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*VAXmate*<sup>TM</sup>

*VAX/VMS*

*Server Guide*

**digital**  
software

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**VAXmate**<sup>TM</sup>  
VAX/VMS  
*Server Guide*

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# Preface

The purpose of this guide is to help the system administrator install and maintain the VAX/VMS server.

This guide assumes the network, including cables, workstations, and other hardware, is physically connected.

## Conventions Used

Follow these conventions while using this guide:

- In examples of dialog between you and the computer, what the computer displays on the screen is in black. The characters you type from the keyboard are in color.
- Type all spaces and punctuation marks exactly as they are printed.
- When you see Ctrl/C, press and hold the Ctrl key and press the C key.
- Square brackets in a command line ( [ ] ) indicate optional command qualifiers. Do not type the brackets when specifying information enclosed in the brackets. For example, you can type HELP, or you can type HELP and a topic:

```
HELP [topic]
```

- A vertical bar ( | ) indicates you have a choice between two or more

entries. You must select one entry, unless the entries are optional. For example, when you use the CLOSE CONNECTION command, you must select an alias or a connection identifier:

`CLOSE CONNECTION alias | /ID=connection identifier`

- All numbers in this guide are in decimal form unless otherwise

# Chapter 1

## Installing the VAX/VMS Server

This chapter tells you how to install the VAX/VMS server. When you complete the installation procedure in this chapter, you should be able to access the VAX/VMS server from a workstation using a key diskette.

This installation procedure assumes that:

- The VAX/VMS operating system and DECnet-VAX are installed and running on your VAX computer. For instructions on installing these systems, see the *VAX/VMS Release Notes* and the *VAX/VMS Guide to Software Installation*.
- If you have a MicroVAX computer, all components of MicroVMS are installed. If they are not, see the *MicroVAX User's Guide*.
- If you want to use the VAXmate terminal emulators with the VAX/VMS server, the Local Area Transport (LAT) software is installed and running on your VAX computer.

If an error message is displayed during this procedure, see the Messages section of this guide or the *VAXmate User's Guide, Volume 2*.

Follow the installation procedure in the order in which it is presented. The installation procedure includes:

## Installing the VAX/VMS Server

1. Installing the VAX/VMS server software on the VAX computer
2. Adding information about the VAX/VMS server to the network start-up file
3. Adding information about the VAX/VMS server to the system administrator's log-in file
4. Preparing the server for the workstation software
5. Adding the first user

These procedures are described in the remainder of this chapter.

## Installing the VAX/VMS Server Software

This installation procedure, including the installation verification procedure, takes approximately 5 minutes and 1000 blocks of disk space to complete. After the VAX/VMS server is installed, it requires approximately 800 blocks of disk space.

### NOTES

Do not install a new version of the VAX/VMS server software until all users are disconnected from the server. Use the `PCSERVER SHOW CONNECTIONS` command to see if users are connected. If users are connected, use the `PCSERVER REFUSE CONNECTIONS` command to disallow further connections. Then wait until the remaining users are disconnected.

If disk quota checking is enabled, and you want to run the Installation Verification Procedure (IVP) portion of the server installation, first make sure the permanent disk quota assigned to the system User Identification Code (that is, UIC [1,4]), is greater than the current usage. If it is not, the following message may be displayed: "Function CREATE DIRECTORY: Expected: 0-0, Received: 1-5."

To install the VAX/VMS server software:

1. Log in to the "SYSTEM" account. This account has full system privileges.
2. Set the default directory by typing:

```
$ SET DEFAULT SYS$UPDATE<Return>
```

**NOTE**

The following dialog is an example of installing the VAX/VMS server. The dialog that occurs during your installation can differ slightly depending on the configuration of your VAX computer.

3. Start VMSINSTAL by typing:

```
$ @VMSINSTAL PCFS ddcu<Return>
```

Where:

PCFS Is the VAX/VMS facility name for the VAX/VMS server.

ddcu Names the device on which the VAX/VMS server distribution medium is mounted and where:

dd Is the device name (for example, CS, MU, DU).

c Is the controller I.D. (for example, A, B, C).

u Is the unit number (for example, 0, 1, 2).

For example, to specify a TK50 tape device, type:

```
$ @VMSINSTAL PCFS MUA0<Return>
```

VMSINSTAL displays:

```
VAX/VMS Software Product Installation Procedure V1.1
```

```
It is 9-MAY-1986 at xx:xx.
```

```
Enter a question mark (?) at any time for help.
```

```
%VMSINSTAL-W-DECNET, Your DECnet network is up and running.
```

If there are any other active processes, VMSINSTAL displays:

```
%VMSINSTAL-W-ACTIVE, The following processes are still active:
```

A list of active processes is displayed.

4. Whether or not active processes are displayed, VMSINSTAL asks:

```
* Do you want to continue anyway [NO]?
```

## Installing the VAX/VMS Server

VMSINSTAL allows you to continue installing the VAX/VMS server with active processes. VMSINSTAL does not interfere with an active process, and an active process does not interfere with VMSINSTAL. However, to stop a process before continuing with the VAX/VMS server installation, you can stop the installation.

- To continue, type:

YES<Return>

- To stop the installation, press:

<Return>

### 5. VMSINSTAL asks:

\* Are you satisfied with the backup of your system disk [YES]?

- If you are satisfied with your backup, press:

<Return>

Note that if you fail to back up the system disk, and the system stops abnormally, you will lose all your system files.

- If you failed to make a backup or are unsatisfied with the backup you made, you can return to the VAX/VMS DCL prompt and make a fresh backup by typing:

NO<Return>

### 6. Before VMSINSTAL tries to mount the distribution medium, it asks you to ready the medium on the device you specified in step 3. Be sure you have put the device on-line. VMSINSTAL displays:

Please mount the first volume of the set on [ddcu]:

\* Are you ready?

When you have mounted the volume, type:

YES<Return>

If mounting is successful, VMSINSTAL displays:

## Installing the VAX/VMS Server

%MOUNT-I-MOUNTED, PCFS mounted on [ddcu]:

The following products will be processed:

PCFS V1.1

Beginning installation of PCFS V1.1 at xx:xx

%VMSINSTAL-I-RESTORE, Restoring product saveset A. . .

### 7. VMSINSTAL displays:

\* Do you want to run the IVP after the installation [YES]?

We recommend you run the IVP, which checks that the VAX/VMS server was installed correctly.

- To run the IVP after the installation procedure, press:

<Return>

- To skip the Installation Verification Procedure (IVP), type:

NO<Return>

### 8. VMSINSTAL asks:

\* Do you want to purge files replaced by this installation [YES]?

- To purge files replaced by the installation, press:

<Return>

When VMSINSTAL purges files, it deletes old versions of the VAX/VMS server software, if any exist, and therefore saves disk space.

- To save old versions of files replaced by the installation, type:

NO<Return>

## Installing the VAX/VMS Server

If you tell VMSINSTAL not to purge the old version of the files and VMSINSTAL does not succeed in installing the new version, you can recover the old version of the server files.

9. If you are installing the VAX/VMS server for the first time, VMSINSTAL asks:

\* Disk Name for PCFS software [SYS\$SYSDEVICE]:

The displayed name is the name of the device that holds VXSYS, ISSYS, PCAPP, and PCFS\_SPOOL. Press the Return key to accept the default, or specify another device name.

\* File version limit for PCFS software [1]:

The displayed number is the number of file versions saved in the xxSYS, PCAPP, and PCFS\_SPOOL directories. Press the Return key to accept the default, or specify another number.

\* Password for PCWAPP account [MAINTAIN]:

The displayed password is the password for the PCWAPP account. Press the Return key to accept the default, or specify another password.

\* Disk Name for PERSONAL/COMMON accounts [SYS\$SYSDEVICE]:

The displayed name is the name of the device that holds VXUSERS, VXAPP, and PCCOMMON. Press the Return key to accept the default, or specify another device.

\* File version limit for PERSONAL/COMMON accounts [1]:

The displayed number is the number of file versions saved in the PERSONAL/COMMON directories. Press the Return key to accept the default, or specify another number.

\* Password for PCCOMMON account [NONE]:

## Installing the VAX/VMS Server

The displayed information is the default for the PERSONAL/  
COMMON directories. Press the Return key to accept the default  
(no password), or specify a password.

\* Group number for PCFS software directories [360]:

The displayed number is the group UIC for the PCFS software di-  
rectories. Press the Return key to accept the default, or specify an-  
other group UIC.

### 10. VMSINSTAL displays:

```
%PCFS-I-VERSION, Checking for VMS V4.2 or greater
%PCFS-I-DECNET, Checking for DECnet
%PCFS-I-FREE, Checking for 1000 free blocks
%PCFS-I-LINKING, Linking to produce the installed image SETUIC.EXE
%PCFS-I-DIRECTORY, Checking for [PCFS] on the system disk
```

If this is the first time you are installing the VAX/VMS server,  
VMSINSTAL creates the [PCFS] directory on SYS\$COMMON and  
displays:

```
%VMSINSTAL-I-SYSDIR, This product creates system directory [PCFS].
```

VMSINSTAL continues:

```
%PCFS-I-SPECIFY, Specifying target directories for the appropriate
files
%PCFS-I-INITIAL, Creating the initial Server directory structure
%VMSINSTAL-I-SYSDISK, This product creates system disk directory
SYS$SYSDEV
%PCFS-I-IGNORE, Please ignore all warning messages that follow
```

```
%VMSINSTAL-I-ACCOUNT, This installation creates an account named
PCAPP.
```

## Installing the VAX/VMS Server

```
%UAF-I-ADDMSG, user record successfully added
%DCL-I-NEGATED, entity explicitly negated in command string
%VMSINSTAL-W-BADACC, Unable to CREATE/MODIFY account PCAPP.
VMSINSTAL-I-ACCOUNT, This installation creates an account named
PCAPP.
%UAF-I-ADDMSG, user record successfully added
%DCL-I-NEGATED, entity explicitly negated in command string
%VMSINSTAL-W-BADACC, Unable to CREATE/MODIFY account PCWAPP.
%VMSINSTAL-I-ACCOUNT, This installation creates an account named
PCCOMMON.
%UAF-I-ADDMSG, user record successfully added
%DCL-I-NEGATED, entity explicitly negated in command string
%VMSINSTAL-W-BADACC, Unable to CREATE/MODIFY account PCCOMMON.
```

### System Manager:

Upon completion of this installation, you must edit the network start-up file to allow the VAX/VMS Server for MS-DOS to be invoked during system booting.

Please refer to the VAX/VMS Server Guide for further information.

```
%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target
directories...
%RUN-S-PROC_ID, identification of created process is xxxxxxxx
```

11. If you answered "yes" to step 7 (that is, to run the IVP), VMSINSTAL displays:

Beginning the VAX PCFS Installation Verification Procedure.

The IVP tests the VAX/VMS server functions. If the tests are successful, the IVP displays:

```
%UAF-I-ADDMSG, user record successfully added
%DCL-W-NEGATED, entity explicitly negated in command string
Testing..... Buffer size: 4398. Server type: VAX.
Negotiate protocol & tree connect...OK
    Directory.....OK
    File open.....OK
    Read/write.....OK
    Seek.....OK
```

## Installing the VAX/VMS Server

```
Lock.....OK
Process exit.....OK
Set/get attributes.....OK
File search.....OK
Compatibility mode.....OK
Deny mode.....OK
Rename and delete.....OK
```

When the IVP finishes successfully, it displays:

```
Cleaning up .. PCFSTEST successfully finished.
%UAF-I-REMSG, record removed from SYSUAF.DAT
```

```
Installation of PCFS V1.1 completed at xx:xx
```

If the IVP unsuccessful, it displays some messages, followed by:

```
%VMSINSTAL-F-UNEXPECTED, Installation terminated due to unexpected
event
```

If VMSINSTAL displays this message, refer to the *Guide to VAX/VMS Software Installation*. If you have an old version of the VAX/VMS server and you chose to leave the old version files, you may be able to return to the old version by deleting the most recent version of the server files. These files are:

- SYSS\$SYSTEM:PCFS\_SERVER.EXE
- SYSS\$SYSTEM:PCFS\_OPERATOR.EXE
- SYSS\$SHARE:SETUIC.EXE
- SYSS\$HELP:PCFS011.RELEASE\_NOTES
- SYSS\$HELP:PCFS\_OPERATOR.HLB
- SYSS\$MANAGER:PCFS\_STARTUP.COM
- SYSS\$MANAGER:PCFS\_ADMIN.COM
- SYSS\$TEST:PCFSTEST.EXE

12. VMSINSTAL displays:

```
VMSINSTAL procedure done at xx:xx
```

\$

13. If you are using the console device and have removed the console volume, remount it when VMSINSTAL prompts you.

## Installing the VAX/VMS Server

Figure 1-1 shows the directory structure created by VMSINSTAL.

**[VXAPP]—[PCCOMMON]—[PCAPP]—[PCFS\_SPOOL]—[VXUSERS]**

**Figure 1-1 Directory Structure Created by VMSINSTAL**

Table 1-1 describes the accounts created by VMSINSTAL.

**Table 1-1 Accounts Created by VMSINSTAL**

---

| Account Name | Description  |
|--------------|--|
| PCAPP        | This account is the read-only alias for the unrestricted applications directory. Therefore, when users specify the PCAPP alias, they cannot delete or destroy files.   |
| PCWAPP       | This account is the writeable alias for the unrestricted applications directory. This is the alias you, the system administrator, use to maintain the applications that come with the VAXmate system software. |
| PCCOMMON     | This account is the read, write, and create alias for the common directory. This alias allows multiple users to store files that are accessible to all.  |

---

## Adding VAX/VMS Server Information to the Network Start-Up File

To start the VAX/VMS server automatically each time you restart the network, edit your network start-up file, SYS\$MANAGER:STARTNET.COM.

After the line:

```
$ @SYS$MANAGER:RTTLOAD
```

add:

```
$ IF F$SEARCH("SYS$SYSTEM:PCFS_SERVER.EXE") .NES. "" THEN -  
    @SYS$MANAGER:PCFS_STARTUP
```

**NOTE**

If you do not want to start the VAX/VMS server automatically each time you start the network, see Chapter 2.

## Adding VAX/VMS Server Information to the System Administrator's Log-In File

To define the command symbol for the operator interface, add the following line to the system administrator's log-in file, SYS\$MANAGER:LOGIN.COM.

```
$ PCSERVER := $PCFS_OPERATOR
```

The VAX/VMS server recognizes the command symbol after the system administrator's log-in file is run again.

## Preparing the VAX/VMS Server for Workstation Software

To prepare the VAX/VMS server for the workstation software, you must:

- Create accounts and directories on the server. The accounts provide access to the workstation software. The directories are to contain the workstation software.
- Register the first node with the server.

To create the accounts and directories and register the first node, use the PCFS Administration utility.

**NOTE**

To use the PCFS Administration utility, you must have the SYSPRV privilege and write access to the Master File Directory (MFD).

## Creating Workstation System Accounts and Directories

To create the workstation software accounts and directories:

1. From a terminal connected to the VAX computer, invoke the PCFS Administration utility by typing:

```
$ @SYS$MANAGER:PCFS_ADMIN<Return>
```

The PCFS Administration utility displays the Management Options menu, Screen 1-1.

### PCFS Administration Utility V1.1

#### Management Options

- 1 - CREATE Client system Directory/Account
- 2 - ADD a Personal Directory/Account
- 3 - ADD a Node Registration Entry
- 4 - ADD a Common Directory/Account
- 5 - ADD an Application Directory/Account
- 6 - ADD a Printer Queue Directory/Account
- 7 - DELETE a Personal Directory/Account
- 8 - DELETE a Node Registration Entry
- 9 - DELETE a Common Directory/Account
- 10 - DELETE an Application Directory/Account
- 11 - DELETE a Printer Queue Directory/Account
- CTRL/Z - Exit from this Utility

Your selection? █

#### Screen 1-1 Management Options Menu

2. Select option 1, CREATE Client system Directory/Account Structure, from the Management Options menu.

This option creates directories and two accounts for the workstation software. Some defaults are set automatically and some you can specify when prompted.

After selecting option 1, the PCFS Administration utility displays the Client Selection Menu, which has three options:

- Select option 1 to create a VAXmate system directory.
- Select option 2 to create an industry-standard system directory.
- Select option 3 for the type hardware supported by this system directory.

Select one of these options and press the Return key.

3. After you press the Return key, the PCFS Administration utility prompts you for the following information:
  - The file version limit for the files in the system directories. The default limit is the version limit used for the PCFS system files. You specified this file version limit when you installed the server. To accept the default, press the Return key.
  - The password for the system directory's writeable account. This account is the writeable alias for the directory that contains the unrestricted applications. The default password is MAINTAIN. To accept the default, press the Return key.

