

Software Product Description

**PRODUCT NAME: PrintServer Client Software,
for ULTRIX, Version 2.0**

SPD 30.86.01

DESCRIPTION

The PrintServer Client Software for ULTRIX is a layered product that enables one of the following:

- Suitably configured ULTRIX-32 or UNIX® systems to communicate within a TCP/IP Ethernet network to access a PrintServer and to use the printing and accounting services that it offers.
- Configured ULTRIX-32 Version 3.0 or ULTRIX Workstation systems within a DECnet Ethernet network to access a PrintServer.

The Client software consists of the following components:

- A print daemon to process print requests from one or more PrintServer printer queues.
- The network software to transmit the request and associated data over the Ethernet to a remote PrintServer.
- A Translator to convert ASCII Text files into the PostScript® language.
- A series of PostScript tools for creator software support (Sixel, ReGIS, and Tektronix®) including a PostScript error handler and lay-up.
- A spooler interface which uses the LPR command.
- Event logging which captures error and status reporting.
- Local accounting for tracking usage information.
- Online manual pages providing help for the user.
- Complete installation instructions.

The PrintServer Client Software for ULTRIX, V2.0 must be installed on each system that provides distributed printing services to its users via a PrintServer.

The software is supplied in such a way that customers can easily add the filters that they already own, such as those purchased from Adobe Systems, Inc. to the Client software.

A system running the PrintServer Client software can transmit print requests to any PrintServer on the network that is defined in its network database. A maximum of 16 clients can simultaneously access a PrintServer with only one client active at one time.

VAX PrintServer Supporting Host Software, V3.x is a companion product for the DECnet-Client users. Refer to SPD 27.68.xx for a description of that product. PrintServer TCP/IP Supporting Host Software, V2.0 is a companion product for the PrintServer Client users. Refer to SPD 30.85.xx for a description of that product.

Features

The Client software expands the ULTRIX-32 lpr command options to access the printing features of the Digital's family of network printers. These new option flags in the lpr command are as follows:

- -D data__type - Specifies the type of data in the print job being sent to the printer. If the data__type is other than PostScript, the print daemon will call one of the supplied translation filters (ANSI text and Sixel Graphics, ReGIS, or Tektronix) to convert the data to PostScript prior to sending it to the PrintServer.

In addition for data__type ASCII, In03rof (fast ASCII to PostScript) translation filter is used. The In03rof(4) filter is supplied with ULTRIX-32 base system.

- -I input__tray - Selects the printer input tray that will supply the paper or media for this job.
- -o output__Tray - Selects the printer output tray where the printed output will be deposited.
- -M messages - Specifies the disposition of messages generated by the print job.
- -Z page__limit - Specifies the first and last logical pages to be printed for the job.
- -O page__orientation - Specifies the orientation of printed output on the page (portrait or landscape). This

® PostScript is a registered trademark of Adobe Systems Inc.

® Tektronix is a trademark of Tektronix Inc.

® UNIX is a registered trademark of American Telephone & Telegraph Company.

digital
software

October 1989
AE-ML10B-TE

option is ignored when data__type is PostScript unless Number__Up is specified.

- -F page__size - Specifies the size of the logical pages being printed. This option is ignored if data__type is PostScript.
- -S sheet__size - Specifies the physical size of the sheets to be printed. This option will cause the appropriate input tray to be selected.
- -X sheet__count - Specifies the number of times each sheet is to be printed at the PrintServer.
- -L layup__definition - Specifies the name of a file that contains all of the page layup features (Borders, Margins, Margin Alternation, Pages per Sheet, First Page, Page Order and Page Grid) except Number__Up.
- -N number__up - Specifies the maximum number of pages that can be printed on one side of a sheet.

Table 1

**New lpr Command Line Options
Compatible with VAX
PrintServer Software V3.x**

VMS Parameter	New ULTRIX Flag	Valid Arguments
DATA__TYPE	-D	ansi, ascii, regis, TEK4010/4014, postscript
INPUT__TRAY	-I	top, middle, bottom, (lcit)
OUTPUT__TRAY	-o	top, side, face-up, upper, lower, lcos
PAGE__ORIENTATION	-O	portrait, landscape
SHEET__SIZE	-S	a, (letter), a3, a4, a5, b (ledger), b4, b5, executive, legal
PAGE__SIZE	-F	same as <SHEET__SIZE>
PAGE__LIMIT	-Z	[lowlim,][uplim] [1-10000]
SHEET__COUNT	-X	num [1-10000]
MESSAGE	-M	ignore, keep
NUMBER__UP	-N	num [1-100]
LAYUP__DEFINITION	-L	filename

The print daemon also supplies accounting information, the number of sheets printed, for each print job.

Translators

Translator software allows users to print documents on the PrintServer with graphic protocols other than PostScript, the native language of the PrintServer, by translating the designated protocol into PostScript. The translators are invoked by the print daemon at print time through switches.

