PATHWORKS for Macintosh

digital

System Administrator's
Reference Manual

Order Number: AA–PBFGB–TE

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Contents

2 VAXshare Manager Commands

A Handling Character Strings in Commands

Glossary

Index

Figures

Tables

Preface

Manual Objectives

This manual describes how to use AppleTalk for VMS Manager and VAXshare Manager commands. These commands are used to set up and manage AppleTalk for VMS, the AppleTalk/DECnet Transport Gateway, and VAXshare file and print services.

Intended Reader

This manual is intended for system administrators of PATHWORKS software for Macintosh computers. To use this manual, you should:

- Be familiar with AppleTalk and DECnet network concepts.
- Be familiar with the VMS operating system.
- Read the *Introduction to the AppleTalk Network System.*
- Read the *System Administrator's Guide.*

Manual Organization

The following table is a guide to the contents of this manual.

Chapter 1	Introduces and describes AppleTalk for VMS Manager commands.
Chapter 2	Introduces and describes VAXshare Manager commands.
Appendix A	Describes the handling of character strings in command lines.
Glossary	Provides information about new terms.

Associated Documentation

For more information, read the other PATHWORKS for Macintosh computers system administrator documents:

- Release Notes (online)
- *Planning and Installation Guide*
- *Introduction to the AppleTalk Network System*
- *System Administrator's Guide*
- *MacTCP Administrator's Guide*

Conventions Used

Convention	Meaning
black type	In examples of dialog between you and the workstation, what displays on the screen is printed in black.
teal blue type	In examples of dialog between you and the workstation, teal blue type indicates what you enter from the keyboard.
case	You can type commands and parameters in uppercase or lowercase letters, or a combination of both.
Enter	Enter all letters, spaces, and punctuation marks exactly as they are printed. Then press the Return key, as appropriate.
Note	A note contains information of special importance.
numbers	All numbers shown in this manual are in decimal form, unless otherwise noted.
two-line commands	Some commands are continued on a second line. In VMS, a continued command may be indicated by a hyphen (-) at the end of the first line. Enter the hyphen, and press Return. The system displays the _$ prompt. Continue entering the text that follows the _$ prompt in your manual.
[]	In a format example, square brackets indicate optional information. Do not type the brackets when specifying the information enclosed in the brackets.
| |	In a format example for an AppleTalk for VMS command, vertical bars indicate that you can specify any number of options.
...	An ellipsis following an entry in a command line indicates that the entry can be repeated any number of times. An ellipsis following a filename indicates that additional parameters, values, or information can be entered.
/	A forward slash (/) indicates that a command qualifier follows.

1

AppleTalk for VMS Manager Commands

Use the AppleTalk for VMS Manager to set up and maintain AppleTalk for VMS and the AppleTalk/DECnet transport gateway.

This chapter describes:

- Running the Manager
- Command syntax
- Command privileges
- Entering command lines
- Command descriptions

Note *The defaults provided with the product at installation are sufficient for most sites. Usually, you only need to adjust the parameters described in this chapter to tune the network for greater efficiency. Changes in the hardware configuration can also warrant changes in the AppleTalk for VMS configuration.*

For step-by-step procedures for managing AppleTalk for VMS and the gateway, see the *System Administrator's Guide.*

Running the Manager

To start the AppleTalk for VMS Manager (ATK$MANAGER), enter (at the VMS prompt):

```
$ RUN SYS$SYSTEM:ATK$MANAGER
```

The ATK$MANAGER prompt is displayed.

To exit the manager, enter EXIT at the prompt.

```
ATK$MANAGER> EXIT
$
```

Command Syntax

AppleTalk for VMS Manager commands are similar in style to those provided by Digital's Network Control Program (NCP). They consist of three parts:

- A command keyword - a verb that establishes a type of action, such as DEFINE, LIST, PURGE
- A component and sub-component keyword (if required) on which the command operates
- Zero or more optional parameters[1] that qualify the specified action, for example, setting the state of the gateway with the OFF parameter

The command line format looks like:

```
Command-keyword component [sub-component] parameter [parameter]
```

You use the command keywords to manage the following:

- **Executor** - the VAX node where the AppleTalk for VMS Manager software is installed and running
- **Gateway** - the device that links dissimilar networks, translating the protocols between them
- **Logging** - the process of recording network events
- **Port** - the portal from the AppleTalk for VMS node into the AppleTalk internet

The AppleTalk for VMS Manager commands allow you to place information in two different databases:

- **Permanent database** - parameters take effect after system reboots or with a shutdown and restart
- **Volatile database** - parameters are not saved after system reboots.

You use different commands depending on which type of database you need to affect. For example, use the DEFINE command verb to establish parameter values for the permanent database and the SET command for the volatile database. The SET command's parameters are usually used to turn components on and off.

[1] A parameter sets a database entry for the component.

Table 1–1 summarizes the command keywords.

Table 1–1 AppleTalk for VMS Manager Command Keywords

Keyword	Definition
DEFINE	Establishes specific parameters in the permanent database that take effect when you reboot the system or when you shutdown and restart AppleTalk for VMS. For example, use DEFINE to change network values permanently such as a port name.
DISCONNECT	Halts a gateway session.
EXIT	Exits the Manager, returns you to the VMS prompt.
HELP	Provides online information about AppleTalk for VMS Manager and its commands. Use this command to lookup command usage, format, parameter ranges, and defaults.
LIST	Displays information from the permanent database. When managing or tuning AppleTalk for VMS, use this command to learn about the permanent characteristics of a component.
PURGE	Deletes information from the permanent database. For example, use this command to purge executor parameters if you need to reconfigure the executor node.
SET	Establishes parameters in the volatile database while AppleTalk for VMS is running. Generally, you use SET to turn on or off components, such as the executor or gateway. For example, the SET GATEWAY STATE OFF command halts a gateway connection immediately. Parameters established with the SET command are not saved after system reboots.
SHOW	Displays information about the currently running system. The parameters are those established in the volatile database. Use this command to learn the current state of specific components such as the gateway.
ZERO	Resets the gateway counters; used to monitor gateway activity.

Command Privileges

Some AppleTalk for VMS Manager commands require special VMS privileges. Additionally, some commands require access to the permanent database file, ATK$CONFIGURATION.DAT, located in the SYS$SYSTEM directory. By default, the AppleTalk for VMS software sets access to this file as S:RWED, O:RWED, G:R,W:R. This access can be changed by the system administrator.

Table 1–2 summarizes the privileges for AppleTalk for VMS Manager commands.

Table 1–2 AppleTalk for VMS Manager Command Privileges

Command	Privileges Required
DEFINE commands	Read and write access to the permanent database file, ATK$CONFIGURATION.DAT
DISCONNECT command	OPER
EXIT	None
HELP	None
LIST commands	Read access to the permanent database file, ATK$CONFIGURATION.DAT
PURGE commands	Read and write access to the permanent database file, ATK$CONFIGURATION.DAT file
SET EXECUTOR	DETACH, CMKRNL, CMEXEC, OPER
SET commands	OPER
SHOW commands	None
ZERO command	OPER

Entering Command Lines

Enter commands using any of the following methods:

- Interactively, one at a time, at the ATK$MANAGER prompt
- Interactively, as a Digital Command Language (DCL) command file
- In VMS batch mode, as a DCL command file

This section provides guidelines for entering command lines at the ATK$MANAGER prompt. Apply the same guidelines for entering commands in DCL command procedures.

Note *You can write DCL command procedures to combine a frequently used sequence of commands into a single command. If you write a command procedure, it is a good idea to write the full AppleTalk for VMS Manager command instead of an abbreviated version. For more information on DCL command procedures, consult the following books in the VMS documentation set:*

- VMS DCL Concepts Manual
- Guide to Writing VMS Command Procedures

You can enter commands in either uppercase or lowercase letters. If a name, such as for a gateway or zone, contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the format and case. You can abbreviate commands using a minimum number of characters. For example, you can enter the command, DEFINE EXECUTOR STATE ON as:

```
DEF EX ST ON
```

If you do not type enough letters, the following message is displayed:

```
%ATK-E-AMBCOMMAN, Ambiguous command; supply more characters
```

If you get this message, retype the command using more letters.

For information on other messages you can receive, see the *System Administrator's Guide*.

You can enter multiple parameters on a single command line without repeating the component. For example, enter:

```
DEFINE EXEC ROUTING STATE ON MAX BUFFERS 20 CACHE SIZE SMALL
```

To continue a long command to the next line, use a hyphen as the last character in the line.

If the first character in a line is an exclamation point (!) the line is ignored by AppleTalk for VMS Manager as a comment line. Lines beginning with a exclamation point which follow a line terminated with a hyphen cause the command to be terminated.

Digital and AppleTalk character sets do not always have equal correspondence. If you are entering component names, refer to Appendix A for guidelines and character set charts.

Command Descriptions

The following sections contain detailed descriptions of AppleTalk for VMS Manager commands. Each command description includes (if applicable):

- Description
- Format
- Parameters
- Restrictions
- Example(s)

The AppleTalk for VMS Manager commands described are:

DEFINE EXECUTOR
DEFINE GATEWAY
DEFINE LOGGING
DEFINE PORT
DISCONNECT GATEWAY SESSION
EXIT
HELP
LIST EXECUTOR
LIST GATEWAY
LIST KNOWN PORTS
LIST LOGGING
LIST PORT
PURGE EXECUTOR
PURGE GATEWAY
PURGE KNOWN PORTS
PURGE LOGGING
PURGE PORT
SET EXECUTOR
SET GATEWAY
SET KNOWN LOGGING
SET KNOWN PORTS ALL
SET LOGGING
SET PORT
SHOW EXECUTOR
SHOW GATEWAY
SHOW LOGGING
SHOW KNOWN PORTS
SHOW PORT
ZERO GATEWAY

DEFINE EXECUTOR

This command defines the characteristics of the executor in the permanent database. It also creates the executor node's entry in the database if it does not already exist. The executor is the node where AppleTalk for VMS is installed and running.

You can use some of the executor parameters to manage the operating characteristics of protocols, such as the AppleTalk Data Stream Protocol (ADSP) and the Name Binding Protocol (NBP). To use these parameters you need to know something about how protocols work and the programming requirements for these protocols. Other executor parameters affect the operating characteristics of routing, the System Information Responder, and socket availability.

Note *For more information on protocols, see the PATHWORKS for Macintosh programmer's documentation set available in a separate kit.*

DEFINE EXECUTOR

Format

DEFINE EXECUTOR

```
                     | INITIAL ROUND TRIP DELAY time         |
  CONNECTION[1]      | OPEN INTERVAL delta-time              |
                     | OPEN RETRYS retry-count               |
                     | RECEIVE QUEUE LENGTH queue-length     |

  DATAGRAM QUEUE LIMIT queue-limit [2]

                 | HIGH RELIABILITY     | INTERVAL delta-time |  |
                 |                      | RETRYS retry-count  |  |
                 |                                               |
  NAME SERVICE[3]| MODERATE RELIABILITY | INTERVAL delta-time |  |
                 |                      | RETRYS retry-count  |  |
                 |                                               |
                 | UNRELIABLE           | INTERVAL delta-time |  |
                 |                      | RETRYS retry-count  |  |

  RESPONDER | NAME responder-name |
            | STATE ON|OFF        |

            | CACHE SIZE SMALL|MEDIUM|LARGE              |
            | MANAGER PASSWORD password                  |
            | MAXIMUM BUFFERS buffer-count               |
  ROUTING   |                | PASSWORD OFF|BOTH     |  |
            | MANAGER MODIFY | PORT OFF|VOLATILE     |  |
            |                | ZONE BOTH|VOLATILE    |  |
            | STATE ON|OFF                               |

  SOCKET COUNT socket-count
  STATE ON|OFF

  TRANSACTION[4] | QUEUE LIMIT queue limit              |
                 | RESPONSE CLUSTER cluster-size        |
```

[1] These parameters apply to the AppleTalk Data Stream Protocol (ADSP).

[2] These parameters apply to the Datagram Delivery Protocol (DDP).

[3] These parameters apply to the Name Binding Protocol (NBP).

[4] These parameters apply to the AppleTalk Transaction Protocol (ATP).

Parameters

CONNECTION INITIAL ROUND TRIP DELAY *time*
Specifies the estimated time for and ADSP datagram to travel from this node to any other node in the internet, and back to this node. A **datagram** is a self-contained packet of data which carries its own routing information. Once you set a value for this parameter, the executor continually updates its own estimate to ensure that the connection is making most efficient use of the internet's bandwidth. The setting depends on the size of the internet and the bandwidth of the datalinks. The range is 250 to 960,000 milliseconds. The default is 1000 milliseconds (one second).

See Example 1.

Note ***AppleTalk Data Stream Protocol (ADSP)*** *is a connection-oriented protocol that provides reliable, full-duplex, byte-stream service between any two sockets in an AppleTalk internet. ADSP ensures sequential, duplicate-free delivery of data over its connections.*

CONNECTION OPEN INTERVAL *delta-time*
Specifies how many milliseconds to wait between requests to open an ADSP connection. The range is 250 to 960,000 milliseconds. The default is 1000 milliseconds.

CONNECTION OPEN RETRYS *retry-count*
Specifies how many times to retry a request to open an ADSP connection. The range is zero to 65,535. The default is 32.

See Example 1.

CONNECTION RECEIVE QUEUE LENGTH *queue length*
Specifies the size, in bytes, of an ADSP connection's receive queue. The memory used is allocated from nonpaged pool and charged to the byte count quota of the process when the connection is initiated. **Nonpaged pool memory** is a portion of physical memory on the VAX system used by VMS to perform its normal operations.The range is 573 to 32,767. The default is 4,096.

DATAGRAM QUEUE LIMIT *queue-limit*
Specifies how many unsolicited datagrams to buffer for each socket opened by an application. Datagrams received after the limit is reached are discarded and must be retransmitted from the originating node.

Note *A datagram consumes approximately 740 bytes of nonpaged pool memory. However, the process is only charged for the 600 bytes (approximately) of real data in the datagram. The process is charged byte count quota (BYTLM) equal to the value of this parameter multiplied by the size of each datagram (600 bytes). For example, if you set this parameter to 3, the amount of byte count quota charged to the process is approximately 3 times 600. The process is charged byte count quota when the socket is opened.*

The range is zero to 32. The default is one.

Note ***Datagram Delivery Protocol (DDP)*** *is the protocol that provides for the end to end delivery of data within an AppleTalk internet.*

NAME SERVICE parameters

Specifies the operating characteristics of each class of name service available with the Name Binding Protocol (NBP). **NBP** provides and maintains translation tables that maps device names to their corresponding network addresses. By specifying one of these parameters you are modifying the operating characteristics of a particular quality of the name service.

The three classes of name service are:

- HIGH RELIABILITY - Specifies that the name service retrieves every possible name from the name service. However, even with this setting, there is a possibility of losing names.
- MODERATE RELIABILITY - Specifies that the name service retrieves almost all names from the internet, but some may be missed. Most applications can use this parameter.
- UNRELIABLE - Specifies a quick response to name lookup requests, but does not necessarily obtain all requested names. Applications that use this service do not need to retrieve all possible names. These applications often only need to obtain a few names quickly.

Define the operating characteristics of each of the NAME SERVICE classes using the INTERVAL and RETRYS parameters. Base the values on the internet size and the application's requirements. Specify INTERVAL in milliseconds with a number from 250 to 960,000. Specify RETRYS with a number from zero to 65,535.

The default values are:

- HIGH RELIABILITY
  - INTERVAL 500
  - RETRYS 16
- MODERATE RELIABILITY
  - INTERVAL 500
  - RETRYS 8
- UNRELIABLE
  - INTERVAL 250
  - RETRYS 0

See Example 2.

RESPONDER NAME *responder-name*
Specifies the name that the System Information Responder uses for the AppleTalk for VMS node. The **Responder** is an AppleTalk management tool that provides information about this AppleTalk node to network management software, such as Apple's Inter•Poll. The default is the DECnet nodename. If there is no DECnet node name, a null name ("") is used.

The name can be up to 32 characters long and is converted to the AppleTalk character set. Refer to Appendix A for more information on entering names.

See Example 5.

RESPONDER STATE ON | OFF
Establishes whether the Responder is started when the Executor is started. The default is ON.

ROUTING CACHE SIZE SMALL | MEDIUM | LARGE
Specifies the size of the cache used for routing table entries. The **Cache** is a form of quick access storage that holds the most frequently used portions of the routing table. Cache is allocated from nonpaged pool memory. Using this cache speeds up routing, since information contained in the cache can be accessed quicker than looking through the full routing table.

Specify SMALL for small to medium size AppleTalk internets. This is the default.

Specify MEDIUM for larger internets.

Specify LARGE for very large AppleTalk internets.

See Example 3.

ROUTING MAXIMUM BUFFERS *buffer-count*
Specifies the maximum number of buffers that can be allocated for routing traffic between AppleTalk networks. These buffers are allocated from nonpaged pool memory as required to route AppleTalk datagrams. Setting this parameter limits the amount of memory consumed by the executor for routing purposes. The range is 32 to 1024. The default is 100.

ROUTING STATE ON | OFF
Establishes the state of routing.

ON specifies that the routing of AppleTalk packets through the internet is enabled.

OFF specifies that packets are not routed. The default is OFF.

See Example 3.

ROUTING MANAGER PASSWORD *password*
Establishes the password required to access the routing manager from the AppleTalk internet. The password is a string of up to eight characters and is converted to the AppleTalk character set. Refer to Appendix A for more information on handling password character strings.

ROUTING MANAGER MODIFY PASSWORD OFF | BOTH
Establishes whether the routing manager's password can be modified from the AppleTalk internet.

OFF specifies the routing manager cannot modify the routing manager password. This is the default.

BOTH specifies that the routing manager can change the password in both the volatile and permanent database.

ROUTING MANAGER MODIFY PORT OFF | VOLATILE
Establishes whether the routing manager can modify the state of ports.

OFF specifies that the routing manager cannot modify the state of ports.

VOLATILE specifies that the manager can modify the state but it only affects the volatile database.

ROUTING MANAGER MODIFY ZONE BOTH | VOLATILE
Establishes whether the routing manager can modify the primary port's zone entry.

BOTH specifies that the entry in both the volatile and permanent database are affected.

VOLATILE specifies that the entry in only the volatile database is affected.