Next, the PCFS Administration utility displays some VAX/VMS utility messages while it creates the system directory and read-only and writeable accounts. The read-only account name and directory name are the two letter codes you specified for the system, with "SYS" appended to them. For example, if you specified VAXmate, the PCFS Administration utility creates the accounts:

**VXSYS**     The read-only alias for the system directory, which contains the MS-DOS operating system, the VAXmate network software, and MS-Windows. Therefore, when users specify the VXSYS alias, they cannot delete or destroy files.

**VXWSYS**   The writeable alias for the system directory, which contains the MS-DOS operating system, the VAXmate network software, and MS-Windows. Use this alias to connect to the directory when you need to write to the directory. To protect the files in the [VXSYS] directory, only authorized system administrators should know this alias and password

If you specified IBM, the PCFS Administration utility creates the accounts:

## Installing the VAX/VMS Server

- ISSYS**      The read-only alias for the system directory, which contains the MS-DOS operating system, the network software, and MS-Windows. Therefore, when users specify the ISSYS alias, they cannot delete or destroy files.
- ISWSYS**     The writeable alias for the system directory, which contains the MS-DOS operating system, the network software, and MS-Windows. Use this alias to connect to the directory when you need to write to the directory. To protect the files in the [ISSYS] directory, only authorized system administrators should know this alias and password.

Before you allow users to connect to the read-only alias for a system directory, you must set that system directory to read only.

To set the system directory to read-only:

1. Edit the file PCFS\_STARTUP.COM.
2. Advance to the lines that begin:

```
$ MCR PCFS_OPERATOR
      SET ALIAS PCAPP /READ
$ !   SET ALIAS VXSYS /READ
$ !   SET ALIAS ISSYS /READ
$ !   SET ALIAS RBSYS /READ
```

3. Remove the dollar sign (\$) and exclamation point (!) from the appropriate command line. For example, if you added an industry-standard system account, remove the dollar sign and exclamation point from the command line for ISSYS.

Figure 1-2 shows the directory structure created by option 1 of the Management Options Menu.

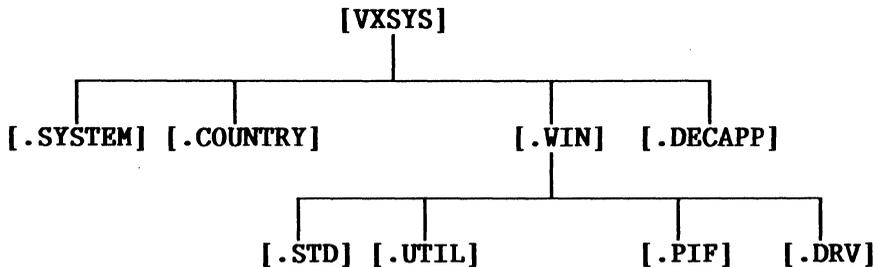


Figure 1-2 Directory Structure Created by Option 1

## Registering the First Node

To register the first node, you must know its DECnet node name and address. You should write down this information now.

### NOTE

If you are responsible for assigning DECnet node names and addresses for your network, use the NCP SHOW KNOWN NODE command to list the nodes defined on your network. Then assign a DECnet node name and address that are not on the list of known nodes.

If you are not responsible for assigning DECnet node names and addresses for your network, see the person in your organization who is.

To register the first node:

1. Select option 3, ADD a Node Registration Entry, from the Management Options menu.

The PCFS Management utility prompts you for:

- The DECnet node name of the workstation you want to register
- The DECnet node address of the workstation you want to register

## Installing the VAX/VMS Server

2. Type the DECnet node name and node address of the first workstation to connect to the VAX/VMS server.

This option registers the DECnet node name and address with the server's permanent database and volatile database. The permanent database, stored on disk, defines the network to the local node, which is the VAX/VMS server. The volatile database, stored in memory, contains the current network configuration parameters, including node names that are defined for DECnet.

3. To return to the main menu, press the Return key. To exit from the PCFS Administration utility, press the Ctrl/Z keys.

To install VAXmate workstation software or IBM workstation software, see the *Personal Workstation Configuration Guide*.

## Adding the First User

Adding users to the server is a common task that you may perform many times. It is recommended that the first user you add to the network is yourself. The following procedure tells you how to add yourself to the server.

1. Determine your personal directory name.

A personal directory is a directory exclusively reserved for one user and is the key diskette's default directory. A WIN.INI file is stored in each personal directory so each user can run a tailored version of MS-Windows. When a user creates a file, it is stored in the personal directory by default.

The VAX/VMS server requires that each user has at least one of the three types of personal directories:

- A personal directory set up specifically for use with the VAX/VMS server. You can create this kind of personal directory with the PCFS Administration utility. A user cannot "login" to this directory using a terminal emulator.
- A personal directory on a workstation hard disk. To use this personal directory, you must have installed and formatted the hard disk.
- A personal directory that is a current VAX/VMS user directory. This directory is normally used with the VAX/VMS operating system. A user can "login" to this directory using a terminal emulator.

You should note your personal directory name now.

2. If the first workstation does not have a hard disk or you do not already have a directory and account on the VAX computer, create a personal directory on the VAX as follows:

- a. From a terminal connected to the VAX computer, invoke the PCFS Administration utility by typing:

```
$ @SYS$MANAGER:PCFS_ADMIN<Return>
```

- b. Select option 2, ADD a Personal Directory/Account, from the Management Options menu.
- c. Type the VAX/VMS account name for your personal directory and press the Return key. For example, if your name is John Smith, you can type:

```
SMITH<Return>
```

- d. Type the password you want to assign to your account and press the Return key. If you omit the password, the account is assigned the default password WELCOME.
- e. Type the file version limit for your personal directory and press the Return key. If you omit the file version limit, the PCFS Administration utility assigns the default file version limit for personal and common directories. The default file version limit is 1, unless you changed the default when you created the VAX/VMS server directory structure.

The PCFS Administration utility displays some VAX/VMS utility messages while it creates your directory and updates the User Access File (UAF) to include your account.

The PCFS Administration utility creates your directory in the [VXUSER] directory and assigns the same name as the account name. For example, if you specified your account name as SMITH, the PCFS Administration utility creates the directory [VXUSER.SMITH].

To exit from the PCFS Administration utility, press the Return key to return to the main menu, then press the Ctrl/Z keys.

## Installing the VAX/VMS Server

### NOTE

Normally, when you add users, you must register the DECnet node name for the user's workstation with the VAX/VMS server. You registered the node name for the first workstation when you created the initial directory structure.

To install client software, see the *Personal Workstation Configuration Guide*.

# Chapter 2

## VAX/VMS Server Operations

This chapter describes tasks that help you maintain your VAX/VMS server and your network. You may perform some of these tasks daily and some not at all, depending on your network configuration and the needs of your users. The tasks are:

- Starting the VAX/VMS server
- Stopping the VAX/VMS server
- Adding a user
- Removing a user
- Installing an application
- Removing an application
- Adding a printer
- Removing a printer
- Creating a common directory
- Removing a common directory
- Modifying the Information System
- Backing up the server
- Maintaining the server log file

### NOTE

Before you perform any of these tasks, make sure that you created a VAX/VMS server directory structure as described in Chapter 1.

## Starting the VAX/VMS Server

The VMSINSTAL procedure in Chapter 1 starts the VAX/VMS server. The VAX/VMS server continues to run as long as the VAX computer runs.

If you specified the PCFS\_STARTUP.COM file in the network start-up file, the VAX/VMS server automatically starts each time you restart the network.

If you did not specify the PCFS\_STARTUP.COM file in the network start-up file or if you stop the VAX/VMS server process, start the server with the PCFS\_STARTUP.COM procedure. This procedure:

- Starts the VAX/VMS server, which runs as a privileged process on the VAX computer. (If the VAX/VMS server is already running when the PCFS\_STARTUP.COM procedure is run, this procedure stops the server process and starts another server process. This procedure also disconnects all current connections.)
- Defines any commands that you want to execute each time you start the VAX/VMS server. You place these commands in the PCFS\_STARTUP.COM file.

To run this procedure, log into a privileged account and type:

```
$ @SYS$MANAGER:PCFS_STARTUP
```

When the VAX/VMS server starts, the following message is displayed:

```
%RUN-S-PROC_ID, identification of created process is xxxxxxxx
```

For more information about the PCFS\_STARTUP.COM file, see Chapter 4.

## Stopping the VAX/VMS Server

You can stop the VAX/VMS server in one of three ways. You can stop:

- Users from connecting to the server  
Use the PCSERVER REFUSE CONNECTIONS command, which prevents users from connecting to the VAX/VMS server. Users already connected to the server remain connected.

To use the REFUSE CONNECTIONS command, type:

**\$ PCSERVER REFUSE CONNECTIONS**

To allow users to reconnect to the server, use the PCSERVER ACCEPT CONNECTIONS command:

**\$ PCFSSERVER ACCEPT CONNECTIONS**

- Existing connections to the server

Use the PCSERVER STOP SERVER command, which disconnects all current users from the server and prevents other users from connecting to the server.

To use the STOP SERVER command, type:

**\$ PCSERVER STOP SERVER**

Any workstations connected to the server remain connected until they choose to disconnect.

The server image continues to run, but no more workstations can connect to the server.

To allow users to reconnect to the server, use the PCSERVER START SERVER command. For more information about the PCSERVER STOP SERVER command or the PCSERVER START SERVER command, see Chapter 3.

- The server process

Determine the server process identification number by using the VAX/VMS SHOW SYSTEM command. Look for the identification number for the process PCFS\_SERVER.

To stop the server process, type:

**\$ STOP /ID=number**

If you stop the server process, all existing connections to the server are disconnected, and the server image is terminated. To restart the server process, use the PCFS\_STARTUP.COM file and type:

**\$ @SYS\$MANAGER:PCFS\_STARTUP.COM**

## Adding a User

You can add users to the VAX/VMS server at any time. Usually you add users when you first set up the VAX/VMS server and when new users come into your organization.

### NOTE

If the VAX/VMS server no longer recognizes a node you already defined, delete the node using the PCFS Administration utility and specify option 8. Redefine the node use the PCFS Administration utility and specify option 3.

To add a user to the VAX/VMS server:

1. Make sure the user has a personal directory on either the workstation or on the VAX/VMS server. If the user's workstation does not have a hard disk that contains a personal directory or if the user does not have an existing VAX/VMS account and directory, create a personal directory and account for the user.

To create a personal directory and account on the VAX/VMS server:

- a. Invoke the PCFS Administration utility by typing:

```
$ @SYS$MANAGER:PCFS_ADMIN
```

- b. Select option 2, ADD a Personal Directory/Account, from the Management Options menu.
- c. Type the user's account name.
- d. Type the user's account password. If you do not type a password, the default password "WELCOME" is assigned. If the default password is chosen, remind the user to change it to a unique password.
- e. Type the file version limit for the user's directory. If you do not specify a file version limit, the PCFS Administration utility assigns the default file version limit for personal and common

directories. The default limit is 1, unless you changed the default when you created the VAX/VMS server directory structure.

- f. If disk quotas are enabled on the disk where the personal accounts are created, type the disk quota limit for the account. The default disk quota is 10,000 blocks, which is approximately 5 megabytes of storage space.

The PCFS Administration utility displays some VAX/VMS utility messages while it creates the user's directory and updates the UAF to include the user's account. The PCFS Administration utility creates the user's subdirectory in the VXUSER directory and assigns the same name as the account name. The PCFS Administration utility also assigns the UIC with the default group number and a unique member number within the group.

2. Add the DECnet node name and DECnet node address for the user's workstation to the DECnet database using the PCFS Administration utility:
  - a. Select option 3, ADD a Node Registration Entry, from the Management Options menu.
  - b. Type the user's DECnet node name. Make sure you type a unique DECnet node name.
  - c. Type the user's DECnet node address. Make sure you type a unique DECnet node address.

The PCFS Administration utility enters the information into the permanent database and the volatile database. To return to the main menu, press the Return key. To exit from the PCFS Administration utility from the main menu, press the Ctrl/Z keys.

3. Create a key diskette for the user. For more information about creating a key diskette, see the *Personal Workstation Configuration Guide*.

## Removing a User

To remove a user from the network and the VAX/VMS server:

1. If the user has a personal directory, which was created by the PCFS Administration utility, on the VAX/VMS server, use the VMS BACKUP utility to back up the files in the user's personal directory to some removable media.
2. Use the PCFS Administration utility to delete the files, the directory, and the UAF entry for the account:

- a. Type:

```
$ @SYS$MANAGER:PCFS_ADMIN
```

- b. Select option 7, DELETE a Personal Directory/Account, from the Management Options menu.
- c. Type the name of the user's account that you want to delete.

The PCFS Administration utility displays some VAX/VMS utility messages while it deletes the directory, the files, and the UAF entry for the user's account.

3. Delete the user's DECnet node registration entry from the network database, using the PCFS Administration utility:
  - a. Select option 8, DELETE a Node Registration Entry, from the Management Options menu.
  - b. Type either the DECnet node name or the DECnet node address when prompted for the node identifier.

The PCFS Administration utility displays some VAX/VMS utility messages while it deletes the node from the network database. To return to the main menu, press the Return key. To exit from the main menu, press the Ctrl/Z keys.

## Installing an Application

An MS-DOS application directory stores applications for remote access. You can set applications to be unrestricted or restricted.

## Unrestricted Applications

Unrestricted applications have no restrictions on the number of users that can connect to that application's directory at one time.

You install unrestricted applications in the PCAPP directory, which is created as part of the VAX/VMS server directory structure. Some unrestricted applications are automatically installed in this directory as part of the VAXmate system software installation.

The PCAPP directory has two aliases or accounts: one (PCAPP) with read-only access for the application users and one (PCWAPP) with read and write access for the system administrator. Both accounts were created when you installed the VAX/VMS server.

### NOTE

The VAXmate system software also includes unrestricted applications that are hardware dependent. These are installed in the [VXSYS.DECAPP] directory. You should not need to add other applications to this directory.

To install an unrestricted application on the VAX/VMS server:

1. From your workstation, insert the system administrator's key diskette into drive A and turn on (or reset) the workstation.
2. Expand the MS-DOS Executive icon. You may have to exit from MS-Windows to install some applications.
3. Connect to the PCAPP directory.
4. Create a subdirectory for the application.
5. Install the application into the subdirectory in the PCAPP directory according to the instructions provided with the manufacturer's documentation. PCAPP is drive K on your key diskette.
6. If the application requires a Program Information File (PIF), copy or create the PIF in the application directory. A PIF is required if the application is to be used with MS-Windows and was not designed for MS-Windows. For more information on PIFs, see the *VAXmate Operating Environment Release Notes* and the *VAXmate User's Guide*.

To offer the application to users, add the application to the Configuration Aide application database and specify the application on the user's key diskette. For more information about adding an application with the Configuration Aide, see the *Personal Workstation Configuration Guide*.

## Restricted Applications

Restricted applications have a password, a limit to the number of users that can connect to the application at one time, or both.

You install restricted applications in subdirectories of the VXAPP directory, which was created as part of the VAX/VMS server directory structure.

A restricted application must have two aliases or accounts: one for read-only access for the application users and one for read and write access for the system administrator. Both of these accounts are created with the PCFS Administration utility.

You can limit the number of users that connect to a directory with the PCSERVER LIMIT CONNECTIONS /ALIAS command. Be sure to specify this command in the PCFS\_STARTUP.COM or each time you restart the VAX computer. For more information about the LIMIT commands, see Chapter 3.

### NOTE

Various DIGITAL and industry-standard applications can be installed on the VAX/VMS server. Check the application's license agreement to be sure you have the correct license and permission to install and operate the application on the server.

You are responsible for ensuring that correct licenses are obtained prior to installing and operating a restricted application.

To install a restricted application on the VAX/VMS server:

1. Invoke the PCFS Administration utility by typing:

```
$ @SYS$MANAGER:PCFS_ADMIN
```

2. Select option 5, ADD an Application Directory/Account, from the Management Options menu.
3. Type the name of the application.
4. Type the password for the application's writeable account. If you do not specify a password, the PCFS Administration utility assigns the default password MAINTAIN.

5. Type the password for the application's read-only account. If you do not specify a password, the PCFS Administration utility assigns no password to this account.

The PCFS Administration utility displays some VAX/VMS utility messages while it creates the application directory and read-only and writeable accounts.

The read-only account name and the directory name are the name you specified for the application. The writeable account name is the application name with a *W* appended to the end. For example, if you type the application name *RBASE*, the PCFS Administration utility creates a read-only account *RBASE*, a writeable account *RBASEW*, and a directory [*VXAPP.RBASE*].

To return to the main menu, press the Return key. To exit from the PCFS Administration utility from the main menu, press the Ctrl/Z keys.

6. Issue the following operator interface command:

```
$ PCSERVER SET ALIAS name /READ
```

Where:

*name* Is the name of the application directory you created.

