

Artisoft[®]

**INSTALLING AND USING
LANTASTIC FOR WINDOWS 95**

Hardware and software setup with steps for basic use

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WELCOME TO LANtASTIC FOR WINDOWS 95

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Welcome to LANtastic® for Windows® 95 – the complete solution for integrating your Windows 95 computers with any combination of desktop PCs running Microsoft® Windows 95, Windows, DOS, IBM® OS/2® or LANtastic Dedicated Server. This interoperability lets you incorporate multiple operating systems and Intel® hardware platforms into a single LANtastic network.

With LANtastic for Windows 95 you can continue to take advantage of your current computer investment as you convert to Windows 95 at your own pace. Even your DOS-only PCs can seamlessly share files and printers with your new Windows 95 computers.

In addition to this multi-platform connectivity, LANtastic for Windows 95 provides a set of enhanced networking features, which are described in the section that follows.

Enhanced feature set ---

LANtastic for Windows 95's new network administration features let you view and add groups and users from a central screen with less navigating through the network. The software also includes an account template enhancement, in which a profile of user attributes is created once for applying later when you're setting up individual accounts. This increases the network administrator's productivity.

Network administrators will also appreciate LANtastic for Windows 95's four new levels of network access for supervisors. You can now assign different Management Security Levels, depending on whether the supervisor needs low, middle or top access and management privileges within the network.

If you have experience with a previous version of LANtastic, you'll like LANtastic for Windows 95's familiar yet updated user interface that integrates well with the Windows 95 desktop. Its most prominent new feature is the LANtastic Custom Control Panel, which lets you customize tabs and buttons by changing colors, names and icons. And you can drag and drop up to 100 different application icons onto 16 user-definable tabbed pages.

Using the Custom Control Panel, you can welcome users to the network with special messages or thumbnail instructions. By adding frequently used applications and utilities, you can give each of your end users a customized network solution.

This table shows at a glance the advantages you get from using LANtastic for Windows 95 on all of your Windows 95 computers.

Networking Features	Windows 95 native networking	LANtastic for Windows 95
Security	2 levels	Over 32 levels
32-bit client and server networking	Yes	Yes
Access to DOS PC resources	No	Yes
User-definable tab pages	No	Yes
Customizable control panel buttons	No	Yes
Central Manage Servers page	No	Yes
User profile template	No	Yes
Customizable welcome screens	Yes	Yes
Familiar network interface	No	Yes

Differences from previous versions of LANtastic_____

LANtastic for Windows 95 has a feature set different from that of LANtastic v5.0 and v6.0, LANtastic Power Suite, Simply LANtastic and Home Network. Although you gain many new features, such as enhanced security, some of the features you may remember from earlier versions aren't available through the LANtastic Custom Control panel.

If you don't see a familiar feature on the Control Panel, look for it in the DOS-based LNET program that's included with your LANtastic for Windows 95 software. For example, LNET gives you the LNET LOGIN and LNET USE commands that you can use to create batch files to connect to servers and redirect drives. With the /DEFERRED and /WAIT switches that work with these commands, you can establish connections to servers that aren't yet online or force a wait for a server to become available. For more information on the LNET program, refer to the online Help.

Features that aren't available through either LNET or the LANtastic Custom Control panel include:

- Exchange Mail (LANtastic v6.0)
- Linkbook (LANtastic v6.0 and LANtastic Power Suite)
- Workstation Cache (Power Suite)
- HP JetDirect[®] printing (Power Suite)
- Central Station[®]
- Remote server control
- ALONE program
- NET CHAT command
- NET SEND command

As indicated in the list above, the LNET program doesn't include the CHAT and SEND commands. LANtastic Custom Control Panel also doesn't provide user-selectable server settings such as Buffers and Run Burst. In LANtastic for Windows 95, many of these settings are controlled automatically for optimal performance. You can click the Configure Server button on the Manage Servers page of the LANtastic Custom Control Panel to customize other server settings.

A few additional NET functions that aren't supported by the LNET program are explained in the online Help.

About this manual

This manual provides brief instructions that quickly get you up and running with LANtastic for Windows 95. For fully comprehensive instructions that explain each feature of the software, just go to the online Help system. Online Help is essential to learning how to use the full range of networking functions offered by LANtastic for Windows 95.

Online version of this manual

When you buy LANtastic for Windows 95, you get one printed copy of this manual for everyone to share. If you want to have your own online copy available on your hard disk, you can use the one that comes in Adobe™ Acrobat™ Portable Document Format (PDF). This PDF version of the manual is easy to print and keep in a binder because it has book-page formatting and can be copied double-sided.

The online version of the manual is convenient to use online because it has Go to Page and Find functions. It also includes hypertext links that allow you to jump quickly from place to place.

The most up-to-date PDF version of this manual is available on the Artisoft BBS, on the internet from Artisoft's FTP server, in the Technical Support Files area of the World Wide Web site at <http://www.artisoft.com>, and on CompuServe. To copy this manual (INSTALL.PDF) to your hard drive, follow the instructions for using the online site of your choice that appear on page 9 or page 10. On any of these sites, go to the UPDATES area and download the file INSTALL.PDF. To view the manual, follow the steps in Appendix A (page 83) or in the Readme file for installing the Adobe Acrobat Reader. Instructions for navigating and printing the manual appear there too.

Readme file

The Readme file contains instructions that are convenient to have on your hard disk, along with information that became available after this manual and the online Help were completed. You can read this file by clicking the View Readme button on the Online Information page in the LANtastic Custom Control Panel. In DOS the same Readme file is located in the LANtastic program directory (typically C:\LANTASTI) on your hard drive. Read these files by using a text editor such as Windows 95 WordPad™ or DOS EDIT.

Online Help

To learn how to make the most of LANtastic for Windows 95, you can choose from a variety of printed and online instructions – but by far the most important source of information is the online Help. After the software is installed, if you regularly refer to the Help, you won't really need this manual or any other learning tool. You can access the online Help and all other LANtastic for Windows 95 functions from the LANtastic Custom Control Panel, which you can custom design to fit your unique computing needs.

LANtastic for Windows 95 gives you two main types of Help:

- Screen-by-screen Help that tells you all about the LANtastic screen you're working on. Just press the Help button or the F1 key.
- “How To” steps for performing specific tasks.

The Help system also includes:

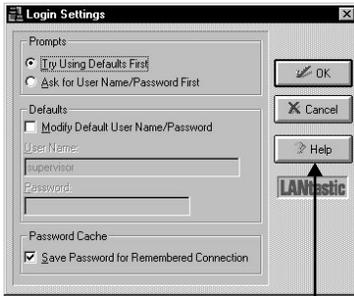
- Overview information about LANtastic's main features.
- Online troubleshooters to help you solve common networking problems.
- Tips and tricks you can use to make the most of your LANtastic software.

Getting the Help you need

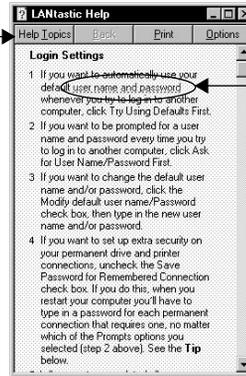
If you get stuck when you're working in a specific LANtastic window, just click the Help button or press the F1 key. A Help topic appears describing all the features and functions of that window (an example appears on the next page.) In many cases, you'll be able to click on green text to see more Help information

If you want to use the How To Help – or any other type of LANtastic Help – you can easily find the topics you need in either of two ways:

- By clicking the buttons on the Online Information page in the LANtastic Custom Control Panel.
- By bringing up the Help Topics window. You can do this from the LANtastic Custom Control Panel (click Help Topics in the Help menu or the Help Topics button on the Online Information page) or from any Help topic window (click the Help Topics button).



On any Help window, you can click this button to view the main Help Topics window (see page 7).



In many cases, you can also click green underlined text to see more related Help information.

If you need help using any LANtastic window, click the Help button (if available) or press F1.
The Help topic for that window appears, explaining how to use all its features and options.

Using the Online Information page

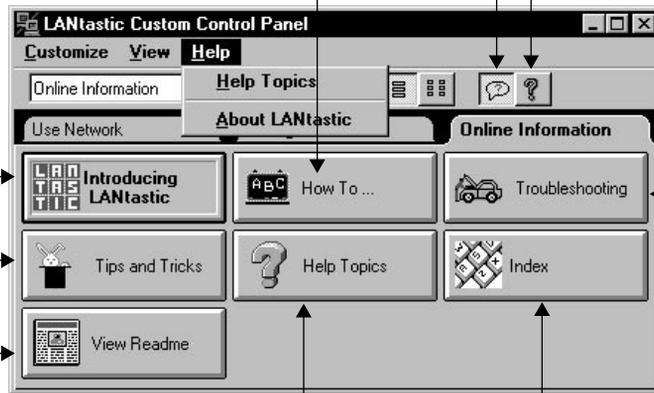
The Online Information page is an easy starting point for most online Help functions.

Click to enable or disable tooltips pop-up Help for buttons and fields in this window.

Click for step-by-step instructions for all networking tasks.

Click to get detailed Help information about all the pages and options on the Custom Control Panel.

Click to learn more about the main features and functions of LANtastic.
Click for a list of tips and tricks that can help you make the most of LANtastic.
Click to view the Readme file containing updated tips for using LANtastic.



Click to open the main LANtastic Help Topics window (see page 7). As shown here, you can also get to this window by clicking Help Topics in the Help menu.

Click to view the Index page on the Help Topics window.

Click to use LANtastic troubleshooters to solve common networking problems.

Using the Help Topics window

Each of the three pages in the Help Topics window gives you a different way to find the information you need.

The Contents page shows the main “books” in the Help system.

Click the page tabs to change pages.

Double-click on a book to view its contents, which may be other books or separate topics, as shown here. Double-click on the open book to close it.

Double-click the topic you need. When you're finished reading the topic, you can click the Help Topics button in the topic toolbar to return to the Contents page.

Tip: The main books listed correspond to buttons on the Online Information page (see page 6).

The Index page lets you quickly find topics from an alphabetized list.

Type in the first few letters of the topic you're looking for.

The main list will show the topics that might be most useful.

Double-click on the topic you need. When you're finished reading the topic, you can click the Help Topics button in the topic toolbar to return to the Index page.

The Find page gives you powerful word-search capabilities. You can click the Options button to define the search parameters you prefer.

Type in the word or phrase you're interested in.

Narrow the search by clicking one of these options.

Double-click on the topic you need.

When you're finished reading the topic, you can click the Help Topics button in the topic toolbar to return to the Find page.

Printing Help topics

It's easy to print out any Help topic you're currently viewing. Depending on the type of Help window you're looking at, you'll find a Print Topic option in the File or Options menu. Some Help windows also include a Print button.

Getting Help with LANtastic's LNET program

LANtastic for Windows 95 includes the DOS-based LNET program. You can use LNET by choosing options from a main functions menu or by typing commands and options at a DOS command line. Because LNET is a DOS program, its online Help works differently from the regular Help for LANtastic for Windows 95.

If you need Help and you're working from the LNET Main Functions menu, press the F1 key to bring up a Help screen. F1 Help is available for all LNET screens. If you're working with LNET commands and options, type the Help or ? switch after the command you want to know about.

Note... Look in LANtastic's online Help for full information about using the LNET program and the LNET Help system. If you'd like detailed printed information about the LNET program, you may want to order the optional *LANtastic for Windows 95 Network Management Guide* described next. This guide includes a chapter outlining the function of each LNET command and its associated switches.

Ordering the Network Management Guide _____

There's a lot of information in the LANtastic for Windows 95 online Help that doesn't appear in this manual. If you want to obtain this Help information in printed form, you can print the desired Help topics as described on page 8. Or, if you prefer, you can order the printed *LANtastic for Windows 95 Network Management Guide* by following the instructions on the form that came in your LANtastic for Windows 95 package. Orders can be placed by mail, fax or phone.

The *Network Management Guide* contains all the information in the online Help, along with the installation and setup instructions in this manual. It includes explanations of common error messages, and detailed descriptions of all the commands and options available under LANtastic's handy DOS-based LNET program.

Where to go for technical support _____

Artisoft provides a variety of award-winning complimentary and fee-based technical support services. For full instructions on using these services worldwide, see the Technical Support Directory of Services that came in your package. This directory also contains information on product compatibility, as well as a description of the LANtastic Developer Alliance program.

Many of the Artisoft services listed here provide technical bulletins and product news, along with software patches and enhancements. So to get regularly updated information about LANtastic for Windows 95 and other Artisoft products, contact the sources listed in this section.

Complimentary support is available to registered users through the following services:

- **Arti-FactsSM** electronic bulletin board service (BBS). Call 1 (520) 884-8648 or 1 (520) 884-9675 in the U.S. and Canada, or refer to the Technical Support Directory of Services for the BBS number of the Artisoft office nearest you. This requires LANtastic registration information.
- **Artisoft Home Page on the World Wide Web.** To download files and bulletins, visit the home page at <http://www.artisoft.com>. Select the Technical Support Files area.
- **Artisoft's anonymous FTP server on the Internet.** To download files and technical bulletins, log in to <ftp.artisoft.com> using "anonymous" as the User ID and your e-mail address as the password.

- Artisoft FaxReturnSM system. To have technical bulletins and other information sent directly to your fax machine, call 1 (520) 884-1397 and respond to the prompts.
- Artisoft's forum on CompuServe[®] (this requires a CompuServe account). Type Go Artisoft <Enter> at the ! prompt.
- Artisoft Sales Consultation Center. For product information and sales referrals, call 1 (800) 846-9726 in the U.S. and Canada, or refer to the Technical Support Directory of Services for the number of the Artisoft office nearest you.
- Hardware Support Service (U.S. and Canada only). Call 1 (520) 670-7000 if you need help with the adapters, cables or other hardware that came in your LANtastic for Windows 95 starter kit. Long distance toll charges apply for this service.

To receive technical consulting for a fee (U.S. and Canada only):

- Call 1 (800) 293-3936 or refer to the Technical Support Directory of Services for the number of the Artisoft office nearest you. For your convenience, charges will be billed to your Visa[®], MasterCard[®] or American Express[®] card.
- To have charges billed directly to your phone bill, call 1 (900) 555-8324.

To learn more about Artisoft Technical Support

Artisoft's technical support offerings are frequently enhanced and updated. For the latest detailed information and consultation rates, or for information on automated support options, call 1 (520) 670-7000 in the U.S. and Canada, or refer to the Technical Support Directory of Services for the number of the Artisoft office nearest you. Technical support information is also available from the Artisoft Home Page on the World Wide Web at <http://www.artisoft.com>.

RELATED TOPICS

The index of this manual contains references to online Help topics as well as page references to the chapters in this manual.

The glossary at the end of this manual defines networking terms and concepts.

The Contents and Index pages of the Help Topics window let you jump directly to the online information you need.

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SHORTCUT! If your Windows 95 computers are equipped with pre-installed Plug and Play adapters and have no previous versions of LANtastic running, you can go straight to “Installing the LANtastic for Windows 95 software” on page 23.

If you don't qualify for this shortcut, take a few minutes to carry out the following preliminary checks. Completing them will help ensure that LANtastic for Windows 95 will install and operate properly on your Windows 95 computers.

- Disabling any other LANtastic software
- Checking your computer requirements
- Configuring your network adapters
- Installing an adapter driver
- Creating a floppy-only installation

Instructions for each of these steps appear in the sections that follow.

Disabling any other LANtastic software ---

If any of your Windows 95 computers are already running LANtastic, you must manually disable that software before installing LANtastic for Windows 95.

Note... If you're running the LANtastic 32-bit Client software, see "Questions about the LANtastic 32-bit Client" on page 13.

Follow these steps to disable your other LANtastic software:

1. Use a text editor such as DOS EDIT to open your AUTOEXEC.BAT file.
2. Type REM <space> before the command line that starts up your network, typically CALL C:\LANTASTI\STARTNET.BAT. This will disable the line by turning it into a remark.

Important... The network startup line in the AUTOEXEC.BAT file, as well as the lines that load NDIS drivers in the CONFIG.SYS file described in step 5 below, must remain remarked out after you've installed the LANtastic for Windows 95 software. LANtastic for Windows 95 won't function when these lines are active.

3. Save your changes.
4. Open your CONFIG.SYS file.
5. Find any lines that load NDIS drivers and type REM <space> in front of them. For example:

```
REM Device=C:\LANTASTI\PROTMAN.DOS /I C:\LANTASTI
REM Device=C:\LANTASTI\AEXNDIS.DOS
```
6. Save your changes.
7. Open your WIN.INI file. Go the load= line, highlight the section C:\LANTASTI\WNET.EXE, and press the Delete key.
8. Save your changes and exit the text editor.
9. On the Windows 95 desktop, click Start, Settings, Control Panel.
10. Double-click Network. A window appears showing the installed network components.
11. Select the line that says "Artisoft LANtastic (version 6.x and above)," then click Remove.
12. Click OK and Yes to restart your computer.

Questions about the LANtastic 32-bit Client

You may have computers that are already running the LANtastic 32-bit Client software. If so, you'll need the answers to these questions.

Do you have to disable the LANtastic 32-bit Client software prior to installing LANtastic for Windows 95?

This isn't necessary. While you're installing LANtastic for Windows 95, you can click a Remove button that tells the Setup program to remove the client software for you.

Do you have to install LANtastic for Windows 95 on each of your LANtastic 32-bit Client computers?

You don't have to install LANtastic for Windows 95 on each computer that's already running the LANtastic 32-bit Client software. Although your 32-bit Client computer won't have long filename support and will display pop-up messages reminding you of the availability of LANtastic for Windows 95, it will be able to log in to your LANtastic for Windows 95 computers as a client. For best networking among your Windows 95 computers, however, it's wise to upgrade all of them to LANtastic for Windows 95.

Checking your computer requirements_____

In order to share their own resources (act as a server) and use resources on other computers (act as a client), all of the computers on which you plan to install LANtastic for Windows 95 should have the items listed below.

