VAX/VMS Software Installation Guide: ScriptPrinters

Order Number: AA–JF60D–TE

This manual describes how to install VAX ScriptPrinter and LN03 Image Printer software on a VAX/VMS system. It also shows how to verify the installation and how to modify system startup files.

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Preface

Intended Audience

The *VAX/VMS Software Installation Guide: ScriptPrinters* is for users with system management responsibilities. Prerequisites include a knowledge of the VAX/VMS installation utility VMSINSTAL.

Document Structure

The manual contains the following chapters and appendixes:

- Chapter 1 provides an overview of the LN03R ScriptPrinter, the LN03 Image printer, and their software environment.
- Chapter 2 describes the preinstallation requirements.
- Chapter 3 explains how to install the software.
- Chapter 4 describes postinstallation requirements for printing.
- Chapter 5 provides information on more advanced postinstallation procedures.
- Chapter 6 describes error messages and recovery procedures.
- Appendix A contains a sample installation session.
- Appendix B contains a sample printer startup command file.
- Appendix C contains printed copies of the IVP pages.
- Appendix D contains a list of the files and libraries created on the host system during the installation procedure.

- Appendix E describes the steps used to troubleshoot the ScriptPrinter and the LN03 Image printer.
- A glossary of terms and an index are provided for reference.

Conventions

This document uses the following conventions:

Convention	Meaning
Uppercase notation	Type the word or letter exactly as shown.
Lowercase notation	Substitute a word or value of your choice.
Italics	When *italic* words and letters appear in command formats, substitute an appropriate word or value for the word or letter. Italic words in normal text indicate the first use of a new term that is defined in the glossary.
[ ]	Square brackets in command formats indicate that the enclosed item is optional.
{ }	Braces in command formats enclose lists from which you must choose one alternative. The choices are listed vertically or separated by the vertical bar symbol (|).
...	A horizontal ellipsis in command formats indicates that the preceding item(s) can be repeated one or more times.
. . .	A vertical ellipsis in examples indicates that code has been omitted.
CTRL/*x*	This symbol indicates that you should press the key labeled CTRL while you simultaneously press another key, for example, CTRL/Z, CTRL/C, CTRL/O.
RETURN	This symbol indicates that you should press the RETURN key.

Associated Documents

The installation procedures are based on the VMSINSTAL command procedure. Additional information on this procedure can be found in the *VMS Install Utility Manual.*

The following documents are associated with ScriptPrinters and/or the LN03 Image printer:

- *Introduction to VMS System Management*
- *Guide to Setting Up a VMS System*
- *Guide to Maintaining a VMS System*
- *VMS DCL Dictionary*
- *VMS System Messages and Recovery Procedures*
- *POSTSCRIPT Language Tutorial and Cookbook*
- *POSTSCRIPT Language Reference Manual*
- *POSTSCRIPT Language Program Design*
- *LN03R ScriptPrinter Programmer's Supplement*
- *POSTSCRIPT Translators Reference Manual*
- *VAX/VMS Management/User's Guide: ScriptPrinters*
- *POSTSCRIPT Quick Reference Guide*
- *LN03 Image Installation and Operation Guide*
- *LN03 Image Support Software Installation Guide*
- *LN03R ScriptPrinter Operator Guide*
- *LN03R ScriptPrinter Installation Guide*

Other reference books you may find helpful if your ScriptPrinter is configured on a DECserver in a local area Ethernet, or uses Distributed Queuing Service (DQS) software:

- *DECserver 100 Management Guide*
- *DECserver 200 Management Guide*
- *DECserver 200 Software Installation Guide*
- *DECserver 500 Management Guide*
- *Terminal Server Commands and Messages Reference*
- *Guide to Terminal Server Manager*
- *LAT/VMS Management Guide*
- *VMS System Generation Utility Manual*

Summary of Technical Changes

The VAX ScriptPrinter Software, Version 2.1, has the following new features:

- LN03 Image printer support
- New DDIF data type for DATA_TYPE parameter
- Simplified installation procedure
  - — Printer queue definition removed from installation
  - — New Installation Verification Procedure (IVP)
- New startup process
  - — Site-specific queue structure separated from installation
  - — Queue structure preserved across installations
- Printing of **printername** on separation pages for the LN03R ScriptPrinter printer
- VMS, Versions 5.0–2 and 5.1 support

Chapter 1

Overview

This chapter provides an overview of the LN03R ScriptPrinter and the LN03 Image printer, both high-quality laser printers, and the VAX ScriptPrinter Software.

1.1 The LN03R ScriptPrinter

The LN03R ScriptPrinter is a nonimpact printer that uses laser printing technology to produce high-quality prints and images. The printer serves as a local printer for its host VAX/VMS system. The ScriptPrinter accepts only Adobe's POSTSCRIPT® page description language without translation. A POSTSCRIPT interpreter on the printer produces a bitmap image. The ScriptPrinter operates at speeds up to eight pages a minute.

ScriptPrinters can generate printed pages that integrate text and complex graphics, using a variety of fonts. Along with POSTSCRIPT, ScriptPrinters support DDIF images and the ANSI/Sixel, ReGIS, and Tektronix® 4010/4014 protocols, through host-based translators that convert those protocols into POSTSCRIPT code.

1.2 The LN03 Image Printer

The LN03 Image printer is also a nonimpact printer that uses laser printing technology to produce high-quality prints and images. This printer accepts bitmap information only through its video terminal interface to produce a bitmap image. When performing continuous printing, the LN03 Image printer is also capable of printing up to eight pages a minute.

Together, the LN03 Image printer and the software kits listed in Section 2.4 support DDIF images, Adobe's POSTSCRIPT page description language and the ANSI/Sixel, ReGIS, and Tektronix 4010/4014 protocols. Host-based translators convert the protocols into POSTSCRIPT code. A host-based POSTSCRIPT interpreter then produces bitmap information from your POSTSCRIPT file to allow printing on the LN03 Image printer.

1.3 Components of the VAX ScriptPrinter Software

The VAX ScriptPrinter Software consists of the following components in one distribution kit:

- Print *symbiont* software, which processes print requests from one or more ScriptPrinter or LN03 Image printer queues.
- Translators to convert ANSI/SIXEL, ReGIS, Tektronix 4010/4014, and DDIF (image subset only) files into POSTSCRIPT files.
- DCL command files for defining an execution queue, generic queues, a default form, and a modifiable startup command template.

1.4 Components of the LN03 Image Printer Software

The LN03 Image printer requires the components of two kits:

- VAX ScriptPrinter Software, Version 2.1, kit (Section 1.3)
- VAX LN03 Image Support Software, Version 1.0

The LN03 Image Support Software distribution kit consists of the following:

- A host-based POSTSCRIPT interpreter, which converts POSTSCRIPT code to a bitmap image
- An LN03 Image device driver (LDDRIVER)

Chapter 2

Preinstallation Requirements

VAX ScriptPrinter Software can be installed on VAX/VMS systems that meet the hardware and software requirements listed in Sections 2.1 and 2.2. Installation of the software and its verification are independent of a working printer connected to your host system.

2.1 Host Hardware Requirements

The host system must have an input device that corresponds to the ScriptPrinter software distribution kit. The distribution kits are available on the following media:

- One magnetic tape (1600 BPI)
- One TK50 COMPACTape cartridge

LN03R ScriptPrinter

The ScriptPrinter must be either configured on a DECserver in a local area Ethernet environment, or the host must have one of the following serial interfaces:

- DHV11 (Q-bus)
- DZQ11 (Q-bus)
- DLV11 (Q-bus)
- DHU11
- DMZ32 (UNIBUS)
- DMF32 (UNIBUS)
- DMB32 (VAXBI)

- CVAX serial line interface (CXA16, CXB16, CXY08, DZQ11)
- VS2000 serial line interface

NOTE

When you use a DMZ32 serial communication interface, Revision E1 or less, to connect the ScriptPrinter to the VMS host, you MUST set the baud rate at 4800 baud or lower. With DMZ32, Revision F2 or later, set the baud rate at 9600 baud. Refer to Section 5.3.3 for information on changing the default baud rate.

LN03 Image Printer

The LN03 Image printer requires one of the following Q-bus interfaces:

- LNV21–AA dual-sized controller for BA123/BA23 enclosures (BC27H–15 cable)
- LNV21–SA or LNV21–SF quad-sized controller for BA213 enclosure (BC27P–15 cable)

2.2 Host Software Requirements

The LN03R ScriptPrinter and the LN03 Image printer have the following software requirements:

- The host must be running VMS, Version 5.0-2 or 5.1.
- The installation procedure uses the VMSINSTAL utility.
- The print symbiont uses the following drivers to communicate with the printers:
  - — LN03R ScriptPrinter — the standard VMS terminal driver (TTDRIVER) or the LAT port driver (LTDRIVER)
  - — LN03 Image printer — the LN03 Image driver (LDDRIVER)
- The host must be running VMS, Version 5.1, and DECwindows for image printing.

2.3 VAX ScriptPrinter Software Distribution Kit

Check the contents of the VAX ScriptPrinter Software Distribution Kit against the bill of materials. You should have the following:

- Software labeled VAX ScriptPrinter Software, Version 2.1, in one of the listed media forms
- *POSTSCRIPT Translators Reference Manual*
- *VAX/VMS Management/User's Guide: ScriptPrinters*
- *VAX/VMS Software Installation Guide: ScriptPrinters*

NOTE

The following software documentation is distributed with the hardware:

- *POSTSCRIPT Programmer's Supplement*

2.4 LN03 Image Printer Distribution Kits

The LN03 Image printer requires the following prerequisite software kits:

- VAX ScriptPrinter Software, Version 2.1 (See Section 2.3.)
- VAX LN03 Image Support Software, Version 1.0 (See Section 1.4.)

2.5 Required Disk Space

The installation of the ScriptPrinter host software requires 5500 disk blocks. After installation, this software requires approximately 2800 disk blocks for operation.

2.6 Installation Time

VAX ScriptPrinter Software installation on the host system can take up to 15 minutes, depending on the type of distribution media, and on the concurrent activity on the host system.

2.7 Default Device Characteristics

The ScriptPrinter startup procedure for VAX ScriptPrinter Software, Version 2.1, automatically sets the proper device characteristics for ScriptPrinters. Users should only change communication speeds and spooling.

The LN03 Image printer does not require a user to set device characteristics.

2.8 Custom Device Control Modules

The installation of VAX ScriptPrinter Software, Version 2.1, creates a new version of the standard device control library CPS$DEVCTL.TLB in SYS$LIBRARY without purging older versions of the standard device control library.

NOTE

Answering yes to purging in the installation procedure does **not** purge existing libraries.

Digital recommends that you create new device control libraries rather than extracting your custom device control modules from the old library and inserting them into the new version, CPS$DEVCTL.TLB. Follow the procedure outlined in the *VAX/VMS Management/User's Guide: ScriptPrinters*, Section 5.1.2, Creating Device Control Modules.

2.9 Installation on a System with a PrintServer Network Printer Installed

If a PrintServer network printer is installed on your system, the printers will share the ANSI, ReGIS, and Tektronix 4010/4014 translators. During installation, the procedure checks the version number of each translator, and if necessary, installs the latest version.

The VAX ScriptPrinter Software, Versions 2.0 or 2.1, and the VAX PrintServer Software, Versions 2.0, 2.1, or 3.0, also share the disk directory pointed to by the logical LPS$LAYUP and the definition of this logical name.

2.10 Ethernet Use for the ScriptPrinter

The following sections concerning use on an Ethernet apply to the LN03R ScriptPrinter. They do **not** apply to the LN03 Image printer.

If you plan to use your ScriptPrinter with a DECserver terminal server, you must do the following before executing the printer startup procedure:

1. Set the necessary DECserver port and server characteristics for the ScriptPrinter.
2. Make the necessary changes to SYS$MANAGER:LTLOAD.COM, the command procedure that starts the local area transport (LAT) protocol and configures applications devices for remote printers.

2.10.1 ScriptPrinter Queuing Model

Multiple systems on the same Ethernet can access the LN03R ScriptPrinter if the following prerequisites are met:

- The ScriptPrinter is connected to a DECserver.
- Each host system is running a copy of the VAX ScriptPrinter Software, Version 2.1, symbiont.

Implementation by the ScriptPrinter of shared printer access is similar to the shared printer support in the printservers. Using this multihost model has the following implications:

- No centralized accounting for the printer exists. Each system maintains accounting information for the printing performed by that system.
- Multiple symbionts contend for the same printer.

An LN03R ScriptPrinter that is connected through a direct-connect serial interface, such as a DHV11, cannot be shared as described. An LN03 Image printer cannot be shared as described. You must use Distributed Queuing Services (DQS) software to share a ScriptPrinter that is directly connected to a host or to share an LN03 Image printer.

2.10.2 DECserver Port Characteristics

Table 2–1 lists the DECserver port characteristics required for dedicated printing on a ScriptPrinter.

Table 2–1: ScriptPrinter-Required DECserver Port Characteristics

Characteristic	DECserver Port
ACCESS	REMOTE
AUTOBAUD	DISABLED
AUTOCONNECT	DISABLED
AUTOPROMPT	DISABLED
BREAK	DISABLED
BROADCAST	DISABLED
FLOW CONTROL	XON
INPUT FLOW CONTROL[1]	ENABLED
OUTPUT FLOW CONTROL[1]	ENABLED
INACTIVITY LOGOUT	DISABLED
LOSS NOTIFICATION	DISABLED
MESSAGE CODES	DISABLED
QUEUING	ENABLED
VERIFICATION	DISABLED

[1] Characteristic **not** supported by the DECserver 500.

NOTE

On many versions of DECservers, QUEUING is not a port characteristic, but is a server characteristic whose default is ENABLED.