Add this line to the server start-up file, so that it takes effect each time the server is started.

7. From your workstation, insert the system administrator's key diskette into drive A and turn on (or reset) the workstation.
8. Expand the MS-DOS Executive icon. You may have to exit from MS-Windows to install some applications.
9. Connect drive L: to the VAX/VMS server with the NET USE command and specify the application's writeable alias. If drive L: is already in use, specify an unused drive. For example, to install the application *RBASE* on the VAX/VMS server with node name *BOSTON*, type:

```
A>NET USE L: \\BOSTON\RBASEW password
```

## VAX/VMS Server Operations

10. Install the application into the subdirectory in the VXAPP directory according to instructions provided with the manufacturer's documentation. VXAPP is drive L on your key diskette, or the drive you specified in step 9.
11. If the application requires a Program Information File (PIF), copy or create the PIF in the application directory. A PIF is required if the application is to be used with MS-Windows and was not designed for MS-Windows. For more information on PIFs, see the *VAXmate Operating Environment Release Notes* and the *VAXmate User's Guide*.

To offer the application to users, add the application to the Configuration Aide application database and specify the application on the user's key diskette. For more information about adding an application with the Configuration Aide, see the *Personal Workstation Configuration Guide*.

## Removing an Application

You can remove access to unrestricted and restricted applications.

### Unrestricted Applications

To remove an unrestricted application from the VAX/VMS server:

1. Back up the application's files in the application's directory to some removable media.
2. Delete the application's files from the application's directory.
3. Delete the application's directory from the PCAPP directory.

Remove the application from the Configuration Aide application database and update any key diskette that accessed the application. For more information, see the *Personal Workstation Configuration Guide*.

### Restricted Applications

To remove an unrestricted application from the VAX/VMS server:

1. Back up the application's files in the application's directory to some removable media.
2. Use the PCFS Administration utility to delete the directory, the files, and the UAF entry for the account.

- a. Type:

```
$ @SYS$MANAGER:PCFS_ADMIN
```

- b. Select option 10, DELETE an Application Directory/Account, from the Management Options menu.
- c. Type the name of the application the you want to delete.

The PCFS Administration utility displays some VAX/VMS utility messages while it deletes the files, the directory, and the UAF entry for the application account.

To return to the main menu, press the Return key. To exit from the main menu, press the Ctrl/Z keys.

Remove the appropriate SET ALIAS command line from the server start-up file.

Remove the application from the Configuration Aide application database and update any key diskette that accessed the application. For more information, see the *Personal Workstation Configuration Guide*.

## Adding a Printer

The VAX/VMS server allows users access to printers connected to the VAX computer and to print files using various forms. The VAX/VMS server provides default forms and device control libraries for some of the printers that it supports. You use the PCFS Administration utility to set up the printer queues and create the necessary account and directories.

The PCFS Administration utility supports four printers and provides a device control library for each printer and eight default forms.

Table 2-1 lists the default forms and device control library for each printer that the PCFS Administration utility supports. The .TLB files are stored in SYS\$LIBRARY.

## VAX/VMS Server Operations

**Table 2-1 VAX/VMS Server Printers and Forms**

| Printer            | Default Forms  | Device Control Library   |
|--------------------|--|--------------------------|
| DEC LN03           | DEC Portrait Mode<br>DEC Landscape Mode  | PCFS_LN03_DEVCTL.TLB     |
| DEC LN03 PLUS      | DEC Portrait Mode<br>DEC Landscape Mode<br>Industry-standard Portrait Mode<br>Industry-standard Landscape Mode     | PCFS_LN03PLUS_DEVCTL.TLB |
| DEC LA50           | DEC 80 column Mode<br>DEC 132 column Mode  | PCFS_LA50_DEVCTL.TLB     |
| DEC LA75 Companion | DEC 80 column Mode<br>DEC 132 column Mode<br>Industry-standard 80 column Mode<br>Industry-standard 132 column Mode | PCFS_LA75_DEVCTL.TLB     |

The default printer queue that is created when you install a printer is named according to the printer type:

- For a DEC LN03, the printer queue name is PCFS\$LN03.
- For a DEC LN03 PLUS, the printer queue name is PCFS\$LN03P.
- For a DEC LA50, the printer queue name is PCFS\$LA50.
- For a DEC LA75 Companion, the printer queue name is PCFS\$LA75.

You can also use the VAX/VMS server with an existing generic printer queue, which is described later in this chapter.

Before you add a printer, make sure the printer is physically connected to the VAX computer. For more information on connecting the printer, see the printer documentation.

To add a printer to the VAX/VMS server:

1. Invoke the PCFS Administration utility by typing:  

```
$ @SYS$MANAGER:PCFS_ADMIN
```
2. Select option 6, ADD a Printer Queue Directory/Account, from the Management Options menu.
3. Select the number corresponding to the printer you want to add.
4. If you select the LN03, LN03PLUS, LA75, or LA50 printers:
  - a. Type the physical device name for the printer port.

### NOTE

To change the printer port, select option 11, DELETE a Printer Queue Directory/Account, from the Management Options menu to delete the printer, then select option 6 again to enter the correct printer port.

The PCFS Administration utility prompts you for the physical device again. If you only have one printer of the specified type (for example, one LN03 PLUS), press the Return key to continue.

If you have more than one printer of the specified type, specify the physical device name for each of the other printers. Press the Return key to continue.

For example, if you have two LN03 printers, specify the physical device TXA0: for one printer and the physical device TXB0: for the other printer.

- b. Type the password for the printer account. To specify no password, press the Return key.
  - The PCFS Administration utility displays some VAX/VMS utility messages while it creates:
    - A generic printer queue for the printer type. The generic queue name is the string "PCFS\$" with the printer type appended to the end.
    - A physical printer queue for each printer of the specified type. The physical queue name is the physical device name that you specified.
    - A subdirectory in the PCFS\_SPOOL directory for the printer type. The directory name is the name of the printer type.

## VAX/VMS Server Operations

- A subdirectory in the [PCFS\_SPOOL.printer] directory for each form that the printer supports. Each directory name is the name of the form.
- An account for each form that the printer supports. Each account name is specified by the printer type, an underscore, and the form name.

For example, if you add an LA75 Companion printer that has the physical device name TTA0:, the PCFS Administration utility creates:

- A generic queue called PCFS\$LA75
- A physical queue called TTA0:
- A directory called [PCFS\_SPOOL.LA75]
- Four subdirectories:

```
[PCFS_SPOOL.LA75.STD_80]
[PCFS_SPOOL.LA75.STD_132]
[PCFS_SPOOL.LA75.DEC_80]
[PCFS_SPOOL.LA75.DEC_132]
```

- Four accounts:

```
LA75_S80
LA75_S132
LA75_D80
LA75_D132
```

The UIC assigned to all printer queue directories and accounts has the default group number and the member number 77. The default group number is 360 unless you changed it when you created the VAX/VMS server directory structure.

The PCFS Administration utility reminds you to add a line to the SYSTARTUP.COM file:

```
$ @SYS$MANAGER:PCFS_PRINT.COM
```

When you restart the VAX computer with the SYSTARTUP.COM file, it runs the PCFS\_PRINT.COM file, which defines forms and initializes the printer queues. The PCFS\_PRINT.COM file is created by the PCFS Administration utility when you add the first printer.

5. If you select the existing generic queue:
  - Type the existing printer queue name.
  - Type the password for the printer queue. To specify no password, press the Return key.

The PCFS Administration utility creates a directory and an account with the name of the printer queue. The directory is created in the PCFS\_SPOOL directory.

**NOTE**

If a user is connected to the VAX/VMS server and issues the NET PRINT \nodename command, it returns information about the generic queue SYS\$PRINT. If the SYS\$PRINT queue is not enabled, you can enable it in your site-specific start-up file. For more information about your site-specific start-up file, see the *Guide to VAX/VMS System Management and Daily Operations*.

To return to the main menu, press the Return key. To exit from the PCFS Administration utility, press the Ctrl/Z keys.

To offer the printer to users, you must specify the printer on the user's key diskette. For more information about adding a printer to a key diskette, see the *Personal Workstation Configuration Guide*.

## Removing a Printer

To remove a printer from the VAX/VMS server, use the PCFS Administration utility to delete the printer queue, the directory, and the UAF entry for the account. To remove a printer:

1. Type:
 

```
$ @SYS$MANAGER:PCFS_ADMIN
```
2. Select option 11, DELETE a Printer Queue Directory/Account, from the Management Options menu.
3. Select the number corresponding to the printer that you want to delete.

The PCFS Administration utility displays some VAX/VMS utility messages while it deletes the printer queue, the directory, and the UAF entry for the printer queue account.

## VAX/VMS Server Operations

To return to the main menu, press the Return key. To exit from the main menu, press the Ctrl/Z keys.

### Creating a Common Directory

A common directory contains files to which users have write access. Each common directory is a subdirectory of the PCCOMMON directory, which was created as part of the VAX/VMS server directory structure.

To create a common directory on the VAX/VMS server:

1. Invoke the PCFS Administration utility by typing:

```
$ @SYS$MANAGER:PCFS_ADMIN
```

2. Select option 4, ADD a Common Directory/Account, from the Management Options menu.
3. Type the name for the common account.
4. Type the password for the account. To specify no password, press the Return key.
5. Type the file version limit for the common directory. If you do not specify a file version limit, the PCFS Administration utility assigns the default file version limit for personal and common directories. The default file version limit is 1, unless you changed the default when you created the VAX/VMS server directory structure.
6. If disk quotas are enabled on the disk where the common account is created, type the disk quota limit for the account. The default disk quota is 10,000 blocks, which is approximately 5 megabytes of storage space.

The PCFS Administration utility displays some VAX/VMS utility messages while it creates the common directory and account. The common directory has the same name as the account. The UIC assigned to all common directories has the default group number and a unique member number. The default group number is 360, unless you changed it when you created the VAX/VMS server directory structure.

To return to the main menu, press the Return key. To exit from the PCFS Administration utility from the main menu, press the Ctrl/Z keys.

To offer a common directory to users, you must specify the common directory on the user's key diskette. For more information about adding a common directory to a user's key diskette, see the *Personal Workstation Configuration Guide*.

## Removing a Common Directory

To remove a common directory and account from the VAX/VMS server:

1. Back up the files in the common directory to some removable media.
2. Use the PCFS Administration utility to delete the directory, the files, and the UAF entry for the account.

a. Type:

```
$ @SYS$MANAGER:PCFS_ADMIN
```

- b. Select option 9, DELETE a Common Directory/Account, from the Management Options menu.
- c. Type the account name for the common directory that you want to delete.

The PCFS Administration utility displays some VAX/VMS utility messages while it deletes the directory, the files, and the UAF entry for the account.

To return to the main menu, press the Return key. To exit from the main menu, press the Ctrl/Z keys.

## Modifying the Information System

You can add new information or notes to the Information System for users. This information can include:

- A list of the network resources that are available to users
- Your name, location, and phone extension so that users may contact you when they have a problem
- Where to pick up listings printed on network printers

To add information:

## VAX/VMS Server Operations

1. From your workstation, insert the system administrator's key diskette into drive A and turn on (or reset) the workstation.  
The workstation should display the Information System.
2. Expand the MS-DOS Executive icon.
3. Create a text file called INFOUSER.TMP that contains the information you want displayed when a user selects the "Notes From Your System Administrator" topic. If you use the Notepad editor, you see the information as it is displayed.
4. Use the MS-DOS ATTRIB command to remove the read-only attribute from the H:\DECAPP\INFOUSER.I00 file.
5. Copy the INFOUSER.TMP file to the file name H:\DECAPP\INFOUSER.I00.
6. Use the MS-DOS ATTRIB command to mark the H:\DECAPP\INFOUSER.I00 file read-only.
7. From the Information System main menu, select the "Notes From Your System Administrator" topic. You should see the information you created.

You can update this file at any time. However, be sure that no users are accessing this Information System topic. If you receive an error message when copying the file, a user may be reading the topic.

## Backing Up the VAX/VMS Server

You should back up the VAX/VMS server:

- As part of your regular back-up process
- On other occasions, depending on the specific component of the server:
  - The VAX/VMS server software, the VAXmate system software, and MS-DOS applications  
These should be backed up if you install a new version of the VAX/VMS server software, the VAXmate system software, or a new version of an application.
  - The VAXmate common directories and personal directories  
Because users can change the files in these directories, the files should be backed up on a daily basis.

**NOTE**

If you use the VAX/VMS server to modify a file, do not back up the file using the BACKUP command with the /MODIFIED qualifier.

Table 2-2 lists the specific directories you should back up for the VAX/VMS server.

**Table 2-2 VAX/VMS Server Directories to Back Up**

| VAX/VMS Server Component    | Disk or Directory to Back Up               |
|-----------------------------|--|
| VAX/VMS server software     | System disk                                |
| VAXmate system software     | [VXSYS], [PCAPP], [PCFS_SPOOL] directories |
| MS-DOS applications         | [VXAPP] directory                          |
| Common and user directories | [PCCOMMON] and [VXUSER] directories        |

VAXmate system software is divided into two components:

1. System independent software, which is stored in [PCAPP] and in [PCFS\_SPOOL].
2. System dependent software, which is stored in one or more of the following directories (depending on the workstations being used):
  - [VXSYS]
  - [ISSYS]

For more information about the VAX/VMS Backup utility, see the *VAX/VMS Backup Utility Reference Manual*.

## Maintaining the Server Log File

The VAX/VMS server records logged events in the file `SYS$SPECIFIC:[PCFS]PCFS_SERVER.LOG`.

The log file is a standard text file that contains one or more messages. The messages describe network events that occur during operation of the VAX/VMS server.

## VAX/VMS Server Operations

### NOTE

It is not uncommon for a log file to contain a number of "link aborted" messages. You do not have to respond to these messages unless users are complaining about losing links to the server.

The VAX/VMS server updates the log file once every 60 seconds. After an event occurs, the event is logged within the next minute.

To display the name of the current log file in the SYS\$SPECIFIC:[PCFS] directory, use the PCSERVER SHOW LOG FILE command.

To display the messages that are in the log file, use the VAX/VMS TYPE command.

You cannot use the VAX/VMS COPY command to copy the log file while the server has it open. Therefore, to copy the log file, close it using the PCSERVER SET LOG FILE. You can omit the file name in the SET LOG FILE command, in which case the default, PCFS\_SERVER.LOG, is used. If the server was using the specified file name, a new file is created.

To close the current log file and create a new one, use the PCSERVER SET LOG FILE command. You might want to close the log file so you can edit it to see the messages it contains. For an explanation of the messages in the log file, see Chapter 5.

### NOTE

The VAX/VMS server automatically creates a new log file, named SYS\$SPECIFIC:[PCFS]PCFS\_SERVER.LOG, each time you start the server.

The PCSERVER SET LOG FILE command:

- Closes the current log file.
- Creates a new version of the file name specified on the command line.
- Begins using the specified file as a log file.

You can control which events the VAX/VMS server logs with the PCSERVER LOG command. For more information about the PCSERVER LOG command or the PCSERVER SET LOG command, see Chapter 3.

# Chapter 3

## VAX/VMS Server Commands

This chapter tells you how to manage the VAX/VMS server with the server operator interface. The operator interface processes commands that allow you to control and monitor the daily use of the VAX/VMS server.

### The VAX/VMS Server Operator Interface

Before you use the VAX/VMS server operator interface:

- You must have OPER and SYSPRV privileges.
- The VAX/VMS server must be installed and executing.
- You must define the "PCSERVER" symbol for the operator interface in the system administrator's log-in file and run the log-in file again. If you have not already done this, see Chapter 1.

To use the operator interface, type:

```
$ PCSERVER
```

If the operator interface displays any error messages, see Chapter 5 for an explanation of the message.

You can enter commands when the VAX/VMS server displays the prompt:

```
PCFS>
```

Table 3-1 lists the tasks you can perform with the operator interface. The tasks are listed alphabetically according to the command you use.