- Windows 95 desktop operating system
- 8MB RAM with 486 processor or higher; 16 MB recommended
- CD-ROM drive and/or one 3 1/2-inch floppy diskette drive
- At least 6MB free hard disk space
- VGA or better video adapter recommended
- Windows 95-compatible network adapter, as described in Appendix B

How LANtastic for Windows 95 computers work with other LANtastic computers

Your LANtastic for Windows 95 computers can act as both clients and servers to any computer that's running LANtastic v5.0 or higher for DOS or Windows, or the LANtastic for OS/2 software. (LANtastic v5.0 or higher includes LANtastic v6.0, LANtastic Power Suite, Simply LANtastic and Home Network.)

Your LANtastic for Windows 95 computers can act as clients to any computer that's running CorStream[®] Server, LANtastic Dedicated Server, or the server module of LANtastic for Windows 95; LANtastic for OS/2; or LANtastic v5.0 or higher for DOS or Windows.

Your LANtastic for Windows 95 computers can act as servers to any computer that's running the LANtastic 32-bit Client, or the client module of LANtastic for Windows 95; LANtastic for OS/2; or LANtastic v5.0 or higher for DOS or Windows.

Configuring your network adapters

Important... All of the adapter configuration guidelines in this section apply only to computers that are going to run the LANtastic for Windows 95 software. If the rest of the non-Windows 95 computers on your LANtastic network have adapters that are already operating on a LANtastic network, they'll be able to communicate with your LANtastic for Windows 95 computers.

A network adapter that's compatible with Windows 95 must be installed in every computer on which you're going to install the LANtastic for Windows 95 software. Each adapter must then be cabled to the other computers on your network. General instructions for determining whether an adapter is Windows 95-compatible, along with steps for installing it and cabling it to the network, appear in Appendix B of this manual.

Remember – If your Windows 95 computers are equipped with pre-installed Plug and Play adapters and have no previous versions of LANtastic running, you can go straight to “Installing the LANtastic for Windows 95 software” on page 23.

Configuring Plug and Play adapters

Little or no configuration is necessary if you've already installed (or are planning to install) a Plug and Play adapter in a Windows 95 computer that has Plug and Play technology. Such adapters come pre-installed on many computers.

- If your Plug and Play adapter came pre-installed, you don't need to do anything to configure it. Once you've cabled your computers together according to the instructions in Appendix B, you're ready to start installing the LANtastic for Windows 95 software.
- If you're manually installing a Plug and Play adapter such as the Artisoft NodeRunner Pro™, follow the installation guidelines in the adapter's documentation and Appendix B of this manual. After the adapter is installed and cabled to the network, start Windows 95 to initiate the automatic configuration process:
 - Typically, Windows 95 will copy a driver for your adapter from the Windows 95 CD-ROM or diskettes.
 - If Windows 95 doesn't have the necessary driver, you may be instructed to insert the disk that came with your adapter.
 - After the driver has been copied, click Start, Settings, Control Panel. Then double-click Network and check the list of installed components. The name of your adapter should now appear on the list.

Important... Because they're compatible with Intel® adapters, Artisoft® NodeRunner Pro™ Plug and Play adapters will appear on the Windows 95 network components list as "Intel EtherExpress Pro adapter."

Speeding up performance with Plug and Play adapters

When you install a Plug and Play adapter on a Windows 95 computer, the auto configuration turns on two default protocols: IPX/SPX-compatible and NetBEUI, along with the client options for Microsoft and NetWare. If the computer on which you've installed your Plug and Play adapter doesn't need to access a Microsoft or Novell server, you should turn these options off to gain speed. Instructions appear under "Manually removing network components" on page 28.

Configuring adapters that aren't Plug and Play

Here are some important guidelines for using a non-Plug and Play adapter under Windows 95:

- You must know the adapter's IRQ and I/O address settings. You'll be asked for these when you install an adapter driver. Depending on the type of adapter, its settings can be checked by running a software utility or by visually inspecting its jumper settings. For instructions on checking the settings of an Artisoft NodeRunner adapter, see "Configuring your NodeRunner adapter to work with LANtastic for Windows 95" on page 17.
- If there's an Artisoft NodeRunner adapter installed in the computer, and it's already set to run in NE1000-compatible mode with an IRQ setting of 5 or below, skip this section and proceed to "Installing the LANtastic for Windows 95 software" on page 23. If you need to change the mode and/or IRQ setting, follow the instructions under "Configuring your NodeRunner adapter to work with LANtastic for Windows 95" on page 17. (This ensures more reliable performance under Windows 95.)
- If the adapter installed in the computer is a brand other than Artisoft NodeRunner, see its documentation for configuration guidelines. If you don't need to change any settings, skip this section and proceed to "Installing the LANtastic for Windows 95 software" on page 23. Otherwise follow the manufacturer's instructions to set the adapter to operate under Windows 95.

Configuring your NodeRunner adapter to work with LANtastic for Windows 95

If there's an Artisoft NodeRunner adapter already installed in a Windows 95 computer, and it isn't already configured to run in NE1000-compatible mode with an IRQ setting of 5 or below, you'll have to reconfigure it to obtain the most reliable performance under Windows 95. You can also use the instructions in this section to check your adapter's IRQ and I/O address settings.

To configure the NodeRunner adapter, you need to run the NRSETUP.EXE program. You'll find NRSETUP.EXE in all of these places:

- On the LANtastic for Windows 95 License diskette (Disk 1)
- On the disk that came with the adapter
- In your \LANTASTI subfolder if you've previously installed LANtastic v5.0 or higher

If you don't have a copy of NRSETUP.EXE, you can download it from the Arti-Facts electronic bulletin board or from Artisoft's FTP server at <ftp.artisoft.com>. For more information, consult the Technical Support Directory of Services that came in your LANtastic for Windows 95 package.

To configure your NodeRunner adapter to NE1000-compatible mode:

1. Insert the diskette that contains the NRSETUP program into a floppy drive on your Windows 95 computer.
2. At the Windows 95 desktop, click the DOS prompt shortcut icon.
3. At the DOS prompt, type: A: <Enter>, then NRSETUP <Enter>, where A: is the floppy drive containing the NRSETUP diskette.
4. If any network software is running, you'll see the message, "Adapter may be in use!" Press Enter to proceed or Esc to abort. The Main Options screen appears.
5. Use the cursor keys to select Manual NodeRunner Configuration, then press Enter.

Two windows appear. The top one shows information about your NodeRunner adapter. The bottom one shows a list of configuration options.

6. Use the cursor keys to select Mode in the bottom window, then press Enter.
A third window appears showing all available modes of operation.
7. Use the cursor keys to select NE1000, then press Enter.
8. Set the IRQ to a value of 5 or below. Make sure the IRQ you select isn't already in use. Be sure to write down the IRQ setting – you'll need it when you're installing the adapter driver.
9. Check and write down the adapter's I/O address setting – you'll need it when you're installing the adapter driver.
10. Press Esc twice to exit NRSETUP.
11. Your NodeRunner adapter is now correctly configured to operate with Windows 95. You'll need to go to the next section to install the adapter driver.

Installing an adapter driver ---

Once you've installed and configured a network adapter on all of your Windows 95 computers, you must make sure that each adapter has driver software that's installed and recognized by Windows 95. (Windows 95 calls this procedure "setting up your computer to use a network.")

Here's how to tell whether you need to install an adapter driver:

- If the Network Neighborhood icon appears on the Windows 95 desktop, you don't have to install an adapter driver. Instead go straight to "Installing the LANtastic for Windows 95 software" on page 23. (This will usually be the case with a Plug and Play adapter.)
- If the Network Neighborhood icon doesn't appear on the Windows 95 desktop, you must install an adapter driver according the instructions on the next page.
- If you know that you must install a driver but decide not to at this time, you'll be asked to do so while you're installing the LANtastic for Windows 95 software. When the installation is complete, you'll need to manually remove some unnecessary default network components according to the steps on page 28. To avoid having to do this, complete the steps that follow.

To install an adapter driver under Windows 95:

1. Click Start, Settings, Control Panel.
2. Double-click Network and check the list of installed components. If your adapter's name appears, follow the directions under step 3. If your adapter's name doesn't appear, follow the directions under step 4.

Note... If you see the name Artisoft LANtastic in the list of installed components, select it and click the Remove button, then continue with the steps below.

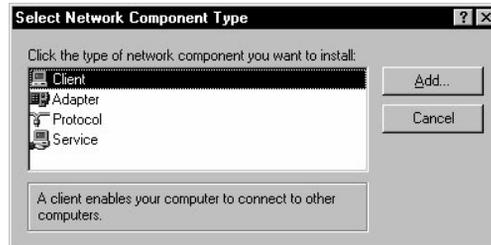
3. If your adapter's name appears in the list of installed components, follow the procedures under this step.

(If your adapter's name doesn't appear on the list of installed network components, go to step 4.)

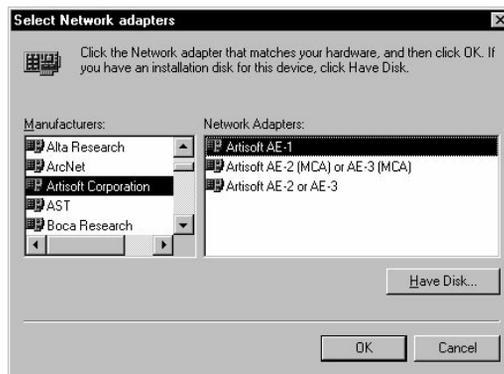
- Select your adapter's name from the list. (Because they're compatible with Intel adapters, Artisoft NodeRunner Pro adapters will appear on the list as "Intel EtherExpress Pro adapter." Any other type of NodeRunner adapter should appear as "NE1000 compatible." An Artisoft AE-x adapter should appear as "Artisoft AE-x.")
- Click the Properties button.
- Click the Resources tab.
 - Check to make sure that the Interrupt (IRQ) and I/O address ranges match the settings that are actually set on the adapter. If they do, click OK to close the Network folder, then go to "Installing the LANtastic for Windows 95 software" on page 23. If the IRQ and I/O settings are incorrect:
 - Click Configuration Type.
 - Select Basic Configuration 0.
 - Scroll to select the correct settings and click OK.
 - Click OK to close the Network folder. Click Yes to restart your computer, then go to "Installing the LANtastic for Windows 95 software" on page 23.

4. If your adapter's name doesn't appear on the list of installed network components:

- Click Add. The Select Network Component Type window appears.



- Click Adapter, then click Add again. The Select Network adapters window appears.



- Select your adapter's name from the Manufacturers' list, then follow the procedures under step 3 on page 19.

Hint... If you're using an Artisoft or Eagle brand adapter, see the chart on the next page. It will help you select the proper adapter manufacturer and driver.

- If your adapter's name doesn't appear on either the Manufacturer's list or the chart on the next page:
 - Click Have disk.
 - Insert the diskette that came with your adapter.
 - Verify that the "Copy manufacturer's files from" box displays the correct floppy drive letter (for example, A:). If necessary, type in the correct drive letter. Click OK.
 - From the Select Network Adapters screen, select the adapter driver that goes with your card and click OK, then follow the procedures under step 3 on page 19.

If you have this adapter:	Select this manufacturer:	Then select this network adapter:
Artisoft NodeRunner or NodeRunner/SI: NodeRunner 2000/T NodeRunner 2000/C NodeRunner 2000/A NodeRunner 2000M/TC NodeRunner/SI 2000/T NodeRunner/SI 2000/C NodeRunner/SI 2000/A NodeRunner/SI 2000M/TC	Novell/Anthem (Same for all adapters)	Novell/Anthem NE1000 or NE2000
Artisoft AE-Series: AE-1T AE-2, AE-2/T or AE-3 AE-2 or AE-3 Micro Channel	Artisoft Corporation (Same for all adapters)	Artisoft Corporation AE-1 Artisoft Corporation AE-2 or AE-3 Artisoft Corporation AE-2 (MCA) or AE-3 (MCA)
Artisoft NodeRunner Pro: (PnP enabled) (PnP not enabled)	Intel Corporation (Same for both adapters)	Intel EtherExpress PRO/10 PnP enabled Intel EtherExpress PRO/10 PnP disabled
Artisoft 2Mbps or NE-3: 2mbps E2mbps A2mbps NE-3	Not available	Not available
Artisoft Simply LANtastic: Internal External parallel port	Detected net drivers Not available	Existing NDIS2 driver (may work) Not available
Eagle: NE2000 Series Eagle EP32100 Series Eagle NE200T Series	Novell/Anthem Not available Eagle Technology	Novell/Anthem NE1000 or NE2000 Call Microdyne for driver availability Eagle Technology NE200T

You're ready to install the software

Now that your network hardware is installed, here's what to do:

If all of your Windows 95 computers have a CD-ROM drive, go to "Installing the LANtastic for Windows 95 software" on page 23.

If some or all of your Windows 95 computers lack a CD-ROM drive:

- See "Creating a floppy-only installation" below.
- Check the "Important Points" box on page 23 to see if the topics in it apply to your situation.

Creating a floppy-only installation ---

To perform a floppy-only installation, you'll need to create a diskette that contains the software that comes on the LANtastic for Windows 95 CD-ROM. You can either download a compressed file or copy the software from the CD-ROM.

Downloading the compressed file

If none of your computers has a CD-ROM drive, you'll need to download a file called L4W95-2.EXE. To download this file from the Arti-Facts BBS, call 1 (520) 884-8648 or 1 (520) 884-9675 in the U.S. and Canada, or refer to the Technical Support Directory of Services for the BBS number of the Artisoft office nearest you.

If you prefer, you can download the L4W95-2.EXE file from Artisoft's forum on CompuServe, Artisoft's Home Page on the World Wide Web, or Artisoft's anonymous FTP server on the Internet, as described on page 9 and page 10.

Either download the files directly to a floppy or download them to your hard drive, then copy them to a 3 1/2-inch diskette. In either case, label the diskette LANtastic for Windows 95 Disk 2, then go to "Installing the LANtastic for Windows 95 software" on page 23.

Copying the software from the CD-ROM

Go to a computer that has both a CD-ROM and 3 1/2-inch diskette drive and follow these steps:

1. Insert the LANtastic for Windows 95 CD-ROM and a blank, formatted diskette.
2. From a DOS prompt, type: `COPY D:\DISKS\2*. * A: <Enter>`, where D: is the CD-ROM drive and A: is the floppy drive.
3. Remove the diskette and label it LANtastic for Windows 95 Disk 2.

Now follow the steps under "Installing the LANtastic for Windows 95 software" on page 23.

Installing the LANtastic for Windows 95 software

Now that you've performed any necessary preliminary steps, installing the LANtastic for Windows 95 software should be quick and easy. Plan on spending 5 to 15 minutes installing on each computer.

IMPORTANT POINTS

If some or all of your Windows 95 computers lack a CD-ROM drive, you must follow the steps under "Creating a floppy-only installation" on page 22 before you start the numbered steps in this section.

Near the end of the installation, you may be asked to insert the Microsoft Windows 95 installation diskettes or CD-ROM. **If you don't have them** because Windows 95 came pre-installed on your computer, you must follow the computer manufacturer's instructions on creating a Windows 95 disk set.

If you have a Windows 95 CD-ROM, but only one CD-ROM drive that's shared across a pre-existing LANtastic network, you'll need to download an Artisoft Technical Support bulletin for further instructions. Follow the directions for using the online site of your choice that appear on page 9 or page 10, then download either LANWIN.TXT or LANWIN.PDF from the BULLETIN file area.

To make your Windows 95 computers network with each other using the LANtastic for Windows 95 interface, you must install the LANtastic for Windows 95 software on each Windows 95 computer. A possible exception is a computer that's already running the LANtastic 32-bit Client software, as explained under "Questions about the LANtastic 32-bit Client" on page 13.

Canceling the installation process: If you decide to cancel the installation at any time during the process, the setup may continue and you may get a series of error messages. If this occurs, you must run Setup again and click Remove to automatically remove the LANtastic for Windows 95 networking components. After you've solved whatever problem caused you to cancel installation, run Setup a final time to reinstall LANtastic for Windows 95.

Note... If you see any type of error message during software installation, refer to "Installation error messages" on page 29 for a table that gives possible causes and solutions.

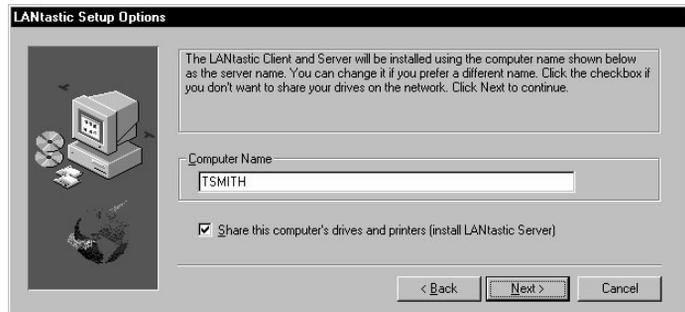
1. Shut down all other programs. Do this by pressing Alt+Tab to switch to other applications and close them.
2. If you're installing with the CD-ROM, put the LANtastic for Windows 95 CD-ROM in your CD-ROM drive. Or, if you're installing with floppy diskettes, insert the LANtastic for Windows 95 Disk 1 (the License diskette) in a floppy drive.

3. Click Start, then Run.
4. Type D:\SETUP where D: is the CD-ROM drive you're using, or A:\SETUP where A: is the floppy drive you're using, then click OK. The Welcome window appears.

