DECnet–VAXmate

Installation Guide

Order No. AA–GV33B–TH

April 1988

This manual details procedures for installing DECnet–VAXmate on the VAXmate workstation.

Supersession/Update Information:	This is a new manual.
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Software Version:	DECnet–VAXmate V2.0

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Preface

DECnet-VAXmate is a communications software product that lets you use your VAXmate personal computer in a DECnet network. DECnet-VAXmate Version 2.0 runs on Digital's VAXmate personal computer system using the VAXmate MS-DOS operating system. For all supported versions of the VAXmate MS-DOS operating system, see the *DECnet-VAXmate Software Product Description 55.05.xx.*

Manual Objectives

The *DECnet-VAXmate Installation Guide* describes how to install, set up, and use DECnet-VAXmate. It also discusses the procedures for verifying software and hardware installation. This guide assumes that you have properly installed the required hardware.

Before you install the DECnet-VAXmate software, read the *DECnet-VAXmate Release Notes*. This document is distributed on-line in a file called README.TXT. README.TXT is on the last diskette in your distribution kit and is not automatically copied during the installation procedure. Digital strongly suggests that, prior to installation, you insert the last diskette and either type (display) this file or, if you have an attached printer, print this file.

Intended Audience

This manual is designed for VAXmate personal computer users who want to expand their system capabilities by sharing data and other resources with DECnet systems. This manual assumes that you have a working knowledge of your VAXmate personal computer and its MS-DOS operating system.

This manual is also for application developers who are responsible for creating DECnet-VAXmate applications.

Structure of This Manual

This manual consists of five chapters and five appendixes.

- Chapter 1 introduces DECnet-VAXmate terms and concepts.
- Chapter 2 describes the hardware necessary for configuring the DECnet-VAXmate node.
- Chapter 3 outlines the steps you must complete before you can install the DECnet software onto your VAXmate personal computer.
- Chapter 4 describes how to use the DECnet-VAXmate Installation Procedure (DIP) to install the DECnet-VAXmate software.
- Chapter 5 describes how to verify your DECnet-VAXmate installation.
- Appendix A lists the contents of each distribution diskette and provides the approximate disk and memory requirements for each DECnet-VAXmate file.
- Appendix B details how to install individual DECnet-VAXmate files.
- Appendix C explains how to specify the DECnet database path.
- Appendix D provides a sample installation.
- Appendix E provides a preinstallation checklist.

Conventions Used in This Document

This manual uses the following graphic conventions:

Convention	Meaning
`Special type`	This special type indicates examples of system output or user input. System output is in black; user input is in red.
UPPERCASE	In command lines, indicates keywords to be entered. Note that you can type the characters in either uppercase or lowercase.
italics	Lowercase italics in commands and examples indicate that either the system supplies or you should supply a value.
[ ]	Square brackets indicate that the enclosed text is optional. If there is more than one option, you can choose one and only one of the options. Do not type the brackets when you enter the command.
{ }	Braces indicate that the enclosed text is required and that you must choose one and only one of the options. Do not type the braces when you enter the command.
key	Indicates that you should press the specified key. CTRL/*x* indicates that you should hold down the CONTROL key while you press the *x* key, where *x* is a letter.
RET	Indicates the RETURN key. Note that unless it is otherwise specified, you should end every command line by pressing the RETURN key.
. . .	Indicates that not all the display text or user input is shown.
.	
.	
.	

Associated Documents

You should have the following documents available for reference:

- *DECnet-DOS Getting Started*
- *DECnet-DOS User's Guide*
- *DECnet-DOS Programmer's Reference Manual*
- Available on-line help:
  - The release notes in the file called README.TXT located on the last distribution diskette.
  - The demonstration script (.SCR) distribution files. These files contain demonstration script files for SETHOST, the terminal emulator.

    A script file contains commands to perform terminal functions automatically, for example, connecting to and logging into a remote system. For complete information, see *The DECnet-DOS User's Guide.*

You should also have the following VAXmate documents available for reference:

- *VAXmate System Handbook*
- *VAXmate Services for MS-DOS Administration Guide*
- *MS-Windows User's Guide*
- *MS-DOS Reference Guide*
- *Using Networks from Your Workstation*
- *Network Troubleshooting Guide*
- *DECconnect General Description*
- *DECconnect System Planning and Configuration Guide*
- *DECconnect Installation and Verification Guide*

Terminology

This guide uses "VAXmate system" and "VAXmate personal computer" when referring to Digital's VAXmate workstation. This guide also uses "VAXmate MS-NET" when referring to the VAXmate networking software, "VAXmate MS-DOS" when referring to the VAXmate operating system, and "Windows" to mean the MS-Windows product.

1

Introduction to DECnet Networks

Computer systems can be linked into networks that allow them to share resources and to exchange information, files, and programs. DECnet is Digital's family of software and hardware communication products that let individual computer systems, called nodes, communicate with other systems in a network.

1.1 DECnet-DOS Functions

DECnet-VAXmate software allows your VAXmate personal computer to operate as an end node in a DECnet network. DECnet-VAXmate performs the following network functions:

- **Task-to-task communication.** Programs running under different operating systems and written in different languages can exchange data. DECnet-VAXmate allows task-to-task communications between a VAXmate and any other DECnet Phase IV system or any DECnet Phase III system connected to a DECnet router or other Digital Ethernet communications routing servers (see the *DECnet-DOS Software Product Description* for other supported routers).
- **Network management.** Network management and maintenance functions allow you to control, monitor, and test DECnet-VAXmate software to ensure correct operation of the network.
- **Remote file access.** Transport facilities permit programs to access remote files. You can create, store, and retrieve information on remote nodes.

- **Resource sharing.** Virtual device capabilities let you define devices, such as disks, on a remote system and then use them as if they were directly connected to your computer. Remote terminal services let you use your VAXmate personal computer as if it were a terminal connected directly to another node in the network.

1.2 DECnet-VAXmate Concepts

You can make the best use of the information in this manual by understanding some basic terms and concepts that are used throughout:

- **The DECnet-VAXmate environment.** The DECnet-VAXmate environment consists of the entire network of DECnet systems.
- **Routing node.** A routing node can automatically receive information from one node and send it on to another. It can also perform non-routing functions.
- **End node.** An end node can send and receive information, but it cannot perform routing functions. The DECnet-VAXmate node is an end node.
- **Local node.** The local node is the node you are working on when you enter commands. Your local node is connected to the DECnet network with an asynchronous communication line or Ethernet controller. Once the physical connection is made and the DECnet-VAXmate software has been installed, you can communicate with any other node in the DECnet network.
- **A remote node.** Any node in the network other than your local node is a remote node.
- **An executor node.** An executor node performs network management functions. It lets you get information about the network. For DECnet-VAXmate, the executor node is your local node.
- **An adjacent node.** In an asynchronous configuration, an adjacent node is a node that your system is physically connected to by an asynchronous communication line. To communicate with any node in the network, DECnet-VAXmate requires that the adjacent node be a routing node. A routing node forwards your messages to the proper remote node.

- **Logical links.** Tasks that run on different nodes and exchange data are connected by logical links. Logical links are temporary software information paths between two communicating tasks in a DECnet network.

2

Hardware Components for DECnet-VAXmate Nodes

This chapter briefly describes the hardware components necessary to configure your VAXmate personal computer as a DECnet node. Any supported VAXmate configuration with 1 MB of memory can run the DECnet-VAXmate software. Although DECnet-VAXmate runs on diskette-only systems, its installation and operation are more convenient and efficient when you use a hard disk option (VAXmate Expansion Box).

Your VAXmate system must be physically connected to either an adjacent node or baseband Ethernet in order to communicate with other DECnet systems. The physical connection method determines which hardware components you must install.

2.1 Hardware Components for Asynchronous DDCMP Communications

The integral serial communications port is a channel to communicate with other I/O devices and systems. It is a standard feature of the VAXmate personal computer.

Your VAXmate system can be connected to another computer either directly or through a modem. The connection uses a cable that is attached to the serial communications port.

The following hardware components are required for asynchronous communications:

- Electrical Industry Association RS-232-C/V.24 cable

- A modem or a null modem cable
- Loopback connector

How you connect your VAXmate system to the network will depend on your application needs and the configuration of the network. You can get help from the person responsible for configuring your network.

2.1.1 Electrical Industry Association (EIA) RS-232-C/V.24 Cable

The EIA RS-232-C/V.24 cable is a physical connection between terminals, personal computers, and modems. Its specifications allow it to carry modem signals, circuit functions, and electrical functions between the devices.

2.1.2 VAXmate Integral Modem

The integral modem option lets you communicate with other computer systems using electrical signals over telephone lines. A modem changes digital signals produced by the computer to the analog signals needed for transmission. Likewise, it converts incoming signals from analog to digital.

2.1.3 VAXmate Loopback Connector

Loopback tests verify that your node is operating correctly. These tests check the operation of both hardware and software.

Loopback tests that use only your node require that you attach a loopback connector to your computer or transmission cable. The *DECnet-DOS Network Management Guide* discusses loopback connectors in more detail.

2.2 Hardware Components for Ethernet Communications

The Ethernet communications adapter is a channel to communicate with other I/O devices and systems. The Ethernet communications adapter is part of your VAXmate unit. A T-connector attaches your system's Ethernet adapter to the ThinWire Ethernet.

The following hardware components are required for Ethernet communications:

- ThinWire Ethernet cable with T-connector
- Ethernet loopback connector

How your VAXmate is connected to the network will depend on your application needs and the configuration of the network. You can get help from the person responsible for configuring your network.

2.2.1 ThinWire Ethernet Transceiver Cable

ThinWire Ethernet cables are coaxial cable systems that physically connect individual nodes. Ethernet allows nodes to exchange data, messages, and signals with other nodes on the same cable.

In ThinWire networks, RG 58 coaxial cable and T-connectors connect individual nodes. Use the T-connector to attach the ThinWire cable to the Ethernet adapter built into your system unit. See the *VAXmate System Handbook* or the *Personal Workstation Network Configuration Guidelines* for more information on installing these components. You may also wish to refer to the *DECconnect General Description*, the *DECconnect System Planning and Configuration Guide*, and the *DECconnect Installation and Verification Guide* for more information on configuring network components.

2.2.2 Ethernet Loopback Connector

Loopback tests verify that your node is operating correctly. These tests check the operation of both hardware and software. Loopback tests that use only your node require that you attach a loopback connector to your computer or transmission cable.

The *DECnet-DOS Network Management Guide* discusses loopback connectors in more detail.

3

Connecting to the DECnet Network

This chapter outlines the steps you must complete before installing the DECnet-VAXmate software. Use the checklist at the end of the chapter to collect the information you will need during installation. You can also use the checklist to track your progress during the automated installation procedure, which Chapter 4 describes.