## VAX/VMS Server Commands

Table 3-1 VAX/VMS Server Operator Interface Commands

| If you want to...   | Use the command...     | On page |
|---|------------------------|---------|
| Allow registered workstations to connect to the VAX/VMS server          | ACCEPT CONNECTIONS     | 3-4     |
| Allows any workstation to connect to the VAX/VMS server                 | ACCEPT<br>UNREGISTERED | 3-5     |
| Close a connection  | CLOSE CONNECTION       | 3-6     |
| Close an open file  | CLOSE FILE             | 3-8     |
| Close a session   | CLOSE SESSION          | 3-10    |
| Exit to the VAX/VMS operating system                                    | EXIT                   | 3-12    |
| Get help  | HELP                   | 3-13    |
| Change the limits imposed by the VAX/VMS server                         | LIMIT CONNECTIONS      | 3-16    |
|   | LIMIT FILES            | 3-18    |
|   | LIMIT SESSIONS         | 3-19    |
| Display network events that the VAX/VMS server is logging               | LOG                    | 3-20    |
| Refuse connection requests to the server from registered workstations   | REFUSE CONNECTIONS     | 3-23    |
| Refuse connection requests to the server from unregistered workstations | REFUSE<br>UNREGISTERED | 3-24    |
| Setting restrictions for an offering                                    | SET ALIAS              | 3-25    |
| Open a file to log network events                                       | SET LOG FILE           | 3-26    |

Table 3-1 VAX/VMS Server Operator Interface Commands (cont.)

| If you want to...  | Use the command... | On page |
|--|--------------------|---------|
| Display information about the VAX/VMS server                     | SHOW CONNECTIONS   | 3-28    |
|  | SHOW FILES         | 3-29    |
|  | SHOW LIMITS        | 3-30    |
|  | SHOW LOG FILE      | 3-31    |
|  | SHOW SESSIONS      | 3-32    |
|  | SHOW STATUS        | 3-33    |
|  | SHOW VERSION       | 3-34    |
| Allow workstations to establish sessions with the VAX/VMS server | START SERVER       | 3-35    |
| Disconnect all existing connections to the VAX/VMS server        | STOP SERVER        | 3-36    |

If you want to remove a workstation from the network database, or add a workstation to the network database, use the PCFS Administration utility.

## ACCEPT CONNECTIONS

### Allowing Connections to the VAX/VMS Server

To allow the VAX/VMS server to accept connections from one or more workstations, use the ACCEPT CONNECTIONS command.

After issuing the REFUSE CONNECTIONS command, use the ACCEPT CONNECTIONS command to reaccept connection requests.

#### *Format*

ACCEPT CONNECTIONS

#### *Example*

To allow the VAX/VMS server to accept connections, type:

```
PCFS>ACCEPT CONNECTIONS  
PCFS>
```

## Allowing Unregistered Nodes

To accept connections from a workstation that is not registered in the volatile DECnet node name database, use the ACCEPT UNREGISTERED command.

The volatile database, which is stored in memory, contains the node names that are registered with DECnet and are recognized by the VAX/VMS server. By default, only registered DECnet nodes can connect to the VAX/VMS server. However, you can issue the ACCEPT UNREGISTERED command to allow other nodes to connect to the VAX/VMS server.

### NOTE

To register a node with the DECnet databases, use the PCFS Administration utility. For more information, see Chapter 2.

To allow unregistered nodes to connect to the VAX/VMS server, you can place the ACCEPT UNREGISTERED command in the file PCFS\_STARTUP.COM. The next time you start the VAX/VMS server, unregistered nodes can connect to the server. Unregistered nodes can connect until you issue a REFUSE UNREGISTERED command or remove the line from the PCFS\_STARTUP.COM file and restart the VAX/VMS server.

To determine if the VAX/VMS server accepts connections from unregistered users, use the SHOW STATUS command.

### *Format*

ACCEPT UNREGISTERED

### *Example*

To allow the VAX/VMS server to accept unregistered nodes, type:

```
PCFS>ACCEPT UNREGISTERED  
PCFS>
```

## CLOSE CONNECTION

### Closing a Connection

To disconnect a workstation connection to the VAX/VMS server, use the CLOSE CONNECTION command. You can close a connection if a user leaves a workstation unattended while still connected to a restricted alias.

You can specify the connection by either its alias or its connection identifier.

The VAX/VMS server asks you to verify that you want to close the specified connection. If you verify your request, the VAX/VMS server closes the connection and any files opened from the connection.

Use the SHOW CONNECTIONS command to display a list of all connections maintained by the VAX/VMS server, including the alias and the connection identifier for each.

#### *Format*

```
CLOSE CONNECTION alias | /ID=connection identifier
```

Where:

|                       |   |
|-----------------------|---|
| alias                 | Is the VAX/VMS account name associated with the connection. If you specify the alias, the VAX/VMS server disconnects all connections to that alias for all sessions.  |
| connection identifier | Is the number the VAX/VMS server assigns to the connection when it is established. The VAX/VMS server assigns a unique identifier to each connection, even if more than one workstation establishes connections to the same alias. If you specify the identifier, the VAX/VMS server disconnects only that specific connection. To determine the connection identifier, use the SHOW CONNECTIONS command. |

#### *Example 1*

To disconnect connections specified by the alias JONES, type:

```
PCFS>CLOSE CONNECTION JONES
Do you want to close the connection JONES? [N]:y
PCFS>
```

## CLOSE CONNECTION

### *Example 2*

To disconnect the connection specified with the connection identifier 1, type:

```
PCFS>CLOSE CONNECTION /ID=1
```

```
Do you want to close the connection 1? [N]:y
```

```
PCFS>
```

## CLOSE FILE

### Closing a File

To close a file that a workstation opened, use the CLOSE FILE command. You can close a file if a user leaves the workstation unattended with a file opened in such a way that no other workstations can open it.

You can specify the file by either the file identifier or the file name.

The VAX/VMS server asks you to verify that you want to close the specified file. If you verify your request, the VAX/VMS server closes the file.

Use the SHOW FILES command to display a list of all open files, including the file name and file identifier for each.

#### *Format*

```
CLOSE FILE filename | /ID=file identifier
```

Where:

|                 |  |
|-----------------|--|
| filename        | Is the name that the workstation specifies when the VAX/VMS server opens the file, in the form:<br><br>dev:[directory]filename.ext<br><br>If you specify the file name, the VAX/VMS server closes all instances of that open file for all connections.   |
| file identifier | Is the number the VAX/VMS server assigns when it opens the file. The VAX/VMS server assigns a unique file identifier to each open file, even if that file is currently open by another workstation. If you specify the file identifier, the VAX/VMS server closes only that specific file. To determine the file identifier, use the SHOW FILES command. |

#### *Example 1*

To close all instances of the open file WRK:[SMITH]REPORT.TXT, type:

```
PCFS>CLOSE FILE REPORT.TXT  
Do you want to close the file WRK:[SMITH]REPORT.TXT? [N]:y  
PCFS>
```

## CLOSE FILE

### *Example 2*

To close the file with the file identifier 1, type:

```
PCFS>CLOSE FILE /ID=1
```

```
Do you want to close the file 1? [N]:y
```

```
PCFS>
```

## CLOSE SESSION

### Closing A Session

To close a session that the VAX/VMS server established with a workstation, use the **CLOSE SESSION** command. You can use the **CLOSE SESSION** command to terminate an open session before stopping the VAX/VMS server.

You can specify the session by either the workstation or the workstation identifier.

The VAX/VMS server asks you to verify that you want to close the specified session. If you verify your request, the VAX/VMS server closes the session and any files and connections established during the session.

Use the **SHOW SESSIONS** command to display a list of sessions currently established by the VAX/VMS server.

#### *Format*

```
CLOSE SESSION workstation | /ID=workstation identifier
```

Where:

|                        |  |
|------------------------|--|
| workstation            | Is the DECnet node name for the workstation that provides the user's link to the VAX/VMS server.   |
| workstation identifier | Is the number assigned by the VAX/VMS server when it established the session. To determine the workstation identifier, use the <b>SHOW SESSIONS</b> command. |

#### *Example 1*

To close a session for a workstation named GREEN, type:

```
PCFS>CLOSE SESSION GREEN
Do you want to close the session GREEN? [N]:y
PCFS>
```

## CLOSE SESSION

### *Example 2*

To close a session with the workstation identifier 1, type:

```
PCFS>CLOSE SESSION /ID=1  
Do you want to close the session 1? [N]:y  
PCFS>
```

## **EXIT**

### **Returning to the VAX/VMS Operating System**

To leave the operator interface and return to the VAX/VMS operating system, use the **EXIT** command. The VAX/VMS server continues to run in the state you left it when you exited.

#### *Format*

**EXIT**

#### *Example*

To exit from the operator interface, type:

```
PCFS>EXIT
```

```
$
```

## Getting Help

To display a list of VAX/VMS server topics for which you can get help, use the HELP command. If you specify a topic in the command line, you receive help for that topic. If you specify a topic and a subtopic in the command line, you receive information for that subtopic.

### *Format*

HELP [topic [subtopic]]

### *Example*

To display help for the EXIT command, type:

```
PCFS>HELP EXIT
```

```
EXIT
```

Exits the PCSERVER utility and returns to the VAX/VMS operating system. The VAX/VMS server for MS-DOS will continue to run in the state it was left in at the time the operator exited.

Format:

```
EXIT
```

Topic?

## LIMIT

### Changing the VAX/VMS Server Limits

To change the default limits imposed by the VAX/VMS server, use the LIMIT commands.

You can change the default limits based on the performance of your VAX computer. For example you can limit the number of connections to the VAX/VMS server. This prevents too many users from accessing the VAX/VMS server and degrading the performance of the computer. You should base the limit on:

- The number of workstations that use the VAX/VMS server
- The demands placed on the VAX computer by users (local users, for example) other than workstation users
- The disk throughput requirements of the local users

The VAX/VMS server parameters that you can limit are:

- The total number of connections to the VAX/VMS server, with the CONNECTIONS parameter
- The number of connections to any one alias, with the CONNECTIONS/ALIAS=name parameter
- The number of files the VAX/VMS server can open, with the FILES parameter
- The number of workstations from which the VAX/VMS server can accept logical links, with the SESSIONS parameter

#### NOTE

You may not be able to set some server parameters to extremely high limits because of resource constraints in the VAX/VMS operating system.

If you change a limit, the new limit becomes effective immediately. If you reduce a limit to less than the current limit and the VAX/VMS server is currently beyond the new limit, the workstations beyond the new limit are not affected. For example, assume that the default limit for the total number of connections is 10, and 9 workstations are connected to the server. If you change the total number of connections to 5, the 9 workstations remain connected. However, the VAX/VMS server allows no more connections until at least 5 workstations disconnect.

## LIMIT

To display a list of the current limits imposed by the VAX/VMS server, use the `SHOW LIMITS` command.

To set the limits automatically each time you start the VAX/VMS server, add the commands to the `PCFS_STARTUP.COM` file. For information about the `PCFS_STARTUP.COM` file, see Chapter 4.

The next three commands tell you how to change the limits for the number of connections, open files, or sessions.

## LIMIT CONNECTIONS

### Limiting the Number of Connections

To set the maximum number of connections that the VAX/VMS server can establish, use the LIMIT CONNECTIONS command.

You can limit the number of connections for:

- All workstations
- One session or workstation
- A specific alias

You can issue multiple LIMIT CONNECTIONS commands. However, when two limits are imposed, the most restrictive limit applies. For example, you can limit the total number of connections to 10 connections, and limit the number of connections for one workstation to 11 connections. If one workstation establishes 10 connections, the VAX/VMS server accepts no further connection requests, even though the connection limit for one workstation is not satisfied.

The default for the number of connections is "No\_limit".

#### *Format*

```
LIMIT CONNECTIONS [/TOTAL | /SESSION | /ALIAS=name] nnn
```

Where:

- |                    |  |
|--------------------|--|
| <b>/TOTAL</b>      | Specifies that you want to limit the total number of connections to the VAX/VMS server. This is the default.   |
| <b>/SESSION</b>    | Specifies that you want to limit the number of connections to the VAX/VMS server for any one workstation.  |
| <b>/ALIAS=name</b> | Specifies that you want to limit the number of connections for the specified alias. The "name" is the name of an account, specified in the user access file, for the VAXmate system software, a user, an application, a common directory, or a printer queue. This qualifier is useful for limiting the number of users who can connect to one directory at the same time. For example, if a directory contains a restricted application, you can specify the /ALIAS qualifier to limit the number of users who can connect at one time. |

## LIMIT CONNECTIONS

**nnn** Is the number to which you want to limit the connections. The number can be a positive integer or the keyword "No limit". The largest number you can specify is limited by the VAX/VMS working set size. For more information about the working set size, see Chapter 4.

If you do not specify a qualifier for the LIMIT CONNECTIONS command, the default is the /TOTAL qualifier.

### *Example 1*

To limit the total number of workstations that can connect to the VAX/VMS server at one time to 30, type:

```
PCFS>LIMIT CONNECTIONS /TOTAL 30
PCFS>
```

### *Example 2*

To limit the number of connections for one workstation to 20, type:

```
PCFS>LIMIT CONNECTIONS /SESSION 20
PCFS>
```

### *Example 3*

To limit the number of connections to the alias SMITH to 10, type:

```
PCFS>LIMIT CONNECTIONS /ALIAS=SMITH 10
PCFS>
```

## LIMIT FILES

### Limiting the Number of Open Files

To set the maximum number of files that the VAX/VMS server can open, use the LIMIT FILES command.

You can limit the number of open files for:

- All workstations
- One workstation or session

The default for the number of open files is 1024 files.

#### *Format*

LIMIT FILES [/TOTAL | /SESSION] nnn

Where:

- |                 |  |
|-----------------|--|
| <b>/TOTAL</b>   | Specifies that you want to limit the total number of files that the VAX/VMS server can open for all workstations. This is the default. |
| <b>/SESSION</b> | Specifies that you want to limit the number of files that the VAX/VMS server can open for one workstation or session.                  |
| <b>nnn</b>      | Is the number to which you want to limit the number of open files. The maximum number of open files is 1024 files.                     |

If you do not specify a qualifier for the LIMIT FILES command, the default is the /TOTAL qualifier.

#### *Example 1*

To limit the total number of files open at one time to 60, type:

```
PCFS>LIMIT FILES /TOTAL 60
PCFS>
```

#### *Example 2*

To limit the number of open files for a session to 40, type:

```
PCFS>LIMIT FILE /SESSION 40
PCFS>
```

## Limiting the Number of Sessions

To set the maximum number of sessions or workstations for which the VAX/VMS server can establish a logical link, use the LIMIT SESSIONS command.

The default number of sessions is 32 sessions.

If you increase the number of sessions, you must increase the number of logical links that DECnet-VAX allows using the NCP SET EXECUTOR MAXIMUM LINKS command. For information about this command, see the *VAX/VMS Network Control Program Reference Manual*.

Also, make sure the number of input/output (I/O) channels that the server can open at one time is large enough to allow the server to establish a large number of sessions. For more information about changing the number of I/O channels, see Chapter 4.

### *Format*

LIMIT SESSIONS nnn

Where:

nnn        Is the number to which you want to limit the number of sessions. The maximum number of sessions is 960 sessions. While the VAX/VMS server allows more than 960 sessions, the VAX/VMS operating system does not accept more than 960 logical links.

### *Example*

To limit the number of sessions for which the VAX/VMS server can establish a logical link to 25 sessions or workstations, type:

```
PCFS>LIMIT SESSIONS 25
PCFS>
```

## LOG

### Logging Network Events

To instruct the VAX/VMS server to log server events, use the LOG commands.

You can log VAX/VMS server events to monitor the VAX/VMS server usage. This allows you to:

- Determine how much the VAX/VMS server is used
- Track errors that the VAX/VMS server generates, which can help when solving a problem with the VAX/VMS server or the network.

Table 3-2 describes the VAX/VMS server events that you can log.

**Table 3-2 VAX/VMS Server Events You Can Log**

| Event Name  | Description   |
|-------------|---|
| ALL         | Logs (or stops logging) all events that the VAX/VMS server can log. This command has the same effect as turning on (or turning off) logging for all possible LOG commands.  |
| CONNECTIONS | Logs (or stops logging) all connection and disconnection requests.  |
| ERRORS      | Logs (or stops logging) all nonfatal errors. Nonfatal errors are errors from which the VAX/VMS server can still recover.  |
| FATAL       | Logs (or stops logging) all fatal VAX/VMS server errors. Fatal errors are errors that cause the VAX/VMS server to stop its normal operation. The VAX/VMS server logs the error condition before the VAX/VMS server stops. |
| LOCKS       | Logs (or stops logging) all file lock and unlock requests.  |
| OPENS       | Logs (or stops logging) all file open and close requests.   |
| OPERATOR    | Logs (or stops logging) operator actions, such as SET ALIAS.  |

|                 |   |
|-----------------|---|
| <b>PROTOCOL</b> | Logs (or stops logging) all protocol errors and session aborts. Protocol errors are errors that occur any time a workstation sends an invalid or partial message to the VAX/VMS server. Session aborts occur when a workstation disconnects its session abnormally (for example, a user may turn off the workstation without disconnecting it from the VAX/VMS server). |
| <b>READS</b>    | Logs (or stops logging) all file read and write requests.   |
| <b>SECURITY</b> | Logs (or stops logging) all attempted security breaches. This command logs any time a workstation attempts to connect to a nonexistent account or supplies an incorrect password with a valid user name.  |
| <b>SESSIONS</b> | Logs (or stops logging) all requests to start or stop a session.  |

---

The events that are logged by default are nonfatal errors, fatal errors, protocol errors, and security errors. You should only log other events that you need to know about. The fewer events you ask the VAX/VMS server to log, the better the performance of the server.

