

# PATHWORKS for DOS

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## Client Commands Reference



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## Client Commands Reference

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# Preface

## Purpose

This manual explains the PATHWORKS for DOS commands you, as a user at a PATHWORKS client workstation, enter to:

- Connect to file, printer, and disk services on the network
- Set protection on files and directories
- Start network component software
- Manage network connections
- Start and stop the network
- Manage memory
- Use DOS enhancements
- Send and receive Broadcast messages
- Load international keyboard files
- Customize Netsetup and modify the Configuration Processor (WIK) files used by Netsetup

## Audience

This manual is for a user who understands:

- Networking concepts such as sessions, connections, servers, and services.
- DOS software: You must be able to run external DOS commands.
- Virtual disks, remote servers, remote services, file and printer services, and disk services.

## Organization

The following table can help you find information in this manual.

Chapter 1	Describes the network commands in alphabetical order.
Chapter 2	Describes commands for loading individual network components.
Chapter 3	Describes DOS enhancements.
Appendix A	Contains illustrations of international keyboards.
Appendix B	Explains how to customize Netsetup by modifying WIK (Write Key Disk) files.
Appendix C	Lists error messages and solutions.
Glossary	Defines technical terms used in this manual.

## Related Documents

Table 1 lists related books that offer further information on subjects discussed in this manual.

**Table 1 Related Documents**

<b>Manual</b>	<b>Topic</b>
<i>User's Handbook</i>	An introduction to PATHWORKS for DOS concepts and practices
<i>User's Handbook and SEDT User's Reference</i>	Instructions on editing files with SEDT
<i>Memory Solutions for Client Administrators</i>	Loading and unloading memory
<i>Client Installation and Configuration Guide for the VMS Server</i>	Using Netsetup
<i>DECnet Network Management Guide</i>	Commands for managing DECnet

## Conventions

This manual uses the following conventions:

Convention	Meaning
<code>Ctrl/x</code>	While you hold down the Ctrl key, press another key or a pointing device button.
<code>Ctrl/Alt/Del</code>	While you hold down the Ctrl and Alt keys, press the Del key.
<code>Esc x</code>	Press the Esc key, release it, and then press another key or a pointing device button.
“enter”	Type all required text, spaces, and punctuation marks; then press Return, Enter, or ↵, depending on your keyboard.
UPPERCASE	In VMS, DOS, and OS/2 syntax, uppercase letters indicate commands and qualifiers. You can enter commands and qualifiers in any combination of uppercase or lowercase, unless otherwise noted.
lowercase	Lowercase letters in command syntax indicate parameters. You must substitute a word or value, unless the parameter is optional.
teal blue type	In examples of dialog between you and the system, teal blue type indicates information that you enter. In online (Bookreader) files, this information appears in boldface.
<b>boldface</b>	Boldface type indicates a new term that appears in the glossary. In online (Bookreader) files, boldface indicates information you enter.
<code>kprz</code>	Press the specified key on the numeric keypad of your keyboard.
two-line commands	In DOS and OS/2 commands, no hyphen is used at the end of the first line; DOS automatically wraps text. Enter the complete command, then press Return at the end of the command.
[ ]	Square brackets in command descriptions enclose the optional command qualifiers. Do not type the brackets when entering information enclosed in the brackets.
/	A forward slash in command descriptions indicates that a command qualifier follows.
	A vertical bar in command descriptions indicates that you have a choice between two or more entries. Select one entry unless the entries are optional.

<b>Convention</b>	<b>Meaning</b>
=   :	In command qualifiers, the equals sign (=) and the colon (:) are interchangeable. For example, /N:NODE is the same as /N=NODE.
()   “ ”	A command string can be enclosed in either parentheses or quotation marks. For example, /NOTE=(MY_NOTE) is the same as /NOTE=“MY_NOTE”.
...	A horizontal ellipsis following an entry in a command line indicates that the entry or a similar entry can be repeated any number of times. An ellipsis following a file name indicates that additional parameters, values, or information can be entered.
NOTE	Notes provide information of special importance.
CAUTION	Cautions provide information to prevent damage to equipment or software.
WARNING	Warnings provide information to prevent personal injury.

## Terminology

The term “personal computer” (PC) refers to a standalone system. The term “client” refers to a PC, connected to the network by PATHWORKS software, that can access resources on a server. A server is a system that offers services to clients.

The term “PATHWORKS” refers to PATHWORKS software. PATHWORKS is a trademark of Digital Equipment Corporation.

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# Network Commands

This chapter lists alphabetically the commands that you can use at a PATHWORKS for DOS client workstation to:

- Send and receive Broadcast messages
- Manage memory
- Manage the Local Area Transport (LAT)
- Log on to your personal account on a VMS, ULTRIX, or OS/2 server
- Set protection on files and directories
- Manage the network
- Connect to file, printer, and disk services on the network

## Controlling a Screen Display

Some commands display more than one screen of text.

To stop the display from scrolling, press **Ctrl/S** **Pause**, or the space bar, depending on your keyboard. To resume scrolling, press any key.

## Network Commands and Redirectors

The commands in this manual work with the following redirectors:

- The PATHWORKS Basic Redirector
- The Microsoft LAN Manager Enhanced Redirector, which can perform all the functions of the Basic Redirector and other functions



## Network Commands and Microsoft LAN Manager

If you want to use the NET commands *and* you use the the full implementation of Microsoft LAN Manager, use NETD instead of NET. For example:

```
C:\> NETD LIST
```

Using NETD ensures that the function performed is the function described in this manual. If you use NET, a similar (but not identical) Microsoft LAN Manager function is performed instead.

---

### Note

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If you want to use the Microsoft LAN Manager functions, see the NET commands in the *Microsoft LAN Manager User's Guide for MS-DOS*.

---

If you do not use the full implementation of Microsoft LAN Manager, both NET and NETD perform the functions described in this manual. For example, without the full implementation of LAN Manager, both the following commands perform the NET LIST function:

```
C:\> NET LIST
```

```
C:\> NETD LIST
```

## Summary of Network Commands

Table 1-1 summarizes the client commands.

**Table 1-1 Summary of Network Commands and Notes on Limitations to Use**

Command	Description
BCAST	Sends a Broadcast message to clients on the network. This command works in all configurations <i>except</i> those with asynchronous communications links.
LATCP	Manages the Local Area Transport (LAT) and creates preferred services. This command works in all configurations <i>except</i> those with asynchronous communications links or Token Ring networks.
LOGON	Connects the client to your personal directory on a VMS or ULTRIX server.
MEMMAN	Displays information about memory and unloads all network components.

---

### Note

---

If you use the full implementation of Microsoft LAN Manager and want to use the functions here, use NETD instead of NET.

---

NET ATTRIB	Sets and displays protection on files and directories. On VMS, lets you change an access control list.
NET CONTINUE	Restarts file or printer services that have been temporarily suspended.
NET CLEAR	Removes a node from the network database.
NET CREATE	Creates and formats a virtual disk. This command is limited to configurations with a VMS server accessed over DECnet.
NET DEFINE	Registers a DECnet node name and address.
NET DELETE	Deletes a virtual disk. This command is limited to configurations with a VMS server accessed over DECnet.
NET DISK SERVICES	Describes the virtual disk services available on a server. This command is limited to configurations with a VMS server accessed over DECnet.

(continued on next page)

**Table 1-1 (Cont.) Summary of Network Commands and Notes on Limitations to Use**

<b>Command</b>	<b>Description</b>
NET DISMOUNT	Makes a virtual disk unavailable on the network. This command is limited to configurations with a VMS server accessed over DECnet.
NET ERROR	Displays error statistics.
NET FILE SERVICES	Shows the file and printer services available on a server.
NET HELP	Shows function and syntax of client commands.
NET LIST	Lists the nodes currently held in the DECnet node database.
NET LOAD	Restores network connections that have been saved.
NET MODIFY	Changes the characteristics of a virtual disk service. This command is limited to configurations with a VMS server accessed over DECnet.
NET MOUNT	Makes a virtual disk ready for network connections. This command is limited to configurations with a VMS server accessed over DECnet.
NET PAUSE	Temporarily suspends logical connections to file or printer services.
NET PASSWORD	Lets users change their passwords on a VMS or ULTRIX server.
NET PRINT	Prints a file and shows print request status. Configurations with an OS/2 server support this command but none of the qualifiers. Configurations with an ULTRIX server or with TCP/IP transport support all of the qualifiers <i>except</i> for the following: /BINARY, /BURST, /CHARACTERISTICS, /LOWERCASE, /NOTE, /PASSALL, /PRIORITY, /RESTART, /SETUP, /SPACE, and /TRAILER. All other configurations support all PRINT command qualifiers.
NET SAVE	Saves current network connections.
NET TEST	Starts the server loop test. This command works in all configurations <i>except</i> asynchronous communications links.
NETTIME	Sets the date and time at the client. This command works in all configurations <i>except</i> those with OS/2 servers.

(continued on next page)

**Table 1–1 (Cont.) Summary of Network Commands and Notes on Limitations to Use**

<b>Command</b>	<b>Description</b>
NET ZERO LAD	Clears error counters for the virtual disk drives. This command is limited to configurations with a VMS server accessed over LAD or LAST transport.
PERMIT	Offers one client as a temporary file server by permitting a second client to make a single session connection to the first client.
RCV	Displays Broadcast and stored Broadcast messages on a client that uses DECnet. This command works in all configurations <i>except</i> asynchronous communications links.
SETLOGON	Registers your user name and password for connection to an OS/2 server with user-level security when you use the basic Redirector.
SETNAME	Sets the client's computer name.
TRCV	Displays Broadcast and stored Broadcast messages on a client that uses TCP/IP.
USE	Lets users connect to and disconnect from file, printer, and disk services. Displays information about connections. This command has complete functionality <i>except</i> with an ULTRIX or OS/2 server or over a TCP/IP network. In any of those configurations, the command qualifiers /CLICK, /CDROM, and /VIRTUAL are unsupported. In configurations with an OS/2 server, the qualifier /SHOW is also not supported.

When you specify qualifiers with any of the commands described in this manual, make sure that you type a space before each qualifier. For example, to use the NET SAVE command with the /VIRTUAL and /LOG qualifiers, type:

```
C:\> NET SAVE SAVE.TXT /VIRTUAL /LOG
```

If you do not type a space before a qualifier, the command may not work, in which case an error message is displayed.

## BCAST

---

## BCAST

### Purpose

This command lets you send a Broadcast message to one or more client nodes on the network. A **Broadcast message** appears on the screen as a priority message that interrupts any other screen activity.

### Guidelines

You can specify the nodes that receive a BCAST message by:

- Listing the nodes on the command line
- Creating a distribution list

You can create a distribution list with up to 200 recipients for your Broadcast messages. Each line in the list contains a client node name of up to 15 characters. The file name for the list has the extension `.DIS` (for example, `GROUP.DIS`). Set up a distribution list as follows:

```
NODE1  
NODE2  
NODE3  
.  
.  
.  
NODE200
```

You can also create a file called `BCAST.ID`, which contains your personal name of up to 12 characters. When you send a message, the users receiving the message see both your node name and the personal name you specified in `BCAST.ID`.

You must create the `BCAST.ID` file in a directory on the path.

### Format

```
BCAST [/C] node [,node...] | list message
```

## Parameters

- node** Is the name of the node to receive a Broadcast message. Node can also be the name of a .DIS file that contains a list of nodes. Omit the .DIS extension when entering the file name. To send the message to all the nodes on the network, use an asterisk (\*) instead of a node name or the name of a .DIS file.
- message** Is the message BCAST sends to the node (or nodes).

## Qualifier

- /C** The system informs you that a Broadcast message was *not* sent to a specific node. Without the /C qualifier, you receive only the confirmation that a message *was* sent.

## Examples

- You want to call a group meeting of the people on your distribution list, GROUP.DIS. You send the following message:  
C:\> BCAST GROUP Group meeting in the cafeteria at 9:00 a.m.
- You want to cancel a meeting with users at NODE1, NODE2, and NODE3. If your Broadcast message to NODE1, NODE2, and NODE3 did not get through, you want the system to let you know this. Enter:

```
C:\> BCAST /C NODE1,NODE2,NODE3 Canceling 3 o'clock meeting
```

If the message does not get through, the screen displays:

```
Could not confirm message sent to NODE1,NODE2,NODE3
```

## Related Commands

RCV

TRCV

# LATCP

---

## LATCP

### Purpose

LATCP commands enable you to:

- Manage the Local Area Transport
- Create preferred services
- Offer your parallel printer as a service

Table 1–2 lists all the LATCP commands and their associated tasks.

### Guidelines

To start the LAT Control Program (LATCP) utility, enter the following command at the DOS prompt:

```
LATCP
```

### Format

LATCP command

**Table 1–2 Summary of LATCP Commands**

---

<b>ADD</b>	Displays current services, from which you can select preferred services.
<b>ADD LPTn</b>	Offers your parallel printer as a service.
<b>DEFINE FALLBACK</b>	Determines whether LAT should try additional addresses if its initial attempt to make a connection fails.
<b>DEFINE GROUP CODES</b>	Assigns LAT resources to a specific set of users and balances the load between computers offering identical services.
<b>DEFINE LPT THROTTLE</b>	Specifies how much time LAT can spend trying to print during each timed interval of the scheduler.
<b>DEFINE MAX CIRCUITS</b>	Specifies the maximum number of virtual circuits.

(continued on next page)

**Table 1–2 (Cont.) Summary of LATCP Commands**


---

<b>DEFINE MULTICAST</b>	Listens (or does not listen) for service announcements and other multicast messages.
<b>DEFINE RETRANSMIT LIMIT</b>	Specifies the number of times a message will be retransmitted before the virtual circuit is declared “down”.
<b>DEFINE SCB</b>	Allocates a number of SCBs (Session Control Blocks) for LAT applications.
<b>DEFINE SCB BUFFER</b>	Allocates a number of buffers for each SCB allocated with the LATCP DEFINE SCB command.
<b>DEFINE SEARCH</b>	Searches for additional addresses if the initial connection attempt fails.
<b>DEFINE SERVICE TABLE</b>	Specifies the maximum number of services that can be stored in your service table.
<b>DEFINE SESSION THROTTLE</b>	Specifies the maximum number of data bytes used by LAT when sending data to another node.
<b>DELETE</b>	Deletes a preferred service.
<b>DELETE LPTn</b>	Withdraws your local printer as a LAT service.
<b>EXIT</b>	Leaves the LATCP utility.
<b>HELP</b>	Briefly describes the LATCP commands.
<b>LIST SERVICES</b>	Displays your current preferred services and their Ethernet addresses stored in DECLAT.DAT.
<b>SHOW</b>	Combines all the information in the other SHOW commands.
<b>SHOW CHARACTERISTICS</b>	Displays information about the operating characteristics of LAT.
<b>SHOW CIRCUITS</b>	Displays information about the current circuits.
<b>SHOW COUNTERS</b>	Displays information about LAT errors.
<b>SHOW PORTS</b>	Shows the printer ports created with LPTn.

(continued on next page)



**Table 1–2 (Cont.) Summary of LATCP Commands**

---

<b>SHOW SERVICES</b>	Displays your current preferred services, their Ethernet addresses, ratings, node names, and status.
<b>SHOW SESSIONS</b>	Displays information on all existing sessions, both inbound and outbound.
<b>ZERO COUNTERS</b>	Sets LAT error counters to zero.

---

---

## ADD

### Purpose

With the ADD command you can:

- List up to 255 of the services currently being offered by LAT nodes.
- Select services that remain in your service table. The services that you select are called **preferred services**.

### Guidelines

Preferred services work this way:

Every time you start LAT, you receive multicast messages called **service announcements** from every node offering services. It can take up to two minutes for your node to receive all of the service announcements.

Information from these announcements is stored in your service table if there is room and if the announcements meet certain requirements.

However, you can save both time and memory by storing information about the services you use the most. By creating a preferred service, you ensure that information about that service is always in your service table. You can then make a connection to the service without delay.

The information for preferred services is stored in your permanent database, DECLAT.DAT, and is loaded into the LAT service table when LAT is loaded or reloaded.

You can add preferred services in one of the following ways:

- By selecting the service from a screen displayed with the LATCP ADD command (see Example 1)
- By entering a command at the LATCP prompt (see Examples 2 and 3)

To update the service table, exit LATCP and restart LAT.

---

#### Note

---

Selecting a preferred service does not automatically connect you to the service. After selecting a preferred service, you must use a terminal emulator to connect to the service.

---

## LATCP ADD

### Format

ADD [node address | ethernet address nodename servicename]

### Parameters

node address	Is the DECnet node address of a LAT node offering the service. If you do not know the node address for a specified node, see your system administrator.
ethernet address	Is the Ethernet address of a host computer offering the service. When you use the ADD command without parameters, the Ethernet address of the host computers offering LAT services is displayed on your workstation screen.
node name	Is the name of the node offering the service.
service name	Is the name of the preferred service.

---

#### Note

---

Use no parameters or all parameters.

---

### Examples

- To display all the LAT services currently offered, enter:

```
LATCP> ADD
```

A screen similar to the following is displayed:

Selections	Service	Address	Rating
------------	---------	---------	--------

```
Listening for service announcements. This takes up to 2 minutes.  
Press <SPACE> to stop listening.
```

```
Number of nodes: 25      Number of services: 96
```

As service announcements are received, the number of nodes and services continues to increase. When you are ready to see a list of available services, press the space bar.

A screen similar to the following is displayed:

Selections	Service	Address	Rating
	SERVICE1	AA-00-04-00-0C-F8	6
	SERVICE2	AA-00-2B-07-25-7D	120
	SERVICE3	08-00-2B-14-1D-25	249
	.		
	.		
	SERVICen	AA-00-04-00-7D-27	84

Select an entry by moving there with the cursor keys, and pressing <RETURN>. Selected entries are displayed in the left window. When you are finished press <ESC>.

You can undo a selection by using <LEFT> to go to the left window, use <UP> or <DOWN> to move to the entry, and then press <RETURN>.

Follow the instructions on the screen to select your preferred services. The keys are as follows:

<ESC> Is **Esc** or **PF1** on an LK250 keyboard.

<UP> Is the up arrow.

<LEFT> Is the left arrow.

<DOWN> Is the down arrow.

- You want to add the VAX service MODEM\_POOL as a preferred service. MODEM\_POOL is on node PLAY7 at Ethernet address AA-00-04-00-1D-25. Enter:

```
LATCP> ADD AA-00-04-00-1D-25 PLAY7 MODEM_POOL
```

- You want to add the service SAMPLE, node PLAY8, address 9.320, as a preferred service. Enter:

```
LATCP> ADD 9.320 PLAY8 SAMPLE
```

## Related Command

ADD LPTn

## LATCP ADD LPTn

---

### ADD LPTn

#### Purpose

This command lets you offer a local parallel printer as a LAT service.

#### Guidelines

The service is stored in the permanent database, DECLAT.DAT.

When you offer a printer as a LAT service, the printer appears to be offered on a terminal server. On a VMS or ULTRIX server, the system administrator creates a print queue through which users can access the printer. Then, with the USE or NET PRINT command, users access the printer remotely like any other printer service.

---

#### Note

---

The printer service operates as a background task. You can use your personal computer while other users access your printer. However, you cannot access your printer as a local resource; you can access the printer only by means of the LAT print queue.

---

Any client that wants access to the LAT service must:

- Enter ADD to add the LAT service as a preferred service on the client.
- Be added as a preferred service on the client from which the LAT service is offered.

For information about adding a preferred service, see the LATCP ADD command.

#### Format

```
ADD LPTn service name [ /RATING=n  
                        /PASSWORD=string  
                        /NOPASSWORD ]
```

## **Parameters**

**LPTn** Is the logical name of the printer you are offering, for example, LPT1 or LPT2.

**service name** Is the name you give to the printer service.

## **Qualifiers**

**/RATING=n** Is the priority for the service you are offering. The value for n is 0 to 255. The default is 255, the highest rating.

**/PASSWORD=string** Is the service password, if you have assigned one. You may want to limit access to your printer service. If it is not feasible to limit access by using group codes, you can assign a service password.

**/NOPASSWORD** A password is not required (the default).

## **Examples**

- You want to offer your printer as a LAT service with the logical name LPT2. The service name is SERVICE1.  
To control access to your printer, you have assigned the service password MYPRINTER. Enter:  

```
LATCP> ADD LPT2 SERVICE1 /PASSWORD=MYPRINTER
```
- Several services on the network have the name SERVICE1. You want to direct print jobs away from your printer. To do this, you can change the rating from the default of 255 to a low rating. You decide on a rating of 4. Enter:  

```
LATCP> ADD LPT2 SERVICE1 /RATING=4
```

## LATCP DEFINE FALLBACK

---

### DEFINE FALLBACK

#### Purpose

This command determines whether LAT should try additional addresses if its initial attempt to make a connection fails.

#### Guidelines

LAT normally chooses the service that has the highest rating. Then LAT tries to make a connection to that Ethernet address. If LAT cannot establish a session to that address, it fails.

However, if FALLBACK is enabled, LAT tries all known addresses for the service. If it still cannot make a connection, it finally fails. This is especially useful with clusters because you can create multiple preferred services with the same service name. If FALLBACK is enabled, it tries all of them, if necessary, until a connection is established.

#### Format

DEFINE FALLBACK [ON | OFF]

#### Qualifiers

ON	Tries all known addresses.
OFF	Accepts only the entry in the service table with the highest rating for that service. This is the default.

#### Example

To be sure that LAT tries every known address for the service you need, enter:

```
LATCP> DEFINE FALLBACK ON
```

#### Related Command

DEFINE SEARCH

## DEFINE GROUP CODES

### Purpose

This command specifies what group codes can make connections to a particular service on a server. A **group code** is a number assigned by you or the system administrator to a specific group of users.

### Guidelines

When multiple servers offer the same service, using group codes prevents all clients from connecting to the server that has the highest service rating, and thus partitions the network.

The group codes affect connections both to and from other nodes.

### Format

```
DEFINE GROUP CODES code[,...] [/ALL]
```

### Parameter

`code`                    Is the group code. The range is 0 to 255.

### Qualifier

`/ALL`                    Enables all of the group codes from 0 to 255. This is the default.

### Example

You want to allow groups 23, 45, and 67 to access a service. Do so by defining group codes as follows:

```
LATCP> DEFINE GROUP CODES 23,45,67
```



## **LATCP DEFINE LPT THROTTLE**

---

### **DEFINE LPT THROTTLE**

#### **Purpose**

This command specifies how much time LAT spends trying to print during each timed interval of the scheduler.

#### **Guidelines**

This value is a loop counter that is used when LAT checks the status of each printer. Each time LAT checks a printer, it determines if more data can be sent to the printer. The higher the value, the more time LAT spends trying to print during each interval. The default value is 255. If your computer has a fast CPU, such as that of a 386 or 486 machine, you may want to increase this value (for example, to 500). If your computer has a slow CPU, such as that of a PC or XT, you may want to decrease the default value (for example, to 50).

#### **Format**

```
DEFINE LPT THROTTLE x
```

#### **Parameters**

x                    Is the throttle value. The minimum value is 1; the maximum value is

#### **Example**

You want to improve the performance of a printer connected to or used by a 386-based personal computer. The default value is too low for optimal performance.

```
LATCP> DEFINE LPT THROTTLE 500
```

## DEFINE MAX CIRCUITS

### Purpose

This command lets you specify the maximum number of virtual circuits (node-to-node connections) that can be made. By limiting the number of virtual circuits, you can save memory.

### Format

```
DEFINE MAX CIRCUITS n
```

### Parameter

**n** Is the maximum number of virtual circuits. The value for n is from 1 to 32. The default is 4. The value for n is stored in the permanent database DECLAT.DAT.

### Examples

- Because two new LAT printer services are offered, you need to increase the current default of 4 circuits by 2. Enter:  
LATCP> DEFINE MAX CIRCUITS 6
- You need to connect to only one node. To save as much memory as possible, you can limit the allowable circuits to 1. Enter:  
LATCP> DEFINE MAX CIRCUITS 1

## LATCP DEFINE MULTICAST

---

### DEFINE MULTICAST

#### Purpose

This command specifies whether or not your client listens for multicast messages (service announcements from host computers).

#### Guidelines

When LAT is started, it loads preferred services from your service table, DECLAT.DAT. Other services come from service announcements that are periodically sent to all nodes. However, if you disable LAT multicast, LAT ignores the service announcements.

Never disable LAT multicast unless you have defined all desired preferred services.

Leave multicast ON if you have offered your printer as a LAT service. If a LAT node wants to access your printer, it sends a **solicit-information message** by multicast, asking whether the printer service is available.

#### Format

```
DEFINE MULTICAST [ON | OFF]
```

#### Parameters

ON	LAT listens to service announcements. This is the default.
OFF	LAT ignores service announcements. ADD LPTn overrides this qualifier.

#### Example

You have defined all the preferred services you need. To conserve CPU processing time on your PC, enter:

```
LATCP> DEFINE MULTICAST OFF
```

## DEFINE RETRANSMIT LIMIT

### Purpose

This command specifies the number of times a message is retransmitted before the virtual circuit (connection) is declared down. When the circuit is down, any sessions using that virtual circuit are stopped.

### Format

```
DEFINE RETRANSMIT LIMIT n
```

### Parameter

n                    Is the number of times a message is retransmitted. The value of n is 1 to 255. The default is 24. The value for n is stored in the permanent database, DECLAT.DAT.

### Example

You have noticed that you cannot make connections to the terminal server or that the connections are frequently broken. You need to increase the number of retransmissions from the default of 24. Enter:

```
LATCP>DEFINE RETRANSMIT LIMIT 32
```

## LATCP DEFINE SCB

---

### DEFINE SCB

#### Purpose

This command allocates a selected number of session control blocks (SCBs) within LAT that can be used by LAT applications. An SCB is a data structure that an application must provide to LAT to create a session; each session requires an SCB.

#### Guidelines

Do not move or swap an SCB out of memory; LAT may write to it at any time.

The following information applies to Microsoft Windows 3.0:

- Since a windowing application can be swapped out of memory, use **DEFINE SCB** to provide LAT with an SCB when you are using Microsoft Windows.
- If you want to use either **SETHOST** or **VT320**:
  - Use **LATCP DEFINE SCB** to allocate several SCBs.
  - Load LAT before starting Microsoft Windows.
  - Set the environment variable **NVTWIN** to 1.

#### Format

**DEFINE SCB n**

#### Parameter

**n** Is the number of SCBs you are allocating. The minimum number of SCBs is 0; this is the default. The maximum number is 10.

#### Example

You need to increase the number of SCBs from 0, the default, to 4. Enter:

```
LATCP> DEFINE SCB 4
```

**LATCP**  
**DEFINE SCB**

**Related Command**

**DEFINE SCB BUFFER**

## **LATCP DEFINE SCB BUFFER**

---

### **DEFINE SCB BUFFER**

#### **Purpose**

This command allocates a selected number of buffers for each session control block (SCB) you allocate with the LATCP DEFINE SCB command.

#### **Guidelines**

Each buffer allocated contains 259 bytes.

The default number of buffers allocated (6) helps VMS LAT achieve maximum performance.

#### **Format**

DEFINE SCB BUFFER n

#### **Parameter**

n            Is the number of SCB buffers you are allocating. The default number is 6. The range of numbers is 1 to 8.

#### **Example**

You want to decrease the number of SCB buffers that are allocated from 6 to 4.

Enter:

```
LATCP> DEFINE SCB BUFFER 4
```

#### **Related Command**

DEFINE SCB

---

## DEFINE SEARCH

### Purpose

This command specifies whether LAT should send a **solicit-information message** to other nodes, asking if they offer a service. DEFINE SEARCH tries each address in turn until it makes a connection.

### Guidelines

Use DEFINE SEARCH if DEFINE FALLBACK has failed to make a connection.

If they offer the service, the nodes respond affirmatively. The responses are stored in the service table the same way service announcements are.

---

#### Note

---

Currently, terminal servers are the only communications systems on the LAT that are guaranteed to respond to the DEFINE SEARCH command.

---

Enabling SEARCH also enables FALLBACK.

### Format

DEFINE SEARCH ON | OFF

### Parameters

ON            Turns on a search of other nodes that results in a connection.

OFF           Turns off a search of other nodes that results in a connection.

### Example

To enable SEARCH, enter:

```
LATCP> DEFINE SEARCH ON
```



**LATCP**  
**DEFINE SEARCH**

**Related Command**  
**DEFINE FALLBACK**

## DEFINE SERVICE TABLE

### Purpose

This command lets you specify the maximum number of services that can be stored in your service table.

### Guidelines

Preferred services adjust the service table size transparently. Therefore, this command does not apply to preferred services.

Each addition to the service table requires approximately 62 bytes of memory: 31 bytes for the service, 31 bytes for the node.

You can use the full command or the abbreviated version, `DEFINE SERVICE`.

### Format

`DEFINE SERVICE [TABLE] n`

### Parameters

`n` Is the maximum number of services you want in the service table. The value of `n` is 1 through 255. The default is 10.

### Example

To store 50 services in your service table, enter:

```
LATCP> DEFINE SERVICE 50
```

## LATCP DEFINE SESSION THROTTLE

---

### DEFINE SESSION THROTTLE

#### Purpose

This command lets you limit the maximum number of bytes sent in a slot. A **slot** is a packet of data containing the information for a single session.

#### Guidelines

It is possible to lose data if the other LAT node has inadequate port buffers. If this happens, one workaround is to limit the number of bytes sent in each slot.

---

#### Caution

---

Use this command only if you have expert knowledge of the system.

---

#### Format

DEFINE SESSION THROTTLE n

#### Parameter

n            Is the maximum number of characters sent in a slot. The value of n is 1 to 255 bytes. The default is 127 bytes.

#### Example

Error counters on the terminal server show frequent data overruns. You need to reduce the slot size. You can decrease the number of bytes until the problem is corrected. A good number to start with is 64. Enter:

```
LATCP> DEFINE SESSION THROTTLE 64
```

## **DELETE**

### **Purpose**

The **DELETE** command deletes one or more LAT preferred services. By deleting services you no longer need, you reduce the memory used by LAT.

### **Guidelines**

You can delete a preferred service in one of the following ways:

- If you specify a service name, that service is deleted from the service table stored in **DECLAT.DAT**.
- If you do not specify a service name, **LATCP** displays a window containing all of the preferred LAT services. Follow the instructions on the display to select the services to be deleted.

Services are deleted from **DECLAT.DAT** after you restart **LAT**.

### **Format**

**DELETE** [service name] [/ALL]

### **Parameter**

service name            Is the name of the preferred service.

### **Qualifier**

/ALL                    Deletes all of the services in **DECLAT.DAT**.

### **Examples**

- To delete **SERVICE1** from **DECLAT.DAT**, enter:  
LATCP> DELETE SERVICE1
- You want to delete an entry from the service table. First, display the service table by entering:  
LATCP> DELETE

## LATCP DELETE

A screen similar to the following is displayed.

Selections	Service	Address	Rating
	SERVICE1	AA-00-04-00-0C-F8	0
	SERVICE2	08-00-2B-07-25-7D	255

Select an entry by moving to it with the arrow keys. Press Return. Selected entries are displayed in the left hand window. When you are finished press <ESC>.

You can undo a selection by using <LEFT> to go to the left window, use <UP> or <DOWN> to move to the entry, and then press <RETURN>.

<ESC> Is **[Esc]** or **[PF1]** on an LK250 keyboard.

<UP> Is the up arrow.

<LEFT> Is the left arrow.

<DOWN> Is the down arrow.

Follow the instructions on the screen to delete the entry.

- Your service table is no longer current. To delete all your preferred services, enter:

```
LATCP> DELETE /ALL
```

## DELETE LPTn

### Purpose

This command deletes a local printer service defined with DEFINE LPTn.

### Format

DELETE LPTn

### Parameters

LPTn            Is a local printer that you have offered as a LAT service. LPTn can be LPT1, LPT2, LPT3, or LPT4.

### Example

You have offered LPT1 as printer service on LAT. Now you want to remove your printer as a service. Enter:

```
LATCP> DELETE LPT1
```

You can now connect logical device LPT1 to another printer.

### Related Command

DEFINE LPTn

## **LATCP EXIT**

---

### **EXIT**

#### **Purpose**

The **EXIT** command lets you leave the LATCP utility.

#### **Format**

**EXIT**

#### **Example**

To leave the LATCP utility and return to the DOS prompt, enter:

```
LATCP> EXIT
```

---

## HELP

### Purpose

The HELP command displays information about the following LATCP commands:

- ADD
- DEFINE
  - SCB
  - SCB BUFFER
  - FALLBACK
  - GROUP CODES
  - LPT THROTTLE
  - RETRANSMIT LIMIT
  - MAXIMUM CIRCUITS
  - MULTICAST
  - SEARCH
  - SERVICE TABLE
  - SESSION THROTTLE
- DELETE
- EXIT
- LIST
  - LIST SERVICES
- SHOW
  - CHARACTERISTICS
  - CIRCUITS
  - COUNTERS
  - SERVICES
  - PORTS
- UNLOAD
- ZERO COUNTERS

### Format

HELP [command]



# LATCP HELP

## Parameters

**command**            Is the command for which you want help.

## Example

To see information about all the LATCP commands, enter:

```
LATCP> HELP
```

The following screen is displayed:

The HELP command displays information about LATCP commands on your screen. HELP is available for the following commands:

```
ADD DEFINE DELETE EXIT LIST SHOW UNLOAD ZERO
```

Select an entry, for example DEFINE. Enter:

```
C:\> LATCP HELP DEFINE
```

A screen similar to the following is displayed:

The DEFINE command is used to stored LAT parameters in a permanent database (declat.dat) that LAT reads whenever it is loaded. This eliminates all LAT command line parameters except for /u which is used by Sethost if it transparently loads and unloads LAT. The following DEFINE commands exist:

```
SCB  
SCB BUFFER  
FALLBACK  
GROUP CODES  
LPT THROTTLE  
RETRANSMIT LIMIT  
MAXIMUM CIRCUITS  
MULTICAST  
SEARCH  
SERVICE TABLE  
SESSION THROTTLE
```

For information on a specific DEFINE command such as DEFINE SCB, enter:

```
LATCP> HELP DEFINE SCB
```

The resulting screen defines the command.

## LIST SERVICES

### Purpose

With this command, you can display the preferred services that you selected with LATCP ADD and stored in your permanent database, DECLAT.DAT. The node name and Ethernet address for each service are displayed.

### Guidelines

When LAT is not running, you can use LIST SERVICES for a quick listing of your current preferred services.

When LAT is running, use SHOW SERVICES to list more detailed information about preferred services.

### Format

LIST SERVICES

### Example

You have started your client, and you want to see a quick list of your current preferred services. Enter:

```
LATCP> LIST SERVICES
```

The screen displays your preferred services and their Ethernet addresses.

Node Name	Preferred Service	Ethernet Address
-----	-----	-----
PLAY7	SERVICE1	AA-00-04-00-F3-F8
PLAY8	SERVICE2	08-00-2B-0B-1B-ED
PLAY9	SERVICE3	AA-00-04-00-A2-24

## **LATCP SHOW**

---

### **SHOW**

#### **Purpose**

This command displays all the information from the following commands:

- SHOW CHARACTERISTICS
- SHOW COUNTERS
- SHOW CIRCUITS
- SHOW SESSIONS
- SHOW SERVICES
- SHOW PORTS

#### **Format**

SHOW

#### **Example**

You want detailed information on all the services offered on LAT. Enter:

```
LATCP> SHOW
```

Screens similar to the following are displayed:

# LATCP SHOW

LAT characteristics as of 12-Aug-1991 6:51:46

```
Server name                = LAT_AA0004003326
Protocol version           = 5
Protocol ECO               = 1
Maximum number of circuits = 4
Number of circuits        = 0
Maximum number of sessions = 32
Number of sessions       = 0
Multicast                  = Enabled
Fallback                   = Disabled
Search                     = Disabled
Local services             = 0
Service table size        = 100
Number of services        = 7
Number of nodes           = 4
Unused entries in service table = 189
Number of application SCBs = 3
Number of application SCBs in use = 0
Number of slot buffers in an application SCB = 6
Maximum slot size when sending = 127 bytes
Group codes                = 0 - 255 (all groups enabled)
Number of ticks per second = 18
Retransmit timer          = 6 ticks
Retransmit limit          = 10
Multicast timer           = 540 ticks
Keepalive timer           = 360 ticks
Cmd retry timer           = 4 ticks
Cmd retry limit           = 4
Response timer            = 36 ticks
LPT throttle              = 255
```

# LATCP SHOW

LAT counters as of 12-Aug-1991 6:59:38

Seconds since last zeroed	= 5369
Messages transmitted	= 0
Messages received	= 0
Messages retransmitted	= 0
Messages received out of sequence	= 0
Illegal messages received	= 0
Illegal slots received	= 0
Queue entry unavailable for service	= 0
Transmit buffers unavailable	= 0
Invalid messages received	= 0
Invalid slots received	= 0
Invalid multicast messages	= 0
Invalid acknowledgments	= 0
Solicit information messages received	= 0
Solicit information messages sent	= 0
Response information messages received	= 0
Response information messages sent	= 0
Connection solicitations received	= 0
Connection solicitations accepted	= 0
DLL buffers owned	= 9670
DLL buffers freed	= 9670
Session transmit queue already full	= 0

**LATCP  
SHOW**

LAT virtual circuits as of 12-Aug-1991 15:13:40

Node Name	Ethernet Address	Circuit State	Circuit Id	Number of Sessions
PLAY1	AA-00-04-00-A8-27	Running	2	1

LAT sessions as of 12-Aug-1991 14:22:58

Service Name	Session State	Session Id	Circuit Id	Local Credits	Remote Credits	Number of Buffers
SERVICE1	Running	4	2	0	0	3
SERVICE2	Running	8	6	0	0	3

Known LAT services as of 12-Aug-1991 15:13:40  
10 services offered by 10 nodes

Service Name	Rating	Ethernet Address	Node Name	Status
SERVICE1	6	AA-00-04-00-18-27	PLAY1	Available
SERVICE2	6	AA-00-04-00-0C-F8	PLAY2	Available
SERVICE3	255	08-00-2B-17-F2-19	PLAY3	Available
SERVICE4	83	AA-00-04-00-07-F9	PLAY4	Available
SERVICE5	0	AA-00-04-00-CB-24	PLAY5	Available
SERVICE6	0	08-00-2B-06-77-39	PLAY6	Available
SERVICE7	76	AA-00-04-00-4F-24	PLAY7	Available
SERVICE8	50	AA-00-04-00-E6-F8	PLAY8	Available
SERVICE9	6	AA-00-04-00-46-24	PLAY9	Available
SERVICE10	245	AA-00-04-00-92-24	PLAY10	Available

LAT ports as of 12-Aug-1991 15:13:40

Service Name	Service Password	Service Rating	LPT#
SERVICE1	255	1	1

## **LATCP SHOW CHARACTERISTICS**

---

### **SHOW CHARACTERISTICS**

#### **Purpose**

This command displays information about the LAT configuration and its operating characteristics.

#### **Format**

**SHOW CHARACTERISTICS**

#### **Example**

To display the LAT characteristics for your node, enter:

```
C:\> SHOW CHARACTERISTICS
```

## LATCP SHOW CHARACTERISTICS

A screen similar to the following is displayed:

LAT characteristics as of 12-Aug-1991 6:51:46

```
Server name                = LAT_AA0004003326
Protocol version           = 5
Protocol ECO               = 1
Maximum number of circuits = 4
Number of circuits         = 0
Maximum number of sessions = 32
Number of sessions        = 0
Multicast                  = Enabled
Fallback                   = Disabled
Search                     = Disabled
Local services             = 0
Service table size        = 100
Number of services         = 7
Number of nodes            = 4
Unused entries in service table = 189
Number of application SCBs = 3
Number of application SCBs in use = 0
Number of slot buffers in an application SCB = 6
Maximum slot size when sending = 127 bytes
Group codes                = 0 - 255 (all groups enabled)
Number of ticks per second = 18
Retransmit timer           = 6 ticks
Retransmit limit           = 10
Multicast timer            = 540 ticks
Keepalive timer            = 360 ticks
Cmd retry timer            = 4 ticks
Cmd retry limit            = 4
Response timer             = 36 ticks
LPT throttle               = 255
```



## LATCP SHOW CIRCUITS

---

### SHOW CIRCUITS

#### Purpose

This command displays information about the existing virtual circuits (SETHOST and printer connections).

#### Format

SHOW CIRCUITS

#### Example

To show information about current connections, enter:

```
LATCP> SHOW CIRCUITS
```

A screen similar to the following is displayed:

```
LAT virtual circuits as of 12-Aug-1991 14:22:58
```

Node Name	Ethernet Address	Circuit State	Circuit Id	Number of Sessions
----	-----	-----	-----	-----
PLAY1	AA-00-04-00-23-F9	Running	2	1

---

## SHOW COUNTERS

### Purpose

The SHOW COUNTERS command displays the LAT error counters, which show the types of errors that have occurred since counters were last zeroed.

### Format

SHOW COUNTERS

### Example

To determine the type of error that may be causing problems on LATCP, enter:

```
LATCP> SHOW COUNTERS
```

A screen similar to the following is displayed:

```
LAT counters as of 12-Aug-1991 6:59:38

Seconds since last zeroed           = 5369
Messages transmitted                 = 0
Messages received                    = 0
Messages retransmitted               = 0
Messages received out of sequence    = 0
Illegal messages received            = 0
Illegal slots received               = 0
Queue entry unavailable for service  = 0
Transmit buffers unavailable         = 0
Invalid messages received            = 0
Invalid slots received               = 0
Invalid multicast messages          = 0
Invalid acknowledgments              = 0
Solicit information messages received = 0
Solicit information messages sent    = 0
Response information messages received = 0
Response information messages sent   = 0
Connection solicitations received   = 0
Connection solications accepted     = 0
DLL buffers owned                    = 9670
DLL buffers freed                    = 9670
Session transmit queue already full  = 0
```

## LATCP SHOW PORTS

---

### SHOW PORTS

#### Purpose

This command shows the printer ports created with ADD LPTn.

#### Format

SHOW PORTS

#### Example

LPT1 has been offered as local printers on LAT. To see information about this service, enter:

```
LATCP> SHOW PORTS
```

A screen similar to the following is displayed:

```
LAT ports as of 12-Aug-1991 15:13:11
```

Service Name	Service Password	Service Rating	LPT#
-----			
SERVICE1		255	1

#### Related Command

DEFINE LPTn

---

## SHOW SERVICES

### Purpose

This command displays all the services stored in your LAT service table. SHOW SERVICES includes preferred services and any other known services that have been added by means of service announcements and response information messages.

### Guidelines

You can use SHOW SERVICES when LAT is running. When LAT is not running, use LIST SERVICES for a quick list of preferred services.

### Format

SHOW SERVICES

### Example

LAT is running, and you want to find out what services are currently in your LAT service table. Enter:

```
LATCP> SHOW SERVICES
```

A screen similar to the following is displayed.

```
Known LAT services as of 12-Aug-1991 15:13:40  
10 services offered by 10 nodes
```

Service Name	Rating	Ethernet Address	Node Name	Status
SERVICE1	6	AA-00-04-00-18-27	PLAY1	Available
SERVICE2	6	AA-00-04-00-0C-F8	PLAY2	Available
SERVICE3	255	08-00-2B-17-F2-19	PLAY3	Available
SERVICE4	83	AA-00-04-00-07-F9	PLAY4	Available
SERVICE5	0	AA-00-04-00-CB-24	PLAY5	Available
SERVICE6	0	08-00-2B-06-77-39	PLAY6	Available
SERVICE7	76	AA-00-04-00-4F-24	PLAY7	Available
SERVICE8	50	AA-00-04-00-E6-F8	PLAY8	Available
SERVICE9	6	AA-00-04-00-46-24	PLAY9	Available
SERVICE10	245	AA-00-04-00-92-24	PLAY10	Available

## LATCP SHOW SESSIONS

---

### SHOW SESSIONS

#### Purpose

This command displays the current inbound and outbound sessions.

#### Format

SHOW SESSIONS

#### Example

To show active sessions and information about them, enter:

```
LATCP> SHOW SESSIONS
```

A screen similar to the following is displayed:

```
LAT local services as of 12-Aug-1991 14:22:58
```

Service Name	Session State	Session Id	Circuit Id	Local Credits	Remote Credits	Number of Buffers
-----	-----	-----	-----	-----	-----	-----
SERVICE1	Running	4	2	0	0	3
SERVICE2	Running	8	6	0	0	3

## **ZERO COUNTERS**

### **Purpose**

This command sets all of the LAT error counters to zero. The system then records errors and other statistics until the next time you clear the error counters.

### **Format**

ZERO COUNTERS

### **Example**

To set all of the LAT counters to zero, enter:

```
LATCP> ZERO COUNTERS
```

## LOGON

---

## LOGON

### Purpose

This command connects the client to your personal directory on a VMS or ULTRIX server and runs your user profile. For information on logging on to an OS/2 server, see the SETLOGON command.

### Guidelines

If you try to connect to your personal directory, and are continually refused connection, see your system administrator.

### Format

LOGON server username [password | \*] [/VIRTUAL]

### Parameters

server	Is the name of the server to which you want to connect.
username	Is your assigned user name.
password	Is your assigned password.
*	Prompts you for your password, which is not echoed on the screen.

### Qualifier

/VIRTUAL Is required if your personal account is on a virtual disk.

### Example

You want to connect to your personal directory USER1 on SERVR1. You also want to be prompted for a password that does not appear on the screen. Enter:

```
A:\> LOGON SERVR1 USER1 *  
Password:
```

---

## MEMMAN

### Purpose

The MEMMAN command invokes the Memory Information Utility, which does the following:

- Displays information about conventional, expanded, or extended memory
- Unloads network components from memory

For more information about using memory, see *Memory Solutions for Client Administrators*.

### Format

```
MEMMAN [ /B  
        /E  
        /F  
        /H  
        /M  
        /S  
        /U  
        /X  
        /Y ]
```

### Qualifiers

- /B** Provides a brief display of information on /E, /M, and /S screens. This is the default.
- /E** Displays detailed information about expanded memory. For this qualifier to work, you need an expanded memory driver such as EMM.SYS in your CONFIG.SYS file.
- /F** Provides detailed information on /E, /M, and /S screens.
- /H** Provides help on MEMMAN.
- /M** Displays a DOS memory map, including the PCSA Mark. This is the default.
- /S** Displays a summary of conventional, expanded, and extended memory.



