

P/OS Server

User's Guide

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First Edition

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DELNI	PRO/RMS	VT
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Before You Start

WHO SHOULD READ THIS BOOK

This book explains how to install and use P/OS Server, a software product that provides a shared resource environment for the Professional 300 series computer.

The purpose of this book is to also document features or menus that are different in a P/OS Server environment from a stand-alone P/OS system environment. Since a Workstation has the capabilities of a Professional hard disk system, this book refers to the *Hard Disk System User's Guide* frequently.

While you need no experience in data communications to use P/OS Server, you should be familiar with the general operation of your Professional: the keyboard, function keys, menus and the file system. These topics are covered in your *Hard Disk System User's Guide*.

CONVENTIONS USED IN THIS BOOK

This book uses certain conventions to represent the way an action should be performed or the way a command should be entered from the keyboard. The following is an explanation of these conventions:

KEY

Words set in this typeface indicate a key on your LK201 keyboard. For example, RETURN, K, and 5 are keys.

CTRL/	Indicates that you hold down the CTRL key while you press a second key. For example, CTRL/Z means hold down the CTRL key while pressing the Z key.
< >	Angle brackets are used in examples to indicate a single keystroke. For example, <EXIT> tells you to press the EXIT key.
[]	Square brackets enclose items that are optional, or items that are defined, either by you, or the application. You do not type the brackets when you type the optional item. However, in a file specification, brackets are part of the syntax and must be included.
Press	Tells you to make one keystroke with the indicated key.
Type	Tells you to enter characters from the keyboard. For example, if you are asked to type DIRECTORY, you make nine keystrokes: one for each letter.
Choose	Implies that you select an item from a list of menu options, and then press the DO key.
<i>Italics</i>	Words defined in the glossary appear in italics the first time they are used in the book.
Dot matrix	Indicates text that is displayed on the computer screen.
Red ink	Indicates user input in examples.

INFORMATION IN THIS BOOK

This book is divided into four sections:

- Getting Started with P/OS Server—explains the basic concepts of P/OS Server, and lists the hardware and software requirements.
- Server Manager—describes the duties of the Server manager, installation procedures, and maintenance of P/OS Server.
- Workstation User—describes what you need to know to use a Workstation in the P/OS Server environment.

- Workstation Manager—describes the duties of the workstation manager.

ASSOCIATED DOCUMENTS

Hard Disk System For Beginners (AA-EX78A-TH)—Explains some of the fundamentals of using the Professional. It is intended for people with little or no experience with computers.

Hard Disk System User's Guide (AA-EX78A-TH)—Explains how to use a Professional with a hard disk.

PRO/Communications User's Guide (AA-EX80A-TH)—Explains how to use PRO/Communications, which enables your Professional to communicate with other computers.

PROSE (AA-DY40A-TH)—Explains how to use PROSE, a text editor that allows you to create documents on your Professional.

PRO/EDT User's Guide (AA-DY40A-TH)—Explains how to use PRO/EDT, DIGITAL's standard interactive text editor for the Professional.

Command Language User's Guide (AA-DY40A-TH)—Explains how to use DIGITAL Command Language, an application that interfaces between you and the Professional Operating System (P/OS).

PRO/DECnet User's Guide (AA-EG83A-TH)—Provides information for all PRO/Server members using PRO/DECnet.

PRO/DECnet Problem Determination Guide (AA-EG83A-TH)—Provides information for diagnosing communications problems.

PRO/DECnet Release Notes (AA-EG83A-TH)—Provides latest release notes for PRO/DECnet.

DELNI Installation/Owner's Manual (EK-DELNI-IN-002)—Provides information on installing the DELNI controller board.

DECNA Installation/Owner's Manual (EK-DECNA-IN-001)—Provides information on installing the DECNA Controller.

Owner's Manual (EK-PC-350-OM or EK-PC-380-OM)—A reference book for Professional hardware. It tells you what to do if you have problems with the hardware.

Hard Disk System Error Guide (AA-FC89A-TH)—Provides hardware, software, and firmware error messages related to your Professional and the latest version of P/OS.

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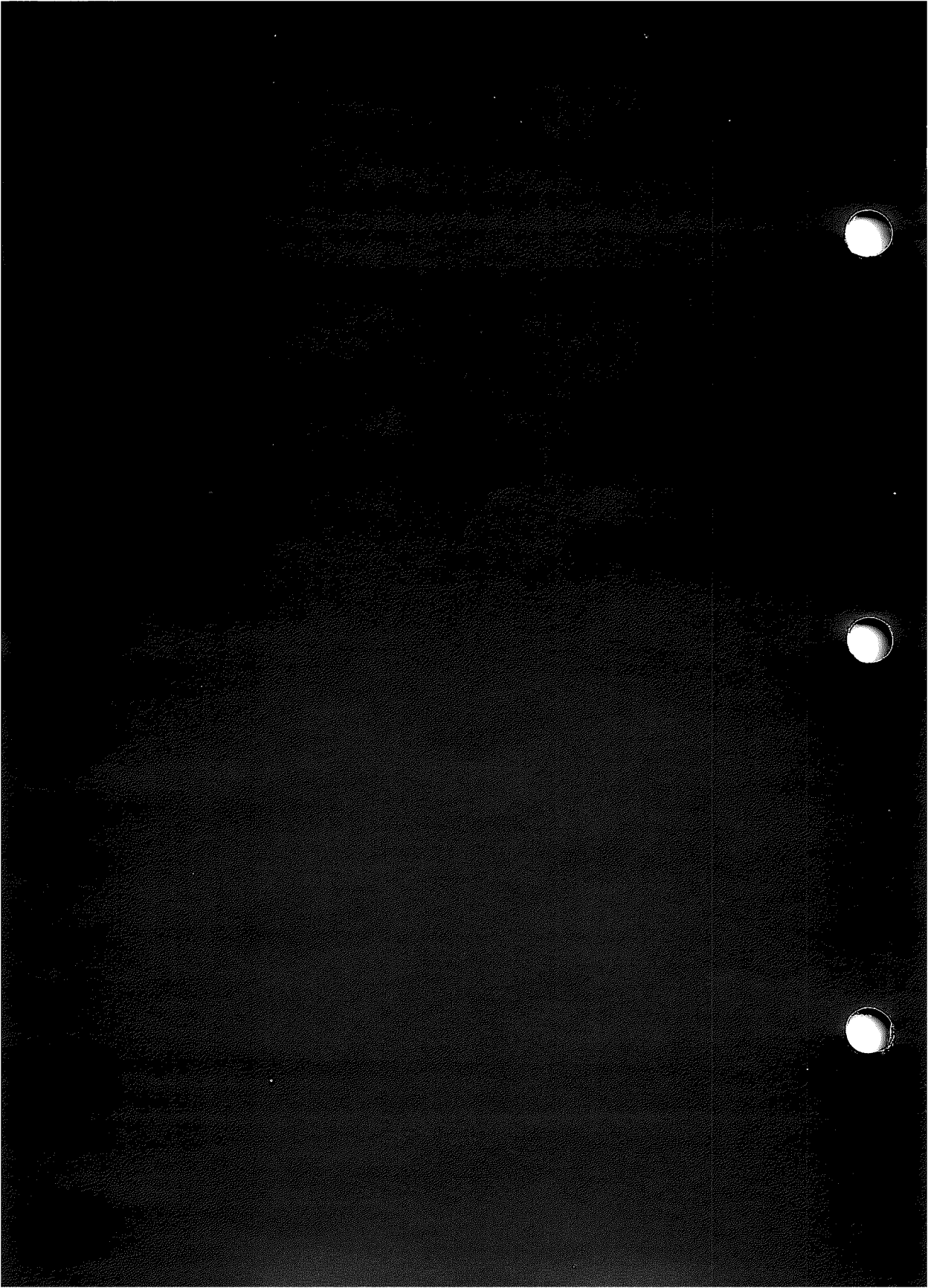
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Getting Started with P/OS Server



Chapter 1

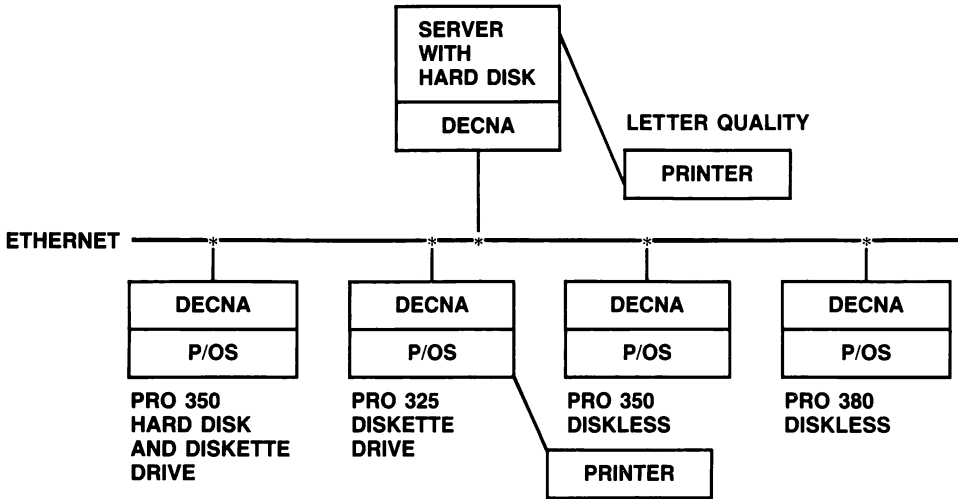
Getting Started with P/OS Server

WHAT IS P/OS SERVER?

P/OS Server is a shared resource environment for the Professional 300 series computer. P/OS Server uses *Ethernet* hardware. Ethernet is a communications concept for local communications *networks*, which employ *coaxial cable* as a passive communications medium to interconnect different kinds of computers, information processing products, and office equipment at a local business site, without requiring switching logic or control by a central computer.

The P/OS Server software enables one Professional system to act as a *Server*, and provides other Professional *Workstations* connected to it the capability to share files, *databases*, *applications*, printers and other resources on the Server. Workstations connected to the Server can be diskless, or can have any supported combination of diskette drives or hard disks.

Figure 1-1 shows a Server and several different Professional Workstations.



* = H4000 or DELNI

Figure 1-1
P/OS Server Group

Some of the features of the P/OS Server product are:

- Access to disks, files, databases, applications, mail services, and printers for Workstations connected to a Server.
- Hard disk P/OS capability on Workstations without the need for either a hard disk, or a diskette drive.
- Application portability and compatibility from the hard disk *stand-alone* environment to a P/OS Server environment.
- Transparent P/OS Server environment at the operating system level.
- Communication between Workstations and other systems connected to Ethernet using DECnet.

HOW DOES P/OS SERVER WORK?

When you turn on a registered Workstation, the Server loads the P/OS operating system over the Ethernet into the Workstation. The Workstation's P/OS operating system establishes communication with the Server and gains access to the Server's disks. This process is known as down-line loading. At this point there is no difference between a local disk and one located on the Server. In this way, the P/OS Server provides hard disk P/OS functionality on a Workstation without the need for either a local hard disk or a diskette drive.

Server

The Server is a Professional with a hard disk that provides a shared resource environment for other Professional Workstations.

You will need to purchase PRO/DECnet Version 2.0 software, to make each Workstation and the Server into DECnet end *nodes*. P/OS Version 3.0 software, installed on the Server, provides operating system services to all Workstations connected to the Server and registered on the Server by the Server manager.

Any printer connected to the Server is also available to Workstations. In this way, the P/OS Server provides disk resources and printer facilities to a number of Professional Workstations without the cost of providing each Professional with its own disk resources or printers.

Professional Workstations

Professional Workstations can be configured with any supported combination of hard disks and/or diskette drives, or they can be diskless Workstations.

A Workstation can be one of the following:

- Professional 325
- Professional 350 or 380—diskless, diskette based, or hard disk based Workstation

Diskless Systems

A diskless Workstation can be any one of the Professional 300 series computers; either a Professional 325, Professional 350, or a Professional 380. The diskless Workstation gives you a low-cost Workstation with the capabilities of a hard disk system using the Server's hard disk resources.

Diskette Systems

A Professional 325 Diskette System gives you the choice of *booting* from the Server or, if the system has a diskette-based P/OS kit, booting from the Professional 325 as a stand-alone system and running applications locally. The Professional 325 in Figure 1-1 has a printer attached which allows you to print files locally.

Hard Disk Systems

With a Professional as a Workstation (Figure 1-1), you have the option of booting from the Server as a Workstation or from a local hard disk as a stand-alone system. Booting is the process of loading an operating system into memory and bringing the system to a state where applications can execute. Normally, a system with a local hard disk will be booted from that hard disk; this is referred to as a stand-alone system. With P/OS Server, you have the capability of loading the operating system from another system (the Server system), thus bypassing the operating system on your local hard disk.

With this configuration your Professional Workstation can be part of a P/OS Server Group and communicate with other members of the Group or function as a stand-alone Professional. Stand-alone refers to a system which is booted from its own local disk.

Communicating with P/OS Server

P/OS Server uses Ethernet hardware and PRO/DECnet software to communicate between Workstations. The Phone application, Set Host network interface, and Mail applications which come with PRO/DECnet, allow Workstations to communicate with each other and with *remote* nodes. Refer to the *PRO/DECnet User's Guide* for more information on these applications.

The Ethernet connection can be either an Ethernet cable with one *H4000 Transceiver* per node, or a *DELNI* for up to eight nodes. The DELNI is essentially Ethernet in a box with eight H4000 Transceivers. A *DECNA* option module is the Ethernet communications controller for each Professional and must be installed in each Workstation and the Server. Refer to the *PRO/DECnet User's Guide* for more information on Ethernet configurations.

WHAT MAKES A PROFESSIONAL A P/OS SERVER WORKSTATION?

The requirements for a Professional to be a member of a P/OS Server Group are:

1. A Workstation must be registered on a Server as a member of a P/OS Server group.
2. A Workstation must have a DECNA option module installed.
3. A Workstation must be connected to Ethernet either using an H4000 Transceiver or the DELNI. It must be on the same Ethernet segment as the Server.

THE P/OS SERVER ENVIRONMENT

In the P/OS Server environment, you log into your Workstation and then into the Server. As a Workstation user, you may have your own account on the Server with its own unique environment or it may be on a local disk (if there is one). This environment includes the application set available to you, your default directory, and your files.

PUBLIC AND PRIVATE AREAS OF P/OS SERVER

The Server disk consists of two areas, a public area and a private (or user account) area. The public area on the Server is accessible to all users of the P/OS Server group. Users can list all applications residing in the public area, and, if they wish, install them into their private application database. The private area on the Server contains all of the user's private files and system files which describe the user's environment, such as the applications on the Main Menu and terminal setup for each user.

HARDWARE REQUIREMENTS

Ethernet Hardware for P/OS Server Group

The minimum interconnect hardware requirements for P/OS Server are:

- DECNA Controller and cable for each Workstation
- DECNA Controller and cable for the Server
- DELNI for up to eight Workstations

and/or

Ethernet coaxial cable, H4000 Transceiver and *Transceiver Cable* for each Workstation and Server connected to Ethernet. Refer to the *PRO/DECnet User's Guide* for valid Ethernet configurations.

Server

The minimum hardware requirements for a Server are:

- Professional 350 with 512 KB memory
- RD31 hard disk
- RX50 disk drive

NOTE: The Server will need additional memory if you use it as a Workstation.

Recommended hardware for a Server is:

- Professional 380

Optional hardware for a Server is:

- Expander box for additional hard disks
- Supported printers
- Additional memory
- Quad Port Serial Line Unit

Professional Workstation

The minimum hardware requirements for a Workstation are:

- Diskless Workstation–Professional 300 series computer
- 512 KB memory

A Professional Workstation can be one of the following:

- Diskless Workstation–Professional 300 series computer
- Professional 325
- Professional 350
- Professional 380

Optional hardware for a Professional Workstation is:

- Hard disk
- Expander box with an additional hard disk
- Supported printers
- Additional memory
- Quad Port Serial Line Unit
- Diskette drive

SOFTWARE REQUIREMENTS

The minimum software requirement for a P/OS Server group is P/OS Version 3.0 and PRO/DECnet Version 2.0 software.

P/OS Version 3.0 software comes in two binders:

- Hard Disk System binder
- Editors and Command Language binder

The Hard Disk System binder includes:

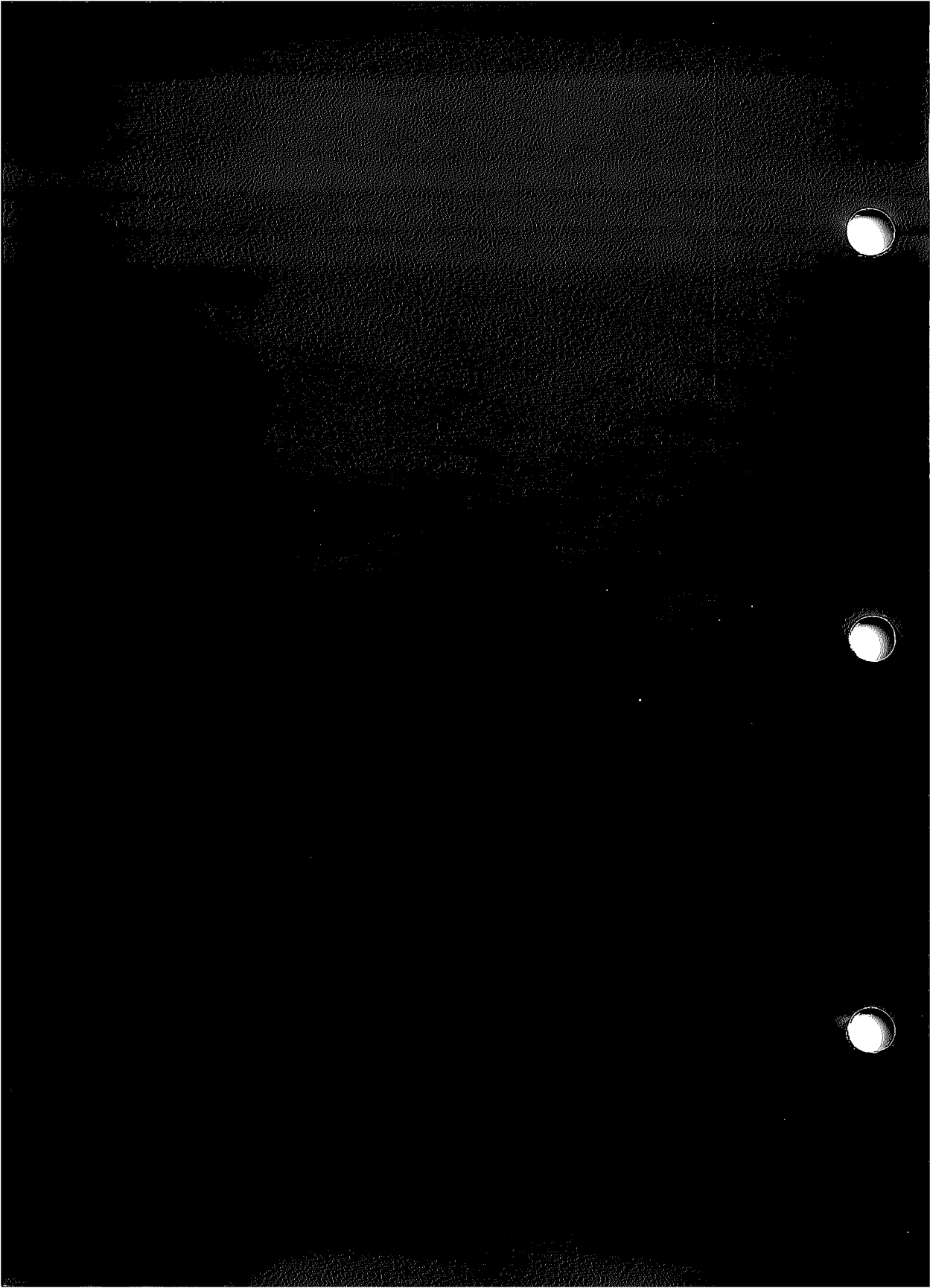
- *P/OS Server User's Guide*
- *Hard Disk System User's Guide*
- *Hard Disk System Quick Reference Card*
- *Hard Disk System for Beginners*
- *Hard Disk System Error Guide*
- Customer Letter
- Release Notes
- P/OS Version 3.0 operating system software—Use this to install the operating system on the Server.
- P/OS Server Workstation Registration Application software—Install this application to register a Workstation as a member of a P/OS Server Group, and to make this system a Server system.
- P/OS Server Non-Volatile RAM (NVR) Modification Utility software—Run this utility to change the boot sequence of a Professional to boot from the Server or the local hard disk.
- Backup and Restore Utility (BRU) software—Install BRU to back up or restore files created on P/OS Version 3.0 or later versions.
- Backup/Restore Application (Archive) software—Install this Backup and Restore Application to back up and restore files created on P/OS V2.0 or V2.0A or earlier versions of P/OS.