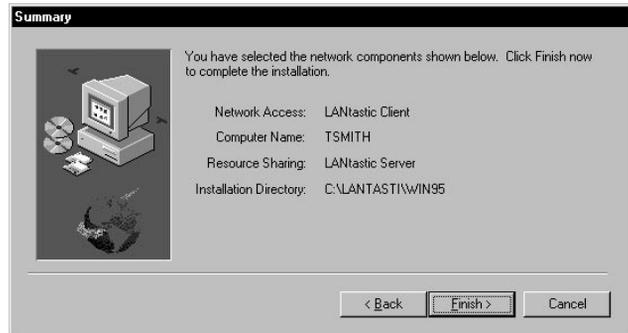


- If you haven't already exited all other programs, do so now.
 - If you're running an earlier version of LANtastic and haven't already disabled it, you'll see a dialog box that tells you that a LANtastic redirector is currently running. Go to page 12 for instructions on disabling the previous LANtastic software.
 - If you're running the LANtastic 32-bit Client software, you'll see a dialog box that tells you that LANtastic for Windows 95 or LANtastic 32-bit Client is already installed. Click the Remove button to make the Setup program disable the software for you.
 - At the dialog box, click Yes to confirm the removal.
 - Click Restart.
 - When the computer restarts, click Start, then Run. Type D:\SETUP, where D: is the CD-ROM drive you're using, or A:\SETUP, where A: is the floppy drive you're using. Then click OK.
5. From the Welcome window, click Next to continue. If you want, click the View Readme File button to see the latest information on LANtastic for Windows 95.

6. If you're installing from the CD-ROM, a prompt to insert the License diskette (Disk 1) will appear. Do so and click OK. The LANtastic Setup Options window appears.



7. At the LANtastic Setup Options window:
 - Type in a computer name. If the computer's Windows 95 name already appears there, you can keep that name, unless this computer has been set up for use as a Microsoft server.
 - LANtastic for Windows 95 automatically sets up this computer to share its drives and printers (act as a server), unless you click the check box to deselect this option. (If you deselect this option, this computer will operate as a client only and can't share its resources with other computers.)
8. From the Setup Options window, click Next to continue. The Summary window appears.



9. At the Summary window, review your selections. If you want to change an option, click Back. If everything is correct, click Finish to begin copying files. Here's what happens:
 - Windows builds a driver information database and adds the LANtastic network component to Windows 95.
 - If you haven't already installed an adapter driver, the Select Network Adapters window appears. Follow the instructions on that screen, then click OK. For driver selection guidelines, see the instructions that start on page 18. After the installation is complete, you'll need to follow the steps under "Manually removing network components" on page 28.
 - If you're performing a floppy-only installation, you'll be prompted to insert Disk 2. Do so and click OK.
 - If you're missing any required files from your Windows system directory, you may be asked to insert your Windows 95 CD-ROM or diskettes. The instructions on the screen will guide you through this process. When the process is complete, the LANtastic for Windows 95 Setup Complete window appears.



10. When the LANtastic for Windows 95 Setup Complete window appears, remove the LANtastic for Windows 95 CD-ROM and diskette, then click Restart. If the Windows 95 Enter Network Password logon box appears, enter your user name and an optional password. To make the LANtastic logon box appear the next time you start up your computer, follow the instructions under "Changing the primary logon box" on page 29.
11. To run LANtastic, double-click the LANtastic shortcut icon or click Start, Programs, LANtastic for Windows 95.

12. Wait for the program to add pages and buttons to the LANtastic Custom Control Panel.
13. If this is the first time you've installed LANtastic for Windows 95, the Confirm Resource Setup window appears. This window asks if you want Setup to add resources that will allow this computer to share its drives and printers. If you do, click Yes. The Sharing Drives and Printers window now appears, displaying messages that indicate what resource is being created.
14. If this is the first time you've installed a LANtastic for Windows 95 product on this computer, the Registration window appears. Type in the requested information, then follow the instructions on the screen to register by modem or mail. (You need to register only once for each license you've purchased, so after you've registered on one computer, you can bypass the registration process during subsequent installations.)

The LANtastic for Windows 95 software is now installed.

What you just installed

In addition to the LANtastic for Windows 95 network application, the Setup program created a number of default items on each computer. These include:

- A Supervisor account that allows you to manage the accounts and resources for this computer. To use it, simply log in to this server by typing in the user name supervisor, then pressing Tab and typing in the password supervisor. (To add security to this server, you can change the supervisor account password, as described under "Logging in with a Supervisor account" on page 57.
- A Guest account that allows anyone to log in to any server and use its drives and printers. All you have to do is type in the user name guest. (If you're accustomed to using a previous version of LANtastic, the guest account works like the default wildcard account named "*".) For more details on the Guest account, see "Guest account" on page 56.

- An Everyone group that gives everyone full rights to the resources on all servers. Every LANtastic for Windows 95 computer automatically becomes a member of the Everyone group. For more details on the Everyone group, see “Everyone group” on page 56.
- If you clicked OK at the Confirm Resource Setup screen, each disk drive, printer and CD-ROM drive attached to this computer has been set up as a shared resource that can be used by other network computers. To see a list of the names of these shared resources, log in to your Supervisor account. Directions for logging in to your Supervisor account appear on page 57.
- A folder called \INSTALL under the C:\LANTASTI\WIN95 program folder. Copies of all LANtastic for Windows 95 uncompressed files are located there. These files will allow you to use the Windows 95 Network control panel to add or remove various LANtastic for Windows 95 components at any time. Instructions for removing components appear in the next section. (Instructions for adding and removing components appear under “Adding or removing LANtastic for Windows 95 software components” on page 75.)

Manually removing network components _____

If you installed your adapter driver from the Network Adapters window while you were installing LANtastic for Windows 95, you'll now need to manually remove some unnecessary default network components. Follow these steps to remove the extra components:

1. Click Start, Settings, Control Panel. Double-click the Network icon.
2. Look for the Client for Microsoft Networks, IPX/SPX-compatible protocol, and NetBEUI in the Configuration window. These are default network components that aren't used by LANtastic.
3. For each of the components in the order listed above, click the component, then click Remove.
4. Click OK, then click Yes to restart your computer.

Changing the primary logon box _____

Since you're going to be regularly using the LANtastic for Windows 95 networking interface, you may want to make the LANtastic for Windows 95 logon box appear in place of the Windows 95 logon box. (The logon box contains the user name and password prompts that appear whenever you start up your computer.) To change the primary logon box:

1. Click Start, Settings, Control Panel.
2. Double-click Network.
3. From the drop-down list box titled Primary Network Logon, choose Client for LANtastic Networks.
4. Click OK.

The LANtastic for Windows 95 logon box will now appear whenever you start up your computer.

Installation error messages

The following table tells you what to do if you receive an error message when you're installing LANtastic for Windows 95.

Error Message	Possible Cause	Suggested Solution
Invalid computer name.	The computer name entered is too long or contains invalid characters.	See below for specific computer name error messages.
The computer name may not be more than 15 characters.	The computer name entered is too long.	Type in another name using 15 characters or less.
The computer name may not contain spaces.	The computer name entered has one or more spaces in it.	Type in another name without using spaces.
The computer name may not contain the character XXX.	The computer name entered contains one or more of the following invalid characters: * ? / % ; # : + = . , [] < > \	Type in another name without using invalid characters.
Copy Error. Could not open UNINST.INI. Can't delete LANtastic files.	The file UNINST.INI isn't in the program folder. It contains a list of common files that need to be deleted when all LANtastic components have been removed.	Use property sheets to delete files manually. You may need to reinstall LANtastic for Windows 95 (so UNINST.INI is in the program folder) and then remove LANtastic for Windows 95.

(Continued)

Error Message	Possible Cause	Suggested Solution
Could not determine the current directory.	The Microsoft Windows 95 installation might be incorrect.	You may need to reinstall Windows 95.
Could not find the Windows directory.	The Microsoft Windows 95 installation might be incorrect.	You may need to reinstall Windows 95.
Could not find the Windows system directory.	The Microsoft Windows 95 installation might be incorrect.	You may need to reinstall Windows 95.
General file transfer error. Please check your target location and try again.	The disk may have been ejected before Setup was complete, or the disk is bad.	Insert the disk again and restart Setup, or get a good copy of the disk.
Incorrect disk. License file not found. Please insert Disk 1 into the floppy drive.	The wrong disk was inserted into the drive.	Insert Disk 1, which is the License diskette.
A LANtastic redirector is currently running. Follow instructions in README.TXT on shutting down LANtastic 6.1 and earlier versions, then restart Setup.	A previous version of LANtastic is running or detected in memory.	Remove previous versions of LANtastic and try Setup again.
There is not enough space available on the disk C:\LANTASTI\WIN95. If you are re-installing, there may be enough room as the existing files will be overwritten.	There isn't enough free space on the target disk.	Make sure there's at least 4.9MB free space on the target disk.
This program requires VGA or better resolution.	Your monitor's video mode doesn't have a high enough resolution.	Get a VGA monitor and video card.
Unable to create a directory under C:\LANTASTI\WIN95. Please check write access to this directory.	The folder might be write-protected or the file system might be corrupted.	Manually delete the \WIN95 directory under C:\LANTASTI. Refer to the Windows 95 troubleshooting Help.
You must enter a computer name.	The Computer Name field in the LANtastic Options dialog box is empty.	Type in a computer name or quit the installation by clicking Cancel to exit Setup.

If you don't see your error here, check the error messages entry in the index of this manual. Also, your LANtastic for Windows 95 CD-ROM includes an online manual called ERRORS.PDF, which is a complete list of LANtastic for Windows 95 error messages. For instructions on using it, go to the online Help and search for the topic "Error messages."

BASIC NETWORKING

CHAPTER CONTENTS

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The topics in this chapter introduce you to some of the main features of LANtastic and provide step-by-step instructions for everyday networking tasks.

Learning the basics of LANtastic for Windows 95

If you've used LANtastic network operating systems before, you'll notice a few differences in LANtastic for Windows 95 aside from the new interface. Many of the management functions are behind the scenes: you won't see the familiar Network Manager, control directories or the term "access control lists" (ACLs). Furthermore, many network performance settings are adjusted automatically.

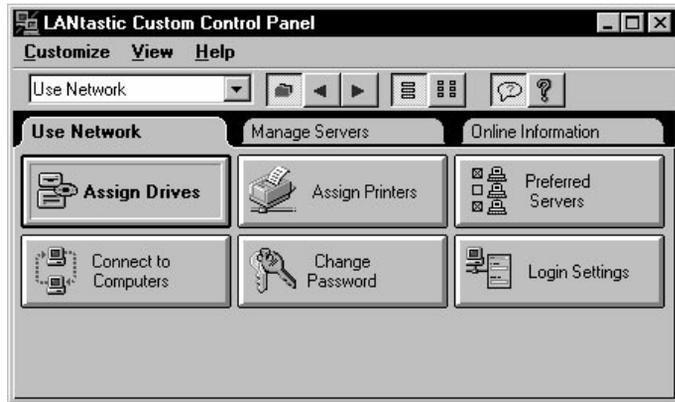
Servers and clients

During installation, if you selected the option to "Share this computer's drives and printers," you made your computer a server. Until security features are set up, everyone on the network can modify files and use applications on your server's hard drive.

If you didn't select "Share this computer's drives and printers" during installation, your computer is a client. It can use resources on network servers but no one has access to its drives other than the person sitting at your computer.

Getting to know the LANtastic Custom Control Panel

As shown on the next page, there are three pages in the LANtastic Custom Control Panel: Use Network, Manage Servers and Online Information. The control panel is fully customizable. You can change the text on the tabs, add new pages and buttons, change colors and more. Take a look at "Customizing the LANtastic Custom Control Panel" on page 39 to learn how you can personalize LANtastic for Windows 95 to suit your day-to-day networking needs.



Use Network page

The buttons in Use Network control your day-to-day network use. You can set up your computer to automatically connect to a series of computers and printers every time you start it up. You can also change your password and make other configuration changes.

Manage Servers page

The buttons in Manage Servers are for the use of the system administrator or anyone who's authorized to set up login accounts, resources and their access rights. You can also configure the server, back up its accounts and resources, view log files and manage print jobs.

Online Information page

The buttons in Online Information lead you to all forms of online documentation available on LANtastic for Windows 95. For example, *Introducing LANtastic* explains networking basics. *How To* explains how to perform a series of specific tasks. *Help Topics* and *Index* take you to *Contents*, *Find* and *Index* for the online Help. *Troubleshooting* offers solutions to possible problems.

Using security features to restrict access

LANTastic for Windows 95 offers more security features than Windows 95 or Windows for Workgroups. Network users who require a tight, multi-level security system often assume they must purchase a more costly, complex network. But for less money and easier administration, you can use LANTastic for Windows 95's comprehensive security features with any DOS, Windows, OS/2 or Windows 95 computer.

Although you aren't required to use LANTastic's security options, they're useful in today's business world because they help protect proprietary information and allow selective access to privileged information. For example, you can keep everyone but your payroll accountant out of your payroll files.

Security starts with creating unique accounts that let people on your network log in to the LANTastic for Windows 95 servers. Every account is assigned a Management Security Level and account privileges. You can also set password and time-of-day account restrictions.

The next step is setting up specific network resources, such as a computer's C drive, or another computer's CD-ROM drive, printer or specific folder on the hard drive. Then accounts are assigned access rights to these resources.

Finally, the Configure Server button offers additional options that further secure your network, such as setting up audit trails.

Instructions on setting up security features appear in Chapter 4.

Using network drives and printers

Your computer has physical drives, such as your hard drive (usually the C drive) and floppy diskette drives (usually the A and B drives). When you use LANTastic for Windows 95 to connect to other computers' drives, you assign or map your own computer's non-physical "virtual drives" to those resources. Your virtual drives can be represented by most of the drive letters from D through Z.

Permanently mapping your computer's drives makes it faster and easier to use network resources such as servers and printers. This is because you can set up LANTastic to log you in to these resources automatically every time you start up your computer.

Printers are assigned ports such as LPT1 and LPT2, instead of drive letters.

Complete details on assigning drives appear in the next section. Printer connections are described starting on page 37.

Connecting to a drive on another computer

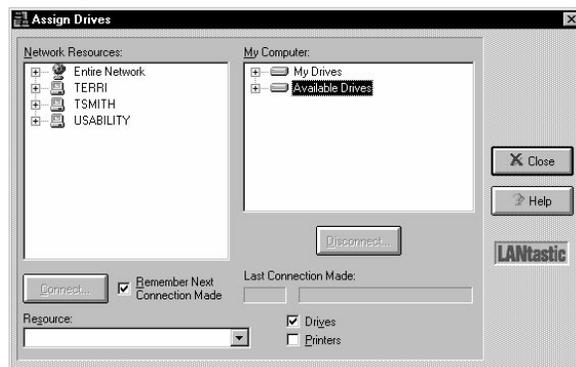
You can use the hard drives on any of the computers on your network, as long as:

- Those computers were installed as servers (the option to “share drives and printers” was selected during Setup).
- The servers’ drives have been set up as shared resources (see the first paragraph under “Creating shared resources” on page 66).
- No one has set up security options that limit your access to the servers.

You can also connect to other types of drives on servers, such as CD-ROM drives. For example, your network may have only one CD-ROM device. If it’s attached to a server, you can easily use it while sitting at your computer by following the steps in this section. Note that, when you want to connect to a CD-ROM drive, you must first turn on the device and put a CD in it.

These steps are applicable for all types of drives:

1. Go to the Use Network page and click Assign Drives. The Assign Drives window appears.



Note... If you're already in the Assign Printers window, you can click the Drives check box. The window title bar will change to Assign Drives and Printers.

2. In the Network Resources field, click the plus sign next to Entire Network to view all servers. Then click the plus sign next to a server's name to view all of its shared resources.
3. Click the plus sign next to Available Drives in the My Computer field, then click the drive letter you want to use for this connection.
4. If you want to make this connection permanent, so that you'll connect to it automatically every time you restart your computer, click Remember Next Connection Made.
5. Go back to the Network Resources field and double-click the drive you want to connect to. This connects it to the drive you selected.

Alternatively, you can click the drive you want to connect to, then click Connect.

The Last Connection Made field immediately shows that your connection was successful. You can also check all your drive letter assignments by clicking the plus sign next to My Drives, in the My Computer field.

6. When you've made all the connections you need, click Close.

Canceling a drive connection

To cancel a connection to another computer's drive:

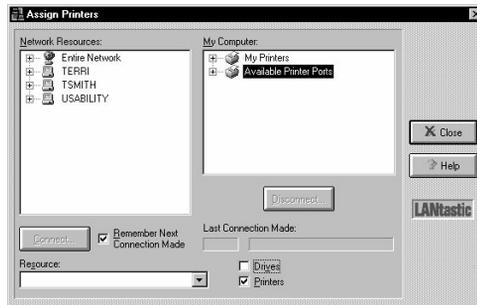
1. Go to the Use Network page in the LANtastic Custom Control Panel and click Assign Drives.
2. In the My Computer field, click the connection you want to cancel. (To view all the existing connections, click the plus sign next to My Drives.)
3. Click Disconnect, then click Close.

Note that there's a Printers check box at the bottom of the Assign Drives window. You can click this box to connect to or cancel a connection to a printer, or use the instructions in the next section.

Connecting to a printer attached to another computer

Connecting to printers is just as easy as connecting to drives:

1. Go to the Use Network page and click Assign Printers. The Assign Printers window appears.



- Note...** If you're already in the Assign Drives window, you can click the Printers check box. The window title bar will change to Assign Drives and Printers.
2. In the Network Resources field, you'll need to locate the name of the server that has a printer attached. You can click the plus sign next to Entire Network to view all servers.
 3. Click the plus sign next to the server's name to view its shared printers.
 4. Click the printer you need.
 5. In the My Computer field, click the LPT printer port number you want to assign to the printer.

Note... If you want the new connection to be reestablished automatically every time you start your computer, click the Remember Next Connection Made check box. Do this before you make the connection.

6. Click Connect.
7. When you've made all the connections you need, click Close.

Canceling a printer connection

To cancel a connection to a printer on another computer:

1. Go to the Use Network page in the LANtastic Custom Control Panel and click Assign Printers.
2. In the My Computer field, click the connection you want to cancel. (To view the existing connections, click the plus sign next to My Printers.)
3. Click Disconnect.

