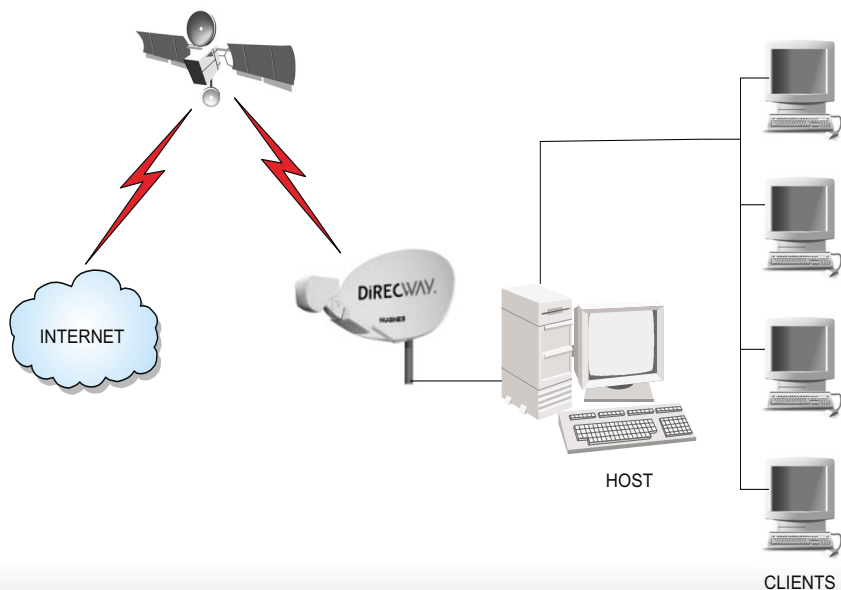


DiRECWAY®

User Guide for LAN Client Configuration Utility



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LCCU only supported on two-way systems

The LAN Client Configuration Utility (LCCU) feature is intended only for use with a DIRECWAY Two-Way satellite connection. ICS will function with a DIRECWAY One-Way satellite connection but this configuration is not supported by Hughes Network Systems, Inc.

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Safety information

Cautions and notes, defined as follows, help you become familiar with possible safety and equipment hazards.

		CAUTION
Indicates a hazard or unsafe practice that might result in moderate or minor personal injury.		
		CAUTION
Indicates a hazard or unsafe practice that might result in property damage.		

A **note** presents additional information.

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The DIRECWAY® LAN Client Configuration Utility (LCCU) enhances the performance of the PCs on a LAN accessing the Internet via a DW4000 Two-Way, or via a DW4020 or other self-hosted system. It works on Windows 98, 98 SE, ME, NT, 2000 Professional, and XP systems. The LCCU must be run for each user profile on each client computer. If there are no user profiles on the client it is just run on that client once.

How do I get a copy of the LCCU?

A ZIP file containing the LCCU can be downloaded from www.mydirecway.com. Follow the on-screen instructions to download the file to a diskette. Then go to the diskette directory where the ZIP file is located, double-click on it, and follow the on-screen instructions to unzip it. You need to download the LCCU to a diskette because you must run it on each individual client computer.

The LCCU optimizes settings

The LCCU optimizes the TCP/IP and browser settings to improve Internet access on a PC. TCP/IP stands for *transmission control protocol/Internet protocol*. It is the method by which computers assemble and address messages sent over the Internet.

The LCCU also can configure certain NETBIOS settings to optimize performance on a PC. NETBIOS is a program that allows applications on different computers to communicate within a LAN.

The LCCU also optimizes the DNS settings on computers using Windows NT. DNS stands for *domain name system*. It is the way Internet domain names are located and translated into IP addresses.

You must install the DIRECWAY hardware and software, and configure the LAN, before running the LCCU. If you install a DW4000 Two-Way system, you must also configure Internet Connection Sharing (ICS) before running the LCCU. For more information about ICS, refer to the *Configuration Guide for Microsoft® Internet Connection Sharing* (HNS 1032370-0001).

System requirements

The client computers do not need to meet any hardware requirements. They must use one of the following operating systems:

- Windows 98
- Windows 98 Second Edition (SE)
- Windows Millennium (ME)
- Windows NT
- Windows 2000 Professional
- Windows XP

TCP/IP must be installed on each client.