The Editors and Command Language binder includes:

- *PROSE User's Guide*
- *PRO/EDT User's Guide*
- *Command Language User's Guide*
- *PRO/EDT Quick Reference Card*
- PROSE software—A text editor
- EDT software—A text editor
- DIGITAL Command Language software—A command line interface between users and the Professional Operating System (P/OS) that can be used instead of the menu interface.

2

Server Manager



CHAPTER 2

Server Manager

The P/OS Server requires someone to plan the configuration for the *Server* and its *Workstations*, install P/OS Server software, *register Workstations*, and maintain the Server. We suggest that someone in the location of the Server act as *Server manager* to handle the routine administrative tasks that need attention.

PLANNING A P/OS SERVER GROUP

When planning the number of Workstations in a P/OS Server Group the Server manager should consider the following factors:

- The amount of disk space on the Server.
- Whether the Workstations are diskless or whether they have their own local storage. Are they entirely dependent on the Server?
- The type of application used. Disk intensive applications, like sort applications, will lower the number of possible Workstations. CPU intensive applications, like a graphics application, will allow the Server to support a larger number of Workstations since each Workstation has its own CPU.
- Whether Workstations will be used full time or only part of the day.

Documentation

The Server manager can order any of the Server manuals for members of the P/OS Server Group.

INTERCONNECTING HARDWARE

You should choose the interconnecting hardware that you will need to set up a P/OS Server Group on the basis of the configuration that most suits the group's needs.

A Server and a Workstation can be located anywhere on Ethernet hardware.

Workstations can be added or removed without disturbing other users of the Server.

Refer to the *PRO/DECnet User's Guide* for descriptions of Ethernet configurations.

BEFORE YOU BEGIN INSTALLATION

Before you install the P/OS Server software, you should *back up* any of your current files that you want to keep. There are two backup and restore utilities in your P/OS kit, Backup and Restore Utility (BRU) and the Backup/Restore Application (Archive).

Use the Backup and Restore Utility (BRU) to back up or restore files created on P/OS Version 3.0 later.

Use Backup/Restore Application (Archive) to back up and restore files created on P/OS V2.0 or V2.0A or earlier versions of P/OS.

Refer to the *Hard Disk System User's Guide* for information on how to use these two utilities.

Before you begin software installation you should also:

1. Record the following information about the Server and each Workstation in Appendix A of this book.
 - a. Record the Ethernet address from the DECNA Controller before you install the DECNA Controller in each Workstation and in the Server. This address will be used to register a Workstation on the Server.

If you already have a DECNA Controller installed in a Professional and need the Ethernet address, you can get this address without removing the DECNA Controller by using the Professional Maintenance and Installation services. Refer to the *Owner's Manual* for instructions.

The Ethernet address appears on a label on the DECNA Controller as shown in Figure 2-1.

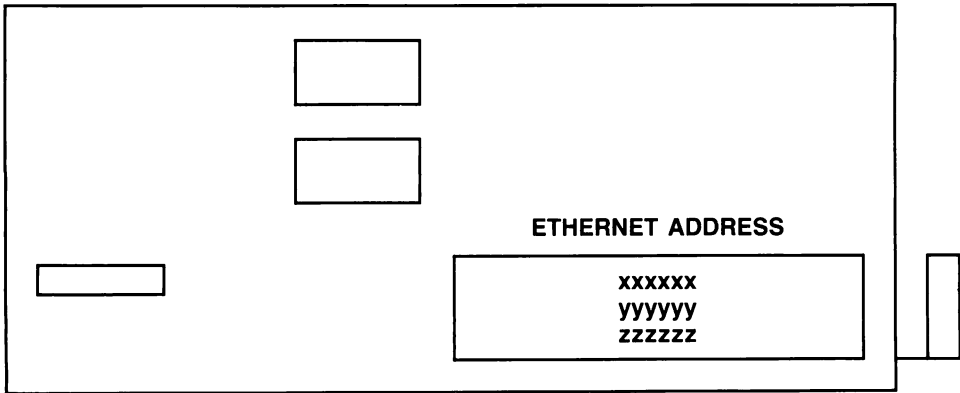


Figure 2-1
Ethernet Address Label on the DECNA Controller

The Ethernet address can appear in either one of two formats.

It can look like this:

```
xxxxxx
yyyyyy
zzzzzz
```

Or it can look like this:

```
xx-xx-xx-xx-xx-xx
```

NOTE: Leading zeros must be included when registering Workstations on the Server for the xx-xx-xx-xx-xx-xx format.

- b. Obtain a node name and address from the *network coordinator*. The network coordinator is a person who provides administrative assistance to network users.

If the P/OS Server group is not connected to a larger network, then the Server manager can assign a node name and node address to the Server using the following instructions.

Give the Server and each Workstation a node name and node address and record them in Appendix A. Each node must have a unique node name and node address within the network.

Node Name

The node name is used as the DECnet node name for the Workstation and as its system name. The node name consists of up to six characters. At least one character must be a letter for example, A12345, or CATHY. Do not use characters created with the COMPOSE CHARACTER key. Do not use a node name used by any other system in the P/OS Server Group and in a DECnet network.

Node Address

The node address must be unique for each registered Workstation in the P/OS Server Group and in a DECnet network. It consists of two numbers:

- i. Area code number—a decimal number from 1 to 63. The area code for each member of a P/OS Server group should be the same.
- ii. Node address—a decimal number from 1 to 1023.

The format for the node address is:

```

      xx.xxxx
       | |
area code node address
  
```

NOTE: Be sure to include the “.” in the node address. Do not use the same node address as anyone else in the network. Leading zeros are not necessary for the area code or node address.

2. Record all other information asked for in Appendix A.
3. Install the DECNA Controller.

Install the DECNA Controller on the Server and in each Professional Workstation. Refer to the *DECNA Installation/Owner's Manual* (EK-DECNA-IN-001) for information on the installation of the DECNA Controller.

4. Connect Workstations and the Server to Ethernet or DELNI.

NOTE: If you are adding P/OS Server to a complex heterogeneous networking environment you may need to provide for on-site installation and/or configuration of the network.

Depending on how you configure the P/OS Server Group, you will need to do one of the following:

- a. Connect Workstations and Server to the DELNI. Refer to the *DELNI Installation/Owner's Manual*, (EK-DELNI-IN) for information on connecting a Professional 300 series system to the DELNI.
- b. Connect Workstations and Server to the Ethernet coaxial cable. You will need a specialist to install the Ethernet cable and H4000 Transceivers.
- c. Connect Workstations and Server to the DELNI and the DELNI to Ethernet using the H4000 Transceiver.

If you would like more information about site planning for Ethernet, consult DIGITAL's *Ethernet Installation Guide* (EK-ETHER-IN-001).

INSTALLING P/OS

In order to use P/OS, you must install it on the Server, which means copying it from the P/OS diskettes you received with the system onto the Professional Server hard disk.

1. Install P/OS referring to the *Hard Disk System User's Guide* for installation information.
2. When installation is complete, turn the system off and then turn it on again.

Logging into the Server

1. When you turn on the Server for the first time after installing the P/OS software, the DIGITAL logo appears and the screen displays "Professional hardware checkout completed Disk-based P/OS now being loaded. . . ."

Then the screen appears as in Figure 2-2.

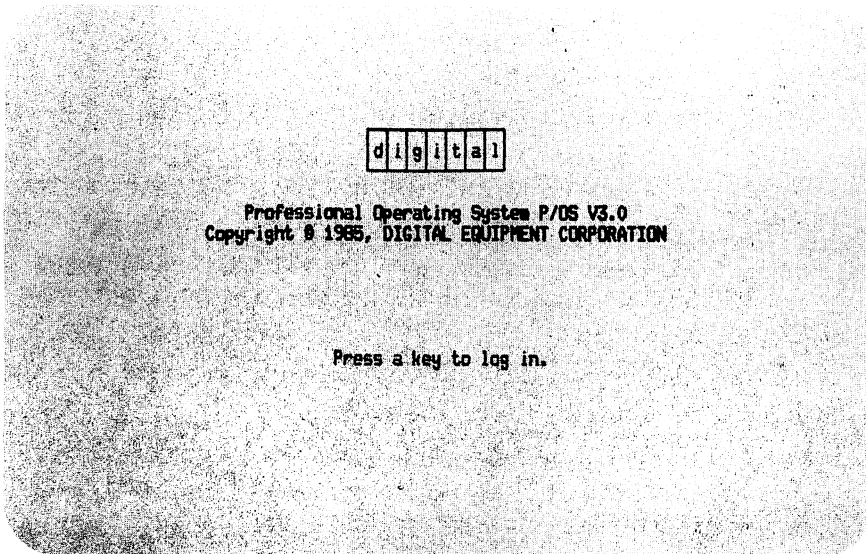
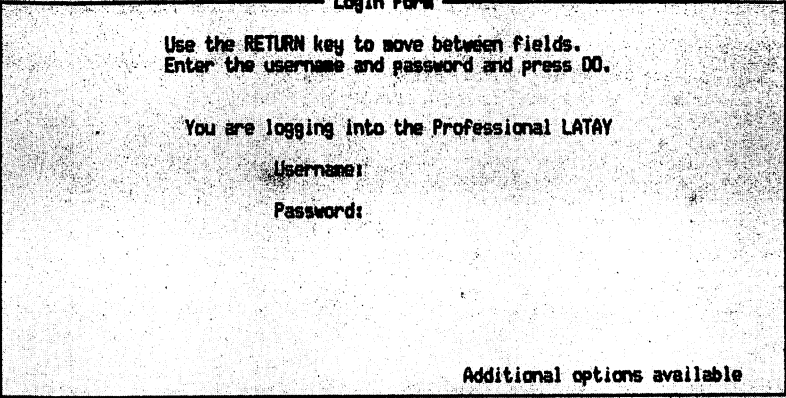


Figure 2-2
DIGITAL Logo Display

2. Press a key to log into the Server. The Login Form will appear as in Figure 2-3.



Login Form

Use the RETURN key to move between fields.
Enter the username and password and press DO.

You are logging into the Professional LATAY

Username:
Password:

Additional options available

Complete the form and press DO.

Figure 2-3
Login Form

3. Fill in the Login Form. To use the system for the first time, enter SYSTEM as the user name and SYSTEM again as the *password*, then press DO.
4. The form in Figure 2-4 will then appear for you to enter a new password for this account. If you forget the password to this account, you will not be able to get into the system account. The SYSTEM account is a privileged account that allows you full access to the operating system (see the following caution). You should use the SYSTEM account to set up the Server.

Change Password Form

Use the RETURN key to move between fields.
Enter a new password for this account and press DO.

New Password

Verification

Complete the form and press DO.

Figure 2-4
Change Password Form

CAUTION: The SYSTEM account privileges allow full access to all P/OS files, including the base system files. Altering or deleting files in P/OS system directories could irreparably damage or destroy the operating system. Digital Equipment Corporation assumes no responsibility for supporting P/OS operating systems that have been so altered. For more information on P/OS system files, see the *Hard Disk System User's Guide*.

The SYSTEM account privileges also allow full access to the account file, which contains all user account records. Altering or deleting records in the account file can erase user accounts or render them inoperable. This account file should be altered only by the Server manager.

- a. Enter a new password (a maximum of six letters and numbers).
- b. Enter the new password again at Verification, then press DO.
The new password will take effect immediately.

When you have entered your new password for the System account, the P/OS Main Menu will appear as in Figure 2-5.

```

P/OS V3.0 SERVER MAIN MENU

Copyright © 1985 Digital Equipment Corporation
For information on using the Professional, press HELP.
To logout from your Professional, press EXIT.
  ->
      Environment services
      File services
      Print control services
      View message/status

Additional options available

```

Make a choice and press DD.

The message board is empty.

Figure 2-5
P/OS Main Menu

Setting Up the Server Terminal and Server Environment

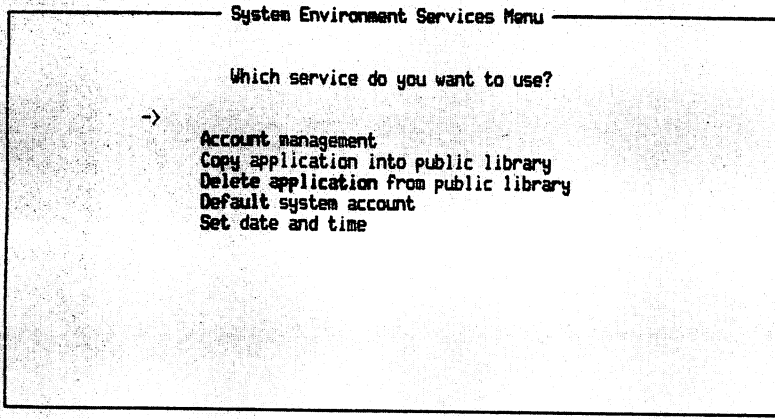
The Server manager should perform terminal setup and set up the user environment of the Server. Refer to the *Hard Disk System User's Guide*.

Installing PRO/DECnet

Copy PRO/DECnet into the public library on the Server by doing the following:

1. Installing the Management Utility for DECnet.
 Insert the diskettes labeled DECNETV20X1 and DECNETV20X2 into the diskette drive slots and close the drive doors.
2. Copy the Management Utility for DECnet from the diskettes to the public library on the Server.

To do this, choose "Environment services" from the P/OS Main Menu. The User Environment Services Menu will appear. Press the NEXT SCREEN key, and the System Environment Services Menu appears as in Figure 2-6.



Make a choice and press DD.

Press PREV SCREEN for User Environment Services.

Figure 2-6
System Environment Services Menu

3. Choose "Copy application into public library" to install the Management Utility for DECnet on the public library on the Server.
4. The submenu in Figure 2-7 appears.

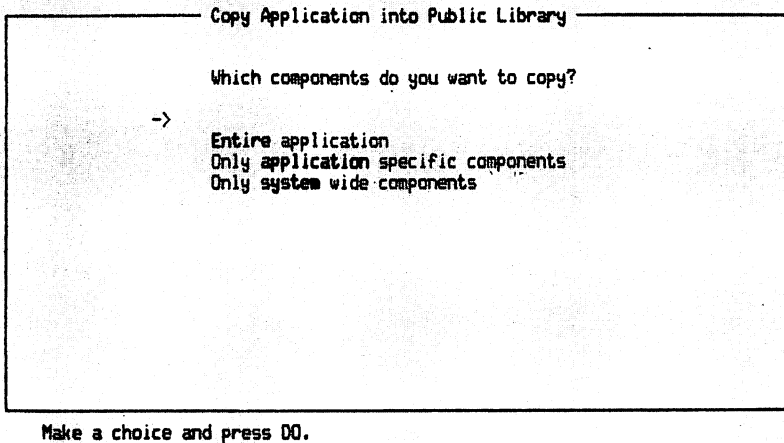


Figure 2-7
Copy Application into the Public Library Menu

5. Choose “Entire application” since you are copying the entire application into the public library on the Server.
6. A submenu appears, listing the name(s) of the applications(s) found on the diskette. Choose “Management Utility for DECnet.”
7. When the copy operation begins, the system prompts you for information which includes the node name, the node address, and a description for your node.

NOTE: Be sure to enter the node name and the node address of the Server. The node names and node addresses for P/OS Server Workstations are entered during *Workstation registration*.

The following form is displayed during the copy procedure as shown in Figure 2-8.

```
----- Local Node Set-up Form -----  
  
Use the RETURN key to move between fields.  
Enter the new Local Node values and press DD.  
Press EXIT if you do not want to make changes.  
  
CURRENT SETTINGS ARE:  
  
Local Node name:      STEVE  
Local Address:        5.329  
Local Description:    PRO/DECnet V2.0  
  
NEXT SYSTEM RESTART SETTINGS ARE:  
  
Local Node Name:      STEVE  
Local Address:        5.329  
Local Description:    PRO/DECnet V2.0  
Additional Options Available
```

Figure 2-8
Local Node Setup Form

Enter your local node settings under the heading **NEXT SYSTEM RESTART SETTINGS ARE:**. Press **RETURN** to move between fields.

Obtain a node name and address from the network coordinator, who provides administrative assistance to network users.

If the P/OS Server Group is not connected to a larger network, then the Server manager can assign a node name and local address to the Server using the following instructions.

a. Local Node Name

Enter a node name from one to six alphanumeric characters in the **Local Node Name:** field. This name identifies your node. At least one character must be a letter. Do not use a node name that has been assigned to another node. Do not use characters created with the **COMPOSE CHARACTER** key.

Examples:

A12345
 NOT2BE
 2BY4
 ROBOTS

b. **Local Address**

Enter the node address in the **Local Address:** field. This address will be assigned to the node name. Do not use an address already assigned to another node.

The address can consist of two parts:

- An area number from 1 to 63.
 (The default area number is 1, and it does not need to be entered on the form.)
- An address number from 1 to 1023.

The area number is separated from the address number by a period (.).

Examples:

3.34
 4.99
 7.56
 52.24

c. **Local Description**

Enter a node description of up to 32 characters in the **Local Description:** field. Use the $\langle X \rangle$ key if you want to delete PRO/DECnet and enter a new node description. This can be an informational message that describes your node to other users at remote nodes. Do not use characters created with the COMPOSE CHARACTER key.

d. **Node Parameters**

Press ADDTNL OPTIONS to display the Node Parameters Form. The parameters are preset to optimize network performance. They only need to be changed if they do not match the parameters of other nodes in the network.

NOTE: We recommend that you increase the number of buffers to 40 in the P/OS Server environment.

If you find that you need to change node parameter values, consult your network coordinator first.

For more details about the Node Parameters Form, refer to the *PRO/DECnet User's Guide*.

e. Accepting Parameter Values

Press DO to accept the values on the Local Node Setup Form.

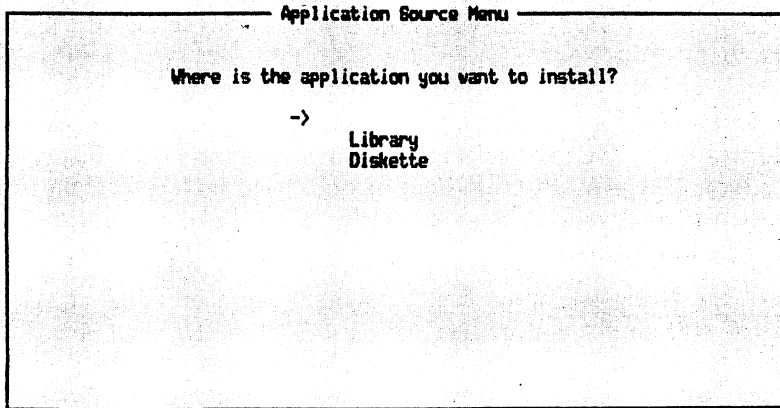
Your local node is now setup. The system redisplay the Environment Services Menu.

8. Once the copy operation is complete and the system no longer prompts you for information, return to the P/OS Main Menu by pressing the MAIN SCREEN key. At this point you should turn the system ON again. This procedure loads the PRO/DECnet software into the Professional's memory.

Installing the Management Utility for DECnet into Your Account

To use the Management Utility for DECnet application from the public library on the Server, you must install the application into a menu on your account. To do this, do the following:

1. Choose "Environment services" from the P/OS Main Menu. The User Environment Services Menu will appear.
2. Choose "Install application" from the menu.
3. The Application Source Menu will appear as in Figure 2-9.



Make a choice and press 00.

Figure 2-9
Application Source Menu

4. Choose "Library" and the Application Library Menu will appear with a list of applications that are available on the public library on the Server.
5. Choose "Management Utility for DECnet" from the menu.
6. A form will appear so that you can install the application on your Main Menu or into an application group in your account.

NOTE: The Server node address should never be changed using the Management Utility for DECnet.

VERIFYING PRO/DECnet INSTALLATION

You have now finished the installation and preparation of your Professional as a PRO/DECnet node. To verify that your node is properly setup, use the following steps:

1. Check the Message/Status display. Installation is successful when the node name and the node address appear at the top of the display. If they do not appear, PRO/DECnet has not been installed. Make sure that you turned your Professional **OFF**, then **ON** again to load PRO/DECnet into memory.
2. Check the Message/Status display again. If the node name and node address still do not appear, use the Test Tool for DECnet to determine the problem. Refer to the *PRO/DECnet Problem Determination Guide* for instructions about using the Test Tool.

