

# Installing the Cisco 200 Software

---

This chapter describes how to install and configure the Cisco 200 software using INSTALL.EXE, Cisco's DOS-based installation program.

---

**Note** The operating system you use to **install** the Cisco 200 software (DOS) is unrelated to the operating system you use to **run** the software (DOS, Windows 3.1, or Windows for Workgroups 3.11).

---

This chapter contains the following sections:

- Before You Start
- Running INSTALL.EXE
- What to Do Next
- Reinstalling the Cisco 200 Software

## Before You Start

Before you run INSTALL.EXE, you should complete the following:

- Installation Worksheet—Have your system administrator fill out the Cisco 200 Software Installation Worksheet in this chapter. You will need a completed copy of this worksheet to install the Cisco 200 software.

- ISDN Adapter—Configure and install the Cisco 200 ISDN Adapter according to the instructions in the *Cisco 200 ISDN Adapter Hardware Installation and Configuration Guide*.
- Windows—If you will be using the Cisco 200 in Windows for Workgroups 3.11, install the Windows software **without** network support. Refer to the Microsoft documentation.
- NetWare VLMs—If you will be using NetWare VLMs, install the Novell NetWare client software with Windows support according to the instructions in the NetWare documentation. (If you do not know whether you will be using NetWare VLMs, ask your system administrator.)
- Working Disk—If you have not already done so, make a working copy of the Cisco 200 disk and store the original. To ensure that all labels and subdirectories are properly copied, use the **DISKCOPY** command:

```
DISKCOPY a: a: /v
```

The /v switch verifies the copies as they are made. Change the original (source) disk to the destination disk when you are prompted. When you finish copying, store the original disk in a safe place.

## Planning Remote Installations

The Cisco 200 Software Installation Worksheet is provided for the system administrator to complete and send to the operator(s) who will be installing and configuring the Cisco 200 at the remote sites. The worksheet indicates the selections you should make when running the INSTALL.EXE utility, and provides space for instructions on modifying the ISDN200.CFG or NET.CFG file if necessary.

## Cisco 200 Software Installation Worksheet

The Cisco 200 Software Installation Worksheet (see Table 2-1) lists the information you should have available before you install and configure the Cisco 200 software. Make a copy of the worksheet and have your system administrator fill it out for your network configuration. Place the completed worksheet in your Site Log.

**Table 2-1 Cisco 200 Software Installation Worksheet**

<b>Cisco 200 Software Installation Worksheet</b>	
<b>Contact Information</b>	
System administrator name _____	
System administrator telephone _____	
Operator name _____	
Operator telephone _____	
<b>Local Site</b>	
Installation drive and directory name _____	
Node MAC address <sup>1</sup> _____	
Local system name (case sensitive) <sup>2</sup> _____	
<b>ISDN Protocol<sup>3</sup></b>	
European protocol	<b>DSS1</b> <ul style="list-style-type: none"> <li>• Name _____</li> </ul>
North American protocols	<b>NI1</b> <ul style="list-style-type: none"> <li>• Name _____</li> <li>• SPID 1 _____</li> <li>• Directory 1 _____</li> <li>• SPID 2 _____</li> <li>• Directory 2 _____</li> </ul> <b>5ESS Point-to-Point</b> _____ <ul style="list-style-type: none"> <li>• SPID _____</li> </ul> <b>5ESS Multipoint</b> _____ <ul style="list-style-type: none"> <li>• SPID _____</li> </ul>
<b>Connecting Router(s)<sup>4</sup></b>	
Connecting router name <sup>5</sup> _____	
Connecting router telephone number <sup>6</sup> _____	
Connecting router ISDN line speed	<input type="checkbox"/> 56 kbps (112 kbps when using PPP multilink) <sup>7</sup> <input type="checkbox"/> 64 kbps (128 kbps when using PPP multilink)

