



*Local Area
Network*

Support Program User's Guide

Note: This product is intended for use within a single establishment and within a single, homogeneous user population. For sensitive applications requiring isolation from each other, management may wish to provide isolated cabling or to encrypt the sensitive data before putting it on the network.

First Edition (April 1987)

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Preface

The IBM Local Area Network (LAN) Support Program provides adapter support and associated program interfaces for two IBM local area networks: the IBM PC Network and the IBM Token-Ring Network. The LAN Support Program provides interfaces that allow network application programs to access the adapters. It also allows the user to run programs written for one network on the other network.

The LAN Support Program replaces the following previously released software:

- TOKREUI.COM

The adapter support interface supplied with the IBM Token-Ring Network PC Adapter and Adapter II.

- TOKR3270.COM

This adapter support interface is the IBM Token-Ring Network PC Adapter Support Program for the 3270-PC, supplied with the NETBIOS Program Version 1.1.

- NETBEUI.COM

The Token-Ring Network NETBIOS (Network Basic Input/Output System) Program.

The LAN Support Program provides all the functions of both network adapter support interfaces and NETBIOS for the IBM Token-Ring Network and the IBM PC Network.

Also, the LAN Support Program diskette contains a Configuration Aid. The Configuration Aid is a program that helps the user determine the parts of the LAN Support Program that he needs and configures the computer for those parts.

This book explains what is needed to use the LAN Support Program and where the LAN Support Program fits in the computer.

Chapter 1 describes the LAN Support Program and the Configuration Aid and what is needed to use them.

Chapter 2 explains how to use the Configuration Aid.

Appendix A lists all the messages returned when the program is loaded.

Appendix B explains how to configure the LAN Support Program manually (without the Configuration Aid).

Appendix C is a statement of service.

Also included on the diskette is DXMINFO.DOC (an information file) with a complete description of all the parameters that can be used with the LAN Support Program.

Related Publications

Below are a few documents you should be familiar with in order to use the LAN Support Program.

- *IBM Token-Ring Network Problem Determination Guide*, SY27-0280
- *IBM Token-Ring Network PC Adapter Technical Reference*
- *IBM Token-Ring Network Introduction and Planning Guide*, GA27-3677
- *IBM Personal Computer Disk Operating System* manual (3.3 or higher)
- The manuals for all network application programs that will be used

To obtain these or other IBM publications, see your place of purchase or your IBM representative.

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Chapter 1. The IBM LAN Support Program

The IBM LAN Support Program provides a program interface to support network application programs on IBM network adapters for both the PC Network and the Token-Ring Network. It provides this support for the IBM network adapters and IBM computers listed on the following pages.

What You Need

To use the LAN Support Program you need:

- The items in this package:
 - The manual you are reading now
 - The appropriate IBM PC Local Area Network Support Program diskette (5.25- or 3.5-inch diskette)
- One of the following IBM computers:
 - Personal Computer
 - Personal Computer XT
 - Personal Computer AT®
 - Industrial Computer
 - 3270 Personal Computer
 - 3270 Personal Computer AT
 - IBM Personal System/2™ computers
- Your computer must have:
 - At least 128 Kb of memory to load the LAN Support Program. If the Configuration Aid will be used to configure this computer, it will need at least 256 Kb.
 - A diskette drive.
 - A display.
 - An IBM printer or equivalent if you wish to print the DXMINFO.DOC file.
 - Attachment to an IBM local area network.

- One or two of the following network adapters:
 - Token-Ring Network Adapters
 - Token-Ring Network PC Adapter
 - Token-Ring Network PC Adapter II
 - Token-Ring Network Adapter/A
 - IBM PC Network adapters
 - PC Network Adapter II
 - PC Network Adapter II/A
- DOS 3.3 or later
- One or more network application programs

The LAN Support Program provides an interface for two kinds of network application programs:

- Programs written to the IEEE 802.2 interface (such as the IBM Advanced Program-to-Program Communication/Personal Computer)
- Programs written to the NETBIOS interface (such as the PC Local Area Network Program).

You will also need some blank diskettes for making backups and working diskettes.

IBM 3270-PC Control Program

Version 4.0 of the IBM 3270-PC Control Program runs on IBM 3270 Personal Computers as well as other IBM Personal Computers. The LAN Support Program can be configured to provide a program interface to DOS 3.3 with the 3270-PC Control Program.

The Configuration Aid

The Configuration Aid is a program that determines which configuration of the LAN Support Program is needed. It then copies the required files onto a fixed disk or diskette and edits the disk(ette)'s CONFIG.SYS file to create commands that will load the files into the computer's memory when the computer is restarted. To use the Configuration Aid, see Chapter 2.

