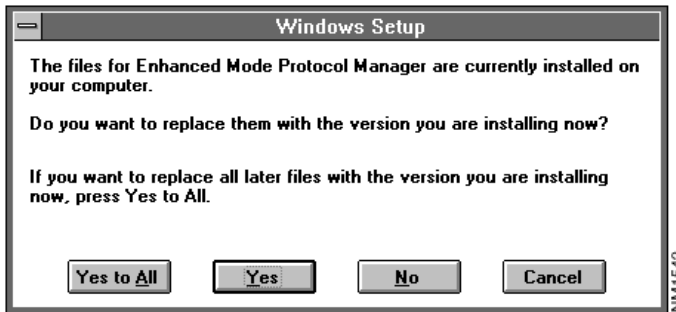


**Step 9**     Click **No**.

Windows for Workgroups will then ask if you want to restart your computer. See Figure 3-14.

**Figure 3-14       Windows Setup: Restart Your Computer Dialog Box**



**Step 10**     **Do not restart** your computer at this time. Click **Continue** and exit Windows for Workgroups in the normal way.

## Editing System Configuration Files

**Step 1** Using any text editor or word processor that can save files in DOS ASCII text format, edit your AUTOEXEC.BAT file. It should contain statements similar to the following:

```
C:\WINDOWS\NET START                    ; Delete this line
@@CALL C:\directory\CONNECT routername
C:\WINDOWS\ODIHLP                       ; Delete this line
C:\WINDOWS\SMARTDRV
@@ECHO OFF
PROMPT $P$G
PATH C:\WINDOWS;C:\DOS;C:\TOOLS;
PATH C:\directory\;%PATH%
SET TEMP=C:\TEMP
C:\DOS DOSKEY
```

**Step 2** Delete the following line from your AUTOEXEC.BAT file:

```
C:\WINDOWS\ODIHLP
```

**Step 3** When you have finished editing, save the AUTOEXEC.BAT file as ASCII text and exit the text editor or word processor.

**Step 4** Edit the section in the CONNECT.BAT file in C:\*directory* to add or confirm the following statements:

```
drive:
CD\path\directory
LH CAPI200
LH LSL
LH CISCO200
ISDN200 %1
IF ERRORLEVEL 1 GO TO UNLOAD
C:\WINDOWS\ODIHLP
LH IPXODI
VLM
LOGIN userid   ; have a local "login.exe" file
```

where:

- *drive* is the driver letter of the *directory* directory. This statement is necessary only if the *directory* directory is not on the C: drive.

- *path\directory* is the path and name of the directory into which you installed both the Cisco 200 software and the NetWare Client software.

- *routername* is the name of the connecting router.

- *userid* is the name you were assigned to use when logging on to your file server.

ODIHLP allows 32-bit MS VxDs to get packets on the wire via LSL and the Cisco 200 ODI driver, but they can be displayed only if you have NDIS support installed.

**Step 5**  When you have finished editing, save the STARTNET.BAT file as DOS ASCII text and exit the text editor or word processor.

**Step 6**  Do **not** reboot now; return to DOS.

**Step 7**  Using any text editor or word processor that can save files in DOS ASCII text format, edit your NET.CFG file:

- Make sure that Ethernet_II is the first frame type for the "Cisco 200 Link Driver" section.

- Do not change the "Link Driver XXXX" section; leave Ethernet_II in the second position, as shown below:

```
Link Driver CISCO200
  Frame Ethernet_II
  Frame Ethernet_802.3
  Frame Ethernet_802.2
  Frame Ethernet_SNAP
  NODE ADDRESS 801cc1234

Link Driver XXXX   ; additional lines from WFWG
  Frame Ethernet_802.3
  Frame Ethernet_II
  Frame Ethernet_802.2
  Frame Ethernet_SNAP
```

If you do not see the second set of Ethernet Frame Types, reinstall starting from Step 1.

**Step 8**  Exit the NET.CFG file, saving any changes in DOS ASCII text format.

**Step 9**     Check your CONFIG.SYS file to make sure that Windows for Workgroups 3.11 has added the following statement:

`DEVICE=C:\WINDOWS\IFSHLP.SYS`

If this line does not appear in the CONFIG.SYS file, use any text editor or word processor that can save files in DOS ASCII text format to add the statement to the other device statements.

**Step 10**    Reboot the PC.

**Step 11**    Enter the following:

`LOGIN` *userid*

where *userid* is the name you were assigned to use when logging on to your file server.

**Step 12**    After the connection to the connecting router has been made, start Windows for Workgroups. Your network drives will display according to your mappings.

**Step 13**    You can now delete the temporary directory you created to install WFWT32 and its files.

# What to Do Next

You have now completed configuring the Cisco 200 software to run in Windows 3.1 or Windows for Workgroups 3.11.

If you need to modify your Cisco 200 configuration—to add another connecting router for example—see the appendix "Modifying the Cisco 200 Configuration Files."

For information on using the Cisco 200, refer to the chapter "Using the Cisco 200."