3.1 The VAXmate Operating System

The VAXmate MS-DOS operating system controls the overall operation of your VAXmate personal computer.

The *VAXmate System Administrator's Guide* describes the VAXmate MS-DOS operating system installation.

3.2 Locating the DECnet-VAXmate Software Components

DECnet-VAXmate software is distributed on three 5.25-inch RX31 diskettes. Volume labels on the three diskettes identify them as VDND20 1-3, VDND20 2-3, and VDND20 3-3.

Check to make sure you have all three diskettes. Then, create a back-up copy of each diskette and use the copies during installation. Do not put write protect tabs on the back-up copies because the installation procedure needs to write information onto the diskettes.

3.3 Setting Up Your Node

Before connecting to the network, you must identify your node with a unique name and address and a node user name. Get the DECnet node name and DECnet node address from the person responsible for setting up networks in your facility. Network managers assign node names and addresses according to these guidelines:

1. **DECnet node name.** The node name is a string of one to six alphanumeric characters, at least one of which must be alphabetic.

   The name must not already be assigned to another node.

2. **DECnet node address.** The node address is a unique numeric identification of a specific node. The address includes an area number and a node number:

   area.node

   where

   area is a number from 1 to 63, and *node* is a number from 1 to 1023. The area and node numbers are separated by a period.

   The area numbers for your node and for the adjacent node must be the same.

   The node address must not already be assigned to another node in the network.

3. **Node user name.** The node user name is a unique identification string of 1 to 16 alphanumeric characters. The local node user name is required by other nodes on the network to access information on your VAXmate node.

Enter this node information in the checklist at the end of this chapter.

3.4 Choosing the Communication Type

Communication between your DECnet-VAXmate node and other DECnet systems is possible through a physical connection either directly to a baseband Ethernet or to an adjacent routing node. Choose one of the following communication types and enter your selection in the checklist at the end of this chapter.

3.4.1 Ethernet Communications

Follow the directions in the *VAXmate System Handbook* to connect your DECnet-VAXmate node directly to a baseband Ethernet local area network. See your system administrator if you need help connecting to the Ethernet.

3.4.2 Asynchronous DDCMP Communications

Follow these steps to connect your DECnet-VAXmate node to an adjacent routing node.

1. **Select an adjacent node.** It must be one of these DECnet Phase IV routing nodes supporting asynchronous DDCMP connections:
   - VAX/VMS Version 4.2 or later
   - RSX-11M Version 4.2 or later
   - RSX-11S Version 4.2 or later
   - RSX-11M-PLUS Version 3.0 or later
   - Ethernet DECnet Router Server Version 1.1 or later
   - Other Digital Ethernet communications routing servers (see the *DECnet-DOS Software Product Description* for other supported routers).

2. **Install the appropriate hardware.** Install one of the following:
   - A null modem cable.
   - A modem. (The adjacent node also requires a modem to match yours.)

3. **Select a communication speed for the line.** The maximum baud rate for a VAXmate personal computer is 19200. Enter your selection in the checklist at the end of this chapter.

4. **Configure the adjacent node for asynchronous DDCMP communication.** The DECnet product at the adjacent node must be able to communicate with the DECnet-VAXmate software. Get help from the person responsible for configuring the network.

   Configure the adjacent node to meet the following requirements.
   - The software and hardware must support a full duplex asynchronous DDCMP line; communication with the VAXmate system is either direct or modem controlled. Use the same method selected for the VAXmate system.

- Be sure that the baud rate selected for the communication line matches the rate to be used by the VAXmate system.

3.5 Specifying the Location of Files

You can use system start-up files CONFIG.SYS and AUTOEXEC.BAT to execute programs automatically when you start MS-DOS. The installation procedure will create or modify these files for you to add information needed to configure and run DECnet-VAXmate.

If VAXmate MS-NET is installed on your system, the installation procedure will modify CONFIG.SYS and AUTOEXEC.BAT to add the information needed to properly integrate DECnet-VAXmate and VAXmate MS-NET components.

3.5.1 Assigning a Device Specification

You must specify the device that contains the system files. This device is the drive from which you booted your VAXmate personal computer. CONFIG.SYS and AUTOEXEC.BAT must be in the root directory of this drive. You can either use the installation procedure's default parameter or choose your own device. The default device is C:.

NOTE

If your VAXmate system is configured with a single diskette drive and no hard disk, your boot drive must be drive A:.

The default device depends on whether you have a hard disk.

Enter the device name in the checklist at the end of this chapter.

3.5.2 Assigning Path Specifications

Specify where files will be found or copied during installation. A path specification indicates where files are located by pointing to a specific directory. A valid path specification includes a device name, for example:

```
C:\DECNET
```

In this example, C: represents the device name and \DECNET represents the path name.

You can assign path specifications for each of the following:

- Installation destination path
- DECnet database path
- Programming library sources destination path

3.5.2.1 Installation Destination Path

This is the path into which the DECnet-VAXmate utilities and network functions will be copied. You can either use the default specification C:\DECNET or assign a different path specification. The DECnet-VAXmate Installation Procedure (DIP) will automatically provide this path specification to the PATH command in the file AUTOEXEC.BAT.

Note that the default device depends on whether you have a hard disk.

NOTE

If you install DECnet-VAXmate on a single diskette drive system with no hard disk, you may want to copy files to an MS-NET redirected device located on your remote server system. The redirected device you select must have read and write access.

Many of the DECnet-VAXmate components, except the network virtual device drivers and installation and verification utilities, can be copied to a redirected device. The Network Virtual Disk Driver (NDDRV) and the Network Virtual Printer Driver (NPDRV) must be copied to your boot drive to enable them to be accessible to your operating system at system start-up time.

3.5.2.2 DECnet Database Path

DECnet-VAXmate requires several database files to run DECnet-VAXmate components. The DECnet database path is the path into which the database files will be stored. You can either use the default specification C:\DECNET or assign a different path specification.

Note that the default device depends on whether you have a hard disk.

This path must be on a device that is accessible at system start-up time. DIP will automatically add this path specification to the DECnet process command line in the file AUTOEXEC.BAT. See Appendix C for detailed instructions on specifying a DECnet database path.

3.5.2.3 Programming Library Sources Destination Path

This is the path into which the DECnet C programming library sources will be copied. You can either use the default specification C:\DECNET or assign a different path specification. Enter the path name in the checklist at the end of this chapter.

Note that the default device depends on whether you have a hard disk.

3.6 Verifying the Installation

Verify the DECnet-VAXmate installation by running tests that use the Network Control Program (NCP). You can have these tests run automatically as part of the installation procedure or you can run them manually:

- Automatic testing

  You must specify at least one reachable remote node to be used for testing. Use the guidelines in Section 3.3 when assigning remote node names and addresses. Enter this node information in the checklist at the end of this chapter.

- Manual testing

  See Chapter 5 of this manual and the chapter "Testing the Network" in the *DECnet-DOS Network Management Guide* for details.

3.7 Reboot Line State

You can automatically start DECnet-VAXmate whenever your system reboots. To enable the automatic start-up of DECnet-VAXmate, set the reboot line state to ON. Select ON or OFF and enter your choice in the checklist at the end of this chapter.

3.8 Selecting DECnet-VAXmate Utilities

The DECnet-VAXmate software kit has many components for high-level network functions. When installing DECnet-VAXmate software, you can install either the entire kit or individual components. Your decision depends on how your system is configured—whether you have a hard disk or whether you use only diskettes—and if you have sufficient disk and memory.

Each DECnet-VAXmate component takes up disk and memory space on your VAXmate personal computer. Some components require memory all the time and others require memory space only when used. See Appendixes A and B for details.

See Table 3-1 for a list of network functions and the DECnet-VAXmate components you use to access them. Select some or all of these DECnet-VAXmate utilities and record your choices in the checklist at the end of this chapter.

Table 3–1: DECnet-VAXmate Utilities

Network Function	DECnet-VAXmate Utility
DECnet-DOS User Interface	DECnet-DOS Menus (DECNET)
Network Programming	Transparent File Access (TFA)
	Transparent Task-to-Task (TTT)
	Transparent Network Task Control (TNT)
	C Programming Library
	NETBIOS Emulation Interface (NETBIOS)
Network Management	Network Control Program (NCP)
	Network Management Listener (NML)
	Data Test Sender (DTS)
	Data Test Receiver (DTR)
Remote File Access	Network File Transfer (NFT)
	File Access Listener (FAL)
Resource Sharing	Network Virtual Terminal (SETHOST)
	Local Area Transport (LAT)
	Command Terminal (CTERM)
	Network Virtual Disk (NVD)
	Network Virtual Printer (NVP)
	Job Spawner (SPAWNER)
	Mail Sender (MAIL)

3.9 Preinstallation Checklist

This checklist summarizes the preinstallation requirements in this chapter. This checklist is also in Appendix E for easy removal.

Use the information you prepare with this checklist, along with the information in Chapter 4, to install the DECnet-VAXmate software.

Hardware and Software Requirements

Check off each item:

VAXmate personal computer _____

Operating System - VAXmate MS-DOS _____

For a list of supported versions, see the *DECnet-VAXmate Software Product Description*.

DECnet-VAXmate Software Kit - three RX33 diskettes labeled:

VDND20 1-3 _____
VDND20 2-3 _____
VDND20 3-3 _____

Network Parameters

Enter the appropriate DECnet node parameters:

Local Node

Node Name _____
Node Address _____
Local Node User Name _____

Remote Node(s)

Node Name _____
Node Address _____

Node Name _____
Node Address _____

Node Name _____
Node Address _____

Communications Type

Choose one of the following schemes:

Asynchronous DDCMP - (line speed) _____
Ethernet _____

Device and Path Specifications

Enter the appropriate specifications:

Boot Drive (system start-up files) _____
Destination Path (kit files) _____
Destination Path (DECnet database files) _____
Destination Path (programming library sources) _____

Reboot Line State

Choose one of the following:

ON _____
OFF _____

DECnet-VAXmate Utilities

Select the components you want to install:

Real-Time Scheduler _____
DLL - Data Link Layer Process _____
NCP - Network Control Program _____
Network Management Conversion Utility _____
Network Device Utility _____
DECNET - DECnet-DOS Menus _____
TTT - Transparent Task-to-Task _____
TFA - Transparent File Access _____
SETHOST - Network Virtual Terminal _____
NETBIOS (Emulation Interface) _____
LAT - Local Area Transport _____
NFT - Network File Transfer _____
FAL - File Access Listener _____
DTS - Data Test Sender _____

DTR - Data Test Receiver _____
NML - Network Management Listener _____
NVD - Network Virtual Disk _____
NVP - Network Virtual Printer _____
Dnetlib - Programming Library _____
MAIL - Mail Sender Utility _____
SPAWNER - Job Spawner Utility _____

4

Installing the DECnet-VAXmate Software

This chapter describes how to use the DECnet-VAXmate Installation Procedure (DIP) to install the DECnet-VAXmate software onto your Digital VAXmate workstation. DIP is an automated, interactive installation procedure. See Appendix D for a sample installation session.