The translators provided convert the following data types into PostScript:

- ANSI text and Sixel graphics compatible with the LN03 excluding support for font cartridges
 - ReGIS compatible with the VT240 *
 - Tektronix 4010/4014 compatible with VT240 *
- * (With the exception of the DECstation 2100, DECstation 3100, DECstation 3100S, DECsystem 3100, DECsystem 5400, DECsystem 5810, DECsystem 5820)

PostScript is a device-independent, page description language that has the ability to describe the appearance of text, images, and graphic material on the printed page.

PostScript Tools

The tools consist of the following:

A PostScript error handler which prints the last partial page of output as well as information to help identify the error. This information includes the error name, the PostScript operator that encountered the error, the operand stack, and the graphics state of the machine at the time of the error.

INSTALLATION

The PrintServer Client Software for ULTRIX, V2.0 is classified as Customer Installable, however, only experienced customers should attempt installation of this software product. Installation Services are available for those customers who desire installation of the software, in addition to the PrintServer hardware, by an experienced Digital Specialist.

Customer Responsibilities

Before installation of the software, the customer must:

- Previously have installed all requisite software and hardware (as specified in the System Support Addendum SSA 30.86.01-x)
- Obtain, install and demonstrate as operational any equipment and facilities necessary to interface to Digital's communication equipment
- Make available for a reasonable period of time, as mutually agreed upon by Digital and the customer, all hardware, communication facilities and terminals that are to be used during installation
- Supply to Digital all of the information necessary for installation of the software as described in the PrintServer Site Preparation Guide

Installation of a new system where no hardware or software exists will consist of the following:

- Verification that the installation information in the PrintServer Site Preparation Guide is complete
- Verification that a complete set of PrintServer Client Software media and documentation has been received
- Verification that all hardware and software prerequisites have been met and the equipment is operational
- Installation of the PrintServer Client Software on one system
- The optional establishment of print queues for the three supplied translators and PostScript on the PrintServer Client system
- Modification of the databases to add the PrintServer node name and address
- Verification that the PrintServer Client Software has been correctly installed by running the Installation Verification Program

Should a Digital Specialist be required to modify the previously installed software parameters, a time and materials charge will apply.

HARDWARE REQUIREMENTS

VAX, MicroVAX, VAXstation, or DECstation configuration as specified in the System Support Addendum (SSA 30.86.01-x).

SOFTWARE REQUIREMENTS*

ULTRIX-32 Operating System

ULTRIX Worksystem Software

For PrintServer Client users, the following additional software is required:

- PrintServer TCP/IP Supporting Host Software for ULTRIX

For DECnet Client users, the following additional software is required:

- DECnet-ULTRIX
- VAX PrintServer Supporting Host Software

ORDERING INFORMATION

Software Licenses: QL-VVMA*-**

Software Media: QA-VVMA*-H*

Software Documentation: QA-VVMAA-GZ

Software Product Services: QT-VVMA*-**

* Denotes variant fields. For additional information on available licenses, services and media, refer to the appropriate price book.

SOFTWARE LICENSING

This software is furnished under the licensing provisions of Digital Equipment Corporation's Standard Terms and Conditions. For more information about Digital's licensing terms and policies, contact your local Digital office.

Binary Licenses

A Binary License to use this software is included with a PrintServer. The license gives you the right to use the software on a single CPU or equipment configuration and the right to copy this software for use on any CPU or equipment configuration on a local area network that requires access to a PrintServer.

Source Licenses

A PrintServer Client source kit is available in "tar" format for users who wish to retrieve and modify selected source modules (with the exception of the PrintServer image). Although every attempt is made to include accurate source modules, Digital does not warrant the ability to build a binary kit. Limited supporting documentation is provided. Digital does not warrant the results of using the source kit to change selected portions of the system.

It is intended that the source kit can be installed on any Berkeley based UNIX system (see SSA 30.86.01-x) and can be ported to other operating environments which provide TCP/IP network access.

The following minimum conditions must be satisfied prior to each and every distribution (initial distribution or revision) of source materials:

- You must be currently licensed by Digital to use PrintServer Software.
- You must have signed Digital's Software Program Sources License Agreement for the facility or site where the CPU is located.

Source kits provided by Digital do not necessarily contain all source files used by Digital to build object code kits. Digital provides these source kits on a reference only basis. Digital does not provide support for source code as part of the standard SPS offerings. These sources are distributed on an as is basis.

Source License and Sources Distribution Option

This option provides you with a source license and the machine-readable source code for this software product. Subject to the terms and conditions of your UNIX source license, it gives you the right to use this source code on any CPU at the facility/location (as specified in the above mentioned agreements with Digital).

Source Update Distribution Option

This option provides you with the machine-readable source code for a revised version of this software product. Subject to the terms and conditions of your PrintServer license from Digital, it gives you the right to use this revised source code on any CPU at the facility/location (as specified in the above mentioned agreements with Digital).

A variety of service options are available. For more information on these or other services, please contact your local Digital office.