The following browser versions are the minimum required:

- Microsoft Internet Explorer 5.0
- Netscape 4.7
- Mozilla 1.0

Note: DIRECWAY must not be installed on any client computer. Do not run the LCCU on the host computer of a networked DW4000 system, or on the host of any other networked system.

Administrator privileges

In order to fully utilize the LCCU on Windows 2000, NT, and XP operating systems, you must have administrator privileges. If you do not, the LCCU will optimize only the browser settings.

Additional help resources

HUGHES can provide limited support if you need more assistance. If you purchased DIRECWAY through one of our retail channels:

- Check our Web site, www.mydirecway.com for more information.
- Send e-mail to technical support by selecting **Email** under **Help Center** on our www.mydirecway.com Web site.
- Call 1-866-DIRECWAY (1-866-347-3292).

If you purchased DIRECWAY from one of our Value Added Resellers (VARs), please do not contact DIRECWAY. Contact your VAR according to the procedure supplied by them for technical support. They are trained to help you with any technical problem.

You must run the LCCU on each client computer. If the client has multiple users, run it for each user. To take full advantage of the LCCU's ability to optimize TCP/IP and NetBIOS (if applicable) you need administrator privileges.

There are two ways to run the LCCU.

- Click on the LCCU icon if the client does not have NetBIOS installed.
- If the client has NetBIOS installed and you want to also optimize that, run the LCCU from the DOS command line prompt as explained in *Starting the LCCU from MS-DOS* on page 18. You will see the same screens as when running it from the icon.

Running the LCCU from the icon

1. Insert the diskette to which you downloaded the LCCU in the client floppy disk drive.
2. Double-click on the *lcconfig.exe* icon. The Welcome screen in Figure 1 appears. Make sure you have exited all Windows programs.
3. Click **Next**. The minimum system requirements are displayed.
4. Click **Next**. A checkmark appears next to each requirement that is met. See Figure 2. If all requirements are met, click **Next**. The window in Figure 3 appears.
5. If an "x" appears next to any requirement, you cannot proceed until you have exited the LCCU and fulfilled the requirement.