REMOVING PRO/DECnet SOFTWARE COMPONENTS

The procedure for removing PRO/DECnet software depends on the type of system you are using. If you are on a Workstation, you can only remove the applications from the menus where you originally installed them. If you want to remove PRO/DECnet from the Server, you must remove the applications from the private menus as well as delete them from the public library area on the system disk.

NOTE: If you remove PRO/DECnet, your system is no longer a Server.

INSTALLING PRO/DECnet UTILITIES AND APPLICATIONS

Once you have installed the Management Utility for DECnet, you can install the remaining PRO/DECnet utilities and applications. You will find these applications on the following diskettes:

- **NETTESTV20**—contains the Test Tool for DECnet and the Remote Terminal for DECnet.
- **NETUTILV20**—contains the Mail Utility for DECnet and the Phone Utility for DECnet.

To save disk space, it is recommended that you install the Test Tool only when you want to use it. For information about using the Test Tool, refer to the *PRO/DECnet Problem Determination Guide*.

When you install the Test Tool and the Mail, Phone and Remote Terminal for DECnet utilities, you must first copy them from the diskettes to the public library area. You can then install them on your Server or Workstation using "Install application" on the User Environment Services Menu.

Removing PRO/DECnet Components from a Workstation

To remove PRO/DECnet software from a Workstation menu, refer to the *Hard Disk System User's Guide* for more details.

Deleting PRO/DECnet Components from the Server

To delete PRO/DECnet software from the Server, you must start by removing the applications from the menus where they were originally installed. Use the Remove application feature first to remove the applications (refer to the *Hard Disk System User's Guide* for more details).

Once you have removed all the PRO/DECnet software applications from the user menus, you can delete the applications from the public library area. Use the Delete application feature of the System Environment Services Menu (refer to the *Hard Disk System User's Guide* for more details). Delete all of the PRO/DECnet applications except for the Management Utility for DECnet. The Management Utility for DECnet must be the **last** application that you delete.

Once you have deleted all of the applications (with the Management Utility for DECnet as the last one), you should turn your Professional **OFF**, then turn it back **ON** again. This procedure removes PRO/DECnet from memory. This system will no longer be a Server system.

BEFORE YOU BEGIN WORKSTATION REGISTRATION

In order for a Professional to be a member of the P/OS Server Group, the Server manager must register it as a Workstation on the Server. The Server manager must have a privileged account to register Workstations.

Before you begin Workstation registration, you should have recorded the following information in Appendix A of this book:

- The DECNA Ethernet address for each Workstation. (This number appears on a label on the DECNA Controller.)
- The node name and address for each node. Each node must have a unique name and address within the network.

INSTALLING THE WORKSTATION REGISTRATION APPLICATION

Copy the Workstation Registration Application into the public library on the Server by doing the following:

1. Insert the two diskettes labeled POSSERVER1V3 and POSSERVER2V3 into the diskette drives.
2. Choose "Environment services" from the Main Menu.
3. Press the NEXT SCREEN key to get to the System Environment Services Menu.
4. Choose "Copy application into public library" from the menu (the submenu in Figure 2-10 appears).

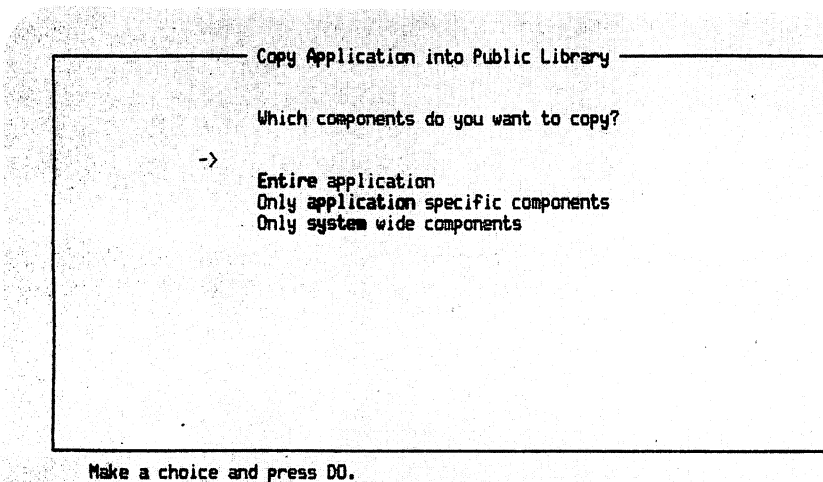


Figure 2-10
Copy Application into the Public Library Menu

5. Choose "Entire application" since you are copying the entire application into the public library on the Server.
6. A submenu appears, listing the name(s) of the application(s) found on the diskette. Choose "Workstation registration" from the menu.

7. When installation is complete, turn the power **OFF** and **ON** again.
8. Install the Workstation Registration Application from the public library on the Server. You must install the Workstation Application from the public library into a menu on your account so that you can access the application.
 - a. Choose "Environment services" from the P/OS Main Menu. The User Environment Services Menu will appear.
 - b. Choose "Install application" from the menu.
 - c. The Application Source Menu will appear as in Figure 2-11.

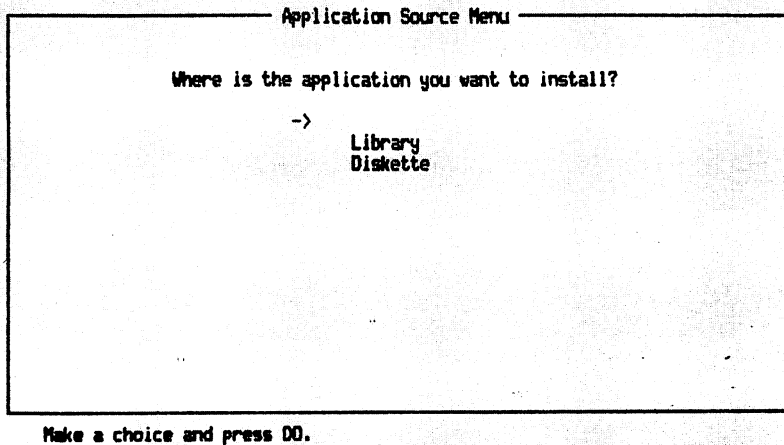


Figure 2-11
Application Source Menu

- d. Choose "Library" and the Application Library Menu will appear with a list of applications that are available on the public library on the Server.
- e. Choose "Workstation registration" from the menu.
- f. A form will appear so that you can install the application on your Main Menu or into an application group in your account.

Registering a Workstation

To use the Workstation Registration Application:

1. The user must be privileged.
2. The application can only be run at the Server.
3. PRO/DECnet must be installed.

Select the Workstation Registration Application from the Main Menu or application group you installed it in.

NOTE: We recommend that you register a Workstation with only one Server. If you register a Workstation with more than one Server, there is no guarantee which Server will boot your Workstation.

When the Workstation Registration Application starts, the Workstation Registration Menu will appear as in Figure 2-12.

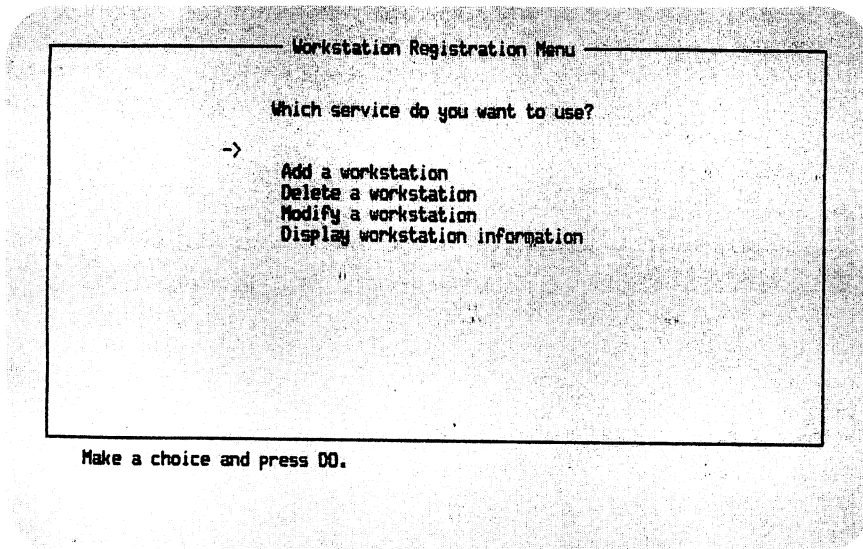


Figure 2-12
Workstation Registration Menu

Adding a Workstation

When you choose “Add a workstation” from the menu, the Add a Workstation Form will appear as in Figure 2-13.

Add a Workstation Form

Use the RETURN key to move between fields.
Enter the Workstation information and press DO.
Press EXIT if you do not want to add a Workstation.

Workstation ethernet address: _____
Workstation node name: _____
Workstation node address: _____

Complete the form and press DO.

Figure 2-13
Add a Workstation Form

Enter information in this form as explained below. You can use Appendix A to help you fill in this information. Press RETURN to move between fields.

1. Enter the Ethernet address.

The Ethernet address is an alphanumeric address that appears on a label on the DECNA Controller. The Ethernet address can appear in either one of two formats.

If the Ethernet address appears on the DECNA label like this:

```
XXXXXX
YYYYYY
ZZZZZZ
```

Enter it in the Add a Workstation Form as:

xxxxxx/yyyyy/zzzzzz

If the Ethernet address appears on the DECNA label like this:

xx-xx-xx-xx-xx-xx

Enter it in the Add a Workstation Form as:

xx-xx-xx-xx-xx-xx

NOTE: Leading zeros must be included when registering Workstations on the Server for the xx-xx-xx-xx-xx-xx format.

2. Enter the node name.

The node name can be up to six letters and numbers. At least one character must be a letter for example, A12345, or CATHY. Do not use characters created with the **COMPOSE CHARACTER** key. Do not use a node name used by any other system in the P/OS Server Group or on a DECnet network.

3. Enter the node address.

The node address must be unique for each registered Workstation in the P/OS Server Group or on a DECnet network. If your Server is part of a larger network, see your network coordinator for the node address and node name. It consists of two numbers:


- a. Area code number—a decimal number from 1 to 63. The area code for each member of a P/OS Server group should be the same.
- b. Node address—a decimal number from 1 to 1023.

The format for the node address is:

xx.xxxx
| |
area code node address

NOTE: Be sure to include the "." in the node address. Do not use the same node address as anyone else in the network. Leading zeros are not necessary for the area code or node address.

4. Press **DO** to set the values typed on the Add a Workstation Form.



If the node name is already in the PRO/DECnet configuration database, the corresponding node address will display when you enter the node name or vice versa. This alerts the user that the node already exists in the PRO/DECnet configuration database, created by using the Management Utility for DECnet. This also prevents the user from creating a node in the down-line load database that might conflict with information in the PRO/DECnet configuration database.


Workstation Directories

When you add a Workstation, a directory is created for each Workstation that you register. The directory name uses the following format:


ZZW377nnn

PRO/DECnet Configuration Database

The PRO/DECnet configuration database is a list of other nodes on the Ethernet that Server and Workstation users can communicate with. This database also contains information that the Server uses when down-line loading a Workstation.



When you add a Workstation, the node name and node address are added to the PRO/DECnet configuration database, if they are not already there. Workstations use the PRO/DECnet configuration database to communicate with each other.



Deleting a Workstation from the Down-line Load Database

To delete a Workstation from the down-line load database, choose "Delete a workstation" from the Workstation Registration Menu. The Delete a Workstation Form will appear as shown in Figure 2-14.

Delete a Workstation Form

Enter the node you want to delete and press DO.
Press EXIT if you do not want to delete a node.

Node name or node address: _____

Complete the form and press DO.

Figure 2-14
Delete a Workstation Form

When you enter the node address or the node name and press DO, the Delete a Workstation from the Down-line Load Database Form will appear as in Figure 2-15.

```
----- Delete Workstation from Down-line Load Database Form -----  
  
To delete the Workstation entry below, enter YES.  
To keep the entry, enter NO.  
  
Workstation ethernet address: 111111/122222/133333  
Workstation node name:      TEST  
Workstation node address:   5.33
```

Are you sure you want to delete this workstation [YES/NO]?

Figure 2-15
Delete a Workstation from the Down-line Load Database Form

Check to make sure that this is the Workstation that you want to delete and then type YES and then press DO. If you do not want to delete this Workstation, type NO and then press DO.

When you delete the Workstation, the Delete a Node from PRO/DECnet Configuration Database Form will appear as in Figure 2-16.

```
Delete Node from PRO/DECnet Configuration Database Form

To delete the entry below, enter YES.
To keep the entry, enter NO.

Workstation node name:      TEST
Workstation node address:  5.33
```

Are you sure you want to delete this node [YES/NO]?

Figure 2-16
Delete a Node from the PRO/DECnet Configuration Database Form

Workstations use the PRO/DECnet configuration database to communicate with each other.

If you replace the DECNA Controller, this would change the Ethernet address, so you would have to delete the Workstation from the PRO/DECnet configuration database and reenter it with the new Ethernet address.

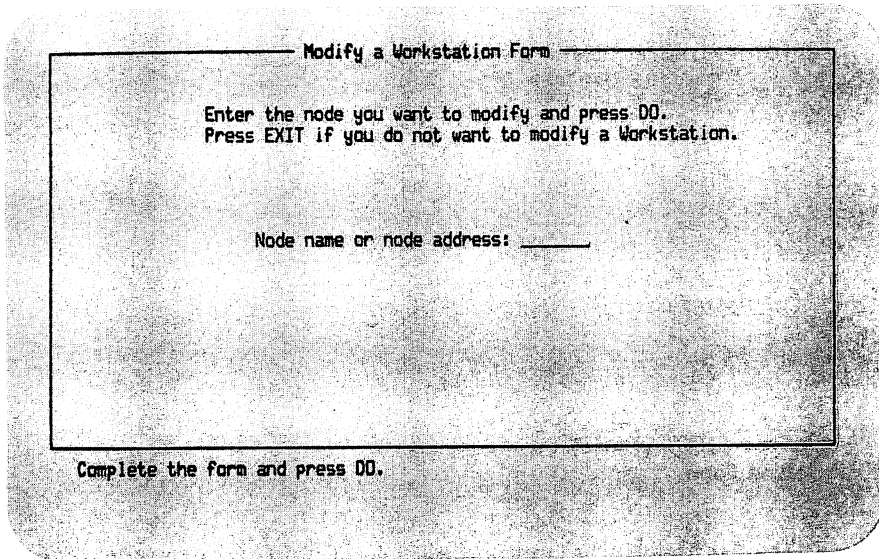
If you delete a node from the database, other Workstations, the Server and other nodes on the network will not be able to communicate with this node via DECnet.

If you want to delete this Workstation from the database, type YES and then press DO. If you do not want to delete this Workstation from the database, type NO and then press DO.

NOTE: If you change a node address in the PRO/DECnet configuration database using the Management Utility for DECnet and do not change the Workstation entry, that system will not be able to be used as a Workstation.

Modifying a Workstation

To modify information about a Workstation, select “Modify a workstation” from the Workstation Registration Menu. The Modify a Workstation Form will appear as in Figure 2-17.



— Modify a Workstation Form —

Enter the node you want to modify and press DD.
Press EXIT if you do not want to modify a Workstation.

Node name or node address: _____

Complete the form and press DD.

Figure 2-17
Modify a Workstation Form

When you enter the node address or the node name and press DO, the Modify a Workstation Form, shown in Figure 2-18, will display current information about the selected Workstation.

Modify a Workstation Form

Use the RETURN key to move between fields.
Enter the new information and press DO.
Press EXIT to leave the entry unchanged.

Workstation ethernet address: 111111/122222/133333
Workstation node name: TEST
Workstation node address: 5.33

Complete the form and press DO.

Figure 2-18
Modify a Workstation Form

Use the $\langle X \rangle$ key to delete the appropriate field. Fill in the new node name or node address and press DO.

When you modify the node information, the Delete Node from PRO/DECnet Configuration Database Form will appear as in Figure 2-19.

```

Delete Node from PRO/DECnet Configuration Database Form

To delete the entry below, enter YES.
To keep the entry, enter NO.

Workstation node name:      TEST
Workstation node address:  5.33

Are you sure you want to delete this node [YES/NO]?

```

Figure 2-19
Delete Node from PRO/DECnet Configuration Database Form

Modify any field in this form and when you have finished, type YES and then press DO to modify this node or type NO to return to Modify a Workstation Form.

Displaying Workstation Information

To display information on a particular Workstation, or look at information on all Workstations, select "Display workstation information" from the Workstation Registration Menu. The form in Figure 2-20 will appear.

Display a Workstation Form

To display all Workstations, press DO.
To display a specific Workstation enter the information and press DO.
Press EXIT if you do not want to display a Workstation.

Node name or node address: _____

Complete the form and press DO.

Figure 2-20
Display a Workstation Form

If you press DO without entering a node name or address, information will display beginning with the first Workstation registered. Press NEXT SCREEN to display information on the next group of Workstations.

If you enter the node address or the node name and press DO, information will display beginning with the particular Workstation that you requested. Press NEXT SCREEN to display the next group of Workstations. Figure 2-21 shows a display of Workstation information.

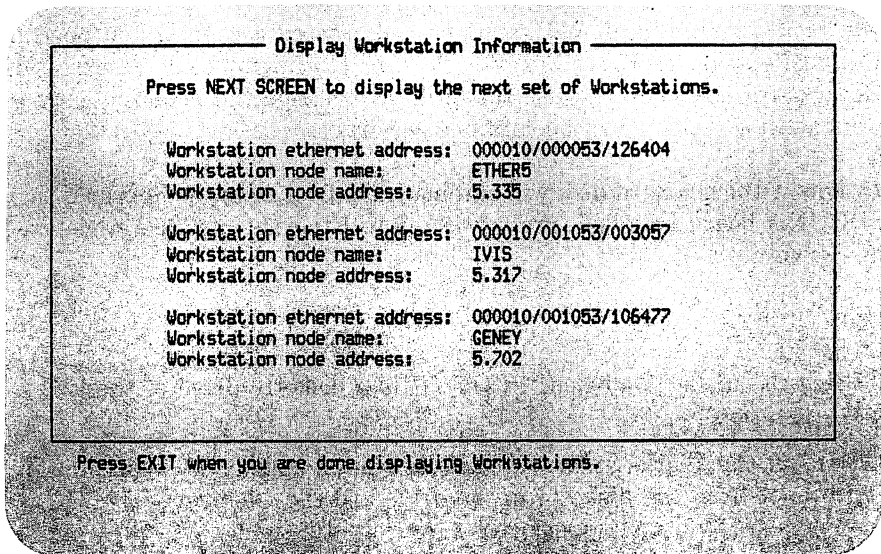


Figure 2-21
Workstation Information Display

CREATING USER ACCOUNTS ON THE SERVER

The Account Management program enables the Server manager, or privileged user of a Server to set up and maintain accounts for other users on the Server. Using Account Management, you can create new user accounts, and display, modify, or delete existing ones.

The Server manager should set up accounts for users on the Server. A user can use an account on the Server while sitting at the Server, or while sitting at a Workstation logged into the Server. If you are the Server manager and want to add, modify, or list any Server accounts, you have to be sitting at the Server. Refer to the *Hard Disk System User's Guide* to use the Account Management program.

The Server manager should keep a list of new accounts and the initial passwords assigned to those accounts to give to new users, so that they can log into their accounts for the first time.

BRINGING UP WORKSTATIONS WITH LOCAL HARD DISKS

After you have registered all Workstations and created accounts, you need to run the *Non-Volatile RAM (NVR) Modification Utility* for each Workstation with a local hard disk. You can use this utility to change the boot sequence of the Workstation so that it will boot from the Server.

Workstations without a hard disk will automatically boot from the Server if they have a DECNA board installed, are connected to Ethernet, and are registered with the Server.

To run this utility:

1. Place the diskette labeled, PRONVR in a diskette drive of the Workstation.
2. Shut off the Workstation and turn it back on again. The Workstation will boot from the diskette in the drive and the Change Boot Sequence Menu will appear as in Figure 2-22.

```
Change Boot Sequence Menu
Which device do you want to boot from?
-> Server
   Local Hard Disk
Make a choice and Press DO:
```

Figure 2-22
Change Boot Sequence Menu

3. To boot from the Server, choose "Server" from the menu.
4. If you have more than one local hard disk, you will be prompted to enter the volume or device name of the hard disk you want to boot from.
5. Remove the diskette and power off the system.
6. When you power back on, the Workstation will boot from the Server.