SOFTWARE WARRANTY

Warranty for this software product is provided by Digital with the purchase of a license for the product as defined in the Software Warranty Addendum of this SPD.

SOFTWARE PRODUCT SERVICES

The DIGITAL Logo is a registered trademark of Digital Equipment Corporation.

PrintServer, PrintServer 40 and PrintServer 40 Plus are trademarks of Digital Equipment Corporation.

System Support Addendum

PRODUCT NAME: **PrintServer Client Software
for ULTRIX, Version 2.0**

SSA 30.86.01-A

HARDWARE REQUIREMENTS

Processors Supported

VAX: VAX 6000-210, VAX 6000-220, VAX 8200, VAX 8250, VAX 8300, VAX 8350, VAX 8500 ¹, VAX 8530 ¹, VAX 8550 ¹, VAX 8600 ^{2, 3}, VAX 8650

VAX-11/750, VAX-11/780, VAX-11/785

MicroVAX: MicroVAX II, MicroVAX 2000, MicroVAX 3300/3400, MicroVAX 3500/3600

VAXserver: VAXserver 3300/3400 ⁴, VAXserver 3500/3600/3602, VAXserver 6210/6220

VAXstation: VAXstation 2000

DECstation: DECstation 2100, DECstation 3100, DECstation 3100S

DECsystem: DECsystem 3100, DECsystem 5400, DECsystem 5810, DECsystem 5820

Notes:

¹ Console software for the VAX 8550, 8700, and 8800 must be at version 4.0 or greater.

² The VAX 8600 CPU must be at hardware Revision Level K or greater.

³ Console software for the VAX 8600/8650 must be at version 2.0 or greater.

⁴ The MicroVAX 3300/3400 provides by default a DDSI Bus Interface for RF disk support and Ethernet interface DELQA/DESQA by default which are supported by ULTRIX device drivers.

The PrintServer Client software shall be installed on those VAX processors listed above which meet the following criteria:

Any valid VAX minimum system configuration with:

- Minimum of six megabytes of memory
- Ethernet Controller Interface
- 1600 BPI Magtape or TK50 tape drive
- System Disk

Any valid MicroVAX 2000 or VAXstation 2000 system configuration with:

- Minimum of six megabytes of memory
- Ethernet Controller Interface
- A 1600 BPI Magtape or TK50 tape drive
- RD54 system disk or 2-RD53s

The source kit can be installed on any Berkeley based UNIX (4.2 or 4.3) systems.

The PrintServer Client software requires that a minimum of one PrintServer 40 is connected to the Ethernet physical channel with a transceiver cable and either an Ethernet transceiver (H4000) or the Local Network Interconnect (DELNI) or the ThinWire Ethernet Station Adapter (DESTA). (Note that the PrintServer cannot be booted over a gateway.)

Space Requirements:

Client Space Requirements

Disk space required for installation:
2.5 Mbytes or 4883 blocks

Disk space required for use (permanent):
2.5 Mbytes or 4883 blocks

DECnet Client Space Requirement

Subset	Kilobytes Used		Total	
	root	usr	Kilobytes	or Blocks
LPSCLI010	17	1259	1276	2492
LPSMAN010	1	50	51	100
LPSMIPSCLI020	34	1609	1643	3209

These counts refer to the disk space required on the system disk. The sizes are approximations; actual sizes may vary depending on the user's system environment, configuration and software options selected.

digital
software

October 1989
AE-MN78B-TE

OPTIONAL HARDWARE

Additional PrintServers may be connected to the Ethernet physical channel.

SOFTWARE REQUIREMENTS

ULTRIX-32 Operating System V3.0 or V3.1

ULTRIX Worksystem Software V2.0 or V2.1

For PrintServer Client users, the following additional software is required:

PrintServer TCP/IP Supporting Host Software, V1.0 or V2.0 for the PrintServer 40 and PrintServer 40 Plus and V2.0 for the PrintServer 20

In addition, the source kit can be installed on any Berkeley-based UNIX (4.2 or 4.3) systems.

For DECnet Client users, the following additional software is required:

DECnet-ULTRIX

VAX PrintServer Supporting Host Software, V2.0, V2.1, or V3.0 for the PrintServer 40 and V3.0 for the PrintServer 20 and PrintServer 40 Plus installed on one VAX system on the same Ethernet

OPTIONAL SOFTWARE

None

GROWTH CONSIDERATIONS

The minimum hardware/software requirements for any future version of this product may be different from the minimum requirements for the current version.

DISTRIBUTION MEDIA

Tape: 9-track 1600 BPI Magtape (PE), TK50 Streaming Tape

ORDERING INFORMATION

Software Licenses: QL-VVMA*-**

Software Media: QA-VVMA*-H*

Software Documentation: QA-VVMAA-GZ

Software Product Services: QT-VVMA*-**

* Denotes variant fields. For additional information on available licenses, services and media, refer to the appropriate price book.

The above information is valid at the time of release. Please contact your local Digital office for the most up-to-date information.