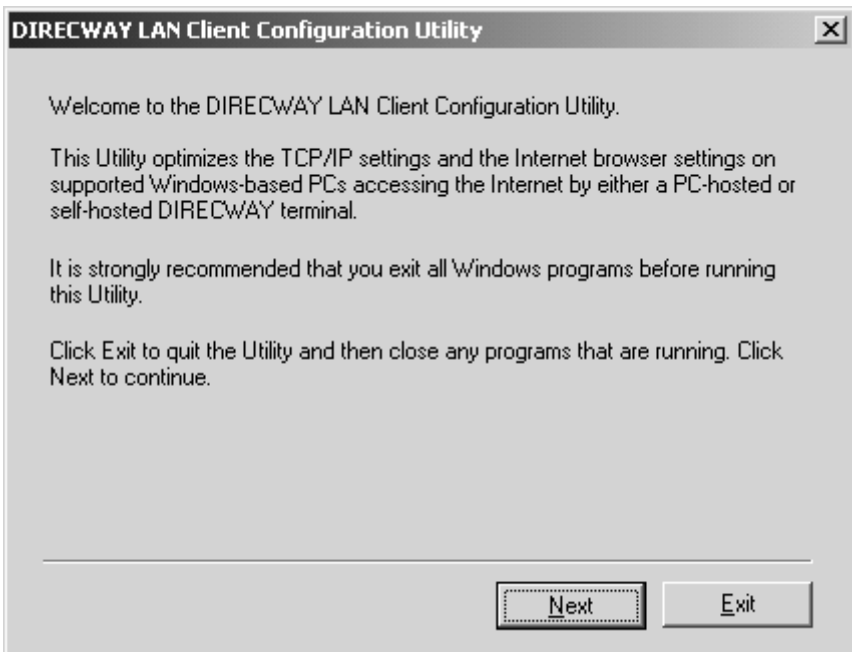


Figure 1: LCCU Welcome screen

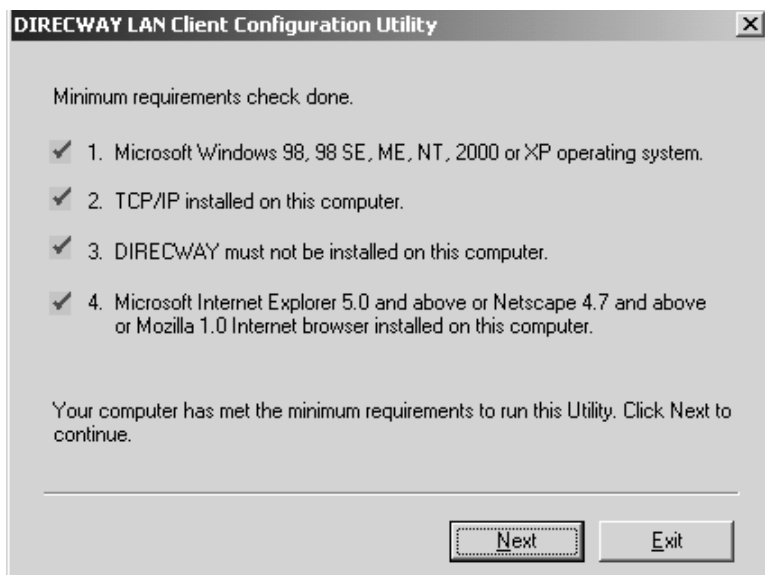


Figure 2: All requirements met

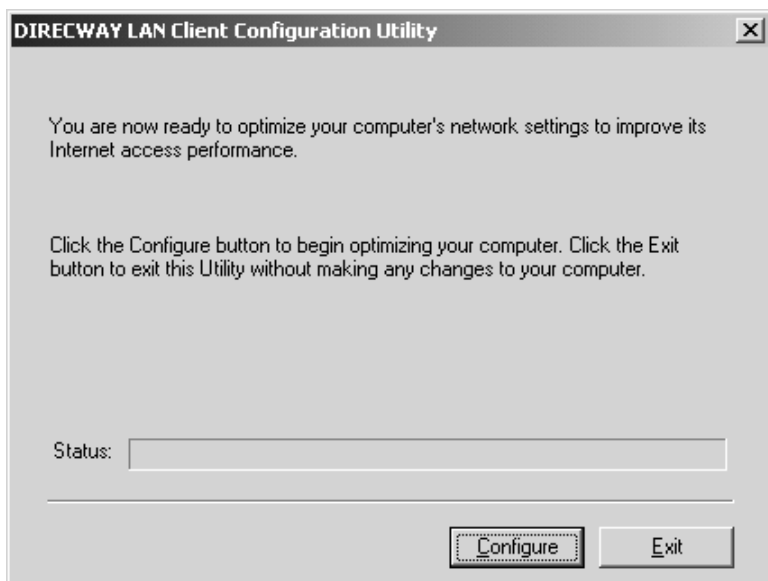


Figure 3: Ready to configure

6. Click **Configure** to run the LCCU. If you do not have administrator privileges, a message will appear reminding you. Click **OK** to go to the window in Figure 3. You can go ahead and run the LCCU to optimize just the browser, or click **Exit** to leave the LCCU and return to the operating system to set up administrator privileges.
7. 6. When the LCCU is done, the window in Figure 4, or one similar to it, appears. Click **Finish**. If a message appears starting with the sentence Note that the Utility could not connect to the LCCU proxy see *LCCU and the DIRECWAY proxy* on page 9. If you do not have administrator privileges, the window will show that only items 2 and/or 3 were performed. If more than one user is registered on the client, the window will remind you to run the LCCU once for each user.

Note: If the TCP/IP settings were optimized, a window appears prompting you to restart the computer. Click **Yes**.