Chapter 2. The Configuration Aid

There are two ways to get the appropriate configuration of the LAN Support Program copied onto a fixed disk or diskette: through the Configuration Aid or by copying the appropriate files and editing the configuration file (CONFIG.SYS) manually. The Configuration Aid is provided to simplify the job of copying files and editing the CONFIG.SYS file. The manual instructions are included for the more experienced PC user. They allow you to customize the configuration of the LAN Support Program. The manual instructions are in Appendix B.

The Configuration Aid is a program that determines the configuration of the LAN Support Program that is needed. It can determine the configuration needed for the computer it is running in or for another computer.

When determining the configuration for its own computer, the Configuration Aid identifies the installed hardware and uses your answers to software-related questions to make its determination. When the configuration is for another computer, the Configuration Aid uses your answers to both hardware- and software-related questions.

When all appropriate questions have been answered, the Configuration Aid copies the LAN Support Program files onto a fixed disk or diskette. It then edits this disk(ette)'s CONFIG.SYS file to create commands that will cause the LAN Support Program to be loaded when the computer is restarted. This disk(ette) is the one you will use in everyday operation of the IBM LAN Support Program.

Before Using the Configuration Aid

1. If you will be starting the computer from a working diskette (instead of a fixed disk), format a blank diskette for use as the working diskette. Be sure to format it as a DOS 3.3 (or later) system diskette (use the DOS FORMAT command with the /S option).

If you will be starting the computer from a fixed disk, make sure that the fixed disk has been formatted with DOS 3.3. Use the DOS VER command to check the DOS level. If you must reformat your fixed disk, be sure to backup your files. See the DOS manual for backup instructions.

2. If you want the 3270-PC Support Program Version 4.0 to be loaded into memory when the computer is started, you must use this same working disk or fixed disk to load it.
3. Before running the Configuration Aid, make a backup copy of the IBM LAN Support Program diskette. (Use the DOS DISKCOPY command.) When running the Configuration Aid, use the backup copy and keep the original in a safe place.

Using the Configuration Aid

1. Do one of the following:
 - If you plan to run the Configuration Aid from a diskette, insert the backup copy of the LAN Support Program diskette (3.5-inch or 5.25-inch) into the **default drive**.
 - If you copied the LAN Support Program onto a fixed disk and plan to run the Configuration Aid from that disk, set it as the **default drive**.
2. If you want the LAN Support Program configuration to be installed in a sub-directory, you should make sure that the DOS prompt indicates that sub-directory before you use the Configuration Aid.
3. Type **DXMAID** and press **Enter**.
4. Answer the questions on the Configuration Aid panels.

After the program has copied the LAN Support Program files, you will be returned to DOS. The appropriate LAN Support Program configuration has been copied to the fixed disk or diskette. This is now your **working disk(ette)**. You will not need the original or backup copy of the LAN Support Program diskette for everyday operation. You will need these diskettes only if you want to change your configuration later.

A new CONFIG.SYS file has been created on the working disk(ette) with the appropriate commands to load the adapter support when the computer is started. Default values are assumed for variables such as adapter setup parameters and NETBIOS parameters (if the NETBIOS interface is used). If you require other values for these parameters, you may edit the CONFIG.SYS file and add these parameters on the appropriate entry. See the DXMINFO.DOC file on the LAN Support Program diskette for more information relating to the parameters.

If you already had a CONFIG.SYS file on the working disk(ette), the Configuration Aid has created a new one and saved the old one with the same filename and a unique numeric extension. The new CONFIG.SYS file contains the same commands as the ori-

ginal one, along with any changes requested for the new configuration.

5. If you have any commands in an AUTOEXEC.BAT file or a related batch file that load the following files, you must remove them. If you do not have any commands loading these files, go to step 6.

- TOKREUI.COM
- TOKR3270.COM
- NETBEUI.COM

To remove these commands, do the following:

- a. Make a backup copy of the AUTOEXEC or other batch file to protect any information that may be needed later (for example, any parameters that might be used with TOKREUI and NETBEUI).
- b. Erase the lines that load TOKREUI or NETBEUI. Also erase any lines that do ERRORLEVEL checking for TOKREUI or NETBEUI. An example of these lines is shown on the following page.

```
TOKREUI < optional parameters >
echo off
if errorlevel 3 goto T3
if errorlevel 2 goto T2
if errorlevel 1 goto T1
if errorlevel 0 goto T0
:T3
echo One or both shared RAM locations are invalid.
echo The Adapter Support Interface was not loaded.
goto exit
:T2
echo One or both adapter addresses are invalid.
echo The Adapter Support Interface was not loaded.
goto exit
:T1
echo A version of the Adapter Support Interface
echo was already in memory.
echo This version was not loaded.
goto exit
:T0
echo The Adapter Support Interface was loaded
echo successfully.
:exit
```

```
NETBEUI < optional parameters >
echo off
if errorlevel 6 goto n6
if errorlevel 5 goto n5
if errorlevel 4 goto n4
if errorlevel 3 goto n3
if errorlevel 2 goto n2
if errorlevel 1 goto n1
if errorlevel 0 goto n0
:n6
echo Requested link stations exceeded maximum.
go to exit1
:n5
echo Requested Service Access Points exceeded maximum.
go to exit1
:n4
echo Requested work space exceeded maximum.
go to exit1
:n3
echo An adapter was already in use.
go to exit1
:n2
echo TOKREUI was not previously loaded as
echo required or the Token-Ring adapter is missing.
:exit1
echo NETBIOS Program not loaded.
go to exit2
:n1
echo NETBEUI was already loaded into storage.
echo The NETBIOS Program will not load twice.
go to exit2
:n0
echo The NETBIOS Program was loaded successfully.
:exit2
```


6. Start the computer with the working disk(ette) that the configuration was saved onto. A copyright statement for the LAN Support Program will be displayed. Look for messages appearing after the copyright statement. If any error messages are displayed, see Appendix A. If any of these messages are error messages, the LAN Support Program may not have been properly loaded. If there are no messages, or there are only information messages, the LAN Support Program has been properly loaded. If no LAN Support Program copyright statement is displayed, the LAN Support Program has not been installed or has been removed.
7. If any of the following files are also on the disk(ette) with the LAN Support Program, you may want to erase them to save space:
 - TOKREUI.COM
 - TOKR3270.COM
 - NETBEUI.COM.

These files were used in previously released software as program interfaces and are not needed if the LAN Support Program is installed.

Removing the Configuration

You can also use the LAN Support Program Configuration Aid to remove the configuration. To do this, run the Configuration Aid and request that no adapters be supported. The files will not be erased; instead all entries in the CONFIG.SYS file that load the LAN Support Program will be removed.

1. To run the Configuration Aid:

Type **DXMAID** and press **Enter**.

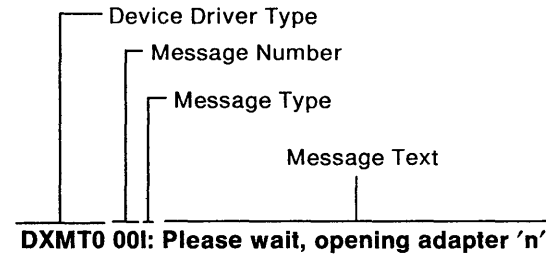
2. Answer no to all yes/no questions. When you press F6 to save the configuration, all entries in the CONFIG.SYS file that load the LAN Support Program will be removed.
3. If any of the following files are also on the disk(ette), you may want to erase them to save space:
 - DXMA0MOD.SYS
 - DXMC0MOD.SYS
 - DXMC1MOD.SYS

- DXMT0MOD.SYS
- DXMG0MOD.SYS
- DXMG1MOD.SYS

After removing the LAN Support Program configuration, start the computer with the updated working disk(ette) and look for installation messages. If you get a LAN Support Program copyright statement, the LAN Support Program was not removed. Run the Configuration Aid again and be sure to select no (N) support for all adapters.

Appendix A. Messages

This appendix lists all the messages that the LAN Support Program device drivers can display when being loaded into memory. The messages are listed numerically, with a description of each where needed. All messages have the following format:



The two types of messages are:

- E Error
- I Information

In the messages listed below:

- The adapter number is represented by "n."
- "data" is 24 bytes of the **device** = line in the CONFIG.SYS file, beginning with the keyword in error.
- The "message text" is a phrase describing the message.
- If an error message is displayed, you will be prompted by the device driver to "Press F1 to Continue." After pressing F1, wait for the DOS prompt to appear. When it does, you can attempt to fix the problem by following the action for it listed below.
- All information relating to parameters can be found in the DXMINFO.DOC file on the LAN Support Program diskette.

Message Listings

The message numbers are listed below in numerical order.

- **00I: Please wait, opening adapter 'n'**

Meaning: Either a Token-Ring adapter is inserting into the ring or a PC Network adapter is executing an open process.

Action: This is an information message: no action is required.

- **01E: Interrupt vector X'5C' in use**

Meaning: The software interrupt vector was not zero and the user of the vector was not the PC Network Adapter.

Action: Either use the Configuration Aid to reconfigure or check the CONFIG.SYS file to ensure that the DXMA0MOD device driver is loaded before any other local area network device driver.