Note that there's a Drives check box at the bottom of the Assign Printers window. You can click this box to connect to or cancel a connection to a drive.

Connecting to drives and printers from the same window

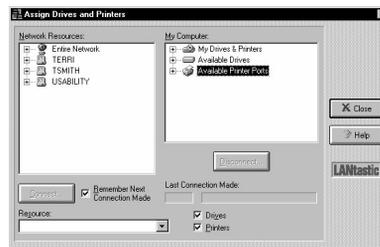
If you want to always make connections to drives and printers from the same window, you can combine the Assign Drives and Assign Printers buttons in the Custom Control Panel.

1. On the Use Network page, right-click either the Assign Drives or Assign Printers button.
2. Click Properties, then Options. The Options – Assign Drives and Printers window appears.



3. Make sure both the Drives and Printers boxes are checked. Then click OK to return to the Button Properties window.
4. In the Title field, type in a new name for the button – Assign Drives and Printers, or Network Connection Setup, for example.
5. Click Apply to view your changes.
6. When the button setup is correct, click OK.

From now on, whenever you click this button the Assign Drives and Printers window will appear.



7. To rename the button, right-click it and click Properties, then type the new name in the Title field.
8. To delete the other Assign button, right-click it and click Remove.

Using an existing drive connection

Once you've set up your drive connections, you can use the connections from the Windows 95 Explorer.

1. Click My Computer, then click the drive you want to use.
2. Click the plus sign next to the drive name to show its subfolders. You can double-click a folder to display its files in the Contents field, on the right side of the Explorer window.
3. Double-click a file and it will either open in the application in which it was created, or you'll see the Open With window. This window gives you a choice of applications from which to open the file.

Customizing the LANtastic Custom Control Panel

The LANtastic Custom Control Panel is fully customizable. As well as sizing the panel just like any other Windows 95 window, you can use LANtastic's drag-and-drop capabilities to quickly add buttons that make your day-to-day work even easier. For example, you might want to create a new button that starts your favorite application – whether the application is on your computer or someone else's. Or you could create a new button that automatically opens a file you use every day on someone else's computer.

The following options are explained in this section:

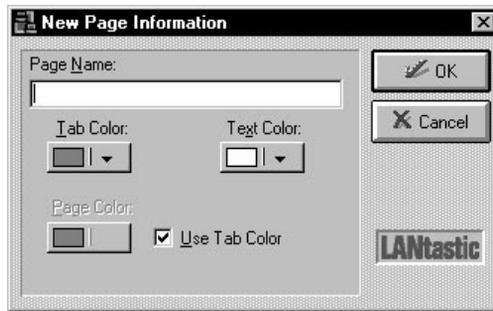
- Add new pages (see page 40)
- Delete pages (see page 41)
- Change the names and colors of existing pages (see page 41)
- Add buttons on a Custom Control Panel page (see page 42)
- Delete buttons on a Custom Control Panel page (see page 44)
- Change button names, icons and descriptions (see page 45)
- Start an application or open a file from a button on the Custom Control Panel (see page 46)

You can also use the View menu options to hide the toolbar and page tabs, and switch between large and small (icon-only) buttons.

Hint... If you make a mistake when you're customizing the LANtastic Custom Control Panel, you can restore its default appearance (pages, buttons and other settings). See page 46.

Adding a new page

From the Customize menu, click New Page. The New Page Information window appears.



1. Type in the page name.
2. Click the down arrows and click the color you want for the page, tab and the tab text. If you want to use different colors for the page and its tab, click to clear the Use Tab Color check box. If you want to use the same color for the page and tab, make sure the box is checked.
3. Click OK.

Note... You can have up to 16 pages in the Custom Control Panel. If you have a large number of pages and can't see all their tabs (or if you prefer to hide the tabs), you can click the down arrow next to the field on the left side of the toolbar to view a pull-down list of all pages. Then click in the list to switch to the page you want to use.

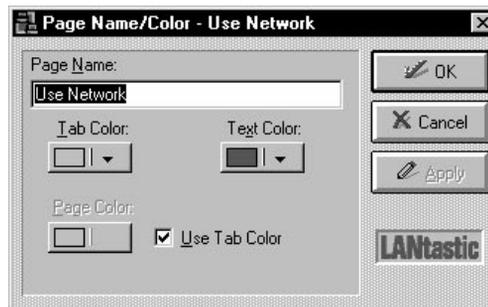
Deleting a page

1. Click the page you want to delete.
2. From the Customize menu, click Delete Current Page.
3. Click Yes to confirm the deletion.

Note... When you delete a page, it disappears along with all the buttons on it. However, those buttons will still be available for adding to other pages. Use the Add/Remove Buttons menu option to locate the buttons on the Add page of the Add/Remove Buttons window.

Changing page names and colors

1. Make sure the page you want to change is active.
2. From the Customize menu, click Page Name/Color. Or with the cursor pointing to the page and not a button, right-click and select Name/Color from the pop-up menu. The Page Name/Color window appears.

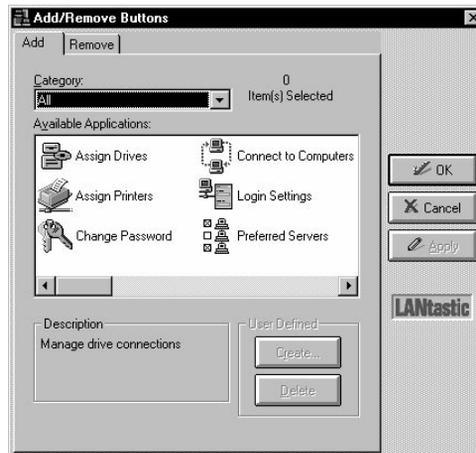


3. To change the page name, edit the Page Name field.
4. To change the color of the page, its tab or the tab text, click the required down arrow and click the color you want.
5. Click Apply to view your choice.
6. When your changes are correct, click OK.

7. If you want to use different colors for the page and its tab, click to clear the Use Tab Color check box. If you want to use the same color for the page and tab, make sure the box is checked.

Adding new buttons

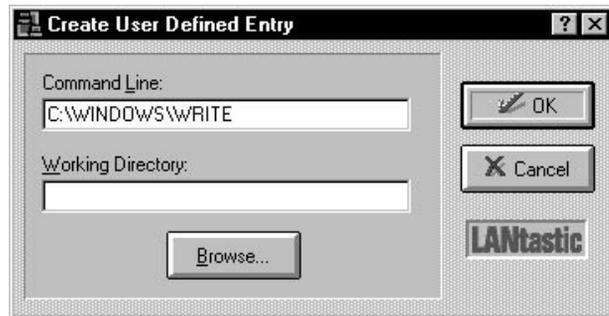
1. Make sure the page you want to modify is active.
2. From the Customize menu, click Add/Remove Buttons. The Add/Remove Buttons window appears.



3. With the Add page active, use the Category pull-down list to display the button(s) you want to add.
 - If you want to add buttons to launch your favorite applications, or to open the files and windows you use frequently, click User Defined Applications in the Category list then click Create. Use the Create User Defined Entry window as described in “Creating a user-defined button” on page 43 to add buttons to the Available Applications list. (You can also add these “quick launch” buttons by dragging and dropping.)
 - If you want to add buttons that allow you to change your computer name or to display pop-up messages, click Utilities in the Category list, click the button you need, then click OK to add the button to the active page.
4. Click the button you want to add (or click and drag to select multiple buttons), then click Apply.
5. Click OK when you’re finished adding buttons.

Creating a user-defined button

To add buttons to launch your favorite applications, or to open files and windows you use frequently, complete the steps below in the Create User Defined Entry window (shown here).



1. In the Command Line field, type in the full path to the application, file or folder you want. Click Browse if you need to check out the correct path.

Note... In the example shown here, the path is to Windows Write. You could use this button to open a new Write document.

2. If you're using the button to invoke an application (not a folder or file) that requires a specific working directory, type in the correct path in the Working Directory field. Note that few applications require a working directory, so you usually won't have to use this field. However, see the Hint below.
3. Click OK to add the new entry to the Available Applications field.

Hint... If you're invoking an application that you use to open files, you can speed up the search process when you click Open on the File menu by specifying the working directory that the application should begin searching in. If the button is for Microsoft Word, for example, you'll probably want to begin the File-Open process in the folder where you keep all your .DOC files.

Deleting buttons

1. Make sure the page with the buttons you want to delete is active.
2. From the Customize menu, click Add/Remove Buttons, then click the Remove page tab.
3. Click the icon for the button you want to remove. The name and description of the button appears at the bottom of the window. (You can click and drag to select multiple buttons.)
4. Click OK to remove the button(s).
5. If you're prompted to confirm the deletion, click OK again.

When you're deleting buttons, note the following:

- If you don't need to delete many buttons at the same time, you may prefer simply to right-click a button you want to delete. A pop-up menu appears, as shown here.

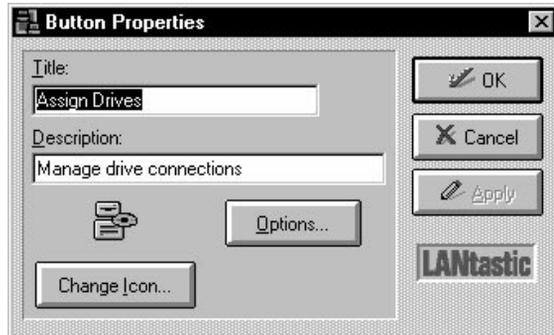


Click Remove to delete the button. If you're prompted to confirm the deletion, click OK again.

- With the exception of user-defined buttons, whatever way you use to delete a button from a page it will still remain available on the Add page of the Add/Remove Buttons window. This is handy in case you ever want to add the button again. (You can click a user-defined button in the Available Applications field and then delete it using the Delete button. You'll then have to recreate it if you want to use it on a page in the future.)
- If you don't want to be prompted to confirm a deletion, clear the Confirm Delete check box on the Remove page.

Changing button names, icons and descriptions

Right-click the button you want to change. Then click Properties. The Button Properties window appears.



Complete one or more of the following:

- Edit the Title field to change the button name.
- Edit the Description field to change the text that appears when you call up balloon Help for the button.
- Click Change Icon to choose a different icon for the button. Click the left and right arrows to view the icons available. To locate an icon somewhere else on your system, click Browse (or type in the path to the icon, if you know it). Click OK when you've specified the icon you want.

If you're modifying a button that you've added to the Custom Control Panel to launch an application or open a file or folder (a "user-defined" button):

- In the Command Line field, type in the full path to the application, file or folder you want this button to invoke. Click Browse if you need to check out the correct path.

Hint... If you're using the button to invoke an application (not a folder or file) that requires a specific working folder, type in the correct path in the Working Directory field. Note that few applications require a working folder, so you won't generally have to use this field.

- Click Apply to check out your changes. If they're correct, click OK.

Starting an application or opening a file from the Custom Control Panel

LANtastic's drag-and-drop capabilities make it easy to set up "quick launch" buttons in the LANtastic Custom Control Panel. When you've set up these buttons, you can run your favorite applications and open files that you use every day – with just a click of the mouse.

1. Make sure the LANtastic Custom Control Panel page where you want to put the button is active.
2. Run Windows 95 Explorer and locate the icon for the application or file that you need. This can be on your computer's hard drive or a drive on someone else's computer.
3. Drag and drop the icon onto your Custom Control Panel page. The new button appears automatically, with the same application or filename.

Hint... You can also add buttons to launch your favorite applications, and to open files and windows you use frequently, by clicking the Add/Remove Buttons option on the Customize menu. Then click User Defined Applications in the Category list and click Create. Use the Create User Defined Entry window to add buttons to the Available Applications list. See "Adding new buttons" on page 42 for more information.

Restoring the LANtastic Custom Control Panel default settings

If you accidentally delete a button or page that came with LANtastic for Windows 95, or if you want to restore the default LANtastic Custom Control Panel for any reason, follow these steps:

1. Close LANtastic for Windows 95.
2. Click Start, Programs, MS-DOS Prompt to open a DOS box.
3. Change to the Windows directory on your hard drive by typing `CD \WINDOWS <Enter>`.
4. Type `DELETE *.LCF <Enter>` then type `EXIT <Enter>`.
5. Open LANtastic for Windows 95 again. The default LANtastic Custom Control Panel settings will be restored.

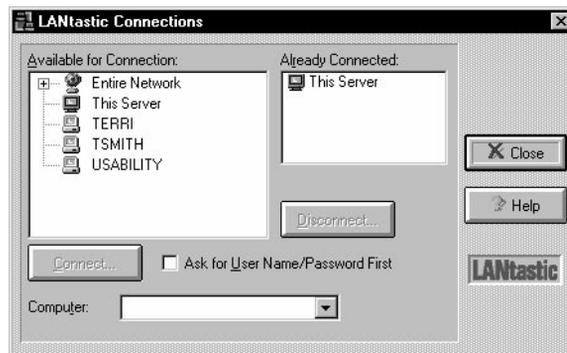
Logging in to other computers

You must log in to a computer before you can use its drives and printers. Logging in is the process of identifying yourself as a valid user with a pre-assigned user name and password.

For information about setting up security features such as access rights to resources, refer to Chapter 4. If you set up such features, logging in may involve steps beyond the basic ones described below. For complete instructions on logging in and out of servers, see the online Help.

To log in to a server:

1. From the Use Network page, click Connect to Computers. The LANtastic Connections window appears.



2. Use one of these methods to select the computer you want to use:
 - Click it in the Available for Connection list.
 - Click the plus sign next to Entire Network, then click the computer.
 - Type the computer's name in the Computer field.
 - Click the scroll arrow on the Computer list box to see a list of the computers you connected to most recently, then click the one you want.
3. If you want to connect to the computer using a non-default user name and password, make sure the Ask for User Name/Password First box is checked.

4. Click Connect. You're automatically logged in to a server when you connect to it, providing you have rights on that computer.
5. Repeat these steps for each computer you want to use, then click Close.

Note... To perform server management functions you must log in to a server with an account that has the Supervisor Management Security Level (MSL). See page 57 to learn how to do this.

Logging out of other computers ---

1. From the Use Network page, click Connect to Computers.
2. In the Already Connected list, click the computer you want to log out of.
3. Click Disconnect, then click Yes to confirm the disconnection.

Shutting down servers ---

If your computer is set up to share drives and printers, it's a good idea to follow the guidelines in this section before shutting down your computer. If other people are using files on your computer and you shut it down without warning, they may lose any work they haven't saved.

Note... You can disable sharing on a server only if you logged in to that server using an account that has the Supervisor Management Security Level (MSL).

It's a good idea to use these shutdown guidelines when you're planning to shut down LANtastic's sharing feature (by using the Shutdown Server option on the Server Control Panel Server menu) and then continue working on your computer. These same guidelines are recommended when you're going to shut down the computer completely (by clicking Shut Down from the Windows 95 Start menu).

1. From the Manage Servers page click Server Control Panel and check the Server Statistics field to see whether other people are using files on your computer:
 - If no one is using your files, go ahead and shut down in the normal way. (Note that to stop sharing you must log in

to your computer using an account with the Supervisor security level.)

- If people are using your files:
 - Make sure other people's computers are set up to display LANtastic pop-up messages (see page 80) and then specify a delay time before the shutdown. To do this, when you click Shutdown Server from the Server Control Panel's Server menu, clear the Shutdown Now check box and specify the number of minutes before the shutdown.

This way, a series of pop-up messages will warn everyone who is logged in to your computer of the pending shutdown (providing they have pop-up messages enabled). Once sharing is no longer active, you can turn off your computer.

- If you see that your printer or plotter is busy, check with your colleagues before scheduling a shutdown. If someone is sending a job to your printer, you'll want to keep your computer turned on until the job is done.
2. If you need to cancel the scheduled shutdown before the specified delay time has expired, open the Server menu from the Server Control Panel and click Cancel Shutdown.

RELATED TOPICS

For comprehensive instructions on daily network use, go to the online Help.

BEYOND BASIC NETWORKING

CHAPTER CONTENTS

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This chapter introduces you to the enhanced security features of LANtastic for Windows 95, including four new Management Security Levels. It also explains how to create shared resources in addition to those created automatically during setup.

If you decide to add security to your network, you can use the instructions in this chapter to set up individual and group accounts. These accounts give the people on your network specific degrees of access to computer drives and printers.

The troubleshooting section provides some solutions to common problems, and "Expanding and changing your network" answers questions that might arise when you want to make modifications. For further details on managing LANtastic for Windows 95, refer to the online Help.

Using LANtastic's security options

LANtastic for Windows 95 provides multiple levels of network security, from none at all to security that's fine-tuned enough to limit access to a single file. You can also monitor network activity with the auditing options.

Security is important in network situations when you need to allow selective access to privileged information. For example, you may want to allow only your accounting staff to have access to your company's payroll files.

Of course, LANtastic's security features are optional. When the LANtastic for Windows 95 software is installed, a Guest account and an Everyone group are created on each computer. By default, both allow everyone on the network full access to every shared drive and printer resource. If you retain these default accounts, your network will have no security. To learn more about the Guest and Everyone accounts, see "Understanding the default accounts" on page 56.

Network security strategies

If you want to set up security measures, you can choose to use some or all of the following features:

- Account-related security strategies (see below)
- Drive and folder access security strategies (see page 53)
- Configure Server security strategies (see page 54)

Account-related security strategies

Accounts allow you to set up selected access rights to resources and account privileges for a person or group of people on the network. Account-related security strategies include:

- Restricting the access rights to resources and the account privileges that come with the default Guest account and Everyone group. By default, both accounts allow every network user complete access rights to all resources on all LANtastic for Windows 95 servers, and unlimited account privileges. Guest and Everyone are described under "Understanding the default accounts" on page 56.