INSTALLING SYSTEM MAINTENANCE APPLICATION

You should also install the System Maintenance Application in the public library on the Server so that Workstation users can use these tests should they have a problem with their Workstation hardware.

COPYING APPLICATIONS TO THE SERVER PUBLIC LIBRARY

Applications can have system wide components and application specific components.

System wide components must be copied to the public library on the Server. (This library is on LB000: and is the disk that Workstations boot from.) The *Workstation manager* or privileged users will request the Server manager to copy system wide components into the Server public library.

Application specific components can reside either on a Workstation or on the Server. If they are on a Workstation, you must be sitting at the Workstation that has the application specific components in its library to use that application. Refer to the *Hard Disk System User's Guide* for information on copying only system wide components or application specific components to the library.

DELETING THE SYSTEM WIDE COMPONENTS

Refer to the *Hard Disk System User's Guide* for information on deleting only system wide components or application specific components to the library.

The Workstation manager or privileged users will request the Server manager to delete system wide components from the Server Library.

INSTALLING AN APPLICATION FROM THE PUBLIC LIBRARY

If you want to install an application from a public library on the Server or on a Workstation, refer to the *Hard Disk System User's Guide*.

A list of all available applications on the Server public library will appear. Applications from the Workstation library will appear for that particular Workstation if it has a library.

NOTE: You must be sitting at the Workstation that has the application specific components in its library to use that application.

REMOVING APPLICATIONS

Refer to the *Hard Disk System User's Guide* for information on removing applications from account menus.

LOGGING OUT OF THE ACCOUNT

To log out of your account, press EXIT and then press DO at the Main Menu. The DIGITAL logo display will appear.

MAINTAINING P/OS SERVER

This section describes how to maintain the Server. The topics covered in this section are:

- Adding a printer to the Server
- Problem solving
- Testing the network
- Performing maintenance tests
- Backing up the Server

ADDING A PRINTER TO THE SERVER

Adding a printer to the Server requires two steps:

1. Attaching the printer hardware to the Server.
2. Creating a print queue for the printer.

We recommend that you notify all Workstation users of the print queue name and the location of the corresponding printer when adding or removing a printer from the Server.

When naming print queues, it helps to identify printers connected to the Server, for example by naming a printer SLQP, SLA50, or SLA100 for an LQP, LA50, or LA100 printer connected to a Server. This would help users to select which printer they want to use, since there could be several printers connected to the Server.

Refer to the *Hard Disk System User's Guide* for information on adding or removing printers.

PROBLEM SOLVING

The following tools are available for testing P/OS Server.

- Maintenance and Installation Services—Use this to test your Professional hardware. Refer to the *Owner's Manual* for information on how to use these services.
- DELNI—If the green light on the connector panel does not go on or if you have problems using the DELNI unit, refer to the chapter on Troubleshooting in the *DELNI Installation/Owner's Manual*.

TESTING A WORKSTATION

Maintenance and Installation diskettes shipped with your Professional system include several programs that complement the self-test contained in the system. Install this application in the public library on the Server so that Workstations can access this application.

To test Workstations locally, insert the diskette into the drive and follow the instructions in the *Professional Owner's Manual*.

TROUBLESHOOTING

The Server node address should never be changed using the Management Utility for DECnet. When a Workstation is registered, the Server's address is placed in the PRO/DECnet configuration database. If the Server's address changes, the database will not be changed automatically and the Workstation will not boot.

The Server and Workstation node address and node name should be unique for the entire network. If there are two Servers or Workstations with the same node name or node address, the P/OS Server software will not perform correctly.

TESTING THE NETWORK

Communication between computers is made possible by a blend of sophisticated hardware and software. Testing is done to locate problems that prevent normal use of the network. Refer to the *PRO/DECnet User's Guide* and the *PRO/DECnet Problem Determination Guide* for information on when and how to test your P/OS Server network.

BACKING UP THE SERVER

A backup of the Server disk should be done on a regular basis.

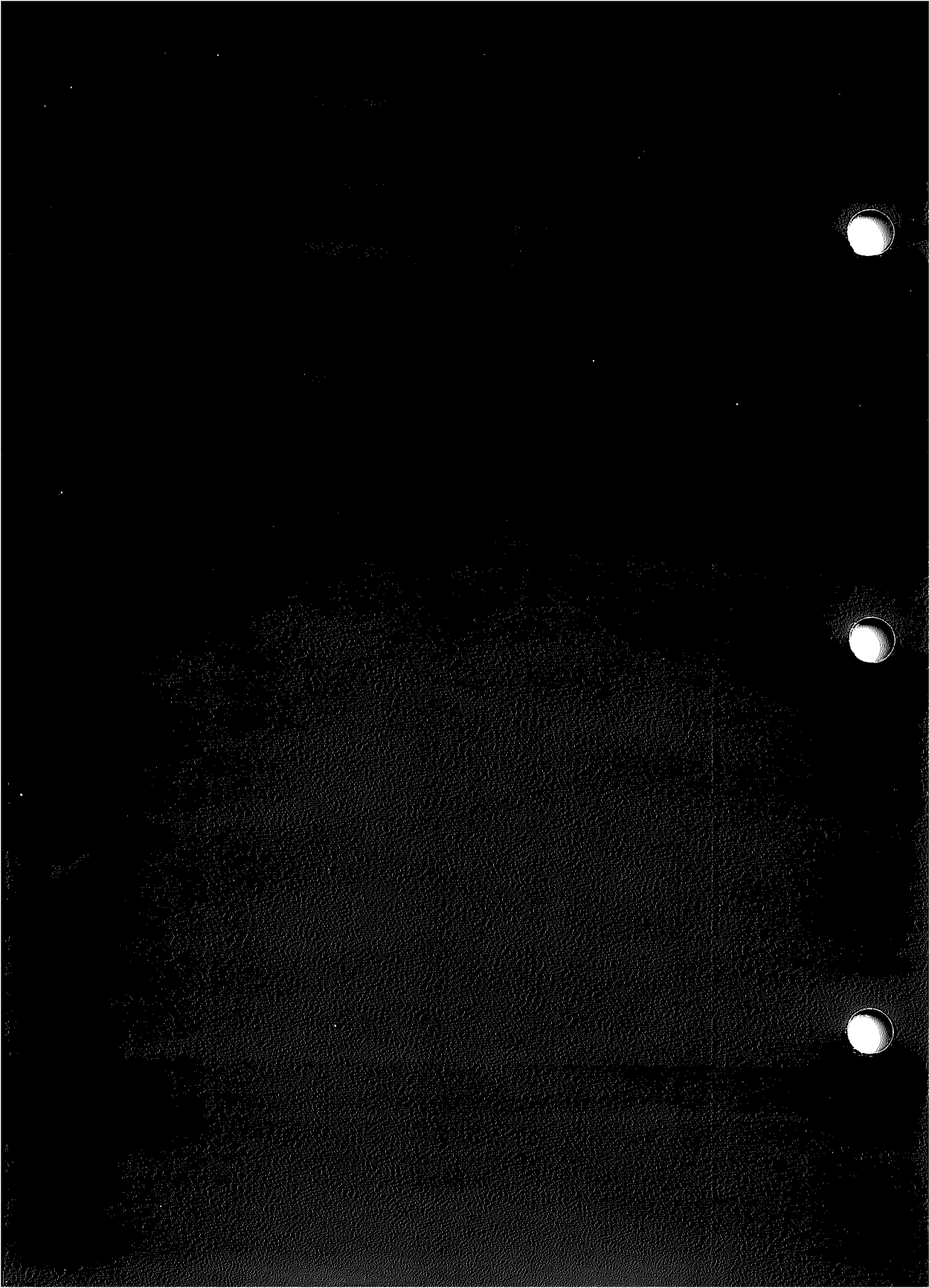
There are several ways to back up the Server disk:

1. If you are on a network with a VMS, or RSX system or any DECnet node, you can use PRO/DECnet to copy files from your Professional to a larger system.
2. If you have two hard disks, you can use the Backup and Restore Utility for the P/OS Server environment, to back up files from one hard disk to another.
3. Use the Backup and Restore Utility to back up files that you frequently revise.

Refer to the *Hard Disk System User's Guide* for information on using the Backup and Restore Utility.

3

Workstation User



Chapter 3

Workstation User

Your Professional Workstation has the capabilities of a Professional hard disk system whether it is a Professional diskless system, diskette based system or a hard disk system. You should read and become familiar with the *Hard Disk System User's Guide*.

If you are the only user of this Workstation, then you are also the manager of the Workstation and should also read Chapter 4, "Workstation Manager," of this book.

LOGGING INTO THE SERVER

Before you can use your Professional Workstation, you must log into your Workstation and then log into the Server. This double login is for security purposes. The local Workstation login is to protect files and accounts on a Workstation with a local hard disk. This prevents anyone from walking up to a Workstation and getting into your account if your user account area resides on the Workstation. The Server login protects files and accounts on the Server for users with their user account area located on the Server.

LOGGING INTO YOUR WORKSTATION

When you turn on the Workstation for the first time, the DIGITAL logo appears and the screen displays "Professional hardware checkout completed, disk-based P/OS now being loaded. . . ."

Then the screen appears as in Figure 3-1.

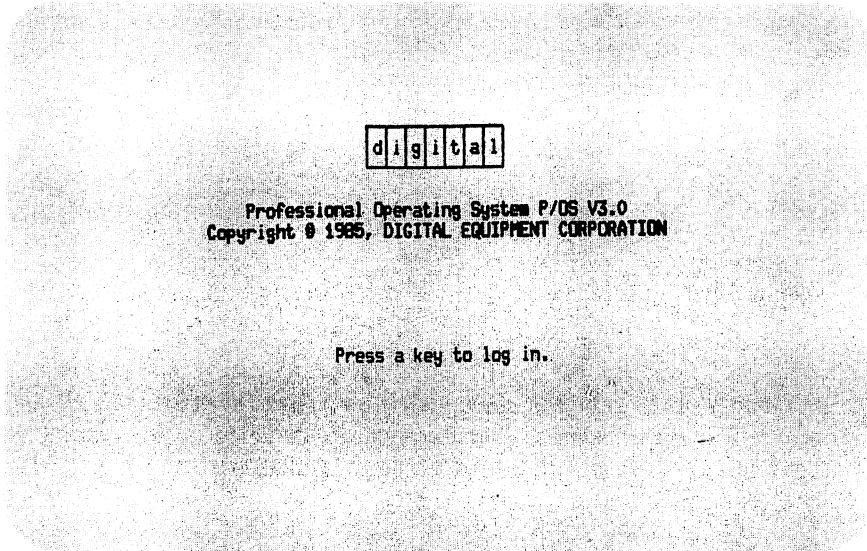


Figure 3-1
DIGITAL Logo Display

Press a key to log in. Figure 3-2 illustrates the Login Form.

NOTE: If you have not typed on your computer for a while and the screen goes blank, press the **SHIFT** key, and the screen form will reappear.

Login Form

Use the RETURN key to move between fields.
Enter the username and password and press DD.

You are logging into the Professional LATAY

Username:

Password:

Additional options available

Complete the form and press DD.

Figure 3-2
Login Form

If your Professional has a local hard disk and is connected to a Server, you could have one or more accounts on your local hard disk system and one or more on the Server. The Workstation manager (of your local system) will give you a user account name and password for logging into the Workstation. Your Server manager will give you your account name and password to log into the Server.

If you are the sole user of this Workstation, you should use the SYSTEM account that is initially supplied with P/OS to set up the system. You should also read Chapter 4 of this book, "Workstation Manager," since you are also the Workstation manager. This account is a "privileged" account that allows managerial access to the Workstation.

To use the SYSTEM account, enter SYSTEM as your name and SYSTEM again as your password. The first time you use the SYSTEM account, you must change the password, using the Change Password Form that appears.

NOTES: The user account name and password for your Workstation may be different from the user account name and password for the Server.

If your account cannot be accessed by the login program, an error message will appear on your screen.

After you log into your system for the first time, the Server Login Form will appear, as in Figure 3-3.

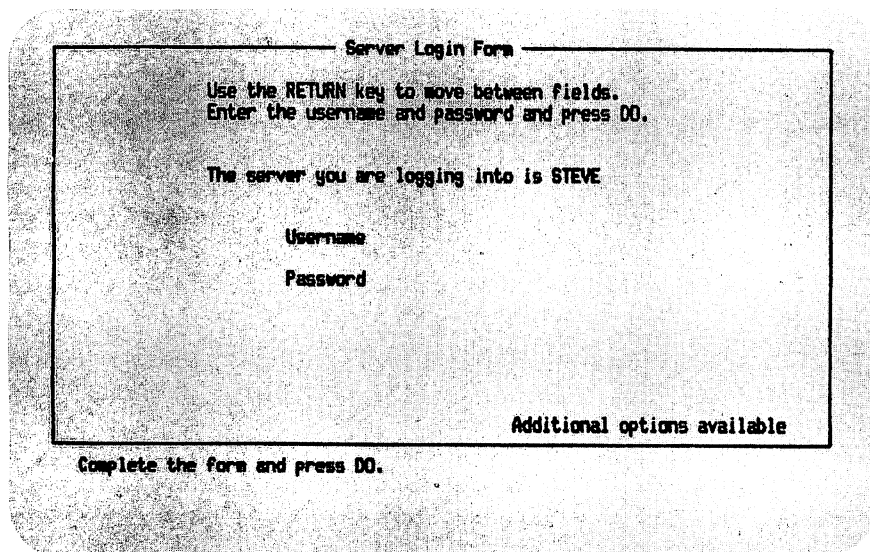


Figure 3-3
Server Login Form

Your Server manager will give you a username and password to log into the Server with. Enter your username and your password, then press DO. The P/OS Main Menu will appear as in Figure 3-4. When you log into the Server for the first time, be sure to change your password.

NOTE: If your user account area is on a local disk, you may bypass the Server Login Form by pressing the EXIT key.

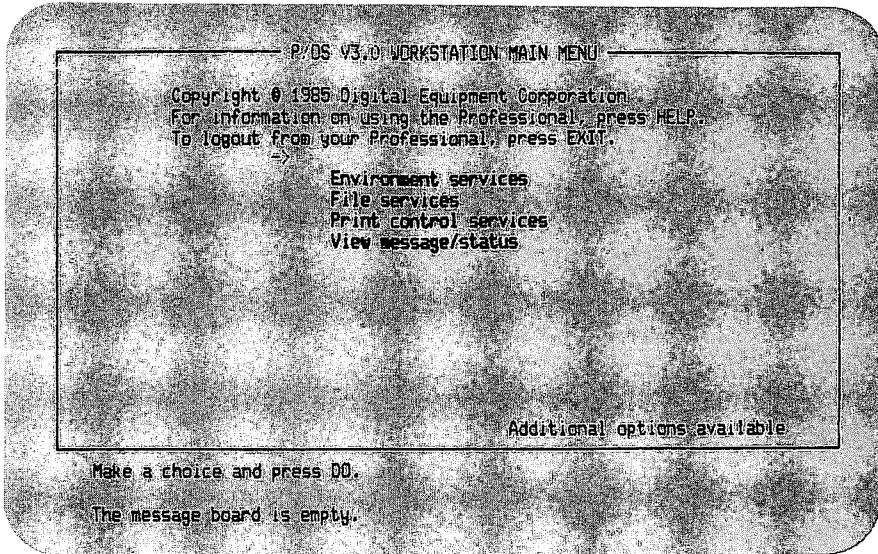


Figure 3-4
P/OS Main Menu

SETTING UP A DEFAULT SERVER LOGIN ACCOUNT

You can set up a default Server login account which will automatically log into an account on the Server at login. You can do this if you have several accounts on the Server and use one account more than another, or you want to log into your Server account automatically.

To define a default Server login account, choose "Environment services" from the P/OS Main Menu. The User Environment Services Menu will appear as in Figure 3-5.

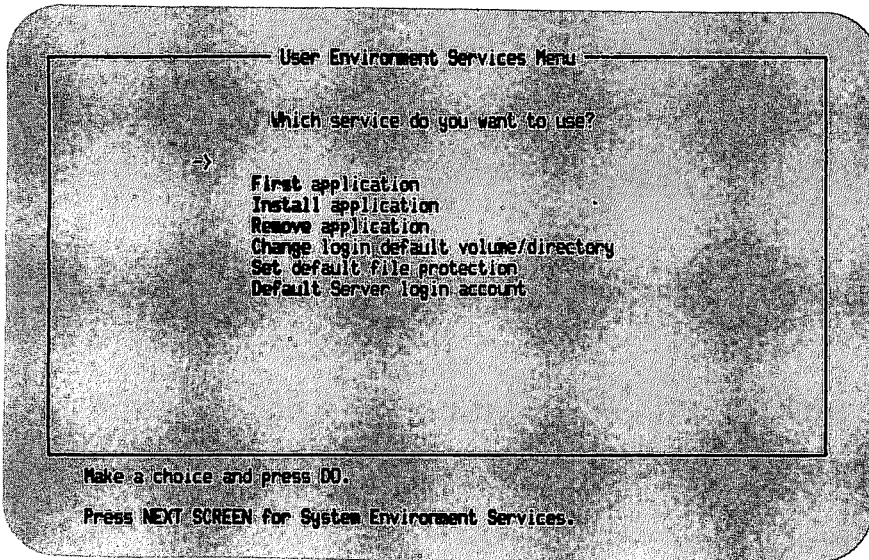


Figure 3-5
User Environment Services Menu

Choose "Default Server login account" from the User Environment Services Menu. The Enter Account Name Form will appear as in Figure 3-6. This form protects your default Server login account by preventing anyone from deleting or modifying it.

Enter Account Name

Use the RETURN key to move between fields.
Re-enter the Workstation account you logged into.

Username:

Password:

Complete the form and press DO.

Figure 3-6
Enter Account Name Form

Type in the username and password for the Workstation account you logged into and press DO. The Default Server Login Account Menu will appear as in Figure 3-7.

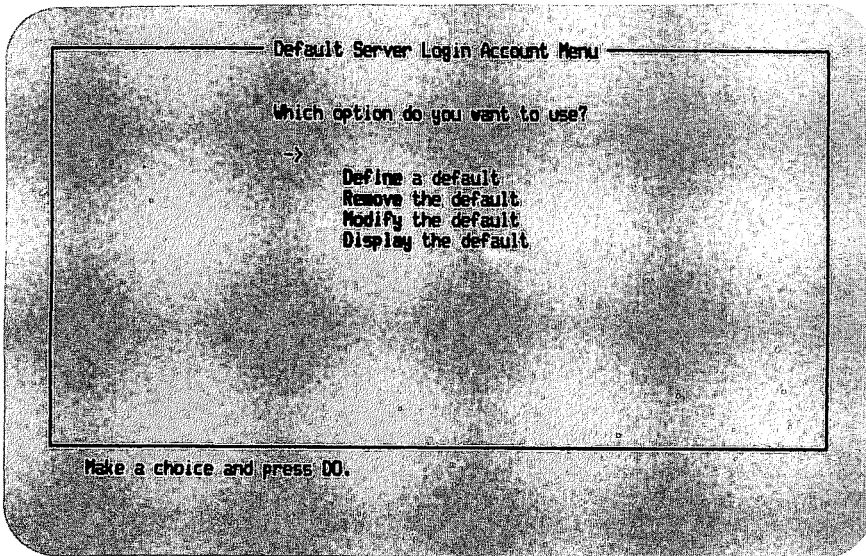
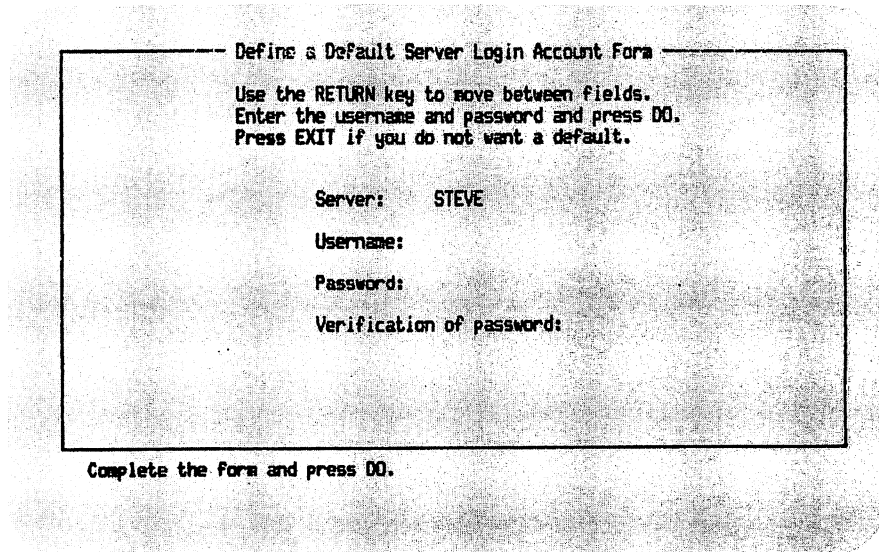


Figure 3-7
Default Server Login Account Menu

Select one of the choices on the Default Server Login Account Menu and press DO.