- **02E: DOS Version 3.3 or higher required**

Meaning: The DOS Version is earlier than 3.3.

Action: The DOS Version needs to be changed to Version 3.3 or later.

- **03E: Interrupt Arbitrator (DXMA0MOD.SYS) device driver required**

Meaning: Module DXMA0MOD was not previously loaded.

Action: Either use the Configuration Aid to reconfigure or check the CONFIG.SYS file to ensure that the DXMA0MOD device driver is loaded before any other LAN Support Program device driver.

- **04E: Program already loaded**

Meaning: This device driver was already installed into memory.

Action: Either use the Configuration Aid to reconfigure or check the CONFIG.SYS file to ensure that the device driver is not listed twice.

- **05E: Invalid node address parameter**

Meaning: The address parameter is incorrect.

Action: Either use the Configuration Aid to reconfigure (this will remove the present parameters) or check the CONFIG.SYS file to correct the address parameter for this device driver.

- **10E: Invalid shared ram address**

Meaning: The shared RAM address is incorrect.

Action: Either use the Configuration Aid to reconfigure (this will remove the present parameters) or check the CONFIG.SYS file to correct the shared RAM parameter.

- **11E: DIR.INITIALIZE failed**

Meaning: The Token-Ring adapter failed to initialize.

Action: Refer to the section describing the adapter diagnostics in the adapter operator's guide.

- **12E: Token-Ring adapter not installed**

Meaning: A Token-Ring Network adapter was not detected.

Action: You may change your configuration by either using the Configuration Aid to reconfigure or by editing the CONFIG.SYS file to remove this adapter support device driver. Alternatively, you may install a Token-Ring Network adapter.

- **20E: Invalid work size parameter**

Meaning: The work size parameter is not correct.

Action: Either use the Configuration Aid to reconfigure (this will remove the present parameters) or check the CONFIG.SYS file to correct the work size parameter.

- **21E: Network error**

Meaning: An error was detected on the PC Network adapter.

Action: The message will be followed by one of the following:

**Please record this number yyyy-yy
Have system serviced**

**Please record this number yyyy-yy
Have network serviced**

**Please record this number yyyy-yy
Adapter not found, have system serviced**

If you receive the "Adapter not found" message, first check to make sure that your LAN Support Program configuration matches the adapters installed in your system unit. If they do not match, either install an adapter or remove this adapter support device driver. Remove the device driver by using the Configuration Aid to reconfigure or by editing the CONFIG.SYS file. If the configuration matches the adapters installed, record the error number and have your system unit serviced.

If you receive one of the other messages, record the error number and have either the system unit or the network serviced as indicated.

- **31E: Requested resources exceed capabilities on adapter 'n'**

Meaning: This would happen when too many link stations are defined, for instance.

Action: Either use the Configuration Aid to reconfigure or check the parameter values in the CONFIG.SYS file to verify that the resource requirements are not exceeded.

- **32E: Initialization or open error on adapter 'n'**

Meaning: There was an adapter failure.

Action: If the adapter is a Token-Ring adapter, refer to the section describing the adapter diagnostics in the adapter operator's guide. If the adapter is a PC Network adapter, have your system unit serviced.

- **33E: Cannot mix OLD.PARMS.x and 'new' keywords**

Meaning: Both new and old parameters are mixed on the device driver parameter line.

Action: Either use the Configuration Aid to reconfigure (this will remove the present parameters) or edit the CONFIG.SYS file to ensure that the parameter types are not mixed.

- **34E: Invalid keyword: 'data'**

Meaning: The keyword used is invalid.

Action: Either use the Configuration Aid to reconfigure (this will remove the present parameters) or check the CONFIG.SYS file to ensure that the keyword is correct.

- **35E: Duplicate keyword: 'data'**

Meaning: This keyword is used twice on the device driver parameter line.

Action: Either use the Configuration Aid to reconfigure (this will remove the present parameters) or check the CONFIG.SYS file to remove the keyword listed twice.

- **36E: Invalid keyword value: 'data'**

Meaning: This value listed is incorrect for its keyword.

Action: Either use the Configuration Aid to reconfigure (this will remove the present parameters) or check the CONFIG.SYS file to ensure that the value is correct.

- **37E: Adapter support required**

Meaning: No adapter support has been previously loaded.

Action: Either use the Configuration Aid to reconfigure or check the CONFIG.SYS file to ensure that an adapter support device driver is listed.

Appendix B. Manual Configuration

To manually configure the IBM LAN Support Program is to configure it without the use of the Configuration Aid. This allows you to request a customized configuration of the LAN Support Program for specific application programs. For example, if you are using application programs written for the NETBIOS Interface, it will allow you to request a specific number of link stations, sessions, and names. For a complete description of the parameters that can be used with the LAN Support Program, see the DXMINFO.DOC file on the LAN Support Program Diskette.