## MEMMAN

- /U** Unloads *all* components from conventional memory up to and including the PCSA Mark. To unload individual components, see *Memory Solutions for Client Administrators*.  
In general, it is best to unload by entering STOPNET at the DOS prompt. However, as an alternative, you can use MEMMAN /U in the following sequence:  
C:\> USE \*: /DISCONNECT  
C:\> USE LPT\*: /DISCONNECT  
C:\> MEMMAN /U  
The network components you unload with MEMMAN /U are reloaded automatically when you restart the network with the STARTNET command.
- /X** Displays detailed information about extended memory. For this qualifier to work, you need an extended memory driver such as HIMEM.SYS in your CONFIG.SYS file.
- /Y** Is used with the /U qualifier only. Indicates that you do not want to be prompted to confirm that you want to unload all components from memory.  
Use this qualifier cautiously. If you use the /Y qualifier, MEMMAN does not prompt you to confirm the unload. Therefore, you cannot stop the unload if active network links are detected. Errors can occur if MEMMAN unloads the network while connections are still active.

## Examples

### MEMMAN /E

You need to know how much memory is available for loading network components from conventional memory into expanded memory. Enter:

```
C:\> MEMMAN /E
```

A screen displays the available space for expanded memory (60 pages, 960K) along with other information about expanded memory:

```
MEMMAN V4.1.0  PATHWORKS Memory Information Utility
Copyright (C) 1988-1991 by Digital Equipment Corporation
```

#### Expanded Memory Information

```
EMM driver version          4.0
EMM page frame address     E000
Expanded memory size       333 pages (5328K)
Expanded memory available   60 pages (960K)
```

Handle	Pages	Size	Attributes	Handle Name
0	40	640K	volatile	[noname]
1	125	2000K	volatile	[noname]
2	100	1600K	volatile	[noname]
3	4	64K	volatile	DECnetR? [44 45 43 6E 65 74 52 02]
4	4	64K	volatile	DECnetR? [44 45 43 6E 65 74 52 01]

Table 1-3 describes the expanded memory display.

## MEMMAN

**Table 1–3 Description of Expanded Memory Display**

---

EMM driver version	Is the software version of the EMM driver. You must be running a Version 4.0 driver for PATHWORKS support.
Page frame address	Is the beginning address for the page frame. A <b>page frame</b> is a window through which expanded memory is accessed.
Expanded memory size	Is the size of the expanded memory in pages and bytes. There are 16 Kbytes to a page.
Expanded memory available	Is the amount of expanded memory that is available to applications using expanded memory.
Handle	Is a unique number used to reference a block of allocated expanded memory.
Pages	Is the size, in pages, of expanded memory for a specific handle.
Size	Is the size, in Kbytes, of expanded memory for a specific handle.
Attributes	Are the characteristics of a handle's expanded memory. <b>Volatile memory</b> is lost when you turn off and restart the system. <b>Nonvolatile memory</b> is preserved when you turn off and restart the system.
Handle name	Is the name an application assigns to a handle. Some handle names can contain nonprintable characters. When this occurs, MEMMAN displays the handle name in hexadecimal.

---

## MEMMAN /H

You need to find out what tasks are performed by the MEMMAN qualifiers.

Enter:

```
C:\> MEMMAN /H
```

The following screen is displayed:

```
MEMMAN V4.1.0 PATHWORKS Memory Information Utility  
Copyright (C) 1988-1991 by Digital Equipment Corporation
```

```
Usage: MEMMAN [/F|B|Y] [/M|S|H|U|E|X]
```

```
Where: /F  Full information  
       /B  Brief information (default)  
       /Y  Do not confirm unload (used with /U)  
       /S  Summary report of all memory  
       /M  DOS memory usage map (default)  
       /H  This help summary  
       /E  Detailed expanded memory information  
       /X  Detailed extended memory information  
       /U  Unload network
```

## MEMMAN

### MEMMAN /M /F

You need to determine how much memory has been used by system processes.  
Enter:

```
C:\> MEMMAN /M /F
```

A screen similar to the following is displayed:

```
MEMMAN V4.1.0 PATHWORKS Memory Information Utility  
Copyright (C) 1988-1991 by Digital Equipment Corporation
```

PSP	Bytes	Owner	Command Line	Hooked Interrupts
0008	40384	MS-DOS		01 03-04 13 19 1B 20-21 25-29 2B-2D 31-32 34-3F
0008	56336	CONFIG.SYS		02 09-0A 0C-0E 15 19 70 72-73
0EB7	3376	COMMAND.COM	/m /f	22-24 2E
free	48			
0EB7	528	COMMAND.COM	<ENVIRONMENT>	
free	96			
18A0	14976	Mouse	/y	10 33 74
free	304			
1C5E	1136	PCSA Mark		
1CA6	7088	Scheduler	/H	08 0B 6C
free	240			
1E72	7664	Datalink		1C
2052	52976	DNP/NETBIOS	/rem:2 /nam:n /fc:0	2A 5C 6E
2D42	9872	LAST	/N:PLAID /C:d /M:D /	
2FAC	34096	n/a	/L:10 /P:1:128 /P2:12	05 17 2F
free	288			
3813	5280	LAD	/R:-1 /W:-1 /A:-1	13
395E	6576	n/a	/r:2	
3AFA	31504	LAT		6A
42AC	34240	CTERM		69
free	346976			

Table 1-4 describes the memory map display.

**Table 1–4 Description of Memory Map Display**

---

<b>PSP</b>	Is the process address or ID.
<b>Bytes</b>	Is the size of the block of memory.
<b>Owner</b>	Is the name of the process that has reserved the block of memory. If the owner cannot be determined, the memory map entry is “n/a”.
<b>Command line</b>	Is one of the following: All or a portion of the command line that started the process. Portions of typical command lines are /L:10 /P1:128, and /P2:12. <ENVIRONMENT>, which contains the environment variables used by the owner. <DATA> (not shown in display), which means that the memory contains data for a process. If you spawn out of an application, for example, the data for that process remains in memory.
<b>Hooked interrupts</b>	Are interrupts that a component takes over for its own communication purposes. In the display, DNP/NETBIOS has taken control of interrupts 2A, 5C, and 6E.

---

# MEMMAN

## MEMMAN /S /F

To display a summary of all types of memory, plus a scan of system memory, enter:

```
C:\> MEMMAN /S /F
```

```
MEMMAN V4.1.0  PATHWORKS Memory Information Utility  
Copyright (C) 1988-1991 by Digital Equipment Corporation
```

### Memory Usage Summary

DOS memory allocation scheme	first fit
Physical conventional memory	640K
Reported conventional memory	704K
Available conventional memory	623K
Physical extended memory	5120K
Reported extended memory	0K
Expanded memory size	5120K
Expanded memory available	592K
XMS extended memory available	592K
Largest available EMB	592K

### System Memory Scan

```
0000-9FC0 639K Conventional  
9FC0-A000 1K Extended BIOS Area  
A000-B7FF 96K Free  
B800-BFFF 32K Ram  
C000-C5FF 24K ROM COPYRIGHT WESTERN DIGITAL CORP.  
1987,88,89,ALL RIGHTS RESERVED  
C600-CBFF 24K Free  
CC00-CFFF 16K ROM  
D000-DBFF 48K RAM  
DC00-DFFF 16K ROM COPYRIGHT DIGITAL EQUIPMENT CORPORATION 1988  
E000-FBFF 112K Unknown  
FC00-FDFF 8K RAM  
FE00-FFFF 8K System ROM (C) 1985,1986,1987
```

Table 1-5 describes the memory usage display.

**Table 1-5 Description of Memory Usage Display**


---

DOS memory allocation scheme	First fit. DOS starts searching at the lowest available block of conventional memory and allocates the first block it finds that satisfies the request.
------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------

---

**Note**

---

The DOS memory allocation scheme can also be:

**Last fit** — DOS starts searching at the highest available block of conventional memory and allocates the first block it finds that satisfies the request.

**Best fit** — DOS searches conventional memory and allocates the first available block that most closely matches the request size.

---

Physical conventional memory	Is the number of Kbytes installed as conventional memory.
Reported conventional memory	Is the number of Kbytes that the system says is configured as conventional memory. System functions can cause this number to vary. Physical memory gives the accurate number.
Available conventional memory	Is the number of remaining Kbytes that you can use for an application.
Physical extended memory	Is the number of Kbytes installed as extended memory.
Reported extended memory	Is the number of Kbytes that the system says is configured as conventional memory. System functions can cause this number to vary. Physical memory gives the accurate number.
Expanded memory size	Is the number of Kbytes installed as expanded memory.

(continued on next page)



## **MEMMAN**

**Table 1–5 (Cont.) Description of Memory Usage Display**

---

<b>Expanded memory available</b>	<b>Is the number of remaining Kbytes that you can use for applications and for loading network components into expanded memory.</b>
<b>XMS extended memory available</b>	<b>Is the number of remaining Kbytes available as XMS-compliant extended memory.</b>
<b>Largest available EMB</b>	<b>Is the largest contiguous extended memory block available.</b>
<b>System Memory Scan</b>	<b>Shows the space allocated to RAM and ROM in adapter memory.</b>

---

## MEMMAN /U

To unload all the components from conventional memory up to and including **SAVE**, enter:

```
C:\> MEMMAN /U
```

The screen displays a warning that DECnet links are active:

```
MEMMAN V4.1.0  PATHWORKS Memory Information Utility  
Copyright (C) 1988-1991 by Digital Equipment Corporation
```

```
Approximately 76336 bytes of memory will be released
```

```
Warning: Active DECnet links
```

```
OK to proceed? [No]: N
```

You have two choices:

- Answer the prompt by pressing N. Then, at the DOS prompt, enter:  
    **USE LPT\*: /DISCONNECT**  
    **MEMMAN /U**
- Answer the prompt by pressing Y. The memory is unloaded, but you lose any connections you have to file and disk services.
- If you are using **MAIL** with the keep-network-link option **ON**, you may have to stop the mail link before you can unload the mail component. To stop the mail link, at the DOS prompt, enter: **MAILLNK /STOP**.

## MEMMAN

### MEMMAN /U /F

You need 51,200 bytes of additional memory to run Lotus 1-2-3. To find out whether you can gain this memory by unloading network components from conventional memory, enter:

```
C:\>MEMMAN /U /F
```

A screen similar to the following is displayed:

```
MEMMAN V4.1.0 PATHWORKS Memory Information Utility  
Copyright (C) 1988-1991 by Digital Equipment Corporation
```

```
PCSA Mark 1 found at PSP 1C5E
```

```
Restoring context from PCSA Mark 1 at PSP 197B
```

```
The following memory will be released:
```

```
Block 1C5D length 1136 bytes owned by PSP 1C5E (PCSA Mark program)  
Block 1CA5 length 7088 bytes owned by PSP 1CA6 (Scheduler program)  
Block 1E71 length 7664 bytes owned by PSP 1E72 (Datalink program)  
Block 2051 length 52976 bytes owned by PSP 2052 (DNP/NETBIOS program)  
Block 2D41 length 9872 bytes owned by PSP 2D42 (LAST program)  
Block 2FAB length 34096 bytes owned by PSP 2FAC (n/a program)  
Block 3812 length 5280 bytes owned by PSP 3813 (LAD program)  
Block 395D length 6128 bytes owned by PSP 395E (n/a program)  
Block 3ADD length 31504 bytes owned by PSP 3ADE (LAT program)  
Block 428F length 34240 bytes owned by PSP 4290 (CTERM program)
```

```
Approximately 190512 bytes of memory will be released
```

```
Warning: Active DECnet links  
OK to proceed? [No]: Y
```

The display shows that 190,512 bytes of memory are released when you complete the command. After unloading you will have more than enough conventional memory for Lotus 1-2-3. At the prompt "OK to proceed?", you can press Y for Yes.

**MEMMAN /X**

To find out what version of the XMS driver is on your system, and how much extended memory is available, enter:

```
C:\> MEMMAN /X
```

A screen similar to the following is displayed:

```
MEMMAN V4.1.0 PATHWORKS Memory Information Utility  
Copyright (C) 1988-1991 by Digital Equipment Corporation
```

## Extended Memory Information

```
XMS driver version          2.00 (revision 2.60)  
Driver API entry point     0A6E:00C9  
High memory area           allocated  
A20 line status            disabled  
Extended memory available  5056K  
Largest available EMB      5056K  
Largest available UMB      1023K  
Available EMB handles      32
```

## Allocated Memory

ID	Handle	Size	Locks	Real Address
--	-----	----	-----	-----
87	0A87	2048	0	00110000

The display shows that XMS driver Version 2.60 is installed. Check with your system administrator to make sure that this is the correct version.

The display also shows that 64 Kbytes of extended memory are available.

Table 1-6 describes the extended memory display.

## MEMMAN

**Table 1-6 Description of Extended Memory Display**

---

XMS driver version	Version number for the extended memory driver.
Driver API entry point	The entry point to the driver for making XMS calls.
High memory area	The first 64 Kbytes of extended memory, located just beyond the 1 MB conventional memory limit.
A20 line status	Reports the current state of the A20 line. The A20 line is the 21st memory address line. It is disabled by default. However, to access the high memory area, it must be enabled.
Extended memory available	The amount of extended memory you can use.
Largest available EMB	Largest contiguous extended memory block available.
Largest available UMB	Upper memory block, a block of memory above 640K, but within the addressable 1 MB area. A UMB can be allocated to load TSRs and device drivers outside of conventional memory, saving room in conventional memory for applications.
Available EMB handles	Numbers used by the system to identify requests for extended memory.

---

---

## NET ATTRIB

### Purpose

Using NET ATTRIB, you can:

- Set or change protection on files and directories
- Display the protection on files and directories
- Change the access control list (VMS only)

### Guidelines

This section gives guidelines for:

- Setting protection
- Displaying protection
- Granting File Access to Selected Users

### Setting Protection

If you are connected to a VMS or an ULTRIX server, you can use NET ATTRIB to set protection on files and directories created in a common file service. For instructions on connecting to a common file service, see the USE command.

On the VMS server, you set protection by means of the Record Management Service (RMS), which determines whether you and other users can access a file. RMS protection is based on the User Identification Code (UIC), a name or number assigned by the system administrator to every user. The UIC identifies you when you log on.

You can grant privileges to one or more of the following categories of users:

- System (S), one of the following:
  - All users who have system privilege (SYSPRV)
  - Users with low group numbers, usually from 1 through 10 (octal). The exact range of system group numbers is determined by the system manager when the system is generated, and may range as high as 37776 (octal). These group numbers are generally for system managers, security managers, system programmers, and operators.

## NET ATTRIB

- Users with the user privilege GRPPRV whose UIC group matches the group of the object's owner.

---

### Note

---

This category is supported in VMS, but not in ULTRIX. In ULTRIX, when you change the privileges granted to the owner of a file or directory, the same privileges are granted to all users who fall into the System category.

---

- Owner (O), the user with the same UIC as the user who created and therefore “owns” the file or directory. Usually, you are the owner.
- Group (G), all users, including the owner, who have the same group number in their UICs as the owner of the file or directory.
- World (W), all users, including those in the first three categories.

You can set protection on:

- One or more directories or files you create in a common VMS or ULTRIX file service.
- One or more directories or files that another user creates in a common file service, provided the user grants control access to you. (See “Granting File Access to Selected Users.”)

You can grant one or more of the following privileges:

- R (Read)
- W (Write)
- E (Execute)
- D (Delete) **Note** This privilege is supported in VMS, but not in ULTRIX. In ULTRIX, having Read and Write privileges automatically confers Delete privileges.

---

### Note

---

The Execute privilege allows users to run executable files on VMS or ULTRIX. In addition, when applied to a VMS directory, Execute allows users to access files in that directory only if they use the exact name of the file. Execute disallows wildcard operations such as directory listings.

---

### Displaying Protection

NET ATTRIB also lets you display the protection on a specific file or directory. However, NET ATTRIB does not display application, security, or hidden ACL entries.

### Granting File Access to Selected Users

On VMS servers, you can grant file access to selected users by changing the access control list (ACL). Thus, as a DOS user, you have the same file access control as a VMS user.

Because ACLs can define access more selectively than UIC-based protection, ACLs allow you to fine tune the action taken when access is requested to a file or directory. Typically, you use ACLs to provide users from several UIC groups access to a file or directory without having to grant World access. For example, as a writer, you might want to let writers from different UIC groups read one of your files for information.

You can ask the system administrator to create a group for you, and to give it a name. You can then grant this group read or write privileges, or both, to one of your files. You do this by adding the group name to the access control list (ACL). Your entry is called an access control entry (ACE).

When the system receives a request for access to a file or directory that has an ACL, the system searches each entry in the ACL sequentially for the first match. It stops searching at the first match. If another match exists further down in the ACL, it has no effect. Thus, ACEs that identify specific users should appear in the ACL before ACEs that identify broader classes of users, as follows:

```
(IDENTIFIER=USER1, ACCESS=READ+EXECUTE)
(IDENTIFIER=CS101, ACCESS=NONE)
```

Assume that USER1 holds the CS101 identifier. USER1 is granted Read and Execute access. If the ACEs were switched, USER1 might be denied access.

See *VMS System Manager's Manual* for more information on creating access control lists.

### Format

```
NET ATTRIB drive:[\ path\] filename.ext | *.* [identifiers]
```

```
[ /ACCESS=option
  /BOTTOM
  /DEFAULT
  /QUERY
  /PROTECTION=(code)
  /REMOVE ]
```



## NET ATTRIB

### Parameters

drive	Is the drive where the file is located. You must specify a drive connected to a file server.
path	Is the path to the directory where the file is located.
filename.ext	Is the file name and extension of the file to which you want to grant access. From a root directory, you can use wildcards (*.*) to affect all the files in a subdirectory, unless prohibited by Execute limitations.
identifiers	(VMS only) Used with /ACCESS=option. One to three identifiers separated by spaces or plus signs.

### Qualifiers

/ACCESS=option	(VMS only) Is the access allowed for the identifier. The options are: READ (grants read access) WRITE (grants read and write access) NONE (denies access)
/BOTTOM	(VMS only) Adds an ACE to the bottom of the ACL. By default, ACEs are added to the top of the ACL.
/DEFAULT	Establishes the default protection for all <i>new</i> files you create or modify on the drive you specify. The /DEFAULT qualifier does not change the protection on files that existed <i>before</i> you ran the NET ATTRIB command.
/QUERY	(VMS only) Prompts you for the information necessary to change the ACL.
/PROTECTION=(code)	Is the file protection code. Valid protection codes are: R (Read), W (Write), E (Execute), and D (Delete). Choose one or more of the protection codes for each type of ownership: S (System), O (Owner), G (Group), and W (World). Use the following format to enter a protection code:

PROTECTION=(S:RWED,O:RWED,G:RWED,W:RWED)

You can deny access to all users by not specifying an entry after the type of ownership. For example, to disable system access, enter:

/PROTECTION=(W:)

**/REMOVE**

(VMS only) Removes the ACE from the ACL. To remove multiple ACEs, use the NET ATTRIB command with the /REMOVE qualifier for each ACE. You cannot use wildcards with the /REMOVE qualifier.

### Examples

These examples assume that you have created directories in a common file service that is connected to drive (device) G.

When the protection has been set correctly, the system responds:

Command completed successfully

#### Setting Protection on All Files in a Directory

You want to set protection on all the files in DIRECTORY1, giving RWED privileges to System and Owner, and RW privileges to Group and World. Enter:

```
C:\>NET ATTRIB G:\DIRECTORY1\*.* /PROT=(S:RWED,O:RWED,G:RW,W:RW)
```

#### Setting Protection on a Directory and Subdirectories

You want to grant Execute privileges to System on \DIRECTORY1 and subdirectories \SUBDIRECTORY1 and \SUBDIRECTORY2 on device G. Enter:

```
C:\> NET ATTRIB G:\DIRECTORY1\SUBDIRECTORY1\SUBDIRECTORY2 /PROT=(S:E)
```

#### Setting Protection on a File

You want to set protection on file MYFILE.TXT in \DIRECTORY1 on device G, giving RWED privileges to System and Owner, and RW privileges to Group and World. Enter:

```
C:\>NET ATTRIB G:\DIRECTORY1\MYFILE.TXT /PROT=(S:RWED,O:RWED,G:RW,W:RW)
```

#### Setting Protection on a Subdirectory File

You want to grant RWED privileges only to System and Owner on file MYFILE.TXT on the path \DIRECTORY1\SUBDIRECTORY1. Enter:

```
C:\> NET ATTRIB G:\DIRECTORY1\SUBDIRECTORY1\MYFILE.TXT /PROT=(S:RWED,O:RWED)
```

## NET ATTRIB

### Setting Default Protection

- Using the /DEFAULT qualifier, you want to change default protection for Group and World to RW on all the files in DIRECTORY 1 on drive G. (The default protection RWED for System and Owner remains.)

The following command changes protection on current files as well as setting default protection on files created in the future in DIRECTORY 1 on device G.

```
C:\> NET ATTRIB G:\DIRECTORY1\*. * /PROT=(G:RW,W:RW) /DEFAULT
```

### Displaying Protection

You can display the protection you have just created. Enter:

```
C:\> NET ATTRIB G:\DIRECTORY1\*. *
```

The following screen is displayed:

```
\DIRECTORY1\MYFILE1.TXT (System:RWED,Owner:RWED,Group:RW,World:RW)
```

```
\DIRECTORY1\MYFILE2.TXT (System:RWED,Owner:RWED,Group:RW,World:RW)
```

Command completed successfully

### Setting ACLs

- On a VMS server, you can give Read and Write access on file WRITER.TXT to the group identified as [300,\*]. Group [300,\*] must be entered at the top of the ACL. This is done by default when you enter:

```
D:\> NET ATTRIB D:\WRITER.TXT [300,*] /ACCESS=WRITE
```

An ACL showing the addition of group [300,\*] might look like this:

```
\WRITER.TXT (System:RWED,Owner:RWED,Group:RW,(World)
Identifier Access
-----
[300,*] READ, WRITE
[200,JONES] READ
POOLPLAYERS READ
PODIATRISTS READ
PSYCHOLOGISTS WRITE
```

- You are a member of the group DOCUSERS. An ACE exists that grants you Read and Write access to file TEST.DAT. You want the rest of the DOCUSERS group to have Read access to TEST.DAT. Therefore, you need to add the ACE granting Read access to DOCUSERS at the bottom of the ACL. Enter:

```
D:\> NET ATTRIB D:\TEST.DAT DOCUSERS /BOTTOM /ACCESS=READ
```

If you added DOCUSERS at the top of the ACL (the default), VMS would match on the DOCUSERS ACE with Read access only; you would lose your Write access.

---

## **NET CLEAR**

### **Purpose**

NET CLEAR lets you remove a node from the DECnet database.

### **Format**

NET CLEAR node

### **Parameter**

node            Is the name of the node you want to remove from the network database.

### **Example**

This example removes the node PLAY1 from the network database. Anyone connecting to the node PLAY1 must supply a user name and password.

```
A:\> NET CLEAR PLAY1
```

## NET CONTINUE

---

### NET CONTINUE

#### Purpose

NET CONTINUE lets you restart file or printer services that were temporarily suspended with the NET PAUSE command.

#### Format

NET CONTINUE DRDR | PRDR

#### Parameters

DRDR               Continues all your connections to file services.

PRDR               Continues all your connections to network printers.

#### Example

To use the network printer service you had before you issued the NET PAUSE command, enter:

```
NET CONTINUE PRDR
```

#### Related Command

NET PAUSE

---

## NET CREATE

### Purpose

NET CREATE lets you create and format a virtual disk, also known as a local area disk (LAD). You must create and format a virtual disk before it can be mounted and used.

### Guidelines

The virtual disk is actually a file that DOS users access as though it were a DOS disk. When you use NET CREATE, you are specifying:

- What to call the virtual disk
- How big to make the virtual disk
- Where to put the virtual disk

To create a system, boot, or application disk, you must have system privileges.

To change the qualifier settings on the disk you have created, use the NET MODIFY command.

### Format

```
NET CREATE \\server[%username] [password | *] [ /ALLOC=n  
/FILE=filespec  
/QUERY  
/SIZE=n  
/TYPE=class ]
```

## NET CREATE

### Parameters

server	Is the name of the server on which the virtual disk is created. The server name is required.
username	Is the name you use when creating a virtual disk, usually your assigned user name on the server.
password	Is your assigned password.
*	Prompts you for your password, which is not displayed on the screen.

### Qualifiers

/ALLOC=n	Is the number of blocks the virtual disk occupies on the server. When you specify the disk size, the system allocates a default number of blocks. The default is the maximum allowed to a disk of the size you specified. Table 1-7 shows the default allocations. You cannot increase the allocation above the default. However, you can allocate fewer blocks down to the minimum shown in Table 1-7. For example, the default allocation for 360KB is 720 blocks. You can select a lower number, with a minimum of 12 blocks.
/FILE=(filespec)	Is the VMS file specification for the virtual disk.
/QUERY	Prompts you for the information you do not specify
/SIZE=n	Determines the size of the virtual disk. The disk is automatically formatted according the maximum size you specify. For choices of n, see <b>Size of Disk</b> in Table 1-7. The default is 10MB for a system disk and 1.2MB for application, boot, and user disks.
/TYPE=class	Determines the default device and directory for the virtual disk. See Table 1-8 for the list of logicals.

**Table 1–7 File Sizes for Virtual Disks**

<b>Size of Disk<sup>1</sup></b>	<b>Minimum Allocation</b>	<b>Maximum Allocation (Default)</b>
360KB	12 blocks	720 blocks
720KB	14 blocks	1440 blocks
1.2MB	29 blocks	2400 blocks
1.44MB	33 blocks	2,880 blocks
5MB	66 blocks	10,240 blocks
10MB	16,417 blocks	20,480 blocks
20MB	16,457 blocks	40,960 blocks
32MB	16,505 blocks	65,535 blocks
64MB	16,633 blocks	131,072 blocks
128MB	32,977 blocks	262,144 blocks
256MB	65,665 blocks	524,288 blocks
512MB	65,921 blocks	1,048,576 blocks

<sup>1</sup>Virtual disks greater than 32MB can be accessed only by DOS V4.01 or greater.

Table 1–8 shows virtual disk devices and logicals.

**Table 1–8 Virtual Disk Devices and Logicals, NET CREATE**

<b>Default Device</b>	<b>Corresponding Logical</b>	<b>Privileges Needed</b>
SYSTEM	LAD\$SYSTEM_DISKS	Write access
BOOT <sup>1</sup>	LAD\$BOOT_DISKS	Write access
APPLICATION	LAD\$APPLICATION_DISKS	Write access
USER	SYS\$LOGIN <sup>2</sup>	Write access

<sup>1</sup>Use the /TYPE=BOOT qualifier to create a network key disk.

<sup>2</sup>SYS\$LOGIN is the root directory of your VMS account. The default class is USER.



## NET CREATE

### Examples

- You want to create a 10 MB user virtual disk on **SERVR1**. The file specification is **[USER1.DISKS]USER1.DSK**. Enter:

```
C:\> NET CREATE \\SERVR1%USER1 * /FILE=[USER1.DISKS]USER1.DSK /SIZE=10MB /TYPE=USER
```

- You want to create a user disk of 360 KB (smaller than the default size of 1.2 MB) for **USER2** on **SERVR2**. The system prompts you for information.

```
C:\> NET CREATE \\SERVR2 /QUERY
```

```
Where should it be stored? (filespec): FLOWER.DSK
```

```
Username: USER2
```

```
Password:
```

```
What type of disk? (application, boot, system, user): USER
```

```
How big a disk?(default 1.2 MB): 360KB
```

```
Allocate space for the entire disk? (y/n): Y
```

```
Okay to continue? (y/n): Y
```

When the disk has been created, a screen display similar to the following appears:

```
Creating $1$DUB2:[USER1]FLOWER.DSK
```

```
Formatting disk, Size = 360KB, Allocation =720/720
```

```
$1$DUB2:[USER1]FLOWER.DSK created
```

```
Command completed successfully.
```

### Related Commands

NET DELETE

NET MODIFY

NET MOUNT

NET DISMOUNT

---

## NET DEFINE

### Purpose

Using NET DEFINE, you can register a node name and address in the DECnet database file DECNODE.DAT. You must register a node in order to:

- Make a DECnet connection to another node
- Send Broadcast messages outside your local area network
- Use file services outside your local area network

### Guidelines

You *must* define a node to use file services outside your local area network. It is a good idea to define local nodes, as well.

### Format

NET DEFINE name address

### Parameters

name	Is the name you are giving to the new node. The name can have a maximum of six alphanumeric characters, as in PLAY10.
address	Is the server address. The address is in the format aa.nnn.
	a           Is an area from 1–63
	n           Is a number from 0–1023

### Example

To define a new node as PLAY1 at address 2.65, enter:

```
C:\> NET DEFINE PLAY1 2.65
```

### Related Command

NET LIST

## NET DELETE

---

### NET DELETE

#### Purpose

Use NET DELETE to delete a virtual disk.

#### Guidelines

Before using NET DELETE, use the NET DISMOUNT command to dismount the disk.

#### Format

```
NET DELETE \\server[%username] [password | *] [ /FILE=(filespec) ]  
[ /QUERY ]  
[ /TYPE=class ]
```

#### Parameters

server	Is the name of the server on which the virtual disk is stored.
username	Is the user name associated with the virtual disk, usually your assigned user name on the server.
password	Is the password associated with the user name.
*	Prompts you for a password, which is not echoed on the screen.

## Qualifiers

<code>/FILE=filespec</code>	Specifies where the file is located. If the file specification includes a directory, it overrides the <code>/TYPE</code> qualifier.
<code>/QUERY</code>	Specifies that you want to be prompted for all the information necessary to delete the virtual disk.
<code>/TYPE=class</code>	Determines the default device and directory for the virtual disk. You need Delete access on the default device and in the directory where the corresponding logical points. The default device and directory are represented by one of the logicals shown in Table 1–9.

Table 1–9 shows virtual disk devices and logicals.

**Table 1–9 Virtual Disk Devices and Logicals, NET DELETE**

Class of Default Device	Corresponding Logical	Privilege Needed
SYSTEM	LAD\$SYSTEM_DISKS	Write access
BOOT <sup>1</sup>	LAD\$BOOT_DISKS	Write access
APPLICATION	LAD\$APPLICATION_DISKS	Write access
USER	SYS\$LOGIN <sup>2</sup>	Write access

<sup>1</sup>Use the `/TYPE=BOOT` qualifier to delete a network key disk.

<sup>2</sup>SYS\$LOGIN is the root directory of your VMS account. The default class is USER.

## Examples

- You want to delete the virtual disk MYDISK.DSK on SERVER1, virtual disk DUB0, and to be prompted for a password. Enter:

```
C:\> NET DELETE \\SERVER1\USER1 * /FILE=DUB0:[USER1]MYDISK.DSK
Password:
```

- As USER1, you want to delete the virtual disk MYDISK.DSK on SERVER1, and to be prompted for information. Enter:

```
C:\> NET DELETE \\SERVER1 /QUERY
```

## **NET DELETE**

The system prompts you as follows:

Where is it stored? (VAX/VMS filespec): MYDISK.DSK

Username: USER1

Password:

What type of disk? (application, boot, system, user:) USER

The screen displays the VMS disk name, followed by the name of the deleted disk:

```
$DUA0: [USER1]MYDISK.DSK;1 deleted
```

Command completed successfully.

### **Related Commands**

**NET CREATE**

**NET DISMOUNT**

---

## NET DISK SERVICES

### Purpose

This command describes the virtual disk services available on a server.

### Guidelines

After you mount the disk with NET MOUNT, use NET DISK SERVICES to display your disk.

The word SERVICES is optional.

### Format

NET DISK [SERVICES] [\ \server][\service[%username] [password | \*]

### Parameters

server	Is the name of the server whose services you want to display.
service	Is the name of the disk service. Enter this parameter alone displays the servers that offer this service.
username	Is your assigned user name.
password	Is your assigned password.
*	Prompts you for your password, which is not echoed on the screen.

### Examples

- To find out what servers offer the service SPREADSHEET, enter:

```
C:\> NET DISK SPREADSHEET
```

The screen displays:

```
USE Version 4.1 Digital Network Connection Manager
```

```
Service information for SPREADSHEET
```

Server Name	Rating	Pass	Access	Limit	Users	Network Address	Node
-----	-----	-----	-----	-----	-----	-----	-----
SERV1	1	No	RO	None	1	AA-00-04-00-03-27	9.606
SERV2	1	No	RO	30	1	AA-00-04-00-26-BD	9.771

## NET DISK SERVICES

- You need to find out what disk services are available on **SERVR1**. Enter:

```
C:\> NET DISK SERVICES \\SERVR1
Password:
```

The screen displays:

```
USE Version 4.1 Digital Network Connection Manager
```

```
Service Information for \\SERVR1%USER1
```

```
Disk Server Services:
```

Service name	Type	Server	Limit	Users	Acc	Rating	Status
08-00-2C-14-28-80	(SMITIX)						
	BOOT	SERVR1	1	0	RW	1	MNT PERM
LISTS	USER	SERVR1	1	0	RW	1	MNT PERM
REPORTS	APPL	SERVR1	1	0	RW	1	MNT PERM
GRAPHS	APPL	SERVR1	1	0	RW	1	MNT PERM
DOS__SYSTEM__V30	SYST	SERVR1	30	28	RO	2	DISMNT

Command completed successfully.

**Table 1-10 Description of the NET DISK SERVICES Display**

Screen Header	Meaning
Service name	Is the name of a service offered on the server. This can be a boot service with an Ethernet address such as AA-00-04-00-0C-F8.
Type	Is the purpose of the service. The service can be for a user, an application, a remote boot, or system information.
Server	Is the name of the server for which you have requested service listings.
Limit	Is the number of connections allowed on the service.
Users	Is the number of users currently connected.
Acc	Is the type of access granted to the service: RO (Read Only) or RW (Read and Write). Only one user at a time can use a service with Read and Write (RW) access.

(continued on next page)

Table 1–10 (Cont.) Description of the NET DISK SERVICES Display

Screen Header	Meaning
Rating	Is the priority of a service. The valid range is 1 through 65,535. The default is 1.
Status	Can be one or more of the following:
	MNT <sup>1</sup> The virtual disk is mounted.
	PERM      The virtual disk is mounted permanently. When mounted permanently, the disk mounts every time the server is restarted. When mounted temporarily, the virtual disk is available only until the next time the server is started.
	PEND <sup>1</sup> Occurs when you mount a read-write disk to the cluster (using the /CLUSTER qualifier). One node offers the disk (MNT); others are pending. If the primary node fails, one of the other nodes in the cluster will go from pending to mounted.
	DSMNT      The virtual disk is currently dismounted.

<sup>1</sup>When the status is MNT and PEND, the virtual disk is mounted with write access on one node, and another node is waiting to mount the disk with write access.



## NET DISMOUNT

---

## NET DISMOUNT

### Purpose

NET DISMOUNT makes a virtual disk unavailable for use on the network.

### Guidelines

You must run the NET DISMOUNT command before you can delete a virtual disk.

### Format

NET DISMOUNT [drive:]\ \ server\ service[%username][password | \*]

```
[ /CLUSTER  
  /QUERY  
  /TEMPORARY  
  /TYPE=class ]
```

### Parameters

drive	Is the logical drive identification for the virtual disk. If you specify a drive, the client is disconnected from the drive when the disk is dismounted.
server	Is the name of the server where the virtual disk resides.
service	Is the name of the disk service you are dismounting.
username	Is your assigned user name on the server.
password	Is the password associated with the user name.
*	Prompts you for your password, which is not echoed on the screen.

**Qualifiers**

<b>/CLUSTER</b>	Dismounts the virtual disk on each applicable server in a cluster. The default is to dismount the virtual disk on a specified server.
<b>/QUERY</b>	Prompts you for all the information needed to dismount the disk.
<b>/TEMPORARY</b>	Dismounts the virtual disk until the server is restarted. The default is to dismount the virtual disk permanently.
<b>/TYPE=class</b>	Determines the default device and directory for the virtual disk. The default device and directory are represented by one of the logicals shown in Table 1–11.

**Table 1–11 Virtual Disk Devices and Logicals, NET DISMOUNT**

<b>Class of Default Device</b>	<b>Corresponding Logical</b>	<b>Privilege Needed</b>
SYSTEM	LAD\$SYSTEM_DISKS	Write access
BOOT <sup>1</sup>	LAD\$BOOT_DISKS	Write access
APPLICATION	LAD\$APPLICATION_DISKS	Write access
USER	SYS\$LOGIN <sup>2</sup>	Write access

<sup>1</sup>Use the /TYPE=BOOT qualifier to delete a network key disk.

<sup>2</sup>SYS\$LOGIN is the root directory of your VMS account. The default class is USER.

## NET DISMOUNT

### Example

You no longer need to use the disk service MAP. The following command disconnects drive D, dismounts the service MAP, belonging to USER1 on SERVER1, and prompts for the rest of the information needed.

```
C:\>NET DISMOUNT D: \\SERVER1\MAP%USER1 * /QUERY
```

```
Password:
```

```
What type of disk? (application, boot, system, user): USER
```

```
Permanently dismount the disk? (y/n): Y
```

```
Dismount the disk for the entire cluster? (y/n): Y
```

```
Okay to continue? (y/n): Y
```

### Related Commands

NET CREATE

NET DELETE

NET MOUNT

---

## NET ERROR

### Purpose

This command lets you display the error statistics for the network and for virtual disk services since the error counters were last zeroed.

### Guidelines

The counters for the virtual disk service are displayed as LAD counters.

### Format

NET ERROR

### Example

To display the error statistics since the error counters were last cleared, enter:

```
C:\> NET ERROR
```

The resulting display shows the error statistics for all the drives on your client.

```
Line Counters as of 12-Aug-1991 17:09:17
```

```
Line = ETHER-1
```

```
Seconds since last zeroed      = 95
Bytes received                 = 660423
Bytes sent                     = 30325
Data blocks received           = 3120
Data blocks sent               = 344
Multicast bytes received       = 34946
Multicast blocks received      = 314
Blocks sent, initially deferred = 2
Blocks sent, single collision   = 0
Blocks sent, multiple collisions = 0
Send failure                   = 0
Receive failure                = 0
Unrecognized frame destination = 0
Data overrun                   = 0
System buffer unavailable      = 0
User buffer unavailable         = 0
Collision detect check failure = 0
```

```
Circuit counters as of 12-Aug-1991 17:09:20
```

```
Circuit = ETHER-1
```

## NET ERROR

Seconds since last zeroed	= 99
Terminating packets received	= 0
Originating packets sent	= 0
Circuit down	= 0
Initialization failure	= 0
Bytes received	= 516438
Bytes sent	= 24094
Data blocks received	= 582
Data blocks sent	= 347
User buffers unavailable	= 0

### LAD connections

Drive F: connected to \\SERVER1\DISK01

Server Address	= AA-00-04-00-5E-20
Disk size, in blocks	= 20480
Block size, in bytes	= 512
Disk size, in bytes	= 10485760
Heads	= 4
Sectors per track	= 17
Reads	= 24
Writes	= 0
Bytes read	= 12576
Bytes written	= 0
Timeouts	= 0
Errors	= 0
Access Mode	= Fast (Read/Write)
Status	= Active

No CD ROM connections

Command completed successfully.

## Related Command

NET ZERO LAD

---

# NET FILE SERVICES

## Purpose

This command displays information about the file and printer services available on a server.

## Guidelines

The word SERVICES is optional.

## Format

NET FILE [SERVICES] \\server[\service][%username] [password | \*]

## Parameters

server	Is the name of the server.
service	Is the name of a service. If you specify a service name, information about only that service is displayed. The default is to display all authorized services.
username	Is your assigned user name. If you do not give a user name, NET FILE SERVICES uses default access information to connect to the server.
password	Is your assigned password.
*	Prompts you for your password, which is not echoed on the screen.

## NET FILE SERVICES

### Example

This command displays the file and printer services on **SERV1**.

```
C:\> NET FILE SERVICES \\SERV1
```

```
USE Version 4.1 Digital Network Connection Manager
```

```
File Server Authorized Services:
```

User name	Alias name	Service name	Access	RMS protection
<PUBLIC>	ISWYS	ISWYS	RWC	S:RWED,O:RWED,G:,W:
<PUBLIC>	LN03_DPORT	LN03_DPORT	RWC	S:RWED,O:RWED,G:,W:
<PUBLIC>	DBASES	PCAPP	RWC	S:RWED,O:RWED,G:,W:
<ADAMS>	ADAMS	PETER	R	S:RWED,O:RWED,G:,W:

**Table 1–12 Description of the NET FILE SERVICES Display**

---

User name	Is the user name associated with the file service. The user name can be a public directory.
Alias name	Is an alternate name for the file service.
Access	Is the access granted to the file service: R (Read), W (Write), C (Create).
Service name	Is the name of the file service.
RMS protection	Is the protection granted by the user who created the file service. The user can grant R (Read), W (Write), E (Execute), and D (Delete) privileges to S (System administrator), O (Owner), G (Group), or W (World).

---

---

## NET HELP

### Purpose

With NET HELP, you can learn the function and syntax of the most commonly used client commands.

### Format

NET HELP [command]

### Parameters

A command can be one of the following:

ATTRIB	DNP	KBDLK	KBDXT	MODIFY	SCH
COMMANDS	EMSLOAD	KBDLK450	KBDZENAT	MOUNT	SETHOST
CONTINUE	ERROR	KBDLTE	KBDZENXT	PASSWORD	TEST
CREATE	FILE	KBDLTEKP	LAD	PAUSE	TIME
DELETE	HELP	KBDM24	LAST	PERMIT	USE
DISK	KBDAT	KBDM28	LAT	PRINT	ZERO
DISMOUNT	KBDEPC	KBDOther	LIST	RCV	
DLL	KBDGEN	KBDST	LOAD	REDIR	
DLL802	KBDLAP	KBDVM	MEMMAN	SAVE	

---

### Note

The KBD commands show keyboard configurations.

---

### Example

This command displays the information for the EMSLOAD command.

```
D:\> NET HELP EMSLOAD
```

```
EMSLOAD
```

The EMSLOAD command is responsible for loading client network components, such as LAD.EXE, LAT.EXE, LAST.EXE, LANSESS.EXE, RCV.EXE and DNNETH.EXE, into EMS.

The format of the command is:

```
EMSLOAD <module name> <SWITCHES>
```

```
Example: EMSLOAD LAD /R:1 /W:1
```

Above example will load LAD.EXE into EMS and all the switches will be used by LAD.EXE.



## NET LIST

---

## NET LIST

### Purpose

This command tells you what nodes are currently held in your DECnet node database file, DECNODE.DAT. A **node** is a client or a server on the network.

### Format

NET LIST

### Example

To display information about nodes in the DECnet node database, enter:

```
C:\> NET LIST
```

A screen similar to the following is displayed:

```
Known Permanent Nodes as of 12-Aug-1991 9:04:51
```

```
Executor node = 9.563 (PLAY1)
```

```
State On  
Executor Identification DECnet-DOS V4.1.0
```

Node Address	Node Name	Active Links	MS-NET	Account Information
9.109	PLAY1	0	M	
9.110	PLAY2	1	M	
9.111	PLAY3	0	EXEC	
9.112	PLAY4	0	M	

```
Command completed successfully.
```

```
C:\>
```

---

## NET LOAD

### Purpose

This command lets you restore network connections that you have saved with NET SAVE. By using NET LOAD, you avoid the task of reestablishing these connections with the USE command.

### Format

NET LOAD [drive:\path\]filename [/LOG]

### Parameters

drive:	Is a drive on which the context file is stored. (See the NET SAVE command.)
path	Is a path, if any, to the context file.
filename	Is the name of the context file.

### Qualifier

/LOG            Displays the connections as they are being restored.

### Example

To restore the connections saved in the context file SAVE.TXT, enter:

```
C:\>NET LOAD SAVE.TXT
```

You are prompted for passwords for each connection. Press  at each prompt.

The screen displays:

```
Command completed successfully.
```

### Related Command

NET SAVE

## NET MODIFY

---

## NET MODIFY

### Purpose

NET MODIFY changes such characteristics of a virtual disk service as:

- Password for the virtual disk
- Number of connections allowed to the virtual disk
- Number of blocks allocated to the virtual disk
- Priority rating of the virtual disk service

### Guidelines

NET MODIFY overrides characteristics set with other commands such as NET CREATE.

### Format

NET MODIFY \\ server\ service[%username] [password | \*]

```
[ /CONNECTIONS=n  
/EXTENSION=n  
/FILE=filespec  
/NOPASSWORD  
/PASSWORD=string  
/QUERY  
/RATING=n  
/TYPE=class ]
```

### Parameters

server	Is the name of the server on which the virtual disk is located.
service	Is the name of the virtual disk service.
username	Is your assigned user name.
password	Is your assigned password.
*	Prompts you for your password, which is not echoed on the screen.

## Qualifiers

<b>/CONNECTIONS=n</b>	Limits the number of connections users can make to the virtual disk. For n, enter a number equal to the maximum number of connections allowed. When n is <b>NO_LIMIT</b> , the number of connections is unlimited. The default is 30. Use this qualifier only for disks mounted for Read Only access; disks mounted for Read and Write access are restricted to one user.
<b>/EXTENSION=n</b>	Is the additional number of blocks you want to allocate to the virtual disk. Use the <b>/EXTENSION</b> qualifier when you want to extend the number of blocks already allocated for the virtual disk. You cannot extend the virtual disk to a size larger than the maximum size specified when the disk was created. See Table 1-7. The DOS operating system only displays and uses the changed file size after you break your connection to the virtual disk and make a new connection.
<b>/FILE=filespec</b>	Is the VMS file specification for the virtual disk.
<b>/NOPASSWORD</b>	Deletes the password for the virtual disk.
<b>/PASSWORD=string</b>	Sets the password to the string you specify.
<b>/QUERY</b>	Prompts you for all the qualifiers.
<b>/RATING=n</b>	Is a measure of the priority of a service. When the <b>USE</b> command connects the client to the virtual disk, it selects the highest rating or priority. The valid range is 1 through 65,535. The default is 1.
<b>/TYPE=class</b>	Determines the default device and directory for the virtual disk. See Table 1-13 for the list of corresponding logicals.