Defining a Default Server Login Account

Choose "Define a default" from the Default Server Login Account Menu. The form in Figure 3-8 will appear.



Define a Default Server Login Account Form

Use the RETURN key to move between fields.
Enter the username and password and press DO.
Press EXIT if you do not want a default.

Server: STEVE

Username:

Password:

Verification of password:

Complete the form and press DO.

Figure 3-8
Define a Default Server Login Account Form

Fill in the form with the username, and password of the Server account you want as your default, and then repeat the password for verification and press DO.

Removing the Default Server Login Account

Choose "Remove the default" from the Default Server Login Account Menu. The following form will appear as in Figure 3-9.

```
Remove Default Server Login Confirmation

If you do not want this account as the default, enter YES.
To keep this default, enter NO.

Server: STEVE

Username: PEPINPRIV

Password: (not displayable)

Remove this default (YES or NO)?
```

Figure 3-9
Remove Default Server Login Confirmation

If you want to remove your current default Server login account, enter YES, and then press DO. To keep your current default Server account, enter NO, and then press DO.

Modifying a Default Server Login Account

To modify your current default Server login account, choose “Modify the default” from the Default Server Login Account Menu. The following display in Figure 3-10 will appear. Fill in the form and press DO.

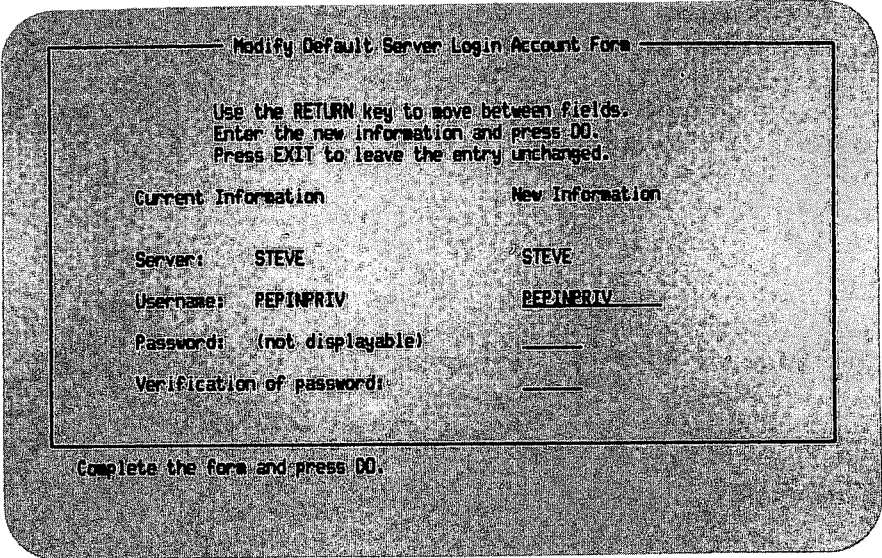


Figure 3-10
Modify Default Server Login Account Form

NOTE: If you have changed your password on the Server, you must change your default Server login account to reflect your new password. If you have forgotten your password on the Server, contact your Server manager.

Displaying the Current Default Account

To display your current default Server login account, choose “Display the default” from the Default Server Login Account Menu. The following display in Figure 3-11 will appear.

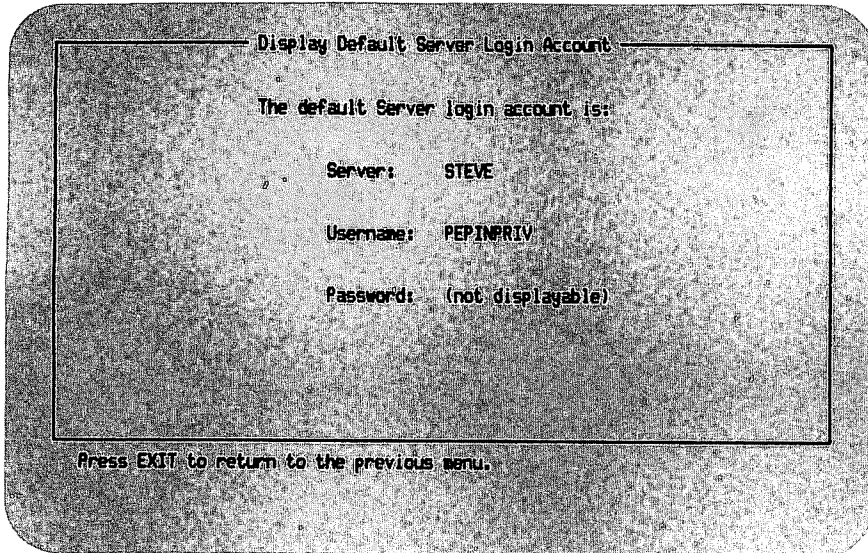


Figure 3-11
Display Default Server Login Account

Press EXIT to return to the previous menu.

Changing Your Login Default Volume and Directory

If you have several directories and want to have P/OS enter one of them automatically when you log in, you can set up a particular directory as the login default directory. To set up a login default directory, see the *Hard Disk System User's Guide*.

LOGGING IN WITH DEFAULTS SET

There are several factors that determine what your login will be like. If you have:

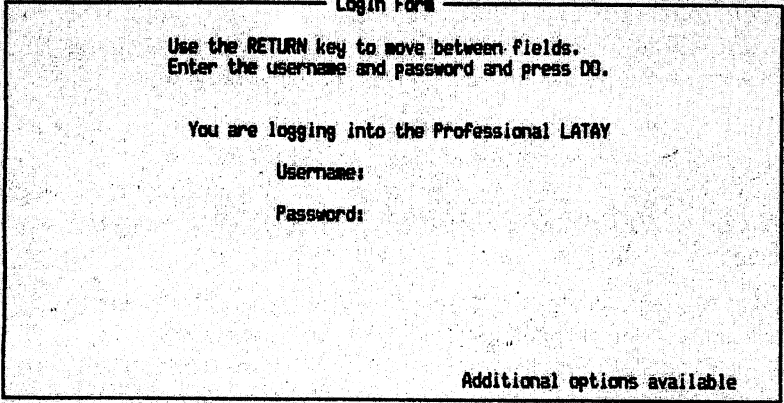
- Server Login Account set—you will have to log into your Workstation, but you will automatically log into the Server when you press DO. The user or Workstation manager can set this default.
- Default System Account set—you will automatically log into your Workstation when you press DO at the DIGITAL logo, but you will have to log into the Server. The Workstation manager or privileged user can set this default. (Refer to Chapter 4, “Workstation Manager,” to set this default.)
- Server Login Account and Default System Account set—you will automatically log into the Workstation and then the Server when you press DO at the DIGITAL logo. You will not see any login forms.

ADDITIONAL LOGIN OPTIONS

There are three additional options for login:

- Change password
- Bypass any default Server login account
- Ignore local User Account Area

To use any of these functions, display the Login Form as in Figure 3-12.



The image shows a terminal window with a login form. The form is enclosed in a rectangular border and contains the following text:

Login Form

Use the RETURN key to move between fields.
Enter the username and password and press DD.

You are logging into the Professional LATAY

Username:
Password:

Additional options available

Complete the form and press DD.

Figure 3-12
Login Form

Press the ADDTNL OPTIONS key and the Login Additional Options Menu will appear as in Figure 3-13.

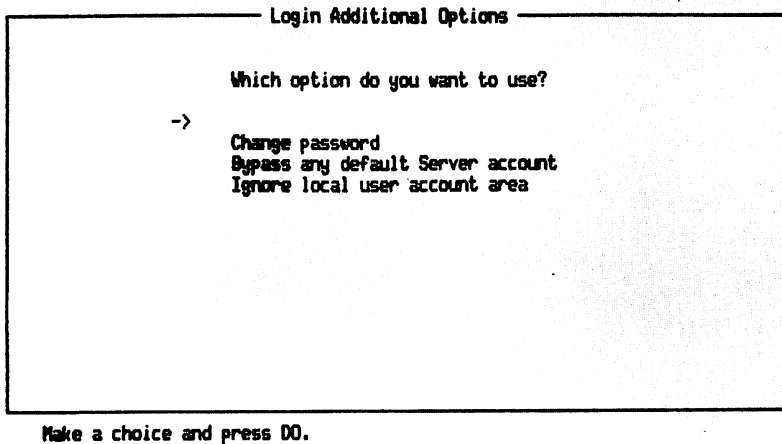


Figure 3-13
Login Additional Options Menu

Changing Your Password

To change your password, choose “Change password” and the Change Password Form will appear as in Figure 3-14.

Change Password Form

Use the RETURN key to move between fields.
Enter the new information and press DO.
Press EXIT to leave the password unchanged.

Username:
Old password:
New Password:
Verification:

Complete the form and press DO.

Figure 3-14
Change Password Form

Enter your account name, the old password and the new password. Enter the new password again at “Verification.” The new password takes effect immediately. When you press DO, you will return to the Login Additional Options Menu. Press EXIT to return to the Login Form and log in using your new password.

NOTE: If you change your password on a Server, you must change your default Server login account to reflect your new password. If you have forgotten your password, see your Server manager or use the Account Management program to modify your password.

Bypassing Default Accounts

If you do not want to log into your default Server login account for this login, choose “Bypass any default Server account.” Your default Server login will remain the same, but you will be able to log into any account on the Server for this login session by using this bypass. Press EXIT to return to the Login Form when you have finished using the Login Additional Options Menu. The Login Form will appear. Fill in the Login Form and press DO. The Server Login Form will appear. Fill in the Server Login Form with the username and password of the account that you want to log into and press DO.

Ignoring the Local User Account Area

If your user account area is on a local hard disk, and you would like to use your user account area on the Server for this login *process* only, choose “Ignore local user account area.” Press EXIT to return to the Login Form when you have finished using the Login Additional Options Menu. The Login Form will appear. Fill in the Login Form and press DO. The Server Login Form will appear. Fill in the Server Login Form with the username and password of the account that you want to log into and press DO.

SETTING UP YOUR WORKSTATION

After you have logged into your Professional Workstation for the first time, you can set up your Workstation to suit your needs. Refer to the *Hard Disk System User's Guide* for information on Terminal Setup and Environment Setup.

LOGGING OUT OF THE ACCOUNT

To log out of your account, press EXIT, and then press DO at the Main Menu. The DIGITAL logo display will appear.

USER ACCOUNT AREAS

The User Account Area (UAA) contains all of the user and system files that define the user's environment, including the applications on the Main Menu and terminal setup. The Workstation manager can set up a user account area on a Workstation that has a hard disk or, if you are a privileged user, you can set this up yourself.

A user account area can be located on the Workstation or on the Server. If the Server or Workstation has multiple disks, the user account could be on any of the disks. Figure 3-15 gives an example of different user account areas and where they could possibly reside.

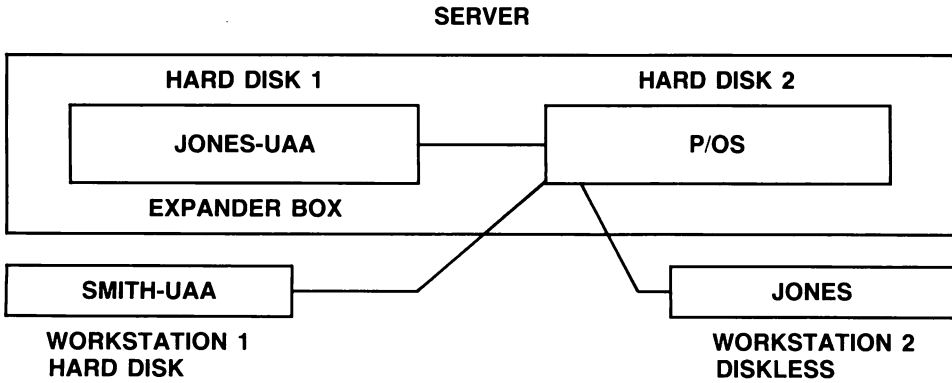


Figure 3-15
User Account Area

In this Figure, the user account area for Smith is on Workstation 1's hard disk. In this situation, user Smith could use P/OS on the Server's Hard Disk 2 and store files and other UAA information on Workstation 1.

Jones has a user account area on the Server's Hard Disk 1. This means that Jones could be sitting at any Workstation registered with this Server, or at the Server, and his files would be stored on the Server's Hard Disk 1.

INSTALLING APPLICATIONS

There are two ways to install an application:

1. From diskette(s)
2. From the library

Installing an Application From Diskette(s)

To install an application from a diskette, you must have a diskette drive at the Workstation or, you can install an application into your account using the diskette drive on the Server.

Refer to the *Hard Disk System User's Guide* for more information.

Installing an Application from the Public Library

If you want to install an application from a public library on the Server or on a Workstation, refer to the *Hard Disk System User's Guide*.

A list of all available applications on the Server public library and applications from the Workstation library will appear for that particular Workstation if it has a library.

NOTE: You must be sitting at the Workstation that has the application . . . specific components in its library to use that application.

REMOVING APPLICATIONS

Refer to the *Hard Disk System User's Guide* for information on removing applications.

HOW TO COMMUNICATE ON THE P/OS SERVER

Use the Mail and Phone Utilities for DECnet to communicate with other Professional Workstations, or other nodes. You can also use the SET HOST command to communicate with RSX, VMS and TOPS-20 DECnet nodes. PRO/DECnet gives you full transparent access to nodes other than those connected to the same Ethernet segment. For more information about these applications, see the *PRO/DECnet User's Guide*.

PRINTING FILES

As a member of a P/OS Server Group, the printers attached to the Server as well as printers attached to your Workstation are available for your use.

You can send a file to a print queue for a printer connected to a Server and then shut off your Workstation. The file will print as long as the Server is running.

Since there could be several printers connected to a Server, you need to know the print queue names and the location of the corresponding printers to pick up your printouts. Ask your Server manager for this information.

Refer to the *Hard Disk System User's Guide* for more information on printing files.


BACKING UP FILES ON A WORKSTATION

Refer to the *Hard Disk System User's Guide* for general information about backing up your files.

There are three ways to back up files from a local hard disk:

1. If your Professional is on a network with a VMS, or RSX system or any DECnet node, you can use PRO/DECnet to copy files from your Professional to the larger system.
2. If you have two hard disks, you can use the Backup and Restore Utility to back up files from one hard disk to another.
3. If you have a local hard disk, use the Backup and Restore Utility, to back up files that you frequently revise. If you do not have a hard disk at your Workstation, you can back up your files while sitting at the Server.

Backing Up Files for a Diskless Workstation




If your Workstation is a diskless Workstation, all your files and the applications in your account are on the Server. The Server manager should back them up on a regular basis, such as once a week. If you need more frequent backups than the scheduled backups, discuss this with your Server manager.

ADDING A PRINTER TO A WORKSTATION

Adding a printer to the Workstation requires two steps:

1. Attaching the printer hardware to the Workstation.
2. Creating a print queue for the printer.

See the *Hard Disk System User's Guide* for information on adding or removing printers and to create print queues.



We recommend that you notify all Workstation users of the print queue name and the location of the corresponding printer when adding or removing a printer from a Workstation.

When naming print queues, it helps to identify printers connected to the Workstation, for example, by naming a printer WLQP, WLA50, or WLA100 for an LQP, LA50, or LA100 printer connected to a Workstation. This would help users to select which printer they want to use, since there could be several printers connected to the Server or Workstations.

BOOTING FROM THE SERVER OR LOCAL HARD DISK

To change a Professional from a Workstation to a stand-alone system, you must have a local hard disk with P/OS or another operating system installed. To install the P/OS operating system, see the *Hard Disk System User's Guide*.

Use the PRO/NVR Modification Utility to change the boot sequence.



To run this utility:

1. Place the diskette labeled, PRONVR in a diskette drive of the Workstation.
2. Shut off the Workstation and turn it back on again. The Workstation will boot from the diskette in the drive and the menu in Figure 3-16 will appear.

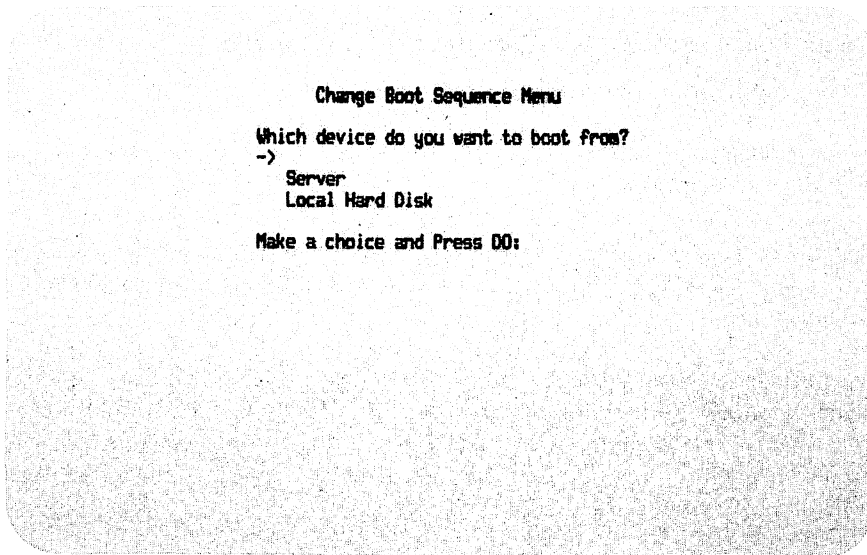



Figure 3-16
Change Boot Sequence Menu

3. To boot from the Server, choose “Server” from the menu. To boot from a local hard disk, choose “Local hard disk.”
4. If you have more than one local hard disk, you will be prompted to enter the volume or device name of the hard disk you want to boot from.
5. Remove the diskette and power off the system.
6. When you power back on, the Workstation will boot from the Server or the local hard disk depending on what you have chosen.