Manual configuration involves copying the appropriate LAN Support Program files to a working disk(ette) and creating a CONFIG.SYS file to load them. (See your DOS manual for a discussion of system configuration files.) After you have copied the files, the fixed disk or the system diskette can be used to start the computer and load the LAN Support Program.

The LAN Support Program Files

The LAN Support Program files are a group of *device drivers*. (A device driver provides a software interface for a device, such as a printer, keyboard, or adapter.) The LAN Support Program provides the device drivers for local area network adapters. Each of these device drivers has an "SYS" extension. The device drivers are loaded into memory with commands from the computer's configuration file (CONFIG.SYS).

How to Manually Configure the LAN Support Program

Below are the instructions to manually configure the LAN Support Program. Be sure you select the device drivers that you need. The chart on the following page shows which device drivers are needed for different installations. Following the chart are a few examples of typical configurations. These examples include the lines from the CONFIG.SYS file that load the device drivers. For more information on coding these lines, see "Coding the CONFIG.SYS File" on page B-5.

1. Determine which device drivers will be needed for your hardware and software requirements. See the chart on the next page and the explanation following it.

Always required — DXMA0MOD.SYS

One or two

**required — DXMC0MOD.SYS
DXMC1MOD.SYS
DXMG0MOD.SYS
DXMG1MOD.SYS**

Optional for NETBIOS — DXMT0MOD.SYS

2. Copy the necessary device drivers onto the working fixed disk or system diskette.
3. Create or alter the CONFIG.SYS file to reflect the chosen device drivers. See "Coding the CONFIG.SYS File" on page B-5.

For a list of commands that might need to be removed before starting the LAN Support Program, see step 5 on page 2-4.

After you have entered the appropriate lines into your CONFIG.SYS file and removed any inappropriate commands, you are ready to start your computer with the LAN Support Program. To install the LAN Support Program:

- If the LAN Support Program configuration was copied to a fixed disk, make sure the door to drive A is open. Then

restart the computer by pressing and holding the Ctrl, Alt, and Del keys.

- If the LAN Support Program was copied to a diskette, insert that diskette into drive A. Then restart the computer by pressing and holding the Ctrl, Alt, and Del keys.

To confirm the installation or the removal of device drivers, look for messages to be displayed when the computer is restarted.

Device Drivers for Different Installations

The figure below shows which device drivers you need for various installations.

Network Adapters to be Supported	Software Interface Supported			
	IEEE 802.2	IEEE 802.2 and NETBIOS	IEEE 802.2 and 3270-PC Cntrl Pgrm	IEEE 802.2, NETBIOS, and 3270-PC Cntrl Pgrm
Token-Ring Network: PC Adapter PC Adapter II Adapter/A	A0 C0	A0 C0 T0	A0 C1	A0 C1 T0
PC Network: Adapter II Adapter II/A	A0 G0	A0 G0 T0	A0 G1	A0 G1 T0

A0 = DXMA0MOD.SYS G0 = DXMG0MOD.SYS
 C0 = DXMC0MOD.SYS G1 = DXMG1MOD.SYS
 C1 = DXMC1MOD.SYS T0 = DXMT0MOD.SYS

For example, if you have a Token-Ring Network PC Adapter and need IEEE 802.2 and NETBIOS interface support you need: DXMA0MOD.SYS, DXMC0MOD.SYS, and DXMT0MOD.SYS.

Notes:

1. One group of device drivers will support two adapters of the same type.
2. If there are two different types of adapters (Token-Ring and PC Network), only one entry for A0 and T0 will be needed. See the coding rules on the following page.

Coding the CONFIG.SYS File

The lines in the CONFIG.SYS file that load the device drivers are illustrated below.

Coding Rules

1. Each **device =** line must not exceed one line in the CONFIG.SYS file.
2. The LAN Support Program device drivers are identified by the two-character portion of the file name that is specific to each file. All the device drivers have file names that start with DXM and end with MOD. The letters in between the DXM and the MOD indicate which device driver it is. For instance, the two characters (T0) in the file name below identify the NETBIOS Interface:

DXMT0MOD.SYS

3. If the disk(ette) already has a CONFIG.SYS file, be sure to change only the lines needed for the LAN Support Program device drivers.
4. The interrupt arbitrator device driver (DXMA0MOD.SYS) must be listed before the adapter support device drivers and the NETBIOS interface device driver (DXMT0MOD.SYS) must be listed last.
5. If the device drivers will be kept in a sub-directory, the device = line needs to include the path: **device = \pathname \dxm...**

device = dxma0mod.sys — Loads the interrupt arbitrator. Required in all configurations.