In addition, check that the following DECserver port characteristics match the DIP switch settings on the back of your printer and the terminal characteristics:

Character size	8
Parity	none
Input speed	9600
Output speed	9600

To change DECserver terminal server and port characteristics, you need privileged status. Once you have privileged status, use the DEFINE PORT *n* and the SET PORT *n* commands. (*n* refers to the number of the DECserver port to which your ScriptPrinter is connected.)

For a detailed description of DECserver 100 commands and how to change them, refer to the *DECserver 100 Terminal Server Operations Guide*. For DECserver 200 terminal server commands, refer to the *DECserver 200 Management Guide*. For DECserver 500 terminal server commands, refer to the *DECserver 500 Management Guide*.

2.10.3 Editing the LAT Protocol Startup and Configuration File

The SYS$MANAGER:LTLOAD.COM file starts the local area transport (LAT) protocol and sets up default host node and server characteristics. In addition, this file tells the host node which DECserver port connects to the ScriptPrinter.

Therefore, before executing SYS$STARTUP:CPS$STARTUP, you should edit SYS$MANAGER:LTLOAD.COM to add information specific to your printer.

NOTE

Commands referenced in this section are LATCP commands. For more information on LATCP commands, refer to the *VMS LAT Control Program (LATCP) Manual*.

Add the following command to create an applications port on the host node (service node) that will support your ScriptPrinter:

```
CREATE PORT LTAd:/NOLOG/APPLICATION
```

where:

d is a unique number from 1 to 9999.

Add the following command to associate the applications port with a remote port on a server:

```
SET PORT LTAd:/NODE=server_name/PORT=port_n_name/QUEUE/APPLICATION
```

where:

LTAd:	is the name of the applications port.
server_name	is the name assigned to the DECserver.
port_n_name	is the DECserver port name.

The following example associates applications port *LTA9000:* with the port named *PORT_7* on a remote DECserver 200 named *LN03RDS*:

```
SET PORT LTA9000:/NODE=LN03RDS/PORT=PORT_7/QUEUE/APPLICATION
```

2.10.4 LAT Groups

To make a successful LAT connection, the following *groups* must all be the same:

- On the DECserver:

  Server service *groups*

  Port authorized *groups*
  current *groups*

- On the Service node:

  enabled *groups*

If you did not set up these groups correctly, you receive the following error message:

```
%CPS-E-LRJACCESSDENIED, Access denied
```

You can use SYSMAN or LATCP commands to include the necessary *group* designations. For additional information refer to the *VMS SYSMAN Utility Manual* or the *VMS LAT Control Program (LATCP) Manual*, respectively.

2.10.5 Software Restrictions with DECservers

VAX ScriptPrinter Software, Versions 1.1 and 2.1 (or 2.0), cannot successfully share a printer that is connected through a DECserver. When VAX ScriptPrinter Software, Version 1.1, connects to the DECserver port, it does not disconnect. Attempts of the Version 2.1 software to connect to the same port fail with no error message. Version 2.1 software controls the printer through the DECserver port, if it connects to the port first, and stays connected to the port not allowing Version 1.1 software to connect. In other words, you may run only one of these versions, 1.1 or 2.1, of the VAX ScriptPrinter Software connected to a particular DECserver port.

VAX ScriptPrinter Software, Versions 2.0 and 2.1, can share a printer connected through a DECserver. However, sharing adversely affects performance. The software that connects to the powered-up printer first, through a DECserver port, persistently loads its system pages and ANSI prolog. The other version of the software must load its system pages and ANSI prolog every time it queues jobs to the printer on the same port. Performance improves when you run only one version, 2.0 or 2.1, of the ScriptPrinter software connected to a particular DECserver port.

Chapter 3

Installing the Software

This chapter describes installing ScriptPrinter software on a VAX/VMS system, using the VMSINSTAL procedure. If you are not familiar with the VMSINSTAL utility, see the *VMS Install Utility Manual*.

3.1 Installation Checklist

Make sure you have the following prerequisites before beginning the installation procedure:

- A backup copy of the software distribution media.
- Distribution media on an appropriate input device.
- Adequate system disk space (see Section 2.5).
- Access to the system manager's account on the host system.

NOTE

If you are installing VAX ScriptPrinter Software, Version 2.1, on a system that has an earlier version of the ScriptPrinter software, you must stop existing ScriptPrinter execution queues before the installation. Use the STOP/QUEUE/NEXT command, for example. This ensures that the system uses the correct symbiont image.

3.2 VMSINSTAL Conventions

The VMSINSTAL procedure is interactive. The system prompts and responds with instructions, statements, queries, and messages.

Instructions guide you through the procedure or provide you with information relevant to subsequent queries. Statements inform you of the status or progress of the installation procedure.

Queries are preceded by an asterisk (*) and may be followed by default responses enclosed in brackets ([ ]). Enter your response, followed by Return. Just press Return to enter the default response. If you are not sure of the response, enter a question mark (?). VMSINSTAL displays explanatory text and repeats the prompt.

VMSINSTAL messages are documented in the *VMS Install Utility Manual*. Messages specific to the installation of the VAX ScriptPrinter host software are found in Chapter 6.

3.3 VMSINSTAL Release Notes

A machine-readable copy of the ScriptPrinter Release Notes is included on the software distribution media. If you wish to display or print the release notes, specify OPTIONS N on the VMSINSTAL command line:

```
$ @SYS$UPDATE:VMSINSTAL CPS021 device-id OPTIONS N
```

See Section 3.4 for more information.

3.4 Installation Procedure

NOTE

This section does not reproduce all text you will see on your screen during the installation procedure.

Invoke the VMSINSTAL procedure as follows:

```
$ @SYS$UPDATE:VMSINSTAL CPS021 device-id OPTIONS N
```

where:

CPS021	refers to the ScriptPrinter software save set.
device-id	is the device on which the distribution media are mounted.
OPTIONS N	is the release notes option, which allows you to display and/or print a copy of the release notes.

VMSINSTAL displays its banner line, the date and time, the statement that you can enter a question mark (?) at any time for help, and one or more warning messages if appropriate. You can continue the installation or exit to modify the conditions causing the warning messages. If DECnet is running, you will get the following messages:

```
%VMSINSTAL-W-DECNET, Your DECnet network is up and running.
* Do you want to continue anyway [NO]?
```

Answer YES to continue. DECnet has no impact on the installation of this product. You are then asked:

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

Answer YES to continue or NO to exit. If you answered NO, make a backup and begin VMSINSTAL again.

If you did not provide the *device_id* (location of the distribution media) on the VMSINSTAL command line, VMSINSTAL then asks:

```
* Where will the distribution volumes be mounted?:
```

Provide the name of the device on which the distribution media is to be mounted. If the distribution media is mountable, VMSINSTAL then asks for confirmation that the distribution media has been mounted.

```
 Please mount the first volume of the set on device-id:
* Are you ready?
```

Answer YES when ready.

VMSINSTAL displays the name and version of the product being installed, the start time of the installation, and confirmation of the restoration of each save set on the distribution media. On multivolume media you are prompted to mount successive volumes.

Choosing Release Notes Options

If you specified OPTIONS N in the command, the following release notes options display:

```
Release Notes Options:
       (1) Display release notes
       (2) Print release notes
       (3) Both 1 and 2
       (4) Copy release notes to SYS$HELP
       (5) Do not display, print or copy release notes
```

If you select 1, the release notes display on your terminal and are copied to CPS021.RELEASE_NOTES in SYS$HELP.

If you select 2, the release notes are queued to SYS$PRINT and copied to CPS021.RELEASE_NOTES in SYS$HELP.

If you select 3, the release notes display on you terminal, are queued to SYS$PRINT, and are copied to CPS021.RELEASE_NOTES in SYS$HELP.

If you select 4, the release notes are copied to CPS021.RELEASE_ NOTES in SYS$HELP.

If you select 5, the release notes are deleted without being printed, displayed, or copied to SYS$HELP.

Purging Files

VMSINSTAL asks if you want to purge any files that are being replaced.

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

Answer YES if you want to save disk space, or NO if you think the files may still be of use.

NOTE

Regardless of your answer, the installation does not purge the supplied device control library CPS$DEVCTL.TLB.

VMSINSTAL checks to see if the amount of disk space required for the installation is available. If the space is not available, a message provides the amount of disk space required and the installation is aborted. Otherwise, the installation continues.

Selecting a Logical Definition for LPS$LAYUP

Next, the installation procedure looks for a logical definition of LPS$LAYUP in the system table in executive mode. If a definition exists, the installation uses this definition. The procedure displays the following message:

```
%CPS-I-LAYUPDEF, LPS$LayUp is already defined
-CPS-I-LAYUPDEF, This installation will use its value
```

If an LPS$LAYUP definition does not exist, the procedure asks the user to select one. You can select SYS$SYSROOT:[SYSHLP.EXAMPLES.CPS] or provide a disk directory of your own. See Section 5.7 if you provide your own directory.

```
* Full definition for LPS$LayUp [SYS$SYSROOT:[SYSHLP.EXAMPLES.CPS]]:

% VMSINSTAL-I-SYSDIR, This product creates system disk directory
VMI$ROOT:[SYSHLP.EXAMPLES.CPS]
```

VMSINSTAL checks to see if the queue manager is running on your system. If the queue manager is not present, the following messages display on your screen before the installation continues:

```
%CPS-I-NOQUEMGR, System queue manager is not running
-CPS-I-NOQUEMGR, IVP will NOT run.  Installation continuing ...
```

The queue manager must be running if you want the installation to run an Installation Verification Procedure (IVP).

VMSINSTAL now creates a directory for the IVP test files and displays the following messages:

```
%VMSINSTAL-I-SYSDIR,  This product creates system disk directory
VMI$ROOT:[SYSTEST.CPS].

%CREATE-I-EXISTS, VMI$ROOT:[SYSTEST.CPS] already exists
```

VMSINSTAL does not ask any more questions. The following message displays on your screen:

```
%CPS-I-NOQUES, No further questions will be asked.
```

At this point, VMSINSTAL installs the translators. Before installing a translator, VMSINSTAL checks the image identification of the translator on the system and in the kit. VMSINSTAL installs the translator from the kit unless its version number is less than the version number of the translator already installed. In this case, the procedure issues an informational message:

```
%CPS-I-TRNNOTREP, The ANSI (or REGIS or TEK4014) translator in the kit
    was NOT installed
```

VMSINSTAL then displays a message on your screen reminding you to do the following:

- Copy SYS$STARTUP:CPS$STARTUP.TEMPLATE to SYS$STARTUP:CPS$STARTUP.COM.
- Edit SYS$STARTUP:CPS$STARTUP.COM following instructions in the file to create your queues. Executing this file establishes and starts the queues.
- Edit SYS$MANAGER:SYSTARTUP_V5.COM to include CPS$STARTUP.COM:

  ```
  $@SYS$STARTUP:CPS$STARTUP.COM
  ```

- If you use LAT devices, create the LAT devices, and edit SYS$MANAGER:SYSTARTUP_V5.COM to call CPS$STARTUP.COM after LTLOAD.COM.

VMSINSTAL now moves files from the temporary locations used during installation to their permanent directories.

```
%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target
directories...
```

The installation verification procedure (IVP) now runs.

```
%CPS-I-IVP. Beginning IVP...
JOB CPS$IVP_POST (queue CPS$IVP_TEST, entry 61) started on
    CPS$IVP_TEST
JOB CPS$IVP_ANSI (queue CPS$IVP_TEST, entry 62) started on
    CPS$IVP_TEST
JOB CPS$IVP_REGIS (queue CPS$IVP_TEST, entry 63) started on
    CPS$IVP_TEST
JOB CPS$IVP_TEK4014 (queue CPS$IVP_TEST, entry 64) started on
    CPS$IVP_TEST
```

These are temporary queues that the procedure automatically deletes after the IVP runs.

VMSINSTAL issues a successfully completed message:

```
IVP successful for VAX ScriptPrinter Software V2.1
```

NOTE

The installation verification procedure does NOT print the IVP files on any printer. This IVP verifies that the installation procedure was successful. You can print these IVP files on your printer by sending them to the appropriate printer queues (see Section E.1.2, Step 2, for printing instructions). The installation procedure places the IVP files in SYS$COMMON:[SYSTEST.CPS]. The files are named as follows:

- CPS$IVP_ANSI.DAT
- CPS$IVP_POST.DAT
- CPS$IVP_REGIS.DAT
- CPS$IVP_TEK4010.DAT

VMSINSTAL issues its terminating messages:

```
Installation of CPS V2.1 completed at hh:mm

VMSINSTAL procedure done at hh:mm
$
```

NOTE

Chapter 4 explains how to set up print queues for your system. These instructions must be followed before you can print to your ScriptPrinter or LN03 Image printer.

Chapter 4

Postinstallation Requirements

This chapter outlines the printer-related operations to be performed after the VAX ScriptPrinter Software is installed. You must perform these operations before you can print. (For further details on the startup process and other postinstallation procedures, refer to Chapter 5.) These operations affect system files and should be performed by a system manager or cluster manager. This chapter discusses the following procedures:

- Renaming and editing the SYS$STARTUP:CPS$STARTUP.TEMPLATE
- Updating the system startup file
- Checking system parameters for the LN03 Image printer
- Adding or deleting execution or generic queues
- Disposing of older version files

4.1 Renaming and Editing the Printer Startup Command File

VAX ScriptPrinter Software, Version 2.1, provides you with a template for a printer startup file, SYS$STARTUP:CPS$STARTUP.TEMPLATE. You must rename this file, edit the file to reflect your own queue structure, and add a command to execute this file in the system startup file. For a sample startup command file, see Appendix B.

NOTE

Do NOT use the cps$startup.com file from a previous version of the ScriptPrinter software; rename and edit the template provided with Version 2.1.