## NET MODIFY

**Table 1–13 Virtual Disk Devices and Logicals, NET MODIFY**

Class of Default Device	Corresponding Logical	Privilege Needed
SYSTEM	LAD\$SYSTEM_DISKS	Write access
BOOT <sup>1</sup>	LAD\$BOOT_DISKS	Write access
APPLICATION	LAD\$APPLICATION_DISKS	Write access
USER	SYS\$LOGIN <sup>2</sup>	Write access

<sup>1</sup>Use the /TYPE=BOOT qualifier to delete a network key disk.

<sup>2</sup>SYS\$LOGIN is the root directory of your VMS account. The default class is USER.

## Examples

- To increase the allocated file size of your virtual disk file MYDISK.DSK by 2000 blocks, enter:

```
D:\> NET MODIFY \\SERVER1\USER1%USER1 /FILE=MYDISK.DSK * /E=2000
```

Password:

- To change the password for the virtual disk service on SERVER2, enter:

```
D:\> NET MODIFY \\SERVER2\DISK1%USER1 * /PASSWORD=newpassword
```

At the prompt, enter the disk location, USER3:[DISKS]:

```
Where is it stored? (DISK1.DSK) : USER3:[DISKS]
```

```
Password: Enter your personal password
```

The system responds:

```
Service DISK1 set
```

```
Command completed successfully
```

To connect to the disk with the new password, enter:

```
K:\> USE ?: DISK1 *
```

```
Password: Newpassword
```

The screen displays:

```
Device F: connected to \\SERVER2\DISK1
```

**Related Command**

**NET CREATE**

## NET MOUNT

---

## NET MOUNT

### Purpose

Use **NET MOUNT** to make a virtual disk ready for network connections. **NET MOUNT** also gives you control over the use of the disk. For example, you can limit access to Read Only, and you can limit the number of connections to the disk.

### Guidelines

Use **NET MOUNT** after you create a virtual disk with **NET CREATE**.

The virtual disk can be mounted in one of two ways:

- Temporarily—only until the server is turned off
- Permanently—remounts when the system is restarted

If you mount a virtual disk already offered on the network, **NET MOUNT** displays a message.

To mount a disk, you need Write access on the default device and in the directory where the corresponding logical points. See Table 1–14 for the list of corresponding logicals.

### Format

**NET MOUNT** \\server\service[%username] [password | \*]

```
[ /CLUSTER  
/CONNECTIONS=n  
/FILE=filespec  
/PASSWORD=string  
/QUERY  
/RATING=n  
/RO | RW  
/TEMPORARY  
/TYPE=class ]
```

## Parameters

<b>server</b>	Is the name of the server on which the virtual disk was created.
<b>service</b>	Is the name you want to give to the disk service.
<b>username</b>	Is the user name used when the virtual disk was created.
<b>password</b>	Is the password associated with the user name.
<b>*</b>	Prompts you for your password, which is not echoed on the screen.

## Qualifiers

<b>/CLUSTER</b>	Mounts the virtual disk on each available server in a cluster. The default is to mount the virtual disk only on the specified server.
<b>/CONNECTIONS=n</b>	Limits the number of connections users can make to the virtual disk. The default is 30. For n, enter a number equal to the maximum number of connections allowed. Use <b>/CONNECTIONS=NO_LIMIT</b> for an unlimited number of connections. Use the <b>/CONNECTIONS</b> and the <b>/RO</b> qualifiers for disks you mount for Read Only access. Disks mounted for Read and Write access are restricted to one user; therefore, no further connection information is necessary.
<b>/FILE=filespec</b>	Is the file specification for the virtual disk.
<b>/PASSWORD=string</b>	Sets the password to the string you specify. The default is no password for the disk. The <b>/PASSWORD</b> qualifier ensures the security of the disk.
<b>/QUERY</b>	Prompts you for the information necessary to mount the disk.
<b>/RATING=n</b>	Is the priority of a service. The rating value is used when the client connects to a virtual disk. At this time, the <b>USE</b> command connects to the service of the highest rating. The range is 1 through 65,535. The default is 1.



## NET MOUNT

<code>/RO</code>	Mounts the virtual disk as <b>Read Only</b> .
<code>/RW</code>	Mounts the virtual disk as <b>Read and Write</b> . Only one user at a time can connect to a virtual disk mounted with Read and Write access. This is the default.
<code>/TEMPORARY</code>	Means that the disk is mounted only until the server stops. When the server is restarted, you must remount the disk.
<code>/TYPE=class</code>	Determines the default device and directory for the virtual disk. The default device and directory are represented by one of the logicals in Table 1–14.

Table 1–14 shows virtual disk devices and corresponding logicals.

**Table 1–14 Virtual Disk Devices and Logicals, NET MOUNT**

<b>Class of Default Device</b>	<b>Corresponding Logical</b>	<b>Privilege Needed</b>
SYSTEM	LAD\$SYSTEM_DISKS	Write access
BOOT <sup>1</sup>	LAD\$BOOT_DISKS	Write access
APPLICATION	LAD\$APPLICATION_DISKS	Write access
USER	SYS\$LOGIN <sup>2</sup>	Write access

<sup>1</sup>Use the `/TYPE=BOOT` qualifier to delete a network key disk.

<sup>2</sup>SYS\$LOGIN is the root directory of your VMS account. The default class is USER.

## Examples

- You want to mount a virtual disk with Read and Write access that was created as a service called **MYSERVICE** on **SERVR1**. You also want to be prompted for a password. Enter:

```
C:\> NET MOUNT \\SERVR1\MYSERVICE%MYNAME * /RW
```

You are prompted as follows:

```
Where is it stored (MYSERVICE.DSK): Press Return to accept or  
enter another file name
```

```
Password: Enter your password
```

- You want to mount **MYSERVICE.DSK**, set the service priority to 1, and be prompted for further information. Enter:

```
C:\> NET MOUNT \\SERVR2\MYSERVICE%MYNAME /QUERY /RATING=1
```

```
Where is the disk stored? (MYSERVICE.DSK) MYSERVICEDISK.DSK
```

```
What type of disk? (application, boot, system, user): USER
```

```
Mount the disk for the entire cluster? (y/n): Y
```

```
How should it be accessed? (RO,RW): RW
```

```
Should it require a password to access the disk? (y/n): Y
```

```
Permanently mount the disk? (y/n): Y
```

```
This service is already offered on the network.
```

```
Okay to continue? (y/n): Y
```

## Related Commands

**NET CREATE**

**NET DISMOUNT**

## NET PASSWORD

---

### NET PASSWORD

#### Purpose

This command lets you change your password on a server.

NET PASSWORD uses any access control information stored in the DECALIAS.DAT file. For example, if DECALIAS.DAT already contains your user name and password, NET PASSWORD prompts you only for the new password. If the file has no information about you, NET PASSWORD prompts you for all the necessary information to change your password.

NET PASSWORD changes the password only on the server. NET PASSWORD does not update the database. To change the password in the database, enter:

```
NCP DEFINE NODE nodename PASSWORD newpassword
```

#### Format

```
NET PASSWORD \\server[%username]
```

#### Parameters

**server** Is the name of server on which you want to change your password.  
**username** Is your assigned user name.

#### Examples

- Your user name and password are already defined in the ACL. Therefore, when you change your password on SERVR1, you are prompted only for the new password and a verification:

```
C:\> NET PASSWORD \\SERVR1  
New password: STAYAWAY  
Verification: STAYAWAY  
Command completed successfully
```

## NET PASSWORD

- No information about you has been defined in the DECALIAS.DAT file. Therefore, NET PASSWORD prompts you as follows:

```
C:\> NET PASSWORD
Which server? (Server node name): SERVER1
Username: USER1
New password: STAYAWAY
Verify: STAYAWAY
Command completed successfully
```

## NET PAUSE

---

## NET PAUSE

### Purpose

This command lets you temporarily suspend logical connections to file or printer services, and redirect devices to your physical disks, directories, or printers.

For example, if you have connected logical devices LPT1 and LPT2 to network printers, you cannot use those devices for your own local printers. To disconnect LPT1 and LPT2 from the network temporarily and redirect them to local printers, use the NET PAUSE command.

### Guidelines

To restart connections suspended with NET PAUSE, use the NET CONTINUE command.

### Format

NET PAUSE DRDR | PRDR

### Parameters

DRDR           Suspends all your connections to file services.

PRDR           Suspends all your connections to network printers.

### Example

You want to use the logical print devices for your local printers. To make the devices available, you must suspend the network connections of your logical print devices for a brief period. Enter:

```
C:\> NET PAUSE PRDR
```

### Related Command

NET CONTINUE

---

## NET PRINT

### Purpose

This command lets you:

- Print a file
- Show the status of your print request

### Guidelines

To print files, you must connect to one of the following printer services (queues). See the USE command, *Connecting to a File or Printer Service*.

- A VMS print queue, for example:  
    `\\SERVR1\LPS$POSTSCRIPT`
- A printer service queue. An example of a printer service queue for Digital-supported printers is:

`\\SERVR1\LN03_DPORT`

The NET PRINT command copies the file to a service (queue) connected to the logical print device. When it is your turn in the queue, your file is printed.

### Format

NET PRINT [drive:][\path\] filename.ext device: [/QUALIFIER /...]

## NET PRINT

You can show the status of print requests by using one of the following formats:

Command	Result
NET PRINT \\server	Lists all the print requests in all the queues on a server.
NET PRINT \\server\queue	Lists the print requests in the specified queue.
NET PRINT \\server\queue /USER=username	Lists the print requests for a specified user on the queue.
NET PRINT device: /USER=username	Lists the print requests for a user on a specified print device.
NET PRINT device: jobnumber	Show the status of a specific job number on the device.

### Parameters

drive	Is the drive that contains the file you want to print.
path	Is the path to the directory containing the file you want to print.
filename.ext	Is the file name and extension of the file you want to print.
device	Is a logical device name for the printer service, such as LPT1 or LPT2. The device name must be followed by a colon. Your file prints on the printer that corresponds to the logical device name.
job #	Is the job number of your print request.
/QUALIFIER	Is one or more words or phrases that modify the NET PRINT command. You can add qualifiers up to a limit of 128 characters.
/...	If you omit qualifiers from the print request, the system uses the system default qualifiers.

## Qualifiers

<code>/AFTER</code>	Specifies the date and/or time after which the file will print. Specifying <code>/AFTER</code> does not affect jobs already in the queue.
<code>/BINARY</code>	Specifies a non-ASCII file such as a PCL file. Use <code>/BINARY</code> only when your printer has a PCL capability.
<code>/BURST   NOBURST</code>	Specifies whether a burst page precedes your printed file. A <b>burst page</b> is a page printed between sheets on a line printer for identification of individual files. The default is <code>/NOBURST</code> . When you specify <code>/BURST</code> , you need not specify <code>/FLAG</code> . A flag page automatically follows a burst page.
<code>/CHARACTERISTICS=n</code>	Lets you modify a print request according to a list of characteristics available to the specific printer. See your system administrator for a list of characteristics. For example, some printers offer different ink colors that can be selected with the <code>/CHARACTERISTICS</code> qualifier. The value of <code>n</code> can be either the number or the name of the characteristic.
<code>/COPIES=n</code>	Specifies the number of copies to be printed. The value of <code>n</code> is from 1 through 255. The default is 1. You may prefer to use the equivalent command <code>/JOB_COUNT=n</code> .
<code>/DELETE</code>	Lets you delete a print request.
<code>/FLAG   NOFLAG</code>	Specifies whether a flag page is printed before a file. The flag page contains the name of the user submitting the request, the job entry number, and other information about the file.



## NET PRINT

<code>/FORM=n</code>	<p>Sets a specific form for your printed file by overriding the default forms.</p> <p>Each form is identified by a name and number, which are assigned at installation. The value for <code>n</code> is the number of the form. For a list of forms and numbers, see the documentation for your printer.</p> <p>Your system can instead use the equivalent qualifier, <code>/PARAMETERS=(string)</code>.</p>
<code>/HEADER   NOHEADER</code>	<p>If your VMS print symbiont supports it, you can use <code>/HEADER</code> to print a heading line at the top of each page. The line generally includes the file name, date, and time of printing. You must add <code>/NOPASSALL</code> to this qualifier. The default is <code>/NOHEADER</code>.</p>
<code>/HELP</code>	<p>Displays information on the screen about print commands, qualifiers, and syntax.</p>
<code>/JOB_COUNT=n</code>	<p>Sets the number of copies to be printed. You may prefer to use the equivalent command <code>/COPIES=n</code>.</p>
<code>/LOWERCASE   NOLOWERCASE</code>	<p>Indicates whether your file must be printed on a printer that supports both lowercase and uppercase letters.</p> <p>Most printers offer both lowercase and uppercase letters. But occasionally a printer offers only uppercase. This qualifier enables you to make a selection between these types of printers.</p> <p>To print on an uppercase printer only, use <code>/NOLOWERCASE</code>. To print on an upper-and-lowercase printer, use <code>/LOWERCASE</code>.</p>
<code>/NAME=(string)</code>	<p>Lets you name your print request and display the name on the flag page. You can use from 1 to 39 alphanumeric characters and underscores in the name.</p> <p>Do not add a file extension. A <i>correct</i> name is <code>MY_FILE_NAME</code>. <i>Incorrect</i> names are <code>MY FILE NAME</code> and <code>MY_FILE_NAME.TXT</code>.</p>

**/NOTE=(string)**

Specifies a message of up to 255 alphanumeric characters that appears on the flag page.

**/OPERATOR=(string)**

**In VMS** Notifies the operator when the file begins to print by sending a screen message of up to 55 characters. The string the operator sees is supplied by the string argument.

**In ULTRIX** Through a mail message, notifies the operator or user when the print job starts to print. The string argument supplies the username (mail address) of the user or operator to be notified. If no username is supplied, the default is the system account.

**/PAGES=lowlim, uplim**

Lets you select the pages to be printed in an ASCII file. The lowest page number is *lowlim*; the highest page number is *uplim*. By default, all pages are printed. Follow these guidelines:

You can print...	You cannot print...
A single page or a range of pages; for example, you can print page 6, or pages 2 through 4 of a 50-page file.	Random pages; for example, you cannot print pages 3, 5, and 14. Selected pages from a postscript file.

**/PARAMETERS=(string)**

Specifies from one to eight parameters for the print request. The parameters control the way the printed page looks. Follow these guidelines:

Each parameter can contain up to 255 alphanumeric characters. If you combine several parameters, the total characters cannot exceed 255.

Each type of printer has its own set of parameters. For a complete list, see the documentation for your printer.

## NET PRINT

ULTRIX parameters work as documented in `lpr(1)` of the ULTRIX Reference Pages. The following ULTRIX parameters are unsupported: `-p`, `-P`, `-T`, `-1`, `-2`, `-3`, `-4`, `-g`, `-l`, `-t`, `-C`, `-d`, `-f`, `-n`, and `-v`.

If you do not specify a user name when you connect to a printer service, you must specify one when you use the `-m` option (see the NET PRINT /PARAMETERS examples).

Your system can instead use the equivalent qualifier `/FORM=n`.

**/PASSALL | NOPASSALL**

Lets you fix output that develops errors in format. Your table columns may be disorganized; your output may have miscellaneous characters that you do not recognize; or printing may start in the middle of the page.

The `/PASSALL` command tells the printer to *pass* the VMS print symbiont and read your input code directly.

**/PRIORITY=n**

Lets you override the print request priorities set by the system administrator. Ask your system administrator to assign a new priority number. Avoid choosing a priority number at random.

**RESTART | NORESTART**

Specifies whether a print request restarts after a system crash or after the system administrator has stopped the queue and restarted it.

Printing normally restarts at the beginning of the file. It does not resume at the point where the interruption occurred. To avoid returning to the beginning of the file, use `/NORESTART`. The file stops printing after the interruption.

**/SET**

Used with other qualifiers, `/SET` specifies that the qualifiers remain in effect until you change them or disconnect from the logical print device. Used alone, `/SET` removes all qualifiers for a print device.

### **/SETUP**

Prints unique documents by sending their control programs to the printer.

Control commands are stored in modules in the VMS device control library. You can use a control module that has already been written, or you can write your own. To write your own, create a module, write a control program to an ASCII file, and use the VMS Librarian program, to store the module in the device control library.

The **/SETUP** program extracts the module from the device control library and copies it to the printer. The new controls override any default controls on the printer.

Note that module names are not checked for validity until the time that the file is actually printed. Therefore, **/SETUP** is susceptible to typing errors and other mistakes. It is recommended only for experimental setups.

### **/SHOW**

Lists the server and service (print queue) connected to a print device, as well as any print qualifiers. The **/SHOW** qualifier works in two ways:

The **/SHOW** qualifier *with* a device name displays only the server and printer service to which the device is connected, and any qualifiers.

The **/SHOW** qualifier *without* a device name displays servers and services for *all* print devices, and any qualifiers.

## NET PRINT

### **/SPACE | NOSPACE**

Specifies whether the space between lines is doubled in the printed output. /SPACE doubles the space between lines. /NOSPACE specifies that the spacing in the output file matches the spacing in the input file. /NOSPACE is the default.

### **/TRAILER | NOTRAILER**

Specifies whether a trailer page is printed at the end of the file. The trailer page signifies the end of the file.

The system administrator determines the content of the trailer page. Frequently, the system administrator sets /TRAILER as the default for all print jobs. If so, you cannot eliminate the trailer page from individual print jobs.

## Examples

### **NET PRINT /AFTER**

You want to print a long file called EXAMPLE1.PS on LPT1 after 5:00 pm on 9 September, 1991. Enter:

```
C:\> NET PRINT EXAMPLE1.PS LPT1: /AFTER=09-SEP-1991:17:00
```

### **NET PRINT /BINARY**

To print the PCL file FILE.CAP, enter:

```
C:\> NET PRINT FILE.CAP LPT1: /BINARY
```

### **NET PRINT /BURST**

You want a burst page to identify your file EXAMPLE1.TXT among all the other files being printed on the line printer connected to device LPT1. Enter:

```
C:\> NET PRINT EXAMPLE.TXT LPT1: /BURST
```

### **NET PRINT /CHARACTERISTICS**

Your printer normally prints in black ink. However, you want your file to be printed in red. Check your characteristics list for the correct number. A typical list looks like this:

---

**Note**

---

The following sample list shows characteristics supported on a typical printer. However, this is only a sample list. Check with your system administrator to see what characteristics are available on your printer.

---

Characteristic name	Number
-----	-----
REDINK	0
COLOR CHART	1
TEXMAC JOB	2
BLUEINK	6
BROWNINK	25

To print in red ink, enter either of the following commands:

```
C:\> NET PRINT /CHARACTERISTICS=0
```

```
C:\> NET PRINT /CHARACTERISTICS=REDINK
```

**NET PRINT /COPIES**

- To print four copies of file **EXAMPLE1.TXT** on device **LPT2**. Enter:

```
C:\> NET PRINT EXAMPLE1.TXT LPT2: /COPIES=4
```

- You want to print two copies of **EXAMPLE2.PS** on postscript device **LPT3**. The file for **EXAMPLE2.PS** is in directory **DIR2** on drive **M**. Enter this command:

```
C:\> NET PRINT M:\DIR2\EXAMPLE2.PS LPT3: /COPIES=2
```

**NET PRINT /DELETE**

To delete job number 93 from the print queue on **SERVR1**, device **LPT1**, enter:

```
C:\> NET PRINT LPT1:\SERVR1\LPS$POSTSCRIPT 93 /DELETE
```

**NET PRINT /FORM**

Your printer normally prints on 8 1/2 x 11-inch paper. However, you want to print your job **EXAMPLE1.TXT** on white 3 x 5-inch cards.

Make sure that 3 x 5-inch cards are in the input tray. Then select the correct number from the forms list.

---

**Note**

---

The following sample list shows forms supported on a typical printer. However, this is only a sample list. Check with your system administrator to see what forms are available on your printer.

---

## NET PRINT

Form name	Number	Description
-----	-----	-----
3_HOLE	56	WHITE 3-HOLE PAPER, HOLES OUT (DUPLEX)
CARD (stock=CARD_WHITE)	102	WHITE CARD STOCK (DUPLEX)
CARD_BLUE	55	BLUE CARD STOCK (DUPLEX)
CARD_YELLOW	54	YELLOW CARD STOCK (DUPLEX)
CPS\$DEFAULT (stock=DEFAULT)	1114	CPS DEFAULT
DEFAULT	0	SYSTEM DEFINED DEFAULT
DUPLEX_PARCHMENT (stock=PARCHMENT)	201	PARCHMENT PAPER (DUPLEX)
DUPLEX_PLAIN (stock=PLAIN)	200	PLAIN WHITE UNPUNCHED PAPER (DUPLEX)
LN\$DEFAULT (stock=DEFAULT)	10	80 X 60 (LN01 AND LN03 DEFAULT)
LN\$LANDSCAPE_FULL (stock=DEFAULT)	12	132 x 60 (LN01 AND LN03 DEFAULT)

White card stock is code 102. To print EXAMPLE1.TXT on print device LPT1 on white card stock, enter either of the following commands:

```
C:\> NET PRINT EXAMPLE1.TXT LPT1: /FORM=102
```

```
C:\> NET PRINT EXAMPLE1.TXT LPT1: /FORM=CARD
```

### NET PRINT /HEADER /NOPASSALL

If your printer supports a VMS header, you can print a standard heading line at the top of each page of your file. To print headers in file EXAMPLE.TXT, enter:

```
C:\> NET PRINT EXAMPLE1.TXT LPT1: /HEADER /NOPASSALL
```

### NET HELP PRINT

You want to display information on the screen about print commands, qualifiers, and syntax. Enter:

```
C:\> NET HELP PRINT
```

### NET PRINT /JOB\_COUNT

To request four printed copies, enter:

```
C:\> NET PRINT /JOB_COUNT=4
```

### NET PRINT /LOWERCASE

Your office has two types of printer:

- All uppercase letters

- Upper and lowercase letters

To print the file TEST.TXT on the upper-and-lowercase printer LPT3, enter:

```
C:\> NET PRINT TEST.TXT LPT3: /LOWERCASE
```

## NET PRINT /NAME

You are printing only page 5 of your file `EXAMPLE1.TXT`. You want the flag page to reflect this so that you can identify your single page. Enter:

```
C:\>NET PRINT EXAMPLE1.TXT LPT1: /PAGE=(5,5) /NAME=(EXAMPLE1_PAGE_5)
```

## NET PRINT /NOTE

This is the final draft of your report. You want to distinguish this draft from all previous drafts by placing a note on the flag page. Add a note similar to the following:

```
C:\>NET PRINT REPORT.TXT LPT1: /NOTE=(Final_draft_of_fiscal_report)
```

## NET PRINT /OPERATOR

You have entered file `TEXT.PS` in the print queue. You want the system to notify you automatically as soon as your file begins to print. Enter:

```
C:\>NET PRINT TEXT.PS LPT3: /OPERATOR=(TEXT.PS_IS_PRINTING)
```

## NET PRINT /PAGES

- You have discovered an error on page 4 of your 50-page ASCII file `EXAMPLE1.TXT`. Rather than print all 50 pages, you can print page 4 alone on LPT1 by entering:

```
C:\>NET PRINT EXAMPLE1.TXT LPT1: /PAGES=(4,4)
```

- You have added several paragraphs to page 10 of ASCII file `EXAMPLE2.TXT`. Currently, `EXAMPLE2.TXT` contains 14 pages. You want to reprint the file, starting with page 10, but you do not know how many pages the new file will contain. To print from page 10 to the end of the file, enter:

```
C:\>NET PRINT EXAMPLE2.TXT LPT1: /PAGES=(10,0)
```

- You want to print out pages 5 through 11 of the 46-page file `EXAMPLE3.TXT`. Enter:

```
C:\>NET PRINT EXAMPLE.TXT LPT1: /PAGES=(5,11)
```

## NET PRINT /PARAMETERS

- You have created a file called `REPORT.TXT` that is 132 characters wide. To print the file on one sheet of 8 1/2 x 11-inch paper, you need to request landscape format. This reduces the typeface so that the 132 characters fit on a sheet normally reserved for 80 characters. In landscape printing, the top of the printed file is on the long edge of the sheet.

To print `REPORT.TXT` on device LPT1 in landscape format, enter:

```
C:\>NET PRINT REPORT.TXT LPT1: /PARAMETERS=("PAGE_ORIENTATION=LANDSCAPE")
```



## NET PRINT

- You need to print a postscript file called **FILE.PS** on device **LPT2**. To identify the content of the file as postscript data, enter:

```
C:\> NET PRINT FILE.PS LPT2: /PARAMETERS=("DATA=POST")
```

- You did not use a user name when connecting to **LPT1**. When using the **ULTRIX -m** parameter, you need to add the user name, enter:

```
C:\> NET PRINT ULTRIXFILE.PS LPT1: /PARAMETERS=(-musername)
```

### NET PRINT /PASSALL

For no apparent reason, your file **EXAMPLE1.TXT** on printer **LPT1** has started printing in the middle of the page. You have checked the paper feeder, and it appears to be in order.

To correct the problem, enter:

```
C:\> NET PRINT EXAMPLE1.TXT LPT1: /PASSALL
```

### NET PRINT /PRIORITY

You have a rush job called **EXAMPLE1.PS** that needs to be printed immediately. Your system administrator has given you Priority 5 for your job. To place your job at Priority 5 in the print queue, enter:

```
C:\> NET PRINT EXAMPLE1.PS LPT3: /PRIORITY=5
```

### NET PRINT /RESTART | NORESTART

- You want to be sure that your print request **EXAMPLE1.PS** on device **LPT3** is not delayed, should the system crash. To set the request to restart automatically, enter:

```
C:\> NET PRINT EXAMPLE1.PS LPT3: /RESTART
```

- You are sending a long batch file **EXAMPLE2.TXT** to the **LPT1** print queue on Friday night. You cannot monitor the printing operation over the weekend. If the job is interrupted when nearly complete, you do not want printing to start again on page 1.

To ensure that the print job does not restart until you give a direct command, enter:

```
C:\> NET PRINT EXAMPLE2.TXT LPT1: /NORESTART
```

### NET PRINT /SET

- You want to be sure that you always get two copies of every print job on **LPT1**. Enter:

```
C:\> NET PRINT LPT1: /SET /COPIES=2
```

## NET PRINT

- You want to be sure that your files on LPT 3 always print on the extra large sheets in the bottom input tray. Enter:  
C:\> NET PRINT LPT3: /SET /PARAMETERS=("INPUT\_TRAY=BOTTOM")
- You want to remove all the qualifiers you have set on LPT2. Enter:  
C:\> NET PRINT LPT2: /SET
- You have used NET PRINT /SHOW to display the current qualifiers on LPT1. All the qualifiers are correct except for the /NAME=USER2. You want to change the name to USER1.  
To retain the correct qualifiers, use the wildcard. Then change only the /NAME qualifier, as follows:  
C:\> NET PRINT LPT1: /SET /\* /NAME=USER1
- You want to enter a long string of qualifiers that will exceed one command line. In the following example, the wildcard retains the qualifiers set in the first two lines while you set the next qualifier.  
C:\> NET PRINT LPT1: /SET /PARAMETERS=("PAGE\_ORIENTATION=LANDSCAPE")  
C:\> NET PRINT LPT1: /SET /NOTE=(EXAMPLE1\_Pages 4\_to\_20)  
C:\> NET PRINT LPT1: /SET /\* /COPIES=2

### NET PRINT /SETUP

You need to print some inventory control forms. The control program for the forms is in module INVENTORY in the VMS device control library. Before you can print the forms, you must extract the control program and send it to the printer. Enter:

```
C:\> NET PRINT LPT1: /SETUP=INVENTORY
```

### NET PRINT /SHOW

As USER1, you want to find out what printer service offers postscript printing. To do this, you need to list all the printer services available to you.

```
C:\> NET PRINT /SHOW  
LPT1: \\SERVR1\LPS$ANSI%USER1  
      /NOTE=(END_OF_MONTH_REPORT)  
LPT2: \\SERVR2\LPS$POSTSCRIPT%USER1  
      /PARAMETERS=(ORIENTATION=LANDSCAPE)  
LPT3: \\SERVR3\LPS$LN03R%USER1  
      /COPIES=2
```

The display shows that LPT2 offers postscript printing. You can now queue your job to LPT2.

## NET PRINT

### NET PRINT /SPACE

You want your single-spaced file EXAMPLE1.TXT to be double-spaced when it is printed on LPT1. Enter:

```
C:\> NET PRINT EXAMPLE1.TXT LPT1: /SPACE
```

### NET PRINT /TRAILER

You want to set a trailer page on all your print jobs on LPT1. Enter:

```
C:\> NET PRINT LPT1: /SET /TRAILER
```

### NET PRINT—Showing Print Request Status

- To list the print requests for all users on all queues on SERVER1, enter:

```
C:\> NET PRINT \\SERVER1
```

User	Job Name	Job#	Size	Status
Queue LPS\$POSTSCRIPT				
USER1	EXAMPLE1.PS	923	512	Printing
USER1	DOCUMENT1.TXT	676	512	
Queue NM\$QUEUE				
SYSTEM	REPORT	860	512	Holding
Queue PCFS\$LN03				
USER2	EXAMPLE2	627	512	Pending
USER2	USERPCSA122641	891	512	
Queue SYS\$LN03				
PCFS\$ACCOUNT	LISSADECLAN113940	963	3072	
USER3	MAIL	333	15K	
USER4	SRVYANAL	301	134K	
USER5	DDIS	467	415K	
Queue SYS\$PRINT				
USER6	REMIND.TXT	906	14K	

- To check on the status of a job submitted under your name USER1 on print device LPT1, enter:

```
C:\> NET PRINT LPT1: /USER=USER1
```

The display shows that you have requested that your job be printed after 5:00 pm on 12 August, 1991.

User	Job Name	Job#	Size	Status
Queue SYS\$PRINT				
USER1	JOB_NAME1	72	512	22 Holding
				until 12-Aug-91 17:00

---

## NET SAVE

### Purpose

NET SAVE lets you save current network connections so that you can restore them after unloading and then reloading the network.

### Guidelines

NET SAVE places your connections in a context file, which you name. A **context file** is an ASCII file that records and saves information about the connections.

### Format

```
NET SAVE [drive:\path\] filename [ /LOG  
/NETWORK  
/VIRTUAL ]
```

### Parameters

drive	Is the drive on which the context file is stored. If you do not specify a drive or a path, the NET SAVE command saves the context file in the default directory (for DECnet) or the current directory (for TCP/IP).
path	Is a path, if any, to the context file.
filename	Is the name of the context file.

### Qualifiers

/LOG	Displays the connections as they are saved.
/NETWORK	Saves only file and printer service connections. The default is to save file, printer, and (if supported by your server) disk connections.
/VIRTUAL	Saves only disk service connections. This qualifier applies only to servers offering disk services.

## NET SAVE

### Examples

- You want to save all connections on drive N in a context file called SAVE.TXT and to record the procedure. Enter the following command from the drive whose connections you want to save:

```
N:\> NET SAVE SAVE.TXT /LOG
```

The screen displays:

```
Profile saved to C:\DECNET\SAVE.TXT  
Command completed successfully.
```

- To save only the current virtual disk service connections on drive D in a context file named SAVE.TXT and record the procedure, enter:

```
D:\> NET SAVE SAVE.TXT /VIRTUAL /LOG
```

The screen displays:

```
Profile saved to C:\DECNET\SAVE.TXT  
Command completed successfully.
```

### Related Command

NET LOAD

---

## NETSYS

### Purpose

Using NETSYS, you can transfer the DOS system files from a file service to a diskette drive on your personal computer, creating a bootable diskette. With a bootable diskette, you can boot your system from the client.

### Guidelines

The following are the DOS system files transferred to your diskette drive by NETSYS:

- COMMAND.COM
- BOOTBLOK.DAT (the boot block)
- IO.SYS and MSDOS.SYS (hidden files for IBM compatibles), or
- IBMBIO.COM and IBMDOS.COM (hidden files for IBM PCs)

**Hidden files:** The only file name you see in the system file subdirectory is COMMAND.COM. Because the other files are always present on the disk by default, they are not named in the directory. Therefore, they are called hidden files.

### Format

NETSYS drive1:\directory drive2:

### Parameters

drive1	Is the drive location of the directory containing the system files for your DOS.
directory	Is the directory containing the system files for your DOS.
drive2	Is the destination diskette drive (usually drive A:) for the system files.

## NETSYS

### Examples

- As a remote boot user, you need to transfer the DOS system files from directory \ISSYSD33 on drive G: to to diskette drive A: on your client. Enter:

```
C:\> NETSYS G:\ISSYSD33 A:
```

- You need a reminder of the command format for NETSYS. Enter:

```
C:\> NETSYS
```

The screen displays:

```
NETSYS V1.0 -- File service to boot disk creator.  
(C)Copyright 1991 by Digital Equipment Corporation
```

```
Usage: G:\PCAPP\NETSYS.EXE <dos_subdirectory> <destination_drive>
```

```
e.g. G:\PCAPP\NETSYS.EXE N:\ISSYSD33 A:
```

- You are in the DOS subdirectory on drive N that contains the system files. To transfer the files to diskette drive A, enter:

```
N:\SSYSD33\> NETSYS . A:
```

---

## NET TEST

### Purpose

This command starts the **loop test**, which verifies that your client can communicate with a specified node.

### Guidelines

If you have problems connecting to a server, follow the procedures described in *Network Troubleshooting Guide*.

### Format

NET TEST server

### Parameter

server            Is the server on which you are running the server loop test.

### Example

To run a loop test on **SERVR2**, enter:

```
C:\> NET TEST SERVER2
```

The screen displays a log of the test procedure. When the test is complete, the workstation displays a success message, or, if the test is unsuccessful, an error message.



## NETTIME

---

## NETTIME

### Purpose

This command sets the date and time at the client. The date and time are taken from the file server you specify, or from the first available MS-NET file server.

### Guidelines

Netsetup ensures that NETTIME is enabled.

The time is shown as HOUR:MINUTES:SECONDS:HUNDREDTHS OF A SECOND.

The date is shown as MONTH/DAY/YEAR.

### Format

NETTIME [server]

### Parameter

server	The server from which you are taking date and time information.
--------	-----------------------------------------------------------------

### Examples

- To take date and time information from SERVR1, enter:

```
C:\> NETTIME SERVR1
Time/Date serviced by node SERVR1
The current date is 11/26/91
The current time is 11:02:08:00
```

- To take the date and time from the first available server, enter:

```
C:\> NETTIME
The current date is 11/26/91
The current time is 11:02:08:00
```

---

## NETVER

### Purpose

This command lets you see what PATHWORKS for DOS version you are running and what DOS files are currently installed on the PCSAV41 file service.

### Format

NETVER

### Example

To see the current version of PATHWORKS for DOS and the DOS files installed on PCSAV41 file service, enter:

```
C:\> NETVER
```

A screen similar to the following is displayed:

```
NETVER V1.0, (C)Copyright 1991 Digital Equipment Corporation
```

```
PATHWORKS for DOS Version 4.1 on drive G:
```

```
Also installed on drive G:
```

```
NetWare Coexistence Installed V1.0
PATHWORKS for DOS (InfoServer) V1.0          Version 1.0
DOS V3.3 in ISSYSD33      IBM PC DOS Version 3.30
DOS V3.3 in DSSYSD33     DECstation DOS V3.30.01
DOS V5.0 in MSSYSD50     MS-DOS V5.00, RC3
DOS V5.0 in MSDOS50      The newest version of MS-DOS 5.00
```

## NET ZERO LAD

---

## NET ZERO LAD

### Purpose

This command lets you set the error counters (statistics) to zero for all the virtual disk drives. This clears the error counters. The system then records errors and other statistics until the next time you clear the error counters.

### Guidelines

To clear file and printer service error counters, see the NCP ZERO commands in *DECnet Network Management Guide*.

### Format

NET ZERO LAD

### Example

To set error counters to zero for all the virtual disk drives, enter:

```
C:\> NET ZERO LAD
```

### Related Command

NET ERROR

---

## PERMIT

### Purpose

The PERMIT command lets you offer your client as a temporary file server by permitting another client to make a single-session connection to your client.

### Guidelines

Start the network before you use the PERMIT command.

The PERMIT command waits for the connection from the client. Once the connection occurs, no other client nodes can connect.

If you do not specify a node name or if you use an asterisk (\*) as the node name, you extend the offer to any node on the network.

When the session is over, control returns to the DOS operating system.

### Format

PERMIT alias=drive:\ path\  $\left[ \begin{array}{l} /C \\ /R \\ /W \end{array} \right]$  node | \*

### Parameters

alias	Is a name representing the file service made available using PERMIT. A client uses this name as a service name in a USE connection request. You cannot set a password for the alias, but you can restrict alias access to just one node by explicitly specifying the node.
drive	Is the drive for the directory you offer over the network.
path	Is the complete path name for the directory you offer over the network.
node	Is the node name of the client on the network with which you want to share your disk or directory.
*	Specifies that any client can share your disk or directory.

## PERMIT

### Qualifiers

<code>/C</code>	Permits the client to create new files in the directory.
<code>/R</code>	Permits Read access to the files in the directory. For example, Read access allows another client to display a directory with the <code>DIR</code> command or display the contents of a file with the <code>TYPE</code> command.
<code>/W</code>	Permits Write access to the files in the directory. The default is <code>/CRW</code> .

### Examples

- You are a client on the network at node `PLAY1`. Your directory `TOOLS` on drive `C` contains information that another client on node `PLAY2` wants to access. To permit temporary access to directory `TOOLS`, enter:  

```
C:\> PERMIT TOOLS=C:\TOOLS /CRW PLAY2
```
- You want any client on the network to be able to read files in your directory `A:\INFORMATION`. Enter:  

```
C:\> PERMIT INFORMATION=A:\INFORMATION /R *
```

---

## RCV

### Purpose

This command lets you read messages on a client that uses DECnet. To read messages on a client that uses TCP/IP, see the TRCV command.

You can also use RCV to add a group name, reduce the number of messages stored, specify a timeout period, change the location of messages on the screen, and change screen colors on a color monitor.

### Guidelines

RCV is a terminate-and-stay-resident program (TSR), usually loaded at startup. When your client receives a Broadcast message, RCV displays it. If you receive another Broadcast message while you are reading the first one, you can display the second message by pressing **[Alt/N]**.

In some cases, however, you may not be able to read the broadcast message, or others that follow. For example, you might be in Graphics mode where you cannot read Broadcast messages. RCV stores these messages, which can be read later by means of the RCV /D command.

### Format

```
RCV [ /A:name
      /D
      /H:n,m
      /L:n
      /M:n,m
      /N:n
      /O:n
      /P:T | B
      /R:n
      /S:Y | N
      /T:n ]
```

## RCV

### Qualifiers

- /A:name** Used only at installation. Cannot be set interactively.  
The /A qualifier allows you to add another name at which you can receive messages. A name is composed of up to 15 alphanumeric characters. You cannot use an existing node name of any computer. However, you can add a group name, which enables you to receive messages sent to the group.
- /D** Enables you to read the stored messages. If no messages have been stored, the screen does not display the Broadcast header, but returns to the DOS prompt.
- /H:n,m** Specifies the foreground (n) and background (m) colors of the Broadcast message header. The value for n must differ from the value for m.  
The value for n is a number from 1 to 16. The value for m is a number from 1 to 8. The defaults are 1 and 8, respectively. Use the following table to select colors.
- |   |         |    |                 |
|---|---------|----|-----------------|
| 1 | Black   | 9  | Dark Gray       |
| 2 | Blue    | 10 | Light Blue      |
| 3 | Green   | 11 | Light Green     |
| 4 | Cyan    | 12 | Light Cyan      |
| 5 | Red     | 13 | Light Red       |
| 6 | Magenta | 14 | Light Magenta   |
| 7 | Brown   | 15 | Yellow          |
| 8 | White   | 16 | Intensity White |
- /L:n** Used only at installation. Cannot be set interactively.  
The /L qualifier specifies the LANA number (0 or 1) from which you want to receive Broadcast messages. The value for n must be a valid NETBIOS LANA number for your configuration. By default, RCV watches all NETBIOS LANAs for Broadcast messages.
- /M:n,m** Specifies the foreground (n) and background (m) colors of the Broadcast message. The value for n must differ from the value for m.  
The value for n is a number from 1 to 16. The value for m is a number from 1 to 8. The defaults are 8 and 1, respectively. To select colors, use the table shown with the /H qualifier.

- /N:n** Used only at installation. Cannot be used interactively. RCV stores from 1 to 10 messages. 10 is the default. Each message takes approximately 160 bytes of memory. Therefore, the more messages you keep, the more memory you use. To save memory, you may want to specify that RCV save fewer than 10 messages. If you want to change the default setting, edit the STARTNET.BAT file accordingly.
- /O:n** Specifies the number of minutes that elapse between receipt of a Broadcast message and the resumption of the client's current task. When you set /O, you ensure that the client operations continue after the specified timeout. If you want to read messages after the timeout expires, enter the RCV/D command. The value for n is:
- 0 No timeout. Client stops operations until you press **Alt/Q** or **Alt/N**. This is the default.
  - 1–99 The number of minutes for the timeout.
- /P:T | B** Specifies whether the message pop-up window is displayed at the top (T) or the bottom (B) of the screen.
- /R:n** Specifies the source from which you receive Broadcast messages. The default for the RCV command in STARTNET.BAT or AUTOUSER.BAT is to receive messages from the server (/R:0). If you enter RCV on the command line, the default is to receive all messages (/R:2). The following table shows the values for the sources of messages you receive.
- 0 Receive messages from server only.
  - 1 Receive messages only from other clients.
  - 2 Receive messages from both server and clients. This is the default.
- /S:Y | N** Turns a beeping sound on (Y) or off (N) when you receive a message or when you are in graphics mode. The default is on (Y).



## RCV

<b>/T:n</b>	Specifies the types of messages you receive. The following table shows the values for n and the types of messages:
<b>0</b>	No messages (you lose all messages).
<b>1</b>	All messages. This is the default.
<b>2</b>	Only the messages sent to you individually. The system administrator can send you a message that pertains only to you. For example, you can receive a message that you are using too much disk space.
<b>3</b>	Only the messages sent to all users.

### Examples

- To read Broadcast messages that were sent over DECnet, enter:  
C:\> RCV /D  
To read the next message, press **[Alt/N]**.  
To stop reading messages, press **[Alt/Q]**.
- You want to be sure that your client operations are interrupted for only 3 minutes to receive Broadcast messages. Therefore, you need to override the default of no timeout. To enable a timeout of 3 minutes enter:  
C:\> RCV /O:3
- On your color monitor, you want to change the foreground color of the header to white and the background to red. You also want hear a beeping sound when you get a Broadcast message. Enter this command:  
C:\> RCV /H:8,5 /S:Y

---

## SETLOGON

### Purpose

SETLOGON lets DOS users set LAN Manager account information for OS/2 servers with user-level security. **User-level security** is assigned by the system administrator at installation, enabling you to set protection on your own files and directories on the server.

SETLOGON stores your user name and password within the network software. The user name and password are used when you make connections with the USE command to OS/2 servers running in user-level security mode.

### Guidelines

To use SETLOGON, complete these steps:

1. Disconnect from active file or printer services

You must also disconnect all your file and printer services if you change user names.

2. Edit your STARTNET.BAT file

SETLOGON is added as a comment in your STARTNET.BAT file by Netsetup. To activate SETLOGON, delete "rem" from the following line in STARTNET.BAT:

```
rem %boot%\DECNET\SETLOGON
```

SETLOGON is not necessary for VMS or ULTRIX servers, or for OS/2 servers running in share-level security.

### Format

SETLOGON [username] [password | \*]

# SETLOGON

## Parameters

username	Is the user name assigned to you on the OS/2 server. If you omit your user name, SETLOGON prompts you for it.
password	Is the password assigned to you on the OS/2 server. A password is limited to eight alphanumeric characters. You can also be assigned a <b>null password</b> , which contains no characters. If you omit the password, SETLOGON assumes a null password.
*	SETLOGON prompts you for a password, which is not displayed on the screen.

## Example

You want to log on to your OS/2 server, letting SETLOGON prompt you for the necessary information. Enter:

```
C:\> SETLOGON
```

SETLOGON prompts you as follows:

```
SETLOGON - Set LAN Manager Logon Credentials -V4.1.0  
Copyright (C) 1988-1991 by Digital Equipment Corporation
```

```
Username: Enter your name  
Password: Enter your password
```

If you have not terminated all file server connections, the following message appears:

```
NET2402: Active connections still exist. You must terminate all file  
server connections before issuing the SETLOGON command.
```

Disconnect file server connections, and reenter SETLOGON, answering the prompts.

If your user name and password have been entered into memory, the screen displays:

```
User name and password stored successfully
```

You can now use the USE command to connect to an OS/2 server with user-level security.

---

## SETNAME

### Purpose

Use SETNAME to set a client's computer name.

### Guidelines

The SETNAME program needs to be run only once, after the basic redirector (REDIR.EXE) is loaded.

Your computer name must be unique on the LAN. Normally, you set your computer name to your DECnet or TCP/IP node name, but you can specify a different name.

The computer name can be up to 15 characters in length. Entering SETNAME with no parameters displays the current computer name.

If you do not run SETNAME, the error "Machine name has not been set" may be displayed when the client tries to establish file service connections.

If you use SETNAME to set your computer name to a name different from your DECnet or TCP/IP node name, you may have problems with PERMIT.

If another node name on the network matches the one you supplied to SETNAME, SETNAME displays the error message "System error." Choose another name if you receive this message.

If you have already set your computer name, SETNAME displays the message "Computer name already in use." If you receive this message on the first attempt to use SETNAME, be sure that you have invoked the DNP module with the /NAM:N switch.

### Format

SETNAME [computername]

### Parameter

computername	Is the name of your computer, usually your DECnet or TCP/IP node name.
--------------	------------------------------------------------------------------------

## **SETNAME**

### **Example**

Your node name is **PLAY1**. After loading the basic redirector (**REDIR.EXE**), set your computer name as follows:

```
A:\> SETNAME PLAY1
```

---

## TRCV

### Purpose

This command lets you read messages on a client that uses TCP/IP. To read messages on a client that uses DECnet, use the RCV command.

You can also use TRCV to add a group name, reduce the number of messages stored, specify a timeout period, change the location of messages on the screen, and change screen colors on a color monitor.

TRCV is a terminate-and-stay-resident program (TSR), usually loaded at startup. When your client receives a Broadcast message, TRCV displays it. If you receive another Broadcast message while you are reading the first one, you can display the second message by pressing **[Alt/N]**.