4.1 Introduction to Using DIP

During DIP, you answer questions and then make selections from a series of menus. Use the checklist you prepared in Chapter 3. Before starting DIP, complete that checklist and have it at hand.

4.1.1 DIP Conventions

DIP uses several easy-to-follow conventions.

4.1.1.1 Question Format

DIP's Yes/No questions include:

- A question mark (?)
- All your possible choices
- The default response within square brackets [Y/N Default:N]

4.1.1.2 Help

Some of your answers to DIP's questions take you into one or more menus. One of the selections in each menu is HELP. When you choose HELP, DIP displays information you may need to aid you in the selection process.

4.1.1.3 Confirmation Messages

If your menu selection results in an installation configuration change, DIP asks you for confirmation before it makes the change.

4.1.1.4 Copy Options

DIP gives you the option of copying the entire distribution kit or selected files.

NOTE

Some files are never copied automatically, even with the Copy Entire Kit option. DIP does not automatically copy sample script (.SCR) files or unsupported utilities. See Appendix A for a list of these files.

4.1.2 Exiting DIP and Saving Changes

You can exit the installation procedure at any time by entering CTRL/C. Before you exit, DIP gives you the opportunity to save any selections or changes you made, storing them in the file DIP.SAV on the first distribution diskette. When you run the installation again, DIP gives you the opportunity to use the options that you previously selected. See the sample installation in Appendix D for more information.

4.2 Installing the DECnet-VAXmate Software

The steps you use to install the DECnet-VAXmate software depend on your workstation's configuration:

- See Section 4.2.1 if you are using a single diskette drive system (with no hard disk) or if you boot your system from drive A:.
- See Section 4.2.2 if you are installing DECnet-VAXmate onto a hard disk drive and if you boot your system from drive C:.

4.2.1 Installing onto a Single Diskette Drive System with No Hard Disk

The MS-DOS operating system treats a single physical diskette drive system as if it were two valid drives: drive A: and drive B:. Follow these steps:

1. Insert the diskette labeled VDND20 1-3 into the drive and close the door.
2. Set your default drive to B: by typing:

   ```
   A>B: RET
   ```

3. Type DIP after the MS-DOS prompt:

   ```
   B>DIP RET
   ```

4. Answer the questions and make selections from the menus that follow.
5. Insert your boot diskette or DECnet-VAXmate diskette as instructed by your operating system or DIP.

DIP gives you the opportunity to save your answers in the file DIP.SAV on the diskette labeled VDND20 1-3. If you want to save your answers, be sure to leave the write protect tab off this diskette.

4.2.2 Installing onto a Hard Disk Drive System

Follow these steps (see the previous section if you boot your system from drive A:):

1. Insert the diskette labeled VDND20 1-3 into drive A: and close the door.
2. Set your default drive to A: by typing:

   ```
   C>A: RET
   ```

3. Type DIP after the MS-DOS prompt:

   ```
   A>DIP RET
   ```

4. Answer the questions and make selections from the menus that follow.

After you finish answering questions and making menu selections, DIP prompts you to insert one or both of the remaining diskettes, VDND20 2-3 and VDND20 3-3.

DIP then gives you the opportunity to save your answers in the file DIP.SAV on the diskette labeled VDND20 1-3. If you want to save your answers, be sure to leave the write protect tab off this diskette.

4.3 Updating System Start-Up Files

DIP automatically updates, or creates if necessary, your system start-up files CONFIG.SYS and AUTOEXEC.BAT to include the commands necessary to configure, test, and run DECnet-VAXmate. These files are in the root directory of the boot drive and are tailored specifically for the configuration you selected.

If you manually copy the DECnet-VAXmate files, you must update your system start-up files yourself. See Appendix B for the commands you must include in the system start-up files.

4.4 Completing the Installation

After the installation procedure, reboot your system to begin using the network parameters you supplied during the installation. Be sure to reboot from the boot drive that you specified during the installation procedure.

If you have an earlier version of DECnet-VAXmate installed, your DECnet database files may be incompatible with DECnet-VAXmate Version 2.0 software. If DIP detects incompatible databases, it automatically runs the Network Management Conversion utility (NMCVT). NMCVT converts the following DECnet files, saving the originals as files with extension .V12:

- DECNODE.DAT (saved as DECNODE.V12)
- DECOCT.DAT (saved as DECOCT.V12)
- DECPARM.DAT (saved as DECPARM.V12)

The Network Management Conversion utility displays messages as it runs. The following is a sample of what may be displayed on your screen if you have an earlier version of DECnet-VAXmate installed.

```
Network Management Conversion Utility - V2.0

Converting C:\DECNET\decnode.dat to V2.0 format
  Saving V1.2 database as C:\DECNET\decnode.V12.

Converting C:\DECNET\decacc.dat to V2.0 format
  Saving V1.2 database as C:\DECNET\decacc.V12.

Converting C:\DECNET\DECPARM.DAT to V2.0 format
  Saving V1.2 database as C:\DECNET\DECPARM.V12.
```

When the file conversion finishes, your system continues to initialize, displaying messages as it does. The following message is a sample only—the message you receive will vary depending upon the components you chose during the installation procedure and on your communication configuration.

```
Network kernel Version 2.0
Datalink Version 1.19 Startup Version 2.0

DECnet LAT Version 2.0
DECnet DNP Version V2.0
DECnet Node Name 'PCDOS' (10.55)
DECnet Started
```

The DECnet-VAXmate verification utility VERIFYDN then automatically runs the Network Control Program (NCP), using a script file, NCP.TXT. The NCP commands in the script file configure the network software for your node and define any remote nodes you want to connect to.

VERIFYDN displays messages on your screen while it runs. The exact messages vary depending on your answers to the installation procedure.

```
        VERIFYDN - DECnet Verification Utility, Version 2.0
****************************************************************
The Network Control Program (NCP) will be run to
configure your DECnet node.  The information which
will be input to NCP was produced from the
DECnet installation procedure.
You can rerun NCP to configure your node by entering
the following:
  "NCP <C:\NCP.TXT"
****************************************************************
Strike a key when ready . . .
****************************************************************
Executing: "NCP <C:\NCP.TXT"
    Network Control Program - V2.0
NCP>SET EXECUTOR IDENTIFICATION "DECnet-VAXmate V2.0"
NCP>DEFINE EXECUTOR IDENTIFICATION "DECnet-VAXmate V2.0"
NCP>DEFINE EXECUTOR NAME PCDOS ADDRESS 10.55
NCP>DEFINE EXECUTOR STATE ON
NCP>SET EXECUTOR DELAY FACTOR 16
NCP>DEFINE EXECUTOR DELAY FACTOR 16
NCP>DEFINE NODE 10.55 NAME PCDOS USER "REVERE"
NCP>DEFINE NODE 3.44 NAME BETA
NCP>DEFINE OBJECT dtr NUMBER 63 FILE dtr
NCP>DEFINE OBJECT fal NUMBER 17 FILE fal
NCP>DEFINE LINE STATE ON
NCP>SET LINE STATE ON
NCP>EXIT
****************************************************************
```

```
If any of the above commands failed, please
refer to the DECnet-DOS Network Management Guide for more
detail.
(Enter a CONTROL-C now, if you wish to abort.)
************************************************************
Strike a key when ready . . .
```

If you selected automatic verification, VERIFYDN runs the script file NCP2.TXT to verify your software installation. The NCP commands in the file perform loop tests to verify that your computer is communicating on the network.

The following message is a sample—the actual message you get depends on the information you provided to the installation procedure.

```
************************************************************
A series of network tests will be run using the
Network Control Program (NCP).  If a test fails
refer to the DECnet-DOS Network Management Guide for error
details.
If all of the tests succeed, the installation
of DECnet was successful.
You can rerun these tests by entering the following:
  "NCP <C:\NCP2.TXT"
************************************************************
Strike a key when ready . . .
************************************************************
Executing: "NCP <C:\NCP2.TXT"
    Network Control Program - V2.0
NCP>LOOP EXECUTOR

LOOP EXECUTOR test started at 23-Apr-1988 15:26:40

Sending loop message  1, 46.
Successful send and receive, message  1.

LOOP EXECUTOR test finished successfully at 23-Apr-1988 15:26:40
NCP>LOOP NODE BETA WITH MIXED COUNT 10 LENGTH 512

LOOP NODE test started at 23-Apr-1988 15:26:41
  Connect complete to node  BETA
  Remote node maximum buffer size for loopback:   4096
```

```
  Sending loop message  1, 512 bytes.
  Successful send and receive, message  1.
  Sending loop message  2, 512 bytes.
  Successful send and receive, message  2.
  Sending loop message  3, 512 bytes.
  Successful send and receive, message  3.
  Sending loop message  4, 512 bytes.
  Successful send and receive, message  4.
  Sending loop message  5, 512 bytes.
  Successful send and receive, message  5.
  Sending loop message  6, 512 bytes.
  Successful send and receive, message  6.
  Sending loop message  7, 512 bytes.
  Successful send and receive, message  7.
  Sending loop message  8, 512 bytes.
  Successful send and receive, message  8.
  Sending loop message  9, 512 bytes.
  Successful send and receive, message  9.
  Sending loop message  10, 512 bytes.
  Successful send and receive, message  10.
LOOP NODE test finished successfully at 23-Apr-1988 15:26:56
NCP>EXIT
************************************************************
If any of the above commands failed, please
refer to the DECnet-DOS Network Management Guide for more
detail.
(Enter a CONTROL-C now, if you wish to abort.)
************************************************************
Strike a key when ready . . .
************************************************************
DECnet-VAXmate Installation Procedure Finished
************************************************************
```

If a problem appears while the verification tests are running, you can enter CTRL/C to abort the procedure. If NCP displays an error message, see the chapter, "Testing the Network", in the *DECnet-DOS Network Management Guide* for help in troubleshooting.

After you resolve the problem, reboot your system and re-execute the NCP commands that configure your node and perform loop tests. You can use the script files NCP.TXT and NCP2.TXT. To configure your node and verify your installation, type:

```
c>NCP <C:\NCP.TXT RET
c>NCP <C:\NCP2.TXT RET
```

4.5 Rerunning DIP

You can rerun the installation procedure at any time. Running DIP again is necessary if:

- You want to install additional DECnet-VAXmate components.
- You stopped the installation procedure.
- You encountered problems after installing and initializing the software.