- Creating unique individual login accounts for higher security. You can set up one or more individual accounts for everyone on the network, and customize their access rights to each shared drive or printer resource. Each person will be prompted to type in a user name and password (log in) before he or she can connect to a server. Accounts are assigned different Management Security Levels (MSLs), privileges and access rights. (MSLs are described on page 54. Access rights and privileges are described beginning on page 68.)
- Setting up group accounts that consist of several individual accounts. This can make it easier to keep track of who has which access rights to a resource, and it allows you to make changes that affect every account in the group at once.
- Setting time-of-day login restrictions and password expiration dates on accounts. Security is tighter when access is denied at odd hours and passwords change regularly.

For detailed instructions on setting up account-related security, see pages 55 – 61 or the online Help.

Drive and folder access security strategies

To use your LANtastic for Windows 95 network, you must set up shared disk resources such as drives and folders. You also must set up shared peripheral resources such as printers and CD-ROM drives. You can add security to your shared resources by:

- Dividing a server's hard disk into separate, well-organized folder resources. For example, if you know that most people who want access to Gordon's server use only one folder on his C-drive, it's better to make that folder the shared resource instead of the entire drive.
- Creating an Account List for every resource. This list contains all individual and group accounts you want to allow access to the resource. It allows you to specify special access rights to that resource that override any general access rights the accounts were given.
- Setting up file-level security to restrict or expand access to specific files or folders on a shared resource. This feature is known as File Exceptions.

For instructions on setting up drive and folder access security, see pages 66 – 69 or the online Help.

Configure Server security strategies

When you click the Configure Server button on the Manage Servers page of the LANtastic Custom Control Panel, the Configure Server window appears. The window's six pages allow you to set security and auditing options on the specified server, such as:

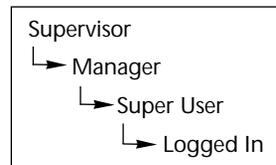
- Setting up an audit trail that records every user attempt to log in to a server and many other user activities (such as opening files, editing files and deleting folders). This lets the network supervisor monitor network use and determine who wants access to specific resources and at what time. This audit trail can help you identify and track suspicious user activity.
- Disabling the Broadcast Server ID to all Network Users option. This option is enabled by default so that your server name is broadcast over the network. Disabling it enhances security because people won't be able to log in to the server unless they already know its name.
- Controlling which Management Security Level has the highest level of server management ability in certain categories. For example, you can allow the Manager MSL to manage print resources, but allow only the Supervisor MSL to manage drive resources, servers and accounts.

To learn more about configuring your server's security options, see the online Help.

Using Management Security Levels (MSLs)

MSLs are the first tier of LANtastic for Windows 95's network security. Every account has an MSL. You can determine which MSL each account has when you're creating or modifying accounts, as explained under "Setting up security with accounts" on page 55.

The hierarchy of the four MSLs that can be assigned to accounts is shown in this diagram:



By default, the Supervisor MSL is the only MSL that allows the account holder to perform all four management tasks on LANtastic for Windows 95 servers: manage the server, accounts, drive resources and print resources. The Logged In MSL allows people only to log in to servers, but not to manage them or create and modify their accounts and resources.

If you log in to a server with an account that has the Supervisor MSL, you can modify which will be the lowest-level MSL that accounts must have to be able to perform each of the four management tasks on that server. For details on changing this setting in the Configure Server window, Security page, see the online Help.

Setting up security with accounts _____

The first step to establishing security on your drives and printers is setting up individual accounts with user names and passwords. Such accounts prevent unauthorized people from accessing a server's drives over the network.

Who can set up accounts?

Many networks have a system administrator who creates and maintains all accounts and shared resources. He or she will probably restrict other network users' ability to create or modify accounts or resources by assigning most accounts a Management Security Level (MSL) of Logged In. The system administrator's account has the Supervisor MSL.

If everyone on your network is allowed to manage accounts and modify resources, you're ready to get started now – because every LANtastic for Windows 95 server comes with a Supervisor account that anyone sitting at the server can use. Its use can be restricted (see “Hints for managing Supervisor accounts” on page 58).

If you do want to enhance security, your first step is to modify the Guest account and the Everyone group on each LANtastic for Windows 95 server to restrict access. These accounts are fully described below.

Understanding the default accounts

Every LANtastic for Windows 95 computer comes with the following accounts.

Guest account

The Guest account is similar to LANtastic's wildcard (*) account. Unless you've previously created an individual account to use a LANtastic for Windows 95 server's resources, any time you attempt to log in to a LANtastic for Windows 95 server you'll automatically be logged in with its Guest account. This is because the Auto guest login option is enabled by default. For details on Auto guest login, see the online Help.

Even if Auto guest login is disabled on a server, you can still log in with its Guest account. When logging in, just type `guest` in the user name field and click OK. By default, no password is necessary.

If you want to tighten network security, the first thing to do is go to every LANtastic for Windows 95 server and either disable the Guest account or delete the Everyone group from its group membership. You can do this only if you have an account on every server that has the Supervisor Management Security Level (see "Supervisor account" below).

Everyone group

Every LANtastic for Windows 95 server has its own Everyone group account. Every individual account that has access to a server is, by default, made a member of that server's Everyone group. Unless the Everyone group has been modified, it grants complete access rights to the resources on that server.

You can modify the Everyone group's default access rights to the resources on each server to suit your security needs, providing your account on that server has the Supervisor Management Security Level (see "Supervisor account" below). For general instructions on modifying groups, see the online Help.

Supervisor account

Every LANtastic for Windows 95 server comes with a Supervisor account. This default account lets you log in to a server with the user name of Supervisor and password of Supervisor. Because this account has the Supervisor Management Security Level, you can:

- Set up or modify shared resources on that server
- Set up or modify accounts that have access to your server
- Change access rights to your server's shared resources

For more information about the Supervisor account, see the next section. It describes how to log in to servers with the Supervisor account, change its password, and more.

Logging in with a Supervisor account

Every LANtastic for Windows 95 server comes with a Supervisor account that lets you:

- Set up or modify shared resources on your server
- Set up or modify accounts that have access to your server
- Change access rights to your server's shared resources

To log in with the Supervisor account:

1. From the Use Network page, click Connect to Computers.
2. If This Server appears in the Already Connected box, double-click This Server to disconnect it and click Yes at the Confirm Disconnect box.
3. Make sure the Ask for User Name/Password First option is checked. Then, in the Available for Connection field, double-click This Server. The Enter Access Information dialog box appears.
4. Type Supervisor in the user name field. Press Tab and type Supervisor in the password field, then click OK – and click Close.
5. To confirm that you're logged in to This Server with a Supervisor account, click the Change Password button. Scroll through the Computer drop-down list box until you see This Server, then click it.
6. The Password Status box at the top of the window contains a For Account listing. It should say SUPERVISOR in this field. If it doesn't, you may have misspelled the user name or password.

7. Click Cancel. If For Account didn't say SUPERVISOR, go back to step 1 and repeat these steps.

Hint... It's always a good idea to log out of the Supervisor account when you're finished managing servers. To do this, follow steps 1 and 2 above.

Hints for managing Supervisor accounts. If you're the system administrator, you may want to go to every LANtastic for Windows 95 server and change the default Supervisor account password to something only you will know. If you do this, no one but you will be able to manage accounts and resources from that point on. Instructions appear in the next section.

Alternatively, you can go to every LANtastic for Windows 95 server and virtually disable its default Supervisor account. For instructions see "Disabling the default Supervisor account" on page 59. But you shouldn't do this until you've created a new account for yourself that has:

- a user name other than Supervisor
- a password only you know
- the Supervisor MSL
- all privileges assigned
- concurrent logins set to 10 or more (recommended)

Changing the Supervisor account password. After installation, it's wise to change your Supervisor account password so that no one else will be able to use it. To do this:

1. Log in to the server that has the Supervisor account whose password you want to change, by following the instructions under "Logging in with a Supervisor account" on page 57.
2. From the Manage Servers page, click Manage Accounts. The Manage Accounts and Groups window appears.
3. Scroll through the Current Server drop-down list box until you see the server you logged in to in step 1, then click it.
4. In the Accounts field, you should see the Supervisor account. Double-click it. The Modify Account window appears.
5. Click Set Password. Make sure the Ignore Password option is unchecked, then click Modify Password.
6. Click in the Modify Password field and type in the new password. Now click OK.
7. Click Modify to make your changes take effect, then click Close.

Hint... It's always a good idea to log out of the Supervisor account when you're finished using it. To do this, follow steps 1 and 2 under "Logging in with a Supervisor account" on page 57.

8. Click Set Password, then click the Modify Password check box.
9. Type your new password in the field below the check box, then click OK.

CAUTION! Don't forget your Supervisor account password – if you do, you'll have to reinstall LANtastic for Windows 95.

Disabling the default Supervisor account If you log in to a server with an account that has the Supervisor MSL, you can modify that server's default Supervisor account (the one that has Supervisor as both its user name and password). You can neither delete nor disable any Supervisor account. But if you want to virtually disable it, first create a new account for yourself as described under "Hints for managing Supervisor accounts" on page 58. Then follow any or all of these steps on every LANtastic for Windows 95 server:

- Change the default Supervisor account password to one only you know.
- Delete all resources (including file exceptions) from its resource list.
- Remove its access and notification privileges.
- Under Restrictions, change its concurrent logins to zero.

Important... It's possible that anyone else whose account on this server has the Supervisor MSL can undo your changes.

Creating or modifying accounts and templates

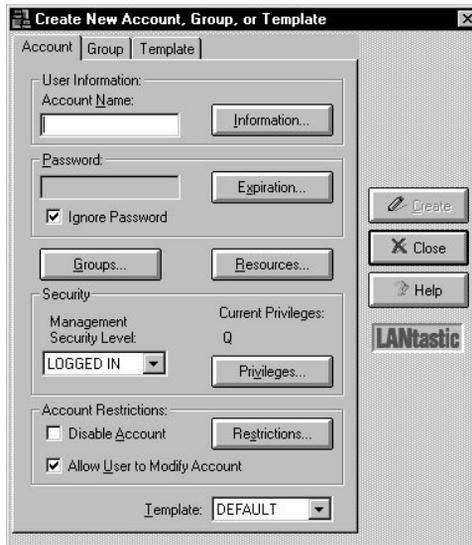
You can make your accounts as simple or complex as you like. The following steps will show you how to set up or modify a basic account. When you're doing this, consider:

- By default, the Everyone group gives everyone on the network full access to all resources. If you don't plan to restrict or disable the Everyone group, you don't need to set up this account with access to any specific resources.

- If resources haven't yet been set up, you can specify them later by modifying this account.
- When you're creating your first few accounts, you may want to do so by creating a template. This could save time when you create accounts in the future because you won't have to enter the same information each time; you can just modify the existing template.

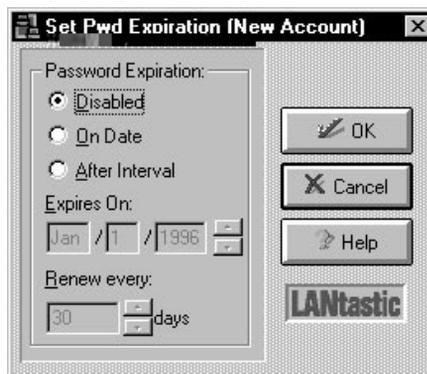
Basic account setup

1. Log in to the server for which you want to set up accounts, with an account that has the Supervisor Management Security Level (see "Supervisor account" on page 57).
2. Go to the Manage Servers page, click Manage Accounts, then click Add or Modify. Make sure you're on the Account page.



3. Type in an account name. You can also click Information to add or change contact information about the person associated with this account. When you've typed in the information you want, click OK.
4. If you're creating a new account and want to base it on an existing template, scroll through the Template list box at the bottom of the page and click the template you want. By default all new accounts are based on the Default template.

5. If you're creating a new account and don't want to assign it a password, make sure Ignore Password is checked.
6. If you do want to require a password:
 - Uncheck the Ignore Password box and type in a password. If you're modifying an existing account, you can click Set Password to modify an existing password.
 - When you're finished, click OK.
7. Click Expiration to specify a password expiration date. The Set Password Expiration window appears. (This option isn't available for Supervisor accounts.)

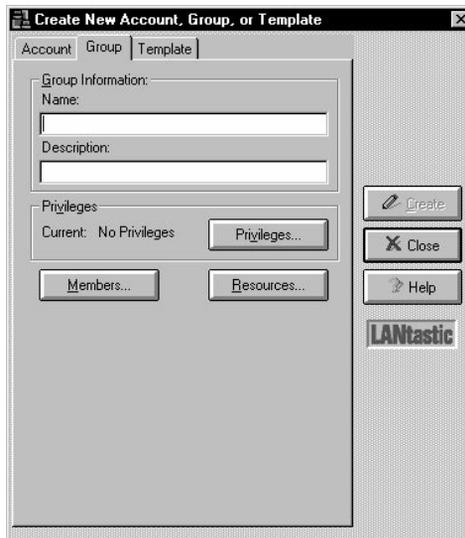


- Click Disabled if you don't want to use the password expiration feature.
- Click On Date if you want the password to expire on a certain date. Type an expiration date in the Expires On field.
- Click After Interval if you want the password to expire after a specified time interval. Specify this time interval in the Renew every __ days field.
- Click OK.

For complete instructions on setting security restrictions on this basic account, refer to the online Help.

Creating a new group account

1. Log in to the server for which you want to set up or modify groups, using an account that has the Supervisor Management Security Level (see “Supervisor account” on page 57).
2. Go to the Manage Servers page, then click Manage Accounts.
3. Click Add or Modify, then click the Group tab. The Group page appears.



4. Type in a group name, along with a description of the group.
5. Click Privileges to set group privileges. The Use the Set Group Privileges window appears. In this window:
 - Click the Set All or Clear All buttons to enable/disable all the privileges.
 - Click OK when you've set all of the privileges you need.

Note... See page 69 for more information about group privileges.

6. Click Members to specify the accounts you want included in this group. The Set Group Members window appears.



In this window:

- To add an individual account to the group, double-click the account in the Available Accounts field (or click the account, then click Add). The account will appear in the Accounts in Group field.
- To remove an account from the Accounts in Group field, double-click on it (or click on it once, then click Remove).
- When you've finished adding and removing accounts, click OK.

Note... You can click and drag the mouse over several groups to select them, then click Add or Remove.

7. Click Resources to set up the group's resource list. In the Resource List window that appears, click Add. The Edit Resource List window appears. In this window:
 - To add a resource, double-click a resource name in the Available Resources field. It moves to the Member Resources field. If you want to add a series of resources, you can click and drag to select them, then click Add.
 - To remove a resource from the group's resource list, double-click the resource name in the Member Resources field (or click the resource name then click Remove). It moves to the Available Resources field.
 - When you're finished making changes, click OK to return to the Resource List window.

8. If you want to assign file exceptions to this group, click Files. The File Exceptions List window appears.



Use this window to assign file exceptions to the group, to modify the access rights the group has to the files, or to remove a file exception from the group. To learn how to do this, refer to the online Help.

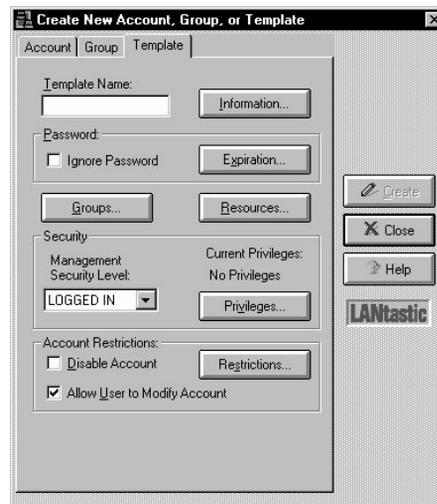
9. To specify the access rights (see page 68 for more information) that you want the group to have to a specified resource, go to the Resource List window. Click a resource name, then click Rights. The Set Access Rights window appears. In this window:
 - Click Set All to grant all possible access rights to this resource.
 - Click Clear All to remove all access rights to this resource.
 - Click the Rights check boxes to select the ones you want.
 - When you're finished setting access rights, click OK to go back to the Resource List window.
10. If you're finished setting up or modifying the group's security, click OK twice to return to the Group page on the main Create/Modify window. Then click Create or Modify.

Creating a new account template

An account template can make it easier to create numerous accounts, because you can base new accounts on the information in this template. This saves you from having to re-enter the same information in every account you create.

1. Log in to the server on which you want to set up a template, using an account that has the Supervisor Management Security Level (see "Supervisor account" on page 57).

2. Go to the Manage Servers page, click Manage Accounts, then click Add or Modify. Click the Template tab.



3. Type in the template name. You can also click Information if you want to add or change contact information about account(s) associated with this template. When you've typed in the information you want, click OK.
4. If you don't want the accounts based on this template to require a password, make sure Ignore Password is checked. If you do want to require a password, uncheck the box.
5. If you want to specify a password expiration date or time interval, click Expiration. The Set Password Expiration window appears.
 - Click Disabled if you don't want to use the password expiration feature.
 - Click On Date if you want the password to expire on a certain date. Type an expiration date in the Expires On field.
 - Click After Interval if you want the password to expire after a specified time interval. Specify this time interval in the Renew every __ days field.
 - Click OK to return to the Template page on the main Create/Modify window.

Creating shared resources

As you were completing your LANtastic for Windows 95 installation, you were asked whether you wanted Setup to “add resources that will allow this computer to share its drives and printers.” If you clicked Yes, you should already have resources set up on that computer. You can ignore this section, unless you want to create more resources such as specific folders on the servers’ hard drives.

If you clicked No, either you or the system administrator will need to set up each drive as a separately named shared resource, such as C-DRIVE, D-DRIVE, CD-ROM and printers. You can also set up folders or specific files as separately named shared resources.

If you buy a new printer or CD-ROM drive that you want to share, you’ll need to set it up as a shared resource.

Planning your drive resources

It’s a good idea to plan which printers and drives, folders, subfolders and files you want to make available for use over the network before you begin setting them up. If you’re adding LANtastic for Windows 95 computers to an existing LANtastic network, chances are you’ve already set up shared resources on that network. Now you should make a list of all the resources on the LANtastic for Windows 95 servers that you’d like to share on the network.