SOCKET COUNT *socket-count*
Specifies how many sockets are available to applications and sessions for communication over AppleTalk. A **socket** is an endpoint of communication in an AppleTalk internet. Each socket has an identifying number (address) for directing traffic to it. The value of socket count also determines the number of AppleTalk nodes the VAX system acquires on the primary port.

Note *There are two pages of nonpaged pool memory consumed for every 127 sockets specified in the parameter. Each page is 512 bytes. The memory is consumed regardless of whether the socket is actually being used.*

The range is 127 to 4064. The default is 127.

See Examples 3 and 6.

STATE ON | OFF
Establishes whether the executor's state is ON or OFF.

ON specifies that the Executor starts when the permanent database information for the executor is copied into the volatile database with the SET EXECUTOR ALL command.

OFF specifies that the executor does not start when the information is copied into the volatile database.

TRANSACTION QUEUE LIMIT *queue-limit*
Defines the maximum number of unsolicited ATP transaction requests that can be queued for each transaction listener. A **transaction listener** listens for requests from other nodes on the network.

Setting this parameter assists slow applications by buffering unsolicited transaction requests until the application asks for the delivery of another transaction request. The range is zero to 32. The default is three. Specifying zero indicates that unsolicited transactions are not buffered.

See Example 4.

Note ***AppleTalk Transaction Protocol (ATP)*** *is an AppleTalk transport that provides loss-free transaction service between sockets.*

TRANSACTION RESPONSE CLUSTER *cluster-size*
Specifies how many ATP transaction responses can be transmitted in one burst before the executor must wait for memory to be released by the datalink. A **datalink** is a communication path between adjacent nodes. The range is one to eight. The default is two.

See Example 4.

Restrictions

DEFINE requires read and write access to the permanent database file ATK$CONFIGURATION.DAT.

Examples

1

```
ATK$MANAGER> DEFINE EXECUTOR CONNECTION INITIAL ROUND TRIP -
_ATK$MANAGER> DELAY 4000 OPEN RETRYS 36
```

This example raises the INITIAL ROUND TRIP DELAY parameter for a larger internet that has several routers.

Increasing the number for OPEN RETRYS can increase the likelihood that a connection opens in adverse circumstances such as router failures, or noisy datalinks.

To assure that a connection is made under adverse circumstances, such as congested traffic or router failures, specify a higher value for OPEN RETRYS.

2

```
ATK$MANAGER> DEFINE EXECUTOR NAME SERVICE HIGH RELIABILITY -
_ATK$MANAGER> INTERVAL 2000 RETRYS 16
```

This example defines the parameters for the high reliability class of name service for a large internet. The interval is changed to 2000 milliseconds to lengthen the time between lookup requests. The RETRY value is changed to specify the number of times to repeat the request.

3

```
ATK$MANAGER> DEFINE EXECUTOR SOCKET COUNT 400  -
_ATK$MANAGER> ROUTING STATE ON CACHE SIZE LARGE
```

This example changes the cache size and the socket count. The cache size has been changed to improve routing on the internet. The socket count has been raised because of the large number of AppleTalk applications running on this node. The routing state has also been set to ON.

4

```
ATK$MANAGER> DEFINE EXECUTOR TRANSACTION QUEUE LIMIT 7 -
_ATK$MANAGER> TRANSACTION RESPONSE CLUSTER 4
```

This example changes the transaction parameters. The queue limit of seven establishes that unsolicited transaction requests can be queued for each transaction listener. The RESPONSE CLUSTER parameter is raised to four to allow more transaction responses to be sent in a burst for each transaction request.

5

```
ATK$MANAGER> DEFINE EXECUTOR -
_ATK$MANAGER> RESPONDER NAME "Accounting VAX Building 10"
```

This example establishes the System Information Responder name for the executor node as "Accounting VAX Building 10".

6

```
ATK$MANAGER> DEFINE EXECUTOR SOCKET COUNT 254
```

This example doubles the socket count for the executor node. For each 127 sockets specified, the VAX system acquires one node on the primary port. In this example, the VAX system acquires two nodes. There are more sockets available when there are many AppleTalk users on the VAX.

DEFINE GATEWAY

This command defines the AppleTalk/DECnet gateway parameters in the permanent database.

Format

DEFINE GATEWAY

APPLETALK NAME *object*
BUFFER SIZE *buffer-size*
MAXIMUM SESSIONS *session-limit*
SESSION BUFFERS *buffer-count*
STATE ON | OFF

Parameters

***APPLETALK NAME** object*
Specifies the up to 32-character name for the gateway as it appears in the Macintosh Chooser. AppleTalk names consist of an object, type, and zone. Just specify the object (expressed in AppleTalk characters) when using this parameter.

Refer to Appendix A for information on handling characters in AppleTalk names. "DECnet on nodename" is the default AppleTalk name.

Note *The type field is assigned by the gateway and the zone field is derived from the zone of the primary port.*

See Example 1.

***BUFFER SIZE** buffer-size*
Specifies the size (in bytes) of the buffers the gateway can use for each active session. The buffer size consumes nonpaged pool memory. The range is one to 32,767 bytes. The default is 572.

See Example 2.

***MAXIMUM SESSIONS** session-limit*
Specifies the maximum number of sessions that can be concurrently active through the gateway. A **session** is an established AppleTalk/DECnet

connection used for data transfers between an AppleTalk node and a DECnet node. The range is zero to 50. The default is 32.

See Example 3.

***SESSION BUFFERS** buffer-count*
Specifies the maximum number of buffers the gateway uses for each active session. The buffer count value must be in the range one to four and is the number of receive buffers for each side (AppleTalk and DECnet) of an active session. The default is two.

See Example 2.

STATE ON | OFF
Specifies the state of the AppleTalk/DECnet gateway.

ON specifies that the gateway is started when you run the MSA$STARTUP command file. The default is ON.

OFF specifies that the gateway is not started.

See Example 1.

Restrictions

DEFINE GATEWAY requires read and write access to the permanent database file ATK$CONFIGURATION.DAT.

Examples

1

```
ATK$MANAGER> DEFINE GATEWAY APPLETALK NAME "DECnet on Boston" -
_ATK$MANAGER> STATE ON
```

This example specifies DECnet on Boston as the gateway's AppleTalk name and sets the state of the gateway to ON.

2

```
ATK$MANAGER> DEFINE GATEWAY BUFFER SIZE 2288 SESSION BUFFERS 4
```

This example increases the buffer size the gateway uses to 2288 bytes. The result is greater efficiency for network applications which transfer large amounts of data. However, memory usage also increases.

The number of buffers for each session is set to four to accommodate the many messages that are transmitted across this particular network.

3

```
ATK$MANAGER> DEFINE GATEWAY MAXIMUM SESSIONS 50
```

This example raises the number of active sessions allowed through the gateway to 50 sessions. Increasing the number of sessions can increase CPU and memory usage on the gateway node.

DEFINE LOGGING

This command modifies the characteristics for logging in the permanent database. Logging records significant network events in a file. These events are also displayed on the operator's console. This logging information is valuable when you are troubleshooting the network.

Note *If the state of the logging file is set to ON, each time you start up AppleTalk for VMS, a new log file is created automatically. Periodically, purge old versions of the logging file.*

Format

DEFINE LOGGING FILE

NAME *file-spec*
STATE ON|OFF

Parameters

FILE
Specifies that you are setting information about the logging file. You must specify this parameter.

NAME *file-spec*
Specifies a file name for the logging file. The default file name is ATK$EVENT.LOG, which resides in the SYS$MANAGER directory.

STATE ON|OFF
Establishes, with ON or OFF, whether significant events are logged to a file. The default is ON.

Restrictions

DEFINE requires read and write access to the permanent database file ATK$CONFIGURATION.DAT.

Example

```
ATK$MANAGER> DEFINE LOGGING FILE NAME messages.log STATE ON
```

This example changes the logging name to MESSAGES.LOG in the default directory, SYS$MANAGER.

DEFINE PORT

This command modifies characteristics for a port in the permanent database. Use the port parameters to change the configuration for specific port, such as a zone name or network range.

You identify the port by entering either its name or device in the command line. If the port does not already exist in the database, this command adds it.

Note *Try to use the port's name to identify it since it is guaranteed to be unique. A device name may identify more than one port. For example, all DECnet tunnel ports have the same device name ("NET:").*

Format

DEFINE PORT

AARP RECEIVE BUFFERS *buffer-count*
CACHE SIZE SMALL | MEDIUM | LARGE
DDP RECEIVE BUFFERS *buffer-count*
DEFAULT ZONE *zone-name*
DEVICE *device-name*
NAME *port-name*
NETWORK RANGE *start end*
 PARTNER *node-spec*
PRIMARY ON | OFF
ROUTING BUFFERS *buffer-count*
ROUTING COST *hop-count*
SEED ON | OFF
SEED ZONES *({+| - |} "zone name 1" [,{+| - |} "zone name 2", ...])*
STATE ON | OFF
ZONE *zone-name*

Parameters

AARP RECEIVE BUFFERS *buffer-count*
Establishes the number of datalink buffers that can be allocated to receive address resolution requests. **Address resolution** is the translation of AppleTalk datalink node addresses to Ethernet physical datalink addresses. The range is one to 32. The default number of buffers is two. The size of each buffer is approximately 740 bytes. This parameter is only valid for Ethernet ports.

Note ***AppleTalk Address Resolution Protocol (AARP)*** *is the protocol that maps AppleTalk datalink addresses to Ethernet datalink addresses.*

See Example 1.

CACHE SIZE SMALL | MEDIUM | LARGE
Specifies the size of cache to use for address resolution requests for this port. The cache is allocated from nonpaged pool memory. This parameter is only valid for Ethernet ports.

Specify SMALL for small to medium number of AppleTalk nodes on the Ethernet. This is the default.

Specify MEDIUM for larger numbers of AppleTalk nodes on the Ethernet.

Specify LARGE for very large number of AppleTalk nodes on the Ethernet.

See Example 1.

DDP RECEIVE BUFFERS *buffer-count*
Establishes the number of datalink buffers that are available for receiving datagrams on a port. The default is ten. The range is one to 32.

See Example 4.

DEFAULT ZONE *zone-name*
Sets the zone name of the default zone for the network. A **zone** is a conceptual way of organizing devices that makes it easier to locate network services. The default zone must be a member of the seed zone list. A **seed zone list** is a list of AppleTalk zone names that a router uses to establish the set of valid zone names for a network.

This parameter is required for seed ports on routing nodes and is only significant if the port's seed state is set to ON.

DEVICE *device-name*
Specifies the VAX hardware device to be associated with the port. Two types of devices are possible:

- Ethernet networks, such as XE, XQ, ES, and ET devices
- DECnet logical links (NET devices)

If you are setting up a DECnet tunnel, the device must be either "NET:" or null "". A **DECnet tunnel** is a DECnet logical link used to connect two or more geographically separate AppleTalk internet routers.

***NAME** port-name*
Specifies the up to 32 character name used to identify the port. If the port already exists, the name is used to locate its entry in the permanent database. If the port does not exist, the name is used by ATK$MANAGER to create a new entry in the database.

Port names are converted to the AppleTalk character set. Refer to Appendix A for information on handling characters in port names.

See Example 2.

***NETWORK RANGE** start end*
Sets the network range to use for the Ethernet associated with the specified port. This parameter is required for seed ports on routing nodes and is recommended for the primary port on non-routing nodes. The default range is 65,280 to 65,534 (the AppleTalk startup range).

***PARTNER** node-spec*
Sets the DECnet node that is designated as the partner in a DECnet tunnel. A **partner** is the DECnet node at the opposite end of the DECnet logical link. Use this parameter to set up a DECnet tunnel. The executor routing state must be set to ON for a DECnet tunnel to be started. If a PARTNER is specified, then the DEVICE parameter must be either null or "NET:".

PRIMARY ON | OFF
Specifies whether this is a primary port or not. The **primary port** is the port where all name registrations occur, and where the executor's node addresses are acquired.

ON specifies that the port is the primary port. It is recommended that the primary port on a routing node also be a seed port. There can be only one primary port for each system, and it must be associated with an Ethernet device. The default is ON.

OFF specifies that the port becomes a secondary port for the executor.

***ROUTING BUFFERS** buffer-count*
Specifies the minimum number of buffers available to route datagrams through the port. The executor allocates at least this number of buffers to route datagrams out of the specified port and continues to allocate buffers until the number specified by the executor's ROUTING MAXIMUM BUFFERS parameter is reached. The range is one to 28. The default is 16. The size of each buffer is approximately 740 bytes. Use this parameter only for routing nodes, that is, the executor routing state must be set to ON.

See Example 3.

***ROUTING COST** hop-count*
Specifies the cost for routing datagrams through this port. The cost is defined in terms of hops. A **hop** is a count of the number of times a datagram has passed through a router.

By specifying a value greater than one, networks reachable through the port appear to be farther away and, therefore, more expensive to reach. Other routers may then choose alternative lower cost routes to reach the destination. The range is zero to 15. The default is one.

This parameter is used only for DECnet tunnels and is valid only when the executor routing state is set to ON.

Note *An AppleTalk node cannot reach a node more than 15 hops away.*

See Example 3.

SEED ON|OFF
Specifies the seed state of the port.

ON specifies that the router acts as a seed router for the network. A seed router transmits identifying information about the network, including the network range, seed zone list, and default.

OFF specifies that the port is not a seed port for this network. The default is OFF.

This parameter is used only for Ethernet ports and only when routing is turned on.

***SEED ZONES** ({+|-|} "zone name 1" [,{+|-|} "zone name 2", ...])*
Defines the seed zones for the network to which this port is connected. A **seed zone** is an AppleTalk zone name that a router uses to establish the set of valid zone names for a network.

Specify plus (+) to add seed zones. Specify minus (-) to remove zones from the list.

If the first name in the list does not have a sign, then the previous list of zones is replaced by the list specified in the parameter.

This parameter is used only for Ethernet ports and only when the seed state is set to ON.

See Example 5.

STATE ON | OFF
Specifies the operational state of the port.

ON specifies that the port is started when the port information is loaded into the volatile database with a SET KNOWN PORTS command. The default is ON.

OFF specifies that the port is not started.

See Example 5.

***ZONE** zone-name*
Specifies the zone name to use for the specified port. Specify a zone only for Ethernet primary ports. The name is the zone the VAX node becomes a member of when AppleTalk for VMS is started.

If this port is a seed port, the zone name specified must be a member of the seed zone list for this port.

If you do not specify a zone name, or you use "*", the VAX system is placed in the default zone for the network attached to this port.

This parameter is only valid for primary ports.

Restrictions

DEFINE requires read and write access to the permanent database file ATK$CONFIGURATION.DAT.

Examples

1

```
ATK$MANAGER> DEFINE PORT DEVICE XQA0 AARP RECEIVE BUFFERS 16 -
_ATK$MANAGER> CACHE SIZE LARGE
```

This example raises the number of AARP receive buffers to 16. The result is more efficient processing of address resolution requests received from other nodes on the network.

The cache size is set to LARGE for the port. Since there are a large number of Macintosh computers attached to the same network as this port, increasing the cache size can improve the performance of the executor node.

2

```
ATK$MANAGER> DEFINE PORT NAME "VAX2 PORT" PRIMARY OFF
```

In this example, the system administrator is defining "VAX2 PORT" as a port. The PRIMARY parameter is set to OFF, which makes this port a secondary port for the executor.

3

```
ATK$MANAGER> DEFINE PORT NAME "NY Tunnel" ROUTING COST 2 -
_ATK$MANAGER> ROUTING BUFFERS 24
```

This example raises the routing cost and buffer count for the DECnet tunnel. Networks reachable through this port now appear to be farther away, and other routers may choose an alternate route to reach those networks.

Setting routing buffers to 24 increases routing performance through slow datalinks. More datagrams can be "stacked up" waiting to be transmitted through a slow datalink, such as a DECnet tunnel.

4

```
ATK$MANAGER> DEFINE PORT DEVICE XQA0 DDP RECEIVE BUFFERS 30
```

In this example, the system administrator is using the VAX Ethernet device name to identify the port and changing the number of datagram receive buffers. Increasing the receive buffers prevents datagram loss and improves performance on ports with heavy data traffic.

5

```
ATK$MANAGER> DEFINE PORT DEVICE XQA0 SEED ZONES  -
_ATK$MANAGER> (+ "Accounting Dept NY",+ "Manufacturing Group Boston") -
_ATK$MANAGER> STATE ON
```

In this example the system administrator is adding two zones names for the network to which the port is connected. He has added to the zones to handle the new groups in New York and Boston. In this case, the seed state must be set to ON so that this port can transmit identifying information about the network.

DISCONNECT GATEWAY SESSION

This command halts a specific gateway session.

Format

DISCONNECT GATEWAY SESSION session-id

Parameters

session-id
Specifies the identification number of the session to be stopped. Use the SHOW GATEWAY KNOWN SESSIONS command to determine the number. The number is in the "Session" column. You can specify the number without the leading zeros.

Restrictions

This command requires the OPER privilege.

Example

```
ATK$MANAGER> SHOW GATEWAY KNOWN SESSIONS



Gateway Sessions as of 14-JUN-1990 16:02:39

                   --------  AppleTalk  ---------    ---------  DECnet  ---------
                                 Total      Total                  Total      Total
Session     State  Address    Messages      Bytes    Node       Messages      Bytes

0000000019 UP      FA070385        189      23886    VAXSVR           63       4582
0000000023 UP      FC750387         25      82934    LURCH            23     134829

ATK$MANAGER> DISCONNECT GATEWAY SESSION 19
```

The examples shows the system administrator using the SHOW GATEWAY KNOWN SESSIONS to determine the session identification number. Then the DISCONNECT GATEWAY SESSION command is used to halt session 19.

EXIT

This command allows you to exit from the AppleTalk for VMS Manager.

Format

EXIT

Example

```
ATK$MANAGER> EXIT
$
```

HELP

This command provides online user level documentation for AppleTalk for VMS Manager commands. If you omit a topic on the HELP command line, the manager prompts you for a topic.

Format

HELP [topic [sub-topic...]]

Parameters

topic
Is a topic you need information on.

sub-topic
Is a sub-topic you need information on.