To rerun DIP, follow the steps in Section 4.1.2. If you saved your installation selections in the file DIP.SAV, DIP gives you the option of re-using your saved answers.

4.6 Getting Started As A Network Node

When you have verified that your node is communicating with other network nodes, you are ready to use the network. The *DECnet-DOS Getting Started* manual has introductory information about the DECnet-DOS utilities you can use to:

- Control your VAXmate computer from a remote terminal.
- Access remote resources without leaving your VAXmate environment.
- Exchange files with other users.
- Emulate certain terminals.

NOTE

For a list of specific terminals, see the *DECnet-VAXmate Software Product Description*.

- Examine information about how your node communicates.

See the *DECnet-DOS User's Guide* for detailed information about using each utility.

5

Verifying Your DECnet-VAXmate Installation

After you finish installing DECnet-VAXmate, use the DECnet-VAXmate test utilities to verify the correct operation of your VAXmate system as a DECnet node. During the installation procedure, you can indicate that you want to have diagnostic tests run automatically or you can run them yourself.

If you select automatic verification, the file VERIFYDN automatically runs script files that execute NCP commands. These files, named NCP.TXT and NCP2.TXT, configure the network software for your node, define any remote nodes to which you want to connect, and perform loop tests to verify that your computer can communicate with others on the network.

If you choose manual verification, you enter NCP commands to configure your node and to verify the installation.

This chapter tells you how to configure your node and verify installation manually. The *DECnet-DOS Network Management Guide* has more information on these commands.

5.1 Configuring Your Node

To configure your network software, issue these NCP commands:

- DEFINE EXECUTOR NAME—to name your local (executor) node
- DEFINE EXECUTOR ADDRESS—to register the network address of your local node
- DEFINE EXECUTOR STATE ON—to allow your local node to accept logical links.
- DEFINE NODE—to specify the name and address of a remote node with which you want to communicate
- DEFINE LINE STATE ON—to make your line available for network use

5.2 Verifying Your Installation

NCP commands help you to verify that the software installation was successful and that you can communicate with remote network nodes. Use these commands to perform loop tests:

- LOOP EXECUTOR—to verify that your local node is operating correctly.
- LOOP NODE—to verify that your local node can communicate with a remote node.

5.2.1 NCP LOOP EXECUTOR Command

The LOOP EXECUTOR command runs the loop test for your local node. It verifies the operation of your local node by checking the local network software.

When you execute this command, NCP runs the test until it either succeeds *n* times or it fails. (The default value for *n* is 1. You can change this value using the SET COUNT command.) The *DECnet-DOS Network Management Guide* has more information about these commands.

The following example illustrates the LOOP EXECUTOR command and a possible system response:

```
NCP>LOOP EXECUTOR [RET]

LOOP EXECUTOR test started at  1-APR-1988 9:24:54

Sending loop message  1, 46.
Successful send and receive, message  1.

LOOP EXECUTOR test finished successfully at  1-APR-1988 9:24:55
```

5.2.2 NCP LOOP NODE Command

The LOOP NODE test determines whether your local node can communicate with a specified remote node. The following example illustrates the LOOP NODE command and a possible system response.

```
NCP>LOOP NODE ORION WITH MIXED COUNT 10 LENGTH 512 [RET]

LOOP NODE test started at  1-APR-1988 9:24:56

  Connect complete to node  ORION
  Remote node maximum buffer size for loopback:    4096

  Sending loop message  1, 512 bytes.
  Successful send and receive, message  1.
  Sending loop message  2, 512 bytes.
  Successful send and receive, message  2.
  Sending loop message  3, 512 bytes.
  Successful send and receive, message  3.
  Sending loop message  4, 512 bytes.
  Successful send and receive, message  4.
  Sending loop message  5, 512 bytes.
  Successful send and receive, message  5.
  Sending loop message  6, 512 bytes.
  Successful send and receive, message  6.
  Sending loop message  7, 512 bytes.
  Successful send and receive, message  7.
  Sending loop message  8, 512 bytes.
  Successful send and receive, message  8.
  Sending loop message  9, 512 bytes.
  Successful send and receive, message  9.
  Sending loop message  10, 512 bytes.
  Successful send and receive, message  10.

LOOP NODE test finished successfully at  1-APR-1988 9:25:02
```

The LOOP NODE test was successful. The VAXmate system successfully communicated with the remote node ORION in the LOOP NODE test.

To exit from NCP, type:

```
NCP>EXIT [RET]
```

5.3 Diagnosing Problems

If a verification test fails, check the following list, in order, for possible solutions. Then, run the tests again.

1. Are all cables and other hardware components installed correctly?
2. Are the network parameters correct?
   - For asynchronous communications, the area number for your VAXmate system and the adjacent node must be the same.
   - The line state must be ON.
   - For asynchronous communications, the line speed for your VAXmate system and the adjacent node must be the same.
   - If you use node passwords in asynchronous communication, the passwords of your VAXmate system and the adjacent node must be the same.
   - Network parameters must be set correctly on the adjacent node.
   - Your VAXmate system must have a unique node address.
3. Are you sending and receiving any messages to and from the adjacent node?
   - Use NCP to display line and circuit counters and events.
   - For an asynchronous connection, use a breakout box or a line monitor to confirm that your system is sending and receiving messages.
   - For an asynchronous connection, you can put your VAXmate system in terminal emulation mode and watch the screen. The coded DDCMP start messages are regularly timed sequences of apparently meaningless characters.

5.4 What to Do Next

After solving the problem, rerun the verification tests:

- **If you chose automatic verification:**

  1. Rerun the automatic sequence of tests by typing:

     ```
     A>VERIFYDN RET
     ```

  2. Delete the files VERIFYDN.EXE, XVERIFY.BAT, NCP.TXT, and NCP2.TXT from the root directory of your boot device when you believe that your VAXmate is operating correctly as a DECnet node. You do not need these files for normal day-to-day operation.

- **If you selected manual verification:**

  1. Run NCP again.
  2. Re-execute the LOOP EXECUTOR and LOOP NODE commands (see Sections 5.2.1. and 5.2.2).

If you cannot find the cause of the problem and a verification test still fails, see "Testing the Network", in the *DECnet-DOS Network Management Guide* for more information about NCP. If you need more help, contact the person who is responsible for DECnet at the adjacent node. Running network management tests there may help to isolate the problem.

A

Contents of the DECnet-VAXmate Distribution Diskettes

This appendix lists the files on the DECnet-VAXmate distribution diskettes. The description of each file includes the disk space and memory requirements.

Table A–1: DECnet-VAXmate Files

File Name	Disk Size (1) (in Bytes)	Memory Size (1) (in Bytes)
Diskette labeled VDND20 1-3		
ASCII.CHR	2884	-
BRITISH.CHR	2882	-
CALL.SCR	110	-
CALLS.SCR	36	-
CANADIAN.CHR	2872	-
COMLOGIN.SCR	1724	-
CONTROL.SCR	1352	-
CTERM.EXE	32000	31402
DECM.CHR	2884	-
DECM2.CHR	2888	-

Table A–1 (Cont.): DECnet-VAXmate Files

File Name	Disk Size (1) (in Bytes)	Memory Size (1) (in Bytes)
DECNETPC.EXE	140288	132272
DIP.DAT	7433	-
DIP.EXE	90368	89770
DLL.EXE	7338	6826
DLL802.EXE	13050	8874
DNPDCPPC.EXE	44160	48654
DNPETHPC.EXE	38784	43412
DTR.EXE	24576	31652
DTS.EXE	69760	81320
DTS.TXT	14614	-
DUTCH.CHR	2876	-
ERRORS.SCR	606	-
FILE.SCR	664	-
FINNISH.CHR	2874	-
FIXNVD.EXE	23424	27906
FRENCH.CHR	2870	-
GERMAN.CHR	2874	-
ISO.CHR	2860	-
ISO2.CHR	2860	-
ITALIAN.CHR	2872	-
KEYS.SCR	570	-
LAT.EXE	14080	13482
LATLOGIN.SCR	1190	-
LOGIN.SCR	336	-
LOGLAT.SCR	462	-

Table A–1 (Cont.): DECnet-VAXmate Files

File Name	Disk Size (1) (In Bytes)	Memory Size (1) (In Bytes)
MAIL.EXE	69760	86538
MAIL.SCR	2156	-
MODEM.SCR	474	-
NDDRV.SYS	3968	-
NDU.EXE	52224	59980
NETBIOS.EXE	34986	34474
NFT.EXE	166576	153604
NFTNOWIN.EXE	89098	109610
NMCVT.EXE	13050	16010
NORDAN.CHR	2872	-
NOTES.SCR	420	-
NPDRV.SYS	3328	-
SCHPC.EXE	6314	5802
SPANISH.CHR	2872	-
SWEDISH.CHR	2872	-
SWISS.CHR	2870	-
UNTIL.SCR	232	-
VERIFYDN.EXE	13056	15896
VTX.SCR	214	-
Diskette labeled VDND20 2-3		
DECNETPC.PIF	369	-
DTR.PIF	384	-
DTS.PIF	384	-
FAL.EXE	116768	113048
FALNOWIN.EXE	53944	59480

Table A–1 (Cont.): DECnet-VAXmate Files

File Name	Disk Size (1) (in Bytes)	Memory Size (1) (in Bytes)
FIXNVD.PIF	384	-
KBDVM.HLP	5406	-
MAIL.PIF	384	-
NCP.EXE	30450	32430
NCP.PIF	369	-
NCPDEF.EXE	56550	61310
NCPDEF.PIF	384	-
NCPEVENT.EXE	47850	57234
NCPEVENT.PIF	384	-
NCPHELP.BIN	21750	-
NCPLOOP.EXE	52200	57302
NCPLOOP.PIF	384	-
NCPSET.EXE	34800	36444
NCPSET.PIF	369	-
NCPSHOW.EXE	69374	69808
NCPSHOW.PIF	369	-
NCPTELL.EXE	52200	55844
NCPTELL.PIF	384	-
NDU.PIF	384	-
NMCVT.PIF	369	-
NML.EXE	17400	15018
SETHOST.EXE (2)	161152	221836
SETHOST.PIF (2)	384	-
SPAWNER.EXE	21120	24568
SPAWNER.PIF	369	-