MM2707

**Table 2-1 Cisco 200 Software Installation Worksheet (Continued)**

Cisco 200 Software Installation Worksheet (Continued)	
<b>Network Protocols</b>	<input type="checkbox"/> IP <input type="checkbox"/> IPX <input type="checkbox"/> Bridging
<b>CHAP (Challenge Handshake Authentication Protocol)<sup>8</sup></b>	Using CHAP? <input type="checkbox"/> Yes <input type="checkbox"/> No CHAP password <sup>9</sup> _____ <input type="checkbox"/>
<b>PPP Multilink</b>	Use PPP Multilink? <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>PPP Callback</b>	Use PPP Callback? <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>ISDN200.CFG and NET.CFG File Modifications<sup>10</sup></b>	Modify the ISDN200.CFG file? <input type="checkbox"/> Yes <input type="checkbox"/> No Modify the NET.CFG file? <input type="checkbox"/> Yes <input type="checkbox"/> No

NM2708

1. Addresses must be no more than 12 hexadecimal characters: they can include a combination of numbers (1-9, 0) and letters (A-F). **Each node MAC address must be unique.** You should designate 00 to be the first two characters in order to avoid confusion with a broadcast address.
2. Your Cisco 200 workstation. If connected to a Cisco router using Challenge Handshake Authentication Protocol (CHAP), this name must be identical to the “username” configured on the router.
3. D-channel protocol and parameters of the ISDN switch to which the Cisco 200 is connected.
4. Duplicate this page if you have two or more connecting routers. You must specify the variable information below for each connecting router.
5. If connected to a Cisco router using Challenge Handshake Authentication Protocol (CHAP), this name must be identical to the “hostname” configured on that router.
6. Be sure to include all digits necessary to connect to the router (country code, area code, international access, long distance access, public access, etc.)
7. When the Cisco 200 for DOS, Windows 3.1, and Windows for Workgroups 3.11 is connected to a Cisco router using dial-on-demand routing, CHAP must be configured on both ends.
8. The CHAP password must be identical to the password entered in the router after the username.
9. If yes, attach additional sheet listing required modifications.

## Running INSTALL.EXE

The INSTALL.EXE utility installs the Cisco 200 software. INSTALL.EXE simplifies the process of installing and configuring the Cisco 200 within the DOS environment.

To install the Cisco 200 software, complete the following tasks:

- Starting the Installation
- Selecting the Installation Drive and Directory
- Creating the NET.CFG File
- Creating the ISDN200.CFG File
- Selecting the ISDN Protocol
- Configuring the Connecting Router
- Completing the Installation

### Starting the Installation

To install the Cisco 200 software for the first time, follow the steps in this section.

---

**Note** If you have previously installed the Cisco 200 software, and now want to modify your configuration files, see the section “What to Do Next” later in this chapter, or see the appendix “Modifying the Cisco 200 Configuration Files.”

The NET.CFG and ISDN200.CFG configuration files cannot be changed using the INSTALL.EXE program. The program is designed this way so you can install future software upgrade(s) without repeating the entire configuration procedure.

---

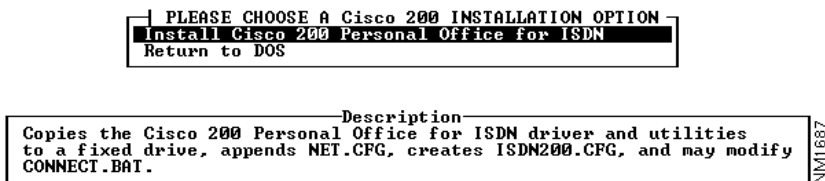
---

**Note** When you are instructed to select a menu item, press one of the arrow keys until the item you want is highlighted. The up arrow key moves the highlight up the list one item at a time; the down arrow key moves it down the list one item at a time. When the item you want to select is highlighted, press **Enter**.

---

- Step 1** Insert the working copy of the Cisco 200 disk containing INSTALL.EXE into the disk drive of your PC.
- Step 2** Change to the drive where the disk is inserted and enter the following command at the prompt:
- ```
INSTALL
```
- The Welcome dialog box appears.
- Step 3** Press any key to continue. The Installation Option dialog box appears. See Figure 2-1. Highlight the “Install Cisco 200” option and press **Enter**.

**Figure 2-1 Installation Option Dialog Box**



The Select Installation Drive dialog box appears. See Figure 2-2.