Example

```
ATK$MANAGER> HELP
Information available:

  Commands    DEFINE      DISCONNECT EXIT        HELP        LIST        PURGE
  SET         SHOW        ZERO

   Topic? define

DEFINE

    Use the DEFINE command to create or modify parameters or  components
    in  the permanent database.  Use the SET command to create or modify
    parameters or components in the volatile database.

  Additional information available:

  EXECUTOR    GATEWAY     LOGGING     PORT
```

This is an example of the output for the HELP command.

LIST EXECUTOR

This command displays the operating parameters and statistical information for the AppleTalk protocol stack.

The information displayed from the permanent database is:

- Executor's state
- Routing parameters
- Socket count
- Connection parameters
- Transaction parameters
- Datagram queue limit
- Responder parameters
- Name service parameters

Format

LIST EXECUTOR

Restrictions

LIST requires read access to the permanent database file ATK$CONFIGURATION.DAT.

Example

```
ATK$MANAGER> LIST EXECUTOR
Executor Permanent Characteristics as of 22-JAN-1990 13:11:22

Executor state                          On
Routing:
     State                              On
     Maximum buffers                    100
     Cache size                         Small
     Manager modify pasword             Off
     Manager modify zone                Volatile
     Manager modify port                Off
Socket count                            127
Connection:
     Receive queue length               4096
     Open retry count                   32
     Open retry interval                1000
     Initial round trip delay           1000
Transaction:
     Queue limit                        3
     Response cluster                   2
Datagram queue limit                    1
Responder:
     State                              On
     Name                               "CADVAX"
High reliability name service:
     Retry interval                     500
     Retry count                        16
Moderate reliability name service:
     Retry interval                     500
     Retry count                        8
Unreliable name service:
     Retry interval                     250
     Retry count                        0
```

This example shows sample output for the LIST EXECUTOR command.

Suppose you need to change the values of the CONNECTION parameters. As system administrator, you can first check the permanent database values with LIST EXECUTOR, then modify the values with the DEFINE EXECUTOR command.

LIST GATEWAY

This command displays the following gateway information:

- State of the gateway, that is, ON or OFF.
- Name of the gateway for the AppleTalk network.
- Maximum number of active sessions allowed through the gateway.
- Number of buffers used for each session.
- Buffer size to use for each session.

Format

LIST GATEWAY

Restrictions

LIST requires read access to the permanent database file ATK$CONFIGURATION.DAT.

Example

```
ATK$MANAGER> LIST GATEWAY
Gateway Permanent Characteristics as of 22-JAN-1990 13:11:52

Gateway state                          On
AppleTalk name                         "DECnet on CARTON"
Maximum sessions                       32
Session buffers                        4
Buffer size                            572
```

This examples shows sample output for the LIST GATEWAY command.

Suppose you need to change the values of the parameters for the gateway. As system administrator, you can first check the permanent database values with LIST GATEWAY, then modify the values with the DEFINE GATEWAY command.

LIST KNOWN PORTS

This command displays the permanent characteristics for all ports:

- Name of the port
- Device associated with the port
- Type of port
- State of the port
- Seeding state of the port
- Network range assigned to the port
- Zone names for the port
- Partner name for the port
- AARP (AppleTalk Address Resolution Protocol) cache size
- DDP (Datagram Delivery Protocol) receive buffers
- Routing information
- Default zone name
- Seed zones for the port

Format

LIST KNOWN PORTS

Restrictions

LIST requires read access to the permanent database file ATK$CONFIGURATION.DAT.

Example

```
ATK$MANAGER> LIST KNOWN PORTS
Port Permanent Characteristics as of 10-SEP-1990 13:56:22

Port name                                "Primary"
Device name                              "XQA0"
Port type                                PRIMARY port
Port state                               On
Seeding state                            Off
Network range                            65280-65534
Zone name                                "*"
Partner                                  ""
AARP cache size                          Small
Preallocated AARP receive buffers        2
Preallocated DDP receive buffers         10
Routing buffers                          16
Routing cost                             1
Default zone                             ""
Number of seed zones                     0
```

This example shows sample output for the LIST KNOWN PORTS command.

As system administrator you may need to change the values of port parameters using DEFINE PORT, for example if nodes are being added to the internet. Use LIST KNOWN PORTS to determine the values in the permanent database.

LIST LOGGING

This command displays the logging state and logging file name in the permanent database.

Format

LIST LOGGING

Restrictions

LIST requires read access to the permanent database file ATK$CONFIGURATION.DAT.

Example

```
ATK$MANAGER> LIST LOGGING
Event Logging Permanent Characteristics as of 12-DEC-1990 14:55:25

Logging state                          ON
Logging file                           "SYS$MANAGER:THISISIT.LOG"
```

Use this command to determine whether logging is turned on and the logging file name. In this example, the system administrator can print out the THISISIT.LOG file and use the logging information for troubleshooting the network.

LIST PORT

This command displays the following information for a specific port. You can use the port's name or device to locate its information.

Note *Try to use the port's name to identify it since it is guaranteed to be unique. A device name can identify more than one port. For example, all DECnet tunnel ports have the same device name ("NET:").*

- Name of the port
- Device associated with the port
- Seeding state of the port
- Network range assigned to the port
- Zone name for the port
- Partner name for the port
- AARP (AppleTalk Address Resolution Protocol) cache size
- DDP (Datagram Delivery Protocol) receive buffers
- Routing buffers
- Routing cost
- Default zone name for the Ethernet port
- Seed zones for the port

Format

LIST PORT | NAME *port-name* | DEVICE *device-name* |

Parameters

***NAME** port-name*
Is the name of the port. Use quotation marks to preserve the case and spacing of multiple word port names.

***DEVICE** device-name*
Is the name of the VAX device associated with the port.

Restrictions

LIST requires read access to the permanent database file ATK$CONFIGURATION.DAT.

Example

```
ATK$MANAGER> LIST PORT DEVICE XQA0
Port Permanent Characteristics as of 22-JAN-1990 13:12:12

Port name                                "Building Ethernet"
Device name                              "XQA0"
Port type                                Primary port
Port state                               On
Seeding state                            On
Network range                            1000-2000
Zone name                                "New Test Network"
Partner                                  ""
AARP cache size                          Small
Preallocated AARP receive buffers        2
Preallocated DDP receive buffers         10
Routing buffers                          16
Routing cost                             1
Default zone                             "Test Zone 1"
Number of seed zones                     3
Seed zone name                           "NEW Test Network"
Seed zone name                           "Test Zone 1"
Seed zone name                           "Test Zone 2"
```

This example shows sample output for the LIST PORT command for the XQA0 device.

PURGE EXECUTOR

This command deletes the parameters for the executor from the permanent database.

Format

PURGE EXECUTOR

Restrictions

PURGE requires read and write access to the permanent database file ATK$CONFIGURATION.DAT.

Example

```
ATK$MANAGER> PURGE EXECUTOR
```

This example deletes the executor's nodes parameters from the database.

PURGE GATEWAY

This command deletes all gateway information from the permanent database.

Format

PURGE GATEWAY

Restrictions

PURGE requires read and write access to the permanent database file ATK$CONFIGURATION.DAT.

Example

```
ATK$MANAGER> PURGE GATEWAY
```

This example deletes all gateway information from the permanent database.

PURGE KNOWN PORTS

This command deletes permanent database information for all ports. Use this command if your network configuration changes or you need to reconfigure the network.

Format

PURGE KNOWN PORTS

Restrictions

PURGE requires read and write access to the permanent database file ATK$CONFIGURATION.DAT.

Example

```
ATK$MANAGER> PURGE KNOWN PORTS
```

This example deletes permanent database information for all ports.

Suppose you need to add ports and change the configuration of existing ports because of changes in the operation of the network. Use PURGE KNOWN PORTS to clear the permanent database of port information. Then use the DEFINE PORT command to change port parameters.

PURGE LOGGING

This command removes the permanent database entry for logging. Use this command if you plan to redefine the logging file entry or reset it to the default value.

Format

PURGE LOGGING

Restrictions

PURGE requires read and write access to the permanent database file ATK$CONFIGURATION.DAT.

Example

```
ATK$MANAGER> PURGE LOGGING
```

This example deletes permanent database information for logging.

PURGE PORT

This command deletes port information from the permanent database file for a specific port. You can use the port's name or device to identify the port. Use this command to purge the port before reconfiguring or if you no longer need the port.

Note *Try to use the port's name to identify it since it is guaranteed to be unique. A device name can identify more than one port. For example, all DECnet tunnel ports have the same device name ("NET:").*

Format

PURGE PORT | NAME *port-name* | DEVICE *device-name* |

Parameters

***NAME** port-name*
Is the name of the port.

***DEVICE** device-name*
Is the name for the Ethernet or NET device name.

Restrictions

PURGE requires read and write access to the permanent database file ATK$CONFIGURATION.DAT.

Example

```
ATK$MANAGER> PURGE PORT DEVICE XQA0:
```

In this example, the system administrator created the port with the device name XQA0: in the permanent database and now does not need it. The PURGE PORT command deletes the port.

SET EXECUTOR

This command modifies the parameters for the executor in the permanent database.

Format

SET EXECUTOR | ALL
STATE ON | OFF |

Parameters

ALL
Copies all executor parameters from the permanent database into the volatile database.

See Example 1.

STATE ON | OFF
Defines the state of the AppleTalk protocol stack.

ON specifies the AppleTalk protocol stack is started if it is not already operating.

OFF specifies network operations are halted. If there are any applications using AppleTalk for VMS, operations are not halted. Refer to the *System Administrator's Guide* for more information on shutting down PATHWORKS for Macintosh components.

See Examples 1 and 2.

Restrictions

If you specify ALL, DETACH, CMKRNL, CMEXEC, OPER privileges, and read access to the database file ATK$CONFIGURATION.DAT are required.

Examples

1

```
ATK$MANAGER> SET EXECUTOR ALL STATE ON
```

This example starts AppleTalk for VMS protocol stack using parameters in the permanent database and sets the state of the executor to ON.

2

```
ATK$MANAGER> SET EXECUTOR STATE OFF
```

Suppose you want to shutdown the AppleTalk for VMS protocol stack. You can use the command format in this example, but if any applications are running, you receive the following message:

```
%ATK-E-ERREXERST, Unable to execute request
-ATK-F-APPARECON, Applications are connected, the protocol
stack cannot be shutdown
```

If this happens, refer to the *System Administrator's Guide* for a complete shutdown procedure.

SET GATEWAY

This command changes the volatile database parameters for the AppleTalk/DECnet gateway. Use this command to override temporarily characteristics that are established by the DEFINE GATEWAY command.

Format

SET GATEWAY

ALL APPLETALK NAME *object* BUFFER SIZE *buffer-size* MAXIMUM SESSIONS *session-limit* SESSION BUFFERS *buffer-count* STATE ON | OFF | SHUT

Parameters

ALL
Specifies that all operating parameters for the gateway are to be copied from the gateway's record in the permanent database.

APPLETALK NAME *object*
Specifies the up to 32-character name for the gateway as it appears in the Macintosh Chooser. AppleTalk names consist of an object, type, and zone. Just specify the object (expressed in AppleTalk characters) when using this parameter.

Refer to the Appendix A for information on handling characters in AppleTalk names. "DECnet on nodename" is the default AppleTalk name.

Note *The type field is assigned by the gateway and the zone field is the zone of the primary port.*

See Example 2.

BUFFER SIZE *buffer-size*
Specifies the size (in bytes) of the buffers the gateway can use for each active session. The gateway buffers consume nonpaged pool memory. The range is one to 32,768 bytes. The default is 572.

See Example 1.

MAXIMUM SESSIONS *session-limit*
Specifies the maximum number of sessions that can be established through the gateway. Attempts by nodes on either side of the gateway to establish a session with a node on the other side are be denied by the gateway once the value for this parameter is reached. The range is 0 to 50. The default is 32.

SESSION BUFFERS *buffer-count*
Specifies the number of buffers the gateway can use for each subsequent session. The value of the buffer count must be in the range one to four and is actually the number of buffers on each side (AppleTalk and DECnet) of an active session. The default is two.

Note *The amount of memory used for each session depends on the ADSP receive queue length and the size and number of buffers. The default ADSP receive queue length is 4,096 bytes.*

See Example 1.

STATE ON | OFF | SHUT
Specifies the state of the AppleTalk/DECnet gateway.

ON specifies that the AppleTalk/DECnet gateway is started.

OFF specifies that the gateway is halted, immediately breaking all active sessions established through the gateway.

SHUT disallows any additional sessions but does allow current sessions to remain active. After all existing sessions terminate, the gateway transitions to the OFF state.

Restrictions

If ALL is specified, read access to the database file ATK$CONFIGURATION.DAT is required.

Examples

1

```
ATK$MANAGER> SET GATEWAY BUFFER SIZE 1024 SESS BUFFERS 3
```

This command sets the buffer size and the number of session buffers for the current gateway session. Increasing the size and number of session buffers may improve the performance of applications which use the gateway if they send and receive many large messages. Increasing these parameters, however, increases the amount of nonpaged pool memory used by the gateway.

2

```
ATK$MANAGER> SET GATEWAY APPLETALK NAME "Lost Horizon"
```

This command sets the AppleTalk name for the gateway. The system administrator is specifying a name that makes this gateway viewable from a Macintosh computer. The user can see the name "Lost Horizon" in the Chooser list.

SET KNOWN LOGGING

This command establishes the operating characteristics of event logging when the protocol stack is started up.

Note *When you start AppleTalk for VMS with the MSA$STARTUP command file, this command is run automatically.*

Format

SET KNOWN LOGGING ALL

Parameter

ALL
Specifies that all operating parameters related to event logging are copied from the permanent database to the volatile database. You must specify this parameter.

Restrictions

Read access to the ATK$CONFIGURATION.DAT file is required.

Example

```
ATK$MANAGER> SET KNOWN LOGGING ALL
```

In this example, the system administrator is starting logging file operation manually. All operating characteristics related to event logging are copied from the permanent database.

SET KNOWN PORTS ALL

This command copies all information relating to ports from the permanent database to the volatile database. If any ports are set to ON, then those ports are activated.

Typically, you use this command when you are starting up the protocol stack. When you run the MSA$STARTUP command procedure, this command is run automatically.

Format

SET KNOWN PORTS ALL

Restrictions

Read access to the database file ATK$CONFIGURATION.DAT is required.

Example

```
ATK$MANAGER> SET KNOWN PORTS ALL
```

In this example, the system administrator is setting the ports manually. All ports configured with state ON in the permament database are started.

SET LOGGING

This command establishes the operating characteristics of event logging. Use this command to override temporarily logging characteristics that are established by the DEFINE LOGGING command.

Format

SET LOGGING FILE

NAME *file-spec*
STATE ON | OFF

Parameters

FILE
Specifies that you are setting information about the logging file.

***NAME** file-spec*
Changes the volatile database entry for the log file name. The default file name is SYS$MANAGER:ATK$EVENT.LOG.

See Example 1.

STATE ON \| OFF
Establishes, with ON or OFF, whether significant events are logged to a file. The default is ON.

See Example 2.

Restrictions

The command requires the OPER privilege.

Examples

1

```
ATK$MANAGER> SET LOGGING FILE NAME network007_file.log
```

This example sets the logging file name for the current session.

2

```
ATK$MANAGER> SET LOGGING FILE STATE ON
```

This example causes the executor to open a new logging file and log AppleTalk events to that file.

SET PORT

This command establishes a specified port's operational state for the current session. Use this command to override temporarily the state established by the DEFINE PORT command. Use the port's name or device to locate the correct port.

Note *Try to use the port's name to identify it since it is guaranteed to be unique. A device name can identify more than one port. For example, all DECnet tunnel ports have the same device name ("NET:").*

Format

SET PORT | DEVICE *device-name* | NAME *port-name* |
STATE *state*

Parameters

***DEVICE** device-name*
The Ethernet or DECnet device name for the port.

See Example 2.

***NAME** port name*
The name used to identify the port.

See Example 1.

***STATE** state*
Specifies the state of the port.

ON specifies that the port is started.

OFF specifies that all operations on the port are immediately halted. For example, if you have three ports currently operational and you do not need the second port anymore, you can set that port's state to OFF.

See Example 1.

Restrictions

This command requires the OPER privilege.

Examples

1

```
ATK$MANAGER> SET PORT NAME PRIMARY STATE OFF
```

This example uses the NAME parameter to locate the port and sets that port's state to OFF since it is no longer needed.

2

```
ATK$MANAGER> SET PORT DEVICE XQB0: STATE ON
```

This example uses the port device to identify the port and turns the port ON.

SHOW EXECUTOR

This command displays the following current operating parameters and statistics for the AppleTalk protocol stack:

- Executor's state
- Internet router's state
- Socket count
- Routing cache size
- Routing maximum buffers
- Connection parameters
- Transaction parameters
- Datagram queue limit
- Responder state and name
- Name service parameters

Format

SHOW EXECUTOR

Example

```
ATK$MANAGER> SHOW EXECUTOR
Executor Volatile Characteristics as of 14-FEB-1990 13:54:13

Executor state                          On
Routing state                           Off
Socket count                            127
Routing cache size                      Small
Routing maximum buffers                 100
Connection:
     Receive queue length               4096
     Open retry count                   32
     Open retry interval                250
     Initial round trip delay           1000
Transaction:
     Queue limit                        1
     Response cluster                   2
Datagram queue limit                    1
Responder:
     State                              On
     Name                               "AppleTalk on Boston"
High reliability name service:
     Retry interval                     500
     Retry count                        16
Moderate reliability name service:
     Retry interval                     250
     Retry count                        8
Unreliable name service:
     Retry interval                     250
     Retry count                        0
```

This example shows sample output for the executor's current statistics and parameter settings.

SHOW GATEWAY

This command displays the following current operating information and statistics for the AppleTalk/DECnet gateway:

- State of the gateway
- Gateway's name for the AppleTalk network
- Maximum number of sessions allowed through the gateway
- Number of buffers allocated for each session
- Session buffer size
- Address
- Total number of messages (packets) processed by the gateway
- Total number of bytes processed by the gateway
- Total number of sessions established through the gateway
- Current number of active sessions
- Numbers of seconds since counters last zeroed

Format

SHOW GATEWAY | KNOWN SESSIONS | SESSION *session-id* |

Parameters

KNOWN SESSIONS
Displays gateway information for all known gateway sessions.

See Example 2.