If you specify the event name with the ON parameter or with no parameters, the VAX/VMS server logs the specified event. If you specify the event name with the OFF parameter, the VAX/VMS server stops logging the specified event. If you specify only the event name, the VAX/VMS server logs the event. If you do not specify the event name, the VAX/VMS server displays a list of the current log settings.

*Format*

LOG [eventname [ON | OFF]]

Where:

eventname    Is the name of the VAX/VMS server event that you want to log.

## LOG

### *Example 1*

To display a list of the current log settings, type:

PCFS>LOG

#### Current Log Settings

---

|             |       |
|-------------|-------|
| CONNECTIONS | : OFF |
| ERRORS      | : ON  |
| FATAL       | : ON  |
| LOCKS       | : OFF |
| OPENS       | : OFF |
| PROTOCOL    | : ON  |
| READS       | : OFF |
| SECURITY    | : ON  |
| SESSIONS    | : OFF |

PCFS>

### *Example 2*

To log all connection and disconnection requests, type:

PCFS>LOG CONNECTIONS ON

PCFS>

### *Example 3*

To stop logging all file open and close requests, type:

PCFS>LOG OPENS OFF

PCFS>

## **Refusing Connections**

To have the VAX/VMS server refuse any further connection requests from workstations, use the REFUSE CONNECTIONS command.

You can refuse connections in preparation for stopping the VAX/VMS server. This way, no other workstations can connect while you wait for other workstations to disconnect.

The VAX/VMS server maintains all existing connections with workstations. When the last workstation disconnects, the VAX/VMS server waits until you issue an ACCEPT CONNECTIONS or START SERVER command.

You can see if the VAX/VMS server is accepting connections with the SHOW STATUS command.

### *Format*

**REFUSE CONNECTIONS**

### *Example*

To have the VAX/VMS server refuse any further connection requests, type:

```
PCFS>REFUSE CONNECTIONS  
PCFS>
```

## REFUSE UNREGISTERED

### Refusing Unregistered Nodes

To have the VAX/VMS server refuse a connection request from a workstation that is not registered in the volatile DECnet node name database, use the REFUSE UNREGISTERED command.

The volatile database, which is stored in memory, contains the node names that are registered with DECnet and are recognized by the VAX/VMS server and other information about the current state of the network. By default, only registered DECnet nodes can connect to the VAX/VMS server.

#### NOTE

To register a node with the DECnet databases, use the PCFS Administration utility. For more information, see Chapter 2.

When you issue the REFUSE UNREGISTERED command, the VAX/VMS server maintains all existing connections with workstations, including unregistered workstations.

You can allow unregistered DECnet nodes to connect to the VAX/VMS server with the ACCEPT UNREGISTERED command. For more information, see Chapter 3.

#### *Format*

REFUSE UNREGISTERED

#### *Example*

To refuse connection requests from unregistered nodes, type:

```
PCFS>REFUSE UNREGISTERED  
PCFS>
```

## Setting the Attributes for Workstation Access

To set the permission on an alias, use the SET ALIAS command.

You can use the SET ALIAS command to restrict user access to different levels of a directory structure. For example, you can set an entire directory structure to read access, then set less restrictive access to individual subdirectories. The default protection for an alias is read, write, and create privileges.

### *Format*

```
SET ALIAS alias [/READ] [/WRITE] [/CREATE]
```

Where:

alias            Is the VAX/VMS account name associated with the connection.

/READ           Gives the client read access for the alias.

/WRITE          Gives the client write access for the alias.

/CREATE         Gives the client create access for the alias.

### *Example 1*

To restrict the alias JONES to read-only permission, type:

```
PCFS>SET ALIAS JONES /READ
```

### *Example 2*

To restrict the alias JONES to read and write permissions, type:

```
PCFS>SET ALIAS JONES /READ /WRITE
```

## SET LOG FILE

### Changing the Log File

To close the current log file and create a new log file, use the SET LOG FILE command.

#### NOTE

The VAX/VMS server automatically creates a new log file named SYS\$SPECIFIC:[PCFS]PCFS\_SERVER.LOG each time you start the server.

The log file is a standard text file that contains one or more messages. The messages describe network events that occur during the operation of the VAX/VMS server.

To display the name of the current log file in the SYS\$SPECIFIC:[PCFS] directory, use the SHOW LOG FILE command.

The VAX/VMS server updates the log file once every 60 seconds. After an event occurs, the event is logged within the next minute.

To display the messages that are in the log file, use the VAX/VMS TYPE command. You can also change the log file and edit the original log file to see the messages. For an explanation of the messages in the log file, see Chapter 5.

The SET LOG FILE command:

- Closes the current log file
- Creates a new version of the file name specified on the command line
- Begins using that file as a log file

You can control which events the VAX/VMS server logs with the LOG command.

#### *Format*

**SET LOG FILE filename**

Where:

filename      Is the name of the log file. The default file name is PCFS\_SERVER.LOG.

## SET LOG FILE

### *Example*

To change the log file name to NEWFILE.LOG, type:

```
PCFS>SET LOG FILE NEWFILE.LOG  
PCFS>
```

## SHOW CONNECTIONS

### Showing the Connections to the VAX/VMS Server

To display the status of the connections recognized by the VAX/VMS server, use the SHOW CONNECTIONS command. The status of the connections includes:

- Connection ID, which is the number the VAX/VMS server assigned to the connection when it was established
- UIC, which is the User Identification Code for the account that established the connection with the VAX/VMS server
- Alias, which is the account name assigned to the device and directory to which the workstation has connected
- Workstation, which is the DECnet node name assigned to the user's workstation
- Path, which is the device and directory to which the workstation is connected

Use the CLOSE CONNECTION command to disconnect a connection.

#### *Format*

## SHOW CONNECTIONS

#### *Example*

To display information about the connections recognized by the VAX/VMS server, type:

```
PCFS>SHOW CONNECTIONS
```

```
Connection
```

| ID | UIC       | Alias | Workstation | Path                 |
|----|-----------|-------|-------------|----------------------|
| 0  | [360,010] | VXSYS | ORANGE      | DVL:[VXSYS]          |
| 1  | [360,103] | ISSYS | YELLOW      | WRK:[ISSYS]          |
| 2  | [360,250] | SALES | ORANGE      | WRK:[PCCOMMON.SALES] |
| 3  | [360,016] | PCAPP | ORANGE      | DVL:[PCAPP]          |
| 4  | [200,023] | SMITH | GREEN       | WRK:[SMITH]          |

```
PCFS>
```

## Showing the Open Files

To display the status of open files, use the SHOW FILES command. The status of open files includes:

- File ID, which is the number that the VAX/VMS server assigned to the file when it was opened
- File size, which is the size of the open file in bytes
- Locks, which is the number of locks that workstations have imposed on the open file
- Workstation, which is the DECnet node name assigned to the workstation from which the user opened the file
- File name, which is the name of the open file, including the device and the directory

### *Format*

SHOW FILES [dev:[directory]filename.ext]

Where:

dev Is the device name.

directory Is the directory name, including any subdirectories. If you specify a directory name, it must be enclosed in square brackets.

filename.ext Is the file name and file extension.

If you do not specify the device, directory, or file name, or you specify an asterisk, the VAX/VMS server displays the status for all open files in the default directory on the default device.

### *Example*

To display a list of all open files, type:

```
PCFS>SHOW FILES
```

| File |           |       |             |                             |
|------|-----------|-------|-------------|-----------------------------|
| ID   | File Size | Locks | Workstation | File Name                   |
| 0    | 1201      | 0     | ORANGE      | WRK:[PCCOMMON.SALES]OCT.TXT |
| 1    | 9823      | 0     | GREEN       | WRK:[SMITH]REPORT.TXT       |

```
PCFS>
```

## SHOW LIMITS

### Showing the Limits

To display a list of current limits imposed by the VAX/VMS server, use the SHOW LIMITS command. The limits imposed by the VAX/VMS server include:

- Total sessions per VAX/VMS server
- Total connections per VAX/VMS server
- Total open files per VAX/VMS server
- Maximum connections per session
- Maximum open files per session
- Maximum connections per alias

See the LIMIT command for an explanation of each limit or to change a limit.

#### *Format*

SHOW LIMITS

#### *Example*

To display a list of the current default limits, type:

```
PCFS>SHOW LIMITS
```

```
Total sessions per server      : 32
Total connections per server   : No limit set
Total open files per server    : No limit set
Maximum connects per session  : No limit set
Maximum open files per session : No limit set
```

| Alias | Limit |
|-------|-------|
|-------|-------|

|       |    |
|-------|----|
| SMITH | 1  |
| VXSYS | 10 |
| RBASE | 3  |

```
PCFS>
```

## Showing the Log File Name

To display the name of the current log file, use the SHOW LOG FILE command. The log file is in the directory SYS\$SPECIFIC:[PCFS].

You can change the log file with the SET LOG FILE command.

### *Format*

SHOW LOG FILE

### *Example*

To display the name of the current log file in the SYS\$SPECIFIC:[PCFS] directory, type:

```
PCFS>SHOW LOG FILE
```

```
Current server log file is PCFS_SERVER.LOG
```

```
PCFS>
```

## SHOW SESSIONS

### Showing the Sessions

To display the status of the sessions recognized by the VAX/VMS server, use the SHOW SESSIONS command. The session status includes:

- Workstation ID, which is the number that the VAX/VMS server assigns to a workstation when its session is established
- Workstation, which is the DECnet node name assigned to the workstation from which the user connected to the VAX/VMS server
- Connections, which is the number of connections made by the workstation to the VAX/VMS server
- Open Files, which is the number of files that the workstation has open

#### *Format*

SHOW SESSIONS

#### *Example*

To display information about the current workstations for which the VAX/VMS server has established logical links, type:

PCFS>SHOW SESSIONS

| Workstation | ID | Workstation | Connections | Open Files |
|-------------|----|-------------|-------------|------------|
|             | 0  | ORANGE      | 6           | 1          |
|             | 1  | GREEN       | 1           | 1          |

PCFS>

## Showing the Status of Server Connections

To display what kind of connection requests the VAX/VMS server is accepting (registered or unregistered), use the SHOW STATUS command.

You can allow the VAX/VMS server to accept connection requests with the START SERVER command. You can limit the number of connections that the VAX/VMS server accepts with the LIMIT CONNECTIONS command.

Use the ACCEPT UNREGISTERED command to allow the VAX/VMS server to accept connection requests from workstations whose names are not registered in the volatile DECnet node name database. Use the REFUSE UNREGISTERED command to disallow server acceptance of connection requests.

### *Format*

SHOW STATUS

### *Example*

To determine whether the VAX/VMS server is accepting connection requests, type:

```
PCFS>SHOW STATUS
```

```
Server is accepting connection requests.  
Server will refuse unregistered users.
```

```
PCFS>
```

## SHOW VERSION

### Showing the VAX/VMS Server's Version Number

To display the version number for the VAX/VMS server, use the SHOW VERSION command.

#### *Format*

SHOW VERSION

#### *Example*

To display the version number, type:

```
PCFS>SHOW VERSION
```

```
VAX/VMS Server for MS-DOS V1.1
```

```
PCFS>
```

## **Restarting the VAX/VMS Server**

Use the **START SERVER** command to:

- Allow the VAX/VMS server to establish sessions with one or more workstations
- Restart the VAX/VMS server after the **STOP SERVER** or **REFUSE CONNECTIONS** command

### *Format*

**START SERVER**

### *Example*

To start the VAX/VMS server, type:

```
PCFS>START SERVER  
PCFS>
```

## STOP SERVER

### Stopping the VAX/VMS Server

To force the VAX/VMS server to stop all sessions, use the STOP SERVER command.

The VAX/VMS server asks you to verify that you want to stop the VAX/VMS server. If you verify your request, the VAX/VMS server disconnects all current connections to any workstation and closes all files opened by that session.

If users attempt to access the VAX/VMS server an error message is displayed.

The STOP SERVER command does not stop the VAX/VMS server process.

#### *Format*

**STOP SERVER**

#### *Example*

To stop the VAX/VMS server, type:

```
PCFS>STOP SERVER
Do you want to stop the server? [N]:y
PCFS>
```

# Chapter 4

## VAX/VMS Server Configuration

This chapter tells you how to configure the VAX/VMS server to:

- Set start-up defaults for the VAX/VMS server
- Change limits and quotas imposed by the VAX/VMS operating system

You can set start-up defaults for the VAX/VMS server and change some limits imposed by the VAX/VMS operating system in the PCFS\_STARTUP.COM file.

This chapter also tells you how to:

- Change the VAX/VMS operating system limit on the number of input/output (I/O) channels
- Add and remove resources, such as applications and printers

### The PCFS\_STARTUP.COM File

The PCFS\_STARTUP.COM file is a command file that starts the VAX/VMS server and executes specified operator interface commands. The default PCFS\_STARTUP.COM file is displayed on the following pages.

#### NOTE

If you run the PCFS\_STARTUP.COM file while the VAX/VMS server is running, the procedure in the file stops the server, which stops all sessions established with the server.

# VAX/VMS Server Configuration

```

$ !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
$ !
$ !           VAX/VMS Server for MS-DOS (PCFS) Startup Command File           !
$ !
$ !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
$ !
$ !                               COPYRIGHT (C) 1985 BY                               !
$ !           DIGITAL EQUIPMENT CORPORATION, MAYNARD                               !
$ !           MASSACHUSETTS.  ALL RIGHTS RESERVED                               !
$ !
$ ! THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND !
$ ! COPIED ONLY IN ACCORDANCE WITH THE TERMS OF SUCH LICENSE AND WITH !
$ ! THE INCLUSION OF THE ABOVE COPYRIGHT NOTICE.  THIS SOFTWARE OR ANY !
$ ! OTHER COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAIL- !
$ ! ABLE TO ANY OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF THE SOFT- !
$ ! WARE IS HEREBY TRANSFERRED.                                               !
$ !
$ ! THE INFORMATION IN THIS SOFTWARE IS SUBJECT TO CHANGE WITHOUT !
$ ! NOTICE AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY DIGITAL !
$ ! EQUIPMENT CORPORATION.                                                  !
$ !
$ ! DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS !
$ ! SOFTWARE ON EQUIPMENT THAT IS NOT SUPPLIED BY DIGITAL.                 !
$ !
$ !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
$ !
$ !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
$ !
$ !           Ensure that the correct privileges are enabled.                 !
$ !
$ !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
$ !
$ PCFS$PRIVS = "BYPASS, CMEXEC, CMKRNL, DETACH, EXQUOTA, GROUP, LOG_IO,-
$           NETMBX, OPER, PHY_IO, PRMMBX, SYSNAM, SYSPRV, TMPMBX, WORLD"
$ SAVE$PRIVS = F$SETPRV(PCFS$PRIVS)
$ IF .NOT. F$PRIV(PCFS$PRIVS) THEN EXIT 36           ! No privilege error code
$ !
$ !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
$ !
$ !           If a version of the server is already running, stop it.         !
$ !
$ !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
$ !

```

# VAX/VMS Server Configuration

```
$ CONTEXT = ""
$ LOOP:
$   PID = F$PID (CONTEXT)
$   IF PID .EQS. "" THEN GOTO DONE
$   NAME = F$GETJPI (PID, "PRCNAM")
$   IF NAME .NES. "PCFS_SERVER" THEN GOTO LOOP
$   STOP /ID='PID'
$ DONE:
$ WAIT 00:00:03      ! Wait for process deletion
$ !
$ !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
$ !
$ !           Start up the current version of the server.           !
$ !
$ !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
$ !
$ PCFS$CURRENT = F$TRNLNM("SYS$DISK")+F$DIRECTORY()
$ SET DEFAULT SYS$SPECIFIC:[PCFS]
$ RUN  SYS$SYSTEM:PCFS_SERVER.EXE -
      /DETACH -
      /INPUT=NL: -
      /OUTPUT=SYS$SPECIFIC:[PCFS]PCFS_OUTPUT.LOG -
      /ERROR=SYS$SPECIFIC:[PCFS]PCFS_ERROR.LOG -
      /PROCESS=PCFS_SERVER -
      /DUMP -
      /AST_LIMIT=100 -
      /BUFFER_LIMIT=300000 -
      /FILE_LIMIT=1024 -
      /IO_BUFFERED=65 -
      /IO_DIRECT=1024 -
      /MAXIMUM_WORKING_SET=2048 -
      /QUEUE_LIMIT=20 -
      /PAGE_FILE=10000 -
      /WORKING_SET=1024
$ SET DEFAULT 'PCFS$CURRENT'
$ WAIT 00:00:03      ! Wait for process startup
$ !
$ !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
$ !
$ !           Put startup specific operator interface commands here.   !
$ !
$ !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
$ !
```

## VAX/VMS Server Configuration

```
$ MCR PCFS_OPERATOR
```

```
      SET ALIAS PCAPP /READ      ! Set the PC Applications alias R/O
$ !   SET ALIAS VXSYS /READ      ! Set the VAXmate system alias R/O
$ !   SET ALIAS ISSYS /READ      ! Set the industry-standard alias R/O
$ !   SET ALIAS RBSYS /READ      ! Set the Rainbow system alias R/O
$ !   ACCEPT UNREGISTERED ! Accepts unregistered connects
$ !
$ !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
$ !
$ !       Reset this process' initial privileges.
$ !
$ !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
$ !
$ PCFS$PRIV = F$SETPRV(SAVE$PRIVS)
```

You can edit the PCFS\_STARTUP.COM file to:

- Include commands that will be executed each time you start the VAX/VMS server
- Change the default limits imposed with the RUN command qualifiers

## Including Operator Interface Commands

The following operator interface commands are the ones most commonly added to the PCFS\_STARTUP.COM file:

- The LIMIT commands
- The ACCEPT UNREGISTERED command
- The SET LOG FILE command
- The SET ALIAS command

For more information about these commands, see Chapter 3.