**Figure 2-2 Select Installation Drive Dialog Box**



## Selecting the Installation Drive and Directory

- Step 1** Select the drive where you want to install the Cisco 200 files and press **Enter**. INSTALL.EXE detects how much space is currently available on your hard drive(s) and displays this information.

---

**Note** The installation directory must be the directory that contains the NetWare Client files.

---

The Select Installation Directory dialog box appears. See Figure 2-3.

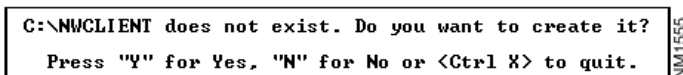
**Figure 2-3** Select Installation Directory Dialog Box



INSTALL.EXE will select C:\NWCLIENT as the default directory, whether or not you have installed the NetWare Client files in the standard NetWare directory.

- Step 2** Either accept the default, or enter a different directory name and press **Enter**. If the directory you enter does not exist, you are prompted to create a new directory. The Create Installation Directory dialog box displays. See Figure 2-4.

**Figure 2-4** Create Installation Directory Dialog Box



- Step 3** To create a new directory, select **Yes**.

If you select **No**, the dialog box in Figure 2-3 will redisplay, allowing you to change the directory name.

**Step 4** After you enter the name of the correct installation directory, press **Y** to create the new directory.

---

**Note** If you have previously installed the Cisco 200 software in the directory you have just selected, dialog boxes will appear informing you that NET.CFG and ISDN200.CFG files already exist in the Cisco 200 directory. These files cannot be changed using the INSTALL.EXE program. The program is designed this way so you can install future software upgrade(s) without repeating the entire configuration procedure.

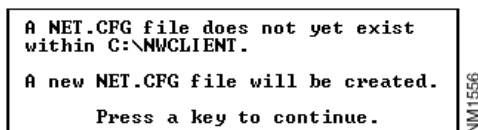
Press any key to exit from each of these messages. Proceed with the section “Completing the Installation” later in this chapter.

If you want to modify the NET.CFG and ISDN200.CFG files, see the section “What to Do Next,” later in this chapter, or see the appendix “Modifying the Cisco 200 Configuration Files.”

---

The Create NET.CFG dialog box appears. See Figure 2-5.

**Figure 2-5 Create NET.CFG Dialog Box**



```
A NET.CFG file does not yet exist
within C:\NWCLIENT.
A new NET.CFG file will be created.
Press a key to continue.
```

NMI1556



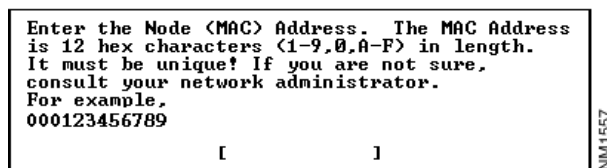
---

## Creating the NET.CFG File

**Step 1** The Create NET.CFG dialog box indicates that INSTALL.EXE has not detected a NET.CFG file in the Cisco 200 directory. Press any key to create a NET.CFG file.

The node Media Access Control (MAC) Address dialog box appears. See Figure 2-6.

**Figure 2-6 Node Media Access Control (MAC) Address Dialog Box**



**Step 2** Enter a node MAC address. The MAC address consists of 12 hexadecimal characters (0 through 9 and A through F). In this chapter, 000123456789 is the example node MAC address.

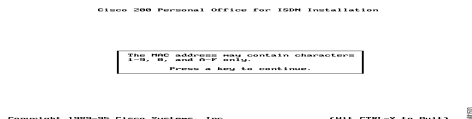
---

**Note** Each node MAC address must be unique. The node MAC address is assigned by your system administrator. If you are unsure what your node MAC address is, consult your Cisco 200 Software Installation Worksheet or your system administrator.

---

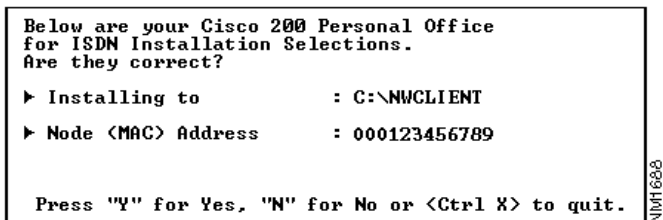
If you enter an invalid character, the invalid node MAC address dialog box appears (see Figure 2-7). Reenter the node MAC address.