Table A–1 (Cont.): DECnet-VAXmate Files

File Name	Disk Size (1) (in Bytes)	Memory Size (1) (in Bytes)
VERIFYDN.PIF	384	-
Diskette labeled VDND20 3-3		
BREAKSRC.EXE	17400	18742
BREAKSRC.PIF	384	-
DDPDCPPC.EXE (3)	60800	69836
DDPETHPC.EXE (3)	55040	64204
DEBUG.DOC (3)	18958	-
DNET.DOC (3)	886	-
DNET.EXE (3)	13056	12392
DNET.PIF (3)	369	-
DNETLIB.SRC	187904	-
DNETTIME.DOC (3)	1134	-
DNETTIME.EXE (3)	17070	20046
DNETTIME.PIF (3)	369	-
NFI.DOC (3)	5586	-
NFI.EXE (3)	32128	35958
NFI.PIF (3)	369	-
README.TXT	1824	-
SAMPLES.SRC	55168	-
TELL.DOC (3)	6590	-
TELL.EXE (3)	22272	26520
TELL.PIF (3)	369	-
TELLS.DOC (3)	7916	-
TELLS.EXE (3)	23552	27304
TELLS.PIF (3)	369	-

Table A–1 (Cont.): DECnet-VAXmate Files

File Name	Disk Size (1) (in Bytes)	Memory Size (1) (in Bytes)
TFA.EXE	29866	29354
TIMESRV.EXE (3)	12544	15134
TIMESRV.PIF (3)	369	-
TNT.EXE	14250	17322
TNT.PIF	384	-
TTT.EXE	20650	20138
VMSTELL.COM (3)	21014	-
VMSTIMES.COM (3)	16	-
VMSTIMES.EXE (3)	20992	34352

Notes:

1. Disk space and memory requirements are approximations.
2. Also a VAXmate MS-NET component; present if VAXmate MS-NET software is already installed.
3. Digital Equipment Corporation supplies this utility on an "as-is" basis. This utility is furnished for general customer use. However, support is not offered for this utility, nor is it covered under any of Digital's support contracts.

   The DIP option to copy the entire kit does not copy these files.
4. The DIP option to copy the entire kit does not copy sample script (.SCR) files.

B

DECnet-VAXmate Utilities

The DECnet-VAXmate Installation Procedure (DIP) automatically installs the DECnet-VAXmate software onto your VAXmate personal computer. DIP leads you through a series of questions and menus to collect the information it needs to tailor the system to your needs. It uses your answers and selections to:

- Select the files you need on the distribution diskettes.
- Copy the files to the appropriate destination path.
- Modify the system start-up files, AUTOEXEC.BAT and CONFIG.SYS, to add commands that install components and configure your node.

This chapter describes the file and installation requirements for each of the DECnet-VAXmate utilities. Use the information in this chapter if you prefer to copy and install the DECnet-VAXmate software without using DIP. Even if you use DIP for the installation, you can refer to this chapter for information about the organization of the software on your system and for instructions on how to copy optional information files, such as sample SETHOST scripts, from the distribution diskettes.

B.1 Installing the DECnet-VAXmate Software Without DIP

Follow this procedure to copy DECnet-VAXmate files and install the software:

1. Use the MKDIR command to create a DECnet directory on the disk that will contain the DECnet-VAXmate files:

   ```
   C>MKDIR \DECNET [RET]
   ```

2. Insert the diskette labeled VDND20 1-3 into the drive and close the door.

   NOTE

   If your system has only one diskette drive, or if you boot your system from drive A:, set your default drive to B:.

3. Select the files you want to copy. (Use Appendix A and the information in the following sections as guides to selecting files.) You can copy some DECnet-VAXmate utility files into any directory you choose, as long as the directory is in your path. However, if the DECnet-VAXmate utility requires .BIN or .DAT files, you must copy them into the DECnet database path. (See Appendix C.)

   Program information files (PIF) are files that let you use an application under MS-Windows. If you want to run some of the DECnet-VAXmate utilities under MS-Windows, copy the .PIF file to the directory that contains the executable file (.EXE).

   For example, to copy the Network Control Program utility, move the .BIN files to the \DECNET directory and the NCP.EXE file to any other directory in your path. Copy the NCP.PIF file to the directory that contains NCP.EXE. Type:

   ```
   C>COPY A:NCPHELP.BIN \DECNET [RET]
   C>COPY A:NCP.EXE [RET]
   C>COPY A:NCP.PIF [RET]
   C>COPY A:NCPDEF.EXE [RET]
   C>COPY A:NCPDEF.PIF [RET]
   C>COPY A:NCPEVENT.EXE [RET]
   C>COPY A:NCPEVENT.PIF [RET]
   C>COPY A:NCPLOOP.EXE [RET]
   C>COPY A:NCPLOOP.PIF [RET]
   C>COPY A:NCPSET.EXE [RET]
   C>COPY A:NCPSET.PIF [RET]
   C>COPY A:NCPSHOW.EXE [RET]
   C>COPY A:NCPSHOW.PIF [RET]
   C>COPY A:NCPTELL.EXE [RET]
   C>COPY A:NCPTELL.PIF [RET]
   ```

4. Perform step 3 for each DECnet-VAXmate utility you want from the diskette.
5. When you have copied all the utilities you want from the diskette, remove it from the drive. Repeat steps 2 through 4 to copy files from the other diskettes in the kit.
6. Update your system start-up files AUTOEXEC.BAT and CONFIG.SYS with the commands to install the utilities you need. The section on each utility tells you how to install it.

B.2 Individual DECnet-VAXmate Components

This section describes the file or files you need to copy to install each of the DECnet-VAXmate utilities. For some utilities, the description also includes instructions to:

- Run the specific DECnet-VAXmate utility.
- Modify DECnet or MS-DOS parameters.

Appendix A lists the disk and memory requirements for each DECnet-VAXmate file and utility.

B.2.1 Installation Tools

Required Files

DIP.EXE

DIP.DAT

DIP.SAV

Installation Requirements

These files are used only during installation. DIP never copies them automatically from the software kit. DIP creates the file DIP.SAV only if the user chooses to save the responses to the installation procedure questions.

B.2.2 Real-Time Scheduler

Required File

SCHPC.EXE

Installation Requirements

The Real-Time Scheduler is required for all other DECnet-VAXmate services and utilities. SCHPC.EXE is a terminate-and-stay-resident task that is loaded into memory the first time it runs. It stays in memory. Copy SCHPC.EXE to any directory in your path. Copy SCHPC.EXE to the file name SCH.EXE. The Scheduler must run before the Data Link layer (DLL), if using Ethernet configuration, and before the DECnet Network Process (DNP).

Install the Scheduler by including the following line in the file AUTOEXEC.BAT:

```
SCH
```

B.2.3 Data Link Layer Process

Required Files

DLL.EXE

Installation Requirements

The Data Link layer (DLL) process is required for all DECnet-VAXmate services and utilities. DLL is a terminate-and-stay-resident task that is loaded into memory the first time it runs. It stays in memory. Install DLL after SCH but before LAT and DNP.

Install DLL in any directory in your path. You can specify the DECnet database path as a command line argument. (See Appendix C for details on specifying the DECnet database path.)

During initialization, DLL reads the permanent database file, DECPARM.DAT, in the DECnet database path.

```
DLL <decnet-database-path>
```

B.2.4 The DECnet-VAXmate Network Process

Required Files

DNPDCPPC.EXE (Asynchronous DDCMP)
DNPETHPC.EXE (Ethernet)

Installation Requirements

The DECnet network process is required by all other DECnet-VAXmate services and utilities. It is loaded into memory and initialized the first time it runs. The DECnet process stays in memory.

During initialization, DNP reads the permanent database file, DECPARM.DAT in the DECnet database path. DNP can be copied to any directory in your path. (See Appendix C for more details on specifying a DECnet database path.)

For asynchronous DDCMP configurations:

1. Copy the file DNPDCPPC.EXE from the kit to file name DNPDCP.EXE.
2. Include the following line in the file AUTOEXEC.BAT:

```
DNPDCP <decnet-database-path>
```

For Ethernet configurations:

1. Copy the file DNPETHPC.EXE from the the kit to file name DNP.EXE.
2. Include the following line in the file AUTOEXEC.BAT:

```
DNP <decnet-database-path>
```

When you reboot your system, **the line comes up in the state last defined by NCP before the reboot.** When the line state is OFF, the asynchronous communication port can be used by any other software, even with the DECnet-VAXmate process loaded.

B.2.5 DECnet Database Files

Required Files

DECPARM.DAT (Permanent Database)
DECNODE.DAT (Node Name Database)
DECALIAS.DAT (Outgoing Access Control Information)
DECACC.DAT (Incoming Access Control Information)
DECREM.DAT (Remote Adapter Name Database)
DECOBJ.DAT (Job Spawner Database)
MAIL.DAT (DECnet Mail Database)
SETHOST.DAT (SETHOST Database)

Installation Requirements

The files DECPARM.DAT, DECNODE.DAT, and DECALIAS.DAT are created automatically during installation. DECOBJ.DAT may be created by DIP, if necessary, during installation. DNP or DLL reads the permanent database file DECPARM.DAT. The files DECNODE.DAT and DECALIAS.DAT are never read or written by DNP. DECPARM.DAT, DECNODE.DAT, DECALIAS.DAT, and DECACC.DAT are created and modified only by NCP and read by utility programs. MAIL.DAT is created the first time MAIL is run. No memory space is required for these data files. Refer to the *DECnet-DOS User's Guide* for more information on how these files are created.

NOTE

The database files (.DAT and .BIN files) must be in the DECnet database path. See Appendix C for details on specifying the DECnet database path. Use the NCP command SHOW EXECUTOR CHARACTERISTICS to display your DECnet database path.

B.2.6 Network File Transfer Utility

Required Files

NFT.EXE
NFTNOWIN.EXE

Installation Requirements

The Network File Transfer utility runs as a class A application under MS-Windows. Use the file NFT.EXE if you want to run NFT as an MS-Windows application; otherwise, use the file NFTNOWIN.EXE. You can copy NFT.EXE or NFTNOWIN.EXE to any directory in your path. NFT uses memory only when it is running.

B.2.7 Network Virtual Terminal Utility (SETHOST)

Required Files

SETHOST.EXE

SETHOST.PIF

ASCII.CHR	GERMAN.CHR
BRITISH.CHR	ISO.CHR
CANADIAN.CHR	ISO2.CHR
DECM.CHR	ITALIAN.CHR
DECM2.CHR	NORDAN.CHR
DUTCH.CHR	SPANISH.CHR
FINNISH.CHR	SWEDISH.CHR
FRENCH.CHR	SWISS.CHR

KBDVM.HLP

Installation Requirements

You can copy SETHOST.EXE to any directory. Copy SETHOST.PIF to the same directory. SETHOST uses memory only when it is running.

The files with file type CHR are character set files. You need copy only those that you will use.

KBDVM.HLP is a HELP file that describes the keyboard mapping for your VAXmate keyboard.