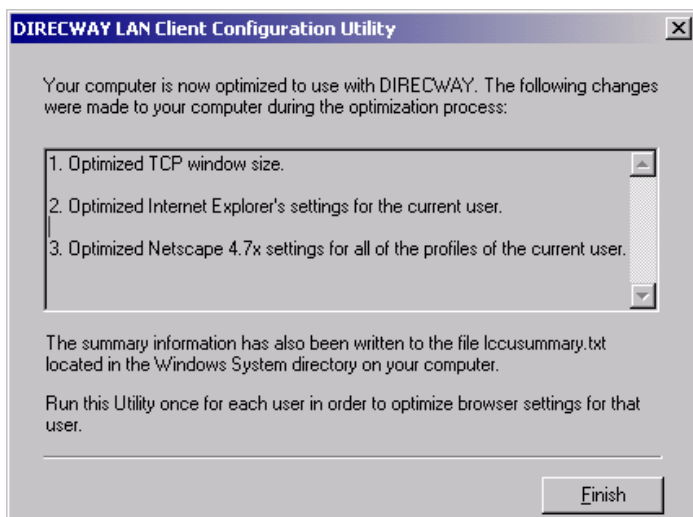


Figure 4: Optimization complete

LCCU and the DIRECWAY proxy

At the end of the LCCU configuration process, the message below will appear if you are using a DW3000, or if you are using a DW4000 and do not have DIRECWAY installed on the host computer, have not properly configured the proxy, or have LAN connection problems.

This utility could not connect to the DIRECWAY Proxy. Reference the LCCU Users Manual for Proxy troubleshooting help. Please make sure that the DIRECWAY Proxy is running on the DIRECWAY host computer and that it is accessible from this computer. Then rerun this utility to access the Internet through the DIRECWAY Proxy. NOTE: This message applies only to DIRECWAY Two-Way systems. Please ignore this message if you own a DIRECWAY One-Way system or a self-hosted DIRECWAY system, such as the DW4010, DW4020, or DW4030.

If you are using a DW3000, simply ignore the message. There is no proxy in that system. (Remember, the LCCU was not developed for the DW3000, although it can be run on clients connected to a host connected to a DW3000. Also remember that HNS does not provide support for setting up networks with the DW3000.)

If you are using a DW4010, DW4020, or DW4030, ignore the message. The self-hosted systems do not use a proxy in the same way as a DW4000, and that is why the message appears.

If you are using a DW4000, follow the instructions below to troubleshoot the problem.

**Confirm that
DIRECWAY is
installed on the host
computer**

On the host computer, go to **Programs** and confirm that DIRECWAY is installed. If it is installed, restart the computer and rerun the LCCU. If DIRECWAY is not installed, install it following the instructions in ***DIRECWAY Installation Guide for Indoor Equipment and Software*** (HNS 1032369-0001). Then rerun the LCCU.

**Confirm that the
browser is configured**

The proxy works with the browser on the host computer to increase browsing speeds. Follow the instructions below to configure the browser to work with the proxy. Then rerun the LCCU.

*Configuring Internet
Explorer*

1. At the host computer, launch Internet Explorer.
2. Pull down the **Tools** menu and select *Internet Options*.
3. On the Connections tab, select LAN Settings. See Figure 5.