**Figure 2-7 Invalid Node MAC Address Dialog Box**



If the node MAC address is valid, the Installation Selections Confirmation dialog box appears. See Figure 2-8.

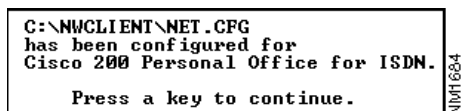
**Figure 2-8 Installation Selections Confirmation Dialog Box**



**Step 3** If the selections are correct, enter **Y** to accept. Enter **N** to return to the previous display and enter the correct information.

If you enter **Y**, the NET.CFG Created dialog box displays (see Figure 2-9). Press any key to continue.

**Figure 2-9 NET.CFG Created Dialog Box**

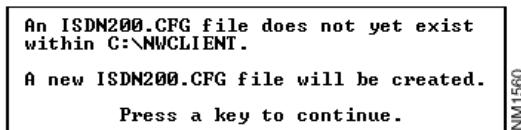


## Creating the ISDN200.CFG File

The ISDN200.CFG Creation dialog box displays. See Figure 2-10. This indicates that INSTALL.EXE has not detected an existing ISDN200.CFG file in the selected directory.

**Step 1** Press any key to continue.

**Figure 2-10 ISDN200.CFG Creation Dialog Box**

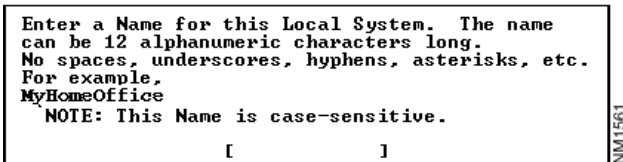


```

An ISDN200.CFG file does not yet exist
within C:\NWCLIENT.
A new ISDN200.CFG file will be created.
Press a key to continue.
  
```

The Local System Name dialog box appears. See Figure 2-11.

**Figure 2-11 Local System Name Dialog Box**



```

Enter a Name for this Local System. The name
can be 12 alphanumeric characters long.
No spaces, underscores, hyphens, asterisks, etc.
For example,
MyHomeOffice
NOTE: This Name is case-sensitive.

[ ]
  
```

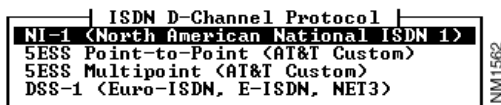
**Step 2** Enter the local system name assigned by your system administrator. Follow these guidelines:

- Any combination of alphanumeric characters
- Case sensitive
- No underscores (\_), hyphens (-), asterisks (\*), or spaces

**Step 3** Press **Enter**. If you entered any invalid characters, an error message will appear and you must enter the local system name again.

The ISDN D-Channel Protocol Dialog Box appears. See Figure 2-12.

Figure 2-12 ISDN D-Channel Protocol Dialog Box



## Selecting the ISDN Protocol

**Step 1** Select the type of ISDN D-channel protocol used by your ISDN carrier. Verify your ISDN switch protocol on the Cisco 200 Software Installation Worksheet.

---

**Note** The Cisco 200 must be configured to use the appropriate D-channel protocol, **not** the switch type.

ISDN switches are a particular switch type, such as DMS-100, 5ESS, and Siemens EWSD. These switches can use different D-channel protocols, such as NI1, Custom 5ESS Point-to-Point, Custom 5ESS Multipoint, and DSS1.

If your switch is not configured for one of these D-channel protocols, have your carrier reconfigure the ISDN circuit to one of the listed D-channel protocols.

---

**Step 2** Press **Enter**. Based on the protocol you selected, proceed to the appropriate section in the text that follows:

North American ISDN Protocols:

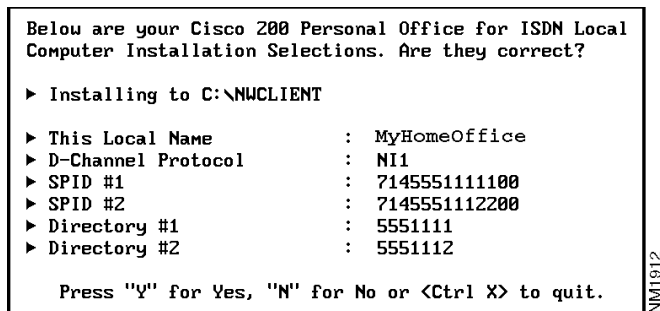
- NI1— Proceed with “Configuring the NI1 SPID(s).”
- 5ESS— Proceed with “Configuring the 5ESS SPID.”