However, you may not be able to read the second message, or others that follow. For example, you might be in Graphics mode where you cannot read Broadcast messages. TRCV stores these messages, which can be read later by means of the TRCV /D command.

### Format

```
TRCV [ /A:name
      /D
      /H:n,m
      /L:n
      /M:n,m
      /N:n
      /O:n
      /P:T | B
      /R:n
      /S:Y | N
      /T:n ]
```

# TRCV

## Qualifiers

**/A:name** Used only at installation. Cannot be set interactively.  
The /A qualifier allows you to add another name at which you can receive messages. A name is composed of up to 15 alphanumeric characters. You cannot use an existing node name of any computer. However, you can add a group name, which enables you to receive messages sent to the group.

**/D** Enables you to read the stored messages. If no messages have been stored, the screen does not display the Broadcast header, but returns to the DOS prompt.

**/H:n,m** Specifies the foreground (n) and background (m) colors of the Broadcast message header. The value for n must differ from the value for m.

The value for n is a number from 1 to 16. The value for m is a number from 1 to 8. The defaults are 1 and 8, respectively. Use the following table to select colors.

1	Black	9	Dark Gray
2	Blue	10	Light Blue
3	Green	11	Light Green
4	Cyan	12	Light Cyan
5	Red	13	Light Red
6	Magenta	14	Light Magenta
7	Brown	15	Yellow
8	White	16	Intensity White

**/L:n** Used only at installation. Cannot be set interactively.  
The /L specifies the LANA number (0 or 1) from which you want to receive Broadcast messages. The value for n must be a valid NETBIOS LANA number for your configuration. By default, TRCV watches all NETBIOS LANAs for Broadcast messages.

**/M:n,m** Specifies the foreground (n) and background (m) colors of the Broadcast message. The value for n must differ from the value for m.

The value for n is a number from 1 to 16. The value for m is a number from 1 to 8. The defaults are 8 and 1, respectively. To select colors, use the table shown with the /H qualifier.

- /N:n** Used only at installation. Cannot be used interactively. TRCV stores from 1 to 10 messages. 10 is the default. Each message takes approximately 160 bytes of memory. Therefore, the more messages you keep, the more memory you use. To save memory, you may want to specify that TRCV save fewer than 10 messages. If you want to change the default setting, edit the AUTOUSER.BAT file accordingly.
- /O:n** Specifies the number of minutes that elapse between receipt of a Broadcast message and the resumption of the client's current task. When you set /O, you ensure that the client operations continue after the specified timeout. If you want to read messages after the timeout expires, enter the TRCV/D command. The value for n is:
- 0 No timeout. Client stops operations until you press **Alt/Q** or **Alt/N**. This is the default.
  - 1–99 The number of minutes for the timeout.
- /P:T | B** Specifies whether the message pop-up window is displayed at the top (T) or the bottom (B) of the screen.
- /R:n** Specifies the source from which you receive Broadcast messages. The default for the TRCV command in STARTNET.BAT or AUTOUSER.BAT is to receive messages from the server (/R:0). If you enter TRCV on the command line, the default is to receive all messages (/R:2). The following table shows the values for the sources of messages you receive.
- 0 Receive messages from server only.
  - 1 Receive messages only from other clients.
  - 2 Receive messages from both server and clients. This is the default.
- /S:Y | N** Turns a beeping sound on (Y) or off (N) when you receive a message or when you are in graphics mode. The default is on (Y).



## TRCV

**/T:n** Specifies the types of messages you receive. The following table shows the values for n and the types of messages:

0	No messages (you lose all messages).
1	All messages. This is the default.
2	Only the messages sent to you individually. The system administrator can send you a message that pertains only to you. For example, you can receive a message that you are using too much disk space.
3	Only the messages sent to all users.

### Examples

- To read Broadcast messages that were sent over DECnet, enter:

```
C:\> TRCV /D
```

To read the next message, press **Alt+N**.

To stop reading messages, press **Alt+Q**.

- You want to be sure that your client operations are interrupted for only 3 minutes to receive Broadcast messages. Therefore, you need to override the default of no timeout. To enable a timeout of 3 minutes enter:

```
C:\> TRCV /O:3
```

- On your color monitor, you want to change the foreground color of the header to white and the background to red. You also want hear a beeping sound when you get a Broadcast message. Enter this command:

```
C:\> TRCV /H:8,5 /S:Y
```

---

## USE

### Purpose

The USE command enables you to:

- Connect to file, printer, and disk services
- Display connections
- Display information about services
- Disconnect from services
- Replace connections to services
- Connect to your account on VMS or ULTRIX servers
- Show the status of network components and devices

### Guidelines

If you use DECnet and the basic redirector, USE automatically takes access control information from DECALIAS.DAT and uses it in file and printer connections.

However, if you use the enhanced redirector, USE does not automatically include default access control information in connections because usernames are not affected with the enhanced redirector.

For more information on access control information, see the NET PASSWORD command.

### Format

USE device: \\server\service%username password [/QUALIFIER /...]

# USE

## Parameters

device	<p>Is a logical device. A device can be a letter that designates a drive, such as I, or a logical device name for a printer, such as LPT1, LPT2, or LPT3. The device is followed by a colon.</p> <p>You can use the <b>ambiguous device</b> (?) to connect to the next available drive. You can use LPT?: to connect to the next available printer.</p> <p>With the wildcard device (*:), you can make a single command affect all drives; LPT*: affects all printers.</p>
server	<p>Is the name of the server where the service is located. If you use a server name, precede it with two backslashes (\\).</p> <p>You do not have to use the server name when connecting to a virtual disk service or a CDROM service. However, you must always use the server name when connecting to a file or printer service.</p>
service	<p>Is the name of the service. The service name is preceded by one backslash (\).</p>
username	<p>Is your assigned user name. The user name is preceded by a percent sign (%).</p>
password	<p>Is your assigned password on the server for the user name, or for the service, if no user name is supplied.</p> <p>On the command line, you can substitute an asterisk (*) for your password. You are then prompted to enter a password, which is not displayed on the screen.</p>

## Qualifiers

/BRIEF	<p>Gives minimal information. This is the default.</p>
/CDROM	<p>Identifies the service as a CDROM service.</p>
/CHECK	<p>Checks the error status of a device. You can use /CHECK at the command line or in a batch file. If the device has an error, USE returns an error level 1.</p>
/CLICK   NOCLICK	<p>Controls the click of virtual disks and CDROMs.</p>

<b>/CONNECT</b>	Prompts for device, service, and password. If you enter these on the command line, you can omit the <b>/CONNECT</b> qualifier.
<b>/DISCONNECT</b>	Disconnects from a service. You cannot disconnect from your current drive or from a paused file service. See also <b>/EXCEPT</b> .
<b>/ENVIRON</b>	As with the DOS <b>SET</b> command, lets you set an environment variable. The value stored in the variable is the device used to resolve a connection with an ambiguous device (? : or LPT?:). The <b>/ENVIRON</b> qualifier is commonly used in batch files to avoid specifying unique devices for all connections.
<b>/EXCEPT</b>	Excludes specified drives from a <b>USE *</b> : <b>/DISCONNECT</b> command.
<b>/FIXUP</b>	Modifies the DOS status of unconnected virtual drives so that they do not appear as valid drives. DOS and Microsoft Windows both treat unconnected virtual drives as active drives, which show up in the Windows File Manager. If you try to use these drives, a fatal error is generated. However, <b>USE /FIXUP</b> marks these unconnected drives so that they do not appear as active drives in the File Manager. If an unconnected virtual drive is used in a <b>JOIN</b> or <b>SUBST</b> operation, and then disconnected, the drive appears as a valid drive until you perform another <b>USE /FIXUP</b> .
<b>/FULL</b>	Gives maximum information.
<b>/HELP</b>	Provides help on the <b>USE</b> command format
<b>/LIST</b>	Shows the services connected to specific devices. If you enter the <b>USE</b> command without parameters or qualifiers, <b>/LIST</b> is the default.
<b>/LOAD</b>	Loads network connections that have been saved using the <b>USE /SAVE</b> command. This command supersedes the command <b>USE/RESTORE</b> .
<b>/LOG</b>	Displays a screen message describing the progress or the result of the procedure you initiated.
<b>/NETWORK</b>	Identifies the service as a file or print service.

## USE

<code>/NONW</code>	Excludes network connections from a wild card operation when NetWare coexistence client software is used.
<code>/NOPROMPT</code>	Suppresses the prompt for a missing component or parameter. Generally used when the USE command is called from within a batch file.
<code>/REMOVE</code>	Removes references to a drive that is being disconnected from the path. This qualifier is always with <code>/DISCONNECT</code> .
<code>/REPLACE</code>	Replaces an existing connection with a connection to another server. Also reconnects a connection that has an error.
<code>/RESTORE</code>	Restores network connections that have been saved with the USE <code>/SAVE</code> command. This command has been superseded by the command USE <code>/LOAD</code> . This older version of the command is used in networks that require downward compatibility with previous versions of PATHWORKS.
<code>/SAVE</code>	Saves a current connection so that you can restore it after loading and unloading the network.
<code>/SETDIR</code>	Lets you connect to any VMS or ULTRIX server directory for which you have access, even if the directory is not offered as a service.
<code>/SHOW</code>	Shows information about servers or services.
<code>/STATUS</code>	Displays information about network components and devices available for connections.
<code>/VIRTUAL</code>	Identifies the service as a virtual disk service. This qualifier is required when you use the name of the server on the command line.
<code>/X</code>	Substitutes the Ethernet address for the service name. This is useful for connecting to your default remote boot disk.

### Listing Current Connections

To list the services to which you are currently connected, enter:

```
C:\> USE
```

A screen similar to the following is displayed:

```
USE Version 4.1 Digital Connection Manager [Virtual drives D:-G:]
Status  Dev   Type   Connection name           Access  Size
-----  -
D:      DISK    \\SERVR1\DOS_SYSTEM_V32   RO      23 MB
F:      DISK    \\SERVR2\TOOLBOX          RO      23 MB
H:      FILE    \\SERVR3\PCCOMMON
I:      FILE    \\SERVR4\GOODIES
M:      FILE    \\SERVR3\SMITH%SMITH
LPT1   PRINT   \\SERVR3\LASER
LPT2   PRINT   \\SERVR3\POST
```

If you want to be connected to these services the next time you log in, save the connections with the NET SAVE command.

### Connecting to a CDROM Service

To connect the CDROM service GOALS to the next available drive on your client, enter:

```
C:\> USE ?: GOALS /CDROM
```

### Connecting to a File Service

To connect SERVER1, common file service PCCOMMON, to the next available drive on your client, enter:

```
C:\> USE ?: \\SERVER1\PCCOMMON
```

The screen displays the connection:

```
Device G: connected to \\SERVER1\PCCOMMON
```

### Connecting to a Virtual Disk Service

To connect SERVER1, virtual disk service BIGDISK, to the next available drive on your client, enter:

```
C:\> USE ?: BIGDISK /V
```

The screen displays the connection:

```
Device F: connected to \\SERVER1\BIGDISK
```

### Connecting to a Printer Service

To connect device LPT3 to the PostScript printer service POST on SERVER3, enter:

```
C:\> USE LPT3: \\SERVER3\POST
```

To connect the next available printer to service POSTSCRIPT on SERVER3, enter:

```
C:\> USE LPT?: \\SERVER3\POSTSCRIPT
```

## USE

### USE /CHECK

The following example shows USE /CHECK in a typical batch file. (USE /CHECK is not generally used interactively.) The system detects the error and replaces the broken connection.

```
echo off
if %_SYSD%.==. goto nosys
use %_SYSD%/check/log
if not errorlevel 1 goto done
use %_SYSD%/replace/log
if errorlevel 1 goto error
goto done
:nosys
echo No system service connected
goto done
:error
echo Could not reconnect device
:done
```

### USE /CONNECT

You want to connect drive I to the file service SPREADSHEET on SERVER2. If you omit necessary information such as server name and service, /CONNECT causes the system to prompt you. Enter:

```
C:\> USE I: /CONNECT /NETWORK

Server: SERVER2
Service: SPREADSHEET
```

### USE /DISCONNECT

- You have finished using the application on a service connected to drive I. To disconnect drive I, enter:

```
C:\> USE I: /DISCONNECT
```

- To disconnect all your printer connections, enter:

```
C:\> USE LPT*: /D
```

### USE /DISCONNECT/EXCEPT

You are currently connected to drives D, E, F, H, and L. To disconnect from all drives except H and L, enter:

```
C:\> USE *: /DISCONNECT /EXC=H:L:
```

**USE /ENVIRON**

The following example shows how the USE ?: command sets the environment variable \_SYSD in a STARTNET.BAT file. Note that BOOT is an environment variable set previously in STARTNET.BAT for a writable disk area.

```
echo \\SERVER1\PATHWORKSV41
set _SYSD=?
%BOOT%\decnet\use ?: \\SERVER1\PATHWORKSV41% /ENV=_SYSD
if not errorlevel 1 goto c_sysdone
echo **WARNING ** Unable to connect to \\SERVER1\PCSAV41
echo          Retrying...
%BOOT%\decnet\use ?: \\SERVER1\PCSAV41% /ENV=_SYSD
if not errorlevel 1 goto c_sysdone
echo **ERROR ** Unable to connect to \\SERVER1\PCSAV41
```

To set an environment variable for a printer drive, use a batch file command similar to the following:

```
USE LPT?: \\SERVER1\PRINTSERVICE /ENV=NEWLPT
```

**USE /FIXUP**

To modify the DOS characteristics of unconnected virtual drives and display the drives affected by the modifications, enter:

```
USE /FIXUP /LOG
```

A display similar to the following appears:

```
Unconnected drives disabled
```

**USE /FULL**

The USE /FULL command gives you a screen display like the following, which includes the size of each service and the server directory, if available. Table 1-15 explains these entries.



## USE

```

USE Version 4.1 Digital Connection Manager [Virtual drives D:-G:]
Status  Dev  Type      Connection name      Access      Size
-----  ---  ---      -----            -
          B:  SUBST    C:\                  -            27 MB
JOINED  H:  DISK     \\SERVER1\DOS_SYSTEM_V3  RO FAST     10 MB
          H:  JOIN     C:\DEV               -            10 MB
SUBST   J:  DISK     \\SERVER2\TOOLBOX      RO           32 MB
          J:  SUBST    C:\TMP               -            27 MB
REDIR   K:  DISK     \\SERVER2\SPREADSHEET  RO FAST     32 MB
          K:  FILE     \\SERVER3\PCCOMMON    -            435 MB
          SERVER: [PCSA.PCCOMMON]  DECnet
          LPT1 PRINT  \\SERVER3\LASER       LANSES
          LPT2 PRINT  \\SERVER3\POST        DECnet
  
```

**Table 1-15 Description of the USE /FULL Display**

Field	Description
Status	Status can be one or more of the following: (BLANK) If the Status field is blank, the device is active. See the Type field for information on how the device is being used. ERROR An error has occurred in the connection. Reconnect the device with USE /REPLACE. JOINED The device has been joined with another device by means of the DOS JOIN command. SUBST The device has been substituted for another device by means of the DOS SUBST command. REDIR A virtual drive has been redirected to a file service. PAUSED The connections to the device are suspended. For more information, see the NET PAUSE command.
Dev	The DOS device name connected to the service.
Type	The type of service. The type can be DISK, CDROM, FILE, PRINT, SUBST, or JOIN.
Connection Name	The name of the service to which you are connected. The connection name includes the name of the server and service.

(continued on next page)

**Table 1-15 (Cont.) Description of the USE /FULL Display**

Field	Description
Access	The service access privileges for disk and CDROM services. The mode of a disk service can be RO (Read Only) or RW (Read and Write). For file service connections, access shows whether the connection is through LANSES or DECnet.
Size	The size of the connected service.

**USE /LIST**

To find out the name of the service to which device H is connected, enter:

```
C:\>USE H: /LIST /FULL
```

```
USE Version V4.1 PATHWORKS Network Connection Manager [Virtual drives F:-I:]
Status  Dev  Type  Connection Name      Mode      Size
-----  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -
          H:   FILE  \\SERVER3\PCCOMMON   435 MB
```

**USE /LOAD**

The **USE /LOAD** command restores network connections that were saved with the **USE /SAVE** command.

```
C:\>USE SESS.SAV /LOAD /LOG
```

```
Drive F: replaced with \\SERVER3\PCCOMMON
Drive G: replaced with \\SERVER2\TOOLBOX
Drive K: replaced with \\SERVER2\SPREADSHEET
Device LPT1: replaced with \\SERVER3\LASER
Device LPT2: replaced with \\SERVER3\POST
```

```
Profile loaded from C: \DECNET\SESS.SAV
```

**USE /NETWORK**

The **USE /NETWORK** command disconnects file services or forces a connect to a file service. The **USE /NETWORK** command works only on file servers. The **USE /VIRTUAL** command works only on virtual disk servers.

The following command disconnects only network file services, leaving any disk, printer, or CDROM connected:

```
C:\>USE *: /D /NETWORK
```

The following command forces a connection to a file server because it is assumed that drive F is virtual disk drive. (For virtual disk drives, virtual disk connections are usually attempted before file server connections.)

```
C:\>USE F: \\SERVER3 \PCCOMMON /NETWORK
```

## USE

### USE /NOPROMPT

The **USE /NOPROMPT** command returns an error condition rather than a prompt for a missing component of user input, such as a prompt for a missing service name or missing password. The error return can be checked with the DOS command **IP ERRORLEVEL**. The **USE /NOPROMPT** command is commonly used in batch files.

### USE /REPLACE

- To disconnect drive D and reconnect it to the file service **PCAPP** on node **PLAY2**, enter:

```
C:\> USE D: \\PLAY2\PCAPP /REPLACE
```

- You want to replace the server currently connected to drive D with a connection to **SERVR2**. All other information from the previous connection is maintained. Enter:

```
C:\> USE D: \\SERVR2 /REPLACE
```

- Drive C is connected to an old version of the operating system, **OPERATING\$SYSTEM\_V41**, on **SERVR1**. You want to replace the connection on drive C with the latest version of the operating system, **OPERATING\$SYSTEM\_V41**, on **SERVR2**. Enter:

```
C:\> USE C: \\SERVR2 /REPLACE
```

The screen displays:

```
Device C: replaced with \\SERVR2\OPERATING$SYSTEM_V41
```

- An error has occurred in the connection on drive D. To replace the connection, enter:

```
C:\> USE D: /REPLACE
```

### USE /RESTORE

The **USE /RESTORE** command reloads network connections that were saved with the **USE /SAVE** command. This command qualifier is superseded by **USE /LOAD**. Use this command qualifier when it is necessary to be compatible with earlier versions of **PATHWORKS**.

```
C:\> USE SESS.SAV /RESTORE /LOG
```

```
Drive F: replaced with \\SERVR3\PCCOMMON
Drive G: replaced with \\SERVR2\TOOLBOX
Drive K: replaced with \\SERVR2\SPREADSHEET
Device LPT1: replaced with \\SERVR3\LASER
Device LPT2: replaced with \\SERVR3\POST
Profile loaded from C: \DECNET\SESS.SAV
```

**USE /SAVE**

The **USE /SAVE** command makes a recallable file of existing network connections. The connections in the file are recalled with the **USE /LOAD** or **USE /RESTORE** command.

```
C:\>USE SESS.SAV /SAVE /LOG
```

```
Profile saved to C: \DECNET\SESS.SAV
```

**USE /SETDIR**

You want to use **/SETDIR** to access a directory on **SERVR1**. Your user name is **USER1**. Follow these steps:

1. Connect to your account on **SERVR1**:

```
C:\>USE ?: \\SERVR1\USER1%USER1 * /LOG
```

```
Password:
```

```
Device I: connected to \\SERVR1\USER1%USER1
```

2. If **SERVR1** is a **VMS** server, connect to **VMS** directory **REVIEWS.V30** on disk **DUA1**:

```
C:\>USE I: DUA1:[REVIEWS.V30] /SETDIR /LOG
```

If **SERVR1** is an **ULTRIX** server, connect to the **ULTRIX** directory **/usr/reviews/v30**:

```
C:\>USE I: \USR/REVIEWS/V30 /SETDIR /LOG
```

**USE /SHOW**

- To find out what file and printer services are offered on **SERVR1** and what kind of file protection they have, enter:

```
C:\>USE \\SERVR1 /NETWORK /SHOW
```

```
USE Version 4.1 PATHWORKS Network Connection Manager
```

```
Service information for \\SERVR1
```

```
File Server Authorized Services:
```

User name	Alias name	Service name	Access	RMS Protection
USER1	ACTION	ACTION	RWC	S:RWED,O:RWED,G:RWED,W:
USER2	ACTION	ACTION	RWC	S:RWED,O:RWED,G:RWED,W:
PUBLIC	LN03 DPORT	LN03 DPORT	RW	S:RWED,O:RWED,G:,W:
PUBLIC	LPS40	LPS40	RW	S:RWED,O:RWED,G:,W:
LITERAL	PUBLIC	PCCOMMON	RW	S:RWED,O:RWED,G:,W:
USER3	EWOK	EWOK	R	S:RWED,O:RWED,G:,W:

## USE

Table 1-16 describes the fields displayed.

**Table 1-16 Fields Displayed for File Services**

Field	Description
User Name	The name PUBLIC or the name of the user with access to the server
Alias Name	The alias name that is assigned by the system administrator for connecting to the service
Service Name	The file or printer service name as created by PATHWORKS Manager
Access	The type of access allowed: R (Read), W (Write), C (Create)
RMS Protection	The default protection for files created on the file service

- To find out what servers offer CDROM services, enter:

```
K:\> USE /CDROM /SHOW
```

A screen similar to the following is displayed:

```
USE Version 4.1 Digital Network Connection Manager  
Copyright (C) 1988-1991 by Digital Equipment Corporation
```

```
InfoServers available
```

Server Name	Network Address	Node
-----	-----	----
SERVR1	08-00-2B-16-06-83	
LAD_08002B14FF50	08-00-2B-14-FF-50	
LAD_08002B18959A	08-00-2B-18-95-9A	

- To see a display of the CDROM and disk services offered by CDROM InfoServers on device K, enter:

```
K:\> USE /CDROM /SHOW /FULL
```

A screen similar to the following is displayed:

```
USE VERSION 4.1 Digital Network Connection Manager
Copyright (C) 1988-1991 by Digital Equipment Corporation
```

InfoServers and services available

Services for LAD\_08002B14FF50 (08-00-2B-14-FF-50)

Service Name	Service Description	Device	Type	Mode	Rating	Limit	Users	Pass
MSC	Device DK15 (RZ23)	Disk	LAD	RW	65263	1001	0	No
CLIP_ART	Device DK15 (RZ23)	Disk	LAD	RW	65269	1001	0	No

Services for LAD\_08002B18959A (08-00-2B-18-95-9A)

Service Name	Service Description	Device	Type	Mode	Rating	Limit	Users	Pass
CLIB9011	Device DK2 (RRD40)	CDROM	LAD	RO	65016	1000	0	No
ESTATE	Device DK13 (RRD40)	CDROM	LAD	RO	65016	1000	0	No

- You want to use the service **SPREADSHEET**. To connect to the service, you need to know what servers offer **SPREADSHEET**. Enter:

```
C:\> USE SPREADSHEET /SHOW
```

A screen similar to the following is displayed:

```
USE Version V4.1 PATHWORKS Connection Manager
```

Service information for SPREADSHEET

Server Name	Rating	Pass	Access	Limit	Users	Network Address	Node
SERV1	1	No	RO	None	1	AA-00-04-00-ED-27	9.606
SERV2	1	No	RO	30	2	AA-00-04-00-24-26	9.771
SERV3	1	Yes	RW	1	1	AA-00-04-00-91-24	9.254

- Each time you boot your client, you have a different configuration. You suspect that you may be connected to one of several different remote boot services. To find out what remote boot services you have, enter:

```
C:\> USE /X /SHOW
```

```
USE Version 4.1 PATHWORKS Connection Manager
Copyright (C) 1988-1991 by Digital Equipment Corporation
```

Service information for 08-00-2B-10-BA-A9

Server Name	Rating	Pass	Access	Limit	Users	Network Address	Node
SERV1	1	No	RO	1	0	AA-00-04-00-46-26	9.606
SERV2	1	No	RO	1	0	AA-00-04-00-06-24	9.375

Table 1-17 describes the fields displayed for a server.

## USE

**Table 1-17 Fields Displayed for Servers**

Field	Description
Server Name	The name of a disk server offering this service.
Rating	The priority of a service. The valid range is 1 through 65,535. The default is 1.
Pass Access	Whether the service requires a password: Yes or No.
Limit	The access mode of this service: RO(Read only) or RW(Read and Write).
Users	The maximum number of connections allowed to the service.
Network Address	The current number of connections to the service.
Node	The Ethernet address of the remote boot disk server.
	.
	The DECnet node address of the server (if available).

- To find out what virtual disk services are offered on **SERVR2**, enter:

```
C:\>USE \\SERVR1%USER1 * /VIRTUAL /SHOW
USE Version 4.1 Digital Connection Manager
Copyright (C) 1988-1991 by Digital Equipment Corporation

Services available on SERVR1

Disk server services:

Service name      Type  Server  Limit  Users  Acc  Rating  Status
-----
MSWINV21          USER  SERVR2   30     0    RO     1    MNT PERM
SERVICE_SYSTEM_V22
SERVICE_SYSTEM_V30
SYST  SERVR2   30     2    RO     1    MNT PERM
TELECOM          SYST  SERVR2   30     0    RO     1    MNT PERM
SYST  SERVR2   1      0    RW     1    MNT PERM
```

Table 1-18 lists the fields displayed for the services offered on a specific virtual disk.

**Table 1–18 Fields Displayed for Services on a Virtual Disk**

<b>Field</b>	<b>Description</b>
Service Name	The service name of the disk service.
Type	The type of disk service: BOOT, USER, SYSTEM, APPLICATION.
Server	The name of a disk server offering this service.
Limit	The maximum number of connections allowed to the service.
Users	The current number of connections to the service.
Acc	The access mode of this service: RO (Read only) or RW (Read and Write).
Rating	The priority of a service, set by the system administrator. The valid range is 1 through 65,535. The default is 1.
Status	The status can be one or more of the following: <ul style="list-style-type: none"> <li>MNT<sup>1</sup>            The virtual disk is mounted.</li> <li>PERM            The virtual disk is mounted permanently. When mounted permanently, the virtual disk mounts every time the server is restarted. When mounted temporarily, the virtual disk is available only until the next time the server is started.</li> <li>PEND<sup>1</sup>           Occurs when you mount a read-write disk to the cluster (using the /CLUSTER qualifier). One node offers the disk (MNT); others are pending. If the primary node fails, one of the other nodes in the cluster goes from pending to mounted.</li> <li>DSMNT           The virtual disk is currently dismounted.</li> </ul>

---

<sup>1</sup>When the status is MNT and PEND, the virtual disk is mounted with Write access on one node, and another node is waiting to mount it with Read and Write access.

---

### USE /STATUS

To obtain a listing of your client node's installed network components and devices available for connection, enter:

```
C:\> USE /STATUS
```



## USE

A screen similar to the following is displayed:

```
USE Version 4.1 Digital Connection Manager
Copyright (C) 1988-1991 by Digital Equipment Corporation
```

```
USE Library version 1.6.0
```

```
LAD Disk Driver:  Version 4.1
LAD CDROM Driver: MSCDEX is not installed
Redirector:       Version 1.4
NetBIOS Session: Version 2.1
```

```
Workstation name: PLAY1
DECnet database:  C:\DECNET\
DECnet node:     PLAY1 (9.562)
Station address: AA-00-04-00-33-26
Hardware address: 08-00-2B-10-BA-A9
Controller type: DEC DEPCA
```

```
Physical drives: A:-I:
Logical drives:  A:-Z:
Network drives:  J:-Z:
Virtual drives:  F:-I:
CD ROM drives:   MSCDEX is not installed
LAD CD drives:   MSCDEX is not installed
```

```
Next available virtual drive:  F:
Next available virtual CDROM:  MSCDEX is not installed
Next available network drive:  N:
Next available network drive:  N:
Next available printer device: LPT1:
```

### USE /VIRTUAL

You want to connect the next available device to the virtual disk service DISK2 on SERVR1, and to log the procedure. (Note that when you include the server name, you must also include the /VIRTUAL qualifier.) Enter:

```
C:\> USE ? : \\SERVR1\DISK2 /VIRTUAL /LOG
```

The system connects the service to device G:

```
Device G:  connected to \\SERVR1\DISK2
```

The USE /VIRTUAL command works only on virtual disk servers. The USE /NETWORK command works only on file servers.

## USE

### USE /X

To connect device E on your client to a remote boot disk, use the /X qualifier. Use /LOG to obtain a screen response. The system supplies the Ethernet address for the remote boot disk. Enter:

```
C:\> USE E: /X /LOG
```

The system responds with a message similar to the following:

```
Device E: connected to \\SERVER2\AA-00-04-27-BA-A9
```



---

## Loading Network Components

This chapter describes the commands used to load network components and start the network.

### Command Conventions

A typical command for loading a network component has this form:

```
drive:\path\component /qualifier /qualifier
```

drive	Is the drive on which the component's executable file is located. The system assumes your current drive unless you specify another.
path	Is the path to the executable file. The system looks for the file in a directory on your current path unless you specify another path.
component	Is the network component you are loading.
qualifier	Is one or more qualifiers that modify the operation of the component.

For example, the following command loads the Local Area System Transport (LAST) from the \LMDOS\DRIVERS\PCSA directory on the system drive (in this case, drive J).

```
C:\> J:\LMDOS\DRIVERS\PCSA /N:NODE /C:D /G:0
```

### Loading with Netsetup

Specific network components and their qualifiers are usually selected by Netsetup, and saved in the STARTNET.BAT batch file, located in the DECNET directory on the path. At the same time, Netsetup puts a call to STARTNET.BAT in AUTOEXEC.BAT.

At startup, the system reads AUTOEXEC.BAT and subsequently STARTNET.BAT for the information necessary to start each network component. No further action is needed on your part.

For more information on Netsetup, see *Client Installation and Configuration Guide for the VMS Server*.

## Loading Without Netsetup

You can create custom network configurations by loading individual components in one of the following ways:

- By loading at the DOS prompt

Entering components individually at the DOS prompt in the loading order you want.

You can load a component at the DOS prompt as long as the executable file is on the DOS search path or on a path you specify. If you try to load a component without specifying the correct path, the screen displays a “Bad command or file name” message.

- By loading from a batch file

You can place the command in STARTNET.BAT or a batch file you create. To load automatically each time you start the system, put a pointer to the batch file in AUTOEXEC.BAT.

## Unloading Components

You can unload components with one of the following commands:

STOPNET	Unloads all the network components listed in STARTNET.BAT. SAVE must be loaded to ensure that STOPNET works successfully.
component /U	Unloads the specified component, if permitted. Currently, only the LAT network component supports this command.

---

### Note

---

Using component /U to unload a component does not free up the memory that the component was using.

---

To reload all the network components, enter:

```
C:\> \DECNET\STARTNET.BAT
```

## Modifying the Configuration

The working configuration of each component is usually set up according to the qualifiers specified at loading time. However, you can change the configuration of some components after they are loaded by reentering the component's name with modified qualifiers. This can be done at the DOS prompt or in the batch file.

You can also modify the configuration by reexecuting Netsetup.

## Summary of Commands for Loading Components

Table 2–1 summarizes the commands that start the network component software.

**Table 2–1 Commands for Loading Components and Limitations on Use**

Command	Function
DLL802	Loads the extended data link interface module, which supports IEEE 802.3 and Ethernet format frames. This command functions in all configurations <i>except</i> those using asynchronous communication links.
DLLDEPCA	Loads the native DEPCA (non-NDIS) data link layer. This command functions in all configurations <i>except</i> those using asynchronous or Token Ring communication links.
DLLNDIS	Loads a software interface that enables many NDIS-compliant Ethernet drivers to be used with PATHWORKS network transports, such as DNP. This command functions in all configurations <i>except</i> those using asynchronous or Token Ring communication links.
DLLNDIST	Loads a software interface that enables many NDIS-compliant Token Ring drivers to be used with PATHWORKS network transports, such as DECnet. This command is limited to configurations that include Token Ring communication links.
DNNDCPLD	Loads DNNDCPEM.EXE, asynchronous DNP with NETBIOS, into expanded memory.
DNNDCPPC	Loads asynchronous DNP with NETBIOS into conventional memory.
DNNETH	Loads the LAN variant of DNP with NETBIOS (DECnet, over Ethernet or Token Ring).

(continued on next page)

**Table 2-1 (Cont.) Commands for Loading Components and Limitations on Use**

<b>Command</b>	<b>Function</b>
DNPDCPPC	Loads asynchronous DNP without NETBIOS into conventional memory.
EMSLOAD	Loads DNNETH, LAD, LAST, LANSESS, LAT, or RCV into expanded memory. This command functions in all configurations <i>except</i> those using asynchronous communication links.
LAD	Loads the virtual disk client software. This command is limited to LAN-only configurations with a VMS server.
LANSESS	Loads the local area network session, which allows you to connect to file and print services. This command is limited to LAN-only configurations with a VMS server.
LAST	Loads the virtual disk transport layer. This command is limited to LAN-only configurations with a VMS server.
LAT	Loads the Local Area Transport (LAT) software, which allows you to use terminal communications over the LAN by means of the LAT protocol.
NDDRV	Provides access over a WAN to virtual disks.
NPDRV	Provides access over a WAN to network printers.
PSC	Loads a program that enables you to print a screen on a network printer and flush print buffers. PSC also supports timed closure of redirected printers.
REDIR	Loads the redirector.
SAVE	Records current memory information. This enables you to restore memory context when you unload components.
SCH	Loads the real-time scheduler, which is required for all other DECnet/PATHWORKS services and utilities.
SRM	Enables source routing for Token Ring clients. Source routing connects a node on one Token Ring to a node on another Token Ring by means of routing bridges. This command is limited to configurations that include Token Ring communication links. It is not supported on ULTRIX servers.

---

## DLL802

### Purpose

DLL802 is the extended data link interface for IEEE 802.3 and Ethernet format frames. The qualifiers for DLL802 are set to their default values. By using the DLL802 command, however, you can change the qualifiers at the DOS prompt, if necessary.

### Format

```
DLL802 [ /B:n ]  
        [ /M:n ]  
        [ /P:n ]  
        [ /S:n ]
```

### Qualifiers

- /B:n** Specifies the maximum number of buffer information blocks (BIB) to be allocated. Each BIB occupies 14 bytes of memory. The range of n is 48 through 255. The default is 64.
- /M:n** Specifies the maximum number of multicast addresses that can be enabled by a DLL802 portal. The range of n is 2 through 8. The default is 2.
- P:n** Specifies the maximum number of DLL802 portals. The range of n is 6 through 16. The default is 6.
- S:n** Specifies the maximum number of service access point addresses that can be enabled by a DLL802 portal. The range of n is 2 through 8. The default is 2.

### Example

To increase the number of multicast addresses you can use from the default (2) to 6, enter:

```
C:\> DLL802 /M:6
```



## DLLDEPCA

---

## DLLDEPCA

### Purpose

The DLLDEPCA command loads the non-NDIS data link layer software that the Etherworks DEPCA board uses. This procedure is required for Ethernet configuration.

### Guidelines

Load DLLDEPCA after the Scheduler (SCH).

Do not load DLLDEPCA if you have loaded the DEPCA NDIS driver (DEPCA.DOS).

DEPCA boards can be configured with or without a ROM (read-only memory). These guidelines describe the options you have for loading DLLDEPCA with or without a ROM.

- With a ROM

Most PATHWORKS users have a ROM. If your DEPCA board has a ROM, you normally load DLLDEPCA by means of Netsetup.

Netsetup also creates a DECPARM.DAT file, which contains the configuration information for your client node. At startup, DLLDEPCA reads DECPARM.DAT. When you enter the DLLDEPCA command, the screen displays the DLLDEPCA configuration for your client node.

You also have the option of loading DLLDEPCA at the DOS prompt, provided DLLDEPCA.EXE is in a directory on the path. You can load at the DOS prompt in one of two ways:

- Load DLLDEPCA without qualifiers

You simply enter the DLLDEPCA command. This runs DLLDEPCA.EXE, but does not run a RAM diagnostic.

- Load DLLDEPCA with qualifiers

You enter the DLLDEPCA command with the /ADAPTER, /IRQ, and /RAM qualifiers. This runs DLLDEPCA.EXE and, in addition, runs a RAM diagnostic. *Be sure that the values you set for the qualifiers match the hardware settings on your DEPCA board.*

- Without a ROM

If your DEPCA board does not have a ROM, you must add the /ADAPTER, /IRQ, and /RAM qualifiers to DLLDEPCA. Normally, you add the qualifiers to the DLLDEPCA load command in the batch file. However, you can add the qualifiers to DLLDEPCA at the DOS prompt for a one-time loading operation. *Be sure that the values match the hardware settings on your DEPCA board.*

---

### Note

---

You can load DLLDEPCA at the DOS prompt. However, you cannot modify the existing DLLDEPCA configuration at the DOS prompt if DLLDEPCA is already running.

---

### Format

DLLDEPCA [ /ADAPTER:name  
          /IRQ:n  
          /RAM:n ] [\path\]

### Parameters

**path** Specifies the location of DECPARM.DAT. If you do not specify this path, DLLDEPCA looks for DECPARM.DAT in the DECNET directory of the current drive.

## DLLDEPCA

### Qualifiers

<code>/ADAPTER:name</code>	(Required if you do not have a ROM.) The value for <i>name</i> is one of the following: DEPCA           DE201 DE100           DE210 DE101           DE212 DE200
<code>/IRQ:n</code>	(Required if you do not have a ROM.) IRQ is the interrupt request line. The value for <i>n</i> is 1 through 15.
<code>/RAM:n</code>	(Required if you do not have a ROM.) RAM is the starting address of the adapter. The value for <i>n</i> is one of the following: C000           C800 D000           D800 E000           E800

### Examples

- If you do not have a ROM on the DLLDEPCA board you can load your data link software from the DOS prompt. For example, for a DEPCA adapter board with an IRQ setting of 3 and a starting address of D000, enter:

```
C:\> DLLDEPCA /ADAPTER:DEPCA /IRQ:3 /RAM:D000
```

To enter the configuration in Example 1 into the STARTNET.BAT batch file, find the following line:

```
%BOOT%\DECNET\DLLDEPCA.EXE
```

To this line, add the appropriate qualifiers:

```
%BOOT%\DECNET\DLLDEPCA.EXE /ADAPTER:DEPCA /IRQ:3 /RAM:D000
```

- In this example, the system looks for DLLDEPCA.EXE in the DECNET directory of the current drive. When DLLDEPCA.EXE runs, it uses the DECPARM.DAT file located on the path A:\MYDIR.

```
C:\> \DECNET\DLLDEPCA A:\MYDIR
```

- In this example, the system looks first in the root directory and then in the search path for DLLDEPCA.EXE. When DLLDEPCA.EXE runs, it uses the DECPARM.DAT file located on the path C:\MYDIR.

```
C:\> DLLDEPCA C:\MYDIR
```

When you successfully complete any of the DLLDEPCA loading commands, one of the following screens is displayed:

- If you have loaded DLLDEPCA successfully, the following screen is displayed:

```
DEPCA Data Link V4.1.0
Copyright (C) 1989, 1991 by Digital Equipment Corporation
Adapter: DEPCA, IRQ:3, I/O:0300, MEM:D000, 64K mode, Buffers:32
Datalink installed successfully.
```

- If DLLDEPCA is already loaded, the screen simply displays the working configuration:

```
DEPCA Data Link V4.1.0
Copyright (C) 1989, 1991 by Digital Equipment Corporation
Adapter: DEPCA, IRQ:3, I/O:0300, MEM:D000, 64K mode, Buffers:32
Datalink already installed
```

**Table 2-2 Description of the DLLDEPCA Display**

---

Adapter	Is the DEPCA in your configuration. See <b>Qualifiers</b> for a list of possible adapters.
IRQ	Interrupt request line.
I/O	Input/output address.
MEM	Starting address of your adapter.
Mode	Either 64K mode or 32K mode, depending on how mode has been set.
Buffers	Total number of buffers on which the data link is operating.

---

## DLLNDIS

---

## DLLNDIS

### Purpose

The DLLNDIS command loads a software interface that enables many NDIS-compliant Ethernet drivers to be used with PATHWORKS network transports such as DNP.

### Guidelines

The following are prerequisites for loading DLLNDIS:

- The appropriate NDIS driver must be loaded with PROTMAN.SYS. For example:

```
DEVICE=C:\LMDOS\DRIVERS\PROTMAN\PROTMAN.SYS /I:C:\DECNET  
DEVICE=C:\DECNET\DEPCA.DOS
```

To modify DLLNDIS, you must edit PROTOCOL.INI, located on the path  
DEVICE=PROTMAN.SYS /I:C:\DECNET.

The \DECNET directory is an example. Remember, however, that PROTOCOL.INI must be in whatever directory is in this location on the path.

- After the CONFIG.SYS file has been executed, DLLNDIS must be loaded in the following sequence:

```
DLLNDIS  
NETBIND  
SAVE (for unloading purposes)  
SCH
```

### Format

DLLNDIS

### Parameters

---

#### Note

---

The values for the following parameters are in the PROTOCOL.INI file. To change these values, edit PROTOCOL.INI. Retain the spaces before and after the equals sign (=).

---

DRIVERNAME = DLL\$MAC	This should always be the first qualifier. Do not change it.
BINDINGS = name	Specifies the name of the adapter that DLLNDIS is to be bound to. The value for <i>name</i> is one of the bracketed items in PROTOCOL.INI. For example, if you are using a DEPCA and the DEPCA information is stored in a section of PROTOCOL.INI called [DEPCA], then use BINDINGS = DEPCA.
LG_BUFFERS = n	Specifies the number of large data link buffers. A large data link buffer is 1518 bytes. The minimum is 16 (the default). You may need to increase the value for n if you are running a large number of simultaneous DECnet links.
SM_BUFFERS = n	Specifies the number of small data link buffers. A small data link buffer is 144 bytes long. The minimum is 8 (the default). You may need to increase the value for n if you are running a large number of simultaneous DECnet links.
OUTSTANDING = n	Specifies the number of outstanding transmit or receive requests. The minimum is 16 (the default). The value for n should be increased in proportion to the number of large and small data link buffers. Each outstanding request consumes 12 bytes.
NI_IRQ = n	Specifies the interrupt number that the Ethernet hardware is attached to. This qualifier is not normally needed because DLLNDIS can determine the interrupt number automatically for many devices. If the Scheduler fails to load, you may need to set NI_IRQ to the interrupt number that your Ethernet device is configured for. On 80286, 80386, or 80486 processors with 16- or 32-bit buses, set NI_IRQ=9 for any adapter configured by jumpers for IRQ2.

## DLLNDIS

DECPARM = "string"

Specifies the path name of your DECnet database files. Normally, this path is the current drive and the \DECNET directory. For example, setting DECPARM = "D:\DNETDATA" configures DLLNDIS and the other network components to find their data files in D:\DNETDATA.

HEURISTICS = n

Specifies a number of "fine tuning" values for DLLNDIS. This qualifier is bitmasked, meaning that each binary bit of the number is significant. The values are as follows:

- 2 Copy all "receive chain" buffers.
- 4 The adapter hears its own multicast transmissions.
- 8 Use the old interrupt shell for the scheduler.
- 16 Use GDT addresses on "receive lookaheads."

To combine options, add the numbers together. Do not change the HEURISTICS option unless you are familiar with NDIS terms and concepts. It is used primarily for debugging new cards that have not been tested with DLLNDIS. Setting HEURISTICS = 6 provides the best results for testing cards that are not explicitly supported by PATHWORKS.

## Examples

- To load DLLNDIS at the command line, enter:

```
C:\> DLLNDIS
```

When the driver is successfully loaded, the screen displays:

```
PATHWORKS NDIS Datalink, V4.1  
Copyright (c) 1989 to 1991 by Digital Equipment Corporation  
NDIS Datalink drive installed successfully
```

- **This is a typical PROTOCOL.INI FILE:**

```
[DATA LINK]
DRIVERNAME = DLL$DEC
BINDINGS   = DEPCA
LG_BUFFERS = 16
SM_BUFFERS = 8
OUTSTANDING = 16
```

```
[DEPCA]
DRIVERNAME = DEPCA$
```

```
[ETHERLINKMC]
DRIVERNAME = ELNKMC$
```

To change the adapter from a DEPCA to and EtherLink/MC, edit the BINDINGS = line in PROTOCOL.INI as follows:

```
BINDINGS = ETHERLINKMC
```



## DLLNDIST

---

## DLLNDIST

### Purpose

The DLLNDIST command loads a software interface that enables many NDIS-compliant Token Ring drivers to be used with PATHWORKS network transports such as DECnet.

### Guidelines

The following are prerequisites for loading DLLNDIST:

- The appropriate NDIS driver must be loaded with PROTMAN.SYS. For example:

```
DEVICE=C:\LMDOS\DRIVERS\PROTMAN\PROTMAN.SYS /I:C:\DECNET  
DEVICE=C:\DECNET\IBMTOK.DOS
```

To modify DLLNDIST, you must edit PROTOCOL.INI, located on the path  
DEVICE=PROTMAN.SYS /I:C:\DECNET.

The /DECNET directory is an example. Remember, however, that PROTOCOL.INI must be in whatever directory is in this location on the path.

- After the CONFIG.SYS file has been executed, DLLNDIST must be loaded in the following sequence:

```
DLLNDIST  
NETBIND  
SAVE (for unloading purposes)  
SCH
```

---

### Note

---

With a Token Ring adapter, NETBIND takes several seconds to execute as it initializes the adapter and connects to the ring.

---

### Format

DLLNDIST

## Parameters

---

### Note

---

The values for the following parameters are in the PROTOCOL.INI file. To change these values, edit PROTOCOL.INI. Retain the spaces before and after the equals sign (=).

---

DRIVERNAME = DLL\$MAC	This should always be the first qualifier. Do not change it.
BINDINGS = name	Specifies the name of the adapter that DLLNDIST is to be bound to. The value for <i>name</i> is one of the bracketed items in PROTOCOL.INI. For example, if you are using IBMTOK and the IBMTOK information is stored in a section of PROTOCOL.INI called [IBMTOK], then use BINDINGS = IBMTOK.
LG_BUFFERS = n	Specifies the number of large data link buffers. A large data link buffer is 1518 bytes. The minimum is 16 (the default). You may need to increase the value for n if you are running a large number of simultaneous DECnet links.
SM_BUFFERS = n	Specifies the number of small data link buffers. A small data link buffer is 144 bytes long. The minimum is 8 (the default). You may need to increase the value for n if you are running a large number of simultaneous DECnet links.
OUTSTANDING = n	Specifies the number of outstanding transmit or receive requests. The minimum is 16 (the default). The value for n should be increased in proportion to the number of large and small data link buffers. Each outstanding request consumes 12 bytes.