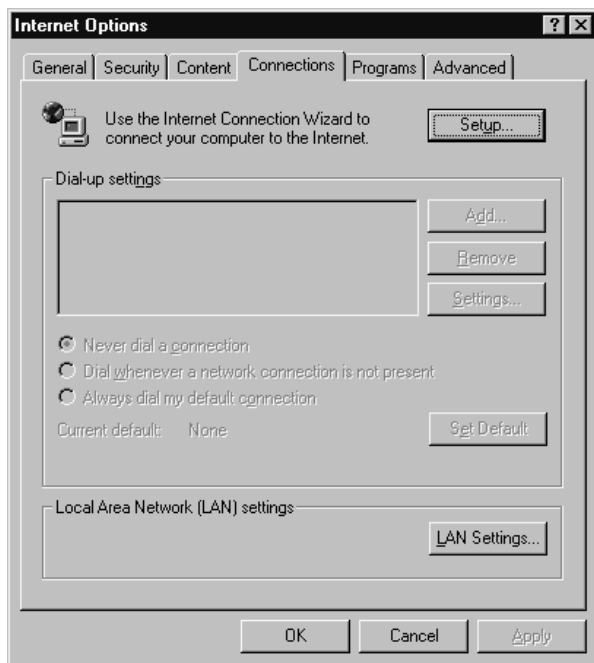


Figure 5: Select LAN settings

4. The *Local Area LAN Settings* window appears. See Figure 6.

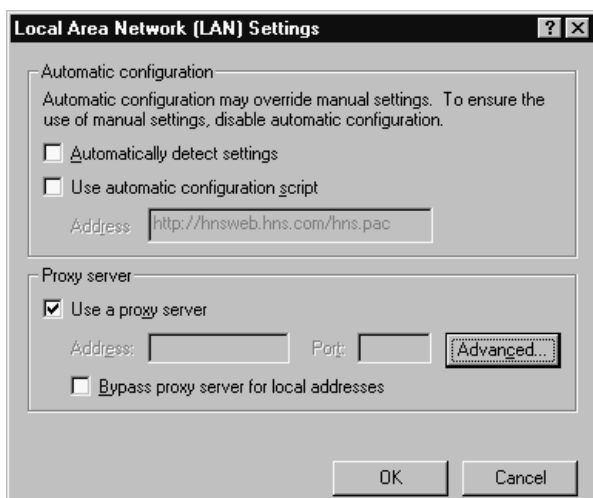


Figure 6: LAN settings window

5. Verify that the Automatically detect settings and Use automatic configuration script check boxes are NOT checked. If they are checked, uncheck them now.
6. Mark the check box next to Use a proxy server.
7. Mark the check box next to Bypass proxy server for local addresses.

8. Select Advanced. The Proxy Settings window in Figure 7 appears.

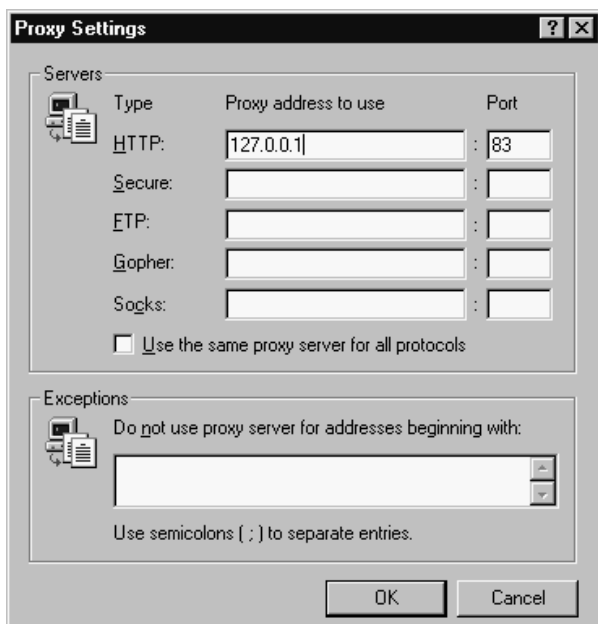


Figure 7: Proxy Settings

9. In the HTTP Proxy address to use field enter 127.0.0.1; enter 83 in the Port field.
10. Make sure that Use same proxy server for all protocols is unchecked.
11. Select OK.
12. Select OK to close the Proxy Settings window.
13. Select OK to close Local Area Network (LAN) Settings.
14. Select OK to close Internet Options.
15. Launch the browser and surf the Internet to confirm proxy functionality.

1. From the host computer, launch Netscape.
2. Pull down the **Edit** menu and select *Preferences*. See Figure 8.
3. In the left-hand pane, expand the *Advanced* option and select *Proxies*.
4. The right pane of the Preferences dialog will show *Proxies* information; select the Manual proxy configuration option.
5. Enter 127.0.0.1 in HTTP Proxy.
6. Enter 83 in the corresponding HTTP Port text box.
7. Select OK to close Preferences.
8. Launch the browser and surf the Internet to confirm proxy functionality.