4.1.1 Renaming the Startup File

Rename the printer startup template file using the COPY command as follows:

```
$ SET DEFAULT SYS$COMMON:[SYS$STARTUP]
$ COPY CPS$STARTUP.TEMPLATE CPS$STARTUP.COM
```

4.1.2 Editing the Startup File

This section includes portions of text from the printer startup command file. Text after an exclamation mark (!) to the end of the line denotes a comment that the startup procedure does not execute. Following these examples and the instructions provided in CPS$STARTUP.COM, use an editor of your choice and edit the file to meet your printing requirements.

Library Logical Name Definition

The printer startup procedure defines your device control library logical name. You do not need to change this section if you only use the standard device control library provided with the ScriptPrinter software. Example 4–1 shows the command to define a library logical name.

Example 4–1: Library Logical Name Definition

```
$!+----------
$! Define your device control library logical name here.  The first
$! "define/system" (commented out) is an example of how to define a
$! search list of device control libraries.  Note that CPS$devctl
$! should always be first in the list.
$!
$! define /system /exec /nolog cps_lib cps$devctl, "ansi/data=ansi", -
$!      "ps/data=post"
$!
$
$ define /system /exec /nolog cps_lib cps$devctl
$
$!-----------
```

where:

cps_lib — is the device control library logical name. This logical name is also parameter **p3** in the execution queue definition elsewhere in this file.

cps$devctl — is the standard printer device control library included with the ScriptPrinter software.

For information on creating a library search list, see Section 5.6. The standard device control library, CPS$DEVCTL, should always be first in the list.

Sample Queue Structure

CPS$STARTUP provides a sample queue structure that includes commands to set up an execution queue on device TXA%%: and two generic queues, one for ANSI and one for POSTSCRIPT. Modify these commands or add commands to meet your requirements. Example 4–2 shows the command that provides parameters to set up an execution queue.

Example 4–2: Sample ScriptPrinter Execution Queue

```
$!
$ define /system /exec /nolog cps_lib cps$devctl, "ansi/data=ansi", -
$       "ps/data=post"
    .
    .
    .
$!+----------
$! Enter your queue structure below this line
$!----------
$
    .
    .
    .
$ on error then continue
$ @sys$startup:cps$execution_queue -
❶ $       cps -                          ! P1 - Execution queue name
❷ $       txa%% -                        ! P2 - /ON device name
❸ $       cps_lib                        ! P3 - Logical name for /LIBRARY
```

@sys$startup:cps$execution_queue executes the file CPS$EXECUTION_QUEUE.COM. This file uses the following parameters from Example 4–2 to set up your execution queue:

❶ Parameter **p1** *cps* is the queue name. Substitute the name of your execution queue.

❷ Parameter **p2** *txa%%* is the name of the device that drives the execution queue. Substitute the name of the device that drives your execution queue. TXA%% is not a valid name. For example:

- txa0 — for a ScriptPrinter on a serial line
- lda1 — for the LN03 Image printer
- lta1 — for a ScriptPrinter on a DECserver port (for information on LAT devices in cluster, refer to Sections 5.2.1 and 5.8)
- foo::txa4 — for printers in clusters: txa4 on node foo

❸ Parameter **p3** *cps_lib* is the device control library logical name. This is the same logical name defined elsewhere in the startup file.

Example 4–3 shows the command that provides parameters to set up an LN03 Image execution queue.

Example 4–3: Sample LN03 Image Execution Queue

```
$
$ define /system /exec /nolog cps_lib cps$devctl
$
   .
   .
   .
$!+----------
$! Enter your queue structure below this line
$!----------
$
   .
   .
   .
$ on error then continue
$ @sys$startup:cps$execution_queue -
❶ $      image -                          ! P1 - Execution queue name
❷ $      lda%% -                          ! P2 - /ON device name
❸ $      cps_lib -                        ! P3 - Logical name for /LIBRARY
❹ $      " " -                            ! P4 - Default queue parameter
❺ $      "/wsquota=10000"                 ! P5 - Required qualifier
```

@sys$startup:cps$execution_queue executes the file CPS$EXECUTION_QUEUE.COM. This file uses the following parameters from Example 4–3 to set up your execution queue:

❶ Parameter **p1** *image* is the queue name. Substitute the name of your execution queue.

❷ Parameter **p2** *lda%%* is the name of the device that drives the execution queue. Substitute the name of the device that drives your execution queue. LDA%% is not a valid name.

❸ Parameter **p3** *cps_lib* is the device control library logical name. This is the same logical name defined elsewhere in the startup file.

❹ Parameter **p4** " " indicates the selection of no default execution queue parameters for the LN03 Image printer.

❺ Parameter **p5** *"/wsquota=10000"* is an additional qualifier required for the operation of the LN03 Image printer.

Example 4–4 shows the command that provides parameters to set up an ANSI generic queue.

Example 4–4: Sample ANSI Generic Queue

```
$ @sys$startup:cps$generic_queue -   ! ANSI queue
❶ $       cps_ansi -                 ! P1 - generic queue name
❷ $       cps -                      ! P2 - /GENERIC = queues
❸ $       "data=ansi"                ! P3 - Queue parameter defaults
```

@sys$startup:cps$generic_queue executes the command file that sets up your ANSI generic queue. This file uses the following parameters shown in Example 4–4:

❶ Parameter **p1** *cps_ansi* is the generic queue name. Substitute the name of your generic queue for ANSI print jobs.

❷ Parameter **p2** *cps* is the execution queue where cps_ansi sends its jobs. Substitute the name of the execution queue where your generic queue sends its print jobs.

❸ Parameter **p3** *"data=ansi"* is the queue default that associates the ANSI data type with the generic queue.

Example 4–5 shows the command that provides parameters to set up a POSTSCRIPT generic queue.

Example 4–5: Sample POSTSCRIPT Generic Queue

```
$ @sys$startup:cps$generic_queue -   ! PostScript queue
❶ $       cps_ps -                   ! P1 - generic queue name
❷ $       cps -                      ! P2 - /GENERIC = queues
❸ $       "data=post"                ! P3 - Queue parameter defaults
```

@sys$startup:cps$generic_queue executes the command file that sets up your POSTSCRIPT generic queue. This file uses the parameters shown in Example 4–5 as follows:

❶ Parameter **p1** *cps_ps* is the generic queue name. Substitute the name of your generic queue for POSTSCRIPT print jobs.

❷ Parameter **p2** *cps* is the execution queue where cps_ps sends its jobs. Substitute the name of the execution queue where your generic queue sends its print jobs.

❸ Parameter **p3** *"data=post"* is the queue default that associates the POSTSCRIPT data type with the queue.

After you set up your queue structure, the printer startup command file is ready to execute. The remainder of the startup command file provides a description and examples of the execution queue parameters and the generic queue parameters. For more information on setting up your own queue structure, refer to Section 5.2.

4.2 Updating the System Startup File

To update the system startup file:

Edit the SYS$COMMON:[SYSMGR]SYSTARTUP_V5.COM file and check for the following command procedure call:

```
$ @SYS$STARTUP:CPS$STARTUP
```

If this line is not present, insert it.

NOTE

If your ScriptPrinter is configured on a DECserver in a local area Ethernet, execute CPS$STARTUP.COM after LTLOAD.COM.

4.3 LN03 Image Printer System Parameter Setup

The LN03 Image printer requires that the SYSGEN parameter WSMAX have a value of at least 10,000 (ten thousand). To check this value, enter the following command:

```
$  RUN SYS$SYSTEM:SYSGEN
```

Once in SYSGEN, look at the parameter with this command:

```
SYSGEN> SHOW WSMAX
```

If WSMAX is equal to or greater than 10,000, type EXIT to leave SYSGEN. If you need to change WSMAX, Digital suggests that

you use the AUTOGEN command procedure after modifying SYS$SPECIFIC:[SYSEXE]MODPARAMS.DAT. To change the WSMAX parameter perform the following steps:

1. Edit SYS$SPECIFIC:[SYSEXE]MODPARAMS.DAT and add the following:

```
MIN_WSMAX=10000
```

2. Issue the following AUTOGEN commands to install the new WSMAX parameter on the system when you reboot the system:

```
$ @SYS$UPDATE:AUTOGEN SAVPARAMS GENPARAMS
$ @SYS$UPDATE:AUTOGEN SETPARAMS REBOOT
```

Refer to the *Guide to Setting Up a VMS System* for more information on the AUTOGEN command procedure.

4.4 Reconfiguring the Printer System

If you wish to add additional printers to your system, or add or delete execution or generic queues, you do not have to rerun VMSINSTAL. Instead, you can do the following:

1. Stop the queues you want to change using the following command:

```
$ STOP/QUEUE/NEXT queue-name[:]
```

2. For existing queues, check to see that no jobs are waiting in the queue then delete queues desired. Use the following commands:

```
$ SHOW/QUEUE/ALL queue-name[:]
$ DELETE/QUEUE queue-name[:]
```

3. Edit SYS$STARTUP:CPS$STARTUP.COM and add or delete the definitions for the desired execution and generic queues (see Section 4.1.2).
4. Then invoke the startup command file with the following command:

```
$ @SYS$STARTUP:CPS$STARTUP
```

The startup procedure then initializes and starts your queues.

4.5 Reinstallation of ScriptPrinter Software

If you are installing VAX ScriptPrinter Software, Version 2.1 on a system that has a version of the ScriptPrinter software, you must stop existing ScriptPrinter execution queues before executing CPS$STARTUP.COM.

```
$ STOP/QUEUE/NEXT queue-name[:]
```

This ensures that the software correctly defines queue characteristics and the system uses the correct symbiont image.

Before executing ScriptPrinter software, you should also power cycle (turn off and on) the printer. This clears resources and allows the reloading of new prologues.

4.6 Disposing of ScriptPrinter, Version 1.1, Files

If you install VAX ScriptPrinter Software, Version 2.0 or 2.1, with the Version 1.1 software already installed, you can delete the old LPS$LN03R$ files after the installation. You no longer need the following files:

File Name	Directory
LPS$LN03R$SMB.EXE	SYS$SYSTEM
LPS$LN03R$MSG.EXE	SYS$MESSAGE
LPS$LN03R$DEVCTL.TLB[1]	SYS$SHARE
LPS$LN03R$STARTUP.COM	SYS$STARTUP
LPS$LN03R$BUILD_STARTUP.COM	SYS$STARTUP
LPS$LN03R$BUILD_QUEUE.COM	SYS$STARTUP
LPS$LN03R$SHUTDOWN.COM	SYS$STARTUP
LPS$LN03R$IVP.COM	SYS$TEST
LPS$LN03R$IVP_ANSI.DAT	SYS$TEST
LPS$LN03R$IVP_REGIS.DAT	SYS$TEST
LPS$LN03R$IVP_TEK4014.DAT	SYS$TEST

[1]Save your custom modules before deleting this file.

File Name	Directory
LPS$LN03R$IVP_PSCRIPT.DAT	SYS$TEST
LPS$LN03R$SET_TIMEOUT.PS	SYS$MANAGER
LPS$LN03R$011.RELEASE_NOTES	SYS$HELP

You **must not** delete the following files located in SYS$SHARE:

- TRN$ANSI_PS.EXE
- TRN$REGIS_PS.EXE
- TRN$TEK4014_PS.EXE
- LPS$FONT_METRICS.TLB

Chapter 5

Additional Postinstallation Procedures

This chapter describes printer-related operations to be performed after the ScriptPrinter VMS host software is installed. These operations affect system files and should be performed by a system manager or cluster manager. This chapter discusses the following additional postinstallation procedures:

- Defining a queue structure
- Changing ScriptPrinter communication speed
- Redefining printer queue default qualifiers
- Changing or redefining default print parameters
- Defining a library search list
- Defining LPS$LAYUP
- Operating notes for VAXcluster systems
- Setting the printer timeout
- Setting the printer name
- Eliminating login dialog on a ScriptPrinter

5.1 The Printer Startup Command File

VAX ScriptPrinter Software, Version 2.1, provides you with a template printer startup file, SYS$STARTUP:CPS$STARTUP.TEMPLATE (for a sample file see Appendix B). Copy the template file to SYS$STARTUP:CPS$STARTUP.COM and edit the file to meet your printing requirements. (Do NOT use the cps$startup.com file from a previous version of the software.) Follow the instructions provided in this file. CPS$STARTUP.COM does the following:

- Calls CPS$REQUIRED.COM, which does the following:
  - — Checks to see if the queue manager is running
  - — Checks privileges
  - — Installs the DDIF translator if necessary
  - — Defines the default form CPS$DEFAULT
  - — Defines the LPS$LAYUP logical name
- Defines a logical name for a library search list
- Builds the system queue structure by calling the following command files:
  - — CPS$EXECUTION_QUEUE.COM — initializes and starts printer execution queues, sets device characteristics
  - — CPS$GENERIC_QUEUE.COM — initializes and starts printer generic queues

NOTE

Do **not** modify the CPS$EXECUTION_QUEUE.COM, CPS$GENERIC_QUEUE.COM, or CPS$REQUIRED.COM files.

Do not change the order of commands in CPS$STARTUP.COM.

5.2 Defining a Queue Structure

The next two sections describe the parameters to use when setting up execution and generic queues, and they provide examples of how to use the parameters in the printer startup command file.

5.2.1 Execution Queues

SYS$STARTUP:CPS$STARTUP.COM calls SYS$STARTUP:CPS$EXECUTION_QUEUE.COM to initialize and start execution queues for the ScriptPrinter and the LN03 Image printer. To define your own execution queue structure, add your selections for parameters **p1** to **p7** in the place provided in the printer startup file. Table 5–1 shows the parameter values to set up execution queues:

Table 5–1: Parameter Values for Execution Queues

Parameter	Value
p1	Name of execution queue
p2	Name of device that the execution queue drives (used with /ON qualifier of INITIALIZE/QUEUE command)
p3	Library logical name; the logical name for the standard ScriptPrinter device control library or for a library search list (used with /LIBRARY qualifier of INITIALIZE/QUEUE command)
p4 (optional)	Execution queue parameter defaults (used with DEFINE LPS$*queue-name*_PARAMETER)
p5 (optional LN03R)	Value to override or add to default qualifiers For LN03 Image printer, always include here "/WSQUOTA=10000"
p6 (optional)	For LN03R ScriptPrinter on serial lines: communication speed; default is 9600 baud[1]. For LN03R ScriptPrinter on a DECserver: setting communication speed not applicable; parameter ignored. For LN03 Image printer: setting communication speed not applicable; parameter ignored
p7 (optional)	Value for SET DEVICE qualifier; default value is SET DEVICE/NOSPOOLED[1]
p8	Digital-Reserved

[1]Default refers to the value of the parameter if left blank.