***SESSION** session-id*
Displays gateway characteristics for the specified session. Use this parameters when you need information only for a particular session. Use the SHOW GATEWAY KNOWN SESSIONS command to determine the session number.

Examples

1

```
ATK$MANAGER> SHOW GATEWAY

Gateway state                          On
AppleTalk name                         "DECnet on BOSTON"
Maximum sessions                       32
Session buffers                        4
Buffer size                            572
Total Messages                         612
Total Bytes                            78172
Total Sessions                         35
Active Sessions                        2
Seconds since last zeroed              235360
```

This example shows the current operating information for the gateway, DECnet on BOSTON.

2

```
ATK$MANAGER> SHOW GATEWAY KNOWN SESSIONS


Gateway Sessions as of 13-JUN-1990 16:02:39

                 --------  AppleTalk  ---------   ---------  DECnet  ---------
                             Total       Total                Total       Total
Session     State  Address  Messages    Bytes    Node       Messages    Bytes

0000000019  UP     FA070385      189    23886    VAXSVR           63     4582
0000000023  UP     FC750387       25    82934    LURCH            23   134829
0000000024  UP     FA1D0385       45     7827    GOMEZ           237    66245
0000000032  UP     FB8A0386       17     1342    VAXSVR            8      624
0000000035  UP     FA110384     1382   249343    THING          3471   821884
0000000037  UP     FA290385      145    23327    MACVAX           92     1903
0000000040  UP     FA500387        5     4534    LURCH             4      788
0000000042  CONN   FA030385        0        0    VAXSVR            0        0
```

This example shows sample output for the SHOW GATEWAY KNOWN SESSIONS command.

SHOW KNOWN PORTS

This command displays the following information about the ports on the currently running system. This information includes parameters established with the SET PORT command.

- Name of the port
- Hardware device associated with the port
- Type of port
- State of the port
- Seeding state of the port
- Network range assigned to the port
- Zone names for the port, including the default zone for Ethernet ports
- Partner information for DECnet tunnels
- AppleTalk Address Resolution Protocol (AARP) information
- Routing information
- Seed zone information

Format

SHOW KNOWN PORTS

Example

```
ATK$MANAGER>SHOW KNOWN PORTS
Port Volatile Characteristics as of 22-JAN-1990 13:12:25

Port name                                "Building Ethernet"
Device name                              "XQA0"
Port type                                Primary port
Port state                               On
Seeding state                            On
Network range                            1900-1907
Zone name                                "Engineering"
Partner                                  ""
AARP cache size                          Small
Preallocated AARP receive buffers        2
Preallocated DDP receive buffers         10
Routing buffers                          16
Routing cost                             1
Default zone                             "Marketing"
Number of seed zones                     3
Seed zone name                           "Engineering"
Seed zone name                           "Marketing"
Seed zone name                           "Manufacturing"

Port name                                "Test Ethernet"
Device name                              "XQB0"
Port type                                Secondary port
Port state                               On
Seeding state                            On
Network range                            1908-1911
Zone name                                "Test Network"
Partner                                  ""
AARP cache size                          Small
Preallocated AARP receive buffers        2
Preallocated DDP receive buffers         10
Routing buffers                          16
Routing cost                             1
Default zone                             "Test Network"
Number of seed zones                     1
Seed zone name                           "Test Network"
```

This example shows information about the ports, "Building Ethernet" and "Test Ethernet" on the currently running system.

SHOW LOGGING

This command displays the logging state and logging file name in the volatile database.

Format

SHOW LOGGING

Example

```
ATK$MANAGER> SHOW LOGGING
Event Logging Volatile Characteristics as of 1-JAN-1999 15:07:20

Logging state                          Off
Logging file                           "SYS$SYSROOT:[SYSMGR]ATK$EVENT.LOG;"
```

This example shows sample output for the SHOW LOGGING command.

SHOW PORT

This command displays the following current operating characteristics for a specific port. You can use the port's name or device to identify the port.

Note *Try to use the port's name to identify it since it is guaranteed to be unique. A device name may be duplicated in more than one port. For example, all DECnet tunnel ports have the same device name ("NET:").*

- Name of the port
- Hardware device associated with the port
- Type of port
- State of the port
- Seeding state of the port
- Network range assigned to the port
- Partner information
- AARP cache size
- AARP receive buffers
- DDP receive buffers
- Routing information
- Default zone
- Number of seed zones
- Zone name for the port

Format

SHOW PORT | DEVICE *device-name* | NAME *port-name* |

Parameters

DEVICE device-name
The Ethernet or DECnet device name for the port.

See Example 2.

NAME port-name
The name of the port.

See Example 1.

Examples

1

```
ATK$MANAGER> SHOW PORT NAME "Test Network"

Port Volatile Characteristics as of 13-JUN-1990 15:37:55

Port name                                "Test Network"
Device name                              "XQB0"
Port type                                Secondary port
Port state                               On
Seeding state                            On
Network range                            908-911
Zone name                                "NEW Test Network"
Partner                                  ""
AARP cache size                          Small
Preallocated AARP receive buffers        2
Preallocated DDP receive buffers         10
Routing buffers                          16
Routing cost                             1
Default zone                             "NEW Test Network"
Number of seed zones                     3
Seed zone name                           "NEW Test Network"
Seed zone name                           "NEW Test Zone 1"
Seed zone name                           "NEW Test Zone 2"
```

This example shows the current characteristics for port "Test Network" using the NAME parameter to locate the port's information.

2

```
ATK$MANAGER> SHOW PORT DEVICE XQB0:
Port Volatile Characteristics as of 13-JUN-1990 15:37:55

Port name                                "Test Network"
Device name                              "XQB0"
Port type                                Secondary port
Port state                               On
Seeding state                            On
Network range                            908-911
Zone name                                "NEW Test Network"
Partner                                  ""
AARP cache size                          Small
Preallocated AARP receive buffers        2
Preallocated DDP receive buffers         10
Routing buffers                          16
Routing cost                             1
Default zone                             "NEW Test Network"
Number of seed zones                     3
Seed zone name                           "NEW Test Network"
Seed zone name                           "NEW Test Zone 1"
Seed zone name                           "NEW Test Zone 2"
```

This example shows the current characteristics for port "Test Network" using the DEVICE parameter to locate the port's information.

ZERO GATEWAY

This command resets the gateway's counters to zero. Use this command to monitor gateway activity.

The following counters are reset with this command:

- Total messages
- Total bytes
- Seconds since last zeroed (only when specifying the command without parameters)

Entering ZERO GATEWAY without parameters clears the cumulative counters and does not affect active sessions. Use this command when you do not need the data from previous sessions.

Format

ZERO GATEWAY | KNOWN SESSIONS | SESSION *session-id* |

Parameters

KNOWN SESSIONS
Sets the session counters to zero for all active sessions.

***SESSION** session-id*
Sets the counters to zero for a specific gateway session. Use the SHOW GATEWAY KNOWN SESSIONS command to determine the session number.

Restrictions

This command requires the OPER privilege.

Example

```
ATK$MANAGER>ZERO GATEWAY SESSION 201
```

This example sets a specific session's counters to zero.

2

VAXshare Manager Commands

Use the VAXshare Manager to set up and maintain file and printer services.

This chapter covers:

- Running VAXshare Manager
- Command syntax
- Entering commands
- Command descriptions

For detailed descriptions of the procedures involved in using the VAXshare Manager see the *System Administrator's Guide*.

Running VAXshare

VAXshare software provides a command line interface that allows you to start, stop, examine, and control VAXshare services from anywhere on the network.

To start the VAXshare Manager, enter:

```
$ ADMINISTER/MSA
```

The VAXshare prompt displays as follows:

```
MSA$MANAGER>
```

You enter all VAXshare file and print server commands at the MSA$MANAGER prompt. To exit VAXshare, enter EXIT at the prompt.

Command Syntax

VAXshare commands consist of:

- A command verb
- An entity on which the command operates
- One or more parameters that qualify the specified action
- One or more qualifiers that further qualify the action

The command line format looks like:

```
Command-verb entity parameter [parameter] /qualifier [/qualifier]
```

Note that qualifiers must be preceeded by a slash (/).

Command Privileges

Most VAXshare commands require the VMS OPER and/or SYSPRV privilege. SYSPRV allows you complete access to system-wide operations. For example, a person with SYSPRV privilege can read and delete any user account or file. OPER privilege allows you access to fewer operations.

Some commands can be used without special privileges. For example, the EXIT and HELP commands are available to any user who has access to the VAX account where VAXshare Manager is installed and running. Table 2–1 summarizes the privileges required for VAXshare Manager commands.

Table 2–1 VAXshare Manager Command Privileges

Command	Privileges Required
ADD ALIAS	OPER or SYSPRV, or that you are logged in on the account that has the alias assigned to it
ADD FILE_SERVER	SYSPRV
ADD PRINTER	SYSPRV
ADD VOLUME	SYSPRV
DISMOUNT	OPER or SYSPRV, or UIC ownership to the volume's root directory
EXIT, HELP	None
MODIFY PRINTER	SYSPRV
MODIFY VOLUME	SYSPRV or UIC ownership to the volume's root directory

(continued on next page)

Table 2–1 (Cont.) VAXshare Manager Command Privileges

Command	Privileges Required
MOUNT	OPER or SYSPRV, or UIC ownership to the volume's root directory
REMOVE ALIAS	OPER or SYSPRV, or that you are logged in on the account assigned to the alias
REMOVE FILE_SERVER	SYSPRV
REMOVE PRINTER	SYSPRV
REMOVE VOLUME	SYSPRV
SET CHARACTERISTICS	SYSPRV
SET FILE_SERVER	None
SET LOCAL	None
SET REMOTE	Username and password to the remote node
SHOW ALIAS	SYSPRV or OPER or owner of the account
SHOW commands	None
START FILE_SERVER	SYSPRV and DETACH
START PRINTER	OPER or SYSPRV and DETACH
STOP FILE_SERVER	SYSPRV
STOP PRINTER	OPER or SYSPRV

For more information on VMS privileges, see the *Guide to Setting Up a VMS System* manual.

Entering Commands

You can enter commands in either uppercase or lowercase letters. If a name, such as for a file server, contains a combination of upper and lowercase letters and spaces, use quotes to preserve the format and case. You can abbreviate commands using a minimum number of characters. For example, you can enter the command SET CHARACTERISTICS as:

```
SET CHAR
```

If you do not type enough letters, the following message displays:

```
%CLI-W-AVERB Ambiguous command verb - supply more characters
```

If you get this message, retype the command using more letters.

For information on other messages you can receive, see the *System Administrator's Guide.*

In addition, you can enter commands at the DCL command line. For example:

```
$ ADMINISTER/MSA SHOW FILE_SERVER
```

Digital and AppleTalk character sets do not always have equal correspondence. If you are entering component names in a command line, refer to Appendix A for guidelines and character set charts.

Command Descriptions

The commands in the next sections are listed alphabetically. Each command description includes (if applicable):

- Description
- Format
- Parameters
- Restrictions
- Qualifiers
- Example(s)

The VAXshare Manager commands described are:

ADD ALIAS
ADD FILE_SERVER
ADD PRINTER
ADD VOLUME
DISMOUNT
EXIT
HELP
MODIFY PRINTER
MODIFY VOLUME
MOUNT
REMOVE ALIAS
REMOVE FILE_SERVER
REMOVE PRINTER
REMOVE VOLUME
SET CHARACTERISTICS
SET FILE_SERVER
SET LOCAL
SET REMOTE
SHOW ALIAS
SHOW CHARACTERISTICS
SHOW CONNECTIONS
SHOW FILE_SERVER
SHOW PRINTER
SHOW VERSION

SHOW VOLUME
START FILE_SERVER
START PRINTER
STOP FILE_SERVER
STOP PRINTER

ADD ALIAS

This command maps Macintosh Chooser user names to VMS user names. It allows a user to access VAXshare using their Macintosh Chooser user name instead of their VMS account name.

The **Chooser** is a Macintosh desk accessory that lets you select devices, such as printers and file server volumes.

Format

ADD ALIAS Chooser-username VMS-username

Parameters

Chooser-username

The 1- to 32-character Macintosh Chooser user name. The name must be unique among all Macintosh Chooser names within the same Appletalk zone.

Use any character, except the following:

```
null (00)     =     ≈     :     @     *
```

If the name contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the format and case.

VMS-username

The 1- to 31-character VMS user name for the account that requires the alias.

Restrictions

This command requires that you have OPER or SYSPRV privileges or that you are logged in on the account that requires the alias.

Example

```
MSA$MANAGER> ADD ALIAS "Maria Gonzales" GONZALES
```

This example shows how to use the ADD ALIAS command to add a new user's Chooser name. Since the name contains embedded spaces and lowercase letters, you must enclose it in quotes. Maria can use "Maria Gonzales" to log on to VAXshare from her Macintosh computer.

ADD FILE_SERVER

This command adds an additional VAXshare file server to the VAX system.

Format

ADD FILE_SERVER server-name

Parameters

server-name

The 1- to 32-character name of the new file server as it appears to AppleShare workstations. The server name must be unique among AppleShare compatible file servers within the same AppleTalk zone.

Use any character except the following:

```
null (00)     =     ≈     :     @     *
```

If the name contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the format and case.

Refer to Appendix A for information on handling characters in file server names.

Qualifiers

/NUMBER=server-id

Assigns an identification number to the file server. Each file server must be assigned a unique number. The default is the highest number currently assigned plus 1. If no servers currently exist, the default is 0. Issuing a SHOW FILE/ALL command lists all the file server along with their ID numbers.

Restrictions

This command requires the SYSPRV privilege.

Example

```
MSA$MANAGER> ADD FILE_SERVER "Srvr2"
MSA$MANAGER> SET FILE_SERVER "Srvr2"
MSA$MANAGER> ADD VOLUME "Lab Mac"/ROOT=USR1:[LAB]
MSA$MANAGER> START FILE_SERVER "Srvr2"
MSA$MANAGER> EXIT
```

This example adds the file server "Srvr2" to the VAX system. The new file server is selected for management using the SET FILE_SERVER command and a volume called "Lab Mac" is created for users.

This additional file server will help balance file service load on the VAX system. You must start the file server before it can be available to users.

ADD PRINTER

This command adds a print service to the VAXshare printer server. The service can be either a Digital PostScript printer or an Apple LaserWriter.

Format

For Digital printers:

```
ADD PRINTER  printer-name/QUEUE=queue-name
              /FONTS=filename
              /PARAMETERS=(parameter[,...])
              /SETUP=(module[,...])
```

For LaserWriter printers:

```
ADD PRINTER  printer-name/QUEUE=queue-name
             /DESTINATION=("device-name@zone-name" | device-name:)
              /DEFAULT=(option[,...])
              /FLAGS=(option[,...])
              /FONTS=filename
              /SETUP=(module[,...])
              /WATER_MARK=string
```

Parameters

printer-name

The 1- to 32-character name for the new printer service as it appears to Macintosh users in the Chooser. The name must be unique among all printers managed by the printer service.

Use any character, except the following:

```
null (00)     =     ≈     :     @     *
```

If the name contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the format and case.

Refer to Appendix A for information on handling characters in printer names.

/DESTINATION=("device-name@zone-name" \| device-name:)
When the LaserWriter is connected as an object on the AppleTalk network, specify the destination AppleTalk device name and the optional AppleTalk zone name. Always specify a "@" character before the zone name. The name can have a maximum of 64 characters. This parameter is required when adding a LaserWriter.

See Example 1.

If the LaserWriter is connected to a serial port on your VAX then specify the device name of the serial port as the destination. A colon (:) is necessary when defining a destination that points to a serial device.

See Example 3.

/QUEUE=VMS-print-queue-name
The name of the VMS print queue to be served.

This parameter is required. When adding a service for a Digital printer, the queue must already exist. When adding a service for an Apple LaserWriter, this queue will be created.

See Examples 1 - 3.

Qualifiers

/DEFAULT=(option[,...])
Establishes defaults for certain options of the DCL PRINT command. After you set an option for the queue with this qualifier, you do not have to specify these options in your DCL PRINT command. This parameter is only valid for Apple LaserWriter print services.

The available options are:

[NO]FLAG[=keyword]

Controls whether a file flag page is printed preceding output. If you specify the keyword ALL (default), a file flag page is printed before each file in the job.

If you specify the keyword ONE, a file flag page is printed once before the first file in the job.

FORM=type

Specifies a default form for a queue from the following table. This form is the one that is used if you submit a print job without specifying a form on the DCL command line. The default form is LTR_12. The following table lists lists the available forms:

Form Name, Number	Description
LPT_GRAY (stock=PLAIN_PAPER) - 1121	DP line printer with gray bars
LPT_PLAIN (stock=PLAIN_PAPER) - 1123	Plain DP line printer format
LTR_10 (stock=PLAIN_PAPER) - 1124	10-Pitch, no margins
LTR_12 (stock=PLAIN_PAPER) - 1127	12-Pitch, no margins
PS_PLAIN (stock=PLAIN_PAPER) - 1132	Postscript - Macintosh

[NO]TRAILER[=keyword]

Controls whether a file trailer page is printed following output.

If you specify the keyword ALL (default), a file trailer page is printed after each file in the job.

If you specify the keyword ONE, a trailer page is printed once after the last file in the job.

/FLAGS=(option[,...])

Establishes options for customizing the text translator's output. The translator is used for processing VMS user print requests. This qualifier is valid only for LaserWriter print services when accessed from the VAX computer and only when printing text files.

Use Table 2–3 to select the customized options for the printed document.

Table 2–3 Flag Options for LaserWriter Printer (when accessed from VMS)

Flag Option	Description
[NO]BORDER	Prints a border on each page
[NO]CONTROL_CHARACTERS	Converts control characters to printable equivalents
[NO]LINE_NUMBERS	Prints line numbers along the side of the page

/FONTS=filename

Specifies a file containing the printer's list of available fonts. This file must exist in the MSA$ROOT:[MSA.MSAP$UTILITY] directory. If this qualifier is not specified, then a default font list is assigned. The default files are:

- MSAP$DEFAULT_DIGITAL_FONTS.TXT for Digital printers
- MSAP$DEFAULT_APPLE_FONTS.TXT for Apple LaserWriter printers

Table 2–4 lists the available font files:

Table 2–4 Font List Files

Use Font List File	For Printers...
MSAP$FONTLIST_APPLE13.TXT	LaserWriter (same as the default file for Apple LaserWriter printers)
MSAP$FONTLIST_APPLE35.TXT	LaserWriter Plus, LaserWriter II-NT, LaserWriter II-NTX
MSAP$FONTLIST_DEC29.TXT	PrintServer 40, PrintServer 40 Plus, PrintServer 20, ScriptPrinter (same as the default file for Digital printers)

/PARAMETERS=(parameter[,...])