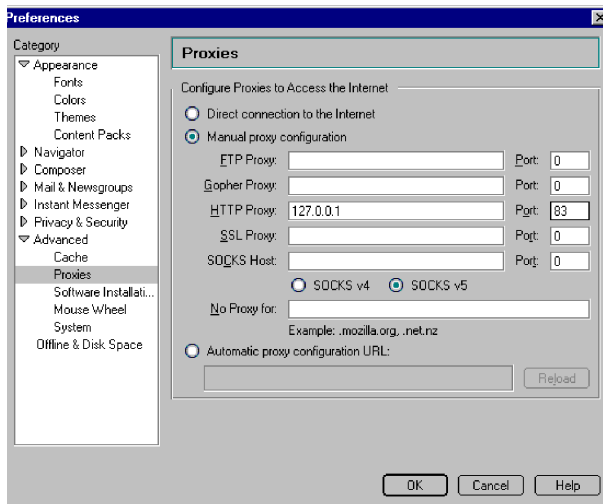


Figure 8: Preferences in Netscape

1. From the host computer, launch Mozilla.
2. Pull down the **Edit** menu and select *Preferences*. See Figure 9.
3. In the left-hand pane, expand the *Advanced* option and select *Proxies*.
4. The right pane of the Preferences dialog will show *Proxies* information; select the Manual proxy configuration option.
5. Enter 127.0.0.1 in HTTP Proxy.
6. Enter 83 in the corresponding HTTP Port text box.
7. Select OK to close Preferences.
8. Launch the browser and surf the Internet to confirm proxy functionality.

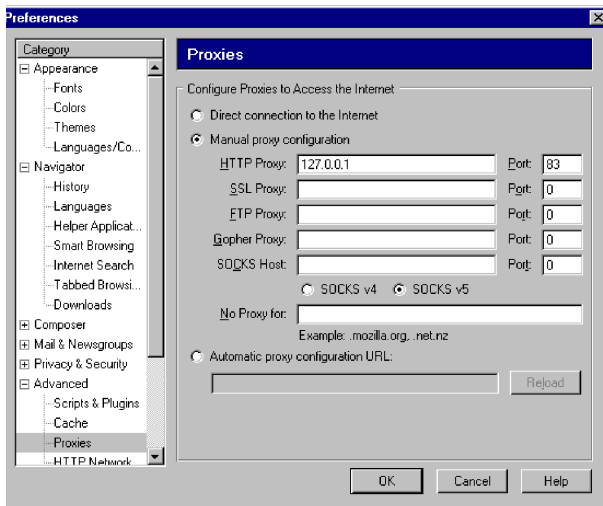


Figure 9: Preferences in Mozilla

Check the LAN connection

If DIRECWAY is installed on the host and the proxy is configured but the error message still appears, check the LAN connectivity as described below.

1. On the host computer, open the **Run** dialog box by selecting **Start**→**Run**. Type **Command** and click **OK**.

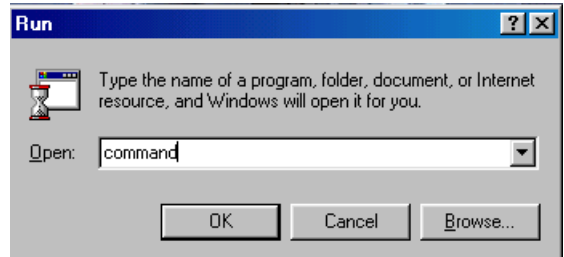


Figure 10: Launching a DOS command prompt

2. In the DOS command window type **ipconfig** and press **Enter**. A list of Ethernet adapters and their IP addresses will be displayed as shown in Figure 11.



Figure 11: Displaying Ethernet adapter addresses using the ipconfig command

- Record the IP address of the Network Interface Card that connects the host computer to clients. Include the period between numbers. You will need this address below in Step 7.

IP Address	
------------	--

Notes: The IP address of this adapter typically starts with 169.254 as shown in Figure 11.

If the host computer has any additional Network Interface Cards, Modems, or VPN clients, the list will differ from that shown above.

- Type **exit** and press **enter** to close the window.
- Move to a client computer of the home network.
- Open the **Run** dialog box by selecting **Start**→**Run**. Type **Command** and click **OK**.
- Try to communicate with the host computer by typing **ping** followed by a space and the IP address that was previously recorded in Step 3, above, including periods. Press **Enter**.

The **ping** command is a standard utility that sends and receives communications between computers. Figure 12 shows a successful attempt, and Figure 13 shows an unsuccessful attempt.

```
C:\>ping 169.254.23.193

Pinging 169.254.23.193 with 32 bytes of data:

Reply from 169.254.23.193: bytes=32 time=1ms TTL=128
Reply from 169.254.23.193: bytes=32 time<10ms TTL=128
Reply from 169.254.23.193: bytes=32 time=1ms TTL=128
Reply from 169.254.23.193: bytes=32 time=1ms TTL=128

Ping statistics for 169.254.23.193:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

Figure 12: Results of a successful ping

```

Microsoft(R) Windows 98
(C)Copyright Microsoft Corp 1981-1999.