Specifying the Device Name for Parameter p2

In parameter **p2**, you specify the node name and/or device name of the device that the execution queue drives. This parameter provides the device name for the /ON qualifier to the DCL INITIALIZE/QUEUE command:

```
$ INITIALIZE/QUEUE/ON=[node::]device[:]
```

You must indicate a device name in parameter **p2**. The print symbiont connects to a printer through the device. A device may be a LAT port, a serial communication device (DHV11, for example) or special hardware (LN03 Image printer).

You must provide the node name in parameter **p2** for the following devices in a cluster, unless the device is on the node where you are running the startup procedure:

- A serial communication device that is node specific
- Special hardware such as the LN03 Image printer
- A local area transport (LAT) port created on only one node in the cluster.

In a single node system, CPS$EXECUTION_QUEUE.COM starts a queue on that node if the node name in parameter **p2** matches the system node or if you did not specify a node name and the device in **p2** exists on the node.

In a cluster, CPS$EXECUTION_QUEUE.COM starts a symbiont process on the node specified in parameter **p2**. If you did not specify a node name in **p2**, the startup procedure starts the symbiont process on the cluster node where the startup procedure first runs.

Device Characteristics and Parameter p2

CPS$EXECUTION_QUEUE.COM also sets device characteristics for LAT devices and serial communication devices. Parameter **p2** provides the device name for the SET TERMINAL and SET DEVICE commands in this command file. If **p2** is a logical name, the command file translates this name. To prevent logical name translation, provide an underscore (_) prefix for your device name in **p2**.

Execution Queue Example

Example 5–1 shows how to use the parameters from Table 5–1 to set up an execution queue for an LN03R ScriptPrinter, which, by default, prints jobs with two pages on one side of a sheet of paper.

Example 5–1: Setting Up an Execution Queue

```
$ on error then continue
$ @SYS$STARTUP:CPS$EXECUTION_QUEUE -
❶   2UP -              ! P1 - execution queue name
❷   FOO::TTB4: -       ! P2 - device name
❸   CPS_LIB -          ! P3 - logical name for your library search list
❹   "NUMBER_UP=2" -    ! P4 - defines a default queue parameter
    "/DEFAULT=(FLAG,FORM=myform,NOFEED)" -
❺                      ! P5 - value to override/add to default qualifiers
❻   "" -               ! P6 - communication speed
    /SPOOL=(2up,disk1$:)
❼                      ! P7 - set device qualifier
```

❶ Parameter **p1** is the name of the execution queue 2UP where the print jobs execute.

❷ Parameter **p2**, FOO::TTB4:, specifies the device *TTB4* on node *FOO* that this execution queue drives.

❸ Parameter **p3** provides the value CPS_LIB as the logical name for the library search list. You define the search list and associate it with CPS_LIB elsewhere in the same CPS$STARTUP command file.

❹ Parameter **p4**, "NUMBER_UP=2", provides a PRINT/PARAMETERS default value for the execution queue. The queue logical name thus created is in the following form:

```
$ DEFINE/SYS/EXEC/NOLOG LPS$2up_PARAMETER "number_up=2"
```

❺ Parameter **p5**, "/DEFAULT=(FLAG,FORM=myform,NOFEED)", adds the printing of a flag page before each file and defines the default form for jobs in this execution queue.

❻ Parameter **p6**, "" (null string), does not change the default communication speed of 9600 baud. To change the communication speed to 4800 baud, for example, replace the null string ("") with 4800.

❼ Parameter **p7**, /SPOOL=(2up,disk1$:), changes the no spooled default SET DEVICE characteristic to spooled.

See Appendix B for a sample printer startup command file.

5.2.2 Generic Queues

SYS$STARTUP:CPS$STARTUP.COM calls SYS$STARTUP:CPS$GENERIC_QUEUE.COM to initialize and start generic queues for the printers. To define the generic queue structure, fill in your selections for the parameters listed in Table 5–2 in the place provided in the startup file.

Table 5–2: Parameter Values for Generic Queues

Parameter	Value
p1	Name of the generic queue
p2	Name(s) of the execution queue(s) into which generic queue can send jobs (used with /GENERIC qualifier)
p3 (optional)	Generic queue parameter default(s) (used with LPS$*queue-name*_PARAMETER)
p4 (optional)	Value to override or add to default qualifiers
p5	Digital-Reserved
p6	Digital-Reserved
p7	Digital-Reserved
p8	Digital-Reserved

Generic Queue Example

Example 5–2 shows how to use the parameters listed in Table 5–2 to set up a generic queue for ReGIS print jobs. This generic queue feeds print jobs to either of two LN03R ScriptPrinter execution queues.

Example 5–2: Setting Up a Generic Queue

```
$ @SYS$STARTUP:CPS$GENERIC_QUEUE -
❶     LN03R_REGIS -              ! P1 - generic queue name
❷     "LN03R_TTB4,LN03R_TTB7" - ! P2 - execution queue names
❸     "data_type=regis"          ! P3 - default queue parameter
```

❶ Parameter **p1**, LN03R_REGIS, names the generic queue to which you can send your ANSI print jobs.

❷ Parameter **p2** names two execution queues, LN03R_TTB4 and LN03R_TTB7, to which the generic queue sends ReGIS print jobs for executing.

❸ Parameter **p3**, "data_type=regis", provides a PRINT/PARAMETERS default value for the generic queue. CPS$GENERIC_QUEUE.COM creates the following queue logical name:

```
$ DEFINE/SYS/EXEC/NOLOG LPS$ln03r_ansi_PARAMETER "data_type=regis"
```

For other /PARAMETERS qualifiers for **p3**, refer to Section 8.2 in the *VAX/VMS Management/User's Guide: ScriptPrinters*.

See Appendix B for a sample printer startup command file.

5.3 Changing the ScriptPrinter Communication Speed

The next three sections discuss the default communication settings and explain how to change them for the LN03R ScriptPrinter. These sections do **not** apply to the LN03 Image printer.

5.3.1 Default Communication Settings

The settings of the two switch packs, SP1 (left) and SP2 (right), on the back of the printer determine the communication mode. Table 5–3 lists the expected settings for the software installation of the LN03R ScriptPrinter.

Table 5–3: Communication Switch Default Settings

Switch	Setting	Switch	Setting
SP1–1	Off	SP2–1	Off
SP1–2	On	SP2–2	Off
SP1–3	Off	SP2–3	Off
SP1–4	On	SP2–4	Off
SP1–5	Off	SP2–5	Off
SP1–6	Off	SP2–6	Off

These settings correspond to 9600 baud, XON/OFF flow control enabled, 8 bits, and no parity.

Press the top of the switch for on or the bottom for off. Refer to the *LN03R ScriptPrinter Operator Guide* for additional information about setting the communication DIP switches.

Once the ScriptPrinter is installed, you can determine its communication setting by pressing the self-test button on the back of the printer and reading the power-up summary sheet.

5.3.2 Baud Rate Limitations

When choosing a baud rate other than the default of 9600 baud, consider the following limitations:

- VMS drivers do not support baud rates of 3600 and 7200 baud.
- DMZ32 serial interfaces, Revision E or less, require a speed of 4800 baud or less.
- The DECserver 100 supports up to 9600 baud
- The DECserver 200 supports up to 19,200 baud
- The DECserver 500 supports up to 9600 baud

If you selected an improper speed, the ScriptPrinter may lose data or may not process jobs. If you exceed the recommended baud rate, you may see DATAOVERUN messages. If you get this message, lower the baud rate.

5.3.3 Changing the Default Settings

To run your LN03R ScriptPrinter at a different communication speed than the default rate of 9600 baud, proceed as follows:

1. Stop the execution queue that drives the printer.

   ```
   $ STOP/QUEUE/NEXT  execution-queue-name
   ```

2. Turn off the power to the printer.
3. Set the communication DIP switches located on the back of the printer unit to the appropriate baud rate. Refer to the *LN03R ScriptPrinter Operator Guide* for information about setting the communication DIP switches for your printer.
4. Edit the execution queue definition for each printer configured in the printer startup file SYS$STARTUP:CPS$STARTUP.COM. Parameter **p6** is reserved for communication speed. Since a separate definition exists for each printer on the host, you must modify each parameter **p6** to reflect the baud rate for that particular printer.
5. Turn on power to the printers. Wait for all printers to eject the power-up test page.
6. Invoke CPS$STARTUP by issuing the following DCL command:

   ```
   $ @SYS$STARTUP:CPS$STARTUP
   ```

A baud rate mismatch between the host serial line and the printer will result in an erratic print job and/or print queue behavior. This behavior may include random text returned in LPS–S–USERDATA messages, a large number of DATASET HANGUP messages, and/or the stopping of print execution queues.

NOTE

When operating with a DECserver terminal server on a local area Ethernet, you must change the input and output speed of the port on the server to which the printer is connected. See Section 2.10.2 for how to change port characteristics.

5.4 Redefining Default Qualifiers

Executing the printer startup command procedure creates printer queues with the following qualifiers:

- /SEPARATE=(BURST,TRAILER,NORESET)
- /DEFAULT=(NOFEED)
- /FORM=CPS$DEFAULT

You can redefine these qualifiers by editing the ScriptPrinter startup command file, CPS$STARTUP.COM. Include the qualifier(s) you require to override a default qualifier or in addition to a default qualifier in parameter **p5** of the execution queue definition (see Example 5–1). If you include more than one qualifier, enclose the values in double open and close quotation marks ("*values*").

5.5 Changing Default Parameters

The print symbiont initially defaults the following three parameters to the printer values shown:

- DATA_TYPE = ANSI
- PAGE_SIZE = A or A4, depending on the setting of the switch on the back of the printer at power-up
- SHEET_SIZE = A or A4, depending on the setting of the switch on the back of the printer at power-up

To associate /PARAMETERS with a ScriptPrinter or LN03 Image print queue, add your values to the following parameters in the SYS$STARTUP:CPS$STARTUP.COM file:

- **p3** in the generic queue definition
- **p4** in the execution queue definition

Example

You can use generic queues to associate a set of common PRINT/PARAMETER default values for a specific print queue. For example, you want to set up a generic queue named REGIS_TTB4 for ReGIS data for printer LN03R_TTB4. You also want to associate a layup definition file with each print job on the queue. To do this, you add the following to the generic queue definition in SYS$STARTUP:CPS$STARTUP.COM:

```
$!
$ @sys$startup:cps$generic_queue -
    REGIS_TTB4 -                ! P1 - generic queue name
    LN03R_TTB4 -                ! P2 - execution queue name
    "data_type=regis,layup_definition=lps$singleholes"
                                ! P3 - default queue parameters
$!
```

CPS$GENERIC_QUEUE.COM creates the following logical name:

```
$ DEFINE/SYS/EXEC/NOLOG LPS$regis_ttb4_PARAMETER -
  "data_type=regis,layup_definition=lps$singleholes"
```

5.6 Defining a Library Search List

If you have ANSI setup modules or customized POSTSCRIPT setup modules in your own libraries, you need to use a library search list. Set up a library search order for the libraries based on the data syntax of your print jobs and in the order you want the software to look for your modules. Define the device control library search list in CPS$STARTUP.COM with this command:

```
$ DEFINE/SYSTEM/EXEC/NOLOG logical-name search-list
```

where:

logical-name is the name that you assign to the search list. Use this logical name in the definition for the execution queue in this same file (see parameter **p3** in Table 5–1).

search-list is the list of libraries to be searched. For each library that includes the /DATA_TYPE qualifier, enclose the library name and the qualifier in quotation marks. If you do not use the DATA_TYPE qualifier, you do not need to enclose the library name in quotation marks. The default data type for a library is POSTSCRIPT.

Example

The following example defines my_lib as the library logical name. Three libraries contain POSTSCRIPT modules, the standard device control library CPS$DEVCTL, psl, and ps2. One library, ansil, contains ANSI setup modules. The following command sets up the library search order: cps$devctl, psl, ansil, ps2. Always include the printer standard device control library first in the list.

```
$ DEFINE/SYS/EXEC/NOLOG my_lib cps$devctl,"psl/data_type=post",-
  "ansil/data_type=ansi",ps2
```

See Appendix B for a sample startup command file that includes defining a library search list.

For more information on defining setup modules and creating device control libraries, refer to the *VAX/VMS Management/User's Guide: ScriptPrinters*.

5.7 LPS$LAYUP Logical Name

During installation, the procedure looks for a definition of LPS$LAYUP in the system logical name table and for executive_mode access. The procedure does not recognize other LPS$LAYUP definitions. If the procedure does not find a definition, you can select SYS$SYSROOT.[SYSHLP.EXAMPLES.CPS] or provide a definition of your own.

If you provide a logical name definition for LPS$LAYUP during the installation procedure, you must create the necessary disk directories and set up the necessary protection for those directories.

See the *VAX/VMS Management/User's Guide: ScriptPrinters* for information on layup definition files.

5.8 Additional Requirements for VAXclusters

If your system is part of a VAXcluster, follow these postinstallation requirements.

The CPS$STARTUP.COM file, after renaming and customizing, must be executed on the other nodes in the cluster. When the installation procedure has completed on your node, a system manager or the cluster manager should execute the following command at every other node in the cluster:

```
$ @SYS$SYSROOT:[SYS$STARTUP]CPS$STARTUP.COM
```

Digital recommends that you use the SYSMAN utility to accomplish this.