Specifies parameters used with Digital PostScript printers. To learn more about these parameters and their defaults, see your printer symbiont software document set. The following is a list of some of the commonly used parameters.

- DATA_TYPE=POSTSCRIPT
- INPUT_TRAY

- MESSAGES
- NUMBER_UP
- OUTPUT_TRAY
- SHEET_COUNT
- PAGE_LIMIT
- SHEET_SIZE
- SIDES

/SETUP=module[,...]
Specifies module(s) that set up the printer for the Macintosh print job.

For Apple LaserWriter printers, this qualifier specifies the LaserPrep setup module. The module is extracted from the device control library (MSAP$DEVCTL.TBL) and copied to the printer before a file is printed if it has not previously been loaded.

The default module is MSAP$DEFAULT_APPLE_PREP which is the same as MSAP$APPLEDICT68. You can use this module or choose a module from the following table:

Table 2–5 LaserPrep Setup Modules

Setup Module	Description
MSAP$APPLEDICT65	LaserPrep 5.0
MSAP$APPLEDICT67	LaserPrep 5.1
MSAP$APPLEDICT68	LaserPrep 5.2 (default)
MSAP$APPLEDICT70	LaserPrep 6.0

Note *The version of the LaserPrep module has to match the version on your Macintosh computer.*

For Digital printers, this qualifier specifies one or more setup modules that set up the printer when accessed from the Macintosh. The modules are extracted from the print symbiont's device control table and copied to the printer before a job is printed. Do not use this qualifier to specify the LaserPrep module as this module is set dynamically by the printer server's receiver.

/WATER_MARK=string
Prints a text string at the top and bottom of the page for text jobs printed by VMS users. This qualifier is only used when adding a LaserWriter printer service. The string can have a maximum of 32 characters.

See the MODIFY PRINTER command for an example.

Restrictions

This command requires the SYSPRV privilege.

Examples

1

```
MSA$MANAGER>ADD PRINTER "2nd Floor LaserWriter"/QUEUE=LW_FLOOR2-
_MSA$MANAGER> /DESTINATION="LaserWriter@FIELDSITE"
```

This example adds a LaserWriter as a VMS printer service. The destination printer is the LaserWriter at zone FIELDSITE.

2

```
MSA$MANAGER>ADD PRINTER uprint/parameters=(DATA_TYPE=POST, -
_MSA$MANAGER> PAGE_ORIENTATION=landscape)/queue=LN03R
```

This example adds a Digital PostScript printer service specifying a PostScript data type and a landscape page.

3

```
MSA$MANAGER>ADD PRINTER "Serial Print"/QUEUE=LW_SERIAL -
_MSA$MANAGER> /DESTINATION=TXA4:
```

This example adds a LaserWriter as a printer service. The destination is a serial port on the VAX. See the *System Administrator's Guide* for more information on adding LaserWriter print services for serially connected LaserWriter printers.

ADD VOLUME

This command makes a VMS directory available to Macintosh users as a VAXshare volume. It registers the directory as a volume name in the file server's database file. After adding the volume, you can make it available to users with the MOUNT command. Macintosh users can then connect to the volume and access its files from the Macintosh.

Note *If the root directory does not already exist, it is created. The new directory has the same protection and ownership as the parent directory.*

Format

ADD VOLUME volume-name
/ACCESS=(READ_ONLY | WRITE)
/[NO]PASSWORD=[password | *]
/ROOT_DIRECTORY=directory-name
/[NO]VERIFY=(FULL | PARTIAL)

Parameters

volume-name
The 1- to 27-character Macintosh volume name as it appears to Macintosh users. The name must be unique among all volumes managed by a file server.

Use any character, except the following:

```
null (00)    =    ≈    :    @    *
```

If the name contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the format and case.

Refer to Appendix A for information on handling characters in volume names.

Qualifiers

/ACCESS=(READ_ONLY | WRITE)
Specifies the type of access allowed to the volume. The default is WRITE. By specifying READ_ONLY, Macintosh users can only read the files on the volume and cannot alter the files.

See Example 2.

/[NO]PASSWORD=[password | *
Specifies if the volume is to be password protected. The default is NOPASSWORD.

If you specify this qualifier, the Macintosh user must enter a password before accessing files in the volume. This feature helps protect against unauthorized users from accessing the volume.

Passwords must be eight characters or less and are case sensitive. Placing the password in quotation marks preserves the case, otherwise it is all uppercase. For example, to specify the word kumquat as the password, enter the qualifer /PASSWORD="kumquat".

Refer to Appendix A for information on handling characters in volume passwords.

If "*" is specified without quotes, you are prompted for a password, then the characters you type do not appear on the screen. See Examples 2 and 3.

/ROOT_DIRECTORY=directory-name
Specifies a full VMS directory path for the account. This qualifier is required.

See Example 1.

/[NO]VERIFY=(FULL | PARTIAL)
Specifies the level of volume verification that is done when the volume is mounted.

FULL volume verification checks that all VMS files on the volume have matching Macintosh catalog entries. A **catalog file** stores Macintosh desktop information that makes it possible for the Macintosh Finder to handle a document. When you specify full verification, it takes longer for MSA$MANAGER to mount the volume.

PARTIAL verification only checks to make sure directories have matching catalog entries. If the verification fails, the file server automatically does a full verification. The default is PARTIAL verification.

NOVERIFY specifies that no volume verification is done.

See Example 3.

ADD VOLUME

Restrictions

This command requires the SYSPRV privilege.

Examples

1

```
MSA$MANAGER> ADD VOLUME "Marketing News" -
_MSA$MANAGER> /ROOT=DISK1:[MARKET_MGMT]/PASS=ANTIQUE
MSA$MANAGER> MOUNT "Marketing News"
```

This example adds a volume service called "Marketing News" that has embedded spaces and lowercase letters. The /ROOT qualifier indicates the VMS directory path for the account. The password is stored in uppercase letters because quotes are not used.

2

```
MSA$MANAGER> ADD VOLUME "Press Releases"/ACCESS=READ_ONLY -
_MSA$MANAGER> /PASS=KUMQUAT/ROOT=USR1:[NEWS]
MSA$MANAGER> MOUNT "Press Releases"
```

This example shows how to add "Press Releases" as a password protected volume. The access is read only because you do not want users to change or delete the information in the volume. It is a collection of information for users to read.

3

```
MSA$MANAGER> ADD VOLUME "Missing Persons"/VERIFY=PARTIAL -
_MSA$MANAGER> /PASS=*/ROOT=DISK2:[M_PERSONS]
_password :
MSA$MANAGER> MOUNT "Missing Persons"
```

After adding the volume, the system administrator makes it available to users with the MOUNT command. The volume verification is set to PARTIAL to speed up volume mount. The password is entered as "*", so you are prompted for the password. When you enter the password, it does not appear on the screen.

DISMOUNT

This command makes a volume unavailable to Macintosh users. The volume's entry in the file server's database file remains, but the volume cannot be selected from the Macintosh Chooser list.

Note *Before issuing a DISMOUNT command, make sure all users have logged off the volume. Use the SHOW CONNECTIONS command to list the active connections to the file server and then ask users who may be logged on to its volumes to disconnect from the file server.*

Format

DISMOUNT volume-name
/[NO]PERMANENT

Parameters

volume-name
The name of an existing VAXshare volume.

If the name contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the case.

Qualifiers

/[NO]PERMANENT
Specifies if the volume dismount is permanent. If it is, the DISMOUNTED attribute is added to the volume database file. A volume which is permanently dismounted is not automatically mounted the next time the VAXshare file server is started. The default is NOPERMANENT.

See Example 2.

Restrictions

This command requires the OPER or SYSPRV privileges or UIC ownership to the volume's root directory. The root directory is the location of the volume on the VAXshare file server.

Examples

1

```
MSA$MANAGER> DISMOUNT "Pen Pals"
%MSA-E-VOLINUSE, volume is in use
```

In this example, the system administrator attempts to make the volume "Pen Pals" unavailable for use. Since there are users logged on, he receives a system message. After requesting that they log off the volume, he can dismount the volume.

2

```
MSA$MANAGER> DISMOUNT/PERMANENT "Blueberry Pie"
```

This example makes the volume Blueberry Pie permanently unavailable for use. When the file server is started, this volume is not mounted automatically.

EXIT

This command allows you to exit from the VAXshare Manager and return to DCL prompt ($), use the EXIT command. Entering the key sequence CTRL/Z is equivalent to the EXIT command.

Format

EXIT

Example

```
MSA$MANAGER> EXIT
$
```

HELP

This command provides online documentation for VAXshare Manager commands. If you omit a topic on the HELP command line, the VAXshare manager prompts you for a topic.

Format

HELP [topic [sub-topic...]]

Parameters

topic
Topic you need information about.

sub-topic
Topic you need information about.

Example

```
MSA$MANAGER> HELP DISMOUNT

  DISMOUNT

      Causes a volume to be made unavailable for access by VAXshare users.
      Its entry in the volume database is not deleted.

      Format:

          DISMOUNT volume-name

    Additional information available:

    /PERMANENT Examples
```

This is an example of the output for the HELP command.

MODIFY PRINTER

This command allows you to modify the characteristics for the printer service. Changes made using this command take effect the next time the printer service is started. To change the destination or queue for the printer, remove the printer service and add it again using the ADD PRINTER command.

Format

For Digital printers:

MODIFY PRINTER printer-name
/FONTS=filename
/PARAMETERS=(parameter[,...])
/SETUP=(module[,...])

For LaserWriter printers:

MODIFY PRINTER printer-name
/DEFAULT=(option[,...])
/FLAGS=(option[,...])
/FONTS=filename
/SETUP=(module[,...])
/WATER_MARK=string

Parameters

printer-name
The name of the printer service which appears in the Chooser.

If the name contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the format and case.

Qualifiers

/DEFAULT=(option[,...])
Establishes defaults for certain options of the DCL PRINT command. This qualifier is only valid for LaserWriter print services when accessed from the VMS operating system.

After you set an option for the queue with this qualifier, users do not have to specify these options in the DCL PRINT command.

The available options are:

[NO]FLAG[=keyword]

Controls whether a file flag page is printed preceding output. If you specify the keyword ALL (default), a file flag page is printed before each file in the job. If you specify the keyword ONE, a file flag page is printed once before the first file in the job.

FORM=type

Specifies a default form for a queue from the following table. This form is the one that is used if you submit a print job without specifying a form on the DCL command line. The default form is LTR_12.

The following table lists the default forms:

Form Name, Number	Description
LPT_GRAY (stock=PLAN_PAPER) - 1121	DP line printer with gray bars
LPT_PLAIN (stock=PLAIN_PAPER) - 1123	Plain DP line printer format
LTR_10 (stock=PLAIN_PAPER) - 1124	10-Pitch, no margins
LTR_12 (stock=PLAIN_PAPER) - 1127	12-Pitch, no margins
PS_PLAIN (stock=PLAIN_PAPER) - 1132	Postscript - Macintosh

[NO]TRAILER[=keyword]

Controls whether a file trailer page is printed following output. If you specify the keyword ALL (default), a file trailer page is printed after each file in the job. If you specify the keyword ONE, a trailer page is printed once after the last file in the job.

For more information, see the description of the INITIALIZE/QUEUE/DEFAULT command in the *Guide to Maintaining a VMS System* manual in the VMS documentation set.

See Example 3.

/FLAGS=option[,...]

Establishes options for customizing the text translator's output. The text translator is used for processing VMS user print requests. This qualifier is valid only for LaserWriter print services when accessed from the VAX computer and only when printing text files.

Use the following table to select the customized options for the printed document:

Flag Option	Description
[NO]BORDER	Prints a border on each page
[NO]CONTROL_CHARACTERS	Converts control characters to printable equivalents
[NO]LINE_NUMBERS	Prints line numbers along the side of the page

See Example 2.

/FONTS=filename

Specifies a file containing the printer's list of available fonts. This file must exist in the MSA$ROOT:[MSA.MSAP$UTILITY] directory. If this qualifier is not specified, then a default font list is assigned. The default files are:

- MSAP$DEFAULT_DIGITAL_FONTS.TXT for Digital PostScript printers
- MSAP$DEFAULT_APPLE_FONTS.TXT for Apple LaserWriter printers

The following table lists the available font files:

Use Font List File	For Printers...
MSAP$FONTLIST_APPLE13.TXT	LaserWriter (same as the default file for Apple LaserWriter printers)
MSAP$FONTLIST_APPLE35.TXT	LaserWriter Plus, LaserWriter IINT, LaserWriter IINTX
MSAP$FONTLIST_DEC29.TXT	PrintServer 40, PrintServer 40 Plus, PrintServer 20, ScriptPrinter (same as the default file for Digital printers)

/PARAMETERS=(parameter[,...])

Specifies parameters used with Digital PostScript printers. To learn more about these parameters and their defaults, see your printer symbiont software document set. The following is a list of some of the commonly used parameters.

- DATA_TYPE=POSTSCRIPT
- INPUT_TRAY
- MESSAGES
- NUMBER_UP

- OUTPUT_TRAY
- SHEET_COUNT
- PAGE_LIMIT
- SHEET_SIZE
- SIDES

/SETUP=module[,...]
Specifies module(s) that set up the printer for the Macintosh print job.

For Apple LaserWriter printers, this qualifier specifies the LaserPrep setup module. The module is extracted from the device control library (MSAP$DEVCTL.TBL) and copied to the printer before a file is printed if it has not previously been loaded.

The default modile is MSAP$DEFAULT_APPLE_PREP which is the same as MSAP$APPLEDICT68. You can choose this module or one from the following table:

Setup Module	Description
MSAP$APPLEDICT65	LaserPrep 5.0
MSAP$APPLEDICT67	LaserPrep 5.1
MSAP$APPLEDICT68	LaserPrep 5.2 (default)
MSAP$APPLEDICT70	LaserPrep 6.0

For Digital printers, this qualifier specifies one or more setup modules that set up the printer when accessed from the Macintosh. The modules are extracted from the print symbiont's device control table and copied to the printer before a job is printed. Do not use this qualifier to specify the LaserPrep module as this module is set dynamically by the printer server's receiver.

/WATER_MARK=string
Prints a text string at the top and bottom of the page for text jobs printed by VMS users. This qualifier is only used when adding a LaserWriter printer service. The string can have a maximum of 32 characters.

See Example 1.

Restrictions

This command requires the SYSPRV privilege.

Examples

1

```
MSA$MANAGER> MODIFY PRINTER TAPDANCE/WATER="Company Confidential"
```

This example modifies the printer service so that a water mark prints on each page of VMS text print jobs.

2

```
MSA$MANAGER> MODIFY PRINTER TOPHAT/FLAGS=(BORDER)
```

This examples modifies the print service's characteristics by adding a border to VMS text documents printed to the "tophat" printer.

3

```
MSA$MANAGER> SET REMOTE BIGVAX/USER=SYSTEM/PASS=*
    _password :
MSA$MANAGER> MODIFY PRINTER MANUFDEPT/DEFAULT=(FORM=LPT_GRAY) -
_MSA$MANAGER> /FLAGS=(BORDER)
```

This example selects a remote printer service to be managed and modifies the characteristics of that service. For more information on selecting remote printer services, see the SET REMOTE command.

MODIFY VOLUME

This command changes the characteristics for an existing volume service. These changes do not affect users who are already using the volume service. If the volume is not mounted, these changes do not take effect until you mount the volume.

Format

MODIFY VOLUME volume-name
/ACCESS=(READ_ONLY | WRITE)
/[NO]PASSWORD[=password-string]
/[NO]VERIFY(=FULL | =PARTIAL)

Parameters

volume-name
An existing volume created with the ADD VOLUME command.

If the name contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the format and case.

Qualifiers

/ACCESS=(READ_ONLY | WRITE)
Specifies the type of access allowed to the service. The default is WRITE.

See Example 1.

/[NO]PASSWORD[=password-string]
Specifies whether the service is password protected. Placing the password in quotation marks preserves the case, otherwise is appears in all uppercase. The default value is NOPASSWORD.

See Example 1.

/[NO]VERIFY[=FULL | =PARTIAL]
Specifies the level of volume verification that is done when the volume is mounted.

FULL volume verification checks that all VMS files on the volume have matching Macintosh catalog entries. A **catalog file** stores Macintosh desktop information that makes it possible for the Macintosh Finder to handle a document. When you specify full verification, it takes longer to mount the volume.

PARTIAL verification only checks to make sure directories have matching catalog entries. If the verification fails, the file server automatically does a full verification. The default is PARTIAL verification.

NOVERIFY specifies that no volume verification is done.

See Example 2.

Examples

1

```
MSA$MANAGER> MODIFY VOLUME "Secret Files"/PASS="newpass" -
_MSA$MANAGER>/ACCESS=READ_ONLY
MSA$MANAGER> MOUNT "Secret Files"
```

This example modifies the volume "Secret Files" with a password protection and makes it read only. Macintosh users cannot alter files in this volume.

2

```
MSA$MANAGER> MODIFY VOLUME "Common Files"/VERIFY=PARTIAL
MSA$MANAGER> MOUNT "Common Files"
```

This example modifies the volume "Common Files" with partial volume verification. The result is a faster volume mount since partial verification takes less time.

MOUNT

This command makes a Macintosh volume available as a selection from the the Macintosh Chooser. The volume must already have been added as a volume service. For more information on adding a volume service, see the ADD VOLUME command.

Note *By default, a volume is automatically mounted at file server startup when you add a volume service with the ADD VOLUME command.*

Format

MOUNT volume-name
/[NO]PERMANENT

Parameters

volume-name
An existing volume created with the ADD VOLUME command.

If the name contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the format and case.

Qualifiers

/[NO]PERMANENT
Determines if the volume mount is permanent. If PERMANENT is specified, the MOUNTED attribute is added to the volume database file. The volume is automatically mounted the next time the file server is started. The default is PERMANENT.