## DLLNDIST

**NI\_IRQ = n**

Specifies the interrupt number that the Token Ring hardware is attached to. This qualifier is not normally needed because DLLNDIST can determine the interrupt number automatically for many devices. If the Scheduler fails to load, you may need to set NI\_IRQ to the interrupt number that your Token Ring device is configured for.

On 80286, 80386, or 80486 processors with 16- or 32-bit buses, set NI\_IRQ=9 for any adapter configured by jumpers for IRQ2.

**DECPARM = "string"**

Specifies the path name of your DECnet database files. Normally, this path is the current drive and the \DECNET directory. For example, setting DECPARM = "D:\DNETDATA" configures DLLNDIST and the other network components to find their data files in D:\DNETDATA.

**HEURISTICS = n**

Specifies a number of "fine tuning" values for DLLNDIST. This qualifier is bitmasked, meaning that each binary bit of the number is significant. The values are as follows:

- 2            Copy all "receive chain" buffers.
- 4            The adapter hears its own multicast transmissions.
- 8            Use the old interrupt shell for the scheduler.
- 16          Use GDT addresses on "receive lookaheads."

To combine options, add the numbers together.

Do not change the HEURISTICS option unless you are familiar with NDIST terms and concepts. It is used primarily for debugging new cards that have not been tested with DLLNDIST. Setting HEURISTICS = 6 provides the best results for testing cards that are not explicitly supported by PATHWORKS.

## Examples

- To load DLLNDIST at the command line, enter:

```
C:\>DLLNDIST
```

When the driver is successfully loaded, the screen displays:

```
PATHWORKS NDIS Token Ring Datalink, V4.1  
Copyright (c) 1989 to 1991 by Digital Equipment Corporation  
Datalink driver installed successfully
```

- This is a typical PROTOCOL.INI FILE:

```
[DATALINK]  
DRIVERNAME = DLL$DEC  
BINDINGS   = IBMTOK  
LG_BUFFERS = 16  
SM_BUFFERS = 8  
OUTSTANDING = 16  
  
[IBMTOK]  
DRIVERNAME = IBMTOK$  
  
[PROTEON]  
DRIVERNAME = PROTEON$
```

To change the adapter from IBMTOK to PROTEON, edit the BINDINGS = line in PROTOCOL.INI as follows:

```
BINDINGS = PROTEON
```

## DNND CPLD

---

## DNND CPLD

### Purpose

This command loads DNND CPEM.EXE into expanded memory (EMS). DNND CPEM is the DNP variant that provides wide-area-network, asynchronous DECnet with NETBIOS support.

### Guidelines

As part of the DNND CPLD command line, specify DNND CPEM.EXE and the qualifiers for DNND CPEM.

---

#### Note

DNND CPEM.EXE cannot be loaded into and executed from conventional memory directly by DOS. This version is structured so that it can be loaded only by DNND CPLD and executed only in EMS memory.

---

### Format

```
DNND CPLD [drive:\path1\DNND CPEM.EXE] [ /CMD:n  
/FC:n  
/I2A:Y | N  
/LAN:n  
/LCN:n  
/MSN:n  
/NAM:Y | N  
/NSB:n  
/REM:n ] [\path2\]
```

### Parameters

drive	Is the drive for the directory containing the executable file for DNND CPEM.
path1	Is the path to the executable file for DNND CPEM.
path2	Is the path to the databases (may include a drive).

## Qualifiers

**/CMD:n** Defines the maximum number of outstanding commands. The default value is 6. The maximum value is 64.

**/FC:n** Sets the default flow control options for IOCB or NETBIOS interfaces, according to the following table:

Value	NETBIOS	Sockets
0	XON/XOFF	XON/XOFF
1	Segment	Segment

**/I2A:Y | N** Enables (Y) or disables (N) the INT 2A service. The default is Y. Set to N if you use an alternate INT 2A interface.

**/LAN:n** Is the LANA number of the Ethernet adapter card that NETBIOS emulates. The value for n is either zero (0) or one (1). The default is zero. Set this value to 1 if you already have another NETBIOS emulator installed that uses the LANA number 0.

**/LCN:n** Is the number of local names in the volatile local adapter database. The value for n is from 2 to 64. The default is 16.

**/MSN:n** Specifies the number of node names in the DECnet node database, DECNODE.DAT. The range of values for n is 1 to 64. The default value is 12 or the number of MS-NET nodes defined in the DECnet node database, whichever is higher.

**/NAM:Y | N** Adds (Y) or does not add (N) the local adapter names for the server and redirector to the volatile local adapter database. Y is the default.

**/NSB:n** Specifies the size in bytes of the largest message the session can support. The value for n is from 512 bytes to 65535 bytes (64 Kbytes). The default is 65535.

**/REM:n** Sets the number of dynamic remote-adapter name entries that DNP reserves. The default is the number defined in the DECREM.DAT file.

## **DNND CPLD**

### **Example**

To load DNND CPEM.EXE from a diskette (A:) and to execute it using a hard drive (C:) for the databases, enter:

```
A:\> DECNET\DNND CPLD A:\DECNET\DNND CPEM.EXE C:\DECNET\
```

The screen displays:

```
DNP EMS Loader V4.1  
DECnet DNP Version V4.1  
  with NETBIOS Interface Support  
DECnet Node Name 'PLAY1' 9.380  
DECnet Started
```

If DNND CPEM.EXE has already been loaded, the screen displays:

```
DNP EMS Loader V4.1  
DNP is already installed
```

## **DNNDCPPC**

### **Purpose**

This command loads into conventional memory the DNP variant that provides wide-area-network, asynchronous DECnet with NETBIOS support.

### **Guidelines**

The DNNDCPPC command operates only in conventional memory. To operate asynchronous DNP from expanded memory, see the DNND CPLD command.

### **Format**

```
DNNDCPPC [drive:\path] [ /CMD:n
                        /FC:n
                        /I2A:Y | N
                        /LAN:n
                        /LCN:n
                        /MSN:n
                        /NAM:Y | N
                        /NSB:n
                        /REM:n ]
```

### **Parameters**

**path**                    Is the path to the databases (may include a drive letter).

### **Qualifiers**

**/CMD:n**                    Defines the maximum number of outstanding commands. The default value is 6. The maximum value is 64.



## DNNDCPPC

**/FC:n** Sets the default flow control options for IOCB or NETBIOS interfaces, according to the following table:

Value	NETBIOS	Sockets
0	XON/XOFF	XON/XOFF
1	Segment	Segment

**/I2A:Y | N** Enables (Y) or disables (N) the INT 2A service. The default is Y. Set to N if you use an alternate INT 2A interface.

**/LAN:n** Is the LANA number of the Ethernet adapter card that NETBIOS emulates. The value for n is either zero (0) or one (1). The default is zero. Set this value to 1 if you already have another NETBIOS emulator installed on LANA number 0.

**/LCN:n** Is the number of local names in the volatile local adapter database. The value for n is from 2 to 64. The default is 16.

**/MSN:n** Specifies the number of node names in the DECnet node database, DECNODE.DAT. The range of values for n is 1 to 64. The default value is 12 or the number of MS-NET nodes defined in the DECnet node database, whichever is higher.

**/NAM:Y | N** Adds (Y) or does not add (N) the local adapter names for the server and redirector to the volatile local adapter database. Y is the default.

**/NSB:n** Specifies the size in bytes of the largest message the session can support. The value for n is from 512 bytes to 65535 bytes (64 Kbytes). The default is 65535.

**/REM:n** Sets the number of dynamic remote-adapter name entries that DNP reserves. The default is the number defined in the DECREM.DAT file.

### Example

To load DNNDCPPC into conventional memory, enter:

```
C:\> DNNDCPPC
```

The screen displays:

```
DECnet DNP Version V4.1  
DECnet Node Name 'PLAY1' 9.380  
DECnet Started
```

**If DNNDCPPC has already been loaded, the screen displays:**

DECnet DNP Version V4.1

## DNNETH

---

## DNNETH

### Purpose

Loads the LAN variant of DNP with NETBIOS (DECnet, over Ethernet or Token Ring).

### Guidelines

DOS loads DNNETH into conventional memory. To load and run DNP in expanded memory (EMS), load DNNETH.EXE into EMS with the EMSLOAD command.

Only one LAN version of DNP exists, and this version supports NETBIOS.

### Format

```
DNNETH [ /ADDR:address  
        /CMD:n  
        /FC:n  
        /I:path  
        /I2A:Y | N  
        /LAN:n  
        /MAX:n  
        /MSN:n  
        /NAME:name  
        /NSB:n  
        /REM:n  
        /SDB:n ]
```

### Qualifiers

- /ADDR:address** Sets the client's node address. For /ADDR to work, you must also supply the node name, using the /NAME qualifier. If you specify the node name and address, the system does not read DECPARM.DAT. Instead, DNP runs with default values.
- /CMD:n** Defines the maximum number of outstanding commands that can be added to the value computed by DNNETH. The value for n is from 0 to 256. The default depends on the number of DECnet links.

**/FC:n** Sets the default flow control options for IOCB or NETBIOS interfaces, according to the following table:

Value	NETBIOS	Sockets
0	XON/XOFF	Segment
1	Segment	Segment
2	XON/XOFF	XON/XOFF
3	Segment	XON/XOFF

**/I:path** Sets the path to the database. This qualifier overrides the default method used by DNP to locate DECPARM.DAT.

**/I2A:Y | N** Enables (Y) or disables (N) the INT 2A service. The default is Y. Set to N if you use an alternate INT 2A interface.

**/LAN:n** (Or **/LANA:n**) Is the LANA number of the Ethernet adapter card that NETBIOS emulates. The value for n is either zero (0) or one (1). The default is zero. Set this value to 1 if you already have another NETBIOS emulator installed on LANA number 0.

**/MAX:n** Configures the maximum number of DECnet links. The value for n is from 4 to 256. Each link requires approximately 212 bytes.

**/MSN:n** Specifies the number of node names in the DECnet node database, DECNODE.DAT. The value for n is 0 plus the number of names defined in DECNODE.DAT. Each node name requires 18 bytes.

**/NAME:name** Sets the client's node name. For **/NAME** to work, you must also supply the node address, using the **/ADDR** qualifier.

**/REM:n** Sets the number of dynamic remote-adapter names that DNP reserves. The default is 0. Each remote adapter requires about 170 bytes.

**/SDB:n** Sets the number of SDBs (small data blocks) that are allocated. SDBs store incoming and outgoing access control data and SELECT commands in progress. The value of n is from 5 to 32. The default is 5. Each SDB requires 202 bytes.

## Example

You want to load your Ethernet DNP into conventional memory, with 2 remote adapter names, 30 commands, 4 DECnet links, and a path to the database for Ethernet LAN DNP with NETBIOS. Enter:

```
C:\> DNNETH /REM:2 /CMD:30 /MAX:4 /I:\DATADIR
```

## DNPDCPPC

---

# DNPDCPPC

### Purpose

This command loads the DNP variant that provides wide-area-network, asynchronous DECnet without NETBIOS support.

### Guidelines

This variant can be operated only in conventional memory. To operate asynchronous DNP from expanded memory (EMS), do not use the use EMSLOAD command. Instead, use the DNND CPLD command and specify the DNND CPEM.EXE parameter.

### Format

DNPDCPPC [drive:\path]

### Parameters

path                    Is the path to the databases (may include a drive letter).

### Example

To load asynchronous DNP into conventional memory from a directory on the DOS path, enter:

```
C:\> DNPDCPPC
```

The screen displays:

```
DECnet DNP Version V4.1  
DECnet Node Name 'PLAY1' 9.380  
DECnet Started
```

If DNPDCPPC has already been loaded, the screen displays:

```
DECnet DNP Version V4.1
```

---

## EMSLOAD

### Purpose

With this command, you can load individually the following network components into expanded memory (EMS): DNNETH, LAD, LANSESS, LAST, LAT, and RCV.

### Guidelines

To use EMSLOAD, you must have expanded memory on your client.

For more information on loading network components into EMS, see *Memory Solutions for Client Administrators*.

---

#### Note

---

Do not use EMSLOAD to operate asynchronous DNP from EMS. Instead, use the DNNDCPLD as described in this manual.

---

### Format

EMSLOAD [drive:\path\component.exe][/qualifiers/...]

### Parameters

**component**            Is the network component you want to load into expanded memory: DNNETH, LAD, LANSESS, LAST, LAT, or RCV.

### Qualifiers

**/qualifiers**            Are the qualifiers that define the way the component works. Within limits, you can modify qualifiers at the command line. For valid settings, see the corresponding command for DNNETH, LAD, LANSESS, LAST, LAT, or RCV in this manual.

## **EMSLOAD**

### **Example**

You need to release some conventional memory for a large application by loading LAD into EMS. To do so, edit your STARTNET.BAT file as follows. The example assumes a path on drive C.

```
EMSLOAD c:\path\lad /r:4 /w:4 /a:d
```

---

## LAD

### Purpose

The LAD command starts the virtual disk client software, enabling you to use your virtual disk services.

### Guidelines

To use the virtual disk client software, your client must be connected by a local area network (LAN) to a VMS system offering a disk service.

You can use this command to change the qualifier values even though LAD has already been loaded.

Before you run LAD:

- LAST should be running. Be sure that LAST precedes LAD in your STARTNET.BAT file.
- The device driver LADDRV.SYS must have been specified in your CONFIG.SYS file, as follows:

```
DEVICE = LADDRV.SYS /D:n
```

The value of n is the number of virtual disk drives to which you are connected. The range for n is 1 through 8. The default is 4.

### Format

```
LAD [ /A:D | E ]  
    [ /R:n  
    [ /W:n ] ]
```



## LAD

### Qualifiers

- /A:D | E** Specifies D to disable and E to enable an audible click for each request made to the network using LAD. The default is D. The click tells you when the system is accessing the disk service.
- /R:n** Specifies the transaction size of a virtual disk Read operation. The **transaction size** is the number of data packets accepted by your client for one Read operation. The range of n is 1 through 15. The default is 4.
- You can increase performance by increasing the Read and Write transaction sizes. Some systems (older 8086 systems, small-mode DEPCAs, and some NDIS configurations) may require smaller values than the defaults. If you experience Read or Write errors, lower the associated transaction sizes.
- Because there is no command line to be read during remote boot, LAD uses the defaults /R:4 and /W:4. You can change these later by using the LAD command.
- /W:n** Specifies the transaction size for a virtual disk Write operation. The range of n is 1 through 15. The default is 4.
- On a fast client, too large a Write transaction size can cause a "General failure writing drive" error. If you get this error, it is important that you rewrite the file to ensure integrity.

### Example

If you have been experiencing timeouts in your LAD connections, you can correct this problem by decreasing your Read and Write transaction sizes. To change the default settings from 4 to 3, enter:

```
C:\> LAD /R:3 /W:3
```

---

## LANSESS

### Purpose

Using the LANSESS command you can:

- Start LANSESS (Local Area Network Session), enabling you to connect to file services
- Show what version of LANSESS you are running
- Modify any LANSESS qualifiers that you specified in Netsetup

### Guidelines

The following are prerequisites for running LANSESS:

- The Local Area System Transport (LAST) must be running. Be sure that LAST precedes LANSESS in your STARTNET.BAT file.
- The file services you use must reside on a PATHWORKS for DOS Version 4.0 file server. Note that you must load DNP to use files services.)

### Format

```
LANSESS [ /R:n ]  
         [ /W:n ]
```

### Qualifiers

- /R:n** Specifies the transaction size of a Read operation. The **transaction size** is the number of data packets accepted by your client for one Read operation. The range of n is 1 through 6. The default is 4. Table 2–3 shows the default transaction sizes for the different Ethernet controllers.
- /W:n** Specifies the transaction size for a Write operation. The range of n is 1 through 16. The default is 4. However, the number of Write buffers is seldom changed, and high numbers are rarely used. Table 2–3 shows the default transaction settings for supported Ethernet controllers.

## LANSESS

---

### Note

---

You can improve the performance for large data transfers by increasing the Read and Write transaction sizes. Some systems (older 8086 machines, small mode DEPCAs and some NDIS configurations) may require smaller values than the defaults. If you experience Read or Write errors, lower the transaction sizes.

---

**Table 2-3 Controllers and Default Transaction Settings, LANSESS**

<b>Controller/Client</b>	<b>Recommended Setting</b>
3C523	/R:4 /W:4
3C503	/R:1 /W:4
NDIS	/R:4 /W:4
DEPCA, DE100, DE200	/R:4 /W:4

### Example

You have an NDIS-compliant Ethernet driver. If you are having network problems, you can try setting the Read buffers to 1, then increasing by one buffer at a time. Enter:

```
C:\> LANSESS /R:1
```

---

## LAST

### Purpose

Using the LAST command you can:

- Start LAST (Local Area System Transport)
- Show what version of LAST you are running
- Modify any LAST qualifiers that you specified in Netsetup

When LAST is loaded, you can connect to:

- Virtual disk services, with LAD installed
- File services, with LANSESS installed

### Format

```
LAST [ /C:D | E ]  
      [ /G:n  
      [ /N:name ] ]
```

### Qualifiers

**/C:D | E** Controls virtual disk checksumming. **Checksumming** verifies whether the data is valid.

D Turns checksumming off

E Turns checksumming on

The default is D, checksumming disabled, which increases performance.

## LAST

**/G:n** Is the group code for LAST. The range for n is 0 through 1023. The default is 0.

The **group code** is the number assigned to selected nodes on the Ethernet to segment a large local area network.

You must change the group code on both the client and the server.

**/N:name** Is a node name of up to 16 characters assigned to your client. If the DECnet network process is loaded, LAST gets its node name from that process. Otherwise, you must specify the name on the command line to load LAST. For more information on the DECnet network process, see *DECnet Network Management Guide*.

### Example

You want to use LAST services in group code 10. Enter:

```
C:\> LAST /G:10
```

The screen displays:

```
Setting new group code
```

---

## LAT

### Purpose

The LAT command:

- Loads the Local Area Transport (LAT) software, which is used to communicate with other LAT nodes. SETHOST and VT320 can use this transport to log on to another node.
- Enables you to offer a local printer as a network service. (See the LATCP ADD LPTn command.)

### Guidelines

All startup parameters for LAT are in the DECLAT.DAT file created by LATCP.EXE.

### Format

LAT [/U]

### Qualifiers

- /U Stops any active LAT sessions and unloads the LAT program.  
Note: The following programs can also unload LAT:
- |           |                                                                                                                                                                                                                      |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MEMMAN /U | Unloads all the network components, including LAT, from expanded memory.                                                                                                                                             |
| SETHOST   | Loads and unloads LAT as necessary.                                                                                                                                                                                  |
| STOPNET   | Unloads all the network components, including LAT, from conventional memory. STOPNET is the recommended method of unloading network components because all services are disconnected before the network is unloaded. |

## LAT

### Examples

- To load LAT in conventional memory, enter:  
C:\> LAT
- To unload LAT from conventional memory, enter:  
C:\> LAT/U

### Related Commands

LATCP

---

## **NDDRV**

### **Purpose**

The NDDRV command loads the device driver that enables you to access LAD disks over a wide area network (WAN).

### **Guidelines**

Before you run NDDRV, the device driver NDDRV.SYS must be specified in your CONFIG.SYS file, as follows:

```
DEVICE = NDDRV.SYS
```

After you run NDDRV, you can use the Network Device Utility (NDU) to access LAD disks over a WAN. For information about using NDU, see the *DECnet User's Guide*.

### **Format**

NDDRV

### **Example**

To load NDDRV, enter:

```
C:\> NDDRV
```

### **Related Commands**

NPDRV



## NPDRV

---

## NPDRV

### Purpose

The NPDRV command loads the device driver that enables you to print a file on a remote printer on the wide area network (WAN). NPDRV creates a temporary file area for the data and copies it over the WAN to the printer. The file is then deleted.

### Guidelines

Before you run NPDRV, the device driver NPDRV.SYS must be specified in your CONFIG.SYS file, as follows:

```
DEVICE = NPDRV.SYS
```

After you run NPDRV, you can use the Network Device Utility (NDU) to access remote printers over a WAN. For information about using NDU, see the *DECnet User's Guide*.

### Format

NPDRV

### Example

To load NPDRV, enter:

```
C:\>NPDRV
```

### Related Commands

NDDRV

---

## PSC

### Purpose

PSC loads a terminate-and-stay resident program that lets you:

- Use the `[Shift/Print Screen]` keys to print a screen on a remote printer
- Use the `[Ctrl/Alt/Print Screen]` keys to close a file redirected to a network printer, immediately queuing the file for printing
- Set a timer that closes a network print file a specified number of seconds after the last byte of data was sent to the network printer

You can perform all of these functions without leaving the word processing program.

### Guidelines

PSC.COM is in the `\LMDOS` directory on the system service.

After loading PSC, you can modify it at the command line. Load PSC.COM after the Interrupt 2A session layer, as follows:

- In DECnet, load after the DECnet network process
- In TCP/IP, load after MINSES

PSC supports independent timing of LPT1, LPT2, and LPT3. However, closure is always for all open queues. This means that you can set each printer to do automatic closure at different intervals as the printers are used. But if any of the intervals expires, all open print queues are closed.

You may decide to use a printer connected to your client and stop redirection to a network printer. If you do so, it is recommended that you use PSC to stop timed print closure for the network printer.

### Troubleshooting

PSC works only with applications that give control to DOS by means of an Int21 call. If the application you are using does not do this, one of the following problems can occur:

- *Problem:* After you press `[Shift/Print]`, the print screen request is canceled, and you hear a beep.

*Solution:* Try `[Shift/Print]` once or twice again. If you continue to hear a beep:

1. Reboot your client.
2. Remove PSC by deleting the PSC line in STARTNET.BAT.

## PSC

3. Print your screen on a local printer.

- *Problem:* After you press `Ctrl/Alt/Print Screen`, you hear a beep. This means that your request to spool has failed.

*Solution:* Exit the application. Your screen automatically starts printing.

- *Problem:* You have specified a timeout period. The time has elapsed, but the file has not closed.

*Solution:* Try to close with the file with `Ctrl/Alt/Print Screen`. If this does not work, exit the application. Your screen automatically starts printing.

## Format

PSC  $\left[ \begin{array}{l} /Pn:x.../Pn:x \\ /Pn:0 \\ /H \end{array} \right]$

## Qualifiers

- `/Pn:x` Specifies the printer and its timeout period:
- `n` Is 1, 2, or 3, corresponding to print devices LPT1, LPT2, and LPT3.
  - `x` Specifies the timeout period in seconds. Printing starts after the specified timeout period. The value of `x` can be from 5 to 1000.  
Note that short values for `x` may cut off print output unnecessarily. Rather than setting too short a value for `x`, remember that you can press `Ctrl/Alt/Print Screen` to close the print file at your convenience.
- `Pn:0` Setting `x` to zero turns off the timing feature.
- `/H` Displays information about the PSC function.

## Examples

- On a DECnet system, you want to load PSC, setting the timeout period for LPT3 at 20 seconds. In STARTNET.BAT, enter:

```
DMNETH
PSC /P3:20
REDIR
```

- On a TCP/IP system, you want to load PSC, setting the timeout period for all print devices. In STARTNET.BAT, enter:

```
MINSES  
PSC /P1:30 /P2:30 /P3:30  
REDIR
```

## REDIR

---

## REDIR

### Purpose

The REDIR command loads the basic redirector, which routes your client's DOS requests to a server or to another client.

### Guidelines

At the command line, you can:

- Modify default qualifiers, if necessary
- Load the redirector into extended memory (XMS) after PSC, if this was not done by Netsetup

When you load the redirector into XMS, you can set qualifiers to their maximum value without affecting conventional memory.

### Format

```
REDIR [ /HIMEM:Y | N ]  
      [ /L:n  
      [ /Pn:x  
      [ /S:n ] ] ]
```

### Qualifiers

**/HIMEM:Y | N** Specifies whether the redirector is loaded into extended memory (XMS). To load the redirector into XMS, HIMEM.SYS or an equivalent memory manager must be in the CONFIG.SYS file.

**Y** If extended memory is available, load the redirector into extended memory. Otherwise, load the redirector into conventional memory. Y is the default.

**N** Load the redirector into conventional memory.

- /L:n** Is the number of redirections (active connections to file or print servers) which the redirector can establish. The default is 10. Each link uses 88 bytes of memory. Unless you use more than two servers at a time, limit the number of logical links to conserve memory.
- /Pn:x** Is the number of the printer and the size of print buffers. Using print buffers of up to 2048 bytes for each printer improves performance slightly. Removing the /Pn:x qualifier can conserve memory.
- n** Is the number (1, 2, or 3) for the printer. For example, if your print device is LPT1, the value of n is 1.
- x** Is the size of the print buffer in bytes. The range for n is 1 through 2048. The default is 128.
- /S:n** Is the number of file and print servers to which the redirector can connect at the same time. The default is 4. The number of possible servers is smaller than or equal to the maximum DECnet links or TCP/IP connections allowed. Each server requires 72 bytes per connection. If you use only two servers at the same time, reset the default from 4 servers to 2 to conserve memory.

## Examples

- If you prefer to load the redirector in conventional, rather than extended, memory, enter:  
C:\> REDIR /HIMEM:N
- To increase print buffer sizes to 256 and load the redirector into extended memory, enter:  
C:\> REDIR /L:10 /P1:256 /P2:256 /P3:256 /S:4 /HIMEM:Y

## SAVE

---

## SAVE

### Purpose

SAVE records the memory context (state of the system) that exists before network components are loaded. Memory context is restored when you unload.

### Guidelines

When you unload, the PCSA mark created by SAVE is used to restore the memory context to the state that existed when SAVE was executed.

In a DECnet configuration, SAVE must be loaded before the Scheduler.

### Format

SAVE

### Example

To load SAVE, enter:

```
C:\> SAVE
```

One of the following messages appears on the screen:

- If SAVE is already loaded, the screen displays:

```
SAVE V4.1.0 Digital Memory Mark Utility  
Copyright (C) 1988-1991 by Digital Equipment Corporation  
Could not install mark -- Scheduler already loaded
```
- If SAVE was not loaded, then typing SAVE completes the task. The screen displays:

```
SAVE V4.1.0 Digital Memory Mark Utility  
Copyright (C) 1988-1991 by Digital Equipment Corporation  
PCSA mark created
```

---

## SCH

### Purpose

The SCH command loads the Scheduler for the network operating system. The Scheduler provides timing services and background multitasking under the DOS operating system.

SCH has two additional centralized services used by other network components: expanded memory support (EMS) and DOS task switching.

### Guidelines

- STARTNET.BAT loads SCH in the correct component order. However, for custom configurations, SCH requires a specific loading order. If you have one of the following configurations, edit the STARTNET.BAT file accordingly:

Driver	Procedure
NDIS data link	Load SCH after DLLNDIS.EXE or DLLNDIST.EXE and NETBIND.EXE.
Non-NDIS data link such as DLLDEPCA.EXE	Load SCH before the data link.

- SCH can be loaded in high memory with the proper third-party memory driver. SCH can be unloaded by MEMMAN if loaded in conventional memory. For more information on loading elements into high memory, see *Memory Solutions for Client Administrators*.



## SCH

- SCH has two variants:

**SCH.EXE** Provides all Scheduler functions, including EMS and 8088/8086 support. SCH requires about 7 Kbytes of memory.

**SCHK.EXE** Contains the Kernel only, which requires about 3 Kbytes of memory. SCHK does not offer EMS support. If the network is not loaded into EMS, SCHK.EXE does save some memory. SCHK requires an 80286 computer or higher and is available only for local boot.

- /H and /S are clock qualifiers. Use only one of these qualifiers at a time.

### Format

SCH  $\left[ \begin{array}{l} /H \\ /M \\ /N \\ /S \end{array} \right]$

SCHK  $\left[ \begin{array}{l} /H \\ /N \\ /S \end{array} \right]$

### Qualifiers

**/H** (STARTNET.BAT and SCH default) Selects the Hardware timer, and uses hardware interrupt 08h. This qualifier helps solve certain timing problems with hardware components in the personal computer, such as:

- The keyboard on the IBM PS/2 Model 55SX
- The simultaneous use of both asynchronous and Ethernet communication if the asynchronous communication uses IRQ 3 or IRQ 4

- /M** Saves memory on 80386-based PCs. Without /M, SCH requires slightly more conventional memory. If the network is loaded in EMS, there is no support for Enhanced Mode Microsoft Windows V3.0.  
The /M qualifier is available only for local boot; it has no effect on 80286 and lower computers.
- /N** Specifies that the Ethernet vector is not checked for interrupt activity during loading, and causes the message “No NDIS Interrupt Activity” to occur. A few NDIS drivers may require this qualifier; in general, /N should not be added to the command line. If the correct Ethernet vector is not hooked by the Scheduler, then system failure can occur.
- /S** Selects the system timer tick and uses software interrupt 1Ch. The /S qualifier may be required by certain configurations of hardware and software. Each clock qualifier selects a different timing mechanism and changes the flow of execution.

### Example

You have an 80386 or higher computer and do not use Microsoft Windows in Enhanced Mode. You would like to save unused memory. To fine-tune the configuration, edit STARTNET.BAT as follows:

- Delete SCH /H
- Add SCH /M

## SRM

---

## SRM

### Purpose

This command enables source routing for Token Ring clients. Source routing connects a node on one Token Ring to a node on another Token Ring by means of routing bridges.

### Guidelines

Before using SRM, be sure that:

- DLLNDIST has been loaded
- NETBIND has run

You cannot load SRM into expanded memory (EMS). However, you can use a high memory driver to load SRM in the high memory area.

### Format

SRM

### Example

To load SRM, enter:

```
C:\> SRM
```

If you load successfully, the screen displays:

```
Source Routing Module for Token Ring V1.0  
Copyright (c) 1991 by Digital Equipment Corporation.  
All rights reserved.
```

```
SRM installed successfully.
```

If SRM is already installed, the following message appears:

```
Source routing already installed.
```

If you receive an error message, see Appendix C.

---

## DOS Enhancements

This chapter describes PATHWORKS for DOS enhancements to native DOS commands. The DOS enhancement commands load program software that enables you to perform important DOS tasks.

Table 3-1 summarizes the DOS enhancements:

**Table 3-1 Summary of DOS Enhancements**

<b>Command</b>	<b>Description</b>
ATTRIB	Sets, clears, and displays the DOS file attributes Archive, System, Hidden, and Read Only.
DECGRAPH	Lets you print graphic video images on a Digital printer.
DECKEYB	Loads a keyboard mapping that enables you to use the Digital Gold keyboard with your personal computer.
DECMODE	Lets you set up Communications, Print, Help, Keyboard, and Video modes.
DECMOUSE	Makes the Digital mouse emulate the Microsoft mouse.
KEYBRD	Lets you use the Digital Gold ROM BIOS keyboard features.
XONXOFF	Lets you use asynchronous ports that have communications devices and attached serial printers requiring the XON/XOFF protocol.

---

# ATTRIB

---

## ATTRIB

### Purpose

The ATTRIB command lets you set, clear, and display the DOS file attributes Archive, System, Hidden, and Read Only.

Usually, native DOS does not allow you to set or clear the hidden and Read Only files.

### Guidelines

The system administrator must install the PATHWORKS for DOS enhancements file for ATTRIB.

You can type the attributes before or after the file name and file extension.

You can use either the plus sign (+) or the minus sign (-) with an attribute. You cannot use both at the same time with one attribute.

### Format

[drive1:][\ path1\ ]ATTRIB [drive2:][\ path2\ ][filename2.ext]

[+ | -, A, S, H, R] [ /L ]  
[ /S ]

### Parameters

drive1	Is the drive containing the ATTRIB program. If you omit this drive, the DOS operating system searches for the ATTRIB program on the default drive.
path1	Is the path containing the ATTRIB program. If you omit this path, the DOS operating system searches for the ATTRIB program in the current directory and along the current path.
drive2	Is the drive containing the file whose attributes you want to set, clear, or display. If you omit this drive, the ATTRIB program uses the default drive.
path2	Is the path on drive 2 containing the file whose attributes you want to set, clear, or display. If you omit this path, the ATTRIB program uses the current directory.

## ATTRIB

filename2.ext	Is the name and extension of the file on drive 2 whose attributes you want to set, clear, or display. You can include wildcards.
+	Enables an attribute.
-	Disables an attribute.
A	Specifies the archive attribute.
S	Specifies the system attribute. A system file makes up part of the DOS operating system.
H	Specifies the hidden attribute. You cannot see a hidden file when you use the DIR command.
R	Specifies the Read Only attribute. You can read and execute a file; you cannot change or delete it.

### Qualifiers

/L	Sends a log of all program activity to the workstation screen.
/S	Processes all subdirectories of the specified path.

## ATTRIB

### Examples

Table 3–2 shows examples of the ATTRIB command.

**Table 3–2 ATTRIB Command Examples**

Command Line	Result
ATTRIB	Displays the ATTRIB help message.
ATTRIB MEMO.TXT	Displays the attributes of MEMO.TXT.
ATTRIB MEMO.TXT +H	Sets MEMO.TXT to hidden.
ATTRIB +H MEMO.TXT	Sets MEMO.TXT to hidden.
ATTRIB MEMO.TXT -S	Clears MEMO.TXT of the system attribute.
ATTRIB -S MEMO.TXT	Clears MEMO.TXT of the system attribute.
ATTRIB +H MEMO.TXT -S	Sets MEMO.TXT to hidden and clears it of the system attribute.
ATTRIB MEMO.TXT +ASHR	Sets MEMO.TXT to archived, system, hidden, and read only.
ATTRIB MEMO.TXT +A+S+H+R	Sets MEMO.TXT to archived, system, hidden, and read only.
ATTRIB *.TXT +A +H +S +R	Sets all .TXT files to archived, hidden, system, and read only.
ATTRIB *.TXT +A-H+S-R	Sets all .TXT files to archived and system, and clears them of the hidden and read only attributes.
ATTRIB MEMO.TXT +SR -AH	Sets MEMO.TXT to system and read only, and clears it of the archived and hidden attributes.
ATTRIB *.TXT +A /S	Sets the archive bit for all .TXT files in the current directory and all subordinate subdirectories.
ATTRIB *.TXT +A /S /L	Sets the archive bit for all .TXT files in the current directory and all subordinate subdirectories. As each file is modified, a log is displayed on the screen.

---

## **DECGRAPH**

### **Purpose**

DECGRAPH is a terminate-and-stay-resident command that lets you print graphic video images on a graphics printer. For example, you can print Microsoft Windows screens or any other application that has graphic video images.

### **Guidelines**

The system administrator must install the PATHWORKS for DOS enhancements file for DECGRAPH.

Do not use this command from Microsoft Windows.

Once you load DECGRAPH, you can print the current graphic video screen by pressing the Shift/Print Screen keys.

To change printer types and set the reverse qualifier or the background qualifier, rerun the DECGRAPH command.

To obtain high-quality prints, the DECGRAPH command causes printers in high-resolution video mode to print in landscape mode. That is, the top of the text is on the long edge of the paper.

You can set the printer type in one of two ways:

- If you used the DECMODE command to set the printer, enter the DECGRAPH command without the parameter or the qualifier. The DECGRAPH command reads the printer setting in memory.
- If you have not used the DECMODE command to set the printer, enter the DECGRAPH command with the appropriate parameter and qualifier.

---

#### **Note**

---

Although the DECMODE command allows you to set the printer type as LJ250HP, the DECGRAPH command does not support the LJ250HP printer type.

---



## DECGRAPH

The DECGRAPH program stops if there is:

- No paper in the printer
- An input/output (I/O) error during the PRINT operation
- A timeout. If a timeout occurs while the printer is in graphics mode, the printer remains in graphics mode. Turn the printer off or complete the graphic printout to reset the following printer types: LN03 Plus, LN03DEC, LA210DEC, LJ250DEC, LA50, or LA75DEC.

### Format

```
[drive:][\ path \ ]DECGRAPH [printer type] [ /B ]  
[ /R ]
```

### Parameters

drive:	Is the drive containing the DECGRAPH command. If you omit this drive, DOS searches for the DECGRAPH command on the default drive.
path	Is the path containing the DECGRAPH command. If you omit this path, the DOS operating system searches for the DECGRAPH command in the current directory and along the current path.
printer type	Is LA50, LA75, LA75STD, LA75DEC, LN03, LN03DEC, LN03STD, LA210DEC, LA210STD, LJ250DEC, STD, COLOR4, COLOR8. LN03 refers to an LN03 Plus printer. LN03STD and LN03DEC are reserved for an LN03 Plus printer with the LN03 Plus ISO/PC cartridge. LA75 is an LA75 printer in default IBM Proprinter emulation mode. It is the same as LA75STD.

## Qualifiers

- /B** Prints the background color. This parameter is only valid for color printers: LJ250DEC, COLOR4 and COLOR8. The default is not to print the background.
- /R** Prints exact graphics video images. Black is printed black; white is printed white. The default is to print black as white and white as black.
- Assume you are using a color printer with the /B qualifier disabled and the /R qualifier enabled. The /R qualifier causes white to print as white and black to print as black. If the foreground (text and graphics) is white, and you press the Shift/Print Screen keys, a blank page is printed. This occurs because you did not enable the /B qualifier. If you use the /R qualifier with a white foreground, remember to use the /B qualifier also.

## Examples

- You need to display the DECGRAPH help message. (You can use this command if the DECMODE command has not been used to set the printer type.) Enter:

```
A:\> DECGRAPH
```

## DECGRAPH

- You want to set the printer type using the **DECMODE** command, then load **DECGRAPH**. Enter the following two commands:

```
A:\> DECMODE PRN:LA75
```

```
A:\> DECGRAPH
```

**The screen displays:**

```
DECGRAPH Utility Program Version 2.20  
(C) Copyright 1985-1989 by Digital Equipment Corporation
```

```
Printer type LA75STD  
Reverse print is OFF  
Print background is OFF  
Loading DECGRAPH.
```

```
A:\>
```

- You need to change the printer from an LA75 printer to an LN03 Plus printer and set the **/REVERSE** qualifier. Enter:

```
A:\> DECGRAPH LN03 /R
```

**The screen displays:**

```
DECGRAPH Utility Program Version 2.20  
(C) Copyright 1985-1989 by Digital Equipment Corporation
```

```
Printer type LN03  
Reverse print is ON  
Print background is OFF  
Loading DECGRAPH.
```

```
A:\>
```

---

## DECKEYB

### Purpose

The DECKEYB command lets you load a keyboard mapping into conventional memory so that you can use the Digital Gold keyboard with your personal computer.

### Guidelines

Normally, you use Netsetup to load the country-specific keyboard mapping for your keyboard. Use the DECKEYB command only if you want to use the keyboard mapping that corresponds with the keyboard for another language.

The system administrator must install the PATHWORKS for DOS enhancements file for DECKEYB.

You must load the KEYBRD program before you can use the DECKEYB command. KEYBRD is described in this chapter.

Do not use this command from Microsoft Windows.

The DECKEYB command does not support code pages.

If the DOS operating system finds the specified keyboard file, the DECKEYB program loads it. The changes are implemented immediately. If the keyboard file does not exist or is not in the proper format, a message is displayed.

The DECKEYB command does not check that the font, keyboard, and country-specific information match. If they do not match, the results are unpredictable.

By pressing the **Ctrl/Alt/F2** keys, you change the currently loaded keyboard file to the standard US keyboard mapping.

By pressing the **Ctrl/Alt/F3** keys, you change the current keyboard file to the last keyboard file loaded into memory. To activate this feature, a nonstandard keyboard such as STDFR.KEY should be loaded.

The DECKEYB command maps the STD character set to an international Digital Gold keyboard layout. Table 3-3 shows the supported .KEY files supplied with the DOS enhancements. Appendix A shows the keyboards that correspond with each of the .KEY files.

## DECKEYB

**Table 3-3 The Keyboard Map Files**

---

Canadian	STDCA.KEY	Danish	ST2DK.KEY
Finnish	STDFI.KEY	French	STDFR.KEY
German	STDDE.KEY	Italian	STDIT.KEY
Norwegian	ST2NO.KEY	Spanish	STDES.KEY
Swedish	STDSE.KEY	Swiss French	STDSF.KEY
Swiss German	STDSD.KEY	U.K.	STDUK.KEY

---

### Format

```
[drive1:[\ path1\ ]DECKEYB [drive2:[\ path2\ ][filename2[.ext]]  
[drive1:[\ path1\ ]DECKEYB [/D]
```

### Parameters

drive1	Is the drive containing the DECKEYB command. If you omit this drive, DOS searches for the DECKEYB command on the default drive.
path1	Is the path containing the DECKEYB command. If you omit this path, the DOS operating system searches for the DECKEYB command in the current directory and along the current path.
drive2	Is the drive containing the keyboard file you want to load. If you omit this drive, the DECKEYB command uses the default drive.
path2	Is the path containing the keyboard file you want to load. If you omit this path, the DECKEYB command searches the current directory, any appended directories, the root directory, and the current search path.
filename2.ext	Is the file name of the keyboard map file. If you omit a file extension, .KEY is used.

**Qualifiers**

**/D** Loads the default (US) keyboard mapping.

**Examples**

- You want to use the U.S. standard keyboard file. Enter:  
A:\> DECKEYB /D
- You need more information on DECKEYB. To get help, enter:  
A:\> DECKEYB
- You need to load the STD French keyboard map file (STDFR.KEY). Enter:  
A:\> DECKEYB STDFR

**The screen displays:**

```
Keyboard Map Loader Version 2.20
(C) Copyright 1985-1989 by Digital Equipment Corporation
STDFR.KEY
Has been successfully loaded
A:\>
```

## DECMODE

---

## DECMODE

### Purpose

With DECMODE, you can set:

- Communications setup
- Help mode
- Keyboard mode
- Printer setup
- Video mode

### Guidelines

The system administrator must install the PATHWORKS for DOS enhancements files for DECMODE.

Do not use this command from Microsoft Windows.

Use your native DOS MODE command for options such as code page support, switching display adapters, and printer redirection.

Because some DECMODE functions require the XONXOFF command to be executed before running DECMODE, put the XONXOFF command into your AUTOEXEC.BAT file before running DECMODE.

DECMODE does not support code pages.

### Parameters

In the DECMODE commands on the following pages:

drive	Is the drive containing the DECMODE program. If you omit this drive, DOS searches for the DECMODE program on the default drive.
path	Is the path containing the DECMODE program. If you omit this path, the DOS operating system searches for the DECMODE program in the current directory and along the current path.

## **Communications Setup**

### **Purpose**

You use the Communications setup (COM) command to set the parameters for the serial ports and communications ports.

### **Guidelines**

In the command line, you can specify the parameters in any order. Parameters must be separated by commas. If you omit a parameter, DECMODE uses the default parameter.

### **Format**

```
[drive:][\ path\ ]DECMODE COMn[:]  
[baud,parity,databits,stopbits,retry,EDIT bypass]
```

### **Parameters**

COMn	Is a serial port number (1, 2, 3, or 4). You can use AUX in place of COM1.
baud	Is the baud rate 50, 75, 110, 134.5, 150, 300, 600, 1200 (default), 1800, 2000, 2400, 3600, 4800, 7200, 9600, 19200. If you change parity, data bits, or stop bits, and do not change baud, baud is reset to its default value.
parity	Is one of the following: e        Even (default). o        Odd. n        None. If you change baud, data bits, or stop bits, and do not change parity, parity is reset to its default value.
databits	Is the number of data bits 5, 6, 7 (default), or 8. If you change baud, parity, or stop bits, and do not change data bits, data bits is reset to its default value.



## DECMODE Communications Setup

stopbits	Is the number of stop bits (1 or 2). The default is 2 for 110 baud, and 1 for all others. If you change baud, parity, or data bits, and do not change stop bits, stop bits is reset to its default value.
retry	Enables or disables continuous retries (p or -). This field is used if the port is being used for a serial printer. If you leave this field blank, retries are disabled. p Enables continuous retry on a timeout; in other words, it keeps sending forever. - Disables continuous retry on a timeout; in other words, it sends only once.
bypass	Bypasses the modem control signals coming into a port. Normally, modem control signals are used, (bypass = m). When using the XON/XOFF protocol, make sure modem control signals are disabled. You must run the XONXOFF command before you disable modem control signals. b Bypasses modem control signals. m Uses modem control signals.

### Example

You want to set up communications port 1 for 1200 baud, even parity, 7 data bits, 1 stop bit, continuous retry, and bypass modem control. Enter:

```
A:\> DECMODE COM1:1200,E,7,1,P,B
```

The screen displays:

```
Mode Setup Utility Version 2.20  
(C) Copyright 1985-1989 by Digital Equipment Corporation
```

```
Baud rate assigned to 1200.  
Parity assigned to Even.  
Data bits assigned to 7.  
Stop bits assigned to 1.  
"Retry forever" set on.  
Modem control set bypass.  
Serial port programmed successfully.
```

```
A:\>
```

## **Help Mode**

### **Purpose**

Using Help mode, you can display a help screen of information listing options and correct syntax for the DECMODE command.

### **Format**

[drive:][\path\]DECMODE HELP [subject]

### **Parameters**

subject	Is one of the following:
COMM	Displays a help screen for the communication parameter commands.
KEY	Displays a help screen for the keyboard mode commands.
PRINT	Displays a help screen for the printer setup commands.
VIDEO	Displays a help screen for the video mode commands.

### **Examples**

- To see the topics for which help is available, enter:  
A:\> DECMODE
- To get help on the printer setup commands, enter:  
A:\> DECMODE HELP PRINT

## DECMODE Keyboard Mode

---

### Keyboard Mode

#### Purpose

With Keyboard mode, you can elect to use the Digital extended keys on your keypad. You can also modify the size of the keyboard buffer in the terminate-and-stay-resident program.

#### Guidelines

Use the option to change the keyboard mode or keyboard buffer size only if you are using a personal computer that has a Digital Gold keyboard. Gold keys are on the rightmost keypad. The first key is marked **PF1**.

You must run the **KEYBRD** command before setting the keyboard mode or buffer size.