There are several sample SETHOST script files on the distribution diskette, all with the file type SCR. You can read these files or use them as templates to create your own SETHOST scripts. They need not be copied from the diskette.

When you define parameters using the Set-Up display, the parameters are saved in the file SETHOST.DAT. SETHOST then uses the DECnet database path to find the DECnet directory.

B.2.8 Local Area Transport

Required File

LAT.EXE

Installation Requirements

You can copy LAT.EXE to any directory in your path. LAT must be run after SCH and DLL. This process is used by SETHOST if you are using an Ethernet configuration. LAT is a terminate-and-stay-resident task that is loaded into memory the first time it is run. It remains resident in memory.

Install LAT by including the following command line in the file AUTOEXEC.BAT:

```
LAT
```

There are four command line switches:

1. /D:*nn*—This switch is used to increase the default size of the LAT Service Directory, where *nn* is an unsigned integer. Each additional entry will cause an extra 47 bytes of memory to be allocated (rounded to the nearest 16 byte paragraph). The default size of the directory is 10 entries = 470 bytes.
2. /G:*byte1,byte2,byte3,...byte32*—Each byte represents a byte in the group code field. Omit a byte by using a comma. Groups are numbered from 0 to 255 starting at the rightmost bit of byte number one. All group codes are enabled by default.
3. /R:*n*—This switch is used to set the number of retransmits permitted for a circuit. Eight retransmits are allowed by default before the circuit is stopped.

4. /N—This switch stops LAT from listening for announcements of services. If this switch is used, all LAT services must be declared using the NCP SET NODE ADDR LAT command. Load balancing will not work.

B.2.9 Command Terminal (CTERM)

Required File

CTERM.EXE

Installation Requirements

You can copy CTERM.EXE to any directory in your path. CTERM must be run after SCH and DLL. CTERM is a terminate-and-stay-resident task that is loaded into memory the first time it is run. It remains resident in memory.

Install CTERM by including the following command line in the file AUTOEXEC.BAT:

```
CTERM
```

B.2.10 Network Control Program

Required Files

NCP.EXE	NCP.PIF
NCPDEF.EXE	NCPDEF.PIF
NCPEVENT.EXE	NCPEVENT.PIF
NCPLOOP.EXE	NCPLOOP.PIF
NCPSET.EXE	NCPSET.PIF
NCPSHOW.EXE	NCPSHOW.PIF
NCPTELL.EXE	NCPTELL.PIF
NCPHELP.BIN	
NML.EXE	

Installation Requirements

You can copy these files to any directory in your path. However, the NCPHELP.BIN file must be in the DECnet database path. (See Appendix C for more details on specifying a DECnet database path.) Copy the .PIF files and the .EXE files to the same directory.

NCP opens many files when it runs. For NCP to run, you must increase the number of FILES in CONFIG.SYS. Edit the command line FILES=*n* in CONFIG.SYS with EDLIN or any editor. The value must be at least 20. NCP uses memory only when it is running.

B.2.11 Network Management Conversion Utility

Required File

NMCVT.EXE

You can copy the file NMCVT.EXE to any directory in your path. Use NMCVT to convert your DECnet database files if you have an earlier version of DECnet-VAXmate installed on your system.

B.2.12 Transparent File Access

Required File

TFA.EXE

Installation Requirements

You can copy TFA.EXE to any directory in your path.

TFA is a terminate-and-stay-resident task that is loaded into memory the first time it is run. It remains resident in memory. TFA can be removed from memory by TNT.

Install TFA by including the following line in your AUTOEXEC.BAT file:

```
TFA
```

B.2.13 Transparent Task-to-Task

Required File

TTT.EXE

Installation Requirements

You can copy TTT to any directory as long as that directory is in your path.

TTT is a terminate-and-stay-resident task that is loaded into memory the first time it is run. It remains resident in memory. TTT can be removed from memory by TNT.

Install TTT by including the following line in your AUTOEXEC.BAT file:

```
TTT
```

B.2.14 Transparent Network Task Control

Required Files

TNT.EXE
TNT.PIF

Installation Requirements

This utility is required if you plan to use TFA and/or TTT. TNT reports error messages from the use of TFA and/or TTT and allows you to remove TFA and/or TTT from memory.

You can copy TNT.EXE to any directory in your path. Copy TNT.PIF to the same directory. TNT uses memory only when it is running. Do not install TNT if you do not use TFA and TTT.

B.2.15 Network Device Utility

Required Files

NDU.EXE
NDU.PIF

Installation Requirements

This utility is required if you plan to use the network virtual disk and/or the network virtual printer. You can copy the NDU.EXE file to any directory in your path. Copy NDU.PIF to the same directory.

B.2.16 Network Virtual Disk Driver

Required File

NDDRV.SYS
FIXNVD.EXE

Installation Requirements

The driver is required for the Network Virtual Disk utility. It is loaded into memory and initialized at boot time as a result of the DEVICE=NDDRV.SYS statement in the CONFIG.SYS file. The driver must be on a disk (preferably the boot disk) that is accessible to the operating system at system start-up time so that the driver can be loaded. Once installed, the driver remains resident in memory. If you plan to use the Network Virtual Disk utility, you must install the driver by including the following command line in the system start-up file CONFIG.SYS:

```
DEVICE = <path>\NDDRV.SYS
```

Although NDU controls your use of virtual disks, the Network Virtual Disk driver actually performs the input and output for you. You must install this program before you can run NDU. Refer to the *DECnet-DOS User's Guide* on how to run the Network Device utility and use the NDU commands.

If you want to access files frequently from an existing virtual disk, you can update your current AUTOEXEC.BAT file and include the NDU OPEN command. This should automatically establish the necessary link to the remote DECnet node where the virtual disk is stored. To do this, include the NDU OPEN command in your current AUTOEXEC.BAT file. Refer to the *DECnet-DOS User's Guide* for an explanation of the NDU OPEN command.

B.2.17 Network Virtual Printer Driver

Required File

NPDRV.SYS

Installation Requirements

The driver is required for the Network Virtual Printer utility. It is loaded into memory and initialized at boot time as a result of the DEVICE=NPDRV.SYS statement in the CONFIG.SYS file. The driver must be on a disk (preferably the boot disk) that is accessible to the operating system at system start-up time so that the driver can be loaded. Once installed, the driver remains resident in memory. If you plan to use the Network Virtual Printer utility,

you must install the driver by including the following command line in the system start-up file CONFIG.SYS:

```
DEVICE = <path>\NPDRV.SYS
```

Although NDU controls your use of virtual printers, the Network Virtual Printer Driver actually performs the input and output for you. You must install this program before you can run NDU. Refer to the *DECnet-DOS User's Guide* on how to run the Network Device utility and use the NDU commands.

If you want to access the virtual printer frequently, you can update your current AUTOEXEC.BAT file and include the NDU OPEN command. This should automatically establish the necessary link to the remote DECnet node where the virtual printer file is located. To do this, include the NDU OPEN command in your current AUTOEXEC.BAT file. Refer to the *DECnet-DOS User's Guide* for an explanation of the NDU OPEN command.

B.2.18 DECnet Test Receive and Send Utilities

Required Files

DTR.EXE (Data Test Receiver utility)
DTR.PIF
DTS.EXE (Data Test Sender utility)
DTS.PIF
DTS.TXT

Installation Requirements

DTR and DTS are network test utilities. You do not need to install these utilities for normal operations. DTR.EXE and DTS.EXE can be copied to any directory in your path. Copy the .PIF files to the same directory.

DTS.TXT provides documentation (not found in the *DECnet-DOS User's Guide*) on the use of DTS and DTR. On-line help is also available for DTS and DTR. DTR and DTS use memory only when they are running.

B.2.19 DECnet-VAXmate Mail Utility

Required Files

MAIL.EXE
MAIL.PIF
MAIL.DAT

Installation Requirements

MAIL.EXE can be copied to any directory in your path. Copy MAIL.PIF to the same directory. MAIL.EXE uses memory only when it is running. The file MAIL.DAT is created the first time you use MAIL, or you can create it yourself with any editor. Refer to the *DECnet-DOS Users Guide* for more information. MAIL.DAT must be in the DECnet database path.

B.2.20 File Access Listener

Required File

FAL.EXE
FALNOWIN.EXE

Installation Requirements

The File Access Listener runs as a Class A application under MS-Windows. It listens for file access requests from remote systems.

You can copy FAL.EXE and FALNOWIN.EXE to any directory in your path. FAL uses memory only when it is running.

B.2.21 Job Spawner

Required File

SPAWNER.EXE
SPAWNER.PIF
DECOBJ.DAT

Installation Requirements

This utility listens for connection requests from other nodes in the network and then starts the appropriate program (for example, FAL or DTR) to service that request. SPAWNER.EXE can be installed in any directory in your path. Copy SPAWNER.PIF to the same directory.

DECOBJ.DAT provides the spawner with object numbers and the names of programs to run. It is created by NCP.

B.2.22 Programming Interface Library Sources

Required File

DNETLIB.SRC
SAMPLES.SRC

Installation Requirements

These files contain the source and header files for the programming interface library. After building the proper object or library file for your compiler, these files can be deleted. Refer to the *DECnet-DOS Programmer's Reference Manual* for information in creating your own programming interface library.

If you are not involved in writing any programs that access the network directly, you do not need these files.

B.2.23 Break Source Utility

Required File

BREAKSRC.EXE
BREAKSRC.PIF

Installation Requirements

Use file BREAKSRC.EXE to break the DNETLIB.SRC file into separate source files for compiling and assembling your programs. You can copy BREAKSRC.EXE to any directory in your path. Copy BREAKSRC.PIF to the same directory.

B.2.24 Configuration and Verification Utility

Required File

VERIFYDN.EXE

Installation Requirements

The file VERIFYDN.EXE is run at boot time after installation to configure your DECnet node and, if selected, to run the automatic verification tests. If you install DECnet-VAXmate utilities manually, you must use NCP to configure your node and to verify your installation. See the *DECnet-DOS Network Management Guide* for more information on how to use NCP.

DIP copies this file to the root directory of the boot drive. VERIFYDN.EXE uses the files that were created by DIP: NCP.TXT and NCP2.TXT. You can delete this file from the root directory of the boot device once DECnet-VAXmate has been successfully started.

C

Specifying a DECnet Database Path

You need several database files to run DECnet-VAXmate software components. Your system start-up file AUTOEXEC.BAT contains a path specification that enables DECnet-VAXmate software to access these database files. This appendix provides instructions you need to specify a DECnet database path if you want to change the existing path specification or if you are manually installing portions of the DECnet-VAXmate software components.