device = dxmC0mod.sys <parameters> — Loads the Token-Ring Network adapter support device driver for IEEE 802.2 program support. This device driver will support one or two Token-Ring adapters.

device = dxmC1mod.sys <parameters> — Loads the Token-Ring Network adapter support device driver that performs the same functions as DXMC0MOD above and also supports the 3270-PC Control Program. This device driver will support one or two Token-Ring adapters.

device = dxmg0mod.sys <parameters> -- Loads the adapter support device driver that provides IEEE 802.2 program support for the PC Network Adapter II or the Adapter II/A. This device driver will support one or two PC Network adapters.

device = dxmg1mod.sys <parameters> -- Loads the adapter support device driver that provides the same functions as DXMG0MOD above and also supports the 3270-PC Control Program. This device driver will support one or two PC Network adapters.

device = dxmt0mod.sys <parameters> -- Loads the NETBIOS interface device driver. This device driver will not work without the interrupt arbitrator and one of the adapter support device drivers.

Device Driver Parameters

See the DXMINFO.DOC file on the LAN Support Program diskette.

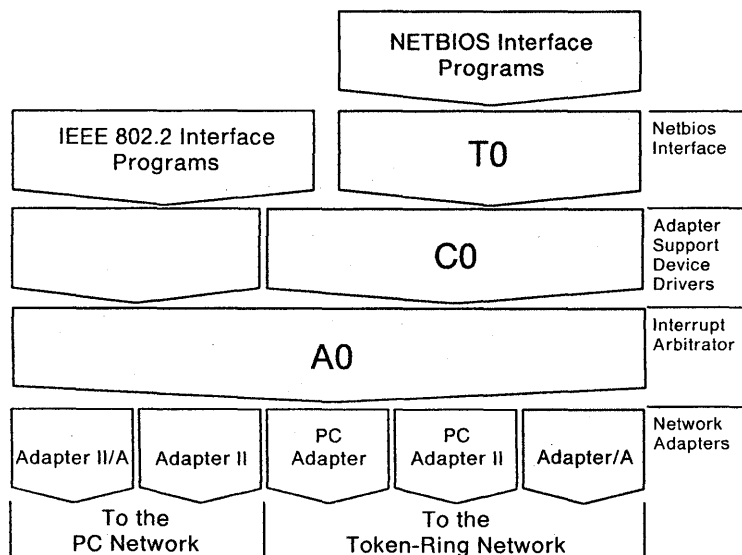
Note: Printer page break characters are included in this file to improve printing.

Example Configurations

On the next four pages, examples are given for typical configurations. They are not intended to represent the only possible configurations that can be used. See the examples and read the coding rules preceding this section to understand what is needed for your installation.

PC with Token-Ring Network Adapter

In this example the computer has one adapter for the Token-Ring Network. It will use application programs written for the NETBIOS interface. It will not use the 3270-PC Control Program. Below are the lines from the CONFIG.SYS file that will load the needed device drivers. Note that application programs written to the IEEE 802.2 interface can also be used.



device = dxma0mod.sys
device = dxmc0mod.sys
device = dxmt0mod.sys

Here is an example for the above configuration that uses sub-directories and changes some of the NETBIOS device driver parameters.

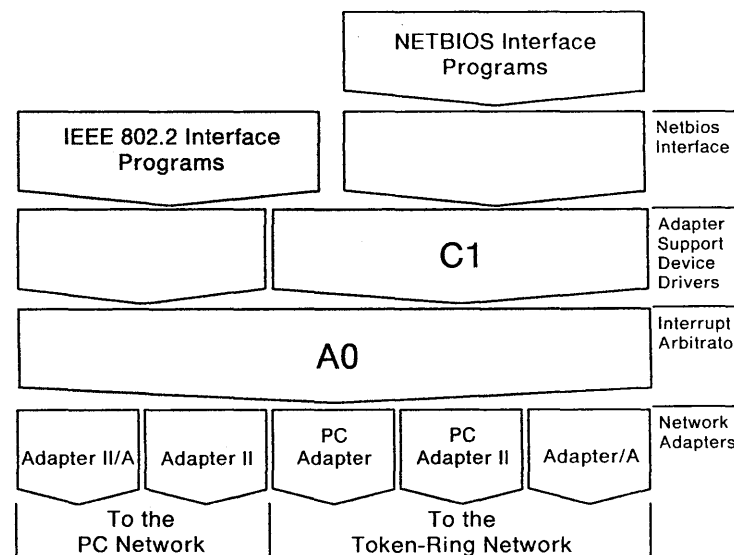
device = \ring\dxma0mod.sys
device = \ring\dxmc0mod.sys
device = \ring\dxmt0mod.sys stations = 64 sessions = 40

Notes:

1. The device drivers will be located in the sub-directory "ring."
2. The parameters for the NETBIOS device driver request 64 stations and 40 sessions. See the DXMINFO.DOC file for a description of all the device driver parameters.