#### Format

[drive:][\path\]DECMODE [keymode,bufsize]

#### Parameters

keymode	Enables or disables Digital extended keys (m or u). Digital extended keys are <b>F11</b> through <b>F20</b> and the special editing keypad. If you omit the key mode, it stays in its current mode. You can toggle these modes by pressing the <b>Alt/F17</b> keys. m            Disables Digital extended keys. This is the default. u            Enables Digital extended keys.
bufsize	Is the size of the new keyboard buffer 1 to 80 characters. If the buffer size is omitted, it remains unchanged. If the buffer size is 16, the default buffer is selected.

## **Examples**

- For more information about the DECMODE keyboard mode, enter:  
A:\> DECMODE HELP KEY
- You want to set the keyboard to use Digital extended keys and specify a buffer of 80 characters. Enter:

A:\> DECMODE U,80

The screen displays:

```
Mode Setup Program Version 2.20  
(C) Copyright 1985-1989 by Digital Equipment Corporation
```

```
Keyboard mode set successfully.  
Keyboard buffer installed successfully.
```

A:\>

## **DECMODE Printer Setup**

---

### **Printer Setup**

#### **Purpose**

The Printer setup command lets you set up any of the following supported printers:

- IBM Proprinter (type STD)
- IBM PC Color Printer (COLOR4 and COLOR8)
- Digital LA50 printer
- Digital LA75 Companion printer
- Digital LN03 Printer (with or without a cartridge)
- Digital LA210 Letterprinter
- Digital LJ250 Companion Color Printer

#### **Guidelines**

On personal computers without an attached printer, it can take up to 10 minutes to return a message that the printer is not ready.

You can enter parameters in any order. Separate parameters with commas.

You must run the XONXOFF command before setting the printer type. For more information, see the XONXOFF command at the end of this chapter.

#### **Format**

[drive:][\path\]DECMODE LPTn[:][type[,width,lpi,retry,qual,bold]

## **Parameters**

<b>LPTn</b>	Is a parallel port number (1, 2, 3, or 4). In place of LPT1, you can use PRN.
<b>type</b>	<p>Is a printer type (STD, LA50, LA75, LA75STD, LA75DEC, LN03, LN03STD, LN03DEC, LA210STD, LA210DEC, LJ250HP, LJ250DEC, COLOR4, COLOR8).</p> <p>If this parameter is present, the DECMODE command sets the printer type for the specified port. If this parameter is omitted, DECMODE determines the type from the current setting.</p> <p>If you do not know the name of the printer you need, use the DECMODE command to display the valid printer types.</p> <p>The LA75DEC, LA210DEC, LN03, and LN03DEC are treated as LA50-type printers. The LA75, LA75STD, LA210STD, and LN03STD are treated as STD-type printers.</p>
<b>width</b>	<p>Is the number of characters per line (80, 96, or 132).</p> <p>If the printer type is an STD, LA75, LA75STD, LA210STD, LN03STD, COLOR4, or COLOR8, only 80 or 132 characters per line are valid.</p>
<b>lpi</b>	Is the number of lines per inch (6 or 8).
<b>retry</b>	<p>Enables or disables continuous retries (p or -).</p> <p><b>p</b> Enables continuous retry on timeouts; in other words, it keeps sending forever.</p> <p><b>-</b> Disables continuous retry on timeouts; in other words, it attempts to send only once.</p> <p>If you omit this parameter, the current setting stays the same. If the printer has been redirected to a communications port, retry is enabled on that communications port.</p>

## DECMODE Printer Setup

**qual** Is the quality of print (d, e, or h).

**d** Draft quality

**e** Enhanced quality

**h** High quality

If the printer type is STD, LA75, LA75STD, LA210STD, LN03STD, COLOR4, or COLOR8, only draft and enhanced are valid.

**bold** Is the number of times the print head passes over each printed line (b or n).

**b** Bold

**n** Normal

You can set the print quality and bolding for some, but not all, printer types. For more information about setting print quality and bolding for your printer, see your printer manual.

## Examples

- You want to set up the LA75 printer for use. Enter:

```
A:\> DECMODE LPT1:LA75
```

The screen displays:

```
Mode Setup Utility Version 2.20
(C) Copyright 1985-1989 by Digital Equipment Corporation

Printer type set successfully.
Printer programmed successfully.
```

```
A:\>
```

- You want to set up the LA75 printer for 80 columns, 8 lines per inch, continuous retry, draft quality, and normal (unbolded) printing. Enter:

```
A:\> DECMODE LPT1:LA75,80,8,p,d,n
```

The screen displays:

```
Mode Setup Utility Version 2.20
(C) Copyright 1985-1989 by Digital Equipment Corporation
```

## **DECMODE Printer Setup**

Printer type set successfully.  
Line width set to 80 columns.  
Vertical spacing set to 8 lines per inch.  
Print quality set to DRAFT.  
Bold print set off.  
"Retry forever" set on.  
Printer programmed successfully.

A:\>



## **DECMODE**

### **Video Mode**

---

### **Video Mode**

#### **Purpose**

With Video mode, you can set up your video screen for either monochrome or color mode. In color mode, you select:

- Number of columns
- Text or video screen
- Number of pixels
- Number of colors

#### **Guidelines**

Use **MONO** only with monochrome monitors.

All video modes, except **MONO**, are for a **COLOR/GRAPHICS** monitor adapter.

To shift the display right or left, use the native **DOS MODE** command.

To switch between two connected monitors, use the native **DOS MODE** command.

#### **Format**

[drive:][\path\]DECMODE vidmode

## Parameters

<b>vidmode</b>	Is one of the following:
<b>40</b>	Set to 40 columns, colors unchanged.
<b>80</b>	Set to 80 columns, colors unchanged. Selecting 40 or 80 affects the number of characters per line. 40 and 80 are valid only in text modes. There is no effect with the monochrome adapter except to clear the screen.
<b>BW40</b>	Set to text mode, 40 columns, 2 colors.
<b>CO40</b>	Set to text mode, 40 columns, 4 colors.
<b>BW80</b>	Set to text mode, 80 columns, 2 colors.
<b>CO80</b>	Set to text mode, 80 columns, 4 colors.
<b>BW320</b>	Set to 320 x 200 pixels, 2 colors.
<b>CO320</b>	Set to 320 x 200 pixels, 4 colors.
<b>BW640</b>	Set to 640 x 200 pixels, 2 colors.
<b>MONO</b>	Setup for monochrome mode.

## Example

You want to set the video to 320 x 200 pixels with color enabled. Enter:

```
A:\> DECMODE CO320
```

The screen displays:

```
Video mode set successfully.
```

```
A:\>
```

## DECMOUSE

---

## DECMOUSE

### Purpose

With the DECMOUSE terminate-and-stay-resident command, you make the Digital mouse on your workstation emulate the Microsoft mouse.

### Guidelines

Do not use this command from Microsoft Windows.

Two drivers are supplied with the DECMOUSE program:

- DECMOUSE.COM, which you execute before you run an application outside of the Microsoft Windows environment
- DECMOUSE.SYS, which you place in your CONFIG.SYS file if you frequently use a mouse outside of the Microsoft Windows environment

In the NDIS environment, be sure that you load DECMOUSE before loading DLLNDIS.

If you unplug your mouse and then plug it back in after running the DECMOUSE command, it does not work. To activate the mouse, restart the personal computer by pressing the `Ctrl/Alt/Del` keys.

DECMOUSE is not supported if used with a LOADHI command. If you load DECMOUSE into high memory, undefined results may occur.

### Format

[drive:][\ path \ ]DECMOUSE

### Parameters

drive	Is the drive containing the DECMOUSE command. If you omit this drive, DOS searches for the DECMOUSE command on the default drive.
path	Is the path containing the DECMOUSE command. If you omit this path, the DOS operating system searches for the DECMOUSE command in the current directory and along the current path.

## Examples

- You must load DECMOUSE.COM for your Digital mouse to emulate a Microsoft mouse. On the command line, enter:

```
A:\> DECMOUSE
```

- You want to be sure that DECMOUSE.SYS is loaded every time you start your personal computer. Add the following command line to your CONFIG.SYS file:

```
DEVICE=C:\SYSTEM\DECMOUSE.SYS
```

## KEYBRD

---

## KEYBRD

### Purpose

The **KEYBRD** command loads **KEYBRD**, a terminate-and-stay-resident program that lets you use the Digital Gold ROM BIOS keyboard features with your personal computer.

### Guidelines

Use **KEYBRD** only if you are using a personal computer that has a Digital Gold keyboard. Gold keys are on the rightmost keypad. The first key is marked **PF1**.

You must run **KEYBRD** before you can use:

- **DECKEYB**
- **DECMODE** or keyboard functions
- Any programs that require VAXmate extended keyboard ROM BIOS functions

You can include the **KEYBRD** program in the **AUTOEXEC.BAT** file if it is not already there. Thus, at system startup, the extended ROM BIOS functions are always available.

Do not use this command from Microsoft Windows.

**KEYBRD** is not supported if used with a **LOADHI** command. If you load **KEYBRD** into high memory, undefined results may occur.

### Format

[drive:][\path\]**KEYBRD**

### Parameters

drive	Is the drive containing the <b>KEYBRD</b> program. If you omit this drive, DOS searches for <b>KEYBRD</b> on the default drive.
path	Is the path containing the <b>KEYBRD</b> program. If you omit this path, the DOS operating system searches for <b>KEYBRD</b> in the current directory and along the current path.

**Example**

You want to use your Digital Gold keyboard on your personal computer. Enter:

A:\> KEYBRD

The screen displays:

KEYBRD Version 3.00

(C) Copyright 1985-1989 by Digital Equipment Corporation

## XONXOFF

---

## XONXOFF

### Purpose

With the terminate-and-stay-resident XONXOFF command, you can use asynchronous ports that have communications devices and attached serial printers requiring the XON/XOFF protocol. For example, XONXOFF lets you use Digital's serial printers, such as the LA75 Companion printer, the LN03 Plus laser printer, and the LJ250 Companion Color Printer.

### Guidelines

The system administrator must install the PATHWORKS for DOS enhancements file for XONXOFF.

Execute the XONXOFF command before you run any program that requires VAXmate extended ROM BIOS functions, or before you use the following DECMODE functions:

- Setting the printer type
- Setting bypass modem control signals for communications setup

Execute the XONXOFF command before you run the DECMODE command because XONXOFF resets some parameters set by the DECMODE command. To ensure that the XONXOFF command executes before you run the DECMODE command, include the XONXOFF command in your AUTOEXEC.BAT file.

Before using the XON/XOFF protocol, use the DECMODE command to disable modem control signals.

Do not use this command from Microsoft Windows.

XONXOFF is not supported if used with a LOADHI command. If you load XONXOFF into high memory, undefined results may occur.

### Format

[drive:]\path\XONXOFF

## Parameters

- drive** Is the drive containing the XONXOFF program. If you omit this drive, DOS searches for the XONXOFF program on the default drive.
- path** Is the path containing the XONXOFF program. If you omit this path, the DOS operating system searches for the XONXOFF program in the current directory and along the current path.

## Example

You want to provide support for devices and printers that use the XON/XOFF protocol. However, you must first disable modem control. Enter the following commands:

```
A:\> XONXOFF  
A:\> DECMODE COM1:4800,8,1,N,-,B
```





# A

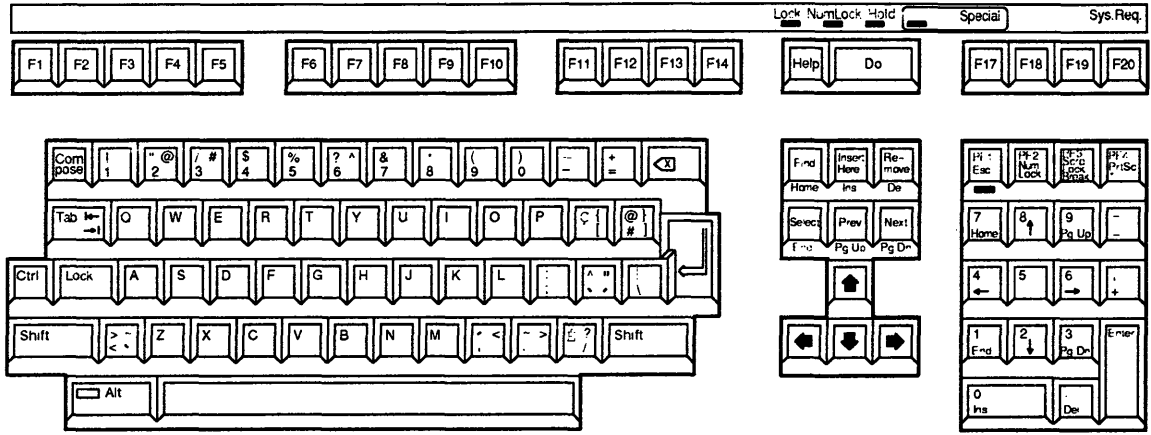
---

## International Keyboards

This appendix contains illustrations of international keyboards. Each keyboard corresponds to one of the keyboard map files listed in the DECKEYB command description, as shown in Table A-1.

**Table A-1 The .KEY Files**

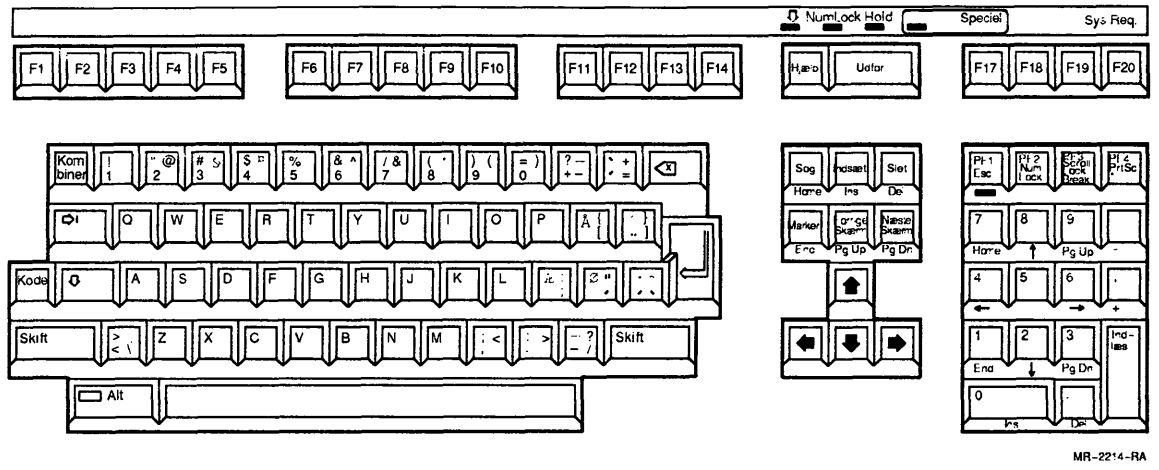
<b>Keyboard</b>	<b>Map File</b>	<b>Keyboard</b>	<b>Map File</b>
Canadian	STDCA.KEY	Danish	ST2DK.KEY
Finnish	STDFI.KEY	French	STDFR.KEY
German	STDDE.KEY	Italian	STDIT.KEY
Norwegian	ST2NO.KEY	Spanish	STDES.KEY
Swedish	STDSE.KEY	Swiss French	STDSF.KEY
Swiss German	STDSD.KEY	U.K.	STDUK.KEY



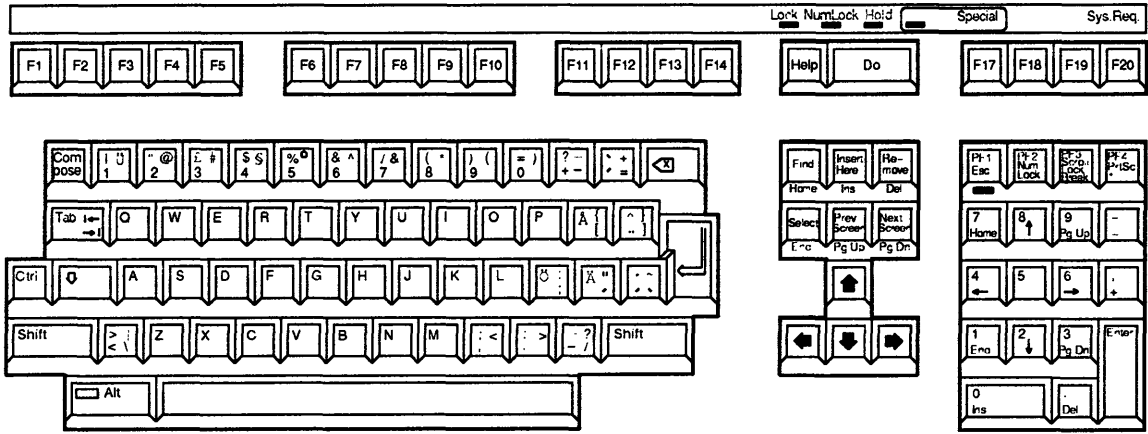
MR-2212-RA

Figure A-1 Canadian Keyboard Mapping-STDCA.KEY

Figure A-2 Danish Keyboard Mapping--ST2DK.KEY



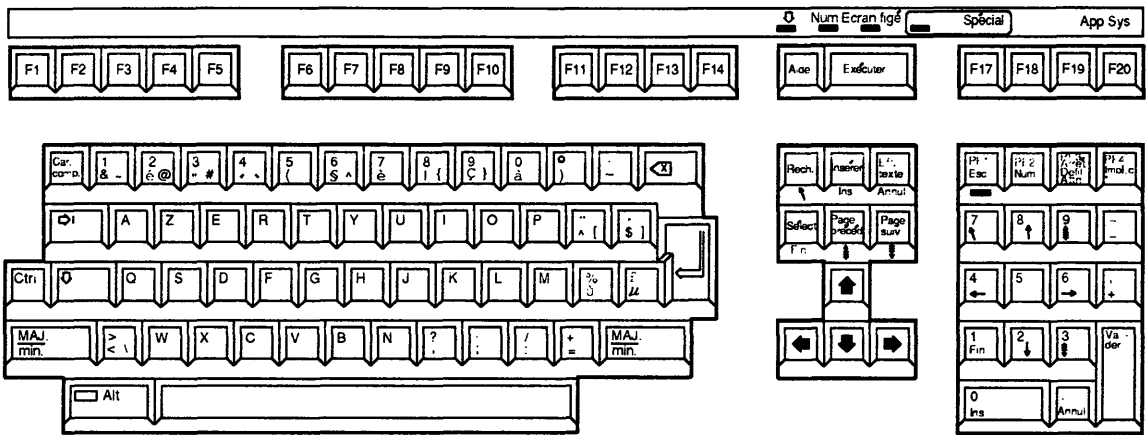
MR-2214-RA



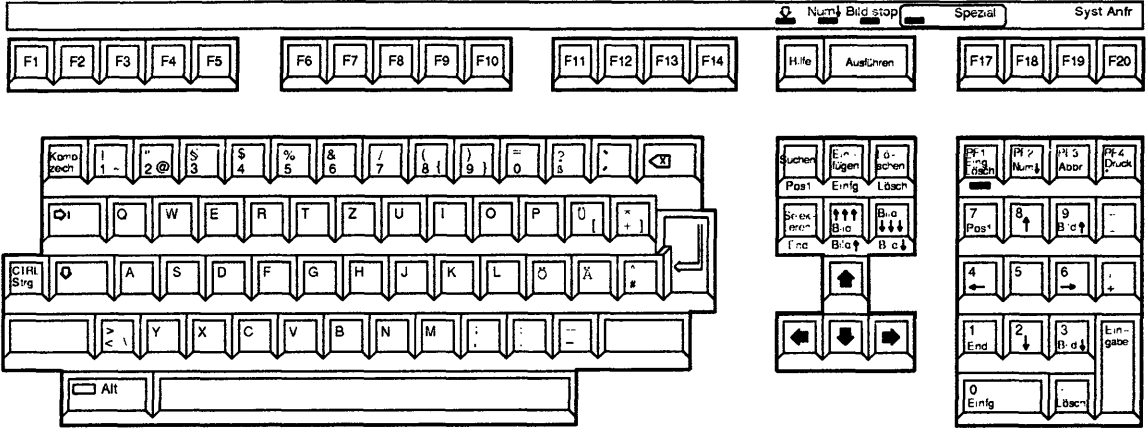
MR-22\*5-RA

Figure A-3 Finnish Keyboard Mapping—STDFI.KEY

Figure A-4 French Keyboard Mapping-STD.FR.KEY



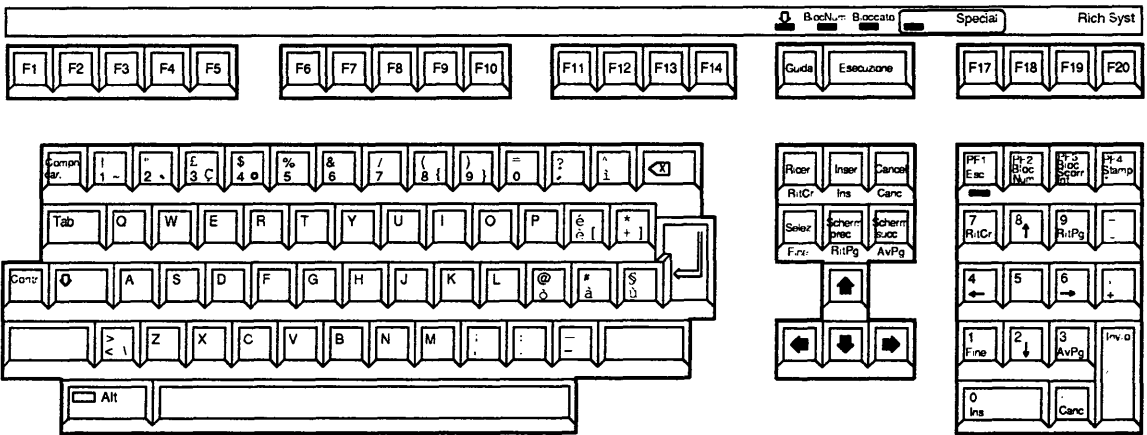
MR-2216-RA



MR-2217-RA

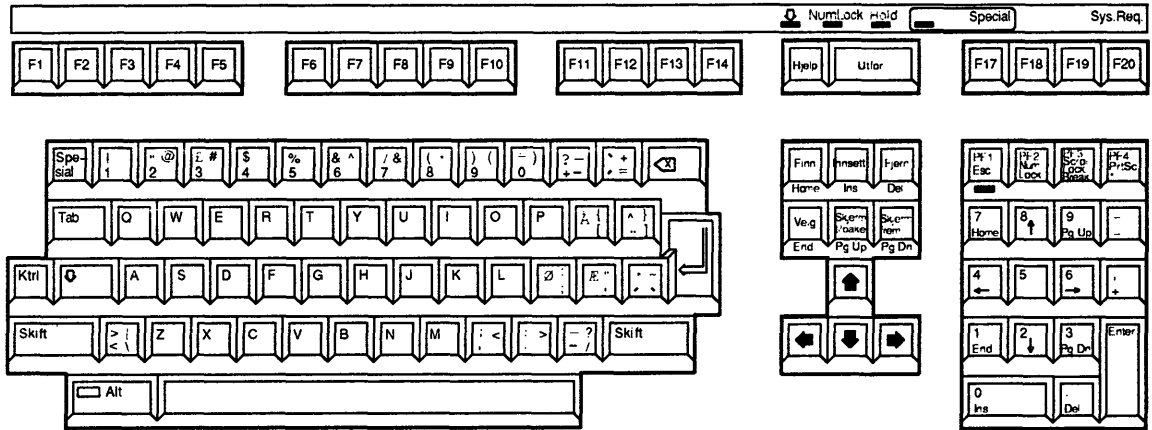
Figure A-5 German-Austrian Keyboard Mapping--STDDE KEY

Figure A-6 Italian Keyboard Mapping--STDIT.KEY



MR-2218-RA

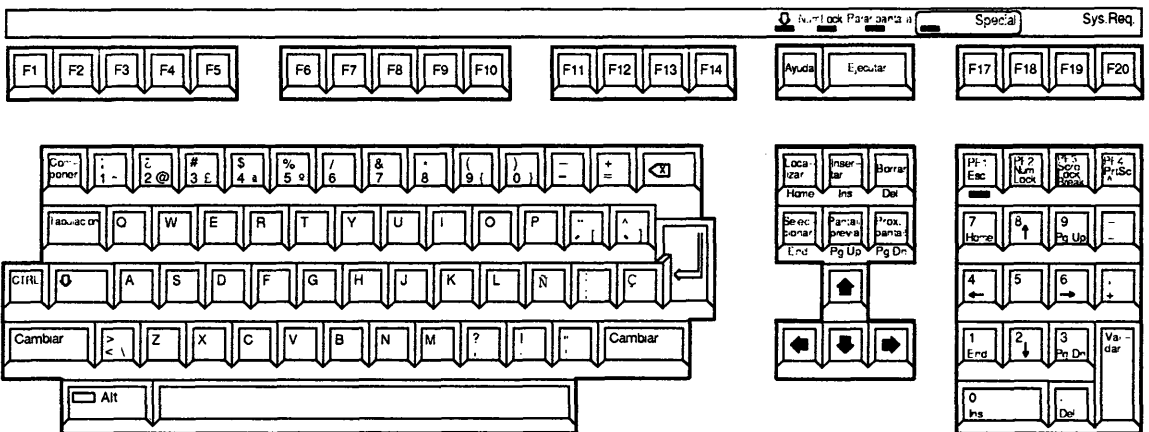




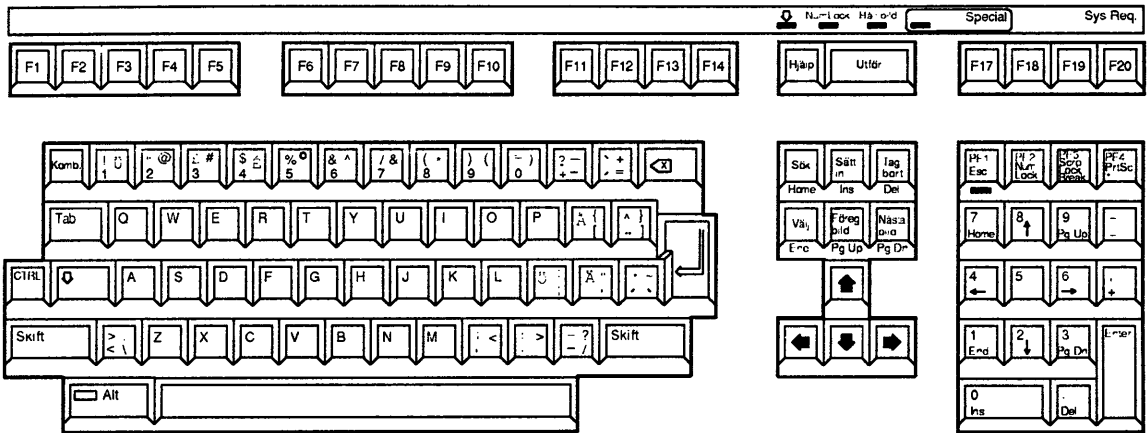
MR-2219-RA

Figure A-7 Norwegian Keyboard Mapping-ST2NO.KEY

Figure A-8 Spanish Keyboard Mapping-STDES.KEY



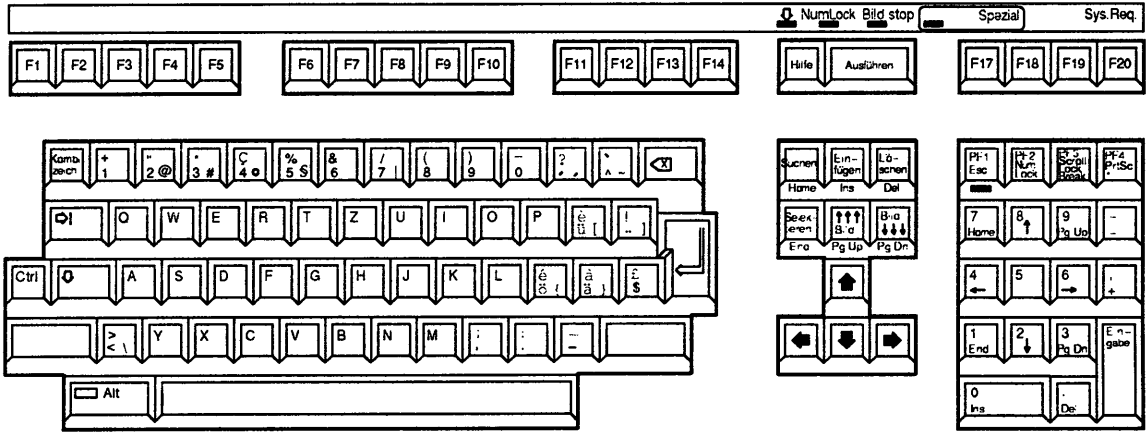
MR-2220-RA



MR-2221-RA

Figure A-9 Swedish Keyboard Mapping-STDSE.KEY

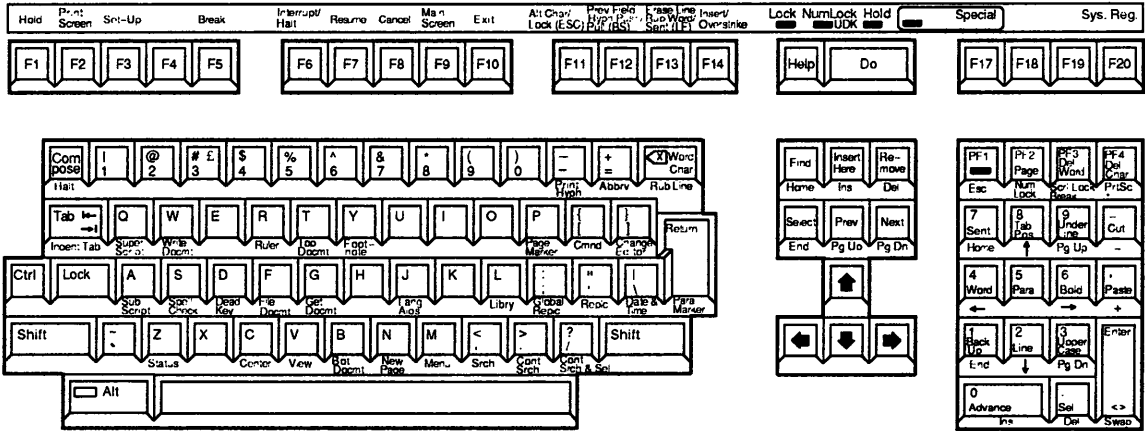




MR-2223-RA

Figure A-11 Swiss-German Keyboard Mapping-STDDSD.KEY

Figure A-12 U.K. Keyboard Mapping-STDUK.KEY



MR-2224-RA



---

## Customizing Netsetup

This appendix provides the following information and tasks for modifying the way network key disks are created for the user:

- Modifying WIK files
- WIK commands and examples
- WIK variables

### Modifying WIK Files

Configuration Processor (WIK) files are the part of Netsetup that manages the way files on network key disks are created. By editing the file, you can change the way Netsetup creates the following files:

- AUTOEXEC.BAT
- CONFIG.SYS
- PROTOCOL.INI
- STARTNET.BAT
- STOPNET.BAT

WIK files are the only part of Netsetup a system administrator can customize. Before doing any customization, you need to determine the configuration requirements of the client users on your network. Be sure that you make a backup copy of the Digital-supplied WIK files before you customize.

If AUTOEXEC.BAT and CONFIG.SYS files already exist, Netsetup modifies them. If not, Netsetup creates them from WIK files. Therefore, modifying CONFIG.SYS blocks in a WIK file does not affect the way the files are modified by Netsetup.

For more information on Netsetup, see *Client Installation and Configuration Guide for the VMS Server*.



WIK files are simple interpretative scripts. Using an editor, modify one of the following WIK files depending on which transport you are using:

- DNETWIK.V41 located in the \DECNET directory
- TCPIPWIK.V41 located in the \TCPIP directory

WIK files may contain transport-specific file creation blocks. These will not be discussed; only the common file will be.

After editing the WIK script, run Netsetup. If a WIK file exists in the current directory, Netsetup uses that file. If a WIK file does not exist in the current directory, Netsetup searches the path, then the system file service. Therefore, if you have created a customized version of the WIK file, place it in the current directory to be assured of its use.

## WIK Commands and Examples

This section describes the command keywords available in the WIK language and how you use them to write a WIK program.

The WIK command keywords are:

```
$BEGIN, $END
$DO_CASE, $CASE, $END_CASE
$IF, $ELSE, $END_IF
$DESTINATION
$CLEAR_SOURCE
$ADD_SOURCE
$SET
$COPY
$DELETE
```

---

## **\$BEGIN, \$END**

### **Purpose**

The **\$BEGIN** and **\$END** commands are used to indicate the scope of a WIK block. Use these commands to start and end a WIK program sequence.

### **Format**

```
$BEGIN blockname  
$END blockname
```

### **Parameters**

blockname            Is the name of the WIK file

### **Example**

```
$BEGIN CONFIG.SYS  
    buffers = 8  
    files = 20  
$END CONFIG.SYS
```

## **\$DO\_CASE, \$CASE, \$END\_CASE**

---

## **\$DO\_CASE, \$CASE, \$END\_CASE**

### **Purpose**

Use the `$DO_CASE`, `$CASE`, and `$END_CASE` command sequence when you want different commands executed for each possible value of a variable.

Use the `$CASE` commands when you have a variable that has more than 2 values. Otherwise, you can use the `$IF` commands.

### **Guidelines**

`$CASE` commands can be nested. The maximum nesting level is 16.

If present, the default case (`$CASE *`) must be the last one in the `$DO_CASE` statement. This command indicates that if none of the previous cases apply, then execute the subsequent commands.

### **Format**

```
$DO_CASE variable  
$CASE value  
... commands  
$CASE value  
... commands  
$CASE *  
$END_CASE
```

### **Parameters**

variable	Is the variable name
... commands	Are the commands that apply to the variable

## **Example**

```
$do_case ADAPTER
$case DEPCA
  $if strequ(NETWARESUP, "Y")
    device=\decnet\protman.sys /I:{PROTDRIVE}:\DECNET
    device=\decnet\depca.dos
  $end_if
$case ETHERWORKS
  $if strequ(NETWARESUP, "Y")
    device=\decnet\protman.sys /I:{PROTDRIVE}:\DECNET
    device=\decnet\depca.dos
  $end_if
$case *
  device=\decnet\protman.sys /I:{PROTDRIVE}:\DECNET
  device=\decnet\{NDIS_FILE}
$end_case
```

## \$IF, \$ELSE, \$END\_IF

---

### \$IF, \$ELSE, \$END\_IF

Use the \$IF, \$ELSE, and \$END\_IF command sequence to write conditional lines to the WIK file.

The conditional expressions in the \$IF statement can include complex relationships to make WIK programming easier.

Several operators and functions are available, including string comparisons:

<code>strequ("string1","string2")</code>	returns true if strings are equal
<code>strdif("string1","string2")</code>	returns true if strings are different
<code>(A == B)</code>	returns true if number A equals number B
<code>(A &lt;&gt; B)</code>	returns true if number A is not equal to B
<code>(A    B)</code>	returns true if either A or B is true
<code>(A &amp;&amp; B)</code>	returns true if both A and B are true

The Digital-supplied WIK files include many examples of valid expressions.

You can substitute Netsetup variable names for constants in these expressions. If you are using a variable created by \$SET, be sure to enclose the variable name in braces ( {} ).

The \$ELSE command is not required.

\$IF commands can be nested. The maximum nesting level is 16.

### Format

```
$IF expression
$ELSE
$END_IF
```

### Example

```
$IF strequ(ADAPTER, "3C503")
    rem We have a 3C503!
$ELSE
    rem We don't have a 3C503.
$END_IF

$IF (strequ(ADAPTER,"DEPCA") && (RUN_FROM_FLOPPY == 1))
    echo floppy boot - DEPCA controller
$END_IF
```

---

## \$DESTINATION

### Purpose

The \$DESTINATION command sets an internal structure indicating the device where files are to be copied.

### Format

```
$DESTINATION {DESTINATION} ""
```

### Parameters

DESTINATION	Is the device expressed as a character from A to Z
""	Is an optional comment line, up to character 80, enclosed in quotes. The text is displayed when Netsetup prompts for the destination diskette.

### Example

- In the following example, the comment line indicates that the user is prompted to insert the network key disk.

```
$DESTINATION {DESTINATION}: "KEY DISK"
```

- In the following example, the comment line indicates that the user is prompted to insert floppy diskettes in drive A:

```
$DESTINATION A: "FLOPPY"
```

## **\$CLEAR\_SOURCE**

---

## **\$CLEAR\_SOURCE**

### **Purpose**

The `$CLEAR_SOURCE` command resets the internal structure that indicates the possible sources for the files to be copied. Use this command only when you are entering a series of `$ADD_SOURCE` commands or the source is changing.

### **Format**

`$CLEAR_SOURCE`

### **Example**

```
$CLEAR_SOURCE
```

---

## \$ADD\_SOURCE

### Purpose

The \$ADD\_SOURCE command specifies a possible source for the files to be copied. The maximum number of sources you can specify is 4.

### Format

```
$ADD_SOURCE {RUN_FROM}:  
or  
$ADD_SOURCE {RUN_FROM}:%[disk label] ""  
$ADD_SOURCE {RUN_FROM}:%[disk label] ""  
$ADD_SOURCE {RUN_FROM}:%[disk label] ""
```

### Parameters

{RUN_FROM}	Is the source device name
%	Indicates the diskette has a label that needs to be verified
""	Indicates a comment line enclosed in quotes

### Example

In the following example, the comments indicate disk sizes.

```
$ADD_SOURCE #: %AINS401 "1.2"  
$ADD_SOURCE #: %PINS401 "360"  
$ADD_SOURCE #: %SINS401 "720"
```



## **\$COPY**

---

## **\$COPY**

### **Purpose**

The \$COPY command copies the newly created file to the key disk.

### **Guidelines**

You must include a directory and file name for the source and destination.

The WIK processor does the following:

- Performs the copies when the \$END command is reached
- Prompts the user to change diskettes when needed
- Creates new directory structures automatically

### **Format**

`$COPY \directory\filename \directory\filename`

### **Example**

```
$COPY \PCAPP\USE.EXE \DECNET\USE.EXE
```

---

## **\$DELETE**

### **Purpose**

The **\$DELETE** command attempts to delete the specified file immediately. If the file does not exist, no errors are reported.

### **Guidelines**

The processor reports an error if the disk is write protected. You can delete any file that is not write protected.

Use this command to ensure that the key disk is cleaned up before copying files to it.

### **Format**

**\$DELETE {DESTINATION}:\filename**

### **Parameters**

<b>{DESTINATION}</b>	Is source directory of the file
<b>filename</b>	Is the file to be deleted

### **Example**

```
$DELETE {DESTINATION}:\STARTNET.BAT
```

## **\$SET**

---

## **\$SET**

### **Purpose**

The `$SET` command sets a variable name to replace any variable name enclosed in braces ( `{}` ) with the variable's value. Any Netsetup variable can be placed in braces. In addition, you can define up to 20 of your own variables using the `$SET` command.

Be careful to choose variable names that do not conflict with those already used by Netsetup.

### **Format**

`$SET varname value`

### **Parameters**

varname	Is a variable from the list of netsetup variables or a variable you define.
value	Is the variables' value.

### **Example**

```
$SET ADAPTER DEPCA
```

## WIK Variables

This section contains tables of variables that you use in WIK scripts.

Table B-1 lists the variables common to all transports.

---

### Note

---

The vertical bar ( | ) indicates that you have a choice between two or more values.

---

**Table B-1 Variables for All Transports**

Variable	Values	Type
ADAPTER	{DEPCA   ETHERWORKS   NDIS_ETH   NDIS_TOK   3C503   3C523}	(list)
ALIAS	PCSAV41	(string)
CODE_PAGE	{""   437USA   850MUL   860POR   863CNF   865NOR}	(list)
COUNTRY	{ /D   STDCA.KEY   STDDE.KEY   STDES.KEY   STDFR.KEY   ST2NO.KEY   STDSE.KEY   STDUK.KEY   ST2DK.KEY   STDFI.KEY   STDIT.KEY   STSDS.KEY   STDSF.KEY }	(list)
DECMOUSE	{N   Y}	(list)
DESTINATION		(character)
DEST_IS_FLOPPY	{0   1}	(flag)
DOSDIR		(string)
DOS_FROM_SERVER	{N   Y}	(list)
DOSVERSION	{3.3   4.0   5.0}	(list)
EMS	{N   Y}	(list)
ENHANCED_REDIR	{N   Y}	(list)

(continued on next page)

**Table B-1 (Cont.) Variables for All Transports**

<b>Variable</b>	<b>Values</b>	<b>Type</b>
INITIAL_WS	{0   1}	(flag)
IRQ	[ 2 .. 5 ]	(integer)
KEYBRD	{N   Y}	(list)
LK250	{N   Y}	(list)
LPT1BUF	[80 .. 2048]	(integer)
LPT2BUF	[80 .. 2048]	(integer)
LPT3BUF	[80 .. 2048]	(integer)
MACHINE	{AT   XT}	(list)
MAXCONNS	[1 .. 32]	(integer)
NDIS_DRIVE		(character)
NDIS_FILE		(string)
NDIS_FLOPPY	{0   1}	(flag)
NDIS_PATH		(string)
NETWARESUP	{N   Y}	(list)
NODE		(string)
PROTOCOL_DRIVE		(character)
PROTOCOL_FLOPPY	{0   1}	(flag)
PROTOCOL_PATH		(string)
RCVLOAD	{N   R   E}	(list)
REDIRLOAD	{R   X}	(list)
RUN_FROM		(character)
RUN_FROM_FLOPPY	{0   1}	(flag)
SL_ROUTER	{N   Y}	(list)
STARTNET	{N   Y}	(list)
TRANSPORT	{DECNET   TCPIP}	(list)
USERNAME		(string)
VERSION	V4.0	(string)
WIRE_TYPE	{THICK   THIN}	(list)
XMS	{N   Y}	(list)

Table B-2 lists the variables available for DECnet transports.

**Table B-2 DNETWIK.V41 Variables**

<b>Variable</b>	<b>Values</b>	<b>Type</b>
ACCESS	{READ/WRITE   READ/ONLY }	(list)
ASYNCH	{0   1}	(flag)
ASYNCH_DEVICE	{com1   com2}	(list)
ASYNCH_MODEM	{NULL   FULL}	(list)
ASYNCH_LINESPEED	{50   75   100   134   200   300   600   1200   1800   2000   2400   3600   4800   7200   9600   192000}	(list)
CD_DRIVES	[1..8]	(integer)
COMMENT		(string)
CONF_TYPE	{REMOTE   LOCAL}	(list)
CTERMLOAD	{N   Y}	(list)
DECNET	{0   1}	(flag)
DNPLOAD	{R   E}	(list)
HARD_ADDR		(string)
INFO_SERVER	{N   R   E}	(list)
LAD	[1 .. 8]	(integer)
LADLOAD	{N   R   E}	(list)
LAD_SIZE	{1.2MB   720KB   1.44MB}	(list)
LANSESS	{0   1}	(flag)
LASTLOAD	{N   R   E}	(list)
LAT	[1 .. 255]	(integer)
LATLOAD	{N   R   E}	(list)
MAXLINKS	[1 .. 32]	(integer)
NMLLOAD	{N   Y}	(list)
NODE		(string)
NODEADDR		(string)
PASSWORD	{DISABLED   ENABLED}	(list)

(continued on next page)

**Table B-2 (Cont.) DNETWIK.V41 Variables**

<b>Variable</b>	<b>Values</b>	<b>Type</b>
SERVICE	{0   1}	(flag)
SYSTEM_CLOCK	{0   1}	(flag)
TFALOAD	{N   Y}	(list)
TTTLOAD	{N   Y}	(list)
WS_NODE		(string)
WS_NODEADDR		(string)

Table B-3 lists the variables available for TCP/IP transports.

**Table B-3 TCPIPWIK.V41 Variables**

<b>Variable</b>	<b>Possible Values</b>	<b>Type</b>
BAPILOAD	{ N   Y }	(list)
DEFAULTGATEWAY		(string)
DNRLOAD	{ N   Y }	(list)
DOMAIN		(string)
IPADDRESS		(string)
NAMESERVER		(string)
NETFILES		(string)
NETSTATION		(string)
NMLOAD	{N   Y}	(list)
SOCKLOAD	{ N   Y }	(list)
SUBNETMASK		(string)
SYSNODE_ADDR		(string)
TCPLOAD	{ N   Y }	(list)
TNLOAD	{ N   Y }	(list)

This appendix contains messages that can be displayed on your client while you are using network services or DOS enhancements.

The message is shown first, followed by an explanation and advice on how to respond to the problem.

Access denied

**Explanation:** Any of the following occurred:

- You tried to delete or modify a Read Only file.
- You entered the wrong password for the user name, or you entered an invalid user name. This error message can result from any of the NET commands except NET ATTRIB and NETTIME.
- While trying to do a remote boot, the workstation could not connect to a service. Your password may be incorrect, or you may have exceeded the maximum number of connections allowed for the service.
- You tried to change an ULTRIX password in a YP/BIND environment.

**User Action:** Try one of the following:

- Avoid deleting or modifying Read Only files.
- If a password is required, enter the correct one. If no password is needed, omit it.
- Make sure the server is running.
- If your attempt to connect exceeded the maximum number of allowable connections, wait until someone else disconnects. Then you can attempt to connect.
- To change a password in an ULTRIX environment, use the YP/BIND commands.



#### Add name already exists

**Explanation:** With the Receiver's /A qualifier, you entered a group name that is already used as another computer's node name.

**User Action:** Reenter the RCV or TRCV command and specify a different group name.

#### Add name argument incorrect

**Explanation:** You entered an incorrect value for the Receiver's /A qualifier.

**User Action:** Reenter the RCV or TRCV command and specify the correct arguments.

#### Allocate Private RAM Error

Hit any key to try other boot

**Explanation:** An error occurred while a private RAM was being allocated.

**User Action:** Make sure the boot file on the server is operational. If it is, there is a hardware problem.

#### Ambiguous qualifier "string"

**Explanation:** You must specify enough letters to make a qualifier unambiguous. For example, NET MOUNT /C could refer to either /CLUSTER or /CONNECTIONS.