C:\WINDOWS\Desktop>ping 169.254.23.193

Pinging 169.254.23.193 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 169.254.23.193:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\WINDOWS\Desktop>_

```

Figure 13: Results of an unsuccessful ping

8. **If the client fails to ping the host**, there are issues with either the network hardware or configuration. Check the LAN connections, refer to the instructions that were provided with your network hardware, and retry the ping test in Step 7.

Note: DIRECWAY cannot accept help calls for network problems. Consult a network professional or your network vendor for assistance.

9. Close the DOS window by typing **Exit** and pressing **Enter**.
10. Test all other client computers until all have successfully pinged the host.

Starting the LCCU from MS-DOS

1. Insert the diskette to which you downloaded the LCCU in the floppy disk drive.
2. Go to *Start→Programs* and click on the icon for the MS-DOS command prompt. The DOS interface appears.
3. Type **a:\lcconfig.exe -extra** and press ENTER. See Figure 14. "-extra" invokes NetBIOS optimization. All other optimization will also be performed.
4. From this point, follow the instructions above, starting at step 2 on page 6.

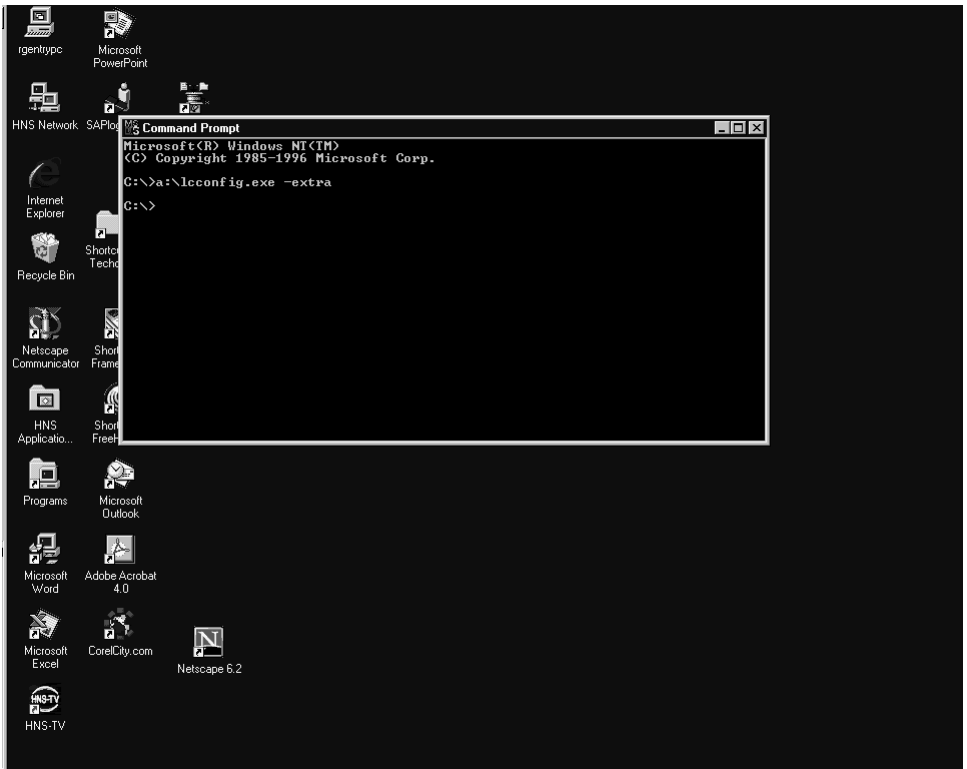


Figure 14: Starting from the MS-DOS prompt