IF YOU HAVE PROBLEMS

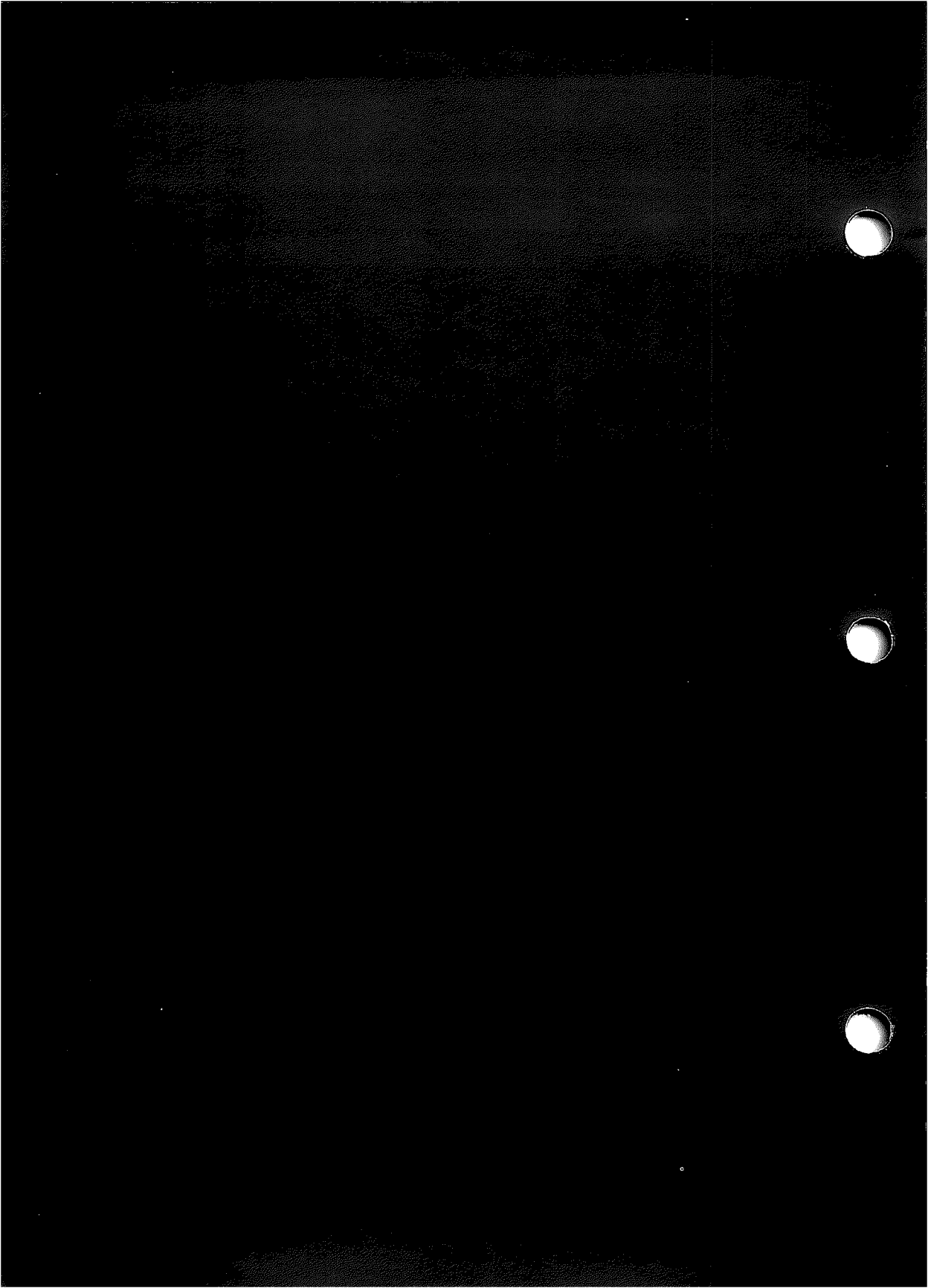
If your Workstation is not registered with a Server, you will see a picture of a diskette and your DECNA address. Call your Server manager to register your Workstation with the Server.

If the Server is not working, and you have a local hard disk, you can run applications in stand-alone mode on your hard disk system.

Use the Maintenance and Installation Services to test your Professional hardware. To use this application, you can install this from the library on your Server into your account. Refer to the *Owner's Manual* for information on how to use these services.

4

Workstation Manager



Chapter 4

Workstation Manager

It is possible to share a Workstation among multiple users. If there are multiple users, we suggest that one person act as the Workstation manager. The Workstation manager sets up accounts on the Workstation and takes responsibility for backing up the files and applications on the hard disk. A separate account is set up by the Workstation manager for each user.

LOGGING INTO THE WORKSTATION

To log into a Workstation as a Workstation manager, follow the directions for logging into a Workstation in Chapter 3 of this book, using `SYSTEM` as your username and `SYSTEM` as your password the first time you log in.

WORKSTATION SETUP

When a Workstation boots from the Server for the first time, the Server sends the Workstation its keyboard and terminal *characteristics*. Since each Workstation may have different hardware than the Server, the Workstation manager or privileged user may need to change the keyboard, monitor or terminal characteristics.

The Workstation manager should select the appropriate keyboard before any Workstation user logs in.

Terminal Setup on a Workstation

To change the Terminal Setup Menu, log into the Workstation and do the following:

1. From the Main Menu, access the Terminal Setup Menu by pressing the **SETUP** key. This Terminal Setup Menu is unique for each user of the Workstation.
2. Press the F12 key. The Terminal Setup Menu will appear again. At the bottom of the screen appears "Your system has been reset. You can now modify System values." This Terminal Setup Menu is for the entire Workstation system and should be used for characteristics that are unique for that Workstation, such as the monitor or keyboard.
3. Choose the monitor and other terminal characteristics that you need by following the documentation in the *Hard Disk System User's Guide*.

NOTE: During setup the screen will normally appear with a white foreground and black background. If the screen goes completely white, it means that a monochrome monitor has been set to color and this is incorrect. Correct this setting and save the new setting.

Creating a User Account Area on a Workstation

The user account area contains all of the user's private and system files which describe the user's environment, such as the applications available on the Main Menu and the terminal setup.

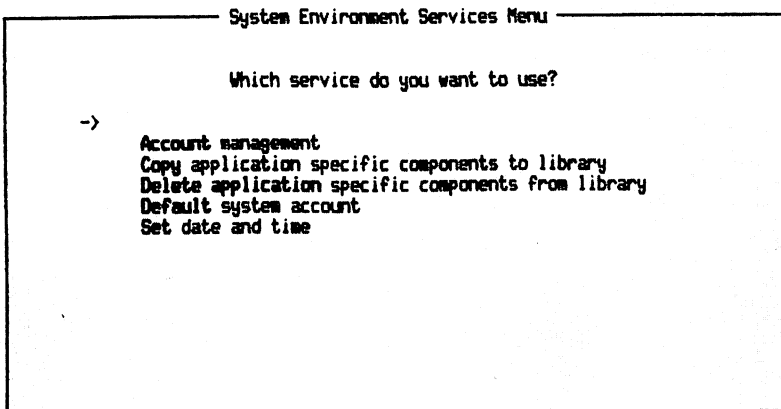
The Account Management program enables the Workstation manager or privileged user to set up and maintain accounts for other users on the Workstation. Using Account Management, you can create new user accounts, and display, modify or delete existing ones.

If you are the Workstation manager and want to add, modify, or list any Workstation accounts, you have to be sitting at the Workstation.

If a Workstation has a local hard disk and Workstation users want to store files there, rather than on the Server, the Workstation manager can create a user account area on the Workstation.

You must have a privileged account to create a user account area on a Workstation. Workstation users can use the P/OS operating system on the Server and all the system services, but files will be stored on the Workstation's local hard disk in the account that you create for each user. This can free up more disk space for the Server, if it is needed.

To create Workstation accounts or a user account area on a Workstation, choose "Environment services" from the P/OS Main Menu. The User Environment Services Menu will appear. Press the NEXT SCREEN key, and the System Environment Services Menu will appear as in Figure 4-1.



Make a choice and press DO.

Press PREV SCREEN for User Environment Services.

Figure 4-1
System Environment Services Menu

Choose "Account management" from the System Environment Services Menu. The Account Management Menu will appear as in Figure 4-2.

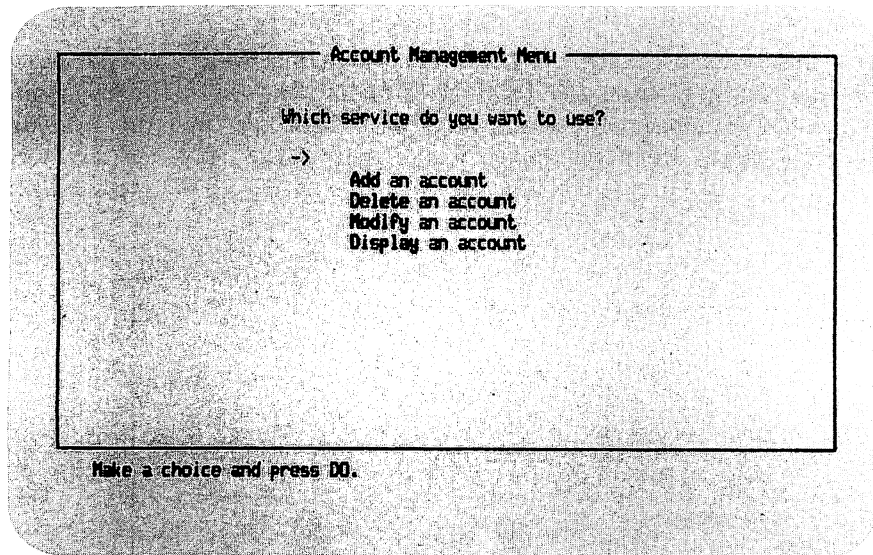


Figure 4-2
Account Management Menu

Choose "Add an account" and the Add an Account Form will appear as in Figure 4-3.

Add an Account Form

Use the RETURN key to move between fields.
Enter a username and password and press DO.
Press EXIT if you do not want to add an account.

Username: _____

Password: _____

Verification of password: _____

Additional options available

Complete the form and press DO.

Figure 4-3
Add an Account Form

If you have a local hard disk, "Additional options available" will appear at the bottom of the screen. Press the ADDTNL OPTIONS key, and the submenu in Figure 4-4 will appear.

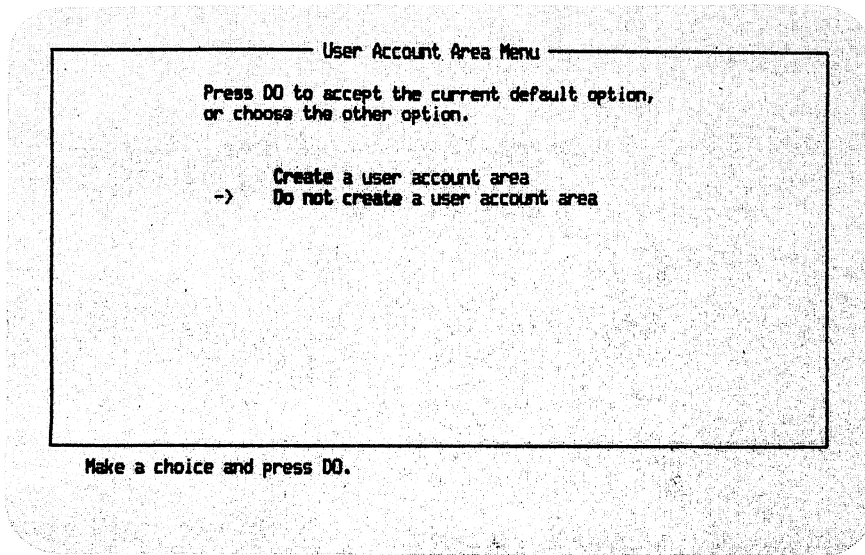


Figure 4-4
User Account Area Menu

The default for Workstations is “Do not create a user account area.”

To create a user account area on a Workstation, do the following:

1. Choose “Create a user account area” to create one on a Workstation.
2. After you have created a user account area on a local hard disk, the Add an Account Form will appear. Fill in this form.
3. Next, the Group List Menu will appear. Fill this in following the directions in the *Hard Disk System User's Guide*. The new account will be located in the new user account area on your local hard disk.

You can have a user account area on the Server or on a Workstation or on any of the disks that may be attached to the Server or Workstation. You cannot move the location of a user account area, but must create a new user account area for each location.

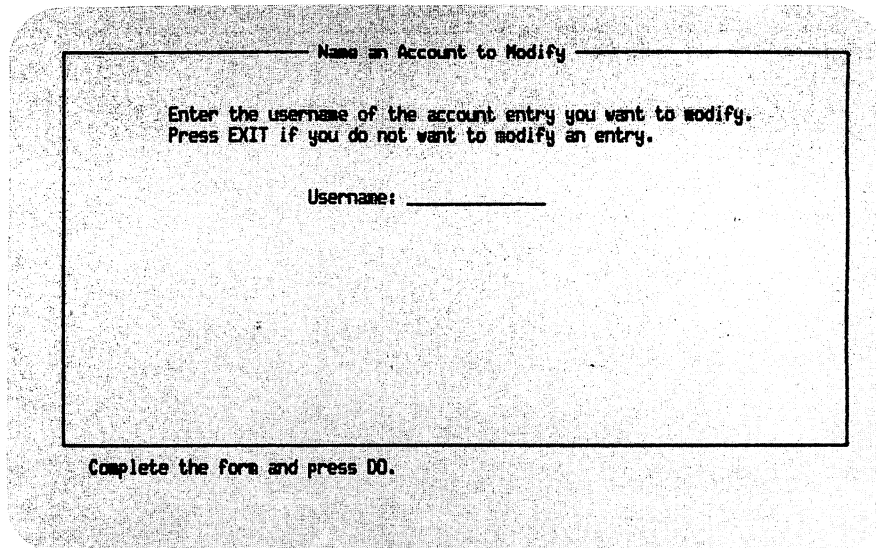
Enabling Default Server Login Account with Account Management

This feature is for the Workstation manager or privileged user in case a Workstation user needs assistance.

A Workstation user can define a default Server login account using User Environment Services. Defining a default Server login account automatically logs a Workstation user into the Server after login. The user will not see the Server Login Menu.

If a user changes their password, and logs out without changing the password on the default Server login account, then the automatic Server login will not work. The Workstation manager can fix this by following the directions in this section of the book.

Choose "Modify an account" from the Account Management Menu. The Name an Account to Modify Form will appear as in Figure 4-5.



The image shows a terminal window with a title bar that reads "Name an Account to Modify". Inside the window, the text says: "Enter the username of the account entry you want to modify. Press EXIT if you do not want to modify an entry." Below this text is a label "Username:" followed by a horizontal line for input. Below the terminal window, the text "Complete the form and press DD." is visible.

Figure 4-5
Name an Account to Modify Form

Enter the name of the account that you want to modify and press DO. If the account does not exist, an error message will appear. Otherwise, the form in Figure 4-6 (shown with sample entries) appears.

Modify an Account Form

Use the RETURN key to move between fields.
Enter the new password and press DO.
Press EXIT to leave the entry unchanged.

Username: SYSTEM

Group: SYSTEM MANAGERS

New password: _____

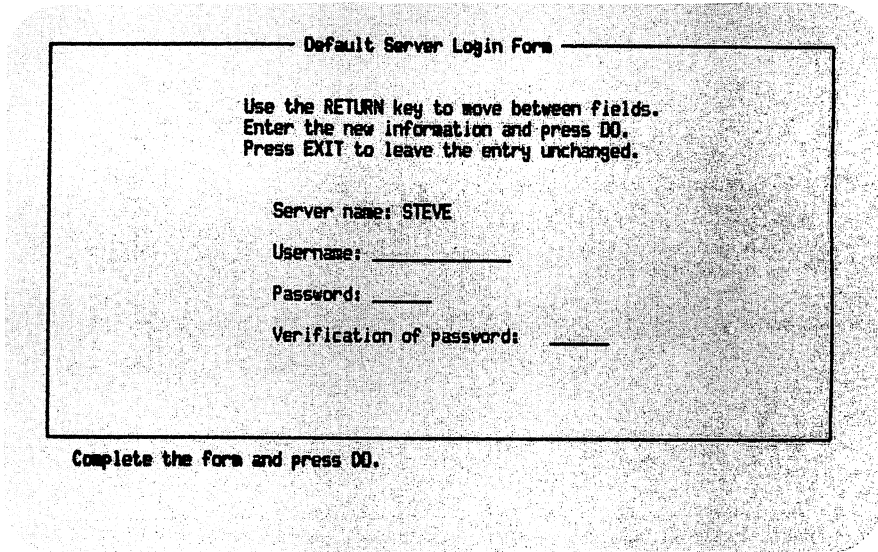
Verification of password: _____

Additional options available

Complete the form and press DO.

Figure 4-6
Modify an Account Form

With the Modify an Account Menu displayed, press the ADDTNL OPTIONS key. The form in Figure 4-7 will appear.



Default Server Login Form

Use the RETURN key to move between fields.
Enter the new information and press DD.
Press EXIT to leave the entry unchanged.

Server name: STEVE

Username: _____


Password: _____

Verification of password: _____

Complete the form and press DD.

Figure 4-7
Default Server Login Form

Change the password to match the user's new password and their default Server login account will work.

To change the username, use the  key to delete the username. Then enter a new username and password and repeat the password at "Verification of password."

Multiple Disks on a Workstation

If you have more than one disk for your Workstation, the following menu in Figure 4-8 will appear so that you can locate the User Account Area on either disk. Choose the disk that you want to store your files on.

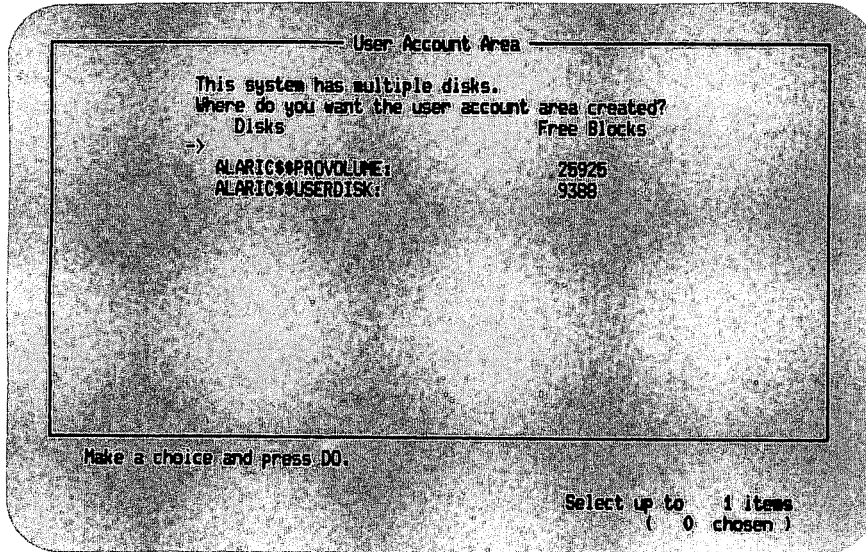


Figure 4-8
User Account Area Menu for Multiple Disks

Establishing a Default System Account

If you set up a default system account, a message will appear on the DIGITAL Login Menu as in Figure 4-9.

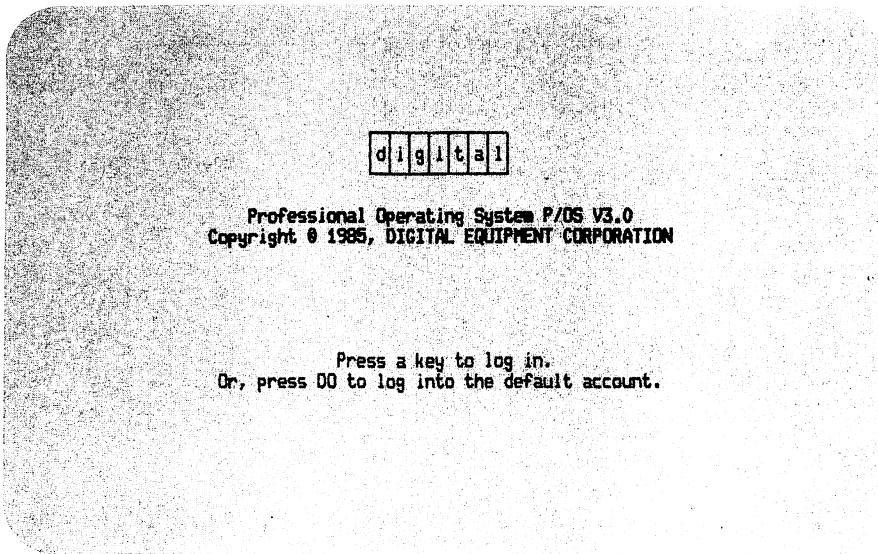


Figure 4-9
DIGITAL Login Menu with Default Set

When you press DO (or the RETURN key) at the DIGITAL Login Menu, you will automatically log into the default system account. You can do this if you have more than one account and use one account more than the other.

To set up a default system account, select "Default system account" from the System Environment Services Menu. The Default System Account Menu will appear as in Figure 4-10.

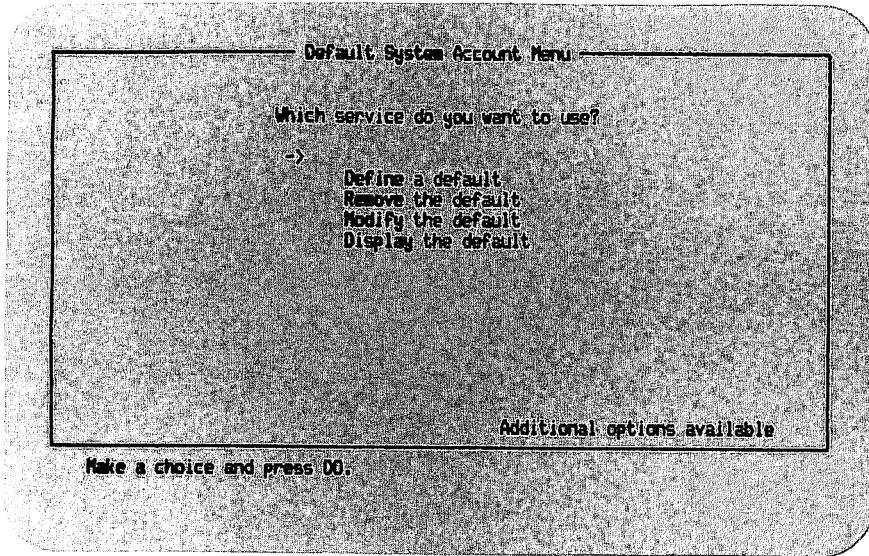


Figure 4-10
Default System Account Menu

Defining a Default System Account

Choose "Define a default" from the Default System Account Menu. A form will appear as in Figure 4-11.