**User Action:** Reenter the USE command and specify enough letters to make the qualifier unambiguous.

Another version was already in memory. The new version has been loaded on top of the old one. (DECMOUSE)

**Explanation:** The mouse driver was installed over an older version of the mouse driver.

**User Action:** Always use the latest version of the mouse driver.

#### Bad command or file name

**Explanation:** You have specified an incorrect path (or no path) to the executable file.

**User Action:** Specify the correct path to the executable file.

#### Bad container file

**Explanation:** The disk size or block size is zero.

**User Action:** Contact your system administrator.

Cannot allocate logical frame.

**Explanation:** The scheduler cannot allocate EMS space for the specified module.

**User Action:** Do any, or all, of the following:

- To make sure you have enough space in EMS, enter the following command at the DOS prompt:

```
MEMMAN /E
```

- To make sure the EMS driver works correctly, enter the following command at the DOS prompt:

```
EMSSPEED
```

If this command responds with any information other than an error message, your EMS driver is working correctly.

Cannot boot local disk

**Explanation:** During local boot, the first block of the boot disk could not be read.

**User Action:** If you are booting from drive A, make sure there is a valid key diskette in drive A. If you are booting from the hard disk, make sure it is operational and that the startup files are present on the partition. Retry the command or the boot procedure.

Cannot change password — password previously used

**Explanation:** With the NET PASSWORD command, you tried unsuccessfully to change the password to your user account on an OS/2 server that has user-level security. The new password you specified is one that you have used previously with that account; the server is configured to accept only passwords that you have never used with that account.

**User Action:** Enter the NET PASSWORD command again and specify a password that you have never used with your account.

Cannot confirm message sent to 'node name'

**Explanation:** You used the BCAST command to broadcast a message, and BCAST cannot verify that the node 'node name' is listening for the message.

**User Action:** Check whether node 'node name' exists. If it does not exist, send the message to the correct node. If it does exist, no action is required because the message is still broadcast and node 'node name' may still receive the message.

#### Cannot connect to self

**Explanation:** You tried to connect to a service, but incorrectly specified your network name as the name of your workstation node.

**User Action:** Retry the command, using the correct network name.

#### Cannot disconnect drive

**Explanation:** You ran the NET DISMOUNT command, but the drive could not be disconnected.

**User Action:** This message is usually displayed with a secondary message. Follow the instructions in the secondary message.

#### Cannot disconnect from current drive

**Explanation:** You tried to disconnect from your current drive.

**User Action:** If you want to disconnect from the current drive, change your default drive and reenter the USE command.

#### Cannot initialize the window system

**Explanation:** You tried to use the LATCP ADD or LATCP DELETE command without sufficient memory or with an incorrect video configuration. The window system could not display the information for the operation you specified.

**User Action:** Make sure you have sufficient memory available. If you have sufficient memory, test the video configuration by running another utility that uses video extensively.

You may also have a video problem that requires you to set your VGA card to emulate CGA. Set the VGA card using the utility supplied with the card.

#### Cannot open "filename.ext"

**Explanation:** LATCP HELP or DECLAT.DAT could not be opened.

**User Action:** Do any, or all, of the following:

- Make sure your path is valid for these files.
- Make sure you have sufficient storage space on your disk. Table 1-7 shows the recommended file sizes for virtual disks.
- Make sure you are not using a Read Only disk. The LATCP ADD and DELETE commands modify DECLAT.DAT. Therefore, you need a disk with Write privileges.

Cannot read the requested module.

**Explanation:** DOS cannot read the module due to file corruption or disk failure.

**User Action:** Make sure the disk is usable and the file on the disk is not corrupted.

Cannot redirect drive

**Explanation:** One of the following occurred:

- You tried to redirect a drive that is substituted.
- You ran the NET MOUNT command, but the drive could not be redirected.

**User Action:** This message is usually displayed with a secondary message. Follow the instructions in the secondary message.

Cannot share a SUBSTed drive

**Explanation:** You specified a drive letter that is directed to another drive with the SUBST command.

**User Action:** Specify the actual path.

Cannot update replicant UAS database

**Explanation:** With the NET PASSWORD command, you tried unsuccessfully to change the password to your user account on an OS/2 server. The OS/2 server you specified has user-level security, but is not the primary domain controller.

**User Action:** Enter the NET PASSWORD command again and specify the name of the OS/2 server that is the primary domain controller.

Can't share 'pathname'

Drive is redirected

**Explanation:** The path specified was redirected over the network and cannot be shared with the PERMIT command.

**User Action:** Specify the actual path.

Command arguments incorrect

**Explanation:** You specified invalid arguments on the command line.

**User Action:** Reenter the command and make sure you specify valid arguments for the command.

#### Command does not exist

**Explanation:** You entered an invalid command.

**User Action:** Use the NET HELP command to display a list of valid commands.

#### Command operands incorrect

**Explanation:** You entered a network command and included too much or too little information.

**User Action:** Use the NET HELP command to check the command format. Retry the command.

#### Command parameters incorrect

**Explanation:** You incorrectly entered a parameter for a command.

**User Action:** Use the NET HELP command to check the command format. Retry the command.

#### Computer name not found

**Explanation:** The system could not find your computer's network node name.

**User Action:** Run SETNAME before installing the Receiver.

#### Connection request to "string" was rejected

**Explanation:** You tried to connect to a virtual disk service and specified an invalid password.

**User Action:** Verify that you have the correct password. Reenter the command with the correct password.

#### Could not find hardware Ethernet address

**Explanation:** You tried to use the USE /X command and could not communicate to the data link layer.

**User Action:** With the USE /STATUS command, verify that the network is installed and running. Check your system configuration.

#### Could not parse "string"

**Explanation:** The USE command could not interpret the command line.

**User Action:** Check the format of the command line you entered. Enter each parameter as described in the USE commands.

Currently no TIME SERVER available

**Explanation:** You used the NETTIME command and failed to specify a node name, or there is no server available from which to get the time.

**User Action:** Retry the command and specify a known node name. Make sure the node is defined with NCP on an MS-NET node. For information on NCP, see the *DECnet Network Management Guide*.

Datagram services unavailable

**Explanation:** You tried to load RCV in a configuration such as asynchronous DECnet, where Datagram is not supported.

**User Action:** None. The function is not available.

Datalink requires DEPCA, DE100, DE200, or DE210 hardware  
Initialization Failure. Datalink not installed.

**Explanation:** This appears appears in one of the following cases:

1. Your system does not have a DEPCA adapter.
2. The DEPCA adapter may not have a physical ROM.
3. Your DEPCA adapter has a ROM, but it is turned off.

**User Action:** Match each of the following solutions to its respective number above:

1. Do not use DLLDEPCA.EXE.
2. Start DLLDEPCA.EXE with /ADAPTER, /IRQ, and /RAM qualifiers.
3. Do one of the following:
  - Reboot your system by turning the power off and on.
  - Start DLLDEPCA.EXE with /ADAPTER, /IRQ, and /RAM qualifiers.

DECnet is not installed

**Explanation:** The network is not running.

**User Action:** Do all of the following:

- With the USE /STATUS command, determine the current status of the network.
- Make sure STARTNET.BAT has executed.

#### Device already redirected

**Explanation:** You tried to redirect a drive that is already redirected. You can only redirect a drive once.

**User Action:** No further action is needed. The drive you specified is already redirected.

#### Device “string” is currently in use

**Explanation:** You tried to connect to a device that is already connected.

**User Action:** Do one of the following:

- Use another device.
- Disconnect the device and connect it to the service you want.
- Replace the connection with the `USE /REPLACE` command.

#### Device “string” is not connected

**Explanation:** You tried an operation that requires a connection.

**User Action:** Make sure the device is connected. If the device is not connected, use the `USE` command to make the appropriate connection. Retry the operation.

#### Device is not redirected

**Explanation:** You specified a printer to which you are not connected.

**User Action:** Connect to the printer with the `USE` command.

#### Diagnostics failed: Error code 80h - Memory Access Error Initialization Failure. Datalink not installed.

**Explanation:** This message is displayed in one of the following cases:

1. The values you set for `DLLDEPCA` qualifiers do not match the settings on your `DEPCA` board
2. There is a hardware problem

**User Action:** Match the numbered response to the problem above:

1. Make sure your qualifier values match your hardware settings.
2. Contact hardware support.

**Diagnostics failed: Error code 81h - Data Path Error  
Initialization Failure. Datalink not installed.**

**Explanation:** This message is displayed in one of the following cases:

1. The values you set for DLLDEPCA qualifiers do not match the settings on your DEPCA board
2. There is a hardware problem

**User Action:** Match the numbered response to the problem above:

1. Make sure your qualifier values match your hardware settings.
2. Contact hardware support.

**Diagnostics failed: Error code 82h - Address Test Error  
Initialization Failure. Datalink not installed.**

**Explanation:** This message is displayed in one of the following cases:

1. The values you set for DLLDEPCA qualifiers do not match the settings on your DEPCA board
2. There is a hardware problem

**User Action:** Match the numbered response to the problem above:

1. Make sure your qualifier values match your hardware settings.
2. Contact hardware support.

**Diagnostics failed: Error code 83h - RAM Test Error  
Initialization Failure. Datalink not installed.**

**Explanation:** This message is displayed in one of the following cases:

1. The values you set for DLLDEPCA qualifiers do not match the settings on your DEPCA board
2. There is a hardware problem

**User Action:** Match the numbered response to the problem above:

1. Make sure your qualifier values match your hardware settings.
2. Contact hardware support.



**Diagnostics failed: Error code 84h - Ethernet Address ROM CRC Error  
Initialization Failure. Datalink not installed.**

**Explanation:** This message is displayed in one of the following cases:

1. The values you set for DLLDEPCA qualifiers do not match the settings on your DEPCA board
2. There is a hardware problem

**User Action:** Match the numbered response to the problem above:

1. Make sure your qualifier values match your hardware settings.
2. Contact hardware support.

**Diagnostics failed: Error code 85h - NI\_CSR Error  
Initialization Failure. Datalink not installed.**

**Explanation:** This message is displayed in one of the following cases:

1. The values you set for DLLDEPCA qualifiers do not match the settings on your DEPCA board
2. There is a hardware problem

**User Action:** Match the numbered response to the problem above:

1. Make sure your qualifier values match your hardware settings.
2. Contact hardware support.

**Diagnostics failed: Error code 86h - LANCE Internal Register Error  
Initialization Failure. Datalink not installed.**

**Explanation:** This message is displayed in one of the following cases:

1. The values you set for DLLDEPCA qualifiers do not match the settings on your DEPCA board
2. There is a hardware problem

**User Action:** Match the numbered response to the problem above:

1. Make sure your qualifier values match your hardware settings.
2. Contact hardware support.

Diagnostics failed: Error code 87h - LANCE Initialization Error  
Initialization Failure. Datalink not installed.

**Explanation:** This message is displayed in one of the following cases:

1. The values you set for DLLDEPCA qualifiers do not match the settings on your DEPCA board
2. There is a hardware problem

**User Action:** Match the numbered response to the problem above:

1. Make sure your qualifier values match your hardware settings.
2. Contact hardware support.

Diagnostics failed: Error code 88h- LANCE Interrupt Error  
Initialization Failure. Datalink not installed.

**Explanation:** This message is displayed in one of the following cases:

1. The values you set for DLLDEPCA qualifiers do not match the settings on your DEPCA board
2. There is a hardware problem

**User Action:** Match the numbered response to the problem above:

1. Make sure your qualifier values match your hardware settings.
2. Contact hardware support.

Diagnostics failed: Error code 89h - NI\_CSR Mask Test Error  
Initialization Failure. Datalink not installed.

**Explanation:** This message is displayed in one of the following cases:

1. The values you set for DLLDEPCA qualifiers do not match the settings on your DEPCA board
2. There is a hardware problem

**User Action:** Match the numbered response to the problem above:

1. Make sure your qualifier values match your hardware settings.
2. Contact hardware support.

**Diagnostics failed: Error code 8Ah- LANCE Internal Loopback Error  
Initialization Failure. Datalink not installed.**

**Explanation:** This message is displayed in one of the following cases:

1. The values you set for DLLDEPCA qualifiers do not match the settings on your DEPCA board
2. There is a hardware problem

**User Action:** Match the numbered response to the problem above:

1. Make sure your qualifier values match your hardware settings.
2. Contact hardware support.

**Diagnostics failed: Error code 8Bh - LANCE Collision Error  
Initialization Failure. Datalink not installed.**

**Explanation:** This message is displayed in one of the following cases:

1. The values you set for DLLDEPCA qualifiers do not match the settings on your DEPCA board
2. There is a hardware problem

**User Action:** Match the numbered response to the problem above:

1. Make sure your qualifier values match your hardware settings.
2. Contact hardware support.

**Diagnostics failed: Error code 8Ch - LANCE CRC Error  
Initialization Failure. Datalink not installed.**

**Explanation:** This message is displayed in one of the following cases:

1. The values you set for DLLDEPCA qualifiers do not match the settings on your DEPCA board
2. There is a hardware problem

**User Action:** Match the numbered response to the problem above:

1. Make sure your qualifier values match your hardware settings.
2. Contact hardware support.

Diagnostics failed: Error code 8Dh - Swap RAM Error  
Initialization Failure. Datalink not installed.

**Explanation:** This message is displayed in one of the following cases:

1. The values you set for DLLDEPCA qualifiers do not match the settings on your DEPCA board
2. There is a hardware problem

**User Action:** Match the numbered response to the problem above:

1. Make sure your qualifier values match your hardware settings.
2. Contact hardware support.

Diagnostics failed: Error code 8Eh - Shadow RAM Test Error  
Initialization Failure. Datalink not installed.

**Explanation:** This message is displayed in one of the following cases:

1. The values you set for DLLDEPCA qualifiers do not match the settings on your DEPCA board
2. There is a hardware problem

**User Action:** Match the numbered response to the problem above:

1. Make sure your qualifier values match your hardware settings.
2. Contact hardware support.

Diagnostics failed: Error code 8Fh - Unsupported DEPCA Configuration  
Initialization Failure. Datalink not installed.

**Explanation:** This message is displayed in one of the following cases:

1. The values you set for DLLDEPCA qualifiers do not match the settings on your DEPCA board
2. There is a hardware problem

**User Action:** Match the numbered response to the problem above:

1. Make sure your qualifier values match your hardware settings.
2. Contact hardware support.

Display message argument incorrect

**Explanation:** You entered an incorrect value for the Receiver's /D qualifier.

**User Action:** Reenter the RCV or TRCV command and specify the correct arguments.

Display row argument incorrect

**Explanation:** You entered an incorrect argument for Receiver's /L qualifier.

**User Action:** Reenter the RCV command and specify either /L:T or /L:B.

DLL has not been installed.

**Explanation:** You must install the datalink before you can use EMSLOAD.

**User Action:** Ensure that the data link (DLLDEPCA) has been installed. If you are using NDIS, ensure that DLLNDIS is loaded.

DLL not loaded

**Explanation:** You cannot start LATCP until you load the scheduler (SCH) and the data link.

**User Action:** Ensure that the Scheduler and the data link (DLLDEPCA) have been installed. If you are using NDIS, ensure that DLLNDIS is loaded.

Drive already in use

**Explanation:** You ran the NET MOUNT or the USE command, but the specified drive is already being used.

**User Action:** Use the USE command with the ambiguous device name (?) to connect the next available drive to the service. If the service did not mount, retry the NET MOUNT command and specify another drive.

Drive "string" is not a virtual drive

**Explanation:** You tried to do a virtual disk function on a nonvirtual drive.

**User Action:** Enter the USE command to display the connected and available drives. Then connect to an available virtual drive.

Drive not in use

**Explanation:** You ran the NET DISMOUNT command, but the specified drive is not being used.

**User Action:** With the USE command, connect another drive to the service. If the service did not dismount, retry the NET DISMOUNT command and specify the drive currently being used.

Driver already installed (DECMOUSE)

**Explanation:** You tried to install the mouse driver, but it is already installed.

**User Action:** Install the mouse driver only once.

EMS has not been installed.

**Explanation:** If you have expanded memory (EMS), you must install an EMS driver.

**User Action:** Install an EMS driver by entering the following command into your CONFIG.SYS file:

```
DEVICE=filename.SYS
```

Error: 8088 PC's Not Supported in this SCH variant

**Explanation:** For performance reasons, SCHK.EXE does not support PCs with 8088 or 8086 processors.

**User Action:** Run SCH.EXE on PCs with an 80186 or lower processor.

Error: Can't load SCH after a task switcher

**Explanation:** The core network components, including the Scheduler, must be loaded before a DOS task switcher. The DOS V5.0 shell, DOSSHELL, supports task switching.

**User Action:** Exit from the task switcher and load any necessary network components.

Error: Datalink not initialized. Run NETBIND before SCH.

**Explanation:** This message applies only to NDIS installations. DLLNDIS cannot be broken. NET BIND must be run before SCH. The NETBIND operation must be successful, or SCH does not load.

**User Action:** In your STARTNET.BAT file, be sure that NETBIND precedes the Scheduler.

Error: DLLNDIS not installed. Run DLLNDIS before SCH.

**Explanation:** DLLNDIS must be installed before SCH. If not, SCH does not load. If a non-NDIS data link is to be loaded, then you must remove PROTMAN.SYS from CONFIG.SYS.

**User Action:** For an NDIS data link, make sure that DLLNDIS precedes the Scheduler in your STARTNET.BAT file. For a non-NDIS data link, remove PROTMAN.SYS from your CONFIG.SYS file.

Error: Network Loaded in EMS, Must Not Use: SCH /M

**Explanation:** The /M qualifier was used with SCH when the network was loaded into EMS. Microsoft Windows tried to start in Enhanced mode and immediately terminated.

**User Action:** Remove /M from the SCH command line in STARTNET.BAT.

**Error:** No NDIS Interrupt Activity. Maybe NI\_IRQ set wrong or cable not attached or hardware/DLL broken.

**Explanation:** For the network to operate correctly, the correct interrupt vector must be hooked by the Scheduler. There were no hardware interrupts from this vector when a message was transmitted.

NI\_IRQ may be the wrong value; DLLNDIS may not be operational; the hardware may be broken; or there could be a cable problem. In any event, the network is unusable and SCH refused to load.

**User Action:** Make sure that NI\_IRQ has the right value. Check that DLLNDIS is operating. Check for broken hardware or problems on the cable. See the description of the /N qualifier in the SCH command.

**Error:** Secondary shell detected at PSP XXXX

**Explanation:** You used a MEMMAN /U command from Microsoft Windows or a similar shell.

**User Action:** Exit Windows or the shell you are in. Then enter the MEMMAN command at the DOS prompt. Be sure to exit completely from the shell. Simply spawning to a DOS prompt does not enable you to use MEMMAN.

**Error:** Wrong Hardware Vector. Set NI\_IRQ in PROTOCOL.INI to Interrupt Vector For Network Adapter.

**Explanation:** The interrupt vector used by the network adapter is range checked. If out of range, SCH does not load.

**User Action:** If your PC is an IBM XT, you can set NI\_IRQ to the following IRQ values: 2–4 and 7. If your PC is an 80286 or better, you can use IRQ values 3–5, 7, 9–12, and 15. If the network adapter on an 80286 is using IRQ 2, set NI\_IRQ to 9.

Some NDIS drivers provide the NI\_IRQ parameter internally, while others do not. You need to set NI\_IRQ only if SCH fails to load.

**Error initializing LAST**

Hit any key to attempt local boot

**Explanation:** An error occurred initializing LAST during remote boot.

**User Action:** Do one or all of the following:

- Restart your workstation by pressing `Ctrl/Alt/Del`.
- Make sure you have the correct remote boot task file on the server.
- Reinstall the boot file on the server.

- Contact the system administrator for the server.

#### Error in server name

**Explanation:** You specified a server name that is too long.

**User Action:** Specify a server name no longer than six characters.

#### Error: Network device type incorrect

**Explanation:** You tried to do one of the following:

- Connect a printer device to a file service.
- Connect a file drive to a printer service.

**User Action:** Connect printer devices to printer services. Connect file drives to file services.

#### Error reading file 'filename' (DECKEYB)

**Explanation:** The program cannot read the file you specified.

**User Action:** Reenter the command. If this message is displayed again, restore the file from your backup diskette.

#### Error reading from "filename"

**Explanation:** An error occurred while the system was reading from the specified file.

**User Action:** Check for file errors and retry the print operation. Check for file access and file corruption errors.

#### Error reading virtual disk. Try again.

**Explanation:** LAD reported that an error occurred when a program tried to read the virtual disk.

**User Action:** Retry the operation.

#### Error reinitializing LAST

Hit any key to attempt local boot

**Explanation:** An error occurred during remote boot while LAST was being initialized.

**User Action:** Make sure the node name in the DECPARM.DAT file is correct. It may be necessary to recreate the DECPARM.DAT file.



#### Error writing to 'filename'

**Explanation:** An error occurred while a program was trying to write to the specified file or device.

**User Action:** Check the remote server. If it is down, wait and retry the command later.

#### File creation error

**Explanation:** One of the following occurred:

- There is no more space.
- You reached the maximum number of directories.
- The file is a Read Only file and cannot be replaced.

**User Action:** Attempt one of the following:

- Run the CHKDSK command to see how much space is left on the disk.
- Delete some files.
- Delete some directories.
- Use the ATTRIB command to determine whether the file is Read Only. If it is, use the ATTRIB command to change it.

#### File not found "filename"

**Explanation:** You specified a file that does not exist.

**User Action:** Reenter the command and specify a file that exists.

#### File not found 'filename' (DECKEYB)

**Explanation:** The PCSA DOS operating system could not find the file you specified.

**User Action:** Make sure the name is correct, the file exists in the directory on the disk, and the path is valid.

#### File protection error opening 'filename'

**Explanation:** You ran the NET ATTRIB command, but one of the files has the wrong protection.

**User Action:** If you used wildcards, the NET ATTRIB command continues. If you specified a file name, the NET ATTRIB command exits. Correct the protection on the specified file.

### Function not supported

**Explanation:** You specified one of the special device names (\*:, ?:) with an incorrect function, for example, USE ?: /DISCONNECT.

**User Action:** Make sure that you can use the command qualifier with a special device name. See the USE commands.

### Function requires a user name

**Explanation:** You tried to connect to a directory without specifying a user name.

**User Action:** Because of security, you must specify a user name.

### General failure error

**Explanation:** This message can be displayed for a variety of reasons. If the error occurs on a drive with a file server connection, the error may signal a problem with the file service, such as a dismounted and offline disk.

**User Action:** A knowledgeable programmer usually has to fix the problem.

### General failure error writing device

**Explanation:** This message is displayed if you try to print a file on a logical device for which you specified incorrect print qualifiers.

**User Action:** Reissue the NET PRINT LPTn /SET command to correct or remove the print qualifiers. If you used the /CHARACTERISTICS= qualifier, reenter the command, and either omit or correct the qualifier.

### Hardware error on server

**Explanation:** When you ran the NET ATTRIB command or the NET PASSWORD command, the server reported a hardware error.

**User Action:** Contact your system administrator.

### Header color argument incorrect

**Explanation:** You entered an incorrect value for the Receiver's /H qualifier.

**User Action:** Reenter the RCV command and specify two correct arguments for the /H qualifier.

### Help files not found

**Explanation:** The Help files are not on the path.

**User Action:** Before you can use Help, you must locate the HELPHLM file. It should be located in the \HELP subdirectory. Once you locate this file, you can specify the correct directory and use Help.

### Identifier too long

**Explanation:** You ran the NET ATTRIB command and specified identifiers that were too long.

**User Action:** Reenter the command and specify valid identifiers for the NET ATTRIB command.

### Incompatible version of LAT

**Explanation:** You tried to use an earlier version of LAT with LATCP.

**User Action:** Use the version of LAT supplied with your PATHWORKS Version 4.0 software. Reenter the command.

### Incomplete request

**Explanation:** You did not specify enough information on the command line for the USE command to interpret it.

**User Action:** For complete information about the command line and required information for requests, see the USE command.

### Incorrect DOS version

**Explanation:** You tried to use an incorrect version of the DOS operating system on your personal computer.

**User Action:** Use the native DOS Version 3.2 or 3.3 operating system. Contact your system administrator to obtain the correct version of the native DOS operating system.

### Incorrect number of operands

**Explanation:** There is no keyword specified in the NET command.

**User Action:** Use the NET HELP command to check the command format.

### Incorrect switch on command line

Initialization Failure. Datalink not installed.

**Explanation:** The qualifier (switch) you specified to start DLLDEPCA.EXE is not valid.

**User Action:** Check the DLLDEPCA command for the valid qualifier.

Incorrect switch parameter on command line

Initialization Failure. Datalink not installed.

**Explanation:** You did not include a value or you included an invalid value for the qualifier on the command line. For example:

- DLLDEPCA /ADAPTER= (no value for /ADAPTER=)
- DLLDEPCA /ADAPTER=3Com (unsupported value for /ADAPTER=)

**User Action:** Check the DLLDEPCA command for the correct value.

Initialization failure, Datalink not found

**Explanation:** The data link has not been loaded.

**User Action:** Load the DLLNDIST data link.

Initialization failure, Datalink too old

**Explanation:** The data link is out of date.

**User Action:** Use DLLNDIST Version V4.1 or greater.

Initialization failure: NETBIOS is not installed

**Explanation:** PSC was loaded incorrectly.

**User Action:** Follow the instructions in the PSC command for setting up STARTNET.BAT.

Initialization failure: Redirector is already installed

**Explanation:** REDIR was loaded before PSC.

**User Action:** Check the STARTNET.BAT file. Be sure that REDIR is loaded *after* PSC. Follow the instructions in the PSC command for setting up STARTNET.BAT.

Insufficient disk space

**Explanation:** Either of the following occurred:

- There is not enough disk space to complete the operation.
- The virtual disk is full.

**User Action:** Delete some files, get a new diskette, or create the file on another partition.

If you are running SETUP and this message is displayed, delete some files from your destination disk and run SETUP again. SETUP requires approximately 446,700 bytes on the destination disk to run successfully.

### Insufficient information

**Explanation:** You have not specified enough information to perform the command.

**User Action:** Retry the command and specify all required information.

### Insufficient memory

**Explanation:** There is not enough memory to run the specified command.

**User Action:** Free up some memory by unloading terminate-and-stay-resident programs. Retry the command.

### Insufficient memory (DOS)

**Explanation:** There was not enough memory to run the specified command. You may have too many terminate-and-stay-resident programs, or your directory structure may be too complex.

**User Action:** Because certain DOS commands and programs are terminate and stay resident, restarting the personal computer may free enough memory to run the desired program. If not, you must edit the CONFIG.SYS file, remove some of them, then restart the PC. Also, if you installed any device drivers, delete them from CONFIG.SYS.

### Insufficient memory (LATCP)

**Explanation:** You specified the LATCP ADD, DELETE, or one of the SHOW commands.

**User Action:** Because these commands use temporary buffers, you must have enough space for these buffers.

### Insufficient network resources. Try again.

**Explanation:** The network is currently handling the maximum of parallel processes.

**User Action:** Disconnect any unused drives. Wait for a short time, then resend your request.

### Insufficient privileges

**Explanation:** You tried to delete a print job whose user name does not match the user name of the connection.

**User Action:** Reconnect with the appropriate user name.

Insufficient space for the requested module.

**Explanation:** The allocated EMS memory is not big enough to load the specified module.

**User Action:** You need 128K bytes of memory to load network components. To achieve this, you may need to free some expanded memory by allocating less space to RAM disks or caches.

Invalid address

**Explanation:** You specified the LATCP ADD or DELETE command and entered an invalid node address or Ethernet address.

**User Action:** Reenter the command with a valid address.

Invalid date

**Explanation:** You specified an invalid date.

**User Action:** Check for misspellings and errors in typing. Reenter the command.

Invalid date received from node 'nodename'

**Explanation:** An invalid time was received from the node.

**User Action:** Retry the NETTIME command.

Invalid device

**Explanation:** You specified a device outside the permitted range.

**User Action:** If you specified a drive letter other than Z in the LASTDRIVE= command in the CONFIG.SYS file, make sure you specify a drive letter that precedes the limit you specified in the LASTDRIVE= command.

Invalid device name

**Explanation:** You used incorrect characters in the device name.

**User Action:** For a drive, specify one letter followed by a colon (:), such as D:. A logical device name for a printer can be LPT1:, LPT2:, or LPT3:.

Invalid device "string"

**Explanation:** You specified an improperly formed device name.

**User Action:** Check the device name and reenter the command. For complete information about device names, see the USE command.

### Invalid drive

**Explanation:** Either of the following occurred:

- The drive you specified for a virtual disk is not in the range of letters allowed for virtual disks.
- You tried to mount or dismount a drive that is not a virtual disk.

**User Action:** Either of the following:

- With the USE command, display the drives available for a virtual disk. Make sure you specify one of the drive letters displayed.
- Retry the command and specify a drive that is connected to a virtual disk.

### Invalid drive specification

**Explanation:** You specified a drive that does not exist on your system.

**User Action:** Specify a valid drive.

### Invalid file specification

**Explanation:** You specified an invalid file specification.

**User Action:** Reenter the command with a valid file specification. Make sure no other directory exists with the same name. Check the directory from a VMS account for any inconsistencies.

### Invalid identifier

**Explanation:** The ACL identifier you specified does not exist.

**User Action:** Either of the following:

- Use the NET ATTRIB command to set the ACL for the file.
- Use the ACL editor to determine whether the identifier exists.
- Reenter the command and make sure you specify only valid identifiers.

### Invalid input line (DECGRAPH)

**Explanation:** You specified invalid information on the command line.

**User Action:** Reenter the DECGRAPH command and specify a valid printer type.

### Invalid LANA number parameter

**Explanation:** You entered the RCV or TRCV command and specified a number other than 0 or 1 for the /L:n qualifier.

**User Action:** Use only 0 or 1 as a value for n.

### Invalid new password

**Explanation:** The new password you specified was invalid.

**User Action:** Reenter the NET PASSWORD command and specify a valid password of six characters or more.

### Invalid node name

**Explanation:** Any of the following occurred:

- You tried to connect to a server that did not have an entry in the DECNODE.DAT file.
- You tried to connect to a virtual disk, but did not specify the /V qualifier.
- You used incorrect syntax for a server name.

**User Action:** Do any or all of the following:

- Run the NET LIST command to display the node names of servers in the DECNODE.DAT file.
- Run the NET DEFINE command to add a node name to the DECNODE.DAT file.
- When connecting to a virtual disk, specify the /V qualifier.
- The server's node name must be preceded by two backslashes. The node name must be six characters or less. You cannot use special characters in a node name. The following is an example of a valid node name:

```
\\REFLEX
```

The following are examples of invalid node names:

```
\\REFLEXIVE  
REFLEX  
\\REF*
```

### Invalid node name "string"

**Explanation:** The server's node name was improperly formed.

**User Action:** Check the server name and reenter the command. For complete information about server names, see the USE command.

### Invalid number of parameters

**Explanation:** You specified either too many or too few parameters on the command line.

**User Action:** Reenter the command and specify the correct number of parameters.



### Invalid parameter

**Explanation:** One of the parameters you specified is invalid.

**User Action:** Make sure you entered the parameter correctly. Reenter the command.

### Invalid password

**Explanation:** The password you entered was invalid.

**User Action:** Reenter the NET PASSWORD command and make sure you specify a password of at least six characters. Do not use special characters in the password.

### Invalid path

**Explanation:** You specified a path that does not exist.

**User Action:** Make sure you entered the path name correctly. To see the current path names, enter:

```
A:\> PATH 
```

### Invalid path on command line

drive letter must be specified on the path

ex. a:\foo\decnet

Initialization Failure. Datalink not installed

**Explanation:** The path specified on the command line is not valid for DECPARM.DAT search. The valid path must include a drive letter and a directory.

**User Action:** Reenter a valid path for DECPARM.DAT search.

### Invalid protection code

**Explanation:** You used an incorrect syntax when specifying a protection code.

**User Action:** Specify a protection in the format:

```
PROTECTION=(S:RWED,O:RWED,G:RWED,W:RWED)
```

### Invalid protocol

**Explanation:** NETBIOS, session, or virtual disk detected mixed protocols.

**User Action:** Contact your system administrator.

#### Invalid protocol negotiated from node 'nodename'

**Explanation:** When you used the NETTIME command, the remote server you specified could not communicate with your node.

**User Action:** Retry the NETTIME command and specify another remote server.

#### Invalid qualifier "/string"

**Explanation:** You specified an invalid qualifier.

**User Action:** Reenter the command and specify a valid qualifier that is preceded by a forward slash.

#### Invalid service name

**Explanation:** You used an invalid service or print queue name.

**User Action:** Reenter the service name. Do not use special characters.

#### Invalid service name "string"

**Explanation:** You specified an improperly formed service name. For example, you may have forgotten to precede the service name with a backslash.

**User Action:** Check the service name and reenter the command correctly. For complete information about service names, see the USE command.

#### Invalid service or password

**Explanation:** You specified either of the following:

- A service that is not offered.
- An invalid password for an offered service.

**User Action:** Make sure the service is offered. If it is, make sure you enter a valid password.

#### Invalid session/netbios

**Explanation:** Either of the following occurred:

- You have an out-of-date session/NETBIOS.
- You have another manufacturer's session/NETBIOS.

**User Action:** You must use the current Digital session/NETBIOS.

#### Invalid time

**Explanation:** You specified an invalid time.

**User Action:** Check for misspellings and errors in typing. Reenter the command.

#### Invalid time received from node 'nodename'

**Explanation:** An invalid time was received from the node.

**User Action:** Retry the NETTIME command.

#### Invalid username

**Explanation:** You used an invalid user name.

**User Action:** Reenter the user name. Do not use special characters.

#### Invalid user name "string"

**Explanation:** You specified an improperly formed user name. For example, you may have forgotten to precede the user name with a percent sign.

**User Action:** Check the user name and reenter the command. For complete information about user names, see the USE command.

#### KEYBRD already loaded (KEYBRD)

**Explanation:** KEYBRD is already loaded.

**User Action:** Do not attempt to run KEYBRD more than once.

#### LAD is not installed

**Explanation:** You tried a virtual disk function, but LAD has not been started.

**User Action:** Do all of the following:

- With the USE /STATUS command, find out if LAST and LAD have as been installed. If not, use Netsetup to install LAST and LAD.

- Enter the STARTNET command from the directory where STARTNET.BAT is located.
- Make sure LADDRV.SYS is in your CONFIG.SYS file.

LAST is not installed

**Explanation:** You tried a virtual disk function but LAST has not been started.

**User Action:** Do one or all of the following:

- With the USE /STATUS command, find out if LAST has been installed. If not, install LAST, using Netsetup.
- Make sure STARTNET.BAT is executed by entering the STARTNET command.

LAT.EXE has an invalid file format

**Explanation:** You specified the LATCP ADD command and either tried to load or unload LAT.EXE.

**User Action:** LAT.EXE could be corrupted. Obtain another copy of LAT.EXE and reenter your command.

LAT is not installed

**Explanation:** You specified one of the LATCP SHOW commands, but LAT.EXE is not loaded. The LATCP SHOW commands require that LAT.EXE be loaded first.

**User Action:** Load LAT.EXE and reenter your SHOW command

Length of "string" too long

**Explanation:** You specified a parameter on the USE command line that is too long.

**User Action:** Reenter the command and specify parameters of the correct length. For more information, see the USE command.

Local Area Disk (LAD) not started

**Explanation:** LADDRV.SYS is missing , or LAD was not started.

**User Action:** Do one of the following:

- Obtain a copy of the current LADDRV.SYS file and add a DEVICE=LADDRV.SYS line to your CONFIG.SYS file.
- Start the current LAD/LAST software or use Netsetup to add LAT and LAST to STARTNET.BAT.

### Local session table full

**Explanation:** The volatile database for node names is full.

**User Action:** Either wait until a session is closed or disconnect one of your drives from the server. You can use the `DNP/MSN:n` command to increase the size of the local session table. For more information about this command, see *DECnet Network Management Guide*.

### Maximum connections exceeded

**Explanation:** Either of the following occurred:

- Someone is already connected to a Read and Write disk service, which permits only one connection.
- Too many users are trying to access the same service.

**User Action:** Do one of the following:

- Wait until the user of the Read and Write disk has finished; then try to access the disk.
- Ask another user to disconnect from the same service.
- Ask your system administrator to modify the number of connections permitted to the disk server or file server. Using the `NET MOUNT` or `NET MODIFY` command, the system administrator can increase or limit connections, as necessary.

### Maximum connections to “string” exceeded

**Explanation:** Either of the following occurred:

- Someone is already connected to a Read and Write disk service, which permits only one connection.
- Too many users are trying to access the same service.

**User Action:** Do one of the following:

- Wait until the user of the Read and Write disk has finished; then try to access the disk.
- Ask another user to disconnect from the same service.
- Ask your system administrator to modify the number of connections permitted to the disk server or file server. Using the `NET MOUNT` or `NET MODIFY` command, the system administrator can increase or limit connections, as necessary.

Message color argument incorrect

**Explanation:** You entered an incorrect value for the Receiver's /M qualifier.

**User Action:** Reenter the RCV command and specify two correct arguments for the /M qualifier. For more information, see the RCV command.

Missing required item

**Explanation:** You did not specify enough information on the USE command line for your request.

**User Action:** Reenter the command correctly. For more information, see the USE command.

More than one path specified on the command line

Initialization Failure. Datalink not installed.

**Explanation:** You specified more than one path to DECPARM.DAT.

**User Action:** Use only one path to DECPARM.DAT.

Mouse port not found or not working! (DECMOUSE)

**Explanation:** There is no DEPCA Ethernet adapter present.

**User Action:** Insert a DEPCA Ethernet adapter into your PC, reboot it, and install the mouse driver.

MS-NET not started

**Explanation:** Session or NETBIOS is not in memory.

**User Action:** Run STARTNET.BAT to load session and NETBIOS into memory.

Must supply /MEM: /IRQ: and /ADAPTER: switches

Initialization Failure. Datalink not installed.

**Explanation:** You supplied one, but not all, of the DLLDEPCA qualifiers.

**User Action:** Specify all three qualifiers: /ADAPTER, /IRQ, and /RAM (/RAM is the same as /MEM).

Name conflict detected

**Explanation:** Session or NETBIOS has detected a name conflict.

**User Action:** Use the NET LIST command to find out all the nodes listed in the database file DECNODE.DAT. Make sure two client computers do not have the same node name or node number. If so, change one of the node names and addresses with the NCP or NET DEFINE command.

### Name conflict error in the network

**Explanation:** You used a node name that is currently being used by another client or server on the network.

**User Action:** Ask your system administrator to change your node name to something unique.

### Name not found or did not answer

**Explanation:** You tried to connect to a server that is not defined at your client, or the server did not respond.

**User Action:** Use NCP or the NET DEFINE command to define the node name and node address.

### NET 801: Remote computer not listening

**Explanation:** You tried to do any of the following:

- Access a node that is not running a server.
- Use a network device that someone else is using through a PERMIT operation.
- Access a computer that is busy servicing other requests.
- Use a network device on a server that has no sessions available.

**User Action:** Make sure the server is running on the remote computer, and retry the command or operation.

If this message is displayed again, the server probably has no sessions remaining to service your requests. Wait until a session is available or ask the system administrator to increase the number of sessions allowed.

### NET 803: Network path not found

**Explanation:** The remote node is unknown or unreachable.

**User Action:** Use the NET LIST command to get a list of node names. If the node is defined, then check that the node is defined as MS-NET. The node must be defined as MS-NET. If it is not, use the NET DEFINE command and specify that the node is MS-NET.

If the node is defined as an MS-NET node, make sure DECnet is running on the server.

If the node is defined, check the file:

SY\$SYSTEM:[DECNET]NETSERVER.LOG.

Make sure that the default DECNET account is set up properly and that the file DNLOGIN.COM is present. If the problem persists, contact your system administrator.

**NET 804: Network busy**

**Explanation:** The data link or transport cannot send your message on the Ethernet controller. Your board might not be properly configured because of the IRQ conflicts.

**User Action:** Make sure there are no IRQ conflicts or other controller configuration problems.

**NET 805: Network device no longer exists**

**Explanation:** The device you tried to access is no longer available. This message is displayed for any of the following reasons:

- You tried to access an invalid device.
- You started a program and the invalid device existed in your PATH statement.
- The server stopped unexpectedly and is no longer available.
- A duplicate node exists on the network.

**User Action:** Stop your request. Enter the USE command to see a list of the devices you are using.

Enter the following command for all devices that have a status of ERROR:

```
USE drv: /D
```

Check with your system administrator about the availability of the device.

**NET 808: Incorrect response from network**

**Explanation:** The remote server could not perform the task you wanted it to perform.

**User Action:** Make sure you are specifying the correct remote server for the command or task you are attempting. If not, specify the correct server.

**NET 809: Network request not supported**

**Explanation:** The remote server could not perform the task you wanted it to perform.

**User Action:** Make sure you are specifying the correct remote server for the command or task you are attempting. If not, specify the correct server.



**NET 810: Unexpected network error**

**Explanation:** An unexpected network error occurred.

**User Action:** If you cannot use the network, try to stop your application. If you cannot stop the application, restart the DOS operating system by pressing **Ctrl/Alt/Del**. Restart the client's network software. Connect to the network again. If this message is displayed again, contact your system administrator.

**NET 812: Print queue full**

**Explanation:** The print queue is full.

**User Action:** Send your request later. Make sure the printer is on line and operating.

**NET 813: Not enough space for print file**

**Explanation:** The server sharing the printer did not have enough disk space to store the file until it was printed.

**User Action:** Make sure the printer is operating and on line. Send your request later when the disk has more space.

**NET 814: Print file was canceled**

**Explanation:** The print file you submitted to a network printer was canceled by the user at the server.

**User Action:** To stop the print operation, press **Alt**. Retry the print operation later.

**NET 815: Network name was deleted**

**Explanation:** An adapter name was deleted because of a name conflict.

**User Action:** Restart your client by pressing **Ctrl/Alt/Del**.

**NET 816: Access denied**

**Explanation:** Any of the following occurred:

- The password you specified was incorrect.
- The server did not allow your connection.
- The node you tried to access was improperly defined.
- The client is not registered on the server.

**User Action:** Try one of the following:

- Make sure you entered the password correctly. If you did, the password may have changed. Contact your system administrator for the correct password.

- Make sure you are allowed to access this resource. Contact your system administrator about access privileges.
- Contact your system administrator to get the client registered.

**NET 817: Network device type incorrect**

**Explanation:** Any of the following occurred:

- The local device type was different from the client's network device type.
- You tried to use a network service or directory and incorrectly used one of the print device names LPT1 through LPT3.
- You tried to use a network printer and incorrectly used one of the file or disk service device names A through Z.
- You specified an illegal print qualifier with the NET PRINT /SET command.

**User Action:** Try one of the following:

- Send the request using the correct device name. For example, use device names A through Z to connect to network file and disk services, and device names LPT1 through LPT3 to connect to network printers.
- Use the NET PRINT /SET command to modify or remove the illegal qualifier.

**NET 818: Network name not found**

**Explanation:** The network name you specified was incorrect.

**User Action:** Make sure you spelled the name correctly. If you did, the name is no longer on the network.

**NET 819: Network name limit exceeded**

**Explanation:** You tried to redirect too many devices.

**User Action:** Using the USE command, disconnect some of the network devices and directories to which you are currently connected. You can also increase the number of redirections by adding the /L:n qualifier to your REDIR command line. The default for n is 4.

**NET 820: Network session limit exceeded**

**Explanation:** You exceeded the maximum number of logical links set in the network driver.

**User Action:** Change the maximum number of logical links using the NCP DEFINE EXEC MAXIMUM LINKS command. The default for n is four. The value takes effect after you restart your client.

**NET 822: Print or disk redirection is paused**

**Explanation:** The printer or disk redirector was paused. Your request could not be performed at that time.

**User Action:** To continue print or disk redirection, enter:

NET CONTINUE

Send your request later.

**NET 825: Network data fault**

**Explanation:** You tried to write data to a network disk, hard disk, or key diskette that was full.

**User Action:** To stop the operation, press **Alt**.

**NETBIOS not installed**

**Explanation:** The client software is not yet installed.

**User Action:** Ask your system administrator to install the client software.

**Network already started**

**Explanation:** You tried to start the network after it was already started.

**User Action:** Continue to use the network. If you cannot continue using the network, restart your client by pressing **Ctrl/Alt/Del**.

**Network connection failed**

**Explanation:** The network software failed.

**User Action:** Restart your client by pressing **Ctrl/Alt/Del**.

**Network connection failed, node unreachable**

**Explanation:** The node to which you tried to connect is unreachable. The node may be not working at the present time.

**User Action:** Do one or more of the following:

- Try logging on to the server. If you cannot log on, wait and try again when the server is working.
- Make sure that the service you want is offered by entering the NET FILE SERVICES or NET DISK SERVICES command.

**Network error**

**Explanation:** An unexpected network error occurred. Because of this error, your command cannot be completed.

**User Action:** Load the network before attempting an NCP operation.

#### Network (MS-NET) not installed

**Explanation:** One of the following occurred:

- The install check for the network failed. You must have the appropriate hardware and software to run the network.
- You tried to use a network command without starting the network.

**User Action:** Make sure you have the appropriate hardware and software to run the network. Then enter the STARTNET command.

Retry the command.

#### Network not started

**Explanation:** You entered a network command, but the network was not started.

**User Action:** Start the network by entering the STARTNET command.

#### New password must be different from current password

**Explanation:** You specified a new password that is identical to your old password.

**User Action:** Make sure you specify a new password that is different from your old password.

#### No answer

**Explanation:** The server did not respond.

**User Action:** Try one or all of the following:

- Try logging on to the server. If you cannot log on, wait and try again when the server is working.
- Make sure that the service you want is offered by entering the NET FILE SERVICES or NET DISK SERVICES command.

#### No available devices

**Explanation:** You tried to make a connection using the ambiguous device type, but there are no available devices.

**User Action:** If you still want to make a connection, disconnect one of the devices and connect it to the desired service.

#### No EMS Support is Included

**Explanation:** This is a warning message telling you that SCHK does not support the network in EMS. SCHK still loads.

**User Action:** If you want to use EMS, load SCH.EXE instead.

No entries in list

**Explanation:** You have not connected to any services.

**User Action:** None.

No remote adapter table

**Explanation:** There is no remote adapter table for the session.

**User Action:** In STARTNET.BAT, specify a value for /REM on the session layer command line. If you started NETBIOS from another location, modify /REM in that file. You can modify /REM at the command line if you started the session layer from the command line.