Restrictions

This command requires OPER or SYSPRV privileges, or UIC ownership of the volume's root directory.

Example

```
MSA$MANAGER>ADD VOLUME "Smith's Stuff"/ROOT=USER_DISK1:[SMITH.VAXSHARE]
MSA$MANAGER>MOUNT "Smith's Stuff"
```

This example adds the volume "Smith's Stuff" and then makes it available for use with the MOUNT command.

REMOVE ALIAS

This command deletes a Chooser user name alias from the user list. Once removed, a user can no longer use their Macintosh Chooser name to access VAXshare volumes unless their Chooser name matches their VMS user name.

Format

REMOVE ALIAS chooser-username

Parameters

chooser-username
The Macintosh Chooser user name.

If the name contains a combination of upper and lowercase letters and spaces, use quotes to preserve the format and case.

Restrictions

This command requires OPER or SYSPRV privileges, or that you logged in as the VMS user name assigned to the alias.

Example

```
MSA$MANAGER> REMOVE ALIAS "Alice Smith"
```

In this example, the system administrator is removing Alice Smith's name. She can no longer access VAXshare using her Chooser user name.

REMOVE FILE_SERVER

This command removes a VAXshare file server from the VAX system.

Note *You must use the STOP FILE_SERVER command to stop the file server before it can be removed.*

Format

REMOVE FILE_SERVER server-name

Parameters

server-name
The 1- to 32-character name of the file server as it appears to the AppleShare workstation.

If the name contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the format and case.

Restrictions

The command requires SYSPRV privilege.

Example

```
MSA$MANAGER> REMOVE FILE_SERVER CADVAX
```

This example shows the removal of the file server CADVAX. This file server is not started the next time VAXshare is started.

REMOVE PRINTER

This command removes a VAXshare printer service. If the service is for a LaserWriter, both the service and the queue are removed. If the service is for a Digital printer, the service is removed, but the queue remains.

Note *You must stop the printer with the STOP PRINTER command before it can be removed.*

Format

REMOVE PRINTER printer-name

Parameters

printer-name
An existing printer created with the ADD PRINTER command.

If the name contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the format and case.

Restrictions

The command requires SYSPRV privileges.

Example

```
MSA$MANAGER> REMOVE PRINTER "new age"
```

This example shows the removal of the printer service "new age". This service is no longer available to Macintosh users.

REMOVE VOLUME

This command removes a volume. The volume is no longer available to Macintosh users.

You cannot remove a volume unless it has been dismounted. For more information, see the DISMOUNT command.

Format

REMOVE VOLUME volume-name

Parameters

volume-name
An existing volume created with the ADD VOLUME command.

If the name contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the format and case.

Restrictions

This command requires the SYSPRV privilege.

Example

```
MSA$MANAGER> DISMOUNT "Price Lists Spring 1990"
MSA$MANAGER> REMOVE VOLUME "Price Lists Spring 1990"
```

In this example, the system administrator is removing the volume "Price Lists Spring 1990" since it is no longer needed. Macintosh users can no longer access this volume.

SET CHARACTERISTICS

This command is used to modify the characteristics of the file server. For example, you can change the password to the server. Use this command to change permanently or temporarily a characteristic. Temporary characteristics you set are only valid until the next time you restart VAXshare. To make the changes permanent, use the PERMANENT qualifier.

Format

SET CHARACTERISTICS

/[NO]PERMANENT
/CATALOG_CACHE=n
/[NO]CHANGE_PASSWORD
/DEFAULT_FOLDER_PROTECTION
/FOLDER_DEPTH=n
/[NO]FULL_CHECK_ACCESS
/[NO]GUEST_NAME=username
/[NO]INHERIT_PROTECTION
/MAXIMUM_CONNECTIONS=n
/[NO]NOTIFY_OPERATOR
/PURGE_TIMER=n
/SERVER_NAME=string
/WINDOW_SIZE=n

Qualifiers

/[NO]PERMANENT

Specifies whether the characteristic is permanent or temporary. If you specify PERMANENT, the modified characteristic is saved in the server's permanent database. If NOPERMANENT is specified, the setting is valid only while the file server is running. PERMANENT is the default.

/CATALOG_CACHE=n

Specifies the number of open catalog cache files. **Catalog file cache** is the memory available for storing catalog files. A **catalog file** stores Macintosh desktop information that makes it possible for the Macintosh Finder to handle a document. The range is 16 to 1024. The default value is 64.

/[NO]CHANGE_PASSWORD
Controls whether you allow users to change the VMS password from the Macintosh Chooser. When you have many users on one account, you can deny them the ability to change passwords with the NOCHANGE_PASSWORD parameter. The default is CHANGE_PASSWORD.

/DEFAULT_FOLDER_PROTECTION=(file-protection-code)
Controls the default VMS protection codes for OWNER (O), GROUP (G), and WORLD (W) that are assigned to folders stored on the file server. The default values are: O:RWED,G:,W:.

The SYSTEM file protection code (S:RWE), required for file server operation, cannot be changed. If you try, the change is ignored.

For more information on VMS protection codes, see the *Guide to Setting Up a VMS System* manual in the VMS documentation set.

See Example 3.

/FOLDER_DEPTH=n
Controls the maximum folder or directory depth enforced by the file server. A depth of 0 means the volume will be flat; no folders or directories can be created. The maximum value is 16. The default is 7.

Although Macintosh computers do not limit the depth that you can nest folders, VAXshare follows RMS-11 file structure that limits the depth of a directory hierarchy to 8.

Note *Folder depths greater than 7 cannot be easily backed up by the VMS Backup utility.*

/[NO]FULL_CHECK_ACCESS
Specifies the extent of the file server's file security checking. Specifying FULL_CHECK_ACCESS qualifier ensures an greater degree of file security. The software checks ACLs (access control lists) for each file. ACLs grant or deny file access to users, in addition to the UIC-based protection. The default is FULL_CHECK_ACCESS.

Specify NOFULL_CHECK_ACCESS if the standard file protection, available with UICs, is sufficient for your environment.

/[NO]GUEST_NAME[=username]
Specifies the VMS user name of the account to use for guest login. This account requires no VMS privileges. Since this account does not require a

password, you can use it for public documents that all users need to share. The default is NOGUEST_NAME.

You must specify the /PERMANENT qualifier when changing the file server GUEST_NAME characteristic. The new guest setting takes effect the next time the file server is started.

See Example 4.

/[NO]INHERIT_PROTECTION

Controls the manner in which the file server handles file protection inheritance. /INHERIT_PROTECTION causes file protection to change when its parent directory protection and/or ownership changes. For example, when you change the protection to world-read in a directory, the files in that directory inherit the same protection code. Specifying INHERIT_PROTECTION follows the file protection convention for VMS files.

The default is NOINHERIT_PROTECTION. Specifying this qualifier follows AppleShare file protection convention and creates a more Macintosh like environment. The protection code for files does not change when a file's parent directory protection and/or ownership changes.

See Example 3.

/MAXIMUM_CONNECTIONS=n

Specifies the number of users that can be logged onto the server simultaneously. The default value of 0 indicates there are no restrictions on the number of logged in users. However, too many connections may cause performance problems. The maximum value for n is 1024.

See Example 1.

/[NO]NOTIFY_OPERATOR

Controls the file server's operator console logging. **Console logging** is the display of error and information messages on the VMS operator's terminal. When you specify /NONOTIFY_OPERATOR, VAXshare error and information messages are not displayed. Use this qualifier when you no longer want to track VAXshare related messages in the OPCOM log file. The default is NOTIFY_OPERATOR.

See Example 2.

/PURGE_TIMER=n
Specifies the number of minutes of file server inactivity that is allowed to pass before the file server writes its catalog cache buffers to disk. A value of 0 disables purging. The maximum value is 59 minutes. The default value is 20 which means the server waits 20 minutes before performing a purge.

See Example 5.

/SERVER_NAME=string
Specifies the name of the file server as it appears to AppleShare workstations. The default server name is "VAXshare on node-name" where the node name is the DECnet node name. Enclose the name in quotes to preserve the case. You must specify the /PERMANENT qualifier with this qualifier.

See Example 6.

/WINDOW_SIZE=n
This qualifier controls the number of file blocks that are read or written in a single disk I/O performed by the file server. A block is 512 bytes.

Set this parameter to a large number if you have many large files on the volume. The data will be transferred faster. The minimum value is 1, and the maximum value is 50. The default value is 10.

See Example 5.

Restrictions

This command requires the SYSPRV privilege.

Examples

1

```
MSA$MANAGER> SET CHAR/MAXIMUM_CON=10/NOPERMANENT
```

This example shows the SET CHARACTERISTIC command used to set temporarily the maximum number of connections to 10. No more than ten users can use the file server simultaneously.

2

```
MSA$MANAGER> SET CHAR/NONOTIFY_OPERATOR/NOPERMANENT
```

In this example the system administrator suppresses error messages temporarily with the NONOTIFY_OPERATOR qualifier. The qualifier is used because he does not want to track VAXshare related messages in the OPCOM log file.

3

```
MSA$MANAGER> SET CHAR/INHERIT_PROTECTION -
_MSA$MANAGER> /DEFAULT_FOLDER_PROT=(O:RWED,G:WR)/PERMANENT
```

This example allows a file protection on file server files to change when a directory's protection code is changed. It also changes the VMS file protection codes for OWNER and GROUP.

4

```
MSA$MANAGER> SET CHAR/GUEST_NAME=PUBLIC/PERMANENT
```

This example sets a user name for a guest account. If the file server is already running, the guest account is usable after the file server is restarted.

5

```
MSA$MANAGER> SET CHAR/WINDOW_SIZE=20/NOPERMANENT
```

This example temporarily sets the window size to a higher value for the "BIGVAX" file server. This means that efficiency of access for large files is improved.

6

```
MSA$MANAGER> SET CHAR/SERVER_NAME="Srvr1"/PERMANENT
```

This example renames the file server to "Srvr1". The new file server name appears in the Chooser after the file server is restarted.

SET FILE_SERVER

This comand selects the VAXshare file server to be managed on a multi-server VAX system. When two or more file servers are installed on the same VAX system, use this command to move between them.

Format

SET FILE_SERVER server-name

Parameters

server-name
The name of an existing file server created with the ADD FILE_SERVER command.

If the name contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the format and case.

Example

```
MSA$MANAGER> SET FILE_SERVER "Srvr2"
MSA$MANAGER> ADD VOLUME "Quarterly Reports"/ROOT=USR2:[REPORTS]
MSA$MANAGER> MOUNT "Quarterly Reports"
MSA$MANAGER> SET FILE_SERVER "Srvr1"
```

This example selects the file server, "Srvr2" and then adds a volume. The SET FILE_SERVER command selects "Srvr1" on the same VAX system.

SET LOCAL

This comand selects the VAXshare file and/or print server running on the VAX system where VAXshare Manager is installed. Use this command to undo a SET REMOTE command.

Format

SET LOCAL

Example

```
MSA$MANAGER> SET REMOTE LILVAX/USER=SYSMGR/PASS=RAININSPAIN
MSA$MANAGER> SET CHAR/NONOTIFY
MSA$MANAGER> SET LOCAL
```

This example sets selects the remote VAX system "LILVAX" as the server to be managed and then changes the characteristics for the server. The SET LOCAL command returns the management session to the local server.

SET REMOTE

This command remotely manages a VAXshare print or file server. Any VAXshare service accessible with DECnet can be selected. The remote node's default file server automatically becomes the selected server to be managed.

To return to the local system, use the SET LOCAL command.

Format

SET REMOTE DECnet-node
/PASSWORD=[password | *]
/USERNAME=username

Parameters

DECnet-node
The DECnet node address of the server to be remotely managed.

Qualifiers

/PASSWORD=[password | *]
Password for the account on the node to be managed. A password prompt appears if a password of "*" is entered. The password you enter does not appear on the screen.

/USERNAME=username
Specifies the VMS user name for the account on the node to be managed.

Restrictions

This command requires a valid user name and password on the remote node.

Example

```
MSA$MANAGER> SET REMOTE BIGVAX/USERNAME=MANUFTG -
_MSA$MANAGER> /PASSWORD=*
_password :
```

This example selects the node "BIGVAX" to be managed remotely.

SHOW ALIAS

This command displays the Macintosh Chooser user name aliases list.

Format

SHOW ALIAS [Chooser-username]
/[NO]ALL

Parameters

Chooser-username
The 1- to 32-character Macintosh Chooser user name. The name must be unique among all Macintosh Chooser names within the same Appletalk zone.

Use any character, except the following:

```
null (00)     =     ≈     :     @     *
```

If the name contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the format and case.

Qualifiers

/ALL
Shows all aliases. This is the default.

Restrictions

An alias will be shown only if it belongs to the user, or if the user has OPER and SYSPRV privileges.

Example

```
MSA$MANAGER> SET REMOTE VAX4/USER=ADMIN -
_MSA$MANAGER>/PASS=Bestco
MSA$MANAGER> SHOW ALIAS/ALL

Chooser alias database for file server "VAX4":

Alias Name            VMS Account Name
----------------------------------------
Maria Gonzales        GONZALES
Robert Hatfield       HATFIELD
Lab Workstation       TEST08
Holga                 SCHMIDT
```

This example shows the Chooser user names and their corresponding VMS user names displayed with the SHOW ALIAS command.

SHOW CHARACTERISTICS

This command displays the file server characteristics for the selected file server.

Format

SHOW CHARACTERISTICS
/[NO]PERMANENT

Qualifiers

/[NO]PERMANENT
The /PERMANENT qualifier displays the values in the file server's characteristics database. The default is NOPERMANENT.

See Example 2.

Examples

1

```
MSA$MANAGER> SHOW CHARACTERISTICS

Characteristic                  Value
--------------                  -----
CATALOG_CACHE                   128
CHANGE_PASSWORD                 TRUE
FULL_CHECK_ACCESS               TRUE
DEFAULT_FOLDER_PROTECTION       O:RWED
FOLDER_DEPTH                    7
GUEST_NAME                      BOZO
INHERIT_PROTECTION              FALSE
MAXIMUM_CONNECTIONS             0
NOTIFY_OPERATOR                 TRUE
PURGE_TIMER                     20
SERVER_NAME                     BANANA
WINDOW_SIZE                     20
```

This example shows the output for a typical SHOW CHARACTERISTICS command. Compare the temporarily set value of CATALOG_CACHE with the default value in the next example.

2

```
MSA$MANAGER> SHO CHAR/PERMANENT

Static characteristics database for file server "BANANA":
Characteristic                  Value
--------------                  -----
CATALOG_CACHE                   64
CHANGE_PASSWORD                 TRUE
FULL_CHECK_ACCESS               TRUE
DEFAULT_FOLDER_PROTECTION       O:RWED
FOLDER_DEPTH                    7
GUEST_NAME                      BOZO
INHERIT_PROTECTION              FALSE
MAXIMUM_CONNECTIONS             0
NOTIFY_OPERATOR                 TRUE
PURGE_TIMER                     20
SERVER_NAME                     BANANA
WINDOW_SIZE                     20
```

This example shows the values in the file server's characteristic database.

SHOW CONNECTIONS

This command lists the active VMS accounts on the selected file server.

Format

SHOW CONNECTIONS

Example

```
MSA$MANAGER> SHOW CONNECTIONS

VMS Account Name
----------------
JONES
SMITH
BROWN
```

This example show connection activity for a current file server session.

SHOW FILE_SERVER

This command displays one or more VAXshare file servers on the selected VAX system.

Format

SHOW FILE_SERVER server-name
/[NO]ALL

Parameters

server-name
Specifies the name of the file server to show.

Qualifiers

/[NO]ALL
Shows the characteristics for all of the file servers on the VAX system. ALL is the default.

Example

```
MSA$MANAGER> SHOW FILE_SERVER/ALL

Current file server: "BANANA"
Connection type:     Local

File server "BANANA", Online, process MSAF$SERVER0

File server "GRAPEFRUIT", Online, process MSAF$SERVER2
```

This example shows the characteristics for all of the file servers running on the VAX system.

SHOW PRINTER

This command displays the current characteristics for the selected printer.

Format

SHOW PRINTER [printer-name]
/[NO]ALL
/FULL

Parameters

printer-name
The name of the printer to be shown.

If the name contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the format and case.

Qualifiers

/[NO]ALL
Specifies the display of all printer services on the VAX system. ALL is the default.

/FULL
Specifies the display of all characteristics for printer services.

Examples

1

```
MSA$MANAGER> SHOW PRINTER


Print service "LN03R spooled by BIGVAX", Offline, for queue PRNTRMPOSTSCRIPT
Print service "LWDOS" for queue LWDOS
```

This example shows the output for a typical SHOW PRINTER command.

2

```
MSA$MANAGER> SHOW PRINTER/ALL/FULL


Print service "LN03R spooled by BIGVAX" for queue PRNTRMPOSTSCRIPT
    Process MSAP$RCVR0
    /FONTS=MSAP$FONTLIST_DEC29.TXT
    /PARAMETERS=(DATA=POSTSCRIPT)

Print service "LWDOS" for queue LWDOS
    Process MSAP$RCVR1
    /DESTINATION="Printer1@Graphics Dept"
    /SETUP=(MSAP$DEFAULT_APPLE_PREP) /FONTS=MSAP$FONTLIST_APPLE35.TXT
    /DEFAULT=(FORM=PS_PLAIN,FLAG,TRAIL)
```

This example shows a sample output for the SHOW PRINTER using the /ALL qualifier to display details of the printer services characteristics.

SHOW VERSION

This command displays the current version numbers for all components of VAXshare software. The components are:

- Management client software
- Management agent software
- File server software
- Print spooler software
- LaserWriter symbiont software

Format

SHOW VERSION

Example

```
MSA$MANAGER> SHOW VERSION

 Management client software version:     MSA  V1.0-001
 Management agent software version:      MSA  V1.0-001
 File server software version:           MSAF V1.0-000
 Print spooler software version:         MSAP V1.0-000
 LaserWriter symbiont software version: MSAP V1.0-000
```

This example shows a sample output for the SHOW VERSION command.

SHOW VOLUMES

This command lists Macintosh volume services available on the selected file server.

The display includes (for each volume service):

- Volume name
- Access mode
- Status
- Root directory of the service

Format

SHOW VOLUMES volume-name

Parameters

volume-name
The name of an existing volume created with the ADD VOLUME command.