European ISDN Protocols:

- DSS1— Proceed with “Configuring the Connecting Router.”

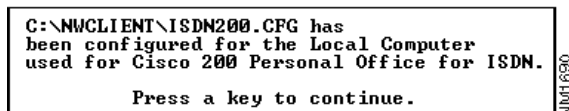


**Figure 2-14 Local Computer Configuration Confirmation Dialog Box**



The ISDN200.CFG Local Configuration dialog box displays. See Figure 2-15.

**Figure 2-15 ISDN200.CFG Local Configuration Dialog Box**



**Step 3** Press any key to continue. Proceed to the section “Configuring the Connecting Router” later in this chapter.

## Configuring the 5ESS SPID

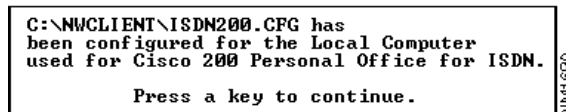
If you selected 5ESS (Point-to-Point or Multipoint), the 5ESS: SPID Entry dialog box appears. See Figure 2-16.

**Figure 2-16 5ESS: SPID Entry Dialog Box**



- Step 1** Enter the SPID number listed on your Cisco 200 Software Installation Worksheet.
- Step 2** Press **Ctrl+Enter**. The ISDN200.CFG Local Configuration Dialog Box displays. See Figure 2-17. Press any key to continue.

**Figure 2-17 ISDN200.CFG Local Configuration Dialog Box**

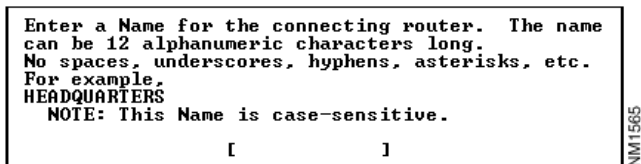


Proceed with the next section, “Configuring the Connecting Router.”

## Configuring the Connecting Router

You are now prompted for the parameters for the connecting routers. The Connecting Router Name dialog box displays. See Figure 2-18.

**Figure 2-18 Connecting Router Name Dialog Box**



**Step 1** Enter the name of the connecting router as provided by your system administrator.

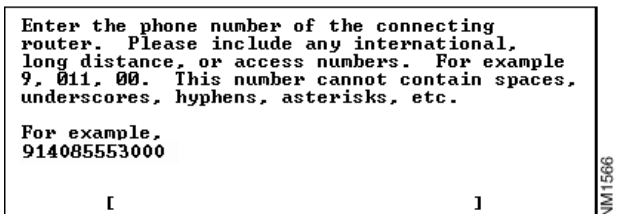
The connecting router is the router or PC to which you will be sending data. Follow these guidelines:

- Up to 12 alphanumeric characters
- Case sensitive
- No underscores ( \_ ), hyphens ( - ), asterisks ( \* ), or spaces

In this document, Headquarters is the example connecting router name. Press **Enter** when you have entered the connecting router name. If you enter an invalid name, an error message will appear and you must enter the connecting router name again.

The Connecting Router Telephone Number dialog box displays. See Figure 2-19.

**Figure 2-19 Connecting Router Telephone Number Dialog Box**





**Step 2** Enter the telephone number of the connecting router and press **Ctrl+Enter**. The number should include in a single string all numbers necessary to dial the remote router, including:

- International access code
- Long-distance access code
- Public access code
- Signalling system 7 code
- Country code
- Area code
- Seven-digit telephone number (North America)
- Subscriber/extension (Europe)

---

**Note** Do not separate the numbers with spaces, hyphens, or any nonnumeric character. If you do so, an error message will appear and you will be asked to reenter the number. In this chapter, 914085553000 is the example connecting router telephone number.

---

The ISDN Line Speed dialog box displays. See Figure 2-20.