Many network users choose to set up folders or subfolders as resources. LANtastic for Windows 95 also lets you control access to individual files. See the online Help for details about sharing and restricting access to folders, subfolders and files.

Setting up shared drive and printer resources

If your account has the Supervisor Management Security Level (MSL), you can add new resources on a server.

From the LANtastic Custom Control Panel:

1. Log in to the server on which you want to set up resources, using an account that has the Supervisor Management Security Level (see “Supervisor account” on page 57).
2. Go to the Manage Servers page and click Share Drives and Printers.

3. At the bottom of the window, make sure Drives is checked if you're adding a drive resource, or Printers is checked if you're adding a printer resource.
4. Click Select. In the Select LANtastic for Windows 95 Computer window, make sure there's a check mark in the Ask for User Name/Password First check box. This ensures that you'll be able to log in to that server with an account that has the Supervisor MSL.
5. Double-click the name of the server that has the resource. In the User Name field, type Supervisor (or the name of another account you have on this server that has the Supervisor MSL). Press the Tab key, then type Supervisor (or the appropriate password) in the Password field. Press Enter. The server's name appears in the Current Server list box.
6. Click Add. The Add Resource window appears.
7. Type the name you want to give the new resource, then a description. For example, if it's a server's C-drive, you could name the resource C-DRIVE and in the description, say which computer it's on (e.g., Emily's Pentium).

If it's a printer resource, the first character in the name must be @.
8. If this is a drive resource, type in its path. If it's on This Server (you're sitting at the server that has the resource), you can click Browse to locate and specify the path to the resource. If it's another server, you must type the path.

If this is a printer resource, click the arrow on the Local Printer drop-down list box and click the printer name.
9. Click Accounts if you want to set up the account list for this resource (you don't have to, because the Everyone account is automatically added to the list). In the Account List window, you can also modify the access rights each account will have to this resource. Click Help for more information about this window. (Access rights are described on page 68.) Click OK when you're finished making changes in the Account List.
10. Back at the Add Resource window, click Create. If this isn't the local server, you may see a message that it "Can't Verify" the path. Just click Yes if you're sure it's the right path, and the resource will be created. Click Close.

11. Back at the Share Drives and Printers window, note that you can double-click any resource to make changes to its Account List. Click Close when you're finished creating resources.
12. If you want to assign the new drive or printer resource to a drive letter on this computer, see the instructions under "Connecting to a drive on another computer" on page 35 or "Connecting to a printer attached to another computer" on page 37.

Setting access rights and privileges ---

Access rights to resources and account privileges are important parts of LANtastic security. You can determine which access rights and privileges accounts and groups have to the shared drives, folders, files and printers you've set up on your network.

Access rights to resources

You can grant an account, group or account template any combination of these ten access rights to control exactly what users are allowed to do when they access a shared resource.

R	Read Access - Open files for reading.
W	Write Access - Edit files and save their changes.
C	Create File - Create new files. Note that if you grant the C (Create File) privilege you must also grant the W (Write Access) privilege or the user won't be able to write to the files.
M	Make Folder - Create new subfolders.
D	Delete File - Delete a file.
K	Remove Folder - Delete a folder.
N	Rename File - Rename a file.
E	Execute Program - Run programs.
A	Change File/Folder Attribute - Change file or folder attributes on a shared drive.
J	Rename Folder - Change a folder's name.

Printer access rights

You can grant an account, group or account template any combination of these three access rights. This will control the extent to which users can monitor or manage printers.

T	Submit and manage own jobs - Allows you to start, pause, resume or cancel your own print jobs.
V	View any job - Allows you to check the status of a print job.
Z	Manage any job - Allows you to pause, resume or cancel any print jobs.

Privileges

Every account, group or template can be assigned any of the account access privileges shown in the table below. There are five access privileges (A, F, D, Q, U) and one notification privilege (O).

Super Access (A)	Grants the person using the account full access to every shared resource, regardless of any access right restrictions that have been set on a resource to restrict access. If you have the A privilege, you also have the F, D, Q and U privileges.
Super File (F)	Grants the person using the account full access to any file or folder, regardless of whether access restrictions have been placed on the files or folders.
Super Disk (D)	Grants the person using the account full access to any disk drive, regardless of whether access restrictions have been placed on that drive.
Super Queue (Q)	Allows the person using the account to control all jobs in the print queue regardless of who sent them. When the Q privilege is disabled, you can view, cancel, pause and restart only your own print jobs.
Create Audit (U)	Allows the person using the account to make a User Audit entry into a server's audit log file.
Receive Operator Messages (O)	This notification privilege allows the person using the account to receive operator messages. This means you'll be notified when someone logs in to or out of a server; when print jobs are queued; when the maximum disk space threshold is reached; and when the maximum CPU usage threshold is reached.

Troubleshooting your drive and printer connections _____

If you have problems using another computer's drives or printers, see if your problem is listed here and try these solutions. Many more troubleshooting topics can be found in the online Help. It's also a good idea to check the Readme file for updated information.

You receive the error message: "You cannot disconnect from <computername> because there are open files on this device."

Exit any applications running on servers (such as Windows Explorer) before attempting to disconnect from that computer.

You receive the error message: "An attempt was made to remember a device that had previously been remembered."

In the LANtastic Assign Drives and Assign Printers windows, uncheck Remember Next Connection Made, then click OK to continue.

You receive the error message: "Error enumerating printers!"

Using the Windows 95 network icon in the Control Panel, remove the Client for Microsoft Networks option, then add it again.

Note... If you don't have any Microsoft servers on your network, the Microsoft client can be permanently removed.

You receive the error message: "The printer this shortcut refers to does not exist on this computer. Delete this shortcut and create a new one from your printer folder."

You may see this message if you've dragged and dropped multiple print jobs to a printer shortcut icon on your Windows 95 desktop. Ignore the message. Your jobs will print as requested.

You can't view or connect to other LANtastic or LANtastic for Windows 95 servers.

Follow these steps:

1. From the Windows 95 desktop, click Start, Settings, Control Panel.
2. Double-click the Network icon.
3. On the Configuration page, select your adapter.
4. Click Properties.
5. Click the Resources tab and verify that the IRQ and I/O address are set correctly. (For instructions on checking your IRQ and I/O address settings on Artisoft NodeRunner

adapters, refer to “Configuring your NodeRunner adapter to operate in NE1000-compatible mode” on page 17.)

6. If the settings are incorrect, click the arrow next to the Configuration type list box and select Basic Configuration 0.
7. Change the settings as necessary, then click OK.
8. Back on the Configuration page, click Artisoft LANtastic NetBIOS, click Properties, then click the Advanced tab.
9. Verify that the selected frame type is Automatic. If it isn't, change it and click OK.
10. Click OK to exit the Properties and Network windows.
11. Click Yes to restart your computer.

If this doesn't solve the problem, go to the LANtastic Custom Control Panel, click the Online Information page and click Troubleshooting. Click the topic “Computers can't communicate.”

Expanding and changing your network ---

This section tells you how to:

- Change the maximum number of users
- Add or delete a network user
- Increase the number of login locations
- Add a new Windows 95 computer
- Remove a computer
- Add or remove LANtastic for Windows 95 components
- Add a network printer
- Disconnect a printer
- Change a server to a client
- Change a client to a server
- Enable and view LANtastic pop-up messages

Changing the maximum number of users

By default, every LANtastic for Windows 95 server lets up to ten people use its drives and printers at the same time. If you want to allow more or less than ten people to use a server at the same time, log in on an account that has the Supervisor MSL and follow these steps:

1. Go to the LANtastic Custom Control Panel and click Manage Servers.

2. Click **Configure Server**, then click the **Options** tab.
3. Choose the server you want to modify by scrolling through the **Current Server** window, or click **Select** to find it.
4. In the **Maximum number of logins** field, type in the number of simultaneous users that you want this server to allow. You can choose any number from 2 to 500.
5. Click **OK**.

Note... To obtain faster response time on a server that has many simultaneous users, you may want to use the **Server Performance** slide bar in the **Server Control Panel**. Drag the lever to the right to speed up a server's performance.

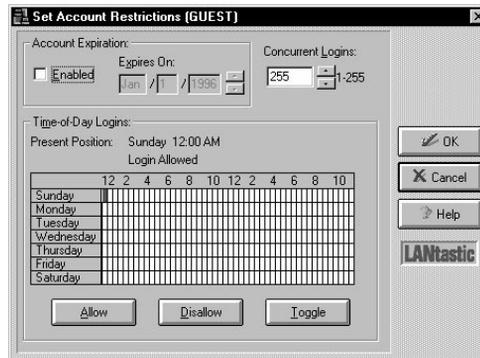
Adding or deleting a network user

If adding a new user requires a server to allow access to more than ten users at the same time, complete the above instructions for increasing the maximum number of users. In a network that uses security, you'll also have to add or delete accounts and resources. (See "Setting up security with accounts" on page 55.)

Increasing the number of login locations

1. Go to the computer that you may need to log in to from more than one location. This will be a computer other than your own.
2. From the **LANtastic Custom Control Panel** on the **Manage Servers** page, click **Manage Accounts**.
3. Double-click your account. The **Modify Account** window appears.
4. Click **Restrictions**.

5. Type a new number in the Concurrent Logins field, and click OK. (Any number from 1 to 255 is acceptable.)



In the Modify Account window, click Modify, then click Close.

Adding a new Windows 95 computer

If you purchase a new Windows 95 computer, you can easily add it to the network.

1. If your new computer doesn't have a pre-installed network adapter, install one and cable it to the network according to the instructions in Appendix B.
2. If necessary, configure the adapter and install an adapter driver, as described in Chapter 2.
3. Install the LANtastic for Windows 95 software according to the instructions in Chapter 2.
4. Go to each computer that will regularly use the new computer's disk drive and make a new permanent drive connection. See "Using network drives and printers" on page 34.
5. If appropriate, follow one or more of these steps:
 - If the new computer is a server and you want to allow more or less than ten users at one time, follow the steps for increasing the maximum number of users on page 71.
 - If the new computer is a server with one or more printers attached, see "Connecting to a printer attached to another computer" on page 37.
 - If the new computer is a server and you want to set it up with account and resource restrictions, refer to "Creating or modifying accounts and templates" on page 59.

Removing a computer

You can either physically disconnect a computer or simply remove the LANtastic for Windows 95 network components on that computer. For instructions on removing network components, see “Adding or removing LANtastic for Windows 95 software components” on page 75.

Physically disconnecting a computer

1. If the computer is a server, shut it down according to the instructions on page 48. Then turn off the computer and any attached peripheral devices.
2. Disconnect the network cable segment from the computer you're removing. If you're using thin coaxial (10Base2) cable, you'll also need to disconnect the cable from the T-connector on the next computer.
3. To reestablish network communication, connect the computers that were on either side of the computer you just removed. Attach the free end of the thin coaxial cable to the open end of the T-connector. If the computer you removed was at the end of the network, move its terminator to the computer that's now at the end of the line.
4. Turn on the remaining network computers.
5. If the computer you removed was a server, go to each computer that used the server's drives and printers and cancel the drive connection to the server.
6. From the Use Network page, click Assign Drives and then click the Drives and/or Printers check boxes, depending on the type of connection you want to cancel.
7. Click the connection you want to cancel. Then click Disconnect, Close.

Adding or removing LANtastic for Windows 95 software components

There may be times when you want to uninstall the LANtastic for Windows 95 program, remove some of its components, or add components:

- If your computer was installed as a client but now you want it to be a server, you'll need to add the server program.
- If your computer was installed as a server but now you want it to be a client, you'll need to remove the server program.
- If you're troubleshooting the source of a problem, you might want to remove components to help narrow down the possible sources. Then you'll want to add them back in when you're finished diagnosing a problem. Which of the three methods listed below you'll use depends on your situation.
- If you want to add another network adapter to your computer, you'll need to add another NetBIOS to enable the adapter to communicate on the network.

There are three easy ways to uninstall or add/remove components:

- Completely removing LANtastic for Windows 95 (uninstalling) – see next topic.
- Adding or removing selected LANtastic for Windows 95 components – see page 76.
- Removing and then reinstalling all LANtastic for Windows 95 components – see page 77.

Completely removing LANtastic for Windows 95 from a computer

Follow these steps if you want to uninstall all of the LANtastic for Windows 95 software from a computer. This process deletes the Install folder, which is used for adding components, and the LANtastic Database (LDB), which stores server settings as well as account and resource information.

Important... Following these steps completely deletes everything you've configured in LANtastic, including accounts and resources.

When you're finished, the LANtastic for Windows 95 software will be gone from your hard drive, but the LANTASTI folder will remain. Its only contents will be a WIN95 folder that contains these two empty folders: LDB_DATA and LOGS.

Note... The uninstall process won't remove any adapter driver you installed during Setup. To remove the driver, follow the steps in the next section.

1. Close LANtastic for Windows 95.
2. Click Start, Settings, Control Panel.
3. Double-click the Add/Remove Programs icon. The Add/Remove Programs Properties window appears.
4. On the Install/Uninstall page, click LANtastic for Windows 95.
5. Click Add/Remove. The LANtastic for Windows 95 Uninstall window appears.
6. Click Remove. Windows builds a driver information database.
7. Click OK when you see the Successfully Removed message.
8. Click Yes at the System Settings Change window to restart your computer.

Adding or removing selected LANtastic for Windows 95 components

To add or remove selected components, you must use the Windows 95 Network control panel. Follow the steps in this section.

Hint... As mentioned on page 28, it's a good idea to remove any and all networking components you don't need. For instance, if you have the Microsoft Client for NetWare Networks installed but never use it, consider removing it.

To remove a component. Always remove components from the Network control panel in the following order: Services (such as file sharing), clients (such as the Microsoft Client for NetWare Networks), protocols (such as NetBIOS or NetBEUI), and adapters (such as NE2000).

1. Click Start, Settings, Control Panel, then double-click the Network icon.
2. Click a component and click Remove. Repeat this for every component you want to remove.

Hint... The server program is called File and printer sharing for LANtastic networks.

3. Click OK, then click Yes to restart your computer.

To add a component. When adding components, reverse the order shown above: Add adapters and adapter drivers first, protocols next, then clients, and finally services.

1. Click Start, Settings, Control Panel, then double-click Network.
2. Click Add. The Select Network Component Type dialog box appears.
3. Click the type of component you want to add. For example, to add the server software, click Service.
4. Click Add again.
5. Click the Have disk button. The Install from Disk dialog box appears.
6. Enter the path to C:\LANTASTI\WIN95\INSTALL and click OK. A new dialog box appears displaying the Artisoft component. Click OK, then reboot your computer.
7. Repeat these steps for each component you want to add.
8. Click OK to exit the Network window. Files will be copied to add the component. You may be asked to insert the Windows 95 CD-ROM or diskettes to obtain files for some components.
9. When you're prompted, click Yes to restart your computer.

Removing then reinstalling all LANtastic for Windows 95 components

You can use your LANtastic for Windows 95 license diskette (Disk 1) to remove the primary components of LANtastic for Windows 95. The LANtastic Database and the Install folder will still reside on your computer.

1. Put the LANtastic for Windows 95 Disk 1 into a floppy drive on your computer.
2. Click Start, Run.
3. Type A:\SETUP where A: is the floppy drive you're using, then click OK. The Removing LANtastic for Windows 95 window appears.
4. Click Remove.

5. When prompted, take the floppy disk out of the drive and click Restart.

Your computer now will operate as a stand-alone computer and won't be able to share its resources or access other resources on a LANtastic network.

To reinstall LANtastic for Windows 95:

1. Put the LANtastic for Windows 95 Disk 1 into a floppy drive on your computer, then:
2. Click Start, Run.
3. Type A:\SETUP where A: is the floppy drive you're using, then click OK.
4. Follow the on-screen Setup instructions. For details, see Chapter 2.

Adding a network printer

If you purchase a new printer after LANtastic has been installed:

1. Connect it to a server as instructed in your printer manual.
2. Set up the printer as a shared resource, as described under "Creating shared resources" on page 66.
3. Go to each computer that will regularly use the new printer and make a new permanent printer connection. See "Using network drives and printers" on page 34.

Disconnecting a printer

First disconnect the printer cable from the computer's port. Your next step is to remove the printer from the network.

If the computer to which the printer was attached is a client, NOT a server:

1. Go to the LANtastic Custom Control Panel and click the Use Network page.
2. Click Assign Printers.
3. In the My Computer field, click the connection you want to cancel. (To view the existing connections, click the plus sign next to My Printers.)
4. Click Disconnect.

If the computer to which the printer was attached is a server:

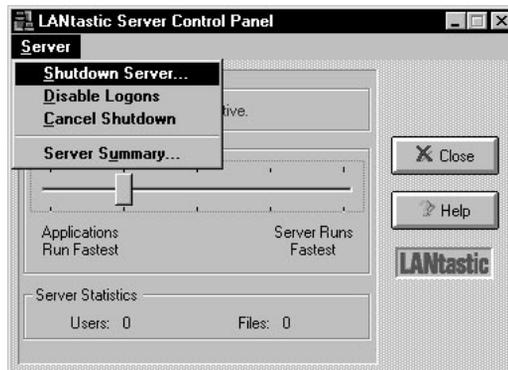
1. Go to the LANtastic Custom Control Panel and click the Use Network page.
2. Click Share Drives and Printers. Click the printer you just disconnected and click Delete.

Changing a server to a client

If you'd like to conserve memory and processor time, you can permanently remove the LANtastic for Windows 95 server program. To do this, refer to the instructions regarding adding or removing network components on page 75.

However, if you simply want to temporarily disable the sharing (server) feature and continue working at your computer as a client, log in with an account that has the Supervisor MSL and follow these steps.

1. In the LANtastic Custom Control Panel, go to the Manage Servers page.
2. Click Server Control Panel, then click the Server menu.



3. Select Shutdown Server. The Shutdown Server window appears. By default, the Shutdown Now option is selected. If you'd prefer to shut the server down within a specific amount of time, uncheck the Shutdown Now box and type in the number of minutes.
4. Click OK. Now your computer will be a client.