If the name contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the format and case.

Qualifiers

/[NO]PERMANENT
Shows all volumes in the file server's current database. The default is NOPERMANENT.

See Example 2.

Examples

1

```
MSA$MANAGER> SHOW VOLUMES

Current mounted volumes for file server "BANANA":
Volume Name                Attribs Vrfy  Root Directory
-----------                ------- ----  --------------
MACVOL4                    MNT,RW  FULL  WORK:[SMITH.MACVOL4]
```

This example shows a sample output for the SHOW VOLUMES command.

2

```
MSA$MANAGER> SHOW VOLUMES/PERM


Volume database for file server "BANANA":
Volume Name                Attribs Vrfy  Root Directory
-----------                ------- ----  --------------
MSAFDOCSVOL                UNM,RW  FULL  SYS$COMMON:[SYSTEST.MSAFDOCSVOL]
MACVOL                     UNM,RW  FULL  WORK:[SMITH.MACVOL]
MACVOL2                    UNM,RW  FULL  WORK:[SMITH.MACVOL2]
MACVOL3                    UNM,RW  FULL  WORK:[SMITH.MACVOL3]
MACVOL4                    MNT,RW  FULL  WORK:[SMITH.MACVOL4]
```

This example shows a sample output for the SHOW VOLUMES command with the /PERMANENT qualifier. "UNM" indicates that the volume will not be mounted the next the file server is started. Note that the "MACVOL 4" volume is the only mounted volume. Compare this output with the output displayed in Example 1.

START FILE_SERVER

This command starts one or more VAXshare file servers.

Format

START FILE_SERVER server-name
/[NO]ALL

Parameters

server-name
The VAXshare file server to start. If a server name is not specified, then the current file server is assumed.

If the name contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the format and case.

Qualifiers

/[NO]ALL
Starts all VAXshare services on the VAX system. The default is NOALL.

Restrictions

This command requires the SYSPRV and DETACH privileges.

Examples

1

```
MSA$MANAGER> START FILE_SERVER "Srvr1"
```

This example uses the START FILE_SERVER command to start the file server, "Srvr1":

2

```
MSA$MANAGER> SET FILE_SERVER "VAXshare IV"
MSA$MANAGER> START FILE_SERVER
```

This example shows the system administrator using the SET FILE_SERVER command to set VAXshare IV as the current server, then starting the file server with the START FILE_SERVER command.

START PRINTER

This command starts one or more VAXshare printer services.

Format

START PRINTER printer-name
/[NO]ALL

Parameters

printer-name
The VAXshare printer to start. If the name contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the format and case.

Qualifiers

/[NO]ALL
Starts all VAXshare printer services on the VAX system. The default is ALL.

Restrictions

This command requires the OPER or the SYSPRV and DETACH privileges.

Examples

1

```
MSA$MANAGER> START PRINTER "Paper Work"
```

This example shows starting the printer service "Paper Work".

2

```
MSA$MANAGER> SET REMOTE BIGVAX/USER=SYSADMIN/PASS=WHATSALLTHIS
MSA$MANAGER> START PRINTER/ALL
```

This example sets a remote file server to be managed and starts all the printers on that server.

3

```
MSA$MANAGER> MODIFY PRINTER "Manufacturing LaserWriter" -
/DEFAULT=(FEED,FORM=LPT_PLAIN)
MSA$MANAGER> STOP PRINTER "Manufacturing LaserWriter"
MSA$MANAGER> START PRINTER "Manufacturing LaserWriter"
```

In this example, the system administrator modifies the printer's characteristics. He stops the printer and restarts it so that the new characteristics take effect.

STOP FILE_SERVER

This command stops the currently selected file server. Cancel a stop request with the START FILE_SERVER command.

Format

STOP FILE_SERVER server-name
/[NO]ALL
/WAIT=n

Parameters

server-name
The name of the file server to stop. If a name is not specified, then the current file server is assumed.

If the name contains a combination of upper and lowercase letters and spaces, use quotes to preserve the format and case.

Qualifiers

/[NO]ALL
ALL stops all VAXshare file services on the VAX system.

NOALL stops only the current file server. The default is NOALL.

/WAIT=n
Specifies the waiting period in *n* minutes before shutting down the server. The default value is 0 minutes. If WAIT is not zero, then the following table is used to determine when a warning message is sent to the users during the shutdown count down. The maximum value is 1440 minutes (one day).

Time (t)	Warning Frequency
t >= 1 hour	Once per half hour
t < 1 hour & t >= 15 minutes	Once per 15 minutes
t < 15 minutes & t >= 5 minutes	Once per 5 minutes
t < 5 minutes	Once per minute

Restrictions

This command requires the SYSPRV privilege.

Example

```
MSA$MANAGER> STOP FILE_SERVER/WAIT=10 "Galaxy"
%MSA-W-SHUTDOWN, File Server "GALAXY" shutting down in 10 minutes.
```

This example of the STOP command shows that the file server "Galaxy" will shut down in 10 minutes.

STOP PRINTER

This command halts the selected printer service.

Format

STOP PRINTER printer-name
/[NO]ALL

Parameters

printer-name
The name of an existing printer created with the ADD PRINTER command.

If the name contains a combination of uppercase and lowercase letters and spaces, use quotes to preserve the format and case.

Qualifiers

/[NO]ALL
ALL stops all VAXshare printer services on the VAX system.

NOALL stops only the current printer service. The default is ALL.

Restrictions

This command requires the OPER or the SYSPRV privilege.

Example

```
MSA$MANAGER> STOP PRINTER "Engineering LPS20"
```

In this example, the system administrator uses the STOP PRINTER command to halt the printer service, "Engineering LPS20".

A

Handling Character Strings in Commands

This appendix contains guidelines, a table, and charts for handling character strings in command lines. It describes:

- How the management software handles character strings
- Guidelines for choosing character strings
- Entering AppleTalk characters
- DCL uppercasing rules
- AppleTalk uppercasing rules

This information pertains to the character strings used for the following names:

- ATK$MANAGER
  - Gateway
  - Port
  - Responder
  - Router Manager password
  - Zone
- MSA$MANAGER
  - Alias
  - File server
  - Printer
  - Volume (names and passwords)

How the Software Handles Character Strings

Commands often require you to enter character strings for names of certain components. Since Digital and Macintosh computers use different character sets, some of these character strings must be converted into a form that is understood by the Macintosh computer. The software converts a character string following these steps:

1 The character string is uppercased, using DCL uppercasing rules (see DCL Uppercasing Rules), if it is not enclosed in quotes.

2 The character string is converted to the AppleTalk character set (see Figure A–1) and is stored for use.

Some character strings, such as AppleTalk for VMS port names, must also be compared for uniqueness after conversion. These names are first uppercased, following the uppercasing rules described in (AppleTalk Uppercasing Rules.

Choosing Character String for Names

When you enter names in command lines, be aware of the following:

- Some characters are not common between the two character sets
- Some characters do not match exactly between the two characters sets
- Characters are compared after being converted to the AppleTalk character set and uppercased.

Use these guidelines when deciding on character strings to use in command lines:

- Refer to the character set charts in this appendix to determine what happens if you enter a Digital character that does not map exactly to an AppleTalk character. For example, (refer to Figure A–5) a superscript 2 (Row 2, column 11) displays as a number 2 in the AppleTalk Character Set (refer to Figure A–1).
- If a character does not exist in the AppleTalk Character Set, do not use the character in the name. The characters you cannot use are: ½ ¼ ¤
- If a character does not exist in the DEC Multinational Character Set (DEC MCS), but does exist in the AppleTalk character set, use the procedure described in Entering AppleTalk Characters.
- Keep in mind DCL and AppleTalk uppercasing rules (see DCL Uppercasing Rules and AppleTalk Uppercasing Rules).

Entering AppleTalk Characters

Character strings you choose for names can contain AppleTalk characters that do not exist in DEC MCS. (See Figure A–4 and Figure A–5.) Use the following procedure to enter character strings in the command line:

1 Decide what character string to use.

If the name has characters that do not exist in DEC MCS, enter the decimal equivalent of the character(s) found in the AppleTalk character set with the following format:

```
\decimal-number
```

For example, suppose you choose a port name such as Primary◇. Check Figure A–3 and use the three-digit decimal equivalent for the required character (◇). In this example, use 215.

2 Enter the command, for example:

```
DEFINE PORT NAME "Primary\215"
```

The name displays on the Macintosh computer as:

Primary◇

As another example, suppose you choose to add a printer with the name "△Eng_Dept LPS20 2 Sides". Enter the command:

```
ADD PRINTER "\198Eng_Dept LPS20 2 Sides"
```

The name displays on the Macintosh computer as:

△ Eng_Dept LPS20 2 Sides.

DCL Uppercasing Rules

The names you enter are converted to uppercase according to DCL uppercasing conventions if they are not enclosed in quotes. DCL converts all characters to their uppercase equivalent in the DEC MCS and preserves diacritical marks. If you enter a name with uppercase and lowercase characters and spaces, you need to enclose the characters in quotes to preserve the format and case. For example, in the ADD ALIAS command:

```
ADD ALIAS "Simple Simon" SIMON
```

In this example the character string "Simple Simon" becomes the alias for the VMS account name, "SIMON".

Note *If you enter the name without quotes, you get a system message since it is an invalid command.*

The next example shows "SIMPLE" (all lowercase) treated as the alias for "SIMON".

```
ADD ALIAS simple simon
```

AppleTalk Uppercasing Rules

The AppleTalk character set does not have uppercase equivalents for all characters with diacritical marks. AppleTalk uppercasing rules preserve diacritical marks when an uppercase equivalent exists in the AppleTalk character set. If the diacritical mark cannot be preserved, the character is not converted to uppercase. For example, AppleTalk character "é" has an uppercase equivalent (É) while the AppleTalk character "è" does not. If you are using characters with diacritical marks, refer to Table A–3.

The following tables illustrate how the software handles character strings with and without diacritical marks. The character strings are treated as equivalent by the management software.

Table A–1 Strings Without Diacritical Marks

	String Without Quotes	String With Quotes
Starting with the string...	building	"Building"
After DCL uppercasing...	BUILDING	"Building"
After conversion to AppleTalk...	BUILDING	"Building"
After AppleTalk uppercasing...	BUILDING	"BUILDING"

In Table A–2 the string contain a character with diacritical marks that does not have an uppercase equivalent in the AppleTalk character set. The strings in this example are not treated as equivalent by the management software.

Table A–2 Strings With Diacritical Marks

	String Without Quotes	String With Quotes
Starting with the string...	Crèche	"Crèche"
After DCL uppercasing...	CRÈCHE	"Crèche"
After conversion to AppleTalk...	CRECHE	"Crèche"
After AppleTalk uppercasing...	CRECHE	"CRèCHE"

Table A–3 AppleTalk Uppercase Character Mapping

Hex Value	Lowercase Character	Hex Value	Uppercase Equivalent
61	a	41	A
62	b	42	B
.	.	.	.
.	.	.	.
.	.	.	.
7A	z	5A	Z
88	à	CB	À
8A	ä	80	Ä
8B	ã	CC	Ã
8C	å	81	Å
8D	ç	82	Ç
8E	é	83	É
96	ñ	84	Ñ
9A	ö	85	Ö
9B	õ	CD	Õ
9F	ü	86	Ü
BE	æ	AE	Æ
BF	ø	AF	Ø
CF	œ	CE	Œ

Figure A–1 DEC Multinational Character Set to AppleTalk Character Set Conversion Chart

DEC Macintosh Character Set to ACS

		GR		GR		GR		GR		GR		GR		GR		GR	
	Column	8		9		A		B		C		D		E		F	
Row 0		200 128 80	•	220 144 90	•	240 160 A0	°	260 176 B0	À	300 192 C0		320 208 D0	à	340 224 E0		360 240 F0	Row 0
1		201 129 81	•	221 145 91	¡	241 161 A1	±	261 177 B1	Á	301 193 C1	Ñ	321 209 D1	á	341 225 E1	ñ	361 241 F1	1
2		202 130 82	•	222 146 92	¢	242 162 A2	2	262 178 B2	Â	302 194 C2	Ò	322 210 D2	â	342 226 E2	ò	362 242 F2	2
3		203 131 83	•	223 147 93	£	243 163 A3	3	263 179 B3	Ã	303 195 C3	Ó	323 211 D3	ã	343 227 E3	ó	363 243 F3	3
4	•	204 132 84	•	224 148 94		244 164 A4		264 180 B4	Ä	304 196 C4	Ô	324 212 D4	ä	344 228 E4	ô	364 244 F4	4
5	•	205 133 85	•	225 149 95	¥	245 165 A5	µ	265 181 B5	Å	305 197 C5	Õ	325 213 D5	å	345 229 E5	õ	365 245 F5	5
6	•	206 134 86	•	226 150 96		246 166 A6	¶	266 182 B6	Æ	306 198 C6	Ö	326 214 D6	æ	346 230 E6	ö	366 246 F6	6
7	•	207 135 87	•	227 151 97	ß	247 167 A7	•	267 183 B7	Ç	307 199 C7	Œ	327 215 D7	ç	347 231 E7	œ	367 247 F7	7
8	•	210 136 88		230 152 98	•	250 168 A8		270 184 B8	È	310 200 C8	Ø	330 216 D8	è	350 232 E8	ø	370 248 F8	8
9	•	211 137 89		231 153 99	©	251 169 A9	1	271 185 B9	É	311 201 C9	Ù	331 217 D9	é	351 233 E9	ù	371 249 F9	9
A	•	212 138 8A		232 154 9A	ª	252 170 AA	º	272 186 BA	Ê	312 202 CA	Ú	332 218 DA	ê	352 234 EA	ú	372 250 FA	A
B	•	213 139 8B	•	233 155 9B	«	253 171 AB	»	273 187 BB	Ë	313 203 CB	Û	333 219 DB	ë	353 235 EB	û	373 251 FB	B
C	•	214 140 8C	•	234 156 9C		254 172 AC	•	274 188 BC	Ì	314 204 CC	Ü	334 220 DC	ì	354 236 EC	ü	374 252 FC	C
D	•	215 141 8D	•	235 157 9D		255 173 AD	•	275 189 BD	Í	315 205 CD	Ÿ	335 221 DD	í	355 237 ED	ÿ	375 253 FD	D
E	•	216 142 8E	•	236 158 9E		256 174 AE		276 190 BE	Î	316 206 CE		336 222 DE	î	356 238 EE		376 254 FE	E
F	•	217 143 8F	•	237 159 9F		257 175 AF	¿	277 191 BF	Ï	317 207 CF	ß	337 223 DF	ï	357 239 EF	•	377 255 FF	F

LEGEND

GR	
C/1	Column/Row
Á 301 193 C1	Octal Decimal Hex

MLO-005196

Figure A–2 AppleTalk Character Set (Left)

Macintosh Character Set (Left)

		GL		GL		GL		GL		GL		GL		GL		GL	
	Column	0		1		2		3		4		5		6		7	
Row 0		0 0 0		20 16 10		40 32 20		60 48 30		100 64 40		120 80 50		140 96 60		160 112 70	Row 0
1	SOH	1 1 1	DC1	21 17 11	!	41 33 21	1	61 49 31	A	101 65 41	Q	121 81 51	a	141 97 61	q	161 113 71	1
2	STX	2 2 2	DC2	22 18 12	"	42 34 22	2	62 50 32	B	102 66 42	R	122 82 52	b	142 98 62	r	162 114 72	2
3	ETX	3 3 3	DC3	23 19 13	#	43 35 23	3	63 51 33	C	103 67 43	S	123 83 53	c	143 99 63	s	163 115 73	3
4	EOT	4 4 4	DC4	24 20 14	$	44 36 24	4	64 52 34	D	104 68 44	T	124 84 54	d	144 100 64	t	164 116 74	4
5	ENQ	5 5 5	NAK	25 21 15	%	45 37 25	5	65 53 35	E	105 69 45	U	125 85 55	e	145 101 65	u	165 117 75	5
6	ACK	6 6 6	SYN	26 22 16	&	46 38 26	6	66 54 36	F	106 70 46	V	126 86 56	f	146 102 66	v	166 118 76	6
7	BEL	7 7 7	ETB	27 23 17	'	47 39 27	7	67 55 37	G	107 71 47	W	127 87 57	g	147 103 67	w	167 119 77	7
8	BS	10 8 8	CAN	30 24 18	(	50 40 28	8	70 56 38	H	110 72 48	X	130 88 58	h	150 104 68	x	170 120 78	8
9	HT	11 9 9	EM	31 25 19	)	51 41 29	9	71 57 39	I	111 73 49	Y	131 89 59	i	151 105 69	y	171 121 79	9
A	LF	12 10 A	SUB	32 26 1A	*	52 42 2A	:	72 58 3A	J	112 74 4A	Z	132 90 5A	j	152 106 6A	z	172 122 7A	A
B	VT	13 11 B	ESC	33 27 1B	+	53 43 2B	;	73 59 3B	K	113 75 4B	[	133 91 5B	k	153 107 6B	{	173 123 7B	B
C	FF	14 12 C	FS	34 28 1C	,	54 44 2C	<	74 60 3C	L	114 76 4C	\	134 92 5C	l	154 108 6C	|	174 124 7C	C
D	CR	15 13 D	GS	35 29 1D	-	55 45 2D	=	75 61 3D	M	115 77 4D	]	135 93 5D	m	155 109 6D	}	175 125 7D	D
E	SO	16 14 E	RS	36 30 1E	.	56 46 2E	>	76 62 3E	N	116 78 4E	^	136 94 5E	n	156 110 6E	~	176 126 7E	E
F	SI	17 15 F	US	37 31 1F	/	57 47 2F	?	77 63 3F	O	117 79 4F	_	137 95 5F	o	157 111 6F	DEL	177 127 7F	F

LEGEND

GL	
4/1	Column/Row
101	Octal
A 65	Decimal
41	Hex

MLO-005194

Figure A–3 AppleTalk Character Set (Right)

Macintosh Character Set (Right)