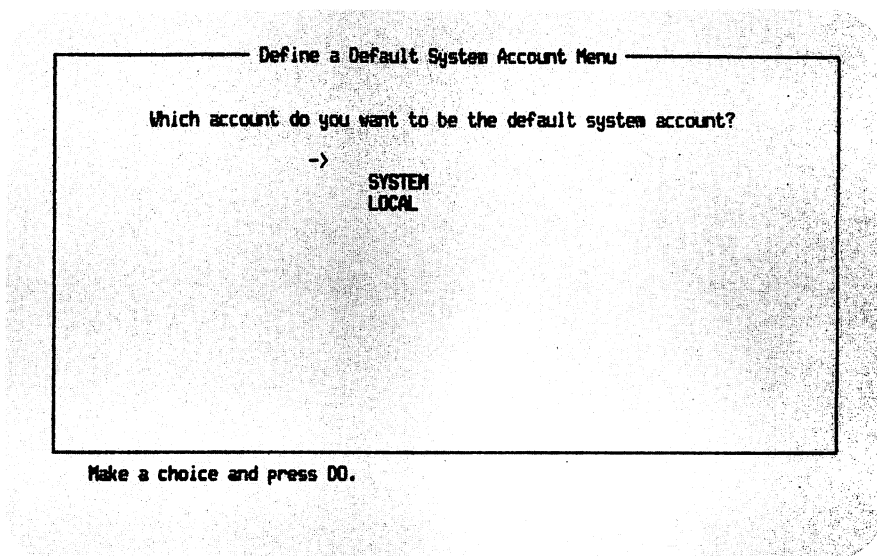
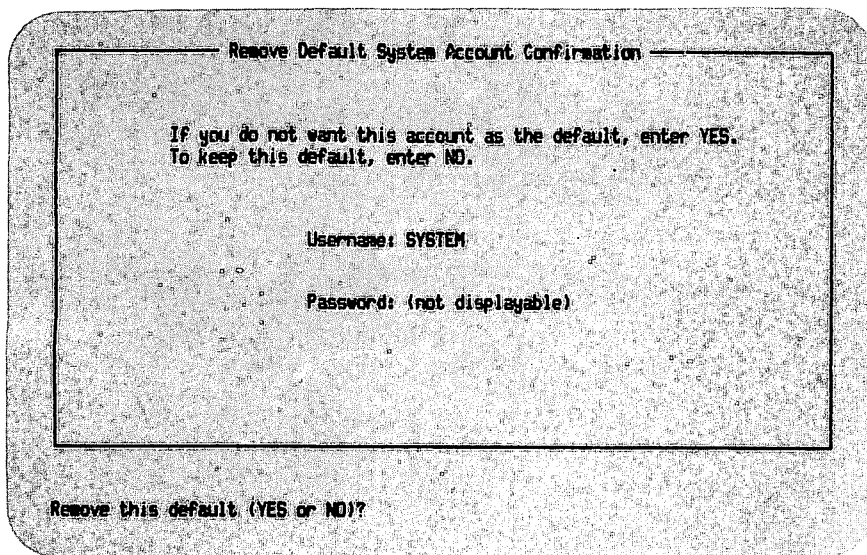


Figure 4-11
Define a Default System Account Menu

A list of the current accounts on your Workstation will appear. Choose the account you want to log into and press DO. This will now be your default system account.

Removing a Default System Account

Choose "Remove the default" from the Default System Account Menu. A form will appear as in Figure 4-12.



The image shows a terminal window with a title bar that reads "Remove Default System Account Confirmation". The main text inside the window says: "If you do not want this account as the default, enter YES. To keep this default, enter NO." Below this, it displays "Username: SYSTEM" and "Password: (not displayable)". At the bottom of the window, it asks "Remove this default (YES or NO)?".

Figure 4-12
Remove Default System Account Confirmation

If you want to delete your current default system account, type YES and press DO. To keep your default system account, type NO and press DO.

Modifying a Default System Account

To modify your current default system account, choose "Modify the default" from the Default System Account Menu. A menu will appear as in Figure 4-13.

```

      Modify Default System Account Form

      Use the RETURN key to move between fields.
      Enter the new information and press DO.
      Press EXIT to leave the entry unchanged.

      Current Information                New Information

      Username:  SYSTEM                 SYSTEM_____
      Password:  (not displayable)      _____
      Verification of password:         _____
  
```

Complete the form and press DO.

Figure 4-13
Modify Default System Account Form

Modify the lines you wish and press DO. If you do not want to modify the entry press EXIT.

Displaying the Current Default Account

To display your current default system account, choose “Display the default” from the Default System Account Menu. A display will appear as in Figure 4-14. Press EXIT to return to the previous menu.

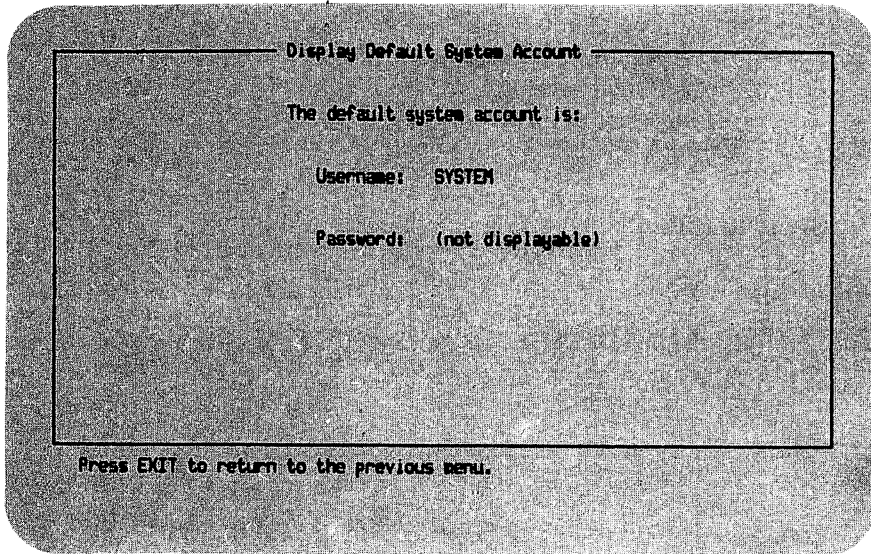


Figure 4-14
Default System Account Display

Enable/Disable Login Message

An additional option on the Default System Account Menu is to enable/disable the login message that first appears when you turn on your system. To use this option, display the Default System Account Menu and press the ADDTNL OPTIONS key. The submenu in Figure 4-15 offers you the choice of enabling or disabling the message. Make the appropriate choice.

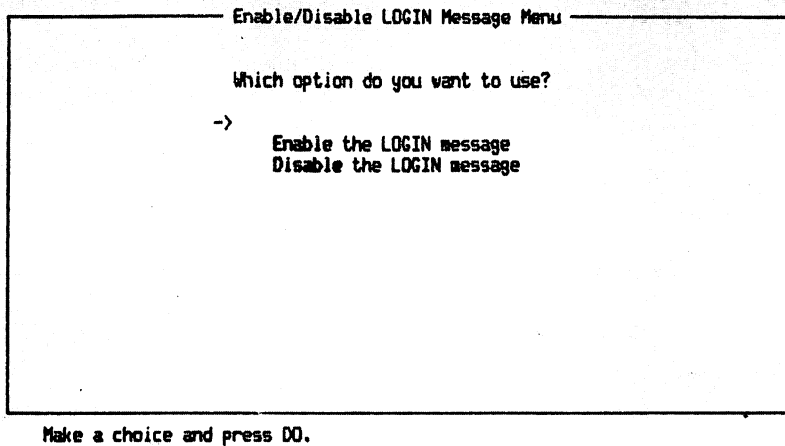


Figure 4-15
Enable/Disable LOGIN Message Menu

NOTE: If you disable this message and have defined a nonprivileged user account as the default system account, you will automatically log into the default account whenever you turn your Professional on. You will not be able to log off and no one else can use any other account except the default account. This also allows anyone to get into your account.

To remedy this situation, do the following:

1. Choose "Default system account" from the System Environment Services Menu.
2. Choose "Define the default." A Privilege Violation screen will appear asking you to log into a privileged account if you have one. If you do not have one, ask your Workstation manager to assist you. The Default System Account Menu will appear.
3. Press the ADDTNL OPTIONS key.
4. Choose "Enable the LOGIN message" from the Enable/Disable LOGIN Message Menu. You will now be able to log off, and the login message will be displayed allowing you to log into any account.

Setting Up a Library on a Workstation

There are several reasons for setting up a public library on a Workstation:

- Some applications may be needed only by users on a particular Workstation. A library of those applications on a Workstation would provide the applications to the appropriate users.
- Installing a public library of applications on a Workstation saves disk space on the Server.

You must have a local hard disk system to have a library on a Workstation.

Applications can have system wide components and application specific components. You can only copy application specific components to a library on a Workstation. System wide components must be copied to the public library on the Server.

You must be sitting at the Workstation that has application specific components in its library to use that application.

If the application you are installing has system wide components, you will get a message that says:

NOTICE

This application has system wide components that must be installed from a privileged account on a Server or stand-alone system. See the system manager.

Ask your Server manager to copy the system wide application components into the public library on the Server.

Copying Application Specific Components to a Workstation Library

To copy only application specific components to a library on a Workstation, do the following:

1. Insert the application diskette into the Workstation's diskette drive and choose "Environment services" from the P/OS Main Menu. The User Environment Services Menu will appear. Press the NEXT SCREEN key, and the System Environment Services Menu will appear. This menu is different than the System Environment Services Menu on the Server because the Workstation can only copy or delete application specific components on a Workstation.

2. Choose “Copy application specific components to library” from the System Environment Services Menu.
3. If your Workstation has more than one disk, a menu of available disks will appear for you to select the disk you want your application to reside on.
4. The application’s specific components will be copied to the library.
5. Some applications may require you to restart the Professional after copying it.

NOTE: You must be sitting at the Workstation that has the application specific components in its public library to use the application.

Deleting Application Specific Components from a Workstation Library

Before deleting application specific components from a library, the Workstation manager or privileged user should notify all other users.

The users should remove the application from their Main Menus or the application group they installed it in before the Workstation manager deletes the application specific components from the library.

To delete the application specific portions of an application, do the following:

1. Choose “Delete application specific components from library” from the System Environment Services Menu.
2. A list of applications in the Workstation library will appear. Select the application you want to delete and press **DO**.
3. When you delete an application which has system wide components, you will get the following message:

NOTICE

This application has system wide components. See the Server manager or system manager if you want to delete system wide components.

Ask your Server manager to delete the system wide application components from the public library on the Server.

4. You may need to restart the Professional after deleting some applications.

BOOTING FROM THE SERVER OR LOCAL HARD DISK

To change a Professional from a Workstation to a stand-alone system, you must have a local hard disk with P/OS or another operating system installed. To install the P/OS operating system, see the *Hard Disk System User's Guide*.

Use the PRO/NVR Modification Utility to change the boot sequence.

To run this utility:

1. Place the diskette labeled, PRONVR in a diskette drive of the Workstation.
2. Shut off the Workstation and turn it back on again. The Workstation will boot from the diskette in the drive and the following menu will appear as in Figure 4-16.

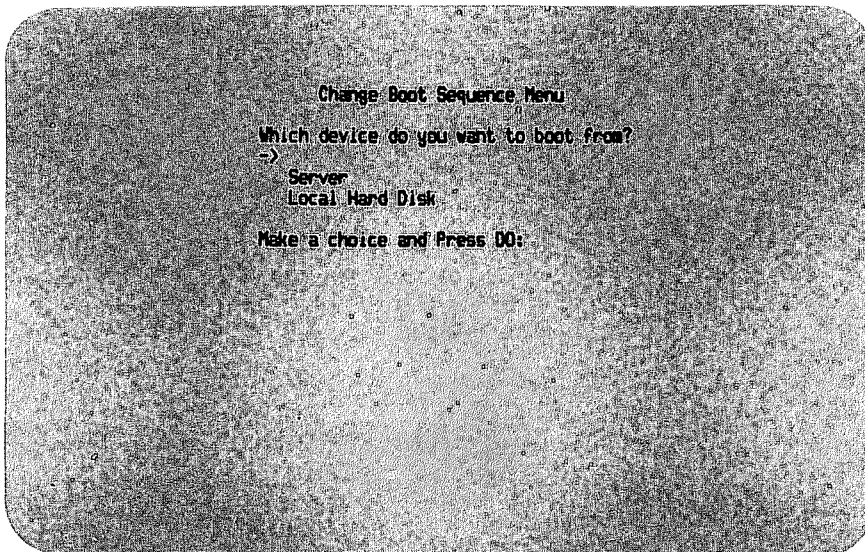


Figure 4-16
Change Boot Sequence Menu

3. To boot from the Server, choose "Server" from the menu. To boot from a local hard disk, choose "Local hard disk."

4. If you have more than one local hard disk, you will be prompted to enter the volume or device name of the hard disk you want to boot from.
5. Remove the diskette and power off the system.
6. When you power back on, the Workstation will boot from the Server or the local hard disk depending on what you have chosen.

BACKING UP FILES ON A WORKSTATION

Refer to the *Hard Disk System User's Guide* for general information about backing up your files.

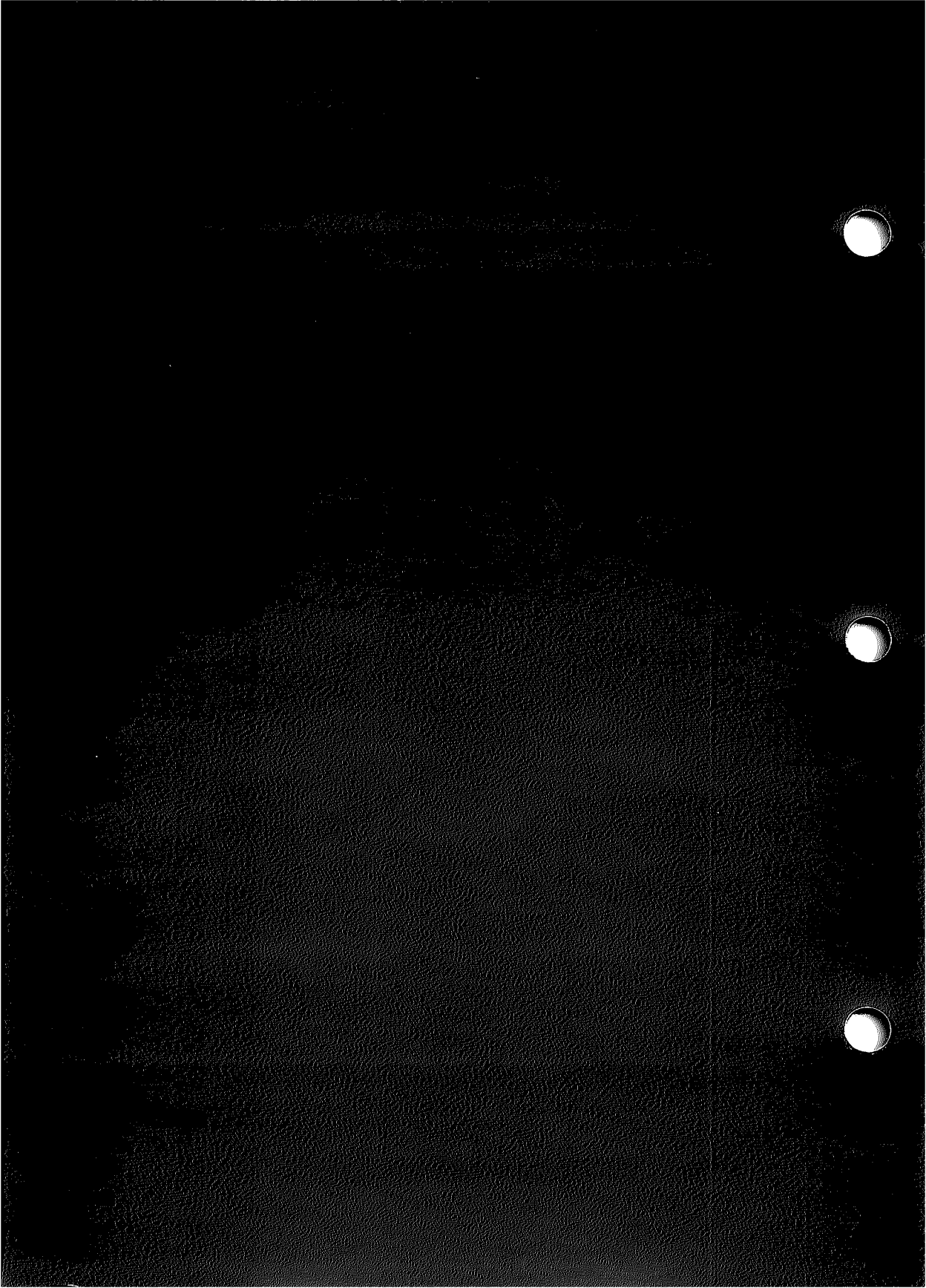
There are three way to back up files from a local hard disk:

1. If your Professional is on a network with a VMS, or RSX system or any DECnet node, you can use PRO/DECnet to copy files from your Professional to the larger system.
2. If you have two hard disks, you can use the Backup and Restore Utility to back up files from one hard disk to another.
3. If you have a local hard disk, use the Backup and Restore Utility, to back up files that you frequently revise. If you do not have a hard disk at your Workstation, you can back up your files while sitting at the Server.

Backing Up Files for a Diskless Workstation

If your Workstation is a diskless Workstation, all your files and the applications in your account are on the Server. The Server manager should back them up on a regular basis, such as once a week. If you need more frequent backups than the scheduled backups, discuss this with your Server manager.

Appendix A



Appendix A

P/OS Server Information Sheets

The pages in this section are provided for your use in recording information on each Workstation.

Call your local Digital Equipment Corporation Customer Support Center to register your system as part of a P/OS Server configuration.

REGISTRATION INFORMATION

Company Name _____

Server Manager _____

Phone Number (_____) _____ - _____ Ext. _____

SERVER INFORMATION

Server is a: _____ Professional 350
_____ Professional 380

Serial number for Server: _____

Server's Ethernet address: _____

Node name for Server: _____

Node address for Server: _____

NETWORK INFORMATION

The Server is connected directly to: _____ DELNI
_____ H4000

Server's access number for Customer Support Center: _____

Workstations are:

_____ physically located in the same area.

_____ physically located throughout a larger area (on multiple floors or in different buildings).

Is this P/OS Server group part of a larger Ethernet network?

_____ yes
_____ no

If yes, what other computers are connected to this network?