Also include the command in the required cluster startup command file(s) so that CPS$STARTUP.COM is run on each node in the cluster.

If the printer is used on a LAT, the cluster manager should execute the following command at every node in the cluster that runs the symbiont:

```
$ @SYS$COMMON:[SYSMGR]LTLOAD.COM
```

5.9 Setting the Printer Timeout

Setting the printer timeout value applies only to the ScriptPrinter. This section does **not** apply to the LN03 Image printer.

The ScriptPrinter will timeout a print job if it does not receive data for a period of 40 seconds. This value may be changed with the SETTIMEOUTS operator. A file has been provided in the installation kit and is left in SYS$MANAGER:, which can be used to change the timeout value to zero (0), which means no timeout. The file name is LPS$SET_TIMEOUT.PS.

NOTE

Digital recommends that you change the timeout value to zero for printing on the ScriptPrinter.

In order to change the timeout (including setting it back to the original value) you must specify the printer password and exit the server loop of the printer. The default password is the string "LN03R" and is specified in LPS$SET_TIMEOUT.PS.

```
serverdict begin (LN03R) exitserver
```

Change the POSTSCRIPT string "(LN03R)" to the correct password for your printer. Then submit the file for printing as a POSTSCRIPT job:

```
$ PRINT/QUEUE=queue-name/PARAMETER=(DATA_TYPE=PostScript) -
lps$set_timeout.ps
```

A page will be printed to indicate that the timeout was successfully changed.

The reason it may be necessary to change the timeout is that if the ANSI translator is loading an LN03 font, it might take more than 40 seconds. In this case, the ScriptPrinter will abort the job in progress. Setting the timeout to zero (0) gives an infinite timeout value.

NOTE

For improved performance of ANSI print jobs, you should not change the default password (LN03R) for your printer.

5.10 Setting the Printer Name

Setting the printer name applies only to the ScriptPrinter. This section does **not** apply to the LN03 Image printer.

In some cases, error messages reference a **printer name**. You can provide your ScriptPrinter with a unique name, which is stored in non-volatile memory, to be inserted into these error messages. To do this, edit the file LPS$SET_PRINTER_NAME.PS found in SYS$MANAGER to include the desired name and password. (The default password is the string "LN03R".) Select a printer name of 31 characters or less. Then submit the file for printing as a POSTSCRIPT job:

```
$ PRINT/QUEUE=queue-name/PARAMETER=(DATA_TYPE=PostScript) -
lps$set_printer_name.ps
```

Without the printer name set, a message contains the default printer name **LN03R** and reads:

```
%CPS-I-TRAYSUBST, Output will be delivered to the only tray on LN03R
```

With the printer name set, the message contains the name you selected for your printer, **David's printer** for example, and reads:

```
%CPS-I-TRAYSUBST, Output will be delivered to the only tray on
David's printer
```

Edit and send a copy of LPS$SET_PRINTER_NAME.PS to each printer requiring a unique name.

Select a unique name that identifies the printer rather than the queue, when selecting a printer name for a multihost ScriptPrinter.

To set the printer name, the ScriptPrinter needs to receive the file, LPS$SET_PRINTER_NAME.PS, once.

5.11 Eliminating Login Dialog on ScriptPrinters

This section applies only to the LN03R ScriptPrinter. It does **not** apply to the LN03 Image printer.

The ScriptPrinter transmits unsolicited data to the host system when power-up initialization occurs. VMS normally interprets unsolicited data from a terminal device as a login request. The ScriptPrinter software startup file sets the SECURE_SERVER terminal characteristic for all ScriptPrinter terminal devices on the host system. SECURE_SERVER prevents the VMS host and the ScriptPrinter from engaging in a potentially endless login dialog. To eliminate login dialog, set terminal characteristics for terminal devices by using the following in this order:

1. SYSGEN AUTOCONFIGURE
2. SYSTARTUP_V5
3. CPS$EXECUTION_QUEUE.COM

AUTOCONFIGURE uses SYSGEN parameters to set default terminal characteristics for all terminal devices on the system. Your system will not encounter the login dialog problem if SECURE_SERVER is set at this time. The SYSGEN parameter that accomplishes this is TTY_DEFCHAR2. Refer to the *VMS System Generation Utility Manual* for information on setting SYSGEN parameters.

The system startup procedure may also set terminal characteristics. Since this command file executes prior to the ScriptPrinter startup file, your system will be less vulnerable to the login dialog problem if SECURE_SERVER is set for ScriptPrinter terminal devices within the SYSTARTUP_V5 file.

CPS$EXECUTION_QUEUE.COM (the ScriptPrinter execution queue command file) sets the SECURE_SERVER terminal characteristic for ScriptPrinter terminal devices by default. This file is provided in the software kit.

If your ScriptPrinter is configured on a DECserver in a local area Ethernet, set the DECserver port and the terminal server characteristics for the ScriptPrinter to minimize login dialog. Refer to Section 2.10.2 for DECserver port characteristics.

Chapter 6

System Messages

This chapter contains the system messages issued by the ScriptPrinter host installation procedure. Refer to the *VMS Install Utility Manual* for explanations of messages issued by VMSINSTAL. Refer to the *VMS System Messages and Recovery Procedures* for explanations of messages issued by the Authorize Utility.

6.1 Message Format

System messages issued during the installation procedure have the following format:

```
%LPS-s-ident, text
-LPS-s-ident, text

%CPS-s-ident, text
-CPS-s-ident, text
```

where:

%	is the prefix to all primary messages.
–	is the prefix to all continuation messages.
s	is the severity level of the message.
ident	is an abbreviation of the message text.
text	is the expanded text of the message.

6.2 Severity Level

The severity levels of ScriptPrinter system messages are as follows:

Code	Meaning
S	Success—successful completion of the request.
I	Informational—may or may not require user action.
W	Warning—request may not have completed and may require user action.
E	Error—system encountered an error that may be recoverable.
F	Fatal—system encountered a fatal error and cannot continue processing the request.

6.3 Message Descriptions

The following message descriptions are alphabetized by the *ident* portion of the messages code. The message prefix, source designation, and severity code are not shown.

CLEANING_UP, Restoring system and network, DO NOT USE CTRL/Y.

Explanation: System parameters that were changed up to the point of failure are being restored to their original values.

User Action: Do not use CTRL/Y; it may prevent the complete restoration of system parameters.

INVRES, Invalid response, please type YES or NO.

Explanation: The only responses accepted for this prompt are YES and NO. A response other than one of these was entered.

User Action: Enter YES or NO.

LAYUPDEF, LPS$LAYUP is already defined

–LAYUPDEF, This installation will use its value

Explanation: The installation uses the existing logical name for LPS$LAYUP.

User Action: None; informational message only.

NO_QUEMAN, This product requires the queue management facility to install.

Explanation: The queue manager could not be found. The installation procedure is aborted.

User Action: Start the queue manager. For information refer to *Introduction to VMS System Management* or *Guide to Maintaining a VMS System*.

NOQUEMGR, System queue manager is not running

–NOQUEMGR, IVP will NOT be run. Installation continuing...

Explanation: The queue manager is not running on your system. The installation will continue, but the IVP cannot run.

User Action: Start the queue manager and then run the installation verification procedure (IVP). Issue the following command to run the IVP after the installation:
$ @SYS$COMMON:[SYSTEST]CPS$IVP.COM.

NO_SPACE, This product requires *decimal-number* blocks of disk space to install.

Explanation: There are not enough free disk blocks to install this software. The installation procedure is aborted.

User Action: Ensure that you have at least the specified number of free disk blocks and restart the installation.

RELMOVE, The product's release notes have been successfully moved to SYS$HELP.

Explanation: The release notes for this software have been moved into SYS$HELP.

User Action: None; informational message only.

TRNNOTREP, The *translator-name* translator in the kit was NOT installed

Explanation: The current translator (ANSI, ReGIS, or Tektronix 4010/4014) is a newer version than the version in the kit. Therefore, the current version of the translator is not replaced.

User Action: None; informational message only.

Appendix A
Sample Installation Session

This appendix shows a sample installation of the VAX ScriptPrinter Software, Version 2.1.

Example A–1: Sample Installation

```
@sys$update:vsminstal cps021 kits$:

       VAX/VMS Software Product Installation Procedure V5.1

It is 21-MAR-1989 at 11:24

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

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

%VMSINSTAL-W-ACTIVE, The following processes are still active:
        Gazelle
        Hyacinth
        Jaguar

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

The following products will be processed:

   CPS V2.1

        Beginning installation of CPS V2.1 at 11:25

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

%VMSINSTAL-I-RELMOVED , The product's release notes have been
successfully moved to SYS$HELP.

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

Example A–1 Cont'd. on next page

Example A–1 (Cont.): Sample Installation

```
%CPS-I-LAYUPDEF, LPS$LayUp is already defined
-CPS-I-LAYUPDEF, This installation will use its value

%VMSINSTAL-I-SYSDIR, This product creates system disk directory
VMI$ROOT:[SYSTEST.CPS].
%CREATE-I-EXISTS, VMI$ROOT:[SYSTEST.CPS] already exists

%VMSINSTAL-I-SYSDIR, This product creates system disk directory
VMI$ROOT:[SYSHLP.EXAMPLES.CPS].
%CREATE-I-EXISTS, VMI$ROOT:[SYSHLP.EXAMPLES.CPS] already exists

%CPS-I-NOQUES, No futher questions will be asked
%VMSINSTAL-I-RESTORE, Restoring product saveset B ...
%CPS-I-TRNNOTREP, The ANSI translator in the kit was NOT installed

Software installer:

        Please remember to copy SYS$StartUp:CPS$StartUp.Template to
        SYS$StartUp:CPS$StartUp.Com.  Then edit this file following
        the instructions to create your queues.  Finally execute
        this file to establish and start the queues.  Also remember
        to edit SYS$Manager:SyStartUp_V5.Com to establish your queues
        at system startup time.  If you use LAT devices, this file
        should be executed after the LAT devices are created.

%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target
directories...

%CPS-I-IVP, Beginning IVP...
Job CPS$IVP_POST (queue CPS$IVP_TEST, entry 359) started on
                                                    CPS$IVP_TEST
Job CPS$IVP_ANSI (queue CPS$IVP_TEST, entry 360) started on
                                                    CPS$IVP_TEST
Job CPS$IVP_REGIS (queue CPS$IVP_TEST, entry 361) started on
                                                    CPS$IVP_TEST
Job CPS$IVP_TEK4014 (queue CPS$IVP_TEST, entry 362) started on
                                                    CPS$IVP_TEST

 IVP successful for VAX ScriptPrinter Software V2.1
 Installation of CPS V2.1 completed at 12:03

 VMSINSTAL procedure done at 12:36
```

Appendix B
Sample Startup Command File

This appendix includes a sample printer startup command file:

Example B–1: Sample Printer Startup Command File

```
$! CPS$Startup.Com is the startup file that is executed to startup CPS.
$! It is template driven to allow you to fully specify the queue
$! structure yet at the same time allow Digital to update the software
$! without disturbing your customizations.
$!
$! Version:  V2.1
$!
$! The first part of the file is mandatory and MUST be executed FIRST.
$! The second part is for your customizations.
$
$! Protect against environment running in.
$ set symbol /scope=(nolocal, noglobal)
$
$ @sys$startup:cps$required
$ if not $status then exit
$
```

Example B–1 Cont'd. on next page

Example B–1 (Cont.): Sample Printer Startup Command File

```
$!+----------
$! Define your device control library logical name here.  The first
$! "define/system" (commented out) is an example of how to define a
$! search list of device control libraries.  Note that CPS$devctl
$! should always be first in the list.
$!
$! define /system /exec /nolog cps_lib cps$devctl, "ansi/data=ansi", -
$!      "ps/data=post"
$!
$
$ define /system /exec /nolog cps_lib cps$devctl
$
$!-----------
$
$!+----------
$! If a printer is connected via a DECserver (LAT), you may want to
$! consider defining the application port here instead of in
$! Sys$manager:ltload.com to keep everything in one place.  Here is
$! an example of a port definition:
$!
$! run sys$system:latcp
$! crea port lta1 /application /nolog
$! set port lta1 /node=YOUR_DECSERVER_NAME_HERE /port=port_3 -
$!  /application /queue
$!-----------
```

Example B–1 Cont'd. on next page

Example B–1 (Cont.): Sample Printer Startup Command File

```
$
$!+----------
$! Enter your queue structure below this line
$!----------
$
$! Here is a sample queue structure: One execution queue on device
$! TXA%%:, and two generic queues (one ANSI, one PostScript).  Modify
$! these commands and add additional ones to reflect your desired
$! queue structure.
$!
$ on error then continue
$ @sys$startup:cps$execution_queue -
       cps -                          ! P1 - Execution queue name
       foo::txa0 -                    ! P2 - Device name
       cps_lib -                      ! P3 - Logical name for library (ies)
       "" -                           ! P4 - Default queue parameters
       "" -                           ! P5 - Default queue qualifiers
       "" -                           ! P6 - Communication speed
       ""                             ! P7 - Device characteristics
$
$ on error then continue
$ @sys$startup:cps$generic_queue - ! ANSI queue
       cps_ansi -                     ! P1 - Generic queue name
       cps -                          ! P2 - Execution queue name(s)
       "data=ansi"                    ! P3 - Default queue parameters
$
$ on error then continue
$ @sys$startup:cps$generic_queue - ! PostScript queue
       cps_ps -                       ! P1 - Generic queue name
       cps -                          ! P2 - Execution queue name(s)
       "data=post"                    ! P3 - Default queue parameters
$
$ exit
$! Parameter definition and example for execution and generic queues.
$!
$! CPS$execution_queue.com:
$!
$! P1 is the queue name.
$!
$! P2 is the device name for /On.  For example:
$!     txa0                ! For a ScriptPrinter on a serial line
$!     lta1                ! For a ScriptPrinter on a DECserver port
$!     lda1                ! For the LN03 Image Printer
$!     foo::txa4           ! Txa4 on node foo - for clusters.
$!
$! P3 is the logical name for the /library qualifier.  If you want to
$!    have a library list to pick up your custom library, you must
$!    define a logical name that defines the libraries.  See cps_lib
```

Example B–1 Cont'd. on next page

Example B–1 (Cont.): Sample Printer Startup Command File