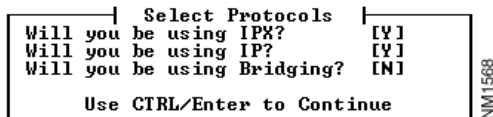
**Figure 2-20 ISDN Line Speed Dialog Box**



**Step 3** Select the speed of the connecting router's ISDN line. The default is 64 or 128 kbps.

The Protocol Selection dialog box displays. See Figure 2-21.

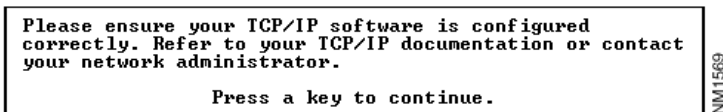
**Figure 2-21 Protocol Selection Dialog Box**



**Step 4** Select the network protocol(s) you use and press **Ctrl+Enter**.

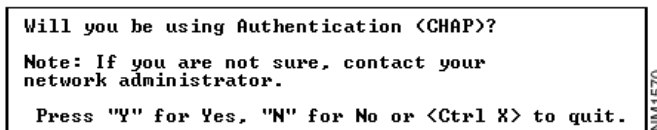
If you selected IP as one of the protocol types, the TCP/IP dialog box displays. See Figure 2-22.

**Figure 2-22 TCP/IP Dialog Box**



**Step 5** Read the dialog box, then press any key to continue. The Authentication (CHAP) dialog box displays. See Figure 2-23.

**Figure 2-23 Authentication (CHAP) Dialog Box**



**Step 6** If you will be using the Challenge Handshake Authentication Protocol (CHAP), enter **Y**. The Authentication (CHAP) Password dialog box displays. See Figure 2-24.

If you will not be using CHAP, enter N and proceed with the next section, “Completing the Installation.”

**Figure 2-24 Authentication (CHAP) Password Dialog Box**

```

Enter the CHAP authentication password:
Note: This password is case-sensitive.
[                                     ] NM1571
  
```

**Step 7** Enter the CHAP password provided by your system administrator.

The CHAP password is case-sensitive and must match exactly the password on the connecting router.

If you answered **Y** in Step 6 but do not enter a valid password, the Reenter (CHAP) Password dialog box displays. See Figure 2-25.

**Figure 2-25 Reenter (CHAP) Password Dialog Box**

```

REENTER CHAP PASSWORD
No password entered.
Please re-enter password.
[                                     ]
  
```

**Step 8** Reenter the CHAP password and press **Enter**.

The Do You Want to Use PPP Multilink dialog box appears. See Figure 2-26.

**Figure 2-26 Do You Want to Use PPP Multilink Dialog Box**

Do you want to use Multilink PPP? This will allow you to use both B-Channels. The second B-Channel will be automatically added when there is excessive traffic on the first B-Channel.

Enabling this feature may increase your ISDN charges if your ISDN service charges per B-Channel connection.

Press "Y" for Yes, "N" for No or <Ctrl X> to quit.

NM1590

**Step 9** Read the information in the Do You Want to Use PPP Multilink dialog box. If you want to use PPP multilink, press **Y**; otherwise, press **N**.

The Do You Want to Use PPP Callback dialog box appears. See Figure 2-27.

**Figure 2-27 Do You Want to Use PPP Callback Dialog Box**

Do you want to use PPP Callback? If you enable this feature, your router must also be configured for PPP Callback.

Press "Y" for Yes, "N" for No or <Ctrl X> to quit.

NM1953

**Step 10** If you want to use PPP callback, which allows for centralized billing and increased security, press **Y**; otherwise, press **N**.

---

**Note** If you use PPP callback, remote users will be restricted to dialing in from a specific telephone number.

---

The Connecting Router Selections Confirmation dialog box displays. See Figure 2-28.