3270-PC with Token-Ring Network Adapter

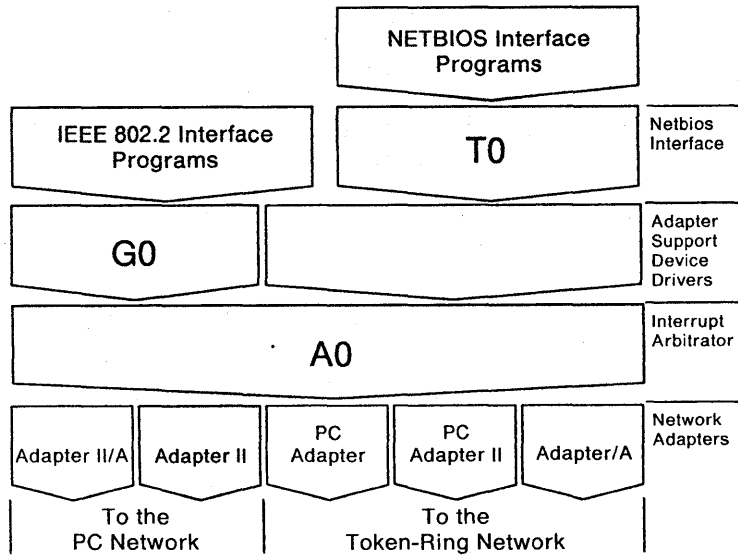
In this example the 3270-PC has one Token-Ring Network Adapter installed and will use the 3270-PC Control Program. Application programs written to the IEEE 802.2 interface will also be used. Application programs written to the NETBIOS interface will not be supported. Below are the lines from the CONFIG.SYS file that will load the needed device drivers.



device = dxma0mod.sys
device = dxmc1mod.sys

PC with PC Network Adapter

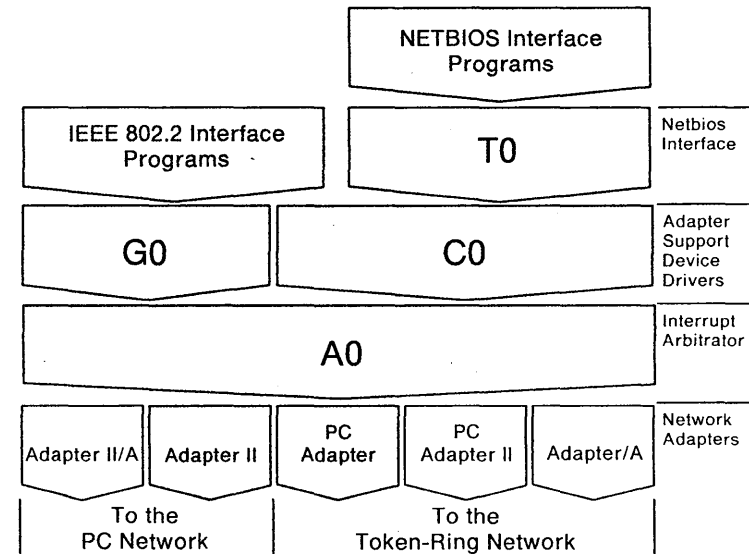
In this example the computer has one PC Network Adapter installed. The 3270-PC Control Program will not be used. Both IEEE 802.2 and NETBIOS programs will be used. Below are the lines from the CONFIG.SYS file that will load the needed device drivers.



device = dxma0mod.sys
device = dxmg0mod.sys
device = dxmt0mod.sys

PC with Adapters for Both Networks

In this example the computer has adapters for both networks installed. It will use application programs written for the IEEE 802.2 interface and the NETBIOS interface. The 3270-PC Control Program will not be used. Below are the lines from the CONFIG.SYS file that will load the needed device drivers.



device = dxma0mod.sys
device = dxmc0mod.sys ,D800
device = dxmg0mod.sys
device = dxmt0mod.sys

Note: The D800 on the C0 device driver is needed when a Token-Ring Network adapter and a PC Network adapter are installed in the same system. The default shared RAM location is changed to avoid a memory conflict.

Appendix C. Statement of Service

IBM will provide service for valid program-related defects in the IBM Local Area Network Support Program to program licensees at no additional charge. Program service is available until September 30, 1988. However, service will be provided only for the current update level.