Important... If other people are using files on your computer and you shut it down without warning, they may lose any work they haven't saved. Refer to "Shutting down servers" on page 48 for proper procedures.

Changing a client to a server

1. From the Windows 95 desktop, click Start, Settings, Control Panel, then double-click Network.
2. Click Add. The Select Network Component Type dialog box appears.
3. Click Service, then click Add. Wait a few moments while Windows 95 builds a driver database. The Select Network Service window appears.
4. In the Manufacturers field, click Artisoft.
5. In the Network Services field, click File and printer sharing for LANtastic networks.
6. Click the Have disk button. The Install from Disk dialog box appears.
7. Enter the path to C:\LANTASTI\WIN95\INSTALL and click OK. A new dialog box appears displaying the Artisoft server component.
8. Click OK, then click OK again to exit the Network window.
9. Click Yes to restart your computer.

Enabling and viewing LANtastic pop-up messages

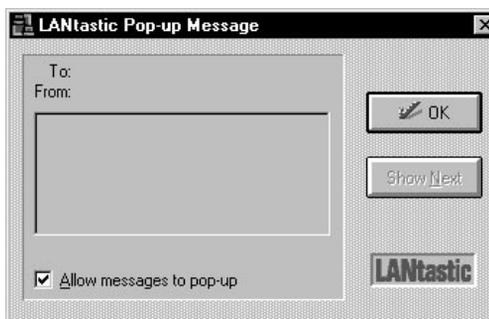
Pop-up messages are enabled by default. Unless you disable pop-up messages, you'll receive operator notification messages (such as notice of a pending shutdown) from servers you're logged in to.

1. When you receive a pop-up message, the LANtastic Pop-up Message window appears. The To and From fields show the computer names of the recipient and sender of the message. The Messages waiting line below the message field shows how many (if any) messages you have waiting.
2. Click Show Next to see the next message. If you have no messages waiting, Show Next is grayed out.

Note... If you disable pop-up messages, you may not have a chance to save your work before a server you're using shuts down.

Disabling pop-up messages

1. Create a Pop-up Messages button and add it to one of the pages on your Lantastic Custom Control Panel. See “Adding new buttons” on page 42. to learn how.
2. When you’ve created the Pop-up messages button, click it.
3. Uncheck the Allow messages to pop-up box, then click OK.



Alternatively, if you’re already in the LANtastic Pop-up Message window, uncheck the Allow messages to pop-up box, then click OK.

RELATED TOPICS

For complete instructions on setting up accounts, resources and network security options, see the online Help.

USING THE ONLINE VERSION OF THIS MANUAL

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Installing Acrobat Reader	84
Navigating the PDF files.	84
Printing the PDF files	85

If you want to have your own online copy of *Installing and Using LANtastic for Windows 95* on your hard disk, you can use the one that comes in Adobe™ Acrobat™ Portable Document Format (PDF). After you copy the PDF version to your hard drive, you can either print it out or use it online to take advantage of its Go to Page and Find functions. It also features hypertext links that let you jump quickly from one point to another in the manual.

The most up-to-date online copy of this manual is available in several locations: The Arti-Facts bulletin board service (BBS), the Internet from Artisoft's FTP server or the World Wide Web site, and CompuServe.

A complete list of LANtastic for Windows 95 error messages is also provided in PDF format on your LANtastic for Windows 95 CD. The filename is ERRORS.PDF.

Copying this manual to your hard drive. The PDF version of this manual is called INSTALL.PDF. To copy it to your hard drive, follow the instructions for using the online site of your choice that appear on page 9 or page 10. On any of these sites, go to the UPDATES area and download INSTALL.PDF.

Using Acrobat Reader to view the manual or error message table. To view INSTALL.PDF or ERRORS.PDF, insert the LANtastic for Windows 95 CD into your CD-ROM drive, then follow the instructions for "Installing Acrobat Reader" on page 84. The Windows reader requires 1.3MB. After you've installed Acrobat Reader, be sure to read the section on navigating the PDF files.

Note... Instead of using the CD-ROM to install the Adobe Acrobat Reader, you can download the Adobe Acrobat Reader from the BBS, Internet or CompuServe. ACROREAD.EXE (the Windows version) and DOSREAD.EXE (the DOS version) are located in the BULLETIN file area of each site. After you download the reader, just follow the instructions in the next section.

Installing Acrobat Reader ---

1. Close all Windows 95 applications, then click Start, Run.
2. Type in D:\MANUAL\ACROREAD where D: is your CD-ROM drive letter, then click OK.
Because Artisoft has met Adobe's licensing requirements, simply click Accept or press Enter to continue past the licensing screen.
3. Click Install or press Enter to accept the default installation path, then click OK to continue past the registration card message.
4. Type in your name and press the Tab key, then type your organization name and press Enter.
5. When the installation is finished and Windows restarts, open ACROREAD.EXE in your ACROREAD folder.
6. To view the manual, click the File menu and click Open. Find your CD-ROM drive in the Drives field by selecting or typing in the path D:\MANUAL where D: is your CD-ROM drive letter. Two documents will appear in the File List field: Errors.pdf and Install.pdf.
7. Double-click the document you want to view.

Navigating the PDF files ---

Once you've opened *Installing and Using LANtastic for Windows 95* from Acrobat Reader, as described in the preceding section, follow these steps to use the manual.

1. Click the View menu, then click Bookmarks and Page. A list of the manual's chapters and appendices appears on the left side of your screen. (You'll see a similar list in the error messages document.)

You can enlarge the Bookmarks window by dragging the double-triangle icon (next to the lower right corner of that window) to the right.

2. Click the triangle to the left of a listing in the Bookmarks window to see its subsections.
3. You can tell when an item in the manual is hypertext-linked by the way your cursor looks. Ordinarily, the cursor looks like an open hand. Any time the hand passes over a hypertext-linked item, it turns into a pointing finger. Just click to use that link. One click of the mouse takes you from the table of contents or an index entry to a topic's location. Cross-references are linked, too. You can click a cross-reference such as "see page 16" and jump directly to the topic on page 16.
4. You can look for a specific topic with the Find feature. Just click the binoculars icon in the toolbar and type in a keyword or two. You can repeat the Find command by pressing the F3 key until you find what you're looking for.
5. It's a good idea to pull down the Help menu to learn how to use the reader's toolbar, status bar and other features. For instance, it's helpful to know about the Go Back feature under the View menu, which retraces links you've used and takes you back to your starting point.

Printing the PDF files

You can print all or parts of the *Installing and Using* manual or the error messages file by following these steps:

1. Open the PDF file you want to print, then pull down the File menu and click Print.
2. Select All, Current or click a page range, then click OK.

Note... If you'd like more information on LANtastic for Windows 95, you can purchase the *LANtastic Network Management Guide*, a comprehensive manual that contains all the information in the online Help, the installation instructions in this manual, the error messages that appear in the PDF file, and a detailed listing of the commands and options available in LANtastic's DOS-based LNET program. To order it, follow the instructions on the form that came in your LANtastic for Windows 95 package.

INSTALLING THE NETWORK HARDWARE

APPENDIX CONTENTS

Checking your hardware requirements	88
Determining whether an adapter is compatible with Windows 95	89
Configuring your adapters and installing the driver software	90
Installing the adapters in the computer	90
Selecting the cable and related hardware	92
Installing the cable	94
Testing your network hardware	96

This appendix tells you how to physically install the network adapters in your LANtastic for Windows 95 computers and cable them to the rest of your LANtastic network. If you need help with these tasks, take advantage of Artisoft's award-winning complimentary and fee-based technical support services. For instance, you can call the Hardware Support service at 1(520) 670-7000 for help with the adapters, cables or other hardware that came in your LANtastic for Windows 95 starter kit. For more instructions on using Artisoft Technical Support services, see Chapter 1 of this manual and the Technical Support Directory of Services that came in your package.

Checking your hardware requirements ---

If you haven't already checked your computer hardware requirements as described in Chapter 2, be sure to do so before installing your network adapters and cables.

Artisoft tests indicate that small and growing businesses running with Windows 95 need more memory than the memory requirements specified by Microsoft. For any LANtastic client, at least a 386DX33 processor with 8MB RAM minimum is recommended. For any LANtastic server, Artisoft recommends at least a 486DX33 processor with 8MB RAM minimum, but encourages you to use 16MB or more. You'll also need at least 6MB of free hard disk space.

In addition, Artisoft recommends that you use Artisoft's Plug and Play NodeRunner/Pro network adapters. However, LANtastic for Windows 95 will work with any industry-standard network interface card supported with Windows 95. Guidelines for locating regularly updated lists of Windows 95-compatible adapters appear under "Configuring your adapters and installing the driver software" on page 90.

Here's a list of the hardware needed by all of the computers on which you plan to install LANtastic for Windows 95:

- 8MB RAM with 486 processor or higher; 16 MB recommended
- CD-ROM drive, directly or network-attached, and/or one 3 1/2-inch floppy diskette drive
- At least 6MB free hard disk space
- VGA or better video adapter recommended
- Windows 95-compatible network adapter

Determining whether an adapter is compatible with Windows 95

A network adapter that's compatible with Windows 95 must be installed in every computer on which you're going to install the LANtastic for Windows 95 software. A network adapter is the board that you install in each computer. Sometimes you'll hear it called a card or network interface card (NIC).

If your computers came with pre-installed network adapters, or if you bought LANtastic for Windows 95 as part of a kit that includes all the necessary hardware, you can skip this section. Otherwise, the following guidelines will help you determine if the adapters that you have are compatible with Windows 95. If you don't already have your adapters, you can use these guidelines to make sure that you purchase compatible ones.

Here's where to find various lists of Windows 95 compatible adapters:

1. Run Windows 95 and click Start, Settings, Control Panel.
2. Double-click Network. A list of installed components appears. All of the adapters on this list already have drivers installed on this computer.
3. If your adapter's name doesn't appear on the list of installed components, click Add, click Adapter, then click Add again. Check the Manufacturers list for the name of the manufacturer of your adapter:
 - If your manufacturer's name appears on this list, click that name to bring up a list of compatible adapters made by that manufacturer. All of the adapters on this list have drivers available on your Windows 95 CD-ROM or diskettes. Instructions for installing these drivers appear in Chapter 2.
 - If your manufacturer's name doesn't appear on the Manufacturers list, check your adapter documentation to see if it's NE1000 or NE2000 compatible. If so, you may select Novell/Anthem as the manufacturer and choose the appropriate adapter type. Otherwise, you should contact the manufacturer to determine if your adapter is compatible with Windows 95. To install a driver, you'll have to insert the diskette that came with the adapter according to the instructions in Chapter 2. If Windows 95 recognizes and installs a driver, you'll know that it's compatible.

4. For a Help file containing a regularly updated list of Windows 95-compatible adapters, check the Microsoft Home Page on the Internet. The address is <http://www.microsoft.com>.
5. For regularly updated hardware and software topics regarding LANtastic for Windows 95, check the Artisoft Home Page on the Internet. The address is <http://www.artisoft.com>. Check the Technical Support Directory of Services that came in your LANtastic for Windows 95 package for additional sources of updated information.

Important... Before you install your network adapters, be sure to write down their brand names and model numbers. You're going to need this information when you're ready to install an adapter driver under Windows 95.

Configuring your adapters and installing the driver software

Instructions for configuring your adapters appear in Chapter 2. The order in which you should do this depends on the type of adapter you're using:

- If your adapters are Plug and Play or non-Plug and Play but software-configurable, configure them after you physically install them in the computer.
- If your adapters must be configured by moving plastic jumpers, configure them before you physically install them in the computer.

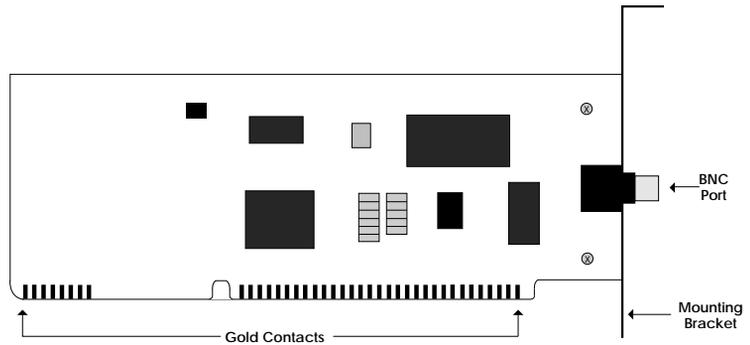
Chapter 2 also contains instructions for installing an adapter driver to operate under Windows 95. Do this after you've installed your adapters in the computer and cabled them together according to the instructions in the adapter's documentation and this appendix.

Installing the adapters in the computer

To install each adapter, you have to take the cover off the computer and install the adapter in an empty expansion slot. Windows 95-compatible adapters typically require a 16-bit slot. For full installation instructions, see the documentation that came with the adapter.

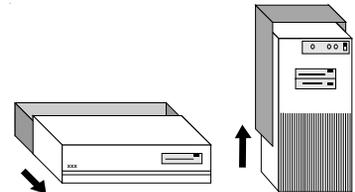
If you're installing a Plug and Play adapter, you'll have to determine if it is an ISA, EISA or PCI type. Each of these requires the appropriate-sized expansion slot. For specific instructions, check the slot-selection guidelines that came with the adapter.

An illustration of a typical adapter appears below.



Here are a few adapter-installation tips:

- Before you start, turn off the computer, the monitor and any attached printers or other devices.
- Before handling an internal adapter card, get rid of any static electricity in your body by touching the computer's frame. Be careful not to touch the delicate gold contacts on the lower edge of the adapter card.
- To install an adapter card, remove the cover from the computer. As shown in the illustration to the right, the cover will slide forward or upward, depending on the model of your computer.



Unscrew the metal bracket from an empty expansion slot, insert the adapter into the slot, then tighten the screw to secure the adapter's bracket to the computer. Replace the cover.

Selecting the cable and related hardware ---

This section gives you general guidelines about cable and related hardware requirements – but the specific items you need to buy depend on how many computers you have, how far apart they're located and many other factors.

Cable is the wire that connects to the end of the network adapter at the back of each computer. Two common types of cable are twisted pair (sometimes called 10BASE-T) and thin coaxial (10BASE2). Twisted pair is inexpensive and conveniently pre-wired in the walls and ceilings of many office buildings. But thin coax is a high-quality alternative.

The instructions in this appendix cover only these two popular categories of cable. If you have adapters that work with another category of cable, ask your dealer or consult the Technical Support Directory of Services that came in your LANtastic for Windows 95 package for sources of information.

WARNING! Make sure that every segment of cable on the network is of similar type and high quality. One bad piece of cable can cause problems on the whole network.

Before you buy your cable, you'll need to decide how long each segment needs to be. This depends on several factors besides the distance between computers. For example, if you put too many computers on a certain length of cable, you'll end up with communication problems. The length that you can use varies with the different types of cable. So if you're going to install your own cable, be sure you understand all this. Here are a few tips:

- Before you buy cable, measure and write down the distance between the computers in your network (or, in the case of twisted pair, the distance between each computer and a central amplifier device called a hub). Remember to include enough length to reach around corners and furniture.
- If you already have your adapters, take one along when you go to buy your cable. This will make it easy to tell whether you need twisted pair (10BASE-T) or thin coaxial cable (10BASE2).
- Within each general category of cable, you can choose from several types. Recommended types are listed in the table on the next page.

- Buy ready-made cable with the end connectors already attached or have the end connectors installed by a qualified technician.
- If you're using twisted pair cable, you will need to buy a device called a hub (sometimes known as a repeater or a hub/repeater). The hub is an amplifier that lets you use conveniently long pieces of twisted pair cable. Each computer on the network connects to the hub with a cable. With the hub located in the center, your network configuration will resemble a star.
- Don't use standard flat phone wire, often called "Silver Satin," in place of twisted pair cable. It doesn't work for computer networks.
- Don't use RG58/U coax cable. It doesn't meet the required specifications for Ethernet computer networks.
- If you're using thin coax cable, you'll need to buy a T-connector for each computer on the network, along with a few spares. You'll also have to purchase two 50-ohm terminators per cable length. Your dealer will know exactly what these items are.

Recommended cable types

Recommended types of twisted pair and thin coax cable are shown in the table below. The table also shows the longest length of cable that you can run between two computers and the maximum number of computers you can have on one cable segment.

	10BASE-T (UTP)	10BASE2 (BNC)
Supported Cable Types	Artisoft UTP AT & T 1041 A Belden 1455 A Belden Plenum 1457 A	RG58A/U Belden 9907 Belden Plenum 89907
Maximum Cable Lengths	100 Meters (328 feet)	185 Meters (607 feet)
Maximum Computers per Segment	1	30

In the above table, a segment is the total cable length between either a hub and an adapter or two terminators.

Installing the cable

If your adapters came with cabling instructions, follow them instead of the ones given here.

Connecting twisted pair cable

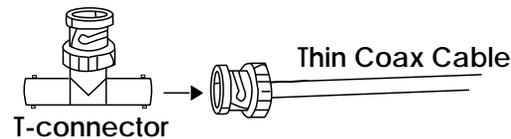
1. Install your hub as close to the center of your network as possible. Change any necessary settings to make the hub work with your network setup. Follow the instructions that came with the hub.
2. Attach one of the connectors on the twisted pair cable to the adapter's RJ45 connector, which will look like the one shown below.



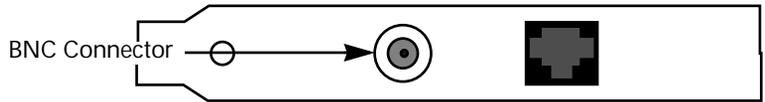
3. Attach the other connector on the cable to a port on the hub.
4. Repeat steps 2 and 3 for all the other computers you want to include in your network. In the end this arrangement will look something like a star, with all your computers radiating off the hub.