To include an operator interface command, type the command at the bottom of the file, under the example command:

```
ACCEPT UNREGISTERED      ! Accepts unregistered connects
```

For example, to set the limit for the number of connections to the alias SALES, add the following line to the appropriate place in the PCFS\_STARTUP.COM file:

```
$ LIMIT CONNECTIONS /ALIAS=SALES 10
```

## Changing VAX/VMS Limits and Quotas

The PCFS\_STARTUP.COM file includes some VAX/VMS RUN command qualifiers that allow you to change some VAX/VMS limits and quotas. The command qualifiers are set when the PCFS\_SERVER.EXE file is run. The PCFS\_STARTUP.COM file, including the default values for the RUN command qualifiers is displayed earlier in this chapter.

You can edit the PCFS\_STARTUP.COM file and change the following command qualifiers:

- **AST\_LIMIT**, which specifies the maximum number of outstanding Asynchronous System Traps (AST) that the VAX/VMS server can have. The number of ASTs should be greater than or equal to the maximum number of workstations plus 12. Use the PCSERVER LIMIT SESSIONS command to limit the number of workstations.

If users make more requests than the AST\_LIMIT supports, users making the extra requests receive an error message.

- **BUFFER\_LIMIT**, which specifies the maximum amount of non-paged system memory (in bytes) that the VAX/VMS server can use. The system memory is used for:
  - I/O buffering
  - DECnet request messages
  - File control blocks

The system memory, in bytes, should equal:

[maximum number of workstations \* 4398] + 12000

- **IO\_BUFFERED**, which specifies the maximum number of outstanding buffered I/O operations that the VAX/VMS server can have at one time.

The IO\_BUFFERED limit should be greater than or equal to:

[maximum number of workstations \* 2] + 1

If you change the values assigned to any command qualifiers in the PCFS\_STARTUP.COM file, run the PCFS\_STARTUP.COM file so the VAX/VMS server recognizes the new values assigned to the qualifiers.

## VAX/VMS Server Configuration

The PCFS\_STARTUP.COM file includes other command qualifiers with default values. It is recommended that you do not change the default values for these command qualifiers:

- **FILE\_LIMIT**, which specifies the maximum number of files that the VAX/VMS server can have open at any one time. This command qualifier has essentially the same function as the PCSERVER LIMIT FILES command.
- **IO\_DIRECT**, which specifies the maximum amount of outstanding system memory (in bytes) for direct I/O operations that the VAX/VMS server can have at one time.
- **MAXIMUM\_WORKING\_SET**, which specifies the maximum number of pages to which the VAX/VMS server can increase its working set size.
- **PAGE\_FILE**, which specifies the maximum number of pages allocated in the paging file for the VAX/VMS server.
- **WORKING\_SET**, which specifies the default working set size for the created process. The default working set size is the number of pages of main memory the VAX/VMS server can use for its working set.

### NOTE

For more information about these VAX/VMS command qualifiers, see the RUN (Process) command in the VAX/VMS DCL Dictionary.

## VAX/VMS Input/Output Channels

The VAX/VMS operating system imposes a limit on the number of input/output channels that a process can open at one time. The default value is 127 channels.

You can change this limit by modifying the CHANNELCNT parameter using SYSGEN. You can have up to 2047 channels.

The VAX/VMS server requires one channel for:

- Each workstation
- Each open file
- Each opening of a nonstream file
- The log file

The VAX/VMS server also requires two channels to manage its DECnet links.

To determine the number of channels that your VAX/VMS server needs to open, multiply the number of open files per workstation plus one, times the number of workstations, then add three.

$[(\text{OPEN FILES per WORKSTATION} + 1) * \text{NUMBER OF WORKSTATIONS}] + 3$

For example, if 50 workstations can connect to the VAX/VMS server and you want to allow each workstation to open 4 files, the number of channels is as follows:

$[(4 + 1) * 50] + 3 = 253$  channels

## Adding and Removing Resources

The VAX/VMS server includes the PCFS Administration utility, which creates directories and accounts for resources on the VAX/VMS server. It is recommended that you use this command file to add and remove resources.

However, if you use VAX/VMS utilities to create directories and accounts and install printer queues, use this section to determine the resource requirements for the VAX/VMS server.

### NOTE

The resources that you add to or remove from the server using VAX/VMS utilities are not recognized by the PCFS Administration utility. Therefore, be sure that anything you add to the server using VAX/VMS utilities is removed using VAX/VMS utilities.

To add and remove resources, you must access an account that has OPER and SYSPRV privileges. To determine the privileges for an account, use the SHOW PROCESS/PRIVILEGES command.

When you installed the VAX/VMS server, you specified a group number for UICs associated with the VAX/VMS server. The default number is 360. The PCFS Administration utility requires an exclusive UIC for the directories and accounts it creates. You can create directories and accounts with this UIC or with another UIC. The examples presented here assume that the group UIC is 360.

## VAX/VMS Server Configuration

### NOTE

The qualifiers and parameters described in this section are the minimum requirements for the VAX/VMS server. You can add other qualifiers or parameters as needed.

These instructions ONLY describe the portion of a task that requires the VAX/VMS operating system. Some tasks also require that you use the MS-DOS operating system from a workstation. For a complete description of all tasks, see Chapter 2.

For more information about any of the VAX/VMS utilities described in this section, refer to the VAX/VMS documentation set.

## Adding a User

To add a user, it is recommended that you create a personal directory and alias and register the user's DECnet node.

1. Create a directory. Set the directory protection so the owner has RWED privileges and assign a unique owner UIC. You can create the directory as a subdirectory of the VXUSERS directory, which was created when you installed the VAX/VMS server directory structure.

For example, to add a user SMITH, you can create a directory using the CREATE/DIRECTORY command:

```
$ CREATE/DIRECTORY DVL:[VXUSERS.SMITH]      -  
      /PROTECTION=[0:RWED]                  -  
      /OWNER=[360,120]
```

2. Create an account. The account for the personal directory is the alias the user specifies to connect to the directory. The UIC must be the same UIC you assigned when you created the directory.

For example, to create the account for user SMITH, you can use the AUTHORIZE program:

```
UAF>ADD SMITH      -  
      /PASSWORD=JOHN      -  
      /UIC=[360,120]      -  
      /DEVICE=DVL:        -  
      /DIRECTORY=[VXUSERS.SMITH]      -
```

```

/NOBATCH -
/NOINTERACTIVE -
/FLAGS=(CAPTIVE,DISCTLY,DISMAIL,DISRECONNECT)-
/PWDLIFE=0

```

3. If disk quotas are enabled for the volume where you created the directory, add an entry to the quota file.

For example, if disk quotas are enabled for device DVL where you created a directory for user SMITH, you can use the DISK QUOTA utility:

```

DISKQ>USE DVL:
DISKQ>ADD [360,120]/PERMQUOTA=2000/OVERDRAFT=100

```

4. Register the DECnet node name and address of the user's workstation. Each workstation must be registered with the permanent and volatile databases.

For example, if a workstation DECnet node name is BOSTON and the DECnet node address is 9.222, you can use NCP:

```

NCP>SET NODE 9.222 NAME BOSTON
NCP>DEFINE NODE 9.222 NAME BOSTON

```

## Adding a Common Directory

To add a common directory, it is recommended that you create the directory and an alias for the directory. To add a common directory:

1. Create a directory. Set the directory protection so the owner and the group have RWED privileges, and assign a unique owner UIC. You can create the directory as a subdirectory of the PCCOMMON directory, which was created when you installed the VAX/VMS server directory structure.

For example, to add the common directory SALES, you can create a directory using the CREATE/DIRECTORY command:

```

$ CREATE/DIRECTORY DVL:[PCCOMMON.SALES] -
  /PROTECTION=[O:RWED,G:RWED] -
  /OWNER=[360,130]

```

## VAX/VMS Server Configuration

2. Create an account. The account for the common directory is the alias that users specify to connect to the directory. A password is optional for this account. The UIC must be the same UIC you assigned when you created the directory.

For example, to create the account for a common directory SALES, you can use the AUTHORIZE program:

```
UAF>ADD SALES -
      /NOPASSWORD -
      /UIC=[360,130] -
      /DEVICE=DVL: -
      /DIRECTORY=[PCCOMMON.SALES] -
      /NOBATCH -
      /NOINTERACTIVE -
      /FLAGS=(CAPTIVE,DISCTLY,DISMAIL,DISRECONNECT)-
      /PWDLIFE=0
```

3. If disk quotas are enabled for the volume where you created the directory, add an entry to the quotas file. For example, if disk quotas are enabled for device DVL where you created a common directory, you can use the DISK QUOTA utility:

```
DISKQ>USE DVL:
DISKQ>ADD [360,130]/PERMQUOTA=2000/OVERDRAFT=100
```

## Adding an Application

To add an application, it is recommended that you create the directory and two aliases: one alias is read-only, and the other is writeable. A read-only alias allows users to access the applications without accidentally deleting or modifying them. A writeable alias allows you, the system administrator, to maintain the directory. To add an application:

1. Create a directory. Set the directory protection so the owner has RWED privileges. Assign a unique owner UIC (this is the UIC for the writeable alias). You can create the directory as a subdirectory of the VXAPP directory, which was created when you installed the VAX/VMS server directory structure.

For example, to add the application RBASE, you can create a directory using the CREATE/DIRECTORY command:

```
$ CREATE/DIRECTORY DVL:[VXAPP.RBASE] -
      /PROTECTION=[0:RWED,G:R] -
      /OWNER=[360,12]
```

2. Create two accounts. One account is the read-only alias that users specify to connect to the directory. The other account is the writeable alias that you, the system administrator, can specify to connect to the directory.

For example, to create the account for the writeable alias for the application RBASE, you can use the AUTHORIZE program. The UIC must be the same UIC you assigned when you created the directory. Specify the account name in a way that you will recognize it as the writeable alias. The PCFS Administration utility appends a W to the end of the read-only alias. Type:

```
UAF>ADD RBASEW -
      /PASSWORD=PRIVATE -
      /UIC=[360,12] -
      /DEVICE=DVL -
      /DIRECTORY=[VXAPP.RBASE] -
      /NOBATCH -
      /NOINTERACTIVE -
      /FLAGS=(CAPTIVE,DISCTLY,DISMAIL,DISRECONNECT)-
      /PWDLIFE=0
```

To create the account for the read-only alias for the application RBASE, you can use the AUTHORIZE program. Type:

```
UAF>ADD RBASE -
      /PASSWORD=SECRET -
      /UIC=[360,12] -
      /DEVICE=DVL -
      /DIRECTORY=[VXAPP.RBASE] -
      /NOBATCH -
      /NOINTERACTIVE -
      /FLAGS=(CAPTIVE,DISCTLY,DISMAIL,DISRECONNECT)-
      /PWDLIFE=0
```

Add the appropriate SET ALIAS /READ command to the server start-up file.

## Adding a New Printer Form

The PCFS Administration utility supports four printers and eight forms for these printers. You can add another form for one of the four printers or for a printer that you added yourself.

For example, if you use an LA50 printer with the VAX/VMS server and want to allow users to print files in enhanced print mode, you can create a new form for this mode.

The eight forms that the PCFS Administration utility automatically defines are:

- PCFS\_STD\_PORTRAIT, which is industry-standard portrait mode
- PCFS\_STD\_LANDSCAPE, which is industry-standard landscape mode
- PCFS\_DEC\_PORTRAIT, which is DIGITAL portrait mode
- PCFS\_DEC\_LANDSCAPE, which is DIGITAL landscape mode
- PCFS\_STD\_80, which is industry-standard 80-column mode
- PCFS\_STD\_132, which is industry-standard 132-column mode
- PCFS\_DEC\_80, which is DIGITAL 80-column mode
- PCFS\_DEC\_132, which is DIGITAL 132-column mode

To create a new form for a printer:

1. With a text editor, create a file to contain the escape sequence required for the new form. For LA50 enhanced print mode, create a file called DEC\_ENHANCED.TXT, and add the sequence <ESC>[2"z to the file.
2. Add the file to the device control library for the printer. For example, to add the file DEC\_ENHANCED.TXT to the LA50 device control library, type:

```
$ LIBRARY/INSERT SYS$LIBRARY:PCFS_LA50_DEVCTL.TLB DEC_ENHANCED
```

3. Create a directory for the new form. Be sure that the directory name is identical to the file name that you added to the device control library. Specify the device on which you created the VAX/VMS server directory structure. For the LA50 enhanced print form, type:

## VAX/VMS Server Configuration

```
$ CREATE/DIRECTORY dev:[PCFS_SPOOL.LA50.DEC_ENHANCED] -  
/OWNER=[360,77] -  
/PROTECTION=[O:RWED,S:RWED,W)
```

4. Determine the form name by appending the file name that you added to the device control library to the "PCFS\_" string. The form name for the LA50 enhanced print mode is PCFS\_DEC\_ENHANCED.
5. Define the new form and specify an unused form number. (To display a list of used form numbers, use the SHOW/QUEUE/FORM command.) For the LA50 enhanced print mode, type:

```
$ DEFINE/FORM PCFS_DEC_ENHANCED nnnnn/SETUP=DEC_ENHANCED -  
/STOCK=DEFAULT/NOWRAP/WIDTH=80/NOTRUNCATE
```

Where:

nnnnn Is the unique form number assigned to the new form.

6. Create an account for the new form by adding an entry in the UAF. Using the AUTHORIZE utility, copy an existing UAF entry for another form for the same printer. Be sure you specify the [PCFS\_SPOOL.] directory you created for the new form. For the LA50 enhanced print mode, type:

```
UAF>COPY LA50_D80 LA50_LQ/DIRECTORY=[PCFS_SPOOL.LA50.DEC_ENHANCED]
```

To define the new form permanently, add the DEFINE/FORM command to the SYS\$MANGER:PCFS\_PRINT.COM file. You should add the command after the other DEFINE/FORM commands in the file. When you restart the VAX computer, the new form is automatically defined.

A PCFS\_PRINT.COM file is displayed on the following page. The PCFS\_PRINT.COM file that you have will differ depending on the print queues and forms that you add.