The LCCU can restore the original settings on the client computer. It can also be run again to optimize settings.

To optimize settings again, start the LCCU. The window in Figure 15 appears. Select **Reconfigure PC Settings**, click on **Next**, and follow the instructions in Chapter 1.

To restore the original settings, follow the instructions below. In all cases, the LCCU restores browser settings for the current user. TCP/IP and NetBIOS settings are restored only if you have administrator privileges.

Note: If the user changes the browser settings manually after the LCCU was run, it cannot restore the original settings.

Restoring settings

1. Insert the diskette to which you downloaded the LCCU in the floppy disk drive.
2. Start the LCCU. The screen in Figure 15 appears.

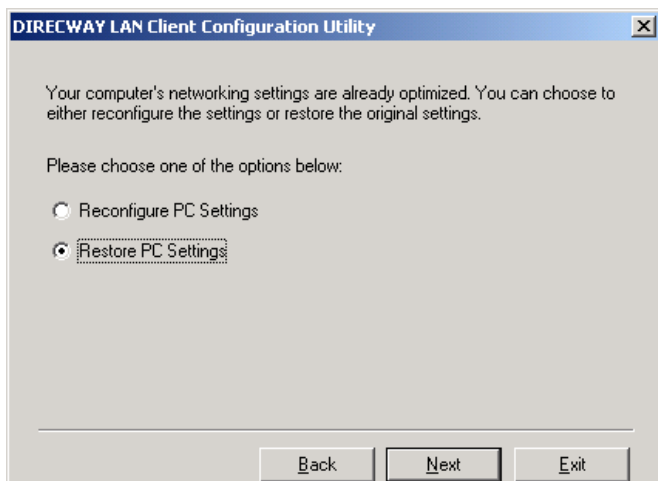


Figure 15: Choose to reconfigure or restore

3. Select **Restore PC Settings**, and click **Next**. The window in Figure 16 appears.
4. Click **Restore**. The window in Figure 17 appears when the restore is complete.
5. Click **Finish**. A window asks if you want to restart the computer. Click **Yes** if you want the restored settings to take effect immediately.

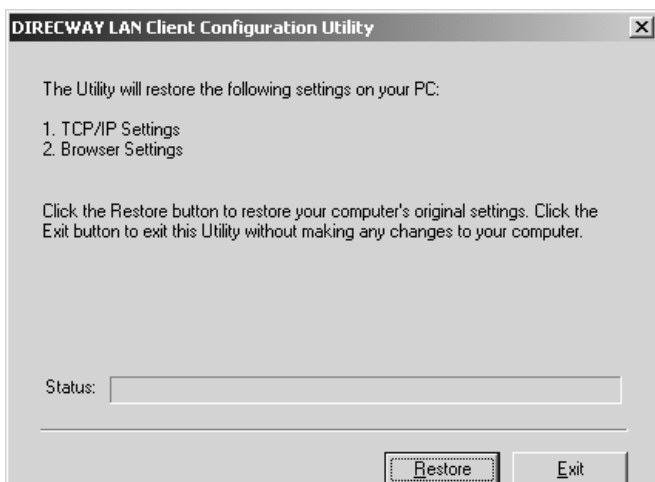


Figure 16: Items to be restored

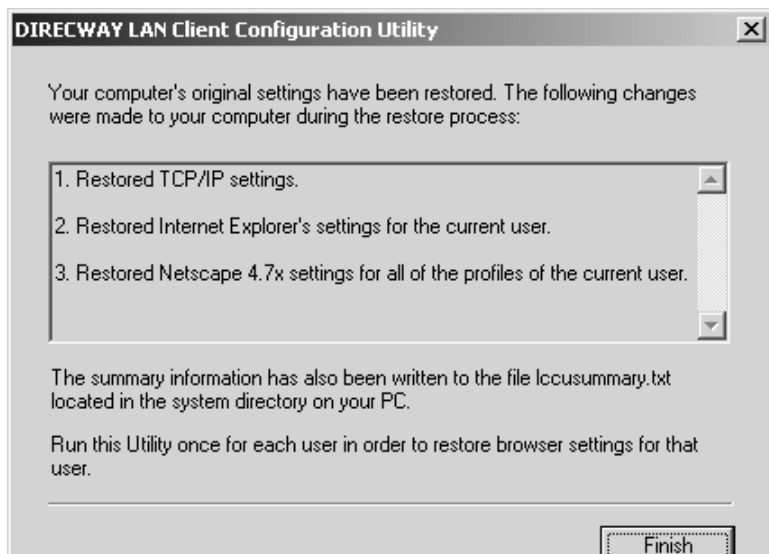


Figure 17: Restored items