DECnet database device and path names are specified as input arguments to the Data Link layer (DLL) and/or the DECnet Network Process (DNP) command lines in AUTOEXEC.BAT. Upon system reboot, DNP and DLL use their command line arguments as the path specification for accessing the database files. To change the DECnet database path, you must enter a new path specification to the DLL and/or the DNP command lines. (Use EDLIN or a similar text editor to edit the command lines in the file AUTOEXEC.BAT.) You must reboot your system to put the new database path name into effect.

C.1 Ethernet Configurations

If you have an Ethernet configuration, the Data Link layer (DLL) and the DECnet Network Process (DNP) will be installed and require the database path specification. Enter the path specification on the DLL and DNP command line in AUTOEXEC.BAT. For example:

```
PATH C:\DECNET;

REM *** DECnet-VAXmate Ethernet Configuration ***
SCH
DLL C:\DECNET
LAT
DNP C:\DECNET
TTT
TFA
```

A default path will be used if no path specification is entered on either command line.

NOTE

The default path is built using the default drive (when DLL and DNP are run) and the directory \DECNET. For example, if C: is the default drive and the user enters DNP with no command line argument, the database path will be C:\DECNET.

C.2 Asynchronous DDCMP Configurations

If you have an asynchronous DDCMP configuration, the DNP will be installed and will require a database path specification. The DECnet database path specification should be entered on the DNP command line in AUTOEXEC.BAT. For example:

```
PATH C:\DECNET;

REM *** DECnet-VAXmate Asynchronous DDCMP Configuration ***
SCH
DNPDCP C:\DECNET
```

A default path will be used if no path specification is entered on either command line.

NOTE

The default path is built using the default drive (when DLL and DNPDCP are run) and the directory \DECNET. For example, if C: is the default drive and the user enters DNPDCP with no command line argument, the database path will be C:\DECNET.

The DECnet database path does not have to match the path into which the DECnet software is copied. However, the path into which the DECnet software is copied should be added to the path environment variable string. For example:

```
PATH C:\DECNET;C:\;C:\utility
```

D

Sample Installation Using DIP

This appendix provides a sample installation of the DECnet-VAXmate software onto a Digital VAXmate workstation using the DECnet-VAXmate Installation Procedure (DIP).

The answers here are for demonstration purposes only and will probably differ from the answers that you will supply during your actual installation. This example, for an Ethernet Configuration, presents the screens and menus that you will see when you use DIP to copy the entire DECnet-VAXmate software kit to your VAXmate workstation, configured for Ethernet communications. This example assumes that you do not have a saved installation configuration answer file and that you will be running in a Windows environment.

Many screens are self explanatory. Where necessary, explanatory text is inserted to help clarify the process.

Insert the diskette labeled VDND20 1-3 into drive A: and type:

```
A:\>DIP [RET]
```

```
                DECnet-VAXmate Installation Procedure (DIP) - 2.0
*******************************************************************************
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*****************************************************************

Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Press a key to continue. The first series of screens provides an overview of the installation procedure.

```
                                OVERVIEW

*****************************************************************

During the DECnet-VAXmate installation you will be asked to reply
to a set of questions and prompted to make selections from
a series of menus.  You may select any one of the items listed
in each menu.  On-line HELP is included as an item in each menu.

When your menu selection results in an installation configuration
change, a confirmation of your selection is displayed.

You can back out of any menu by pressing <RETURN> after
the "Enter selection? " prompt.

*****************************************************************

Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Press a key to continue.

```
                        OVERVIEW (continued)

*****************************************************************

The default answer is displayed with each question.
For example:

"Do you want to change it ? [Y/N  Default: N]"

You may exit the installation procedure at any time by
entering a <CTRL/C>. Before exiting, you will be given the
chance to permanently save your answers to the file DIP.SAV
located on the first distribution floppy.

Leave the write protect tab off of the floppy.

*****************************************************************
Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Press a key to continue.

```
                        OVERVIEW (continued)

*****************************************************************

The following documents provide guidelines and instructions
to help you install, configure, and troubleshoot your
DECnet-VAXmate software:

        o README.TXT file located on the floppy labeled
          VDND20 3-3 (3 of 3), contains information
          not incorporated in the DECnet-VAXmate
          documentation set.

        o DECnet-VAXmate Release Notes

        o DECnet-VAXmate Installation Guide

Be sure to read these documents before proceeding with
the installation of DECnet-VAXmate.

*****************************************************************
Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Press a key to continue. The next set of screens pertains to setting up your VAXmate workstation as a DECnet-VAXmate node.

```
                    SET UP LOCAL NODE INFORMATION

****************************************************************

To run your DEC VAXmate as a DECnet-VAXmate node,
you must give it a node name and a unique node address.
Obtain this information before continuing with this
installation procedure.

****************************************************************
Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Press a key to continue. DIP prompts you for your node name and address, and then displays a summary of your responses. Use the information you recorded in your preinstallation checklist to answer these questions.

```
Node name (Example: ANODE) ?COSMOS [RET]
Node address (Example: 10.55) ?55.63 [RET]


Local node information . . .

Node name:      COSMOS
Node address:   55.63

Change it [Y/N  Default: N] ?[RET]
```

Here DIP prompts you to enter your local node user name:

```
                    SET UP LOCAL NODE USER NAME

****************************************************************

You must set up a local node user name to be used by
DECnet-VAXmate as the access control information required for proxy
logins.  Upper and lower case characters make a
difference, therefore take care when entering this name.
(See the DECnet-DOS Programmer's Reference Manual
 for more information.)

****************************************************************
Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Press a key to continue.

```
Enter a user name of from 1 to 16 alphanumeric characters.

 User name ?NaCpubs [RET]

Local node user name . . .
 name is: "NaCpubs"

Change it [Y/N  Default: N] ?[RET]
```

You can communicate with other DECnet nodes by physically connecting your node directly to the baseband Ethernet or to an adjacent routing node. DIP prompts you to enter your communications type.

```
                    SET UP COMMUNICATIONS TYPE

****************************************************************

You may run DECnet-VAXmate using Ethernet or Asynchronous DDCMP
communications.  The following menus allow you to select
the appropriate communication type.

****************************************************************
Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Press a key to continue.

```
                        COMMUNICATIONS TYPE

                    Select from the following:

                1.  Help
                2.  Ethernet
                3.  Asynchronous DDCMP

Enter selection?2 [RET]
```

DIP displays a summary of your communications type and offers you the option of making further changes.

```
                SUMMARY OF COMMUNICATIONS PARAMETERS

     Communications Type: Ethernet
Communications Controller: Lance Chip Set

Change it [Y/N  Default: N] ? [RET]
```

Your system start-up files, CONFIG.SYS and AUTOEXEC.BAT, contain information needed to configure and run DECnet-VAXmate correctly. Here DIP supplies a summary of the default choices for device and path specifications.

```
                SUMMARY OF PATH SPECIFICATIONS

 Boot drive is C: (location of CONFIG.SYS and AUTOEXEC.BAT).
 DECnet-VAXmate kit files will be copied FROM drive A:
 DECnet-VAXmate kit files will be copied TO C:\DECnet\
 DECnet-VAXmate default database files will be located in C:\DECNET\

Change it [Y/N  Default: N] ? [RET]
```

You use the Network Control Program (NCP) to verify your software installation. You may choose to have verification tests run automatically at the end of this installation, or you may run them manually.

```
                AUTOMATIC INSTALLATION VERIFICATION

****************************************************************

You can verify the DECnet-VAXmate installation
by running tests using the Network Control Program (NCP).
You may choose to have these tests run automatically
or you may run tests manually. If you choose to run
the tests manually, please refer to the chapter on NCP
in the DECnet-DOS Network Management Guide.

****************************************************************

Automatic verification of installation currently set OFF

Change it [Y/N  Default: N] ?Y [RET]

****************************************************************

You must define at least one remote node for use by
the installation verification test(s).  You should
define only "reachable" remote nodes to be used for
the testing.

Press <RETURN> in response to the prompt to stop
entering node information.

****************************************************************
Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Press a key to continue.

```
Press <RETURN> when finished entering nodes...
Node name (Example: ANODE) ?BETA [RET]
Node address (Example: 10.55) ?3.44 [RET]

Remote node information . . .

Node name:      BETA
Node address:   3.44

Change it [Y/N  Default: N] ? [RET]


Press <RETURN> when finished entering nodes...
Node name (Example: ANODE) ? [RET]


Automatic verification of installation currently set ON

Change it [Y/N  Default: N] ? [RET]
```

```
                    SET UP REBOOT LINE STATE

****************************************************************

Setting "Reboot Line State" to ON enables the automatic
startup of DECnet-VAXmate upon DEC VAXmate system reboot.

****************************************************************

Reboot line state currently set ON

Change it [Y/N  Default: N] ?RET


                    SET UP WINDOWS COMPONENTS

****************************************************************

Included with your DECnet-VAXmate kit are components
which will run as Class A Window applications.

Also included with your DECnet-VAXmate kit are .PIF files
(Program Information Files) which will allow the other
DECnet-VAXmate utilities to run as Class B Window applications.

The Window applications and the .PIF files will
be copied to your DEC VAXmate if you will be running
in a Windows environment.

****************************************************************

Will you be running Windows  [Y/N  Default: N] ?Y RET

Window applications and .PIF files WILL be copied
from the DECnet-VAXmate kit to your DEC VAXmate.

Ok [Y/N  Default: Y] ?RET


                    SELECTING SOFTWARE COMPONENTS

****************************************************************

Use the following menus to copy any or all of the
DECnet-VAXmate kit components (files). You may back out
of a menu by pressing <RETURN>.

****************************************************************
Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Press a key to continue. You can copy the entire DECnet-VAXmate software kit or you can select individual components. A minimum configuration is necessary to run DECnet-VAXmate on your system. The files and utilities that make up this minimum configuration will always be copied.

Before you copy files, however, you can review your current software and hardware configuration with the SUMMARIES menu selection. The following series of screens illustrate how to use the summary menus.

```
                              COPY KIT FILES

                          Select from the following:

                      1.  Help
                      2.  Summaries
                      3.  Copy Entire Kit
                      4.  Select Individual Components

Enter selection?2 RET
```

```
                                SUMMARIES

                          Select from the following:

                      1.  Help
                      2.  Begin Copying Kit Files
                      3.  General Information Summary
                      4.  Node Information Summary
                      5.  Communications Information Summary
                      6.  Software Summary

Enter selection?3 RET
```

The following screen displays a summary of your software and hardware configuration and the choices you made for copy path, database path, reboot line state, and automatic installation verification.