Connecting thin coax cable

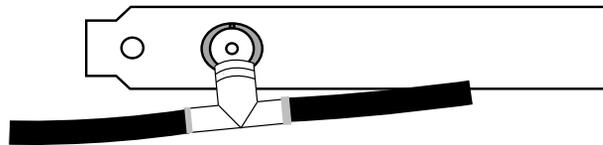
1. Attach one of the connectors on the thin coax cable to one end of the T-connector, as shown below.



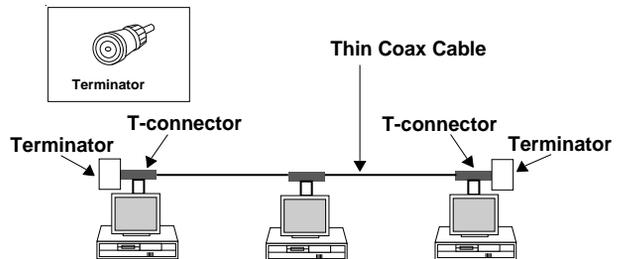
2. Screw the T-connector onto the adapter's BNC connector, as shown below, twisting the T-connector until it locks into place.



3. Attach one end of the thin coax cable from the next computer to the other end of the T-connector, as shown below.



4. Repeat steps 1 - 3 for each of the other computers you want to include in your network.
5. After all your computers are connected, attach 50-ohm terminators to the open end of the T-connector of the adapter on the first and last computer, as shown below.



A few cabling don'ts

- If you're using thin coax cable, don't connect your computers in a closed circle. Instead put a terminator on the adapter in the first and last computer in your network.
- Don't connect a piece of thin coax cable to a T-connector in the ceiling, then drop it down to a computer below. Each adapter needs its own T-connector attached directly to the card.
- Don't exceed the maximum segment lengths shown in the table on page 93. If you're using twisted pair cable, a segment is the distance between a computer and the hub.
- Don't run cables within a few feet of fluorescent lights, power lines, lightning rod cables, X-ray machines, radios, electric motors, air conditioners or TV antennas.
- Don't run cables through walls without passing them through their own conduit tubes. Never use the same conduit that contains power lines or phone lines.
- Don't run cables under carpets in heavily traveled areas.
- Don't run cables between two buildings, even if you plan to run them through a conduit or bury them in the ground.

Testing your network hardware

Many network adapters, including the NodeRunner Pro™ adapters that come in LANtastic for Windows 95 starter kits, include diagnostic programs on their configuration diskettes. These programs check the integrity of adapter and cable connections without making any configuration changes. To make sure that your adapters are communicating with each other, run your adapter's diagnostic program after you've installed your hardware.

Other diagnostic tools available to you are the LANCHECK programs that came with your LANtastic for Windows 95 software. LANCHECK and LCHECK95 allow you to test network communication and adapter operation between computers running LANtastic for Windows 95 and computers running LANtastic under DOS or Windows. For complete details about using LANCHECK, and for network hardware troubleshooting tips, go to the online Help.

GLOSSARY

access rights: Access rights are an important feature of LANtastic security. You can grant an account, group or account template any combination of ten access rights to control exactly what users are allowed to do when they use a shared driver or printer resource.

account list: A list of the individual and group accounts that have access to any one resource. This resource account list adds security to your network, because it allows you to control the type of access rights accounts have to this resource.

accounts: In LANtastic you can set up individual and group accounts that restrict and grant people's ability to use network resources such as servers and printers. This is a basic network security feature. Everybody needs an account to access servers and printers, although on a low-security network you can use the Guest account that comes with LANtastic for Windows 95.

adapter: The printed circuit board that you install in a computer and connect to the network cable, to enable network communication. Also referred to as a board, expansion card or network interface card (NIC).

AILANBIO: Adapter-independent LANtastic NetBIOS, known as AILANBIO, is Artisoft's version of IBM's NetBIOS (Network Basic Input Output System, an application programming interface used for data exchange and network data transport). When coupled with a compatible low-level driver, this NetBIOS will work with any network adapter.

application icon: A small graphic representing an application you can run or one that's currently running and minimized.

application program: A software program used for a specific type of work, enabling you to produce work such as documents, spreadsheets, databases and graphics.

audit trail: A record of networking events taking place on a computer. It's used to keep track of who uses what drives and printers, and when. A complete audit trail record can be produced for the person in charge of security.

batch file: A text file containing a series of DOS commands to be processed sequentially. When you type the name of the file, DOS carries out the instructions contained in it. A batch file is identified by the .bat extension.

baud rate: The transmission speed of data through an asynchronous channel in number of signals per second.

BBS: Bulletin Board Service. A software storage area used to post public messages. The Artisoft BBS is called Arti-Facts.

bit: An abbreviation for binary digit, the smallest unit of information your computer handles. In a binary numbering system, a bit represents either 1 or 0 (also called “on” or “off”).

BMP: A Windows-based graphic file format. BMP graphics are bitmaps, which means they’re comprised of a collection of dots that represent an image.

board: See adapter.

bookmark: A bookmark is a placeholder for a specific Help topic. Once you’ve created a bookmark for a topic, using the Bookmark menu options, you can use it to quickly return to that Help topic later—no matter what topic you’re currently looking at.

BPS: An abbreviation for Bits Per Second. BPS represents the number of data bits that a device such as your modem can transfer within a second. This term is often confused with baud rate.

browse: To view the lists of drives, folders, and files available on the system.

byte: A group of eight (sometimes seven) bits. Often used to represent a character. Bytes are also units of storage and transmission.

check box: A dialog box element representing an option you can activate or deactivate. A check box is a small box that either does or does not contain an X. If the check box contains an X, it’s selected and the option is activated. If the check box is empty, it’s deselected and the option is deactivated.

click: To make a selection by pressing and releasing the left mouse button.

client: A computer on a network that doesn’t share its files and printers. It can connect to and use drive and printer resources that are being shared by other computers (servers). But the only way you can use a client’s drives or devices is to sit at the keyboard. Also known as a workstation.

COM port: A serial communication port. Most fax modems communicate with a computer through a communication port. Most IBM and IBM-compatible computers support up to four serial ports: COM1, COM2, COM3 and COM4.

command: A word or phrase you can choose from a menu or type at the DOS prompt. When you enter a command, a specific action is performed.

command line: In DOS, the prompt where you type commands. It usually looks like this: C:\

You can use LANtastic’s DOS-based LNET program to perform many networking tasks by typing LNET commands at the command line.

computer name: A unique name that identifies a computer in the network. Each computer in your network must have a unique name.

Concurrent Logins setting: Sets the number of times an account can be used to log in to the same server or shared resource at the same time. For example, if the value is set at 7, you can log in to the same server using the same account from up to seven different computers at the same time. You can specify any value between 1 and 255.

configuration file: A file containing the settings that enable a particular program to function. A configuration file may contain information that's unique to the specific configuration of the program on your computer.

Create Audit: An access privilege which, if enabled, allows the user to make user-defined entries into a server's audit log file.

data bits: A group of bits (1s and 0s) that represent a single character or byte. Typically, there are seven or eight data bits per character.

dedicated and nondedicated servers: A dedicated server is a computer that's used exclusively for routing and performing network tasks. Because many network operating systems have high memory requirements, they usually require dedicated servers.

A nondedicated server is a computer that can simultaneously act as a network computer and as a person's desktop computer. Nondedicated servers can log in to other servers and use their drives and printers.

device: Any piece of physical equipment within or attached to a computer, such as a printer, modem, monitor or mouse.

dimmed or grayed out: Indicates a command or option isn't available. You can't choose a dimmed/grayed-out command or option, and you can't type in a text box with a dimmed/grayed-out label.

directory: See folder.

disable/enable: To make a device, feature or option inoperable/operable.

disk: A hard or floppy device for storing information in a computer.

disk drive: A data storage medium, such as a hard disk – sometimes called a hard drive – or floppy disk drive.

DOS: Acronym for Disk Operating System. DOS consists of a set of programs that control and manage the computer's resources and operate its attached peripheral devices, such as printers and CD-ROM drives.

DOS prompt: Indicator that the disk operating system is ready to receive a command. In version 6.0 of DOS, the prompt is a letter (representing the current disk drive) followed by the greater-than symbol (>).

double-click: To make a selection by quickly pressing and releasing the left mouse button twice.

download: To receive one or more files from a remote computer system; for example, from another computer or an online service such as the Arti-Facts bulletin board service (BBS).

drag: To move an icon across the screen by clicking and holding the left mouse button on the icon, then moving it. The dragging ends when you release the mouse button. You can also change the size of a window by clicking on the border with the left mouse button and dragging it to the desired size.

drag and drop: The drag-and-drop action copies or moves selected items from the location where the items were selected to the location at which the mouse is released. To drag and drop, hold down the left mouse button, move the mouse to another location, and then release the mouse button.

enable: See disable/enable.

Everyone group account: Every LANtastic for Windows 95 server has its own Everyone group account. Every individual account that has access to a server is, by default, made a member of that server's Everyone group. Unless the Everyone group has been modified, it grants all access rights to the resources on that server.

expansion card: See adapter.

filename: The unique name under which a file is stored on disk. This name often has two parts, a filename and an extension – for example, Letter.doc.

filename extension: A code at the end of a filename used for identification. It consists of a period (.) followed by zero, one, two or three characters. For example, a .doc extension indicates a Microsoft® Word document.

folder: Groups of files are contained in folders, which appear on your desktop or in Windows 95 Explorer as icons that look like manila file folders. This software storage area makes it easy to organize files and programs. In DOS, folders are referred to as directories.

grayed out: See dimmed or grayed out.

group accounts: Group accounts consist of several individual accounts. Creating groups makes it easier to keep track of who has which access rights to a resource, and allows you to make changes that affect every account in the group at once.

Guest account: The Guest account is similar to LANtastic's wildcard (*) account. Unless you've previously created an individual account to use a LANtastic for Windows 95 server's resources, any time you attempt to log in to a server you'll automatically be logged in on its Guest account. The Guest account can be disabled, or given a password.

hardware: Computer and networking equipment, such as computers, printers, adapters and cables.

icon: An on-screen symbol that represents a program file, data file, folder or some other item.

individual account: A network account through which a single user connects to a server. Each account has privileges and access rights that provide the user with specific types of access to the server.

I/O Base address: A starting address for data input and output.

IRQ (Interrupt Request): The method by which hardware devices request processor attention.

kilobyte: A unit of measure consisting of 1024 bytes.

LAN: Acronym for Local Area Network. A LAN is a group of computers connected together over a limited geographic area. It allows people to electronically share resources such as disk drives and printers.

LANtastic Database: In LANtastic for Windows 95, the LANtastic Database (LDB) replaces the control directory that will be familiar to users of the LANtastic Network Operating System. Your network server settings such as accounts, resources, security and other settings are stored in the LDB.

list box: A list box presents a list of available choices; it always appears within a window or dialog box. If all of the available choices don't fit in the list box, it will include a scroll bar that lets you move through the list.

LNET: LANtastic for Windows 95 includes the DOS-based LNET program that you can use to perform many networking tasks. You can use LNET by choosing menu options on a main functions screen or by typing commands and options at the DOS command line.

local drives and logical drives: A local, or physical, drive is a disk drive that exists on your own computer. Local drives are usually designated by the letters A - C.

A logical drive is a disk drive that doesn't physically exist on your computer. Logical drives are usually designated by the letters D - Z. With LANtastic, you assign these drives to make connections to shared resources (such as drives and folders) on someone else's computer.

logging in: The process of establishing a connection to a server and identifying yourself as a valid user with a pre-defined user name and password.

logical drive: See local drives and logical drives.

Management Security Levels (MSLs): MSLs are the first tier of LANtastic for Windows 95's network security. Every account has an MSL. By default, the Supervisor MSL is the only MSL that allows you to manage LANtastic for Windows 95 servers, their accounts, drive resources and printer resources. The Logged In MSL allows people only to log in to servers, but not to create or modify accounts and resources. See Chapter 4 for details.

menu bar: The horizontal bar, located near the top of an application window, containing the menu names for the application.

MSL: See Management Security Levels.

NetBIOS: Network Basic Input Output System (NetBIOS) is an application programming interface (API) used for data exchange and network data transport.

network drive: A "virtual drive" that's not physically connected to your computer, but instead connects to another computer's drive through the network. LANtastic lets you assign (map) network resources such as other computers' drives to these non-physical "virtual drives." On your computer, these virtual drives are assigned any drive letter between D and Z.

network driver: Software that lets the computer communicate with your network operating system.

network interface card (NIC): See adapter.

Network Operating System (NOS): Software such as LANtastic, which is used to share resources, transfer files and perform other connection activities between computers.

nondedicated servers: See dedicated and nondedicated servers.

operating system: Software such as Windows 95 or DOS that executes computer programs and provides management functions.

password: See user names and passwords.

path: The list of folders through which DOS searches to find a program. The folder names are separated by a backslash (\). The first backslash represents the drive. For example, a file named ACCTS that's located in the EDIT folder on the C: drive has a path of: C:\EDIT\ACCTS. A path is sometimes followed by a filename and a filename extension (if there is one). It's sometimes preceded by a drive letter and a colon (:).

pop-up menu: A menu, displayed by clicking the right mouse button on an icon or in a window, that contains choices appropriate for the given icon or window.

port: A connection on the back of the computer to which peripherals are attached. Most computers have parallel ports for printers and serial ports for devices such as modems.

preferred servers: A button on the Use Network page that lets you assemble a list of the servers you use most often. This saves time when you're opening a file or application over the network, because servers on this list appear alongside Network Neighborhood and Entire Network. You don't have to expand Entire Network and scroll around to locate the server you need.

print driver: A software program that acts as a translator between your application and your printer.

print job: A file sent to a printer to be printed out.

print queue: The area in which a list of print jobs wait for processing on the printer.

privilege, notification: Every account, group or template can be assigned the privilege to Receive Operator Messages. When this privilege is enabled, you're notified when someone logs in to or out of a server, print jobs are queued, the minimum disk space threshold is reached or the maximum CPU usage threshold is reached.

privileges: Every account, group or template can be assigned the access privileges.

RAM: An acronym for Random Access Memory. RAM exists on a chip or collection of chips where data can be entered, read or erased. RAM is the fastest memory device; however, it loses its contents when you turn off your computer.

read-only: A file that you can view, copy or print but can't modify.

Readme file: The Readme file contains instructions that are convenient to have on your hard disk, along with information that became available after the LANtastic for Windows 95 documentation was completed. You can read this file by clicking the View Readme button on the Online Information page in the LANtastic Custom Control Panel. In DOS the same Readme file is located in the LANtastic program folder (C:\LANTASTI\WIN95) on your hard drive. Read the Readme file by using a text editor such as Windows 95 WordPad or DOS EDIT.

Receive Operator Messages: If you enable the Receive Operator Messages privilege, you're notified when someone logs in to or out of a server, print jobs are queued, the minimum disk space threshold is reached, and the maximum CPU usage threshold is reached.

refresh: To manually or automatically update the data displayed on a screen or window.

resources: Disk drives, CD-ROM drives, printers, plotters and specific files or folders that can be shared on the network. Shared resources can be used by all computers that have access rights to the servers where the resources are located.

right-click: To point to an object on your LANtastic screen and click once on the right mouse button. You might want to do this, for example, to bring up a pop-up menu for a button on the LANtastic Custom Control Panel.

rights: See access rights.

security: LANtastic for Windows 95 offers multi-level security so you can keep specific users from opening network drives and viewing or using shared resources you don't want them to have access to. See Chapter 4 for details.

server: A computer that shares its resources (such as disk drives and printers) with other computers on the network. During installation, if you chose the option to "Share this computer's files and printers" you made your computer a server.

server name: The unique name by which your computer is identified on the network. Server names can be up to 15 characters long and can't contain any special DOS characters such as colons, backslashes or spaces.

Setup: The LANtastic program that installs the LANtastic for Windows 95 software on your computer's hard disk.

spooling: The process of temporarily storing print jobs while waiting for an available printer or port.

Super Access: If you grant an account the Super Access (A) privilege, anyone using that account will have full access to every shared resource, regardless of any access restrictions that have been set on the resources. If you have the A privilege, you also have the F, D, Q and U privileges.

Super Disk: If you grant an account the Super Disk (D) privilege, anyone using that account will have full access to any disk drive, regardless of whether access restrictions have been placed on that drive.

Super File: If you grant an account the Super File (F) privilege, anyone using that account will have full access to any file or folder, regardless of whether access restrictions have been placed on it.

Super Queue: If you grant an account the Super Queue (Q) privilege, anyone using that account will have complete control over all jobs in the print queue. When the Q privilege is disabled, you can view, cancel, pause and restart only your own print jobs.

switches: DOS command modifiers that give the computer additional information regarding a requested task. Switches are separated from the command and other switches by a forward slash or space.

templates: An account template provides a basic framework for creating new accounts. You can save time creating accounts if you base new accounts on a template you've previously created, because it will already have some of the entries filled in with standard information. Accounts that were based on a template aren't affected by any future changes you make to the template.

text editor: A program used to create, view and modify text files.

title bar: The horizontal bar at the top of each window that shows the name of that window.

title-bar icon: In Windows 95, the X in the top right corner of a window that you click to close the window.

tooltips Help: A small pop-up window containing descriptive text that appears when you move your cursor over an element - such as a button or field - in the toolbar of a LANtastic window. The text changes automatically when you move the cursor over a different element. The pop-up window disappears when you click an element or move the cursor elsewhere.

Many LANtastic windows have tooltips Help, which is enabled by default. In some cases, you can turn it on and off by clicking on the small question mark icon in the toolbar.

upload: To send one or more files from your computer's disk storage to a remote computer, such as another computer or an online service such as the Arti-Facts bulletin board service (BBS).

user names and passwords: Your user name is the unique name that identifies you on the network. Your password is a special word, code or symbol used for security and identification purposes. You may be prompted to type in your user name and password when you want to connect (log in) to a computer.

workstation: See client.

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