```
$!    in this file for an example.
$!
$! P4 is used to define the queue defaults for /Parameter.  For
$!    example, a queue might be default to make 2 copies with room
$!    to punch holes. Here is what would be supplied to do make that
$!     the queue default:  "sheet_count=2, layup_def=lps$holes"
$!
$! P5 is used to override, or specify other qualifiers to init/que.
$!    Here are some examples:
$!     /wsquota=10000           ! Needed for the LN03 Image Printer
$!     "/form=my_form /schedule=size"
$!
$! P6 is used to specify the device speed for a serial line.  Note
$!    that it has no effect for LAT devices.  The default is 9600.
$!    If you have a DMZ32, you should set the speed to 4800.
$!
$! P7 is used to specify other device characteristics.  For example,
$!    if you want the device spooled, you would say:
$!     /spooled=(my_queue, my_disk)
$!
$! P8 is reserved for Digital.
$!
$! CPS$Generic_queue.com:
$!
$! P1 is the queue name.
$!
$! P2 is list of execution queues for /GENERIC.  For example:
$!     "queue1, queue2"
$!
$! P3 is used to define the queue defaults for /Parameter.  For
$!    example, a queue might be default to make 2 copies with room
$!    to punch holes.  Here is what would be supplied to do make that
$!    the queue default:  "sheet_count=2, layup_def=lps$holes"
$!
$! P4 is used to override, or specify other qualifiers to init/que.
$!
$! P5 - P8 are reserved for Digital.
```

Appendix C

Installation Verification Output

The Installation Verification Procedure (IVP) for the VAX ScriptPrinter Software, Version, 2.1, does **not** print on paper. However, IVP files exist in SYS$COMMON:[SYSTEST.CPS]. You can print these files on your ScriptPrinter or LN03 Image printer to verify correct queue configuration and printer operation. For instructions on how to print these files, see Step 2 in Section E.1.2.

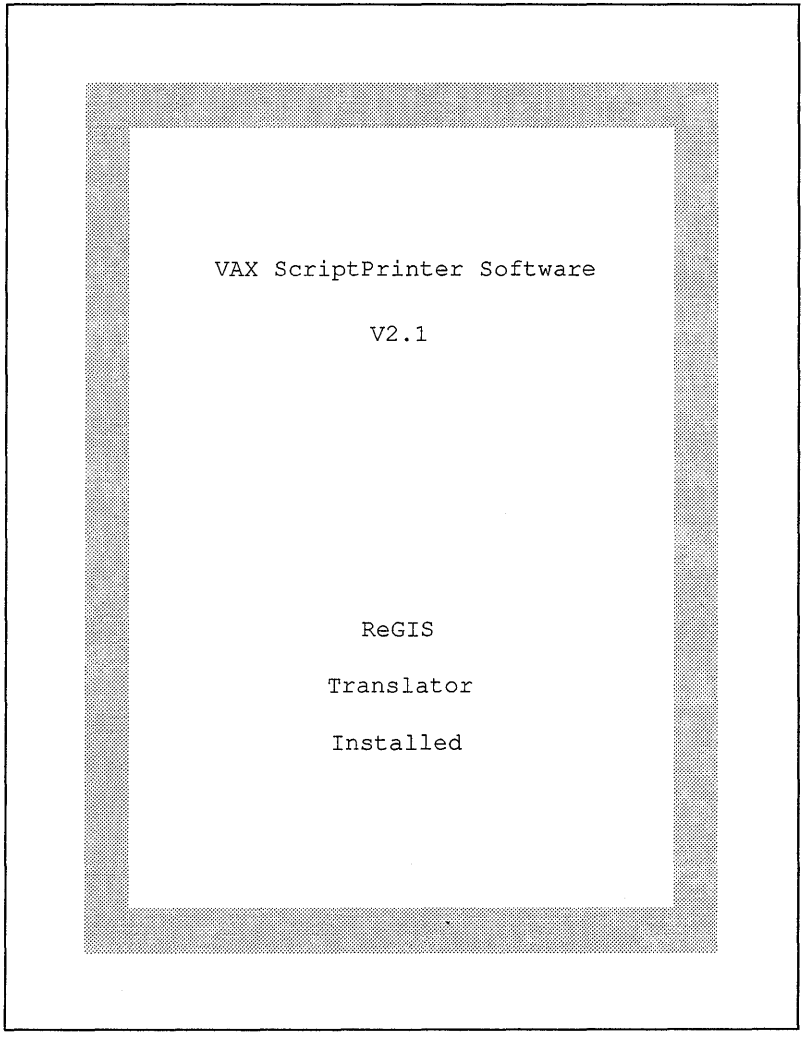
The following pages are copies of the LN03R ScriptPrinter output of the installation verification procedure (IVP). Check your ScriptPrinter output carefully against these copies. The flag and trailer pages are not included as they will vary according to the user and system performing the installation. Resolve any differences in the data output with your Digital Software Service Representative.

C.1 Printed IVP Output Pages

Figure C–1: Printed IVP Output—ANSI Data Page

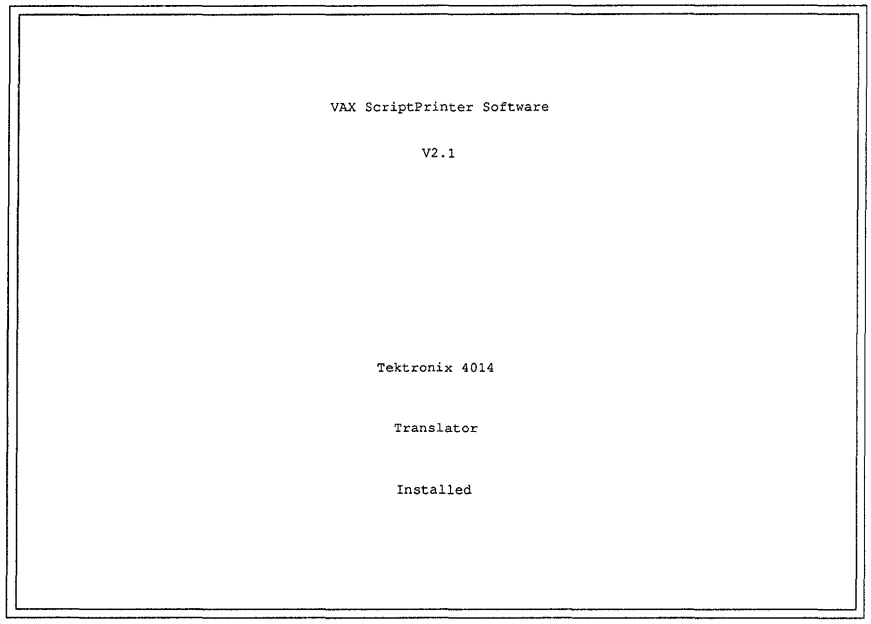
```
                    VAX ScriptPrinter Software

                                V2.0

The following files were provided as a result of this installation:

File name:                      Directory
-------------------------------------------------------------------------
CPS$SMB.EXE                     SYS$SYSTEM
CPS$MSG.EXE                     SYS$MESSAGE
CPS$DEVCTL.TLB                  SYS$LIBRARY

CPS$EXECUTION.COM               SYS$STARTUP
CPS$GENERIC_QUEUE.COM           SYS$STARTUP
CPS$REQUIRED.COM                SYS$STARTUP
CPS$STARTUP.TEMPLATE            SYS$STARTUP

TRN$ANSI_PS.EXE                 SYS$SHARE
TRN$DDIF_PS.EXE                 SYS$SHARE
TRN$REGIS_PS.EXE                SYS$SHARE
TRN$TEK4014_PS.EXE              SYS$SHARE

CPS021.RELEASE_NOTES            SYS$HELP

CPS$IVP.COM                     SYS$COMMON:[SYSTEST]
CPS$IVP_ANSI.DAT                SYS$COMMON:[SYSTEST.CPS]
CPS$IVP_REGIS.DAT               SYS$COMMON:[SYSTEST.CPS]
CPS$IVP_TEK4014.DAT             SYS$COMMON:[SYSTEST.CPS]
CPS$IVP_POST.DAT                SYS$COMMON:[SYSTEST.CPS]
LPS$IVP_LAYUPDEF.DAT            SYS$COMMON:[SYSTEST.CPS]

LPS$SINGLEHOLES.LUP             SYS$COMMON:[SYSHLP.EXAMPLES.CPS]**
LPS$DOUBLEHOLES.LUP             SYS$COMMON:[SYSHLP.EXAMPLES.CPS]**
LPS$HOLES.LUP                   SYS$COMMON:[SYSHLP.EXAMPLES.CPS]**
LPS$NUP.LUP                     SYS$COMMON:[SYSHLP.EXAMPLES.CPS]**

LPS$SET_TIMEOUT.PS              SYS$MANAGER
LPS$SET_PRINTER_NAME.PS         SYS$MANAGER
-------------------------------------------------------------------------

The system help library was also modified as a result of this installation.

** - Note that the default location is used. In the installation, the
     user may choose a different definition of the logical LPS$LAYUP.

                                                                MLO-002477
```

Figure C–2: Printed IVP Output—ReGIS Data Page



MLO-002478

Figure C–3: Printed IVP Output—TEK4014 Data Page



MLO-002479

Figure C–4: Printed IVP Output—POSTSCRIPT Data Page

MLO-001367

Appendix D
New Files and Libraries

During the installation of the ScriptPrinter host software, new files and libraries are added to the system. This appendix lists those files.

D.1 New Files

Table D–1 lists the files added to the specified directories during the installation procedure:

Table D–1: New Files

File Name	Directory
CPS$EXECUTION_QUEUE.COM	SYS$STARTUP
CPS$GENERIC_QUEUE.COM	SYS$STARTUP
CPS$REQUIRED.COM	SYS$STARTUP
CPS$STARTUP.TEMPLATE	SYS$STARTUP
CPS$SMB.EXE	SYS$SYSTEM
CPS$MSG.EXE	SYS$MESSAGE
CPS$DEVCTL.TLB	SYS$LIBRARY
CPS021.RELEASE_NOTES	SYS$HELP
LPS$SET_TIMEOUT.PS	SYS$MANAGER
LPS$SET_PRINTER_NAME.PS	SYS$MANAGER
TRN$ANSI_PS.EXE	SYS$SHARE
TRN$DDIF_PS.EXE	SYS$SHARE

Table D–1 (Cont.): New Files

File Name	Directory
TRN$REGIS_PS.EXE	SYS$SHARE
TRN$TEK4014_PS.EXE	SYS$SHARE
CPS$IVP.COM	SYS$COMMON:[SYSTEST]
CPS$IVP_ANSI.DAT	SYS$COMMON:[SYSTEST.CPS]
CPS$IVP_REGIS.DAT	SYS$COMMON:[SYSTEST.CPS]
CPS$IVP_TEK4014.DAT	SYS$COMMON:[SYSTEST.CPS]
CPS$IVP_POST.DAT	SYS$COMMON:[SYSTEST.CPS]
CPS$IVP_LAYUPDEF.DAT	SYS$COMMON:[SYSTEST.CPS]
LPS$SINGLEHOLES.LUP	SYS$COMMON:[SYSHLP.EXAMPLES.CPS]
LPS$DOUBLEHOLES.LUP	SYS$COMMON:[SYSHLP.EXAMPLES.CPS]
LPS$NUP.LUP	SYS$COMMON:[SYSHLP.EXAMPLES.CPS]
LPS$HOLES.LUP	SYS$COMMON:[SYSHLP.EXAMPLES.CPS]

D.2 Device Control Library

The device control library supplied in the VAX ScriptPrinter Software Distribution Kit contains POSTSCRIPT modules used to control the operation of the ScriptPrinter. This library is located in the SYS$COMMON:[SYSLIB] directory defined as SYS$LIBRARY. The library contains the following modules:

Modules in the Device Control Library CPS$DEVCTL.TLB	
LPS$DECMCSENCODING	LPS$$LN03_SETINPUTTRAY
LPS$ERRORHANDLER	LPS$$LN03_SETOUTPUTTRAY
LPS$ISOLATIN1ENCODING	LPS$$LOADDICT
LPS$$CHECKPROLOGUE	LPS$$SETNUMBERUP
LPS$$EXITSERVERLOOP	LPS$$SETPAGELIMIT
LPS$$FLUSHPAGES	LPS$$SETPAGEORIENTATION
LPS$$GETSHEETCOUNT	LPS$$SETPAGESIZE

Modules in the Device Control Library CPS$DEVCTL.TLB	
LPS$$LN03Q_INITPSDEVICE	LPS$$SETSHEETCOUNT
LPS$$LN03Q_LOADSERVER	LPS$$SETSHEETSIZE
LPS$$LN03Q_SETPAPERSIZE	LPS$$SETSIDES
LPS$$LN03R_INITPSDEVICE	LPS$$SYSTEMPAGES
LPS$$LN03_SETCONTEXT	LPS$$VMSTATUS

Appendix E

Troubleshooting Procedures

The following troubleshooting procedures are provided to diagnose error conditions at the ScriptPrinter or the LN03 Image printer host system.

E.1 The Printer Is Not Printing Jobs

This section discusses steps to take when your printer does not print or when your printer has stopped printing.

E.1.1 Newly Installed Printer

In Section E.1.1, troubleshooting steps 1 through 8 apply to the LN03R ScriptPrinter. Step 1 and steps 4 through 7 apply to the LN03 Image printer. If the ScriptPrinter or the LN03 Image printer is not printing, do this first:

STEP 1: Check OPCOM messages

Look at the operations command procedure (OPCOM) printer messages. If your terminal is not running OPCOM, enable it (REPLY/ENABLE), start the symbiont again, and then read the printer messages. This requires OPER privileges.

Refer to the messages chapter in the *VAX/VMS Management/User's Guide: ScriptPrinters* for an explanation and recovery procedures.

STEP 2: Press the test button for a summary sheet

If you have an LN03R ScriptPrinter, press the test button, the white button with a T in a circle on the back panel of the printer. If you have an LN03 Image printer, go to STEP 4: Check the printer execution queue characteristics.

If pressing the test button produces a summary sheet, go on to STEP 3: Check the printer hardware and software configurations. If no summary sheet prints, do the following:

1. Check the graphic indicators on the front panel.
   - Is the power on?
   - Is the printer online?
   - What is the status of the print engine?
2. Recheck the hardware installation procedure. (Refer to the *LN03R ScriptPrinter Installation Guide.*)
3. Call your Field Service Representative.

STEP 3: Check the printer hardware and software configurations

STEP 3 applies to the LN03R ScriptPrinter. It does **not** apply to the LN03 Image printer.

Default configuration settings on the printer and in the software associated with the printer must be the same. To check the agreement do the following:

1. Check the printed summary sheet to verify the printer configuration switch settings:
   - Paper size: letter (U.S.) or A4 (Europe)
   - Communication: 9600 baud
   - 8-bits + no parity
   - XON/XOFF protocol

   See Table 5–3 for the default configuration switch settings. Power cycle the printer so that the switches take effect. Refer to the *LN03R ScriptPrinter Operator Guide* for information on how to change these settings.

NOTE

The DMZ32, Revision E1 or less, printer interface runs only at 4800 baud and the DECserver 200 can run at 19,200 baud.

2. Check the terminal device characteristics, by issuing this command on the node of the device:

   ```
   $ SHOW TERMINAL device-name[:]
   ```

   The variable *device_name* is the device name in the printer startup file in parameter **p2** of the execution queue definition. The printer startup file CPS$STARTUP.COM is located in SYS$STARTUP.

   Check for the following characteristics:

   - Eightbit
   - Parity: None
   - Input: 9600
   - Output: 9600

   The summary sheet and the terminal settings should be the same. Refer to the SET TERMINAL command in the *VMS DCL Dictionary* for information on changing the system's interpretation of the device characteristics.

   If your printer interface runs at a different speed, make sure you set the configuration switch settings and the terminal device characteristics the same.

3. Check the baud rate setting in the printer startup command file. If you did not enter a baud rate in parameter **p6** of the execution queue definition, the startup procedure sets the printer speed at 9600 baud. For information on how to change default settings, see Section 5.3.3.

4. If your ScriptPrinter uses a DECserver on a local area Ethernet, check the DECserver port and server characteristics to verify that they also match. Changing DECserver characteristics requires privileges. Refer to the user's manual for your particular DECserver for information on how to check and change DECserver port and server data transmission characteristics. For DECserver port characteristics required when you use a port dedicated to printing on a ScriptPrinter, see Section 2.10.2.

If the settings agree and the job still does not print, go on to the next step.

STEP 4: Check the printer execution queue characteristics

STEP 4 applies to both the LN03R ScriptPrinter and the LN03 Image printer.

Make sure that you have edited the CPS$STARTUP.COM to reflect your print queue needs and that the changes are appropriate for your printer. To check the printer execution queue characteristics, perform the following instruction, inserting the name of the printer execution queue:

```
$ SHOW QUEUE/FULL exec-queue-name
```

For example, the characteristics for the printer execution queue TXA1_ LN03R on host EDEN are as follows:

```
$ SHOW QUEUE/FULL TXA1_LN03R

Printer queue TXA1_LN03R, on EDEN::TXA1:
 /BASE_PRIORITY=4 /FORM=CPS$DEFAULT /LIBRARY=CPS$DEVCTL /OWNER=[SYSTEM]
 /PROCESSOR=CPS$SMB /PROTECTION=(S:E,O:D,G:R,W:W) /SCHEDULE=(NOSIZE)
 /SEPARATE=(BURST,TRAILER)
$
```

Make sure that /PROCESSOR=CPS$SMB. Check that /FORM is as above or reflects changes made to the CPS$STARTUP.COM and is suitable for the operation of your printer. Make sure that the /LIBRARY qualifier is the same as parameter **p3** in CPS$STARTUP.COM. If the queue characteristics do not match those in CPS$STARTUP.COM, stop the printer execution queues.

Next execute the CPS$STARTUP.COM file:

```
$ @SYS$STARTUP:CPS$STARTUP
```

Recheck the execution queue characteristics. If the characteristics are correct and the job still does not print, go to the next step.

STEP 5: Check for required files

STEP 5 applies to both the LN03R ScriptPrinter and the LN03 Image printer.

Execute the following directory commands and verify the existence of the specified files. If any of these files are missing, reinstall the appropriate software.

VAX ScriptPrinter Software

If any of these files are missing, reinstall the VAX ScriptPrinter Software.

```
$ DIR SYS$SYSTEM:CPS$SMB.EXE

Directory SYS$COMMON:[SYSEXE]

CPS$SMB.EXE;

Total of 1 file.

$ DIR SYS$LIBRARY:CPS$DEVCTL.TLB

Directory SYS$COMMON:[SYSLIB]

CPS$DEVCTL.TLB;

Total of 1 file.

$ DIR SYS$STARTUP:CPS$*.*

Directory SYS$COMMON:[SYS$STARTUP]

CPS$EXECUTION_QUEUE.COM;     CPS$GENERIC_QUEUE.COM;
CPS$REQUIRED.COM;  CPS$STARTUP.TEMPLATE;

Total of 4 files.

$ DIR SYS$SHARE:TRN$*.*

Directory SYS$COMMON:[SYSLIB]

TRN$ANSI_PS.EXE;  TRN$DDIF_PS.EXE;    TRN$REGIS_PS.EXE;
TRN$TEK4014_PS.EXE;

Total of 4 files.

$ DIR SYS$MESSAGE:CPS$MSG.EXE

Directory SYS$COMMON:[SYSMSG]

CPS$MSG.EXE;

Total of 1 file.
```

VAX LN03 Image Supporting Software

Reinstall the VAX LN03 Image Supporting Software if any of these files are missing.

```
$ DIR SYS$SHARE:LN03IMAGE$LMF.EXE

Directory SYS$COMMON:[SYSLIB]

LN03IMAGE$LMF.EXE;

Total of 1 file.

$ DIR SYS$LOADABLE_IMAGES:LDDRIVER.EXE

Directory SYS$COMMON:[SYS$LDR]

LDDRIVER.EXE;

Total of 1 file.

$ DIR SYS$SHARE:PS$SHR.EXE

Directory SYS$COMMON:[SYSLIB]

PS$SHR.EXE;

Total of 1 file.

$ DIR SYS$LIBRARY:PS$PSVMDATA.DAT

Directory SYS$COMMON:[SYSLIB]

PS$PSVMDATA.DAT;

Total of 1 file.
```

STEP 6: Check queue logical defaulting

STEP 6 applies to both the LN03R ScriptPrinter and the LN03 Image printer.

Check the queue logical names (/PARAMETERS) in CPS$STARTUP.COM in parameter **p4** of the execution queue definition and parameter **p3** of the generic queue definition. These parameters provide values for the LPS$*queue-name*_PARAMETER logical names. For information, see the section on changing default parameters for a queue in the *VAX/VMS Management/User's Guide: ScriptPrinters*.

STEP 7: Check the queue configurations

STEP 7 applies to both the LN03R ScriptPrinter and the LN03 Image printer.

The system manager supplies values in CPS$STARTUP.COM. This startup command procedure does not validate these values, but simply passes them as parameters to the appropriate VMS commands and utilities. Therefore, the VMS commands and utilities detect and report any errors directly. Refer to the *VMS System Messages and Recovery*

Procedures for an explanation of error messages issued by the following DCL commands:

- INITIALIZE/QUEUE
- SET TERMINAL
- SET DEVICE

NOTE

To debug DCL command procedures and record the information in a file, you can use the following commands:

```
$ SET HOST 0/LOG
$ SET VERIFY
```

STEP 8: Check the queues

STEP 8 applies to the ScriptPrinter and does **not** apply to the LN03 Image printer.

Check to see if "Not Available" displays with the execution queue listing when you give the following command:

```
$ SHOW QUEUE/FULL queue-name[:]
```

If "Not Available" displays, the terminal port or the ScriptPrinter may have a problem. "Not Available" displays when the symbiont sends a CTRL C to the ScriptPrinter and the ScriptPrinter does not respond. This action usually resets the printer. The printer should respond with CTRL C back to the symbiont. Until the symbiont receives a CTRL C, "Not Available" will display. Check that the port specified in the startup file is the physical port to which the printer is really connected. Check your cables. "Not Available" may display if you are not using proper cables.

If the correct files are present, and the jobs are still not printing, call your Digital Field Service Representative.

E.1.2 The Printer Has Stopped Printing

When your printer stops printing, follow these steps:

- If your printer fails consistently, follow the steps in Section E.1.1.
- If your printer fails now and then, follow the steps in this section.

STEP 1: Check OPCOM messages

STEP 1 applies to both the LN03R ScriptPrinter and the LN03 Image printer.

Look at the operations command procedure (OPCOM) printer messages. If your terminal does not have OPCOM enabled, enable it (REPLY/ENABLE), start the queue again, and then read the messages. This requires OPER privileges.

Refer to the messages chapter in the *VAX/VMS Management/User's Guide: ScriptPrinters* for an explanation and recovery procedures.

If the OPCOM printer messages do not provide a clue, go on to the next step.

STEP 2: Print the IVP data sheets

STEP 2 applies to both the LN03R ScriptPrinter and the LN03 Image printer.

Print the following installation verification procedure (IVP) files from SYS$COMMON:[SYSTEST.CPS]:

- CPS$IVP_ANSI.DAT
- CPS$IVP_POST.DAT
- CPS$IVP_REGIS.DAT
- CPS$IVP_TEK4014.DAT

Remember to use the appropriate /DATA_TYPE parameter, indicated in the filename following the underscore, for each of the files. For example to print CPS$IVP_REGIS.DAT, use the following PRINT command:

```
$ PRINT/QUEUE=queue-name/PARAMETERS=(DATA_TYPE=REGIS) -
  sys$common:[systest.cps]cps$ivp_regis.dat
```

If the files print, go to STEP 3: Check files for user error. If any of these files do not print, check to see if the translator execution files exist:

```
$ DIR SYS$SHARE:TRN$*.*

Directory SYS$COMMON:[SYSLIB]

TRN$ANSI_PS.EXE;  TRN$DDIF_PS.EXE;   TRN$REGIS_PS.EXE;
TRN$TEK4014_PS.EXE;

Total of 4 files.
```

If the correct files are present, go on to the next step. If any files are missing, reinstall the ScriptPrinter software.

STEP 3: Check files for user error

STEP 3 applies to both the LN03R ScriptPrinter and the LN03 Image printer.

If a particular file fails to print, check the log file for your print job. For an explanation and recovery procedures for the error messages, see the system message chapter of the *VAX/VMS Management/User's Guide: ScriptPrinters*.

If the file is a POSTSCRIPT file, either an error exists in the POSTSCRIPT file or in the application that generated the POSTSCRIPT file. If the application is supplied by Digital, submit a Software Performance Report.

If the file is other than a POSTSCRIPT file, an error exists in the translation process. If the translator is supplied by Digital, submit a Software Performance Report.

E.2 Printing Is Slower Than Expected

This section applies to both the LN03R ScriptPrinter and the LN03 Image printer.

Slower speeds can result from the printing of ANSI jobs in the following instances:

- Complex ANSI jobs from applications
- ANSI translator prologue mismatch

Complex ANSI jobs include those that make use of many down-loaded fonts on a page. These jobs always take longer to print.

A 30-second delay before the printing of ANSI jobs indicates an ANSI prologue mismatch between the ANSI translator and the print job. Power cycle (turn off and on) the printer to cause loading of the appropriate prologue and eliminate the delay.

If your printer is connected to multiple hosts running different versions of ScriptPrinter software (Versions 2.0 and 2.1), power cycling the printer may not eliminate the 30-second delay. Whichever version connects to the printer first, persistently loads its prologue. The other version must load its prologue with every print job. To eliminate

the delay in this case, every host must run the same version of the ScriptPrinter software.

Slower printing on an LN03 Image printer can result from an insufficient working set quota for the symbiont. Check the following:

- The value of the SYSGEN parameter WSMAX is at least 10,000. See Section 4.3 for details on checking and resetting WSMAX.
- The execution queue definition in CPS$STARTUP.COM includes the string "/WSQUOTA=10000" in parameter **p5**. Refer to Table 5–1 for information on parameter values to set up execution queues.

E.3 Data Not Printing Correctly

This section applies to both the LN03R ScriptPrinter and the LN03 Image printer.

If one or more data types are not printing correctly, run the installation verification procedure (IVP) to verify that the data syntax translators are operating properly.

Print the following installation verification procedure (IVP) files from SYS$COMMON:[SYSTEST.CPS]:

- CPS$IVP_ANSI.DAT
- CPS$IVP_POST.DAT
- CPS$IVP_REGIS.DAT
- CPS$IVP_TEK4014.DAT

Remember to use the appropriate /DATA_TYPE parameter for each of the files. If the output matches the IVP data page output in Appendix B, the problem is probably in the input data. If the output does not match the IVP output in Appendix B, submit a Software Performance Report.

E.4 Layup Definition Files Not Found

This version of the VAX ScriptPrinter Software places the following example layup definition files in SYS$SYSDEVICE:[SYSHLP.EXAMPLES.CP

- LPS$HOLES.LUP
- LPS$SINGLEHOLES.LUP

- LPS$DOUBLEHOLES.LUP
- LPS$NUP.LUP

Make sure that the logical layup definition, LPS$LAYUP, points to SYS$SYSDEVICE:[SYSHLP.EXAMPLES.CPS] or the directory that contains the .LUP example files.

E.5 Printer Not Printing in Multihost Environment

Section E.5 applies to the LN03R ScriptPrinter. It does **not** apply to the LN03 Image printer.

A multihost environment allows several separately managed systems to access the same ScriptPrinter printer. Therefore, when the printer is not printing, you need to determine who has control of the printer before troubleshooting the printer. The remaining sections discuss the following steps in troubleshooting the PrintServer printer in a multihost environment:

1. Determining who controls the printer
   - Determine printing node
   - Determine DECserver and DECserver port name
   - Check port and system server names
   - Determine host controlling printer at DECserver or over the network
2. Troubleshooting the printer
   - Follow procedures in Section E.1
   - Check port characteristics
3. Other Troubleshooting Hints
   - DEVICE UNAVAILABLE status
   - Common error messages with their probable causes

E.5.1 Determining Which Host Controls the Printer

Perform the following steps to determine which host has control of the printer.

STEP 1: Determine your printing node

To determine which node runs your printer, issue the following command, inserting the name of the print queue you use:

```
$ SHOW QUEUE/FULL queue-name
```

From the first line of the following sample display, you determine that FIERY is the node that runs your printer and LTA546 is the application port associated with the print queue:

```
Printer queue LN03R3, on FIERY::LTA546, mounted form CPS$DEFAULT
                                                    (stock=DEFAULT)
    /BASE_PRIORITY=4 /FORM=CPS$DEFAULT (stock=DEFAULT)
    /NOENABLE_GENERIC /LIBRARY=CPS$DEVCTL lowercase /OWNER=[SYSTEM]
    /PROCESSOR=CPS$SMB /PROTECTION=(S:E,O:D,G:R,W:W) /SCHEDULE=(NOSIZE)
    /SEPARATE=(BURST,TRAILER)
$
```

Do the next two steps on the node (FIERY) that runs the printer.

STEP 2: Determine DECserver and DECserver port name that connect to the printer

Look in SYS$MANAGER:LTLOAD.COM. The SET PORT command associates the application port (LTA*d*) with a specific port (/PORT=*port_n_name*) on the server (/SERVER=*server_name*).

```
CREATE PORT LTA546: /NOLOG  /APPLICATION                ! LN03R3
SET PORT LTA546: /APPLICATION /QUEUE /NODE=TAS204 /PORT=PORT_7
```

NOTE

The port must be set with queuing enabled (/QUEUE) and as an application port (/APPLICATION).

Make sure that SYSTARTUP_V5.COM includes @LTLOAD.

STEP 3: Check port and server system names

Ensure that port and server system settings are the same as those in SYS$MANAGER:LTLOAD.COM. Use the LATCP SHOW PORT command to look at the application port (LTA*d*) as follows:

```
$ RUN SYS$SYSTEM:LATCP
LCP> SHOW PORT lta546

Local Port Name = LTA546:  <APPLICATION>

  Specified Remote Node Name = TAS204
  Specified Remote Port Name = PORT_7
  Actual Remote Node Name = TAS204
  Actual Remote Port Name = PORT_7
  Link Name = LAT$LINK
```

STEP 4: Determine which host controls the printer

You can do this by logging into a terminal directly connected to the DECserver or by connecting to the DECserver over the network.

At the DECserver terminal

At the DECserver terminal, issue the following command:

```
LOCAL>  SHOW SESSIONS PORT port_number
```

The first line of the display shows the port number, the user name of the port, the port mode (local or service), and the session number. Example E–1 shows a SHOW SESSIONS PORT command on a DECserver 200 that tells you that a remote system HAILEY controls Port 7.

Example E–1: Determining Printer Host Example

```
Local> SHOW SESSIONS PORT 7

Port 7:  (Remote)        Connected        Current Session 1
-Session 1: Hailey       Connected        Pasthru
```

Over the network

Use either the network control program (NCP) or Terminal Server Manager (TSM) to connect to the DECserver over the network.

To use NCP, issue the following commands:

- To determine the type of *service_circuit*, for example UNA–0 or QNA–0, use the following commands:

```
$ MCR NCP
NCP> SHOW KNOWN CIRCUITS
```

- To determine the 48-bit Ethernet address (for example, 08–00–2B–05–C7–05), use the following commands:

```
$ MCR LATCP
LCP> SHOW SERVERS
```

```
$ MCR NCP
NCP> CONNECT VIA service-circuit PHYSICAL ADDRESS 00-00-00-00-00-00
```

After typing in the NCP CONNECT command, press Return until you get the pound sign (#) prompt. At this prompt type the password (ACCESS) to get the Local> prompt:

```
#
username: username
Local>
```

After making your connection and logging in to the DECserver console, give the following commands:

```
Local>  SET PRIVILEGED
Password>
Local>  SHOW SESSIONS PORT port_7
```

This password is SYSTEM by default. See Example E–1 for a sample output of this command.

If your system runs the TSM software, issue the following commands:

```
$ RUN SYS$SYSTEM:TSM$MAIN
TSM> USE SERVER tas204
TSM> SET PRIVLEDGED
Password>
TSM> SHOW SESSIONS PORT port_7
```

The password is SYSTEM by default. See Example E–1 for a sample output from this command.

NOTE

To run the TSM program you need read access to the TSM management directory file and OPER privileges. For more information, refer to the *Guide to Terminal Server Manager*.

E.5.2 Troubleshooting the Printer

After determining which system controls the printer port, follow these steps.

STEP 1: Use procedures in Section E.1

The manager of the system, determined by following the steps in Section E.5.1, should start with the following:

- For a new printer — Section E.1.1
- For a printer that has stopped printing — Section E.1.2

If you follow these procedures and the printer is not printing, go to STEP 2: Check port characteristics.

STEP 2: Check port characteristics

Compare the DECserver port characteristics with those listed in Table 2–1. To view the port characteristics, issue the SHOW PORT command at the Local> prompt or the TSM> prompt.

E.5.2.1 Regaining Control of DECserver Port

You may need to disconnect a symbiont process that controls the port connected to the printer. For example, an earlier version of the ScriptPrinter software does not disconnect once it gains control of the port. Disconnect the symbiont process with the following command:

```
Local>  SET PRIVILEGED
Password>
Local> LOGOUT PORT port_number
```

You need privileged status on the DECserver to execute this command.

E.5.3 Other Troubleshooting Hints for Multihost Environment

This section discusses reasons for DEVICE UNAVAILABLE or NOT READY status and also describes common error messages with suggestions for recovery.

E.5.3.1 Device Unavailable or Not Ready

When checking execution queues with the SHOW QUEUE command, the listing may display DEVICE UNAVAILABLE in the position shown in the following example:

```
$ SHOW QUEUE ln03r3

Printer queue LN03R3, device unavailable, on FIERY::LTA546,
    mounted form CPS$DEFault (stock=DEFAULT)
```

DEVICE UNAVAILABLE implies that the printer is unable to acknowledge any queries from the system. Check for the following:

- Bad communication line
- Incorrect port baud rate setting
- Wrong switch settings on the LN03R ScriptPrinter
- Excessive line noise resulting in lost response from the printer
- No power to the printer
- Bad cable
- Incorrect bits/character and/or wrong parity

An OPCOM message of NOT READY occurs at the same time and for the same reasons as DEVICE UNAVAILABLE.

E.5.3.2 Common DECserver Error Messages

Following is a list of common error messages received in a multihost environment.

- LPS$_LRJINUSE, Port or service in use — usually occurs on a DECserver port when the LTAxxx is not set with the queuing parameter (/QUEUE) enabled. The DECserver configuration file LTLOAD.COM should contain a line similar to the following:

  ```
  SET PORT LTAxxx:/NODE= server/PORT= port_name/QUEUE/APPLICATION
  ```

- LPS$_LRJNOTOFFERED, Service is not offered on the requested port — usually occurs when the access mode is not set to REMOTE on the DECserver port. Use the SET and DEFINE commands as follows to set the access mode for the port:

  ```
  Local> SET PORT port_name ACCESS REMOTE
  Local> DEFINE PORT port_name ACCESS REMOTE
  ```

- LPS$_LRJACCESSDENIED, Access denied — usually occurs when the group code specified in LTLOAD.COM is not registered as a group on the DECserver connected to the ScriptPrinter. Thus the user does not have access to the DECserver. The DECserver configuration file LTLOAD.COM should contain a line similar to the following:

  ```
  LCP SET NODE /GROUP= group_list /ENABLE
  ```

  Compare groups, /GROUP= group_list, set in LTLOAD.COM with those set on the DECserver (SHOW PORT command).

- LPS$_CONTERMINATED, Connection abnormally terminated — occurs when communication to the DECserver is interrupted. This results in a stopped queue. Check the following:
  - — DECserver port settings for the ScriptPrinter correspond to settings in Table 2–1 (for example, AUTOPROMPT should be DISABLED)
  - — Power is supplied to the DECserver
  - — Printer port is not logged off
  - — DECserver is plugged into the transceiver/DELNI/DESTA . . .
  - — All connections from DECserver to the Ethernet cable are working

- LPS$_CONTIMEOUT, Connection timed out, server not available, or incorrect server name specified — occurs when the server name is not recognized. Verify that the server name connected to the printer port is correct. Compare the server name specified in the DECserver configuration file LTLOAD.COM with the server name on the DECserver. LTLOAD.COM should contain a line similar to the following:

  ```
  SET PORT LTAxxx:/NODE= server_name/PORT= port_name/QUEUE/APPLICATION
  ```

  Use the SHOW PORT command to find the server name associated with the printer port:

  ```
  Local> SHOW PORT port_name
  ```

- LPS$_CONAPPLICATION, Connection request is not to a LAT applications port — usually occurs on a DECserver port when the LTAxxx is not specified as an applications port. The DECserver configuration file LTLOAD.COM should contain a line similar to the following with the /APPLICATION parameter.

  ```
  SET PORT LTAxxx:/NODE= server/PORT= port_name/QUEUE/APPLICATION
  ```

- LPS$_LRJRESOURCE, Insufficient resources at server — indicates insufficient memory on the DECserver. This is a temporary problem. Restart the queue.
- LPS$_LRJNAMEUNKNOWN, Port Name is unknown — occurs when the port name specified in the DECserver configuration file LTLOAD.COM is not known on the server. Compare the port name specified in the DECserver configuration file LTLOAD.COM with the printer port name associated with the server. LTLOAD.COM should contain a line similar to the following:

  ```
  SET PORT LTAxxx:/NODE= server_name/PORT= port_name/QUEUE/APPLICATION
  ```

  Find the name of the printer port associated with the server, by issuing the following command:

  ```
  Local> SHOW SERVER server_name
  ```

- LPS$_LRJACCESSREJECT, Immediate access is denied — indicates a temporary problem. Restart the queue.
- LPS$_LRJNOSTART, Session cannot be started — indicates a temporary problem. Restart the queue.
- LPS$_LRJDELETED, Queue entry deleted by server — occurs when someone manually terminates your connection to the DECserver.
- LPS$_LRJILLEGAL, Illegal request parameter — indicates a ScriptPrinter internal error has occurred. Submit a Software Performance Report.

NOTE

For more information, refer to the system messages chapter in the *VAX/VMS Management/User's Guide: ScriptPrinters* or to the troubleshooting guide for your DECserver.

Glossary

applications port The logical device for an application program on a node running the local area transport (LAT) software.

baud rate The speed (bits/second) at which the computer and the printer communicate.

block The smallest logically addressable unit of data that a specified device can transfer in an I/O operation (512 contiguous bytes for most disk devices).

driver The set of code in the kernel that handles the physical I/O to a device.

font The artistic representation of a typeface that describes some set of characters rendered in a particular point size, weight, and style.

group A logical subnetwork defined by the LAT protocol to partition terminals and services into manageable units. Groups are identified by decimal integers from 0 to 225.

host The computer that provides services and enables startup and management of the peripheral devices, such as printers.

host node The computer (node) that provides services to a DECserver port user.

local mode A port user's environment when he or she interacts with the server by using DECserver commands.

network A group of computers that are connected by communications lines to share information and resources.

node A network-addressable component having a unique address.

null string A string without content or an empty string represented by adjacent quotation marks.

port The hardware on the DECserver that transmits and receives data to and from an attached peripheral device or the Ethernet transceiver.

port device The hardware unit attached to a DECserver port. Typically, a port device is a video display terminal or a serial line printer.

printer controller software The software that interprets the data in a print request according to a specified data syntax, builds bitmaps of each page to be printed, and forwards the bitmaps to the print engine that produces the hard-copy output.

printer software The software that handles the communications among the process that makes a print request (terminal), the process that provides resources (a host), and the process that performs the printing service (a print symbiont).

privileged status An operating mode in which a port user has access to the privileged port and to the privileged DECserver commands. The server manager is normally the only user with privileged status.

protocol The conventions or rules for the format and timing of messages sent and received.

server software The software that implements the LAT protocols on the DECserver.

service A resource provided by network computer systems that is available to DECserver port users.

service node A computer system that provides services to a DECserver port user.

symbiont A process that acts under the direction of the job controller and provides printing services to queued jobs. If necessary, a symbiont takes a print request and translates the data syntax from one form to another, then sends the data to a printer and controls the printer.

timeout The expiration of the time limit in which a device is to complete an I/O transfer.

translator A stored program that changes the user's data syntax into a form that can be used by the printer.

user The person who initiates requests for services. These requests are handled by the host, which forwards them to the appropriate queue.

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