Figure 2-28 Connecting Router Selections Confirmation Dialog Box

```

Below are your Cisco 200 Personal Office for ISDN connecting router
Installation Selections. Are they correct?

▶ Installing to C:\NMCCLIENT
▶ Connecting Router Information
▶ Name       : HEADQUARTERS
▶ Phone Number : 914085553000
▶ Line Speed  : 64 Kbps
▶ Protocol    :
▶ IPX        : ENABLED
▶ IP         : ENABLED
▶ Bridging   : DISABLED
▶ CHAP Password : Secret
▶ Multilink PPP : Enabled
▶ PPP Callback : Enabled

Press "Y" for Yes, "N" for No or <Ctrl X> to quit.

```

**Step 11** Enter **Y** to confirm your choices for this connecting router, or enter **N** to reenter the connecting router information.

If you entered **Y**, the Configure Another Connecting Router dialog box displays. See Figure 2-29.

Figure 2-29 Configure Another Connecting Router Dialog Box

```

Will there be another connecting router
to which you want to connect?

Press "Y" for Yes, "N" for No or <Ctrl X> to quit.

```

**Step 12** Enter **Y** to configure another connecting router, or enter **N** if you have configured all connecting routers for this ISDN line.

**Step 13** If you entered **Y**, repeat Step 2 through Step 12 to enter all the connecting routers or PCs you will be dialing using this ISDN line.

After you finish configuring connecting routers, enter **N**.

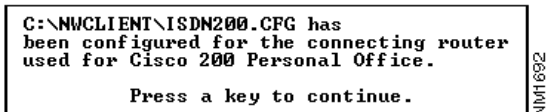
---

**Note** To add or delete connecting routers later, see the section “What to Do Next,” later in this chapter.

---

**Step 14** When you finish configuring all connecting routers, a message similar to that in Figure 2-30 will display. Press any key to continue.

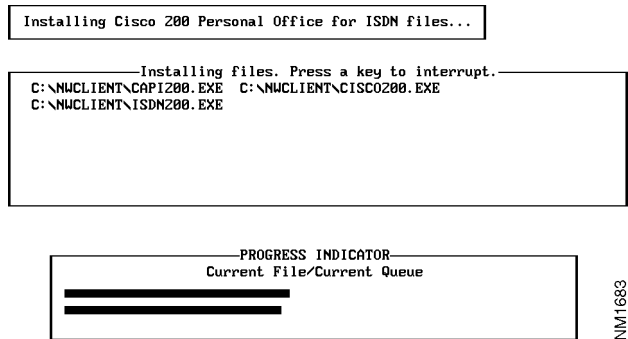
**Figure 2-30 ISDN200.CFG for Connecting Router Configuration Notice Dialog Box**



## Completing the Installation

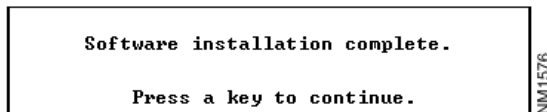
**Step 1** The Installing Files Progress dialog box displays, as shown in Figure 2-31, while INSTALL.EXE copies all necessary files into the designated directory.

**Figure 2-31 Installing Files Progress Dialog Box**



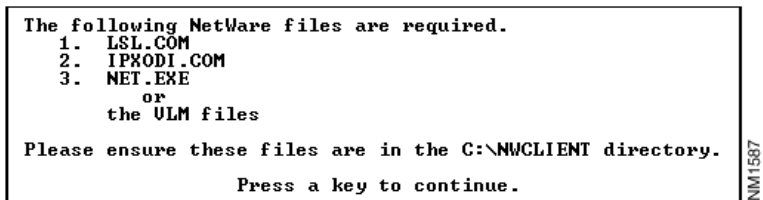
When all files have been copied, the Installation Complete dialog box displays. See Figure 2-32.

**Figure 2-32 Installation Complete Dialog Box**



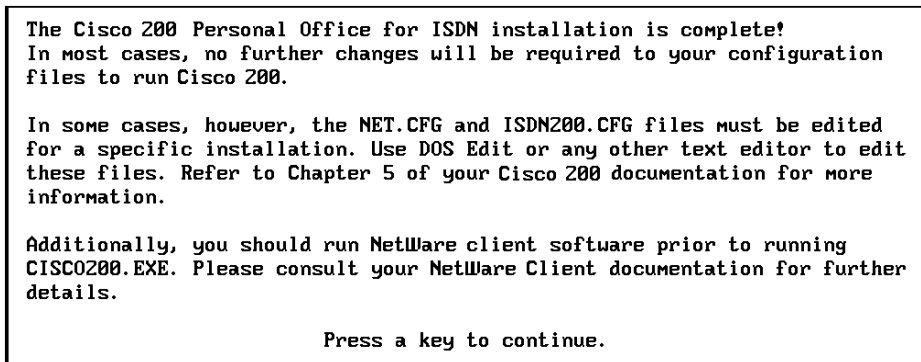
**Step 2** Press any key. The NetWare Client Files Reminder dialog box displays. See Figure 2-33.