Node name not found

**Explanation:** You tried to connect to a server that is not defined at your client.

**User Action:** Use NCP DEFINE or the NET DEFINE command to define the server's node name and address.

Node name too long

**Explanation:** You specified a node name longer than six characters.

**User Action:** Specify a node name of six characters or less.

Non-specific error occurred

**Explanation:** An error occurred, but it was not specific enough to generate another message.

**User Action:** Retry whatever operation you were attempting. If this error persists, reexamine your command, and try to pinpoint what caused the error.

No source drive specified

**Explanation:** You did not specify a source drive.

**User Action:** Reenter the command and specify a source drive letter followed by a colon.

No space in the remote adapter name table

**Explanation:** For some reason, the pointer in the remote adapter name table could not be swapped.

**User Action:** Edit your STARTNET.BAT file and search for the session layer command line. Specify a value for the /REM qualifier.

If you started NETBIOS from another location, modify /REM in that file.

You can modify /REM at the command line if you started the session layer from the command line.

Not a keyboard map file (DECKEYB)

**Explanation:** You specified a file that was not a keyboard map file.

**User Action:** Reenter the DECKEYB command and specify a valid keyboard map file. If you entered a valid keyboard map, restore the original file from your distribution diskette.

Not a virtual drive

**Explanation:** You tried to connect a virtual disk to a drive that is not a virtual disk drive. The drive identifiers you can use for the virtual disk drives are assigned at system startup.

**User Action:** To display the letters you can use for the virtual disk drives, run the USE command. Then, reconnect to a drive valid for a virtual disk.

Number argument incorrect

**Explanation:** You entered an incorrect value for the Receiver's /N qualifier.

**User Action:** Reenter the RCV command and specify a correct argument for the /N qualifier. For more information, see RCV command.

Parameter too long

**Explanation:** You specified a parameter that was too long.

**User Action:** Reenter the command and specify parameters of the correct length.

Password too long

**Explanation:** You specified a password that contained too many characters.

**User Action:** When connecting to a VMS server, specify a password of 31 alphanumeric characters or less. For remote boot, specify a password of 39 characters or less.

When connecting to an ULTRIX server, specify a password of between 6 and 16 alphanumeric characters.

When connecting to an OS/2 server, specify a password of 8 alphanumeric characters or less.

#### Password verification failed

**Explanation:** The new password and the verification you entered are not the same.

**User Action:** Retry the command and specify the same password for New password and for Verification.

#### Please run the KEYBRD program (DECKEYB) (DECMODE)

**Explanation:** You ran the DECKEYB program or the DECMODE program before you loaded KEYBRD.

**User Action:** Run the KEYBRD program before you run the DECKEYB program or the DECMODE program.

#### Please run the XONXOFF program before redirecting output. (DECMODE)

**Explanation:** You tried to redirect LPT# without first running the XONXOFF program.

**User Action:** Run the XONXOFF program before you redirect LPT#.

#### Print job not found

**Explanation:** You specified a print job number that does not exist.

**User Action:** Reenter the command with the correct number.

#### Print quality HIGH is not supported on STD type printers (DECMODE)

**Explanation:** You specified the H parameters for an unqualified printer. The H parameter is valid only for the LA50-type printer.

**User Action:** Specify the H parameter only with STD-type printers, such as the LA50, LA75DEC, LA210DEC. Reenter your current command line without the H parameter.

#### PrintScreen loaded successfully

**Explanation:** On initial execution, PSC found the Interrupt 2A interface available and REDIR not loaded. The resident portion is installed.

**User Action:** No action required. The operation is successful.

#### Printer Timeout values updated

**Explanation:** Following a command-line modification of the timeout period, PSC successfully updated the timeout values for the specified printers.

**User Action:** No action required. The operation is successful.

### Printer type UNKNOWN (DECMODE) (DECGRAPH)

**Explanation:** You did not specify a printer type using the DECMODE command, or you did not supply the printer type when you entered the DECGRAPH command.

**User Action:** Run the DECMODE command and specify your printer, or specify a printer type on the DECGRAPH command line. To see the valid printer types, enter:

```
A:\> DECGRAPH 
```

### Printing the background is for color printers only (DECGRAPH)

**Explanation:** You used the /B qualifier on the DECGRAPH command line with a noncolor printer.

**User Action:** Use the DECGRAPH /B qualifier only with a color printer.

### Process doesn't exist

**Explanation:** A virtual circuit could not be made because the process does not exist.

**User Action:** Contact the system administrator to determine if the server is running the necessary procedures to make the connection.

### Receive mode arguments incorrect

**Explanation:** You entered an incorrect value for the Receiver's /R qualifier.

**User Action:** Reenter the RCV or TRCV command and specify the correct arguments.

### Redirector is not installed

**Explanation:** You tried a file or printer service function, but the redirector has not been started.

**User Action:** Do all of the following:

- With the USE /STATUS command, find out if the Redirector is installed.
- If not, install the Redirector, using Netsetup.
- Enter the STARTNET command.

### Remote adapter table full

**Explanation:** Session's remote adapter table is too small.

**User Action:** Edit your STARTNET.BAT file and search for the session layer command line. Specify a larger value for the /REM qualifier.



Requested module already in EMS.

**Explanation:** The specified module is already in EMS.

**User Action:** No user action is needed.

Requested module COMPONENT initialization failure.

**Explanation:** Either of the following occurred:

- The specified component is already in conventional memory.
- The component qualifiers are invalid.

**User Action:** Do one of the following:

- Make sure the component is not loaded anywhere else.
- Make sure the specified qualifiers are valid for the component.

Requested module COMPONENT loaded successfully.

**Explanation:** EMSLOAD successfully placed the specified component in EMS.

**User Action:** No user action is needed.

Requested module does not exist.

**Explanation:** EMSLOAD cannot find the component in the specified path.

**User Action:** At the DOS prompt, check your path by entering the following command:

PATH

Make sure the specified module is in the path.

Requested module not supported.

**Explanation:** EMSLOAD does not support the specified module.

**User Action:** Do not attempt to load a module that EMSLOAD does not support.

Requires DOS version "n.n" or greater

**Explanation:** You tried to run the USE command on an unsupported version of DOS.

**User Action:** You must obtain the correct version of DOS before you can run the USE command.

Scheduler has not been installed.

**Explanation:** You tried a file or printer service function, but the Scheduler has not been started.

**User Action:** Do all of the following:

- With the USE /STATUS command, find out if the Scheduler is installed.
- If not, install the Scheduler, using Netsetup.
- Make sure STARTNET.BAT has been executed by entering the STARTNET command.

Scheduler not installed. Run SCH before loading datalink  
Initialization Failure. Datalink not installed

**Explanation:** You are trying to load DLLDEPCA.EXE before SCH.EXE.

**User Action:** Load SCH.EXE before loading DLLDEPCA.EXE.

Server not listening

**Explanation:** The server to which you are trying to connect is not listening.

**User Action:** Contact the system administrator for the server. The system administrator should make sure:

- The server is operating
- The server software is running

Server's network name is currently in use on another server

**Explanation:** Two or more servers have the same node name.

**User Action:** Use NET LIST or a similar procedure to find out what node names have been duplicated. Change one of the node names.

Service is READ-ONLY

**Explanation:** You tried to connect to a disk service as Read and Write, but the service was offered as Read Only.

**User Action:** Either:

- Use the NET MOUNT DISK command to remount the service as Read and Write.
- With the USE command, specify Read Only access to connect to the virtual disk.

Service “string” is read-only

**Explanation:** You tried to connect to a virtual disk that is Read Only. However, you specified Read and Write.

**User Action:** If you want to connect to the virtual disk, you must specify Read Only.

Service name cannot exceed 16 characters

**Explanation:** You specified either the LATCP ADD or LATCP DELETE command and entered a service name that is longer than 16 characters.

**User Action:** Reenter the ADD or DELETE command and specify a service name that is no longer than 16 characters.

Service name too long

**Explanation:** You specified a service name that was too long.

**User Action:** Specify a service name with a maximum of 31 characters.

Service not offered

**Explanation:** You tried to connect to a service that may not be currently offered by any server.

**User Action:** Do any or all of the following:

- Try to reconnect to the service. Check that you have correctly spelled the service name.
- Use the NET DISK SERVICES command to display the disk services offered on the server.
- Check that the disk service is offered on the VMS disk server. At the VMS disk server, enter:

```
$ PCSA SHOW DISK SERVICES/SERVICE= servicename
```

The screen display indicates whether the service is mounted. If the service is mounted, there may be a problem with the connection. To be sure that the local node can communicate with the server, do a datalink loopback test. For more information about the loopback test, see the *DECnet Network Management Guide*.

### Service “string” not offered

**Explanation:** Either of the following occurred:

- You tried to connect to a service that is not currently offered.
- No server offering the service responded within the timeout period.

**User Action:** Enter the `NET DISK SERVICES` or the `NET FILE SERVICES` command to determine whether the service has been mounted.

### Session closed

**Explanation:** One of the nodes closed the session.

**User Action:** Contact the system administrator to determine whether the server closed the session.

### Session ended abnormally

**Explanation:** The remote node powered down, or a session/NETBIOS command such as `SEND` or `HANGUP` timed out.

**User Action:** Contact the system administrator. Try connecting later.

### Session is not installed

**Explanation:** You tried an operation on the network, but the session has not been started.

**User Action:** Do all of the following:

- With the `USE /STATUS` command, determine the current status of the network.
- Make sure `STARTNET.BAT` has been executed.

### Session open rejected by host

**Explanation:** The server rejected your attempt to connect. There could be a problem with your access control information (user name and password). There could also be a problem with your configuration in `LOGIN.COM`.

**User Action:** Do all of the following:

- Verify that your user name and password are correct. If not, enter them correctly.
- Verify that `LOGIN.COM` contains the information you want it to contain.

Source routing not supported or failed to install

**Explanation:** For some reason, the system cannot use source routing.

**User Action:** Make sure you have the Token Ring version of the data link. Also make sure that NETBIND has been run.

Syntax error

**Explanation:** You entered a command that LATCP could not recognize.

**User Action:** Reenter your LATCP command, using the correct syntax. For more information, see the LATCP commands.

The 96 column mode is not supported for the STD type printer (DECMODE)

**Explanation:** You tried to use 96-column mode with an STD-type printer. The 96-column mode is valid only for LA50-type printers.

**User Action:** Reenter the command without specifying 96-column mode.

The mouse is not responding (DECMOUSE)

**Explanation:** There is a DEPCA Ethernet adapter, but the mouse does not respond.

**User Action:** Check the mouse installation and then rerun the mouse driver.

The path entry is too long (DECKEYB)

**Explanation:** You specified a path name of more than 64 characters.

**User Action:** Enter a path name of 64 characters or less.

The path is not set and the file was not found in the current directory or root directory: 'filename' (DECKEYB)

**Explanation:** You have not set the path, or the file was not found.

**User Action:** Set the path and make sure you specified a valid file name.

The PATH= string was not found in the environment (DECKEYB)

**Explanation:** Your environment space is corrupt. For more information about the DOS environment, see your native DOS documentation.

**User Action:** Restart your personal computer.

The qualifier "string" requires a value

**Explanation:** You used the USE command with the /EXCEPT or /ENVIRON qualifiers but did not specify a value for the qualifier.

**User Action:** Reenter the command and specify a value for the qualifier.

The specified file is invalid or does not exist: 'filename' (DECKEYB)

**Explanation:** One of the following occurred:

- There is an illegal character in the file name.
- The .KEY file is not in the proper format.

**User Action:** Try one of the following:

- Check the file name for illegal characters.
- Make sure the .KEY file is in the proper format.

This version of scheduler does not support EMS.

**Explanation:** The installed Scheduler version does not support EMS.

**User Action:** Use a scheduler that supports EMS.

Time-out argument incorrect

**Explanation:** You entered an incorrect value for the Receiver's /O qualifier.

**User Action:** Reenter the RCV or TRCV command and specify the correct arguments.

Timed out

**Explanation:** The server did not respond within the time limit.

**User Action:** Retry the command later.

Too long a path specified on the command line  
Initialization Failure. Datalink not installed.

**Explanation:** The specified search path to DECPARM.DAT has exceeded 80 characters.

**User Action:** Shorten your search path.

Too many outstanding session commands

**Explanation:** There are too many outstanding commands for the server.

**User Action:** Try again later.

Too many parameters

**Explanation:** You entered a USE command line, but USE could not interpret it.

**User Action:** Reenter the command and specify the parameters in their correct form. For more information, see the USE command.

Too many processes

**Explanation:** The limit for processes has been exceeded.

**User Action:** Try connecting later.

Too many qualifiers

**Explanation:** You entered a USE command with so many qualifiers that USE could not save and interpret all of them.

**User Action:** Reenter the command and specify fewer qualifiers.

Too many users

**Explanation:** The limit for users has been exceeded.

**User Action:** Try later.

Type argument incorrect

**Explanation:** You entered an incorrect value for the Receiver's /T qualifier.

**User Action:** Reenter the RCV command and specify a correct argument for the /T qualifier.

Unable to close connection with remote node

**Explanation:** You issued the NETTIME command and the remote node serviced your request, but your local node could not close the connection.

**User Action:** Contact your system administrator.

Unable to connect to node or service "name"

**Explanation:** One of the following is true:

- The specified remote node does not respond.
- The service or print queue does not exist.

**User Action:** Reenter the command with the name of an existing node, service, or print queue.

Unable to contact remote node 'nodename'

**Explanation:** You issued the NETTIME command, but the remote node was not listening.

**User Action:** Retry the NETTIME command and specify another node name.

### Unable to delete print job

**Explanation:** One of the following occurred:

- The server could not delete the specified job because the job has already started printing.
- An error occurred while the job was being printed.

**User Action:** Do one or all of the following:

- Make sure you entered the correct information in the delete request.
- Check the print queues to make sure the printer is running or whether the job has already been printed.

### Unable to find the file LAT.EXE

**Explanation:** You specified either the LATCP ADD or the LATCP DELETE command, but LATCP could not find LAT.EXE.

**User Action:** Make sure your path is correct for the LAT.EXE file. Reenter your command.

### Unable to restore remote adapter table entry

**Explanation:** The remote adapter table entry could not be restored.

**User Action:** Do the following:

1. Increase the size of the remote adapter table.
2. Restart your client by pressing Ctrl/Alt/Del.

### Unable to send command to remote node 'nodename'

**Explanation:** You issued the NETTIME command but your local node could not talk to the network.

**User Action:** Do one or all of the following:

- Make sure you entered the correct node name and other command information.
- The remote node may be down. Wait and try the command later.
- If the remote node is down, contact your system administrator. The node may have to be rebooted.

### Unexpected Error: Class="n" Error="n"

**Explanation:** An error occurred that the USE command cannot handle.

**User Action:** Contact your support people. Indicate what operation you were performing, and the error class and number displayed on the screen.



#### Unexpected error in adding local name

**Explanation:** The Redirector was unable to add its local adapter name to the session's table. An unusual network error occurred.

**User Action:** Make sure you installed the software correctly. Make sure also that the hardware is working correctly.

#### Unexpected network error 'errornumber'

**Explanation:** A network command returned an unexpected error. The parentheses in the message contain the DOS operating system extended error code.

**User Action:** Contact your system administrator.

#### Unrecognized character "c"

**Explanation:** You specified a parameter on the USE command line that contains an unrecognized and illegal character. For example, instead of LPT1:, you entered LP\_1:.

**User Action:** Check the command line for unrecognized and illegal characters. Reenter the command. For more information, see the USE command.

#### Unrecognized command

**Explanation:** The remote boot program did not recognize the command.

**User Action:** Enter the command correctly and try again.

#### Unrecognized command line arguments

**Explanation:** This is a warning message. SCH still loads and uses the default clock qualifier /H. The SCH parser did not understand the command line given.

**User Action:** If you intended to use /H, no action is required. If you wanted to use /M, /N, or /S, restart the network.

#### Unsupported file server command

**Explanation:** You tried to use one of the following:

- NET ATTRIB, NET PASSWORD, or NET PRINT on a VAXmate server.
- The specified command on an out-of-date VMS file server.

**User Action:** Either of the following:

- Do not attempt to use these commands on a VAXmate server.
- Contact your system administrator to update your VMS file server.

### Unsupported DOS version

**Explanation:** You tried to install a network with an inappropriate version of the DOS operating system.

**User Action:** Use the DOS Version 3.2, 3.3, or 4.x operating system. Contact your system administrator to obtain the correct version of the DOS operating system.

### USE error: Out of environment space setting variable "string"

**Explanation:** You tried to set an environment with the USE command with the /ENVIRON qualifier. However, there is not enough space to create the variable.

**User Action:** Do one of the following:

- Use the DOS SET command to release unused environment variables
- Increase the maximum environment size by modifying the /E:n value in the SHELL command in CONFIG.SYS. See your DOS User's Guide for more information on SET and CONFIG.SYS options.

### USE error: Too many redirections

**Explanation:** The number of redirected devices (connected file and printer services) exceeds the maximum links configured.

**User Action:** Do the following:

- Increase the /S:n and /L:m values on the REDIR command in STARTNET.BAT.
- Increase the maximum DECnet links to n+2 with the following command:

```
NCP DEFINE EXEC MAX LINKS n
```

Because this command changes the permanent database, and not the volatile database, you must restart your client before the new value takes effect. To restart your client, press Ctrl/Alt/Del.

### Username too long

**Explanation:** You specified a user name that was too long.

**User Action:** Specify a user name of up to 31 characters.

### Warning: DEPCA firmware version not supported by REMOTE BOOT

**Explanation:** Your DEPCA ROM version is not supported.

**User Action:** The remote boot may still work, but you should upgrade your ROMs. If your client hangs and does not respond, you must upgrade your ROMs before you can use this DEPCA.

**Warning:** Service table full Some sessions may be missing  
Press any key to continue

**Explanation:** The service table is full. Certain services were probably not stored in the service table.

**Explanation:** Use the `LATCP DEFINE SERVICE TABLE` command to increase the number of services you can store in the service table. Then restart the LAT.

**Warning:** Unable to set the date and time from the network.

**Explanation:** The network startup software cannot locate a server that can provide date and time information to your personal computer.

**User Action:** Check your `STARTNET.BAT` procedure and make sure it includes a time and date server.

XONXOFF already loaded (XONXOFF)

**Explanation:** XONXOFF has already been loaded.

**User Action:** Do not load XONXOFF more than once.

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# Glossary

The Glossary explains new terms that have appeared in this book. New terms are shown in the text in bold type.

**386 memory manager (n.)**

A software program that manages the allocation of all personal computer memory types. It is based on the Intel 80386 microprocessor.

**access (v.)**

To use a resource, such as a printer, directory, or disk drive.

**account (n.)**

An account allows users access to a computer. It includes the user's name, often a password, other identifiers, a list of services and privileges the user is allowed, and files belonging to the user.

**alias (n.)**

An alternate name for a resource, such as a service, used when you want to refer to several identical resources by the same name. It is also used to refer to the same service by alternate names.

**alphanumeric (adj.)**

Pertaining to the characters A through Z and zero (0) through nine (9).

**ambiguous device name (n.)**

The next available drive letter for the type of device to which users can connect.

**append path (n.)**

A search path that is used to tell DOS where to search for executable files in the directory structure. See also *search path* and *path name*.

**application (n.)**

A program used for a particular kind of work, such as word processing or database management.

**application disk service (n.)**

A virtual disk that contains application software. See also *disk service*.

**application file service (n.)**

A file service that contains application software.

**area (n.)**

In networking, a group of interrelated nodes.

**ASCII (n.)**

American Standard Code for Information Interchange. A set of 8-bit, binary numbers representing the alphabet, punctuation, numerals, and other symbols used to represent text.

Also, a file type composed of binary information. See also *binary*.

**asynchronous communications (n.)**

The method of transmitting data one character at a time over a serial interface. Asynchronous communication can work locally or through a modem. Timing between bits is constant; timing between characters is variable. (Also called start-stop transmission.)

**back up (v.)**

To copy the contents of an entire disk, directory, or file.

**backup (n.)**

A copy of the contents of an entire disk, directory, or file.

**binary (adj.)**

Pertaining to a numbering system that uses a base of 2; it uses only two digits, 1 and 0.

Also, a file type that is in binary format. See also *ASCII*.

**boot (v.)**

(Short for bootstrap.) To run or initiate a program that loads the operating system into memory and starts or restarts the computer.

**boot image (n.)**

The file containing the software needed to boot a computer.

**boot media (n.)**

The diskette, hard disk, or virtual disk that contains the startup files. See also *key diskette* and *network key disk*.

**broadcast message (n.)**

A message sent to personal computer users on the network. Users cannot respond to this message.

**buffer (n.)**

A temporary storage place in volatile memory for data. An example is the paste buffer in the SEDT text editor.

**checksum (n., v.)**

A mathematical procedure that produces a sum of digits or bits to determine if a message is received correctly (*noun*). To use the checksum procedure for error detection (*verb*).

**client (n.)**

A personal computer or workstation, connected to the network with PATHWORKS, that can access resources on a server. A client can have DOS, OS/2, or Macintosh software.

Hardware or software that receives resources from a server. See also *server*.

**client profile (n.)**

Files created by the configuration process that contain information to start the client workstation and that define the workstation's hardware and software components.

**coexistence client (n.)**

A personal computer with both Novell NetWare client software and PATHWORKS for DOS client software installed. From a coexistence client, users can access services on both NetWare and PATHWORKS servers. In addition, users have access to local PATHWORKS services such as PC DECwindows, SEDT, Mail, and terminal emulation.

**command (n.)**

An instruction issued to a computer operating system or application.

**command line (n.)**

That area of the screen in which commands are entered and displayed.

**common file service (n.)**

A file service used to store files that many users can share and update. An example of a common file service is PCCOMMON.

**configuration (n.)**

The set of hardware, hardware options, and software on a computer or network.

**configure (v.)**

To select, install, and customize hardware and software for a computer or network.

**CPU (n.)**

Central Processing Unit. The main unit of a computer that contains the circuits controlling interpretation and execution of instructions. The CPU includes the main storage, arithmetic unit, and special registers.

**CTERM (n.)**

Digital Command Terminal. A network protocol that provides local and wide area network services to computers for VT terminal emulation. CTERM is one of the possible protocols used in the SETHOST and VT320 terminal emulator utilities. See also *LAT*.

**current directory (n.)**

The directory in which you are currently working. Sometimes called the default directory.

**cursor (n.)**

The blinking line or shape on the screen that indicates where the next user input will be displayed.

**data link (n.)**

The interface between the computer's network controller and higher software levels. The type of data link used depends on the computer's network controller.

**DCL (n.)**

Digital Command Language. The standard command interface to Digital's major operating systems, such as VMS.

**DECnet (n.)**

Digital networking software that runs on server and client nodes in both local area and wide area networks. With DECnet, different types of computers that have different operating systems can be connected, and users can access information and services on a remote computer.

A networking protocol. See also *TCP/IP*.

**DECnet link (n.)**

A virtual or logical connection between a client and a server or between two nodes in the network.

**DECnet node database (n.)**

The file that contains information about the network nodes with which a computer communicates.

**default (n.)**

The value assumed by a program if a value is not supplied by the user.

**definition file (n.)**

A file that specifies:

- What operation is performed when you press a key
- What operation is performed when you click a mouse button
- What options are displayed in the menu

**destination (n.)**

The drive, file, or media to which a user is copying or moving information. Also called target. See also *source*.

**device (n.)**

A hardware component that performs a specific function. A keyboard is an input device; a printer is an output device; a terminal is an input/output device. See also *logical device*.

**directory (n.)**

A list of a set of files stored on a storage device such as a file service or disk.

**disk buffer (n.)**

A block of memory in which the DOS operating system can hold data read from or written to a disk when the amount of data is not an exact multiple of the sector size.



**disk server (n.)**

A network program that allocates space on a VMS disk where DOS users can store, create, and maintain DOS files. This space is called a virtual disk. Disk services are available only on VMS servers accessed with DECnet transport. See also *disk service* and *virtual disk*.

**disk service (n.)**

A service located on a VMS server that looks like a VMS file on a server, and lets users access it as if it were a local DOS disk drive. The service may contain more than one DOS file. A disk service gives multiple users fast access to read-only files, and gives one user fast access to read-write files. See also *disk server*.

**downline load (v.)**

To transfer data from a host system to a client system over the network. Sometimes called download.

**driver (n.)**

A background software program typically dedicated to the control of a device or resource on a personal computer. For example, a mouse requires a mouse driver.

**echo (v.)**

To repeat received data to the sender. For example, when the user presses keys on the keyboard, the keystrokes are echoed as characters on the screen.

**EMB (n.)**

See *extended memory block*.

**EMS (n.)**

See *expanded memory* and *Expanded Memory Specification 4.0*.

**end node (n.)**

A network node that sends and receives network messages but cannot route packets intended for other nodes.

**environment variable (n.)**

In DOS, a name or a number you define with the DOS SET command.

In a startup batch file, such as STARTNET.BAT, some environmental variables are set every time you boot. For example, the following USE command sets the environment variable DRV (drive) to the value returned by the command. It connects the DOS\_SYSTEM service to the returned drive when you start the computer:

USE ?: DOS\_SYSTEM/VIRTUAL/ENVIRON=DRV

**Ethernet address (n.)**

An alphanumeric string, six bytes in length, that identifies a node on the Ethernet. The string is six pairs of hexadecimal digits, separated by hyphens, (for example, AA-00-04-00-91-27).

**Ethernet controller (n.)**

A variety of network controller for the transmission and reception of data between a workstation or server and the Ethernet network. For example, a DEPCA is an Ethernet controller for a personal computer that is connected to the network. See also *network controller*.

**expanded memory (EMS) (n.)**

Physical memory outside the addressing range of a processor that can be accessed through a 64 Kbyte frame. Portions of expanded memory, called pages, are switched into a designated area of upper memory for execution. See also *extended memory*.

**Expanded Memory Specification 4.0 (EMS 4.0) (n.)**

A specification of methods for allocating and releasing expanded memory that was developed by Lotus, Intel, and Microsoft (LIM). This specification is sometimes referred to as LIMS 4.0.

**extended edition (EE) (n.)**

A version of OS/2 developed by IBM that includes the Communications Manager, Database Manager, and LAN Requester software and that runs over the NetBEUI transport.

**extended memory (XMS) (n.)**

Memory beyond the one Mbyte addressable boundary up to 16 Mbytes. This space is normally not available to DOS applications. The High Memory Area (HMA) of XMS is the first 64 Kbytes above the 1 Mbyte line and can often be accessed by DOS. See also *expanded memory*.

**extended memory block (EMB) (n.)**

A section of memory above the 1 Mbyte line.

**Extended Memory Specification 2.0 (n.)**

A specification for allocating and releasing extended memory.

**external command (n.)**

In DOS, the files that are stored as files on a diskette, hard disk, or virtual system disk during installation and read into memory when a user types the command. File names for external commands are shown in a directory listing. See also *internal command*.

**FAL (n.)**

File Access Listener. A DECnet utility that runs on your personal computer and monitors the network for requests from other users for your files.

**File Access Listener**

See *FAL*.

**file server (n.)**

A network program that lets a client connect to available file and printer services.

**file service (n.)**

Directories, subdirectories, and files on a file server. Users can use network commands from a client to access a file service and then store and retrieve data. A file service provides read/write access to applications and services for many users simultaneously.

**format (v.)**

In the context of disks, to divide a disk into tracks and sectors, label those tracks and sectors for future reference, and create a directory structure in order to make the disk ready to accept new data and programs. The type of formatting done depends upon which operating system will use the disk. Formatting a disk destroys any data previously stored on the disk.

**generic queue (n.)**

A logical name for a physical queue. See also *physical queue*.

**group (n.)**

In system administration, a collection of users who have the same access to file services. Once users have accounts, they can be assigned to a group. With one command, the system administrator can assign and modify access for all users in the group.

**group code (n.)**

A number or set of numbers used by the LAT or LAST protocol to identify network resources and to control access to those resources. Group codes can be used to assign resources to a specific set of users and to balance the load between computers offering identical services. Sometimes called group code number.

**hexadecimal (adj.)**

Pertaining to a number system using base 16. Hexadecimal notation includes the numbers 0 through 9 and the letters A through F. In base 10 (decimal notation), F equals 15.

**hierarchical directory (n.)**

A type of directory in which subdirectories are organized in a tree structure. A directory can be related to only one directory above it but to any number of subdirectories below it.

**high memory area (HMA) (n.)**

The first 64 Kbyte segment of extended memory immediately above the 1 Mbyte point. HMA is unique because it can operate in real address mode and be made available to DOS programs. See also *real address mode*.

**HMA**

See *high memory area*.

**hooked interrupt (n.)**

In DOS, a software interrupt taken over by a network component for its own communication purposes. See also *interrupt*.

**host system (n.)**

A computer, such as a server, that provides services to clients.

**initial workstation diskette (n.)**

The first key diskette created for the workstation as part of the client installation procedure. Copy the initial key diskette before modifying it to create key diskettes for other workstations. See also *key diskette*.

**internal command (n.)**

In DOS, a basic command (such as copy, delete, and rename) that is stored in the COMMAND.COM file that is automatically read into memory when a personal computer or workstation is booted. Internal commands are not shown in directory listings. See also *external command*.

**Internet (n.)**

A group of networks that includes regional networks and local networks at universities and commercial institutions. See also *DECnet* and *TCP/IP*.

**interrupt (n.)**

A break in the usual flow of a program allowing the processing of a request by an application. See also *hooked interrupt*.

**keyboard mapping (n.)**

The definition of keys stored in a file and used by applications, associating the key you press with the application's interpretation of that key.

**keyboard mouse (n.)**

Keyboard keys used to move the cursor on the screen.

**key diskette (n.)**

A diskette that is used to start up the personal computer or workstation and make network connections. The key diskette stores files with configuration information, optional user-specific information, and some DOS utilities. The key diskette is a type of boot media. See also *boot media* and *initial workstation diskette*.

**LAD (n.)**

Local Area Disk. Digital's virtual disk software on a local area network. LAD provides high-performance disk services to DOS and OS/2 clients connecting to a VMS server. See also *virtual disk*.

**LAN (n.)**

Local Area Network. A self-contained network that offers a high-speed, reliable communication channel. LANs span a limited distance, such as a building or cluster of buildings, but can be connected to WANs with bridge devices.

**LAST (n.)**

Local Area System Transport. The network protocol used by the virtual disk server to send and receive data between computers. LAST provides LAN services to LAD drives.

**LAT (n.)**

Local Area Transport. A character-oriented communications protocol that operates on a LAN to permit communication between nodes and other devices such as terminals, printers, and modems. See also *LAN*.

**LATCP (n.)**

LAT Control Program. A utility that allows the management of LAT services from the client.

**LAT node (n.)**

A computer that has LAT software and can offer services, access services, or both. A LAT node can be either a PC, a terminal server or a service node. See also *service node* and *terminal server*.

**LAT service (n.)**

Any service offered on the LAT; a terminal service is the most common type of LAT services.

**link (n.)**

The logical network connection to a computer or to an application.

**load (v.)**

To bring software into memory. See also *downline load*.

**load file (n.)**

A file with information about the Ethernet controller that is installed in a specific client. The load file is used for remote boot.

**local (adj.)**

Stored on or connected to a client computer, such as a file or a printer. Opposite to being available over a network. See also *remote*.

**local area disk**

See *LAD*.

**local area transport**

See *LAT*.

**local boot (n.)**

A process in which a client operating system is loaded and started locally from either the hard disk or a key diskette. See also *remote boot*.

**local printer (n.)**

A printer that is connected directly to a client. See also *remote printer*.

**logical (adj.)**

Nonphysical. For example, logical can refer to a name in the software that represents a hardware device. Sometimes called a logical name. See also *logical device*.

**logical device (n.)**

A software name that identifies a hardware device for use by an application or program.

**log file (n.)**

A text file that contains messages describing events that occur during operation. Log files are updated frequently during operation and are useful for tracing system operation and errors. Log files are created by file servers, X servers, and many applications and utilities.

**log on (v.)**

To enter a user name and a password that identifies the user and start the session. Also called log in.

**LPT1, LPT2, LPT3 (n.)**

The default logical device names for local parallel printers. LPT1 is the default logical identification for the client local printer port.

**memory manager (n.)**

A software program for 80286- or 80386-based personal computers that manages the allocation of all memory types.

**memory map (n.)**

A representation indicating the allocation of memory addresses and the last location called on a personal computer.

**microprocessor (n.)**

A CPU contained on a single integrated-circuit microchip.

**modem (n.)**

Shortened form of Modulator/Demodulator. A device that converts computer signals into signals that can be sent and received over a telephone line.

**module (n.)**

In a device control library, the portion of the library that defines a form or mode for a particular device.

**mount (v.)**

To make a virtual disk available as a disk service to users on a network.

**multicast (adj.)**

Pertaining to a type of network addressing that enables a node to send messages to any node on the network that has been configured to recognize a multicast address. See also *broadcast message* and *service announcement*.

**NCP (n.)**

See *network control program*.

**NDIS (n.)**

The Network Device Interface Specification written jointly by Microsoft Corporation and 3Com Corporation. By supporting NDIS, Digital enables any personal computer vendor's Ethernet controller to work under PATHWORKS for DOS software.

**network (n.)**

A group of servers, clients, and devices that are connected to each other by communications lines to share information and resources.

**network adapter (n.)**

See *network controller*.

**network controller (n.)**

A combination of hardware, firmware, and software that controls the transmission and reception of data between a workstation or server and the network. For example, a DEPCA is an Ethernet network controller that connects a personal computer to the network. Also known as a *network adapter*.

**Network Control Program (NCP) (n.)**

A DECnet utility used to monitor, manage, and configure network nodes.

**Network File Transfer (NFT) (n.)**

A DECnet utility used to transfer files on a DECnet network.

**network key disk (n.)**

A virtual disk that enables a client to boot over the network by loading the operating system and network startup information to the client. A network key disk is a type of boot media. See also *boot media* and *remote boot*.



**network path (n.)**

A means of identifying and locating services on the network. A network path consists of the server name and service name.

**network topology (n.)**

The configuration of wires, cables, and nodes in a network.

**NFT (n.)**

See *network file transfer*.

**node (n.)**

An individual computer, such as a server or client, that can communicate with other computers in a network.

**node address (n.)**

A unique numerical identification of a node in a network. A node address includes the area and node number.

**node name (n.)**

A name uniquely identifying a node within a network. The node name must be alphanumeric and contain at least one alphabetic character.

In DECnet, a valid node name is one to six characters in length. An example of a DECnet node name is SERVR7.

In TCP/IP, a valid node name is one to sixteen characters in length, separated from its domain specification by a period. An example of a valid TCP/IP node name (including a domain specification) is albertstein.princeton.edu

**node number (n.)**

A number uniquely identifying a specific node in the area.

**nontransparent file access (n.)**

File access through protocol stack utilities such as NFT or FTP.

**parallel (adj.)**

In data transmissions, pertaining to a method of information transfer in which all bits in a character are transmitted simultaneously, rather than sequentially, on different lines or channels. See also *serial*.

**parallel port (n.)**

The hardware component used to connect a client to a device that uses parallel data transmission, such as a parallel printer.

**parallel printer (n.)**

A printer that has a parallel data communications interface. See also *parallel port*.

**parameter (n.)**

One or more variables that are passed to a program or command before execution. A parameter can be a file specification, option, or device name.

In the following example, filename.txt and LPT1: are parameters of the NET PRINT command:

```
NET PRINT filename.txt LPT1:
```

See also *qualifier*.

**password (n.)**

A string of characters that uniquely confirms the identity of a user to the system. See also *user name*.

**path name (n.)**

A default, predefined sequence of directories to be searched when a program or utility looks for a file. Directory names in the path are separated by semicolons. See also *search path*.

**PATHWORKS for DOS (NetWare Coexistence) (n.)**

A product that enables PATHWORKS for DOS and NetWare DOS client software to operate concurrently on the same personal computer, using a single NDIS-compliant Ethernet controller.

**personal computer (n.)**

See *client*.

**personal file service (n.)**

A file service that contains a user's DOS data and text files as well as server files. A personal file service is protected from other users by a user name and a password.

**physical queue (n.)**

A name that corresponds to the physical terminal line for a printer port. See also *generic queue*.

**preferred service (n.)**

A service you configure in the LAT service table on your node, using LATCP. LATCP lets you select the service announcements you receive from among the many services offered on the network. See also *service announcement*.

**printer driver file (n.)**

A file used to tailor general printing functions for a specific printer.

**print service (n.)**

The availability of a printer that is connected to a server. From the client, users run network commands to access a print service and print files. A file server makes a print service available to clients.

**printer startup file (n.)**

A file that runs automatically when the operating system starts all the printers defined in the file.

**print queue (n.)**

A list of files waiting to print.

**profile (n.)**

A set of information about a client or a user. The profile provides information the server may require to recognize the client or the user.

**prompt (n.)**

A request to the user from the software for information or an input signal.

**protocol (n.)**

A set of rules that governs the format and timing of messages sent and received over a communication link. For example, DECnet and TCP/IP are network protocols.

**public file services (n.)**

File services to which users connect using the default account without specifying a username and password. Users connecting in this way are automatically allowed access to public services.

**qualifier (n.)**

A portion of a command that modifies the action by setting or selecting one of several options. For example, in the following command, /COPIES is a qualifier with a value of 3.

```
NET PRINT filename.txt LPT1: /COPIES=3
```

See also *parameter*.

**RAM (n.)**

Random Access Memory. Memory from which information can be read and in which new information can be temporarily stored. See also *ROM*.

**random access memory**

See *RAM*.

**read only memory (n.)**

See *ROM*.

**read-write access (n.)**

The privilege to copy (read) or save to (write) a file, application, or disk area.

**real address mode (n.)**

A personal computer processor operating mode that is compatible with the operation of the Intel 8088 and 8086 processors. In real address mode, the processor recognizes 1 Mbyte of memory addresses.

**real mode (n.)**

See *real address mode*.

**redirect (v.)**

To assign a logical device name, which is a local representation of a physical device on the network.

**redirector (n.)**

The DOS software that interprets instructions for DOS drives and sends these instructions to remote network services.

**remote (adj.)**

Stored on or connected to a server or other computer and available to a client over the network only. Opposite of local. See also *local*.

**remote adapter name (n.)**

A unique name given to a NETBIOS application on a WAN, or to a computer that is not a workstation on the LAN, such as a VAX file server.

**remote boot (n.)**

A process in which a client's operating system is loaded and started remotely from a network key disk. See also *network key disk* and *local boot*.

**remote boot database (n.)**

A set of information containing a list of clients that can be started by a network key disk.

**remote boot diskette (n.)**

A diskette containing the minimum necessary software to connect a personal computer to a server. Once connected, the server can start the personal computer with complete network startup software. A remote boot diskette is required to remote boot any personal computer that does not have a DEPCA Ethernet controller. See also *network key disk*.

**remote printer (n.)**

A printer connected to a server on the network. Opposite of local printer. See also *local printer*.

**resource (n.)**

A service that is available to the client. A source of information or an available means to complete a task. Examples of network resources are applications, file services, disk services, and printers. Resources can be either local or remote.

**response information message (n.)**

In LAT, an information message or multicast message from a service node or a terminal server in response to a client that has queried the availability of a system service.

**reverse video (n.)**

On a monitor display, the opposite of the default video contrast. For example, a black-on-white monitor screen displays white-on-black in reverse video. Reverse video is used by some applications to highlight text or screen objects.

**ROM (n.)**

Read Only Memory. Memory from which information can be read, but to which new information cannot be written. See also *RAM*.

**router (n.)**

A server or a node that can send and receive data packets and direct the packets to other nodes.

**SCB (n.)**

See *session control block*

**script (n.)**

A text file containing a series of commands that performs the commands automatically.

**search path (n.)**

The series of directories and subdirectories that DOS follows to locate a file. See also *path name*.

**serial (adj.)**

In data transmission, pertaining to a method of data transfer in which each bit of information is sent sequentially on a single channel. In the PATHWORKS environment, serial transmission is always asynchronous. See also *asynchronous communication* and *parallel*.

**serial port (n.)**

The hardware component that connects the personal computer or workstation to a serial communication device, such as a modem, terminal, or serial printer. See also *serial*.

**serial printer (n.)**

A printer that has a serial communications interface. See also *serial* and *serial port*.

**server (n.)**

A computer running PATHWORKS software that offers file, printer, or disk services to clients. See also *client*.

**service (n.)**

The availability of files, devices, or disks that let clients access resources on the network or on a server. A service enables a client to use resources on a printer, on the network, or on a server. See also *disk service*, *file service*, *print service*, *shared resource*, and *virtual disk service*.

**service announcement (n.)**

A multicast message sent from a LAT server to all clients. A service announcement contains information about a LAT service offered by the server. This information is stored in the client's service table. .

**service name (n.)**

A label (name) the user or system administrator gives to a file, printer, or disk service to make any one of these services available to other users. For example, PCCOMMON is the service name of the common file service.

**service node (n.)**

A LAT node that offers services that are announced to all terminal servers on the LAN. It also recognizes and processes requests for services. See also *LAT node*, *service announcement* and *terminal server*.

**service table (n.)**

An area in memory in which information about known services is stored.

**session (n.)**

The logical link between a client or terminal and a server.

**session control block (SCB) (n.)**

A system data structure that an application must provide to the LAT whenever the application wants to create a session. The session control block contains all the interrupt and exception vectors known to the system.

**shared resource (n.)**

In LAN Manager, a service available on the network. See also *service*.

**source (n.)**

The drive, file, or media from which the user is copying or moving information. See also *destination* and *target*.

**station address (n.)**

An address on a PATHWORKS client containing the client's node name and node address.

**string (n.)**

In a command line, an entry that contains more than one number or word and is enclosed in parentheses or quotation marks. Often, the words in a string are joined with underscores. In the following example, a string follows the equals sign:

```
NET PRINT/NOTE=(Final_draft_of_fiscal_report).
```

**synchronous communication (n.)**

A method of transmitting data using a timing signal. The timing signal synchronizes the transmitter and the receiver, eliminating the need for stop bits and providing efficiency in data transfer.

**system file service (n.)**

A file service offering system software, including PATHWORKS for DOS and PATHWORKS network software, DECwindows Motif software and applications, and the DOS operating system and utilities.

**system memory (n.)**

In a personal computer, the first 640 Kbyte of memory addresses. System memory is the memory that can be recognized by a processor while the personal computer is in real address mode.

**system service (n.)**

See *system file service*.

**target (n.)**

The drive, file, or media to which the user is copying or moving information. Also called the destination. See also *source*.

**task image (n.)**

An executable file loaded into computer memory, especially during a remote boot operation.

**TCP/IP (n.)**

Transmission Control Protocol/Internet Protocol. A set of protocols that governs the transport of information between computers and networks of dissimilar types. The Internet is a group of networks that includes regional networks, military networks, and local networks at universities and commercial institutions. TCP/IP is an alternative to DECnet transport protocols. See also *DECnet*.



**template (n.)**

In the DOS operating system, the pattern of words and/or switches that make up the last command line entered in the 128 byte buffer. This buffer is reserved for the storage of command lines.

In the Netsetup utility, a copy of the profile that you can use to duplicate common information for registering another personal computer or workstation.

**terminal emulator (n.)**

A program that lets you use the client as if it were a terminal connected to a host computer. The SETHOST utility is a terminal emulator.

**terminal server (n.)**

A dedicated communications system on the LAN that provides logical connections between its serial ports and service nodes, using the LAT protocol. A terminal server can access services and, in some cases, offer services. DECservers 100, 200, 300, and 500 are terminal servers. See also *service node*.

**terminate-and-stay resident (TSR) (n.)**

A program that stays in memory, running in the background, even after the user closes the application.

**transaction size (n.)**

In LAD, LAST, and LANses, the number of data packets accepted by a computer for one read or write operation.

**transparent (adj.)**

Pertaining to a function that a user can use without seeing the function operation, seeing only the result. Invisible in operation.

**transparent file service access (n.)**

Access to a file service through DOS that acts like access to a file service on a local hard disk or diskette.

**transport (n.)**

Network software that routes user data to its destination and controls the flow of data.

**TSR (n.)**

See *terminate and stay resident*.

**ULTRIX server (n.)**

In PATHWORKS, a VAX, MicroVAX, or RISC computer that runs the ULTRIX operating system and PATHWORKS for ULTRIX, the server software that offers clients network resources such as files, applications, and remote printing. Sometimes called an NFS server.

**upper memory (n.)**

Memory blocks in the 640 Kbyte to 1024 Kbyte space that are created by 80386 memory managers. DOS programs, device drivers, and startup software can be loaded into these blocks.

**user name (n.)**

The name a user types when logging in to the system. The combination of the user name and password uniquely identifies a user account to the system. See also *password*.

**user profile (n.)**

Information provided to the server that may be required to recognize the user.

**utility (n.)**

A general-purpose program included in a system to perform common tasks.

**virtual (adj.)**

Having the attributes, but not the actual form, of something. For example, a virtual disk is space on a VMS disk that functions as if it were a DOS disk.

**virtual disk (n.)**

Space the disk server program sets aside on a VMS disk. The virtual disk, actually a VMS container file, functions like a DOS-formatted disk. Users can connect to the virtual disk through a DOS drive and can store, create, and maintain DOS files. See also *local area disk*.

**virtual disk service (n.)**

The availability of a virtual disk to clients over the network. At a client, users can make use of a virtual disk service with network commands and can then store data on and retrieve data from the virtual disk. A virtual disk server makes a virtual disk service available to clients.

**virtual screen (n.)**

The size of the view when you specify dimensions in the Video parameter that are greater than the dimensions of your monitor screen.

**VMS server (n.)**

A VAX or MicroVAX computer running PATHWORKS for VMS, the VMS operating system and PATHWORKS server software offering clients network resources such as files, routers, remote printing, and applications.

**volatile database (n.)**

A file containing information that is not retained when the client or server is rebooted.

**WAN (n.)**

Wide Area Network. Two or more standard or extended LANs that are joined by DECnet routers, gateways, or Packet System Interface (PSI) software.

**wide area network (n.)**

See *WAN*.

**workstation (n.)**

See *client*.

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# Reader's Comments

PATHWORKS for DOS  
Client Commands Reference

AA-PAFEC-TK

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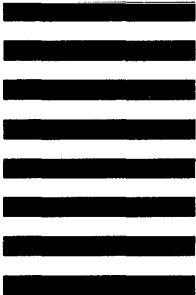


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