```
                        SUMMARY OF GENERAL INFORMATION

      Personal Computer Type:   DEC VAXmate
                 DOS Version:   3.10
                  Boot drive:   C:
  Kit File(s) to be Copied to:  C:\DECnet\
        DECnet Database Path:   C:\DECNET\
           Reboot Line State:   ON
    Installation Verification:  ON

  Minimum DECnet Memory Usage:  56326 (estimated)
    Available Bytes of Memory:  508720 (before installing DECnet)
    Available Bytes of Memory:  452394 (after installing DECnet)

           DECnet Disk Usage:   445666
   Available Bytes on Drive C:  8587264 (before copying files)
   Available Bytes on Drive C:  8141598 (after copying files)

Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Press a key to continue.

```
                                SUMMARIES

                            Select from the following:

                        1.  Help
                        2.  Begin Copying Kit Files
                        3.  General Information Summary
                        4.  Node Information Summary
                        5.  Communications Information Summary
                        6.  Software Summary

Enter selection?4 RET
```

The following screen displays the names and addresses you entered for each node during the installation procedure. It also displays the local node user name.

```
                          SUMMARY OF DEFINED NODE(S)

  COSMOS 55.63     - Local Node (User Name: NaCpubs)

Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Press a key to continue.

```
                                SUMMARIES

                            Select from the following:

                        1.  Help
                        2.  Begin Copying Kit Files
                        3.  General Information Summary
                        4.  Node Information Summary
                        5.  Communications Information Summary
                        6.  Software Summary

Enter selection?5 RET
```

The following screen summarizes your communications type (asynchronous or Ethernet).

```
                    SUMMARY OF COMMUNICATIONS PARAMETERS

      Communications Type: Ethernet
Communications Controller: Lance Chip Set

Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Press a key to continue.

```
                              SUMMARIES

                     Select from the following:

                 1.  Help
                 2.  Begin Copying Kit Files
                 3.  General Information Summary
                 4.  Node Information Summary
                 5.  Communications Information Summary
                 6.  Software Summary

Enter selection? 6 [RET]
```

The following screen summarizes the individual DECnet-VAXmate files and utilities to be copied based upon your current configuration. The information displayed here includes the file name for, the location of, and disk and memory requirements for each component.

If you have not yet selected any DECnet-VAXmate components, the files that make up the minimum configuration will be displayed at this time and subsequently copied.

```
                 SUMMARY OF SELECTED SOFTWARE COMPONENTS

                 Found on           Disk       Memory
    File Name   Kit Labeled         Usage       Usage

 VERIFYDN.EXE    VDND20 1-3         13056       15896
      NCP.EXE    VDND20 2-3         30450       32430
  NCPHELP.BIN    VDND20 2-3         21750           0
 NCPEVENT.EXE    VDND20 2-3         47850       57234
   NCPSET.EXE    VDND20 2-3         34800       36444
   NCPDEF.EXE    VDND20 2-3         56550       61310
  NCPLOOP.EXE    VDND20 2-3         52200       57302
  NCPSHOW.EXE    VDND20 2-3         69374       69008
  NCPTELL.EXE    VDND20 2-3         52200       55844
    SCHPC.EXE    VDND20 1-3          6314        5802 [memory resident]
      DLL.EXE    VDND20 1-3          7338        6826 [memory resident]
 DNPETHPC.EXE    VDND20 1-3         38784       43412 [memory resident]

Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Press a key to continue. You can back out of the SUMMARIES menu by pressing [RET] in response to the "Enter Selection ?" prompt.

```
                                SUMMARIES

                          Select from the following:

                    1.  Help
                    2.  Begin Copying Kit Files
                    3.  General Information Summary
                    4.  Node Information Summary
                    5.  Communications Information Summary
                    6.  Software Summary

Enter selection? RET
```

Proceed with the installation procedure when you are satisfied with your configuration selections.

```
                              COPY KIT FILES

                          Select from the following:

                    1.  Help
                    2.  Summaries
                    3.  Copy Entire Kit
                    4.  Select Individual Components

Enter selection?3 RET

****************************************************************

Some DECnet-VAXmate files may already exist in C:\DECnet\
For each file that already exists, you will be asked
to choose to overwrite the existing file.

You may disable this default prompt option to
overwrite existing files.  If you choose to disable
this option, existing files will be overwritten by default.

****************************************************************

Disable prompt and overwrite existing files [Y/N  Default: N] ?Y RET

[<CTRL/C> disabled while a file is being copied]

Insert diskette labeled VDND20 1-3 into drive A: (1 of 3)

Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Press a key to continue.

```
Copying file A:DECNETPC.EXE to C:\DECnet\DECNET.EXE . . .
        -> DECnet Menus

Copying file A:NFT.EXE to C:\DECnet\NFT.EXE . . .
        -> Network File Transfer (NFT)

Copying file A:NDDRV.SYS to C:\DECnet\NDDRV.SYS . . .
        -> Network Virtual Disk (NVD)

Copying file A:NPDRV.SYS to C:\DECnet\NPDRV.SYS . . .
        -> Network Virtual Printer (NVP)

Copying file A:DTS.EXE to C:\DECnet\DTS.EXE . . .
        -> Data Test Sender (DTS)

Copying file A:DTR.EXE to C:\DECnet\DTR.EXE . . .
        -> Data Test Receiver (DTR)

Copying file A:MAIL.EXE to C:\DECnet\MAIL.EXE . . .
        -> Mail Sender

Copying file A:CTERM.EXE to C:\DECnet\CTERM.EXE . . .
        -> Network Command Terminal

.
.
.

Copying file A:SWISS.CHR to C:\DECNET\SWISS.CHR . . .
        -> SWISS Character Translation Table

Insert diskette labeled VDND20 2-3 into drive A: (2 of 3)

Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Insert the second diskette. Press a key to continue.

```
Copying file A:FAL.EXE to C:\DECnet\FAL.EXE . . .
        -> File Access Listener (FAL)

Copying file A:SETHOST.EXE to C:\DECnet\SETHOST.EXE . . .
        -> SETHOST
.
.
.

Insert diskette labeled VDND20 3-3 into drive A: (3 of 3)

Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Insert the third diskette. Press a key to continue.

```
Copying file A:TFA.EXE to C:\DECnet\TFA.EXE . . .
        -> Transparent File Access (TFA)

Copying file A:TTT.EXE to C:\DECnet\TTT.EXE . . .
        -> Transparent Task-to-Task (TTT)

Copying file A:TNT.EXE to C:\DECnet\TNT.EXE . . .
        -> Transparent Task Error Utility (TNT)

*****************************************************************

You have selected to copy the C Programming Library.
The library will be broken out into separate source
files.  Enter a destination path for these
source files if different from the default.

You can interrupt the break up procedure by entering
a <CTRL/C>. You will have the option to start again
or to continue with the installation procedure.

*****************************************************************

Do you want to copy the C Programming Library [Y/N  Default: N] ? RET

Copying file A:TNT.PIF to C:\DECnet\TNT.PIF . . .
        -> TNT PIF File


Copy of DECnet-VAXmate files completed.

Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Press a key to continue. DIP now automatically updates (or creates, if necessary) your system start-up files:

```
*****************************************************************

Startup files, CONFIG.SYS and AUTOEXEC.BAT, will be updated
(or created if necessary) in root directory of drive C:.

Note: If these files already exist, backup copies
will be made prior to making modified versions.

*****************************************************************

Is boot disk ready in drive C: [Y/N Default: Y] ? Y RET

[Copy of file C:\CONFIG.SYS saved in file C:\CONFIG.BAK]

C:\CONFIG.SYS updated for DECnet-VAXmate...

[Copy of file C:\AUTOEXEC.BAT saved in file C:\AUTOEXEC.BAK]

C:\AUTOEXEC.BAT updated for DECnet-VAXmate...

Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Press a key to continue. You can save your installation configuration answers. If you need to rerun DIP, you will be able to re-use these answers or enter new selections.

```
Do you want to save installation configuration answers [Y/N Default: N] ?Y [RET]

Insert the diskette labeled VDND20 1-3 (1 of 3) into drive A:

Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Insert the first diskette. Press a key to continue.

```
Saving installation configuration answers to the file A:\DIP.SAV...

To rerun DIP:
   1. Insert the diskette labeled VDND20 1-3 (1 of 3) into drive A:
   2. Set your current (default) drive to A:
   3. To run DIP, enter the command "DIP"
      . DIP will automatically look for the saved
        answer file, A:\DIP.SAV

Press any key to continue, <ESC> to get to DOS or <CTRL/C> to exit...
```

Press a key to continue.

```
                              DECnet-VAXmate
                        Finished Copying and Editing Files

                     *** Now REBOOT Your System from drive C: ***

A:\>
```

E

Installation Checklist

This appendix provides a checklist to record your preinstallation and network configuration requirements. This checklist is reproduced here for easy removal. Refer to Chapter 3 in this manual for instructions in using this checklist.

Hardware and Software Requirements

Check off each item:

VAXmate personal computer _____
Operating System - VAXmate MS-DOS _____

For a list of supported versions, see the *DECnet-VAXmate Software Product Description*.

DECnet-VAXmate Software Kit - three RX33 diskettes labeled:

VDND20 1-3 _____
VDND20 2-3 _____
VDND20 3-3 _____

Network Parameters

Enter the appropriate DECnet node parameters:

Local Node

Node Name _____
Node Address _____

Local Node User Name _____

Remote Node(s)

Node Name _____
Node Address _____

Node Name _____
Node Address _____

Node Name _____
Node Address _____

Communications Type

Choose one of the following schemes:

Asynchronous DDCMP - (line speed) _____
Ethernet _____

Device and Path Specifications

Enter the appropriate specifications:

Boot Drive (system start-up files) _____
Destination Path (kit files) _____
Destination Path (DECnet database files) _____
Destination Path (programming library sources) _____

Reboot Line State

Choose one of the following:

ON _____
OFF _____

DECnet-VAXmate Utilities

Select the components you want to install:

Real-Time Scheduler _____
DLL - Data Link Layer Process _____

NCP - Network Control Program _____
Network Management Conversion Utility _____
Network Device Utility _____
DECNET - DECnet-DOS Menus _____
TTT - Transparent Task-to-Task _____
TFA - Transparent File Access _____
SETHOST - Network Virtual Terminal _____
NETBIOS (Emulation Interface) _____
LAT - Local Area Transport _____
NFT - Network File Transfer _____
FAL - File Access Listener _____
DTS - Data Test Sender _____
DTR - Data Test Receiver _____
NML - Network Management Listener _____
NVD - Network Virtual Disk _____
NVP - Network Virtual Printer _____
Dnetlib - Programming Library _____
MAIL - Mail Sender Utility _____
SPAWNER - Job Spawner Utility _____

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compatible terminal and a 1200 baud modem.
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DIGITAL EQUIPMENT CORPORATION
P.O. Box CS2008
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Installation Guide
AA–GV33B–TH

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