The way each licensee obtains access to program service depends on the marketing channel through which the license was obtained.

In the United States and Puerto Rico, if the IBM Local Area Network Support Program was obtained through an authorized IBM Personal Computer dealer, requests for program service should be made through the dealer. If the program was obtained through the IBM National Accounts Division or the IBM National Marketing Division, requests for program service should be made through the service coordinator of the licensee's company.

The IBM Support Center will help the service coordinator diagnose and solve problems. The service coordinator may call the IBM Support Center at any time, and will usually be called back within eight business hours. The IBM Support Center will contact the service coordinator Monday through Friday between 8 a.m. and 5 p.m., local customer time.

IBM does not guarantee service results, or that the program will be error-free, or that all program defects will be corrected.

When a report of a defect in an unaltered portion of a supported release of the program is submitted, IBM will respond by issuing one of the following:

- Defect correction information, such as corrected documentation, corrected code, or notice of availability of corrected code
- A restriction notice
- A bypass.

Corrected code is provided on a cumulative basis on diskettes; no source code is provided. Only one copy of the corrections with supporting documentation will be issued to the licensee, or the agent of the licensee reporting the defect. IBM will authorize various agents, such as IBM Personal Computer dealers and service coordinators of IBM National Accounts Division and IBM National Marketing Division customers, to make and distribute a copy of the corrections, if needed, to each IBM Local Area Network Support Program licensee that they serve.

The total number of copies of an update distributed to IBM Local Area Network Support Program licensees within a customer's location may not exceed the number of copies of the IBM Local Area Network Support Program licensed to the customer. IBM does not plan to release updates of IBM Local Area Network Support Program code on a routine basis for preventive service purposes. However, should IBM determine that there is a general need for a preventive service update, it will be made available to all licensees through the same process used to distribute general IBM Local Area Network Support Program updates.

Following the discontinuance of all program services, this program will be distributed on an "as is" basis, without warranty of any kind either express or implied.

List of Abbreviations

DOS	Disk Operating System	PC	Personal Computer
LAN	Local Area Network	RAM	random access memory
NETBIOS	Network Basic Input/Output System	ROM	read-only memory
		SAP	Service Access Point

Glossary

A

adapter. In the IBM Token-Ring Network and IBM PC Network, the circuit card within a communicating device (such as an IBM Personal Computer) and its associated software, that enable the device to be attached to the network.

application program. A program written for or by a user that applies to the user's work. Some application programs run on a special kind of application program called a *network application program*. See *network application program*.

B

baseband local area network. A local area network in which information is encoded, multiplexed, and transmitted without modulation of a carrier. The IBM Token-Ring Network is an example.

broadband local area network. A local area network in which information is encoded, multiplexed, and transmitted with modulation of a carrier.

bus. A network configuration that provides a bidirectional transmission facility to which all network stations are attached. A sending station

transmits in both directions to the ends of the bus. All stations in the path copy the message as it passes. The IBM PC Network uses a bus topology.

D

device driver. A file that provides a software interface for a device, such as a printer, keyboard, or adapter.

Disk Operating System (DOS). A program that controls the operation of an IBM Personal Computer and the execution of application programs.

F

formatted diskette. A diskette that can be used by the computer to store data.

I

IEEE 802.2 interface. An interface adhering to the 802.2 Logical Link Control (LLC) Standard of the Institute of Electrical and Electronics Engineers. This standard is one of several standards for local area networks approved by the IEEE.

L

link station. A specific place in a Service Access Point that enables an adapter to communicate with another adapter.

N

network application program. A program used to connect and communicate with adapters on a network, enabling users to perform application-oriented activities and to run other application programs.

R

read-only memory (ROM). A computer's storage area whose contents cannot be modified.

ring (network). A network configuration where a series of attaching devices, such as IBM Personal Computers, are connected by

unidirectional transmission links to form a closed path.

S

Service Access Point. A logical point made available by an adapter where information can be received and transmitted.

session. A connection between two application programs that allows them to communicate.

system disk(ette). A fixed disk or diskette that has been formatted with the Personal Computer Operating System by using the DOS FORMAT command with the /S option.

W

working disk(ette). A computer fixed disk or diskette to which files are copied from an original diskette for use in everyday operation.

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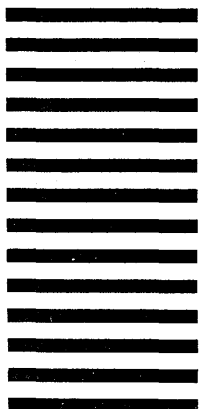
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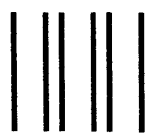
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