# VAX/VMS Server Configuration

```
$!  
$! Define forms used for PCFS printers  
$!  
$DEFINE/FORM PCFS_DEC_PORTRAIT  
10000/SETUP=DEC_PORTRAIT/NOWRAP/STOCK=DEFAULT/WIDTH=80  
$DEFINE/FORM PCFS_DEC_LANDSCAPE  
10001/SETUP=DEC_LANDSCAPE/NOWRAP/STOCK=DEFAULT/WIDTH=132  
$DEFINE/FORM PCFS_STD_PORTRAIT  
10002/SETUP=STD_PORTRAIT/NOWRAP/STOCK=DEFAULT/WIDTH=80  
$DEFINE/FORM PCFS_STD_LANDSCAPE  
10003/SETUP=STD_LANDSCAPE/NOWRAP/STOCK=DEFAULT/WIDTH=132  
$DEFINE/FORM PCFS_DEC_80 10004/SETUP=DEC_80/NOWRAP/STOCK=DEFAULT/WIDTH=80  
$DEFINE/FORM PCFS_DEC_132 10005/SETUP=DEC_132/NOWRAP/STOCK=DEFAULT/WIDTH=132  
$DEFINE/FORM PCFS_STD_80 10006/SETUP=STD_80/NOWRAP/STOCK=DEFAULT/WIDTH=80  
$DEFINE/FORM PCFS_STD_132 10007/SETUP=STD_132/NOWRAP/STOCK=DEFAULT/WIDTH=132  
$DEFINE/FORM PCFS_DEC_OFFSET 10010/SETUP=DEC_OFFSET/STOCK=DEFAULT/WIDTH=132  
$DEFINE/FORM PCFS_DEC_LQ80 10011/SETUP=DEC_LQ80/STOCK=DEFAULT/WIDTH=80  
$!  
$! *****NOTE WELL*****  
$!  
$! The order of printer queue records must be as follows,  
$! in order for the PCFS ADMINISTRATION UTILITY - DELETE PRINTER  
$! function to work properly:  
$!  
$! $!printer type  
$! init queue commands  
$!  
$! $!  
$! $!next printer  
$!  
$! the string $!printertype must be immediately followed  
$! by the init queue commands, etc, no comment lines allowed  
$! between commands associated with this printer  
$!  
$!  
$!LN03 - ADD printer  
SET TERM/PERM/WIDTH=132/NOWRAP/PASTHRU/TTSYNC/SPEED=4800/DEVICE_TYPE=LN03 -  
  
/FORM/TAB TXA3:  
$SET DEVICE/SPOOLED TXA3:  
$INITIALIZE/QUEUE/START/LIBRARY=PCFS_LN03_DEVCTL -  
/SEPARATE=(FLAG, RESET=(RESET)) TXA3:  
$INITIALIZE/QUEUE/START/GENERIC=(TXA3:) PCFS$LN03
```

## VAX/VMS Server Configuration

```
$!  
$!  
$!  
$!LA75 - ADD printer  
SET TERM/PERM/WIDTH=132/NOWRAP/PASTHRU/TTSYNC/SPEED=4800/DEVICE_TYPE=UNKNOWN -  
  
/FORM/TAB TXA4:  
$SET DEVICE/SPOOLED txa4:  
$INITIALIZE/QUEUE/START/LIBRARY=PCFS_LA75_DEVCTL/SEPARATE=(FLAG,  
RESET=(RESET)) txa4:  
$INITIALIZE/QUEUE/START/GENERIC=(txa4:) PCFS$LA75
```

When you update the printer connections for a user's key diskette, specify the alias as the account you created for the new form. For the LA50 enhanced print mode, the alias is LA50\_LQ.

### Adding Another Printer

You can use a printer with the VAX/VMS server that is not supported by the PCFS Administration utility. For example, if you have a LN01 printer that you want to use with the VAX/VMS server, you can create a device control library and a print queue.

To use another printer:

1. Create a file to contain the escape sequence required for the form. For more information on escape sequences, see your printer documentation.

For example, to create files for portrait and landscape modes for an LN01 printer, you can type:

```
$ CREATE SYS$MANAGER:DEC_PORTRAIT.TXT  
<ESC>[?20 J<ESC>[10m<(Ctrl/Z)>
```

```
$ CREATE SYS$MANAGER:DEC_LANDSCAPE.TXT  
<ESC>[?21 J<ESC>[15m<(Ctrl/Z)>
```

```
$ CREATE SYS$MANAGER:RESET.TXT  
<ESC>[!p<(Ctrl/Z)>
```

## VAX/VMS Server Configuration

2. Create a device control library for the printer. The device control library must be created in the SYS\$LIBRARY directory. Insert into the printer device control library, all files that contain the escape sequences for the forms the printer supports.

For example, to create a device control library and insert files for an LN01 printer, type:

```
$ LIBR/CREATE/TEXT SYS$LIBRARY:PCFS_LN01_DEVCTL.TLB
$ LIBR/INSERT SYS$LIBRARY:PCFS_LN01_DEVCTL.TLB SYS$MANAGER:DEC_PORTRAIT
$ LIBR/INSERT SYS$LIBRARY:PCFS_LN01_DEVCTL.TLB SYS$MANAGER:DEC_LANDSCAPE
$ LIBR/INSERT SYS$LIBRARY:PCFS_LN01_DEVCTL.TLB SYS$MANAGER:RESET
```

3. Set the terminal characteristics for the printer you want to add. For an LN01 printer, type:

```
$ SET TERM/PERM/WIDTH=132/NOWRAP/SPEED=4800/DEVICE_TYPE=LN01 TTAO:
```

4. Set the device characteristics for the printer you want to add. For an LN01 printer, type:

```
$ SET DEVICE/SPOOLED TTAO:
```

5. Define a generic printer queue. The queue name must begin with PCFS\$ and end with the printer type. For example, to add an LN01 printer that is connected to the device TTA0:, type:

```
$ INITIALIZE/QUEUE/START/GENERIC=(TTA0:) PCFS$LN01
```

6. Define a physical queue for each device specified with the /GENERIC qualifier when you defined the generic queue. For example, if you specified the device TTA0 for an LN01 printer, define the physical queue by typing:

```
$ INITIALIZE/QUEUE/START/LIBRARY=PCFS_LN01_DEVCTL
/SEPARATE=(FLAG, RESET=(RESET)) TTAO:
```

### NOTE

To initialize the queues each time you restart the VAX computer, add the INITIALIZE/QUEUE commands to a system start-up file or to a printer start-up file. If you add the commands to the PCFS\_PRINT.COM file, follow the instructions in the file.

7. Create a directory for the printer. You must create the directory as a subdirectory of [PCFS\_SPOOL], which was created when you installed the VAX/VMS server directory structure. For example, to create a directory for an LN01 printer, type:

```
$ CREATE/DIRECTORY DVL:[PCFS_SPOOL.LN01]      -
                    /OWNER=[360,77]          -
                    /PROTECTION=(O:RWED,G,S:RWED,W)
```

8. Create a directory for each form that the printer supports. You must create each directory as a subdirectory of the printer directory. The directory name must be the form name without the "PCFS\_" string.

For example, to create a directory for the PCFS\_DEC\_PORTRAIT and PCFS\_DEC\_LANDSCAPE forms that the LN01 supports, type:

```
$ CREATE/DIR DVL:[PCFS_SPOOL.LN01.DEC_PORTRAIT]  -
                    /OWNER=[360,77]              -
                    /PROTECTION=(O:RWED,G,S:RWED,W)
```

```
$ CREATE/DIR DVL:[PCFS_SPOOL.LN01.DEC_LANDSCAPE]  -
                    /OWNER=[360,77]              -
                    /PROTECTION=(O:RWED,G,S:RWED,W)
```

9. If you created a file for the escape sequence for a form, you must define the form. Specify an unused form number. The form name must combine the "PCFS\_" string and the file name you added to the device control library.

For example, to define the forms for an LN01 printer, type:

```
$ DEFINE/FORM PCFS_DEC_PORTRAIT nnnnn/SETUP=DEC_PORTRAIT  -
                    /STOCK=DEFAULT/NOWRAP/WIDTH=80/NOTRUNCATE
$ DEFINE/FORM PCFS_DEC_LANDSCAPE nnnnn/SETUP=DEC_LANDSCAPE  -
                    /STOCK=DEFAULT/NOWRAP/WIDTH=132/NOTRUNCATE
```

10. Create an account for each form the printer supports. Each account is the alias that the user specifies to print a file with a particular form. Specify the directory to be the directory you created for a particular printer form.

For example, to create an account that the LN01 printer supports, for the PCFS\_DEC\_PORTRAIT form, type:

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```
$ UAF ADD LNO1_DPORT -
    /NOPASSWORD -
    /UIC=[360,77] -
    /DEVICE=DEV -
    /DIRECTORY=[PCFS_SPOOL.LNO1.DEC_PORTRAIT] -
    /NOBATCH -
    /NOINTERACTIVE -
    /NOADD_IDENTIFIER -
    /FLAGS=(CAPTIVE, -
            DISCTLY, -
            DISMAIL, -
            DISRECONNECT) -
/PWDLIFE=NONE
```

11. To create an account for the PCFS\_DEC\_LANDSCAPE form that the LN01 printer supports, type:

```
$ UAF ADD LNO1_DLAND -
    /NOPASSWORD -
    /UIC=[360,77] -
    /DEVICE=DEV -
    /DIRECTORY=[PCFS_SPOOL.LNO1.DEC_LANDSCAPE] -
    /NOBATCH -
    /NOINTERACTIVE -
    /NOADD_IDENTIFIER -
    /FLAGS=(CAPTIVE, -
            DISCTLY, -
            DISMAIL, -
            DISRECONNECT) -
/PWDLIFE=NONE
```

## Removing a User

To remove a user, the VAX/VMS server requires that you delete the user's personal directory, alias, and DECnet node registration.

### NOTE

If you added the user with the PCFS Administration utility, you should remove the user with that utility.

1. Delete the files in the user's personal directory and delete the directory.
2. Delete the UAF entry for the user's alias. For example, to delete the entry for the user SMITH, you can use the AUTHORIZE command:

UAF>REMOVE SMITH

3. Remove the user's DECnet node registration entry from the network database. For example, to remove the DECnet node BOSTON, use NCP:

```
$ NCP PURGE NODE BOSTON
```

```
$ NCP CLEAR NODE BOSTON
```

## Removing a Common Directory

To remove a common directory, the VAX/VMS server requires that you delete the common directory and alias.

### NOTE

If you created the common directory with the PCFS Administration utility, you should remove the common directory with that utility.

1. Delete the files in the common directory and delete the directory.
2. Delete the UAF entry for the common directory alias. For example, to delete the entry for the common directory SALES, you can use the AUTHORIZE command:

```
UAF>REMOVE SALES
```

## Removing an Application

To remove an application, the VAX/VMS server requires that you delete the application directory and aliases.

### NOTE

If you added the application with the PCFS Administration utility, you should remove the application with that utility.

1. Delete the files in the application directory and delete the directory.
2. Delete the UAF entry for the read-only alias for the application. For example, to delete the entry for the read-only alias for the application RBASE, you can use the AUTHORIZE command:

```
UAF>REMOVE RBASE
```

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3. Delete the UAF entry for the writeable alias for the application. For example, to delete the entry for the writeable alias for the application RBASE, you can use the AUTHORIZE command:

```
UAF>REMOVE RBASEW
```

4. Remove the appropriate SET ALIAS command from the server start-up file.

## Removing a Printer Queue

To remove a printer queue, the VAX/VMS server requires that you delete the directory and aliases for the printer and delete the generic queue and the physical queue.

### NOTE

If you added the printer queue with the PCFS Administration utility, you should remove the printer queue with that utility.

1. Delete the directory for the printer, including all subdirectories created for the printer forms.
2. Delete all UAF entries for the printer aliases. For example, to delete the entry for the alias for LN01 portrait mode, you can use the AUTHORIZE command:

```
UAF>REMOVE LN01_DPORT
```

3. Stop and delete the generic print queue. For example, to stop and delete the generic queue for an LN01 printer, type:

```
$ STOP/QUEUE PCFS$LN01  
$ DELETE/QUEUE PCFS$LN01
```

4. Stop and delete the physical print queue. For example, to stop and delete the physical queue for the device TXA0:, type:

```
$ STOP/QUEUE/RESET TXA0:  
$ DELETE/QUEUE TXA0:
```

## VAX/VMS Server Configuration

5. Delete the device control library for the printer. For example, to delete the device control library for an LN01 printer, type:

```
$ SET DEF SYS$LIBRARY:  
$ DELETE PCFS_LN01_DEVCTL.TLB;*
```



# Chapter 5

## VAX/VMS Server Messages

This chapter lists the messages that the VAX/VMS server can generate. The messages fall into two sections:

- Messages found in the log file. The default log file that contains these messages is `SYSS$SPECIFIC:[PCFS]PCFS_SERVER.LOG`. The messages are listed alphabetically, and followed by an explanation, if necessary, advice and, in parenthesis, the LOG command that must be turned on to display the message. For more information about a LOG command, see Chapter 3.
- Messages generated by VAX/VMS server operator interface. The messages are listed alphabetically, and followed by an explanation and advice.

### *IMPORTANT*

If you are unfamiliar with any of the solutions required for these messages, refer to the appropriate person in your organization. Otherwise, DIGITAL offers training and consulting services that can help you solve these problems. For more information about the services that DIGITAL offers, see the Software Product Description.

## Messages in the Log File

### Account for user 'name' has expired

The time period in the UAF for the specified user's account has expired. Use the VAX/VMS AUTHORIZE utility to reactivate the account. (LOG ERRORS)

### Account for user 'name' is disabled

The specified user can no longer connect to the associated account. The /FLAGS=DISUSER qualifier is specified for that account in the UAF. Use the VAX/VMS AUTHORIZE utility to reactivate the account. (LOG ERRORS)

### Account for user 'name' is disabled for current time

The specified user cannot connect to the associated account at the current time. The account has been set to deny the user access. Use the /ACCESS qualifier in the VAX/VMS AUTHORIZE utility to change the access to the account. (LOG ERRORS)

### Attempted seek beyond range of file 'name' by client 'nodename'

The workstation attempted to seek beyond the range of the specified file. The workstation should attempt to seek within the file. (LOG ERRORS)

### Can't close file 'name' for client 'nodename'

The VAX/VMS server cannot close the specified file for the workstation. The disk where the file is stored may be full, write-protected, or off-line. Check these possibilities, then close the file with the CLOSE FILE command. (LOG ERRORS)

### Can't create file 'name' for client 'nodename'

The VAX/VMS server cannot create the specified file for the workstation. The disk where the file is stored may be full, write-protected, or off-line. The user may not have the correct privileges to write to the directory or may have attempted to create a file through a read-only connection. You should check the disk, the user's authorization, and the directory protection codes. (LOG ERRORS)

**Can't delete file 'name' for client 'nodename'**

The VAX/VMS server cannot delete the specified file for the specified workstation. The disk may be write-protected or off-line. The user may not have the correct privileges to delete the file. You should check the disk, the user's authorization, and the directory protection codes. (LOG ERRORS)

**Can't locate file handle 'number' for client 'nodename'**

The workstation sent a server message block (SMB) to the VAX/VMS server to access a previously opened file, but the server cannot find the file handle in its database. If the workstation passed data directly to the session layer rather than through the redirector, see the *VAXmate Technical Reference Manual* to check that the SMB is in the correct format. Correct the SMB and pass it again. (LOG ERRORS)

**Can't locate tree 'name' for client 'nodename'**

The VAX/VMS server established a connection and passed back a value for the connection to the workstation. In a successive SMB request, the workstation requested an unrecognized value for the connection. If the workstation passed data directly to the session layer rather than through the redirector, see the *VAXmate Technical Reference Manual* to check that the SMB has the correct format. Correct the SMB and pass it again. (LOG ERROR)

**Can't lock/unlock byte range in file 'name' for client 'nodename'**

The workstation attempted to lock or unlock a byte range in the specified file. The byte range in the specified file is locked by another workstation. The workstation that locked the byte range must unlock it before another workstation can access it.

If the workstation passed data directly to the session layer rather than through the redirector, see the *VAXmate Technical Reference Manual* to check that the SMB has the correct format. Correct the SMB and pass it again. (LOG ERRORS)

**Can't process queue information for client 'nodename'. Queue 'name' is**

## VAX/VMS Server Messages

stopped.

The workstation requested queue information from the VAX/VMS server. The server cannot access queue information because the queue is stopped. Use the VAX/VMS START/QUEUE command to restart the queue. (LOG ERRORS)

Can't read from file 'name' for client 'nodename'

The VAX/VMS server cannot read the specified file and received an error the VAX/VMS operating system. The disk where the file is stored may be off-line. The user may not have the correct privileges to read the directory. Check the disk, the user's authorization, and the directory protection codes. (LOG ERRORS)

Can't rename file 'name' for client 'nodename'

The VAX/VMS server cannot rename the specified file. The disk where the file is stored may be off-line or write-protected. The user may not have the correct privileges to write to the directory. Check the disk, the user's authorization, and the directory protection codes. (LOG ERRORS)

Can't write to file 'name' for client 'nodename'

The VAX/VMS server cannot write data to the specified file. The disk may be full, write-protected, or off-line. The user may not have the correct privileges to write to the directory or may have attempted to write to a read-only file. Check the disk, the user's authorization, and the directory protection codes. Make sure the user is not over quota. (LOG ERRORS)

Can't write to print spooler

The VAX/VMS server cannot print a file because the server cannot write to the print spooler directory. Check that the print spooler directory is large enough. Make sure users have write privileges to the printer queue directory. For more information about the printer queue directory and alias, see Chapter 2 or Chapter 4. (LOG ERRORS)

**Closed file 'name' for client 'nodename'**

The VAX/VMS server closed the specified file as requested by the workstation. (LOG OPENS)

**Connection from client 'nodename' refused**

The VAX/VMS server refused the workstation NET USE command to establish a connection. The workstation may not have the correct privileges or may be unregistered. (LOG CONNECTIONS)

**Could not re-open LOG file 'name' for PC File Server**

The VAX/VMS server failed to reopen the log file after the server closed it for a scheduled update. Check the disk where the log file is stored to see if it is write-protected or off-line. The VAX/VMS server process stops if this situation occurs. (LOG FATAL)

**Created file 'name' for client 'nodename'**

The VAX/VMS server created the specified file as requested by the workstation. (LOG READS)

**DECnet shutting down, server exiting**

The VAX/VMS server is stopping because DECnet is stopping. (LOG OPERATOR)

**Error processing job info on queue 'name' by client 'nodename'**

The VAX/VMS server cannot read the print queue. For more information about print queues, see the *VAX/VMS Guide to System Management and Daily Operations*. (LOG ERRORS)

**File still open for client 'nodename'**

The workstation disconnected its session while a file was open. The VAX/VMS server closes the file and logs this message for your information. (LOG ERRORS)

## VAX/VMS Server Messages

### File 'name' is not a STREAM file (client 'nodename')

The workstation requested that the VAX/VMS server open a nonstream file for writing. The VAX/VMS server can only write to stream files, which are usually created by the server. (LOG ERRORS)

### Function 'SMBname' took 'number' msec

The function took the VAX/VMS server the specified amount of time to execute. (LOG TIMINGS)

### Invalid context for Find Next from client 'nodename'

The workstation was using the find first and find next calls for the MS-DOS operating system incorrectly. The workstation should try the procedure again using the corrected calls. (LOG ERRORS)

### Invalid mailbox message type 'number'

The VAX/VMS server received an undefined message from DECnet. For more information about mailbox messages, see the *DECnet-VAX User's Guide*. (LOG ERRORS)

### Invalid NCB received

The VAX/VMS server cannot read a network control block (NCB) from DECnet, because the NCB is in an incorrect format. For more information about network control blocks, see the *DECnet-VAX User's Guide*. (LOG ERRORS)

### Invalid number of jobs requested from queue 'name' by client 'nodename'

The workstation passed a server message block request (SMB) that contains an invalid maximum count for the queue entries. Correct the SMB, and pass it again. (LOG ERRORS)

### Invalid object value specified by Operator

The VAX/VMS server received a server message block (SMB) request to limit or close an unknown object (a session or a connection, for example). Correct the SMB and pass it again. (LOG ERRORS)

**Invalid path 'name' from client 'nodename'**

The workstation specified an invalid path name in a command that sent a server message block (SMB) to the VAX/VMS server. The workstation should issue the command again using a valid path name. (LOG ERRORS)

**Invalid Protocol from client 'nodename'**

A workstation tried to negotiate protocol with the VAX/VMS server, and the server did not recognize any of the protocol strings. The workstation is probably not using the VAXmate network software. (LOG ERRORS)

**Invalid queue 'name' specified in request by client 'nodename'**

The workstation requested print queue information for an invalid print queue. The workstation should make the request again using a valid print queue name. (LOG ERRORS)

**Invalid SMB**

The VAX/VMS server received a server message block (SMB) that the server cannot read. The SMB is in an incorrect format. The VAX/VMS server process stops if this situation occurs. (LOG FATAL)

**Invalid SMB format from client 'nodename'**

The workstation passed a server message block (SMB) to the VAX/VMS server in an invalid format.

If the workstation passed data directly to the session layer rather than through the redirector, see the *VAXmate Technical Reference Manual* to check that the SMB has the correct format. Correct the SMB and pass it again. (LOG ERRORS)

**Invalid Username/Password for client 'nodename'**

A NET USE command specified an unrecognized user name or an illegal password. The user should request the connection specifying the correct user name and password. (LOG ERRORS)

## VAX/VMS Server Messages

### **LIB\$ASN\_WITH\_MBX failed, status = 'number'**

The VAX/VMS server failed to initialize itself when it was started. Make sure the VAX/VMS server is started in a privileged account and that DECnet is running, (LOG FATAL)

### **Locked range 'number' to 'number' in file 'name' for client 'nodename'**

The VAX/VMS server locked the specified range in the file as requested by the workstation. (LOG LOCKS)

### **Opened file 'name' for client 'nodename'**

The VAX/VMS server opened the specified file as requested by the workstation. (LOG OPENS)

### **OPER or SYSPRV privilege required to perform operator functions**

Someone tried to use the VAX/VMS server operator interface from an account that does not have OPER or SYSPRV privileges. Use the VAX/VMS server operator interface from an account with these privileges. (LOG ERRORS)

### **Read 'number' characters from file 'name' for client 'nodename'**

The VAX/VMS server read the specified characters from the file as requested by the workstation. (LOG READS)

### **Requested range in file 'name' locked against client 'nodename'**

The workstation cannot access the range of the specified file because another workstation has already locked that range. The range must be unlocked by the workstation that locked it before another workstation can access that range. You can also use the CLOSE SESSION command to disconnect the workstation and remove the lock. (LOG ERRORS)

### **Server started on node 'name'**

The VAX/VMS server started on the specified DECnet node. This is the first message in the log file when the server starts.

**SYSS\$ASSIGN failed for device NAME, status = 'number'**

The VAX/VMS server cannot assign a unit number to a session. For more information about the ASSIGN system service, see the *DECnet-VAX User's Guide*. (LOG ERRORS)

**SYSS\$QIO(IO\$\_READVBLK) failed for mailbox, status = 'number'**

The VAX/VMS server attempted to read a DECnet message that does not exist. For more information about mailbox messages, see the *DECnet-VAX User's Guide*. (LOG FATAL)

**SYSS\$QIOW(IO\$\_ACPCONTROL) failed, status = 'number'**

The VAX/VMS server failed to initialize itself when it was started. Make sure the VAX/VMS server is started in a privileged account and that DECnet is running. When status=20, the PCFS\_STARTUP.COM file may have tried to start the VAX/VMS server process when another server process is running. Make sure the new server process is started from the same group as the first server process. (LOG FATAL)

**Too much data requested by client 'nodename', virtual circuit aborted**

The workstation asked the VAX/VMS server for too much data, and the server disconnected the workstation session.

If the workstation passed data directly to the session layer rather than through the redirector, see the *VAXmate Technical Reference Manual* to check that the SMB has the correct format. Correct the SMB and pass it again. (LOG ERRORS)

**Tree connect for client 'nodename' to directory 'name'**

The VAX/VMS server established a connection to the specified directory as requested by the workstation NET USE command. (LOG CONNECTIONS)

**Tree disconnect for client 'nodename' from directory 'name'**

The VAX/VMS server disconnected a connection to the specified directory as requested by the workstation NET USE /D command. (LOG CONNECTIONS)

## VAX/VMS Server Messages

### Tree 'name' still connected to client 'nodename'

The workstation unexpectedly disconnected its session when it still had an active connection with the VAX/VMS server. The VAX/VMS server closes the active connection automatically. (LOG ERRORS)

### Unit 'number': can't create ACE for file 'name'

There was not enough memory to create an ACE for the file.

### Unit 'number': can't create file 'name' on top of directory

A workstation requested the VAX/VMS server to create the specified file. The VAX/VMS server cannot create the file because a subdirectory with the same name already exists. The user should request the file creation again and specify a unique file name. (LOG ERRORS)

### Unit 'number': can't open file 'name'

The VAX/VMS server did not open the specified file for a workstation. The user may not have the correct privileges to open the file. The disk may be write-protected or off-line. A process may have opened the file in a way that precludes another process from opening it. Check these possibilities, and try to open the file again. (LOG ERRORS)

### Unit 'number': connect accept (SYS\_\$QIOW(IO\_\$ACCESS)) failed, status = 'number'

The VAX/VMS server received a request to connect from a workstation, but DECnet does not allow the VAX/VMS server to make the connection. Check that the workstation session is still active and that the DECnet is functioning properly. (LOG ERRORS)

### Unit 'number': connect accepted

A workstation requested a connection that the VAX/VMS server accepted. (LOG CONNECTIONS)

### Unit 'number': connect requested, process 'number'

A workstation requested a connection to the VAX/VMS server. The workstation may or may not have been connected. (LOG CONNECTIONS)

**Unit 'number': DECnet read AST returned error status 'number'**

The VAX/VMS server requested its next message from DECnet, and the VAX/VMS operating system returned an error. Check that DECnet is functioning properly. You may have exceeded the AST limit. For more information about the AST limit, see Chapter 4. (LOG ERRORS)

**Unit 'number': DECnet read QIO returned error status 'number'**

DECnet cannot read what it was attempting to read. Make sure DECnet is functioning properly. For more information about QIO error status, see the *DECnet-VAX User's Guide*. (LOG ERRORS)

**Unit 'number': directory 'name' already exists**

The VAX/VMS server cannot create a directory for the specified user because the directory already exists. The user should create the directory again using another name. (LOG ERRORS)

**Unit 'number': directory create for 'name' failed, errno = 'number'**

The operation failed because you do not have the privileges required to create the directory.

**Unit 'number': disconnect initiated by client**

A workstation requested to be disconnected from the VAX/VMS server. The workstation may or may not have been disconnected. (LOG CONNECTIONS)

**Unit 'number': first four bytes of SMB !=0xFF 'S' 'M' 'B'**

The workstation passed a server message block (SMB) that does not begin with the correct four bytes: FF, 'S', 'M', 'B'. The VAX/VMS server disconnects the workstation session. If the workstation passed data directly to the session layer rather than through the redirector, see the *VAXmate Technical Reference Manual* to check that the SMB has the correct format. Correct the SMB, and pass it again. (LOG ERRORS)

## VAX/VMS Server Messages

### Unit 'number': Invalid SMB byte data type 'number'

The workstation passed a server message block (SMB) with an invalid type of data field.

If the workstation passed data directly to the session layer rather than through the redirector, see the *VAXmate Technical Reference Manual* to check that the SMB has the correct format. Correct the SMB, and pass it again. (LOG ERRORS)

### Unit 'number': invalid SMB received

The VAX/VMS server received a server message block (SMB) from the workstation that the server did not understand.

If the workstation passed data directly to the session layer rather than through the redirector, see the *VAXmate Technical Reference Manual* to check that the SMB has the correct format. Correct the SMB, and pass it again. (LOG ERRORS)

### Unit 'number': link aborted

A workstation unexpectedly disconnected its session without specifying the NET USE device /D command. The workstation may have been turned off or reset while still connected to the server. (LOG ERRORS)

#### NOTE

It is not uncommon for a log file to contain a number of "link aborted" messages. You do not have to respond to these messages unless users are complaining about losing links to the server.

### Unit 'number': link abort failed, status = 'number'

The workstation unexpectedly disconnected its session with the VAX/VMS server. The VAX/VMS server could not disconnect the session. For more information about the link abort, see the *DECnet-VAX User's Guide*. (LOG ERRORS)

#### NOTE

It is not uncommon for a log file to contain a number of "link aborted" messages. You do not have to respond to these messages unless users are complaining about losing links to the server.

**Unit 'number': link close failed status = 'number'**

The workstation requested to close a session. The VAX/VMS server could not deassign the unit and close the session. For more information about the failure, see the *DECnet-VAX User's Guide*. (LOG ERRORS)

**Unit 'number': link disconnected by 3rd party**

A workstation session was unexpectedly disconnected by a party other than the workstation or the VAX/VMS server. Use the network control program (NCP) to see if the network is still active. Check that the network hardware is working properly. After checking these, the workstation should re-establish the session with the NET USE command. (LOG ERRORS)

**Unit 'number': path to client lost**

A workstation session with the VAX/VMS server was disconnected. The session time probably expired. The workstation should issue the NET USE command again to re-establish the session. (LOG ERRORS)

**Unit 'number': Requested access for file 'name' denied**

The VAX/VMS server did not allow the workstation to access the specified file. The workstation does not have the correct privileges to access the file. You can either change the privileges to allow access to the file or tell the user about the file restricted access. (LOG ERRORS)

**Unit 'number': SMB byte data should be null-terminated but isn't**

The workstation passed a server message block (SMB) containing string information that did not end with a zero. If the workstation passed data directly to the session layer rather than through the redirector, see the *VAXmate Technical Reference Manual* to check that the SMB has the correct format. Correct the SMB, and pass it again. (LOG ERRORS)

**Unit 'number': SMB claims to be bigger ('number' bytes) than containing**

## VAX/VMS Server Messages

### message ('number' bytes)

The workstation passed a server message block (SMB) with a number of byte parameters greater than the total byte parameters in the received message.

If the workstation passed data directly to the session layer rather than through the redirector, see the *VAXmate Technical Reference Manual* to check that the SMB has the correct format. Correct the SMB and pass it again. (LOG ERRORS)

### Unit 'number': SMB claims word parameters longer than message

The workstation passed a server message block (SMB) with the number of word parameters greater than the total word parameters in the received message.

If the workstation passed data directly to the session layer rather than through the redirector, see the *VAXmate Technical Reference Manual* to check that the SMB has the correct format. Correct the SMB and pass it again. (LOG ERRORS)

### Unit 'number': stunted SMB received

The workstation passed a server message block (SMB) with total parameters greater than the total parameters of the received message.

If the workstation passed data directly to the session layer rather than through the redirector, see the *VAXmate Technical Reference Manual* to check that the SMB has the correct format. Correct the SMB and pass it again. (LOG ERRORS)

### Unit 'number': SYS\$DASSGN failed, status = 'number'

The workstation disconnected its session with the VAX/VMS server, but the server cannot deassign the unit number associated with that session. For more information about the \$DASSGN system service, see the *DECnet-VAX User's Guide*. (LOG ERRORS)

### Unit 'number': SYS\$QIOW(IO\$\_WRITEVBLK) failed, unit = 'number', status = 'number'

The VAX/VMS server cannot write a message to reply to DECnet. For more information about the IO\$\_WRITEVBLK system service, see the *DECnet-VAX User's Guide*. (LOG ERRORS)

**Unit 'number': virtual circuit aborted by server**

The VAX/VMS server disconnected a workstation session with the server, because the workstation passed an incorrect server message block (SMB). (LOG SESSION)

**Unlocked range 'number' to 'number' in file 'name' for client 'nodename'**

The VAX/VMS server unlocked the specified range in the file as requested by the workstation. (LOG LOCKS)

**Wrote 'number' characters to file 'name' for client 'nodename'**

The VAX/VMS server wrote the specified characters to the file as requested by the workstation. (LOG READS)

## **Messages from the VAX/VMS Server Operator Interface**

You can see these messages when you use the VAX/VMS server operator interface.

**%PCFS-E-BAD\_INT, invalid numeric value — supply an integer**

You entered an incorrect value in a LIMIT command. Type the command again using a positive integer or "NO\_LIMIT".

**%PCFS-E-BADREAD, read from net link failed**

The operator interface could not read the response from the server.

**%PCFS-E-BADWRITE, write to net link failed**

The operator interface could not write a request to the server.

**%PCFS-E-BAD\_PACKET, unrecognizable data received**

The response from the server was not of the proper format.

## VAX/VMS Server Messages

### **%PCFS-E-BAD\_PROT, protocol refused**

The DECnet parameters (possibly the node name or node number) for the VAX computer are not in agreement with the DECnet parameters known to the server. Reconfigure the DECnet parameters. For more information about DECnet parameters, see the *DECnet-VAX User's Guide*.

### **%PCFS-E-INVFILNAM, invalid filename — no wildcards are allowed**

You specified an asterisk(\*) or a percent sign (%) in the SET LOG FILE or CLOSE FILE command. Wildcards are not allowed. Type the command again without specifying a wildcard.

### **%PCFS-E-LONG\_FILENAME, invalid file specification - respecify**

The file name specified in the operator interface command was too long to be a valid VMS file name.

### **%PCFS-E-NO\_ITEM, item to CLOSE did not exist**

You specified an invalid name or ID with a CLOSE command. Type the CLOSE command again specifying a valid name or ID.

### **%PCFS-E-NO\_MEM, out of memory**

The operator interface could not allocate enough virtual memory to do the requested operation.

### **%PCFS-E-NO\_SERVER, server process may have terminated**

The VAX/VMS server encountered a fatal error or the network became unavailable. Use the VAX/VMS SHOW SYSTEM command to see if the VAX/VMS server image is still active. If it is not active, restart the VAX/VMS server and issue the command again.

### **%PCFS-E-SERVER\_DIED, server encountered a fatal error - check server log file**

The server terminated with a fatal error; the operator interface can no longer communicate with it.

**%PCFS-F-FATAL, fatal internal error — 'reason'**

The VAX/VMS server encountered a fatal error that caused it to stop running. Check the log file to see what the error is. Then check the first part of this chapter for a list of errors that can be displayed in the log file.

**%PCFS-F-NO\_LINK, connect failed — server image may not be running**

You attempted to use the VAX/VMS server operator interface on a DECnet node that is not running the VAX/VMS server image. If the VAX/VMS server is installed on that node, run the PCFS\_STARTUP.COM program. If the VAX/VMS server is not installed on the DECnet node, see Chapter 1.

**%PCFS-F-NO\_PRVS, insufficient privileges**

The account from which you are trying to run the VAX/VMS server operator interface does not have OPER or SYSPRV privileges turned on. You can only use the VAX/VMS server operator interface from an account with these privileges.



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