	GR		GR		GR		GR		GR		GR		GR		GR	
Column	8		9		A		B		C		D		E		F	
Row 0	Ä 200 128 80	ê	220 144 90	†	240 160 A0	∞	260 176 B0	¿	300 192 C0	-	320 208 D0		340 224 E0		360 240 F0	Row 0
1	Å 201 129 81	ë	221 145 91	°	241 161 A1	±	261 177 B1	¡	301 193 C1	—	321 209 D1		341 225 E1		361 241 F1	1
2	Ç 202 130 82	í	222 146 92	¢	242 162 A2	≤	262 178 B2	¬	302 194 C2	"	322 210 D2		342 226 E2		362 242 F2	2
3	É 203 131 83	ì	223 147 93	£	243 163 A3	≥	263 179 B3	√	303 195 C3	"	323 211 D3		343 227 E3		363 243 F3	3
4	Ñ 204 132 84	î	224 148 94	§	244 164 A4	¥	264 180 B4	ƒ	304 196 C4	'	324 212 D4		344 228 E4		364 244 F4	4
5	Ö 205 133 85	ï	225 149 95	•	245 165 A5	µ	265 181 B5	≈	305 197 C5	'	325 213 D5		345 229 E5		365 245 F5	5
6	Ü 206 134 86	ñ	226 150 96	¶	246 166 A6	∂	266 182 B6	Δ	306 198 C6	÷	326 214 D6		346 230 E6		366 246 F6	6
7	á 207 135 87	ó	227 151 97	ß	247 167 A7	Σ	267 183 B7	«	307 199 C7	◊	327 215 D7		347 231 E7		367 247 F7	7
8	à 210 136 88	ò	230 152 98	®	250 168 A8	Π	270 184 B8	»	310 200 C8	ÿ	330 216 D8		350 232 E8		370 248 F8	8
9	â 211 137 89	ô	231 153 99	©	251 169 A9	π	271 185 B9	…	311 201 C9		331 217 D9		351 233 E9		371 249 F9	9
A	ä 212 138 8A	ö	232 154 9A	™	252 170 AA	∫	272 186 BA	⌴	312 202 CA		332 218 DA		352 234 EA		372 250 FA	A
B	ã 213 139 8B	õ	233 155 9B	'	253 171 AB	ª	273 187 BB	À	313 203 CB		333 219 DB		353 235 EB		373 251 FB	B
C	å 214 140 8C	ú	234 156 9C	"	254 172 AC	º	274 188 BC	Ã	314 204 CC		334 220 DC		354 236 EC		374 252 FC	C
D	ç 215 141 8D	ù	235 157 9D	≠	255 173 AD	Ω	275 189 BD	Õ	315 205 CD		335 221 DD		355 237 ED		375 253 FD	D
E	é 216 142 8E	û	236 158 9E	Æ	256 174 AE	æ	276 190 BE	Œ	316 206 CE		336 222 DE		356 238 EE		376 254 FE	E
F	è 217 143 8F	ü	237 159 9F	Ø	257 175 AF	ø	277 191 BF	œ	317 207 CF		337 223 DF		357 239 EF		377 255 FF	F

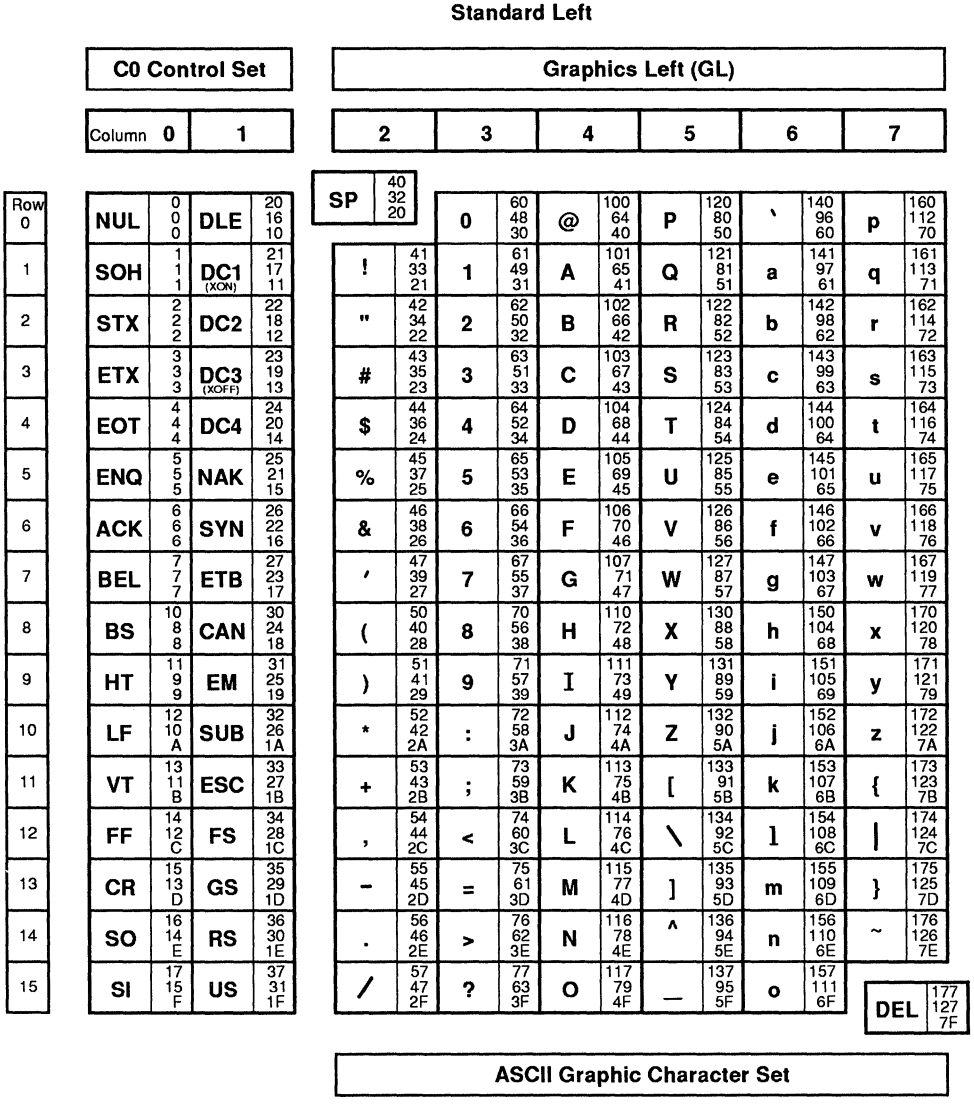
LEGEND

GR
C/1
301
¡ 193
C1

Column/Row
Octal
Decimal
Hex

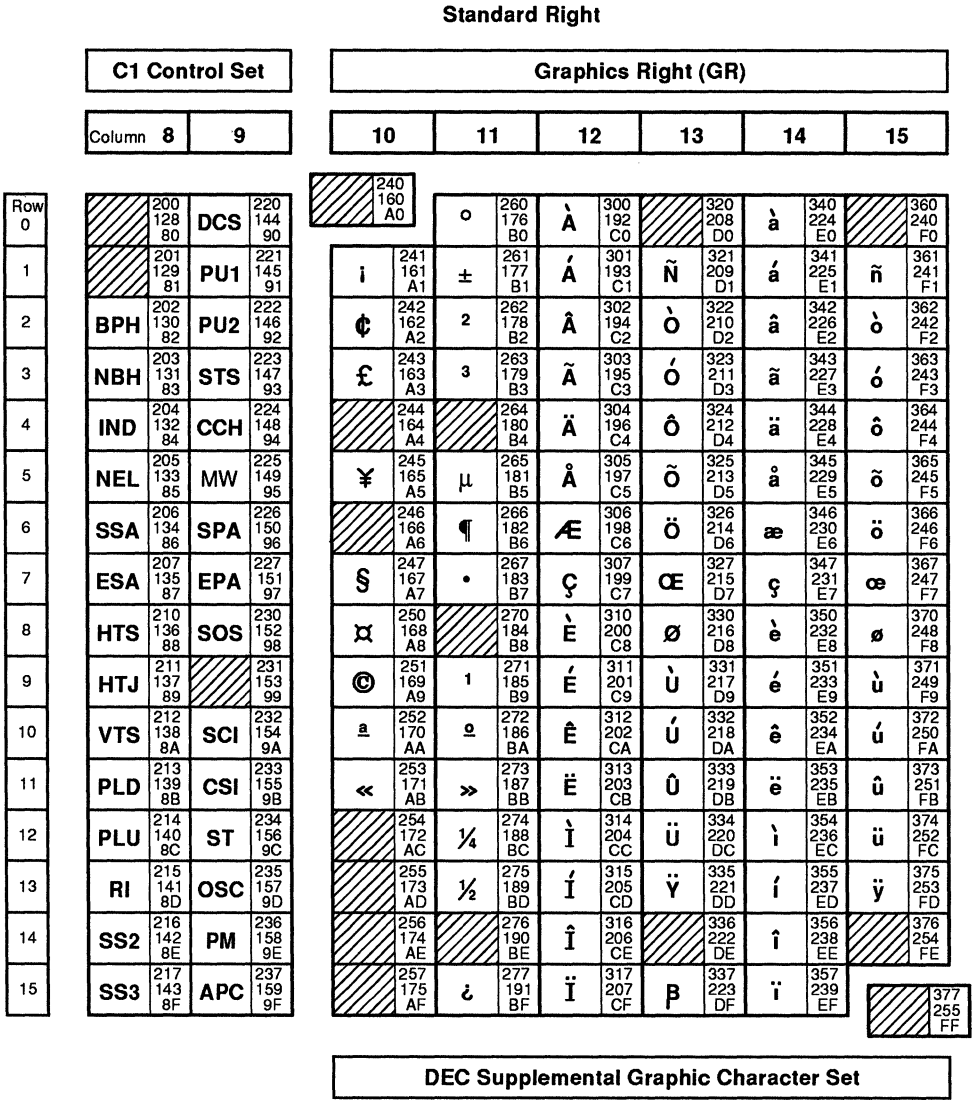
MLO-005195

Figure A–4 DEC MCS Character Set



MLO-003973

Figure A–5 DEC Supplemental Character Set



MLO-003974

Glossary

A

AARP

See AppleTalk Address Resolution Protocol

address resolution

The translation of AppleTalk datalink node addresses to Ethernet physical datalink addresses.

See also AppleTalk Address Resolution Protocol.

ADSP

See AppleTalk Data Stream Protocol.

alias

In VAXshare, a Macintosh Chooser name that has been mapped to a VMS user name. An alias allows a users to log on using Chooser names other than their VMS account names.

AppleShare

AppleShare is Apple Computer's file and print server software that services Macintosh computers on an AppleTalk network.

AppleTalk Address Resolution Protocol (AARP)

The protocol that reconciles addressing differences between a physical datalink protocol and AppleTalk's datalink protocol.

AppleTalk Data Stream Protocol (ADSP)

A connection-oriented protocol that provides reliable, full-duplex, byte-stream service between any two sockets in an AppleTalk internet. ADSP ensures sequential, duplicate-free delivery of data over its connections.

AppleTalk/DECnet Gateway

The gateway that provides Macintosh users access to DECnet-based applications. Performs translation between AppleTalk and DECnet protocols.

AppleTalk for VMS

A component of the PATHWORKS for Macintosh product. Networking software that allows a VMS system to communicate with an AppleTalk network.

AppleTalk for VMS Manager

Command interface used to define and modify AppleTalk for VMS parameters.

AppleTalk Transaction Protocol (ATP)

An AppleTalk transport protocol that provides loss-free transaction service between sockets. This service allows exchanges between two socket clients in which one client requests the other to perform a particular task and to report the results. ATP binds the request and response together to ensure the reliable exchange of request-response pairs.

AppleTalk zone

See zone.

C

cache

A form of quick access storage (memory) that holds the most frequently used portions of the address resolution table.

catalog file

A VMS file that stores the Macintosh desktop information necessary for the Macintosh Finder to handle a document. This file contains icon type, folder location, and is maintained only for the Macintosh.

catalog file cache

Memory available for storing catalog files for the VAXshare file server.

Chooser

A Macintosh desk accessory that allows Macintosh users to select specific AppleTalk devices and services.

console logging

The display of error and information messages on the VMS operator's terminal.

D

Datagram

A packet of data exchanged between two nodes in an AppleTalk network. AppleTalk datagrams can carry up to 586 bytes of data.

Datagram Delivery Protocol (DDP)

The network-layer protocol that is responsible for the end-to-end delivery of datagrams over an AppleTalk internet.

datalink

A datalink is a communication path between adjacent nodes.

DDP

See Datagram Delivery Protocol.

DECnet tunnel

A DECnet logical link used to connect two or more geographically separate AppleTalk internets.

device control library

A VMS text library that contains control modules for a printer. The modules can perform functions such as resetting the printer and establishing specific modes for a printer (portrait, landscape, or enhanced).

directory

A VMS file that lists a set of files stored on a disk.

See folder.

E

Ethernet

A high-speed local area network system that uses a special type of cabling, known as Ethernet cabling. There are several types of Ethernet cabling, including thick, thin, twisted pair, and broadband. Ethernet interconnects different kinds of computers, information processing products, and office equipment at a local site without requiring a switching logic or control by a central computer.

executor

The VAX node where AppleTalk for VMS is installed and running

F

file server

Software that provides file services to network users.

file service

Provides access to files and directories on a server.

Finder

A Macintosh application that allows access to documents and other applications; using icons to represent objects on a disk or volume. You use the Finder to manage documents and applications and to move information between disks.

folder

A container that can hold documents, applications and other folders on the Macintosh Desktop. Folders act as directories, keeping files organized for the user.

fork

Macintosh files have two parts known as forks. The data fork stores text and binary data. The resource fork contains specialized items that are specific to Macintosh computers such as icons, menus, and program code.

format

In VMS, the format specifies the physical layout of the page on which a file is printed and includes the width of the page. Types of formats are landscape and portrait.

G

gateway

An electronic device that separates and manages communication between different types of networks. The gateway serves as a translator between the protocols of two connected networks.

generic queue(s)

In the VMS operating system, holds jobs and then places them in any of the appropriate assigned queues when one becomes available.

guest

A user who is logged on to a file server without a registered user name and password.

H

hop

A measurement of distance in an AppleTalk internet. Two nodes which are separated by a single router are said to be one hop away from each other.

I

internet

In AppleTalk software, one or more AppleTalk networks connected by intelligent nodes are referred to as internet routers.

In DECnet software, a network in which Digital computers are connected to those of another manufacturer.

Inter•Poll

A Macintosh management tool used to monitor and troubleshoot AppleTalk internets.

L

LAN

See Local Area Network.

LAT

See Local Area Transport.

Local Area Network (LAN)

A privately owned 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 wide area networks (WANs) with routers.

Local Area Transport (LAT)

An Ethernet protocol, used in LANs, that transfers data on a character-by-character basis.

Logging

Recording information from an event on the network that has potential significance in its operation and/or maintenance. This information can then be accessed by persons and/or programs to assist in troubleshooting and tuning the network.

N

Name Binding Protocol (NBP)

An AppleTalk protocol that provides and maintains translation tables that match human understandable device names to their corresponding network addresses.

NBP

See Name Binding Protocol.

network number

A 16-bit number that uniquely identifies a network in an AppleTalk internet.

network range

A span of AppleTalk network numbers used to distinguish one network from another in an AppleTalk internet.

Nonpaged pool memory

A portion of physical memory on the VAX computer used by the VMS operating system to perform its normal operations.

O

OPER

In the VMS operating system, the privilege that allows use of the operator communication process (OPCOM) to perform such tasks as responding to user requests, and broadcasting messages to all terminals logged in. In addition, this privilege lets you set devices spooled, create and control batch and output queues, and initialize and mount public volumes.

P

packet

A unit of data to be transmitted from a source node to a destination node.

partner

In a DECnet tunnel, the DECnet node at the opposite end of the DECnet logical link.

permanent database

The file containing information that is retained across system shutdowns.

port

A portal into an AppleTalk internet which AppleTalk for VMS uses to communicate with the internet.

primary port

The port where all name registrations occur, and where the executor's node addresses are acquired.

printer service

Software that allows users access to printers, for example, VAXshare.

The availability of a printer connected to a server.

protocol stack

A set of layered network communication protocols.

R

Responder

See System Information Responder.

router (AppleTalk)

An AppleTalk node that connects two or more networks to form an internet. A router functions as a packet forwarding agent to allow datagrams to be sent between any two nodes of an internet by using a store-and-forward process.

routing table

A table, resident in each AppleTalk internet router, that serves as a map of the internet, specifying the path and distance (in hops) between the internet router and other networks.

S

seed port

A router's port that sends out identifying information about the network to all other routers.

seed zone

An AppleTalk zone name that a router uses to establish the set of valid zone names for a network.

session

An established AppleTalk/DECnet connection used for data transfers between an AppleTalk node and a DECnet node.

socket(s)

An addressable place on a node connected to a network. Sockets are the endpoint of communication in an AppleTalk network. An individual socket is the source and destination of datagrams.

spooler

A program that temporarily stores data on a disk or tape until the data is ready for processing or printing.

symbiont

A VMS process that takes disk files and prepares them for a printer.

SYSPRV

In the VMS operating system, the privilege that allows you complete access to system-wide operations. For example, the person with SYSPRV can read and delete any user account or file. SYSPRV allows you to change the owner UIC and protection of a file.

System Information Responder

An AppleTalk management tool on one AppleTalk node that provides information about the node to other AppleTalk nodes on the network.

T

transaction

A communication between two socket clients requiring a response from the receiving socket client.

transaction request

The initial part of a transaction in which one socket client asks another to perform an operation and return a response.

transaction response

The concluding part of a transaction in which one socket client returns requested information or simply confirms that a requested operation was performed.

tunneling

A mechanism that allows a DECnet wide area network to connect two or more geographically separate AppleTalk internets.

See DECnet tunnel.

V

VAXshare

A component of the PATHWORKS for Macintosh product that makes VMS files and printers available to Macintosh users. The VAXshare file server is compatible with AppleShare Version 2.0.

VAXshare Manager

Command interface used to define and modify VAXshare print and file server parameters.

volatile database

An in-memory database file that contains all the configuration information for the currently running AppleTalk for VMS software.

volume

A storage device that can be an entire disk or only part of disk. A volume has a name and directory that uses the files. VMS volumes can span multiple disks.

Z

zone

In AppleTalk, a conceptual way of organizing devices that makes it easier to locate network services.

Index

A

B

C

D

E

F

G

H

R

S

T

U

V

W

Z

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