**Figure 2-33 NetWare Client Files Reminder Dialog Box**



**Step 3** Press any key to continue. The Installation Complete dialog box displays. See Figure 2-34.

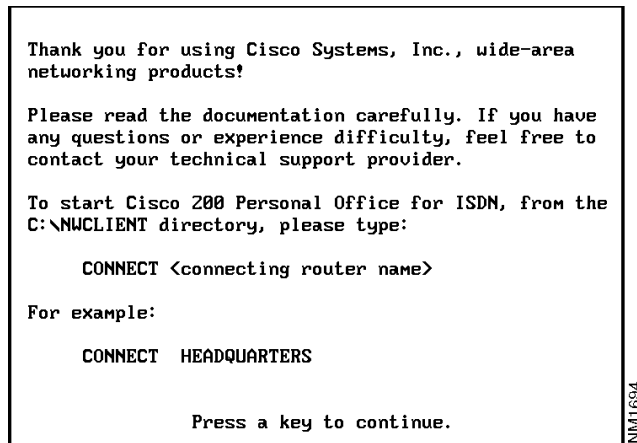
**Figure 2-34 Installation Complete Dialog Box**



**Step 4** Press any key to continue. The Thank You dialog box displays. See Figure 2-35.



Figure 2-35 Thank You Dialog Box



**Step 5** Press any key to continue. INSTALL.EXE will take you to the directory in which you installed the Cisco 200 software.

---

**Note** If you are using the NetWare ODI drivers and you did not install the Cisco 200 software and the NetWare Client software into the same directory, copy the NetWare Client files into the Cisco 200 directory.

---

## What to Do Next

You have now completed installation of the Cisco 200 software.

For information on configuring the Cisco 200 software in Windows 3.1 or Windows for Workgroups 3.11, refer to the chapter “Configuring the Cisco 200 Software for Use in Windows.”

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.”

If you must reinstall the Cisco 200 software using INSTALL.EXE—for example, if you want to install an updated version of the software—follow the procedure described below in “Reinstalling the Cisco 200 Software.”

For information on running the Cisco 200, see the chapter “Using the Cisco 200.”

## Reinstalling the Cisco 200 Software

If you must reinstall the Cisco 200 software using INSTALL.EXE—for example, if you want to install an updated version of the software—use **one** of the following procedures:

- To upgrade your Cisco 200 software, but retain the current configurations outlined in the ISDN200.CFG and NET.CFG files, run INSTALL.EXE and install the Cisco 200 files into the same directory you used in the previous installation. The installation script will not overwrite the ISDN200.CFG and NET.CFG configuration files.
- To reinstall the Cisco 200 software and create new configuration files, follow one of these procedures:
  - Delete the following Cisco 200 files in the installation directory:

```
NET.CFG
ISDN200.CFG
ISDN200.EXE
README.TXT
ISDNEXP1.EXP
ISDNEXP2.EXP
CAPI200.EXE
CISCO200.EXE
NETCFG.EXP
CONNECT.BAT
DCONNECT.BAT
```

Run INSTALL.EXE again, using the same installation directory name as you did during the previous installation.

- Run INSTALL.EXE again, but use a different installation directory name.

---

**Note** Do not reinstall the Cisco 200 software merely to change configuration parameters or add a connecting router. The NET.CFG and ISDN200.CFG files cannot be modified by simply running INSTALL.EXE again. To add or delete destinations or routers, or edit configuration parameters, use a text editor or word processor that allows you to save the file as ASCII (DOS) text, to edit the NET.CFG and ISDN200.CFG files. See the appendix “Modifying the Cisco 200 Configuration Files” for more information.

---