_____	_____
_____	_____
_____	_____
_____	_____

WORKSTATION INFORMATION

Workstation 1 is a: _____ Professional 325
_____ Professional 350
_____ Professional 380

Workstation 1 has a: _____ diskette drive
_____ hard disk drive

If there is a hard disk drive, it is a: _____ 5 megabyte RD50
_____ 10 megabyte RD51
_____ 20 megabyte RD31
_____ 33 megabyte RD52

Workstation 1's Ethernet address: _____

Workstation 1's node name: _____

Workstation 1's node address: _____

Workstation 1 is connected directly to: _____ DELNI
_____ H400

Workstation 1's access number for Customer Support Center: _____

WORKSTATION INFORMATION

Workstation 4 is a: _____ Professional 325
_____ Professional 350
_____ Professional 380

Workstation 4 has a: _____ diskette drive
_____ hard disk drive

If there is a hard disk drive, it is a: _____ 5 megabyte RD50
_____ 10 megabyte RD51
_____ 20 megabyte RD31
_____ 33 megabyte RD52

Workstation 4's Ethernet address: _____

Workstation 4's node name: _____

Workstation 4's node address: _____

Workstation 4 is connected directly to: _____ DELNI
_____ H400

Workstation 4's access number for Customer Support Center: _____

WORKSTATION INFORMATION

Workstation 5 is a: _____ Professional 325
_____ Professional 350
_____ Professional 380

Workstation 5 has a: _____ diskette drive
_____ hard disk drive

If there is a hard disk drive, it is a: _____ 5 megabyte RD50
_____ 10 megabyte RD51
_____ 20 megabyte RD31
_____ 33 megabyte RD52

Workstation 5's Ethernet address: _____

Workstation 5's node name: _____

Workstation 5's node address: _____

Workstation 5 is connected directly to: _____ DELNI
_____ H400

Workstation 5's access number for Customer Support Center: _____

WORKSTATION INFORMATION

Workstation 6 is a: _____ Professional 325
_____ Professional 350
_____ Professional 380

Workstation 6 has a: _____ diskette drive
_____ hard disk drive

If there is a hard disk drive, it is a: _____ 5 megabyte RD50
_____ 10 megabyte RD51
_____ 20 megabyte RD31
_____ 33 megabyte RD52

Workstation 6's Ethernet address: _____

Workstation 6's node name: _____

Workstation 6's node address: _____

Workstation 6 is connected directly to: _____ DELNI
_____ H400

Workstation 6's access number for Customer Support Center: _____

WORKSTATION INFORMATION

Workstation 7 is a: _____ Professional 325
_____ Professional 350
_____ Professional 380

Workstation 7 has a: _____ diskette drive
_____ hard disk drive

If there is a hard disk drive, it is a: _____ 5 megabyte RD50
_____ 10 megabyte RD51
_____ 20 megabyte RD31
_____ 33 megabyte RD52

Workstation 7's Ethernet address: _____

Workstation 7's node name: _____

Workstation 7's node address: _____

Workstation 7 is connected directly to: _____ DELNI
_____ H400

Workstation 7's access number for Customer Support Center: _____

WORKSTATION INFORMATION

Workstation 8 is a: _____ Professional 325
_____ Professional 350
_____ Professional 380

Workstation 8 has a: _____ diskette drive
_____ hard disk drive

If there is a hard disk drive, it is a: _____ 5 megabyte RD50
_____ 10 megabyte RD51
_____ 20 megabyte RD31
_____ 33 megabyte RD52

Workstation 8's Ethernet address: _____

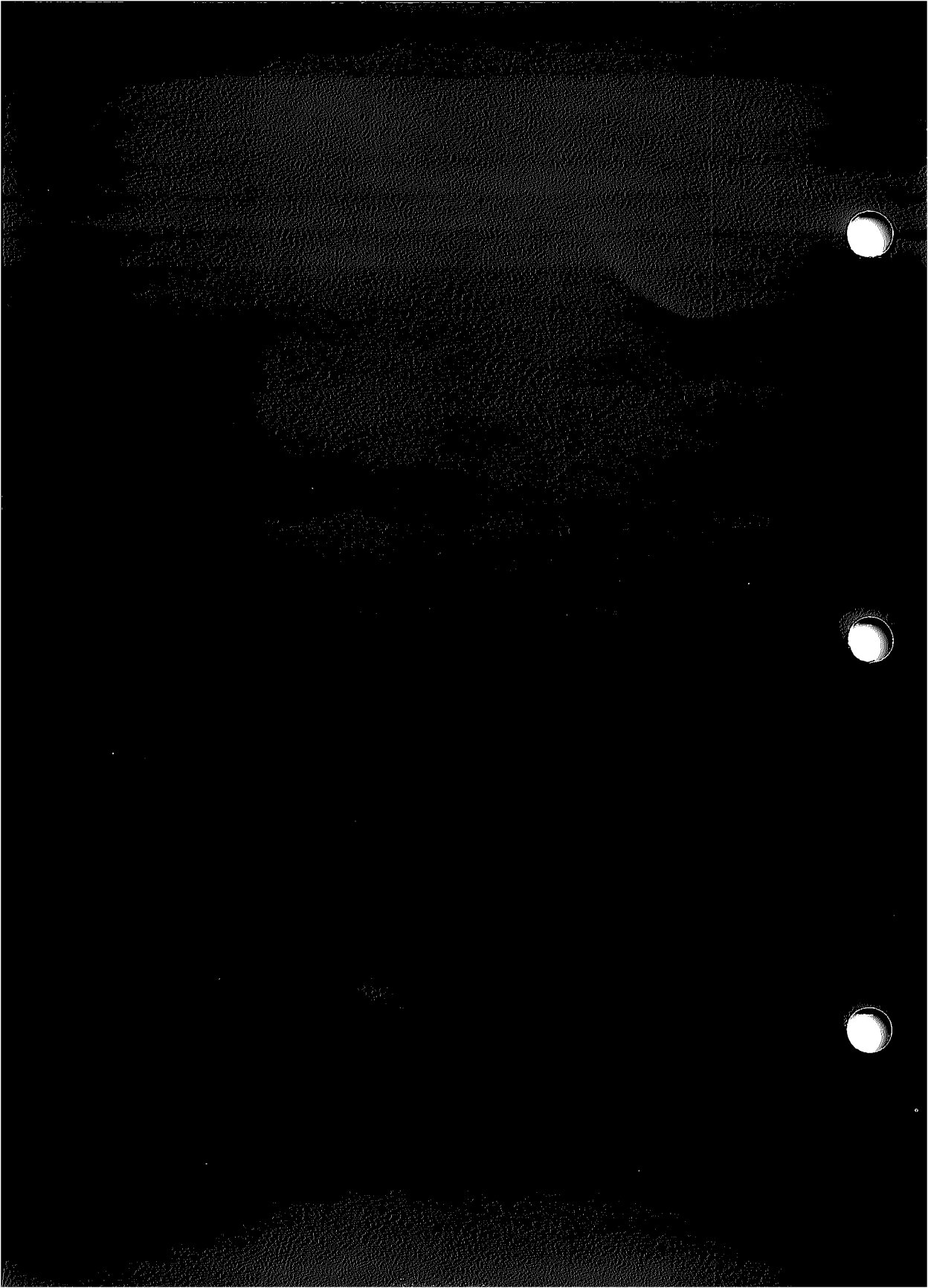
Workstation 8's node name: _____

Workstation 8's node address: _____

Workstation 8 is connected directly to: _____ DELNI
_____ H400

Workstation 8's access number for Customer Support Center: _____

Appendix B



Appendix B

P/OS Server Troubleshooting

This Appendix is an aid for the Server manager in troubleshooting any problems that might occur in a P/OS Server configuration.

You may need to refer to Appendix A in this book for node names, Ethernet addresses, and other P/OS Server information.

If you get an error message, you can get more information in the *Professional Error Guide*. Other Professional manuals that can be of assistance are listed in the “Associated Documents” section of this book.

SOFTWARE REQUIREMENTS

If you have problems, make sure you have installed the following software on the Server system:

1. P/OS—Professional Operating System.
2. PRO/DECnet—copy the Management Utility for DECnet into the public library on the Server to set up PRO/DECnet.

To use this application you must install it from the Server public library to a menu in your user account.

The following applications are available with PRO/DECnet, but are not required to run P/OS Server.

- Remote DECnet Terminal—use to communicate with a remote host computer.
 - PRO/DECnet Phone Application—use to communicate with other users on the network.
 - PRO/DECnet Mail Application—use to communicate with other users on the network.
 - Test Tool for DECnet—use to test the network.
 - DCL Network File Access Commands—install to use DCL commands for network file operations.
3. Workstation Registration Application
 - a. Copy Workstation Registration into the public library on the Server.
 - b. Install Workstation Registration from the public library onto a menu in your user account.
 4. PRONVR Modification Utility—use to change the boot sequence from Workstation hard disk to Server or from Server to local hard disk. This utility is a bootable diskette which can be used on any Workstation with a local hard disk.
 5. Professional Installation and Maintenance—use to test Server and Workstation hardware.

TOOLS FOR TESTING P/OS SERVER

- Installation and Maintenance Services—use to test your Professional hardware. This tool can be run from the Server public library or run from the diskette on a Workstation with a local diskette drive.
- Test Tool for DECnet—use to test the network.

NOTE: Workstations will not be able to run tests with the loopback connectors, the installation test or the local test, because they involve cutting off the connection to the Server temporarily.

- DELNI—If the green light on the connector panel does not go on or if you have problems using the DELNI unit, refer to the chapter on Troubleshooting in the *DELNI Installation/Owner's Manual*.

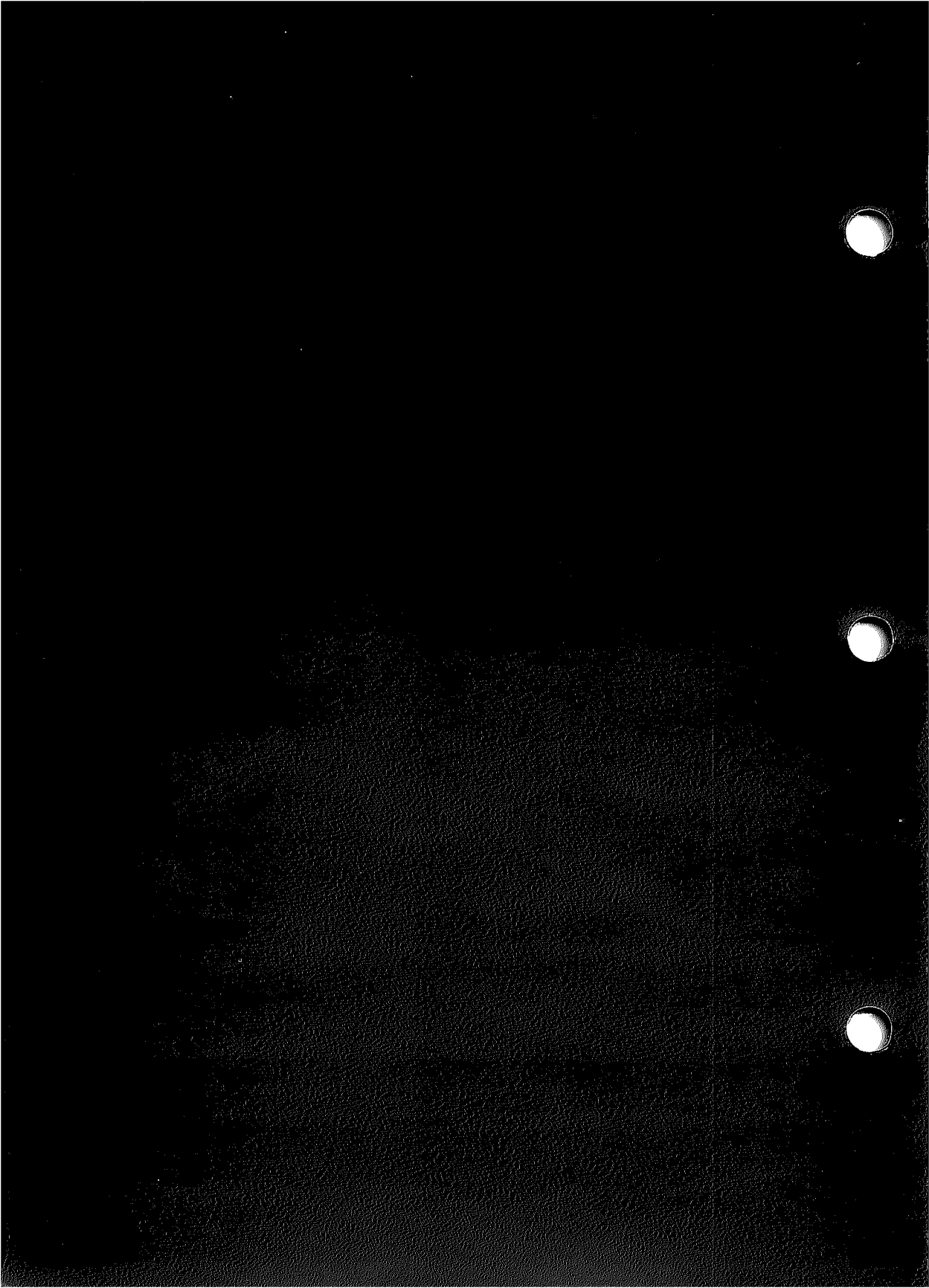
TROUBLESHOOTING

The Server node address should never be changed using the Management Utility for DECnet. When a Workstation is registered, the Server's address is placed in the down-line load database. If the Server's address changes, the database will not be changed automatically and the Workstation will not boot.

The Server and Workstation node addresses and node names should be unique for the entire network. If there are two Servers or Workstations with the same node name or node address, the P/OS Server software will not perform correctly.

If a P/OS Server configuration is being added to an already existing network, ask the network coordinator for valid node names and node addresses.

Glossary



Glossary

application (or application program)

A computer program that meets some specific user need. For example, an application program can do an inventory or monitor a manufacturing process. Applications for the Professional are available from DIGITAL and other companies.

back up

To copy one or more files to a diskette for safekeeping, in case the original volume (disk or diskette) gets damaged or lost. It is good practice to back up all new or newly revised files.

booting

Booting is the process of loading an operating system into memory and bringing the system to a state where applications can execute. Normally, a system with a local hard disk will be booted from that hard disk; this is referred to as a stand-alone system. With P/OS Server, you have the capability of loading the operating system from another system (the Server system), thus bypassing the operating system on your local hard disk.

characteristics

The operational features of a communications or terminal line, such as transmission speed. On the Professional, you can choose these features to suit your particular communications needs.

coaxial cable

A specific cable consisting of one conductor, usually a small copper wire within, that is insulated from another conductor of larger diameter, usually copper braid.

database

A collection of all the data used and produced by a computer program.

DECNA

The DECNA, an Ethernet interface/controller card for the Professional, fits in an option slot inside the Professional system unit. The DECNA allows high level software protocols, such as DECnet, to communicate over a 10 megabits/second baseband Ethernet link.

DECnet

A family of software products that allows programs running under the same or different DIGITAL operating systems to communicate with each other.

DELNI

The DELNI is a low cost Ethernet. It is a customer-installable, electronic unit that permits eight computers, such as the Professional, VAX-11, or PDP-11 to communicate with each other.

down-line loading

To send a copy of a system image or other file over a communications line to the memory of a target node.

Ethernet

Ethernet is a communications concept for local communications networks. Ethernet uses coaxial cable as a passive communications medium to interconnect different kinds of computers, information processing products, and office equipment at a local business site, without requiring switching logic or control by a central computer. Both the Ethernet coaxial cable with the H4000 Transceiver and the DELNI are Ethernet devices.

H4000 Transceiver

DIGITAL's Ethernet H4000 Transceiver provides the interface between the DECNA and Ethernet coaxial cable. All connections to the Ethernet coaxial cable must be made through the H4000 Transceiver.

network

A series of points connected by communications channels.

network coordinator

A person who provides administrative assistance to network users.

node

An end point of any branch of a network, or a junction common to two or more branches of a network.

Non-volatile RAM Modification Utility

This utility changes the boot sequence of a Professional to boot from a Server and become a Workstation or to boot from its local hard disk.

NVR

Non-volatile RAM (NVR) Modification Utility.

password

A string of characters that is established by the owner of a computer account. Used to protect information by restricting access by other users.

protocol

A set of conventions governing the format and relative timing of message exchange between two communicating processes.

remote

Used to refer to a device or computer at a location other than where the user is; generally connected by communications lines.

Server

The Server is the Professional and its disk(s), using P/OS Server software that allow Professionals connected to it to share disk space, files, databases, applications and printer resources.

Server manager

The person responsible for planning the Server configuration, registering Workstations, and maintaining the P/OS Server group.

stand-alone system

A self-contained computer system that does not require the services of another computer and is capable of booting from its own local disk.

terminal

A computer input/output device that is used to input text and commands to the computer. Its components are a keyboard, and either a video display screen or printer.

transceiver cable

This cable comes with the DECNA. This cable is used to connect the DECNA to the DELNI or to the H4000 Transceiver.

Workstation

A Professional in the P/OS Server environment that is similar to an intelligent terminal but with its own processor and optional peripherals.

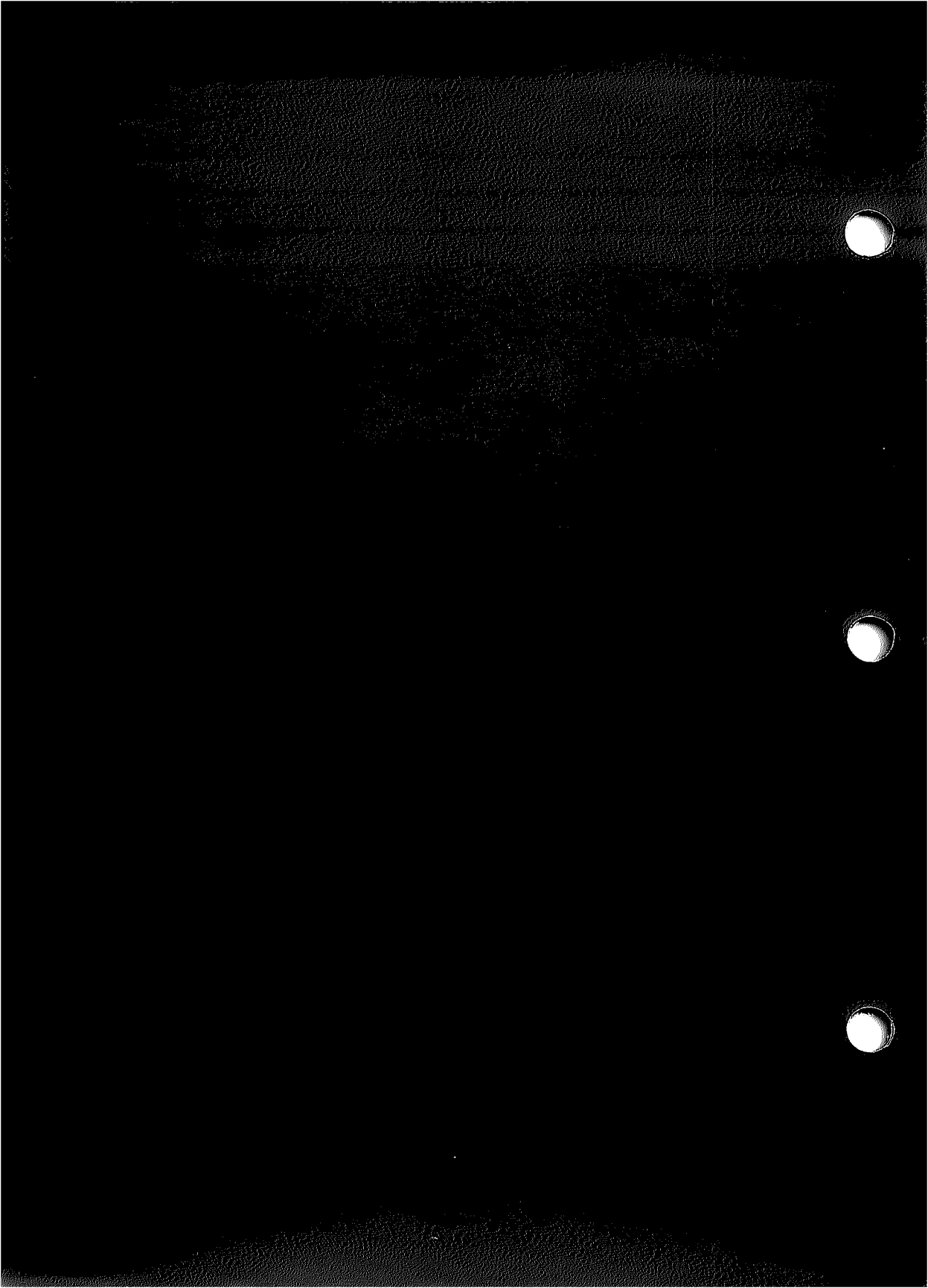
Workstation manager

Person responsible for setting up and managing multiple user accounts on a Workstation.

Workstation registration

What the Server manager must do for each Professional to make it a member of a P/OS Server Group.

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READER'S COMMENTS

Did you find this manual understandable, usable, and well-organized? Please make suggestions for improvement.

Did you find errors in this manual? If so, specify the error and the page number.

Please indicate the type of reader that you most nearly represent.

- First-time computer user
- Experienced computer user
- Application package user
- Programmer
- Other (please specify) _____

Name _____

Date _____

Organization _____

Street _____

City _____

State _____

Zip Code
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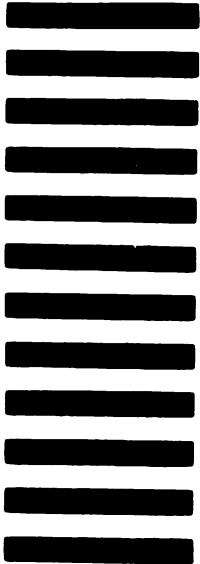


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