



Software Product Description

PRODUCT NAME: VSI DECprint Supervisor for OpenVMS

SPD DO-VIBHAA-025

DESCRIPTION

This document addresses VSI DECprint Supervisor Version 2.8 for OpenVMS.

VSI DECprint Supervisor (DCPS) for OpenVMS is a layered software application that provides access to selected PostScript printers. DCPS runs on OpenVMS Integrity servers and OpenVMS Alpha systems.

DCPS drives selected PostScript printers and supports these printers' special features, such as tray and media selection and two-sided printing. File formats supported include PostScript, ANSI-Compliant DIGITAL Printing Protocol Level 3 (DEC PPL3) and HP PCL. DCPS also includes features such as number-up, layup, automatic data type detection and high-speed image printing, plus translators for a number of printer languages. See the Other Hardware Required section of the SPD for the list of supported printer models.

DECprint Supervisor software consists of the following components:

- A print symbiont that processes print requests for the host on which it resides.
- Software to transmit the request and associated data over the following protocols:
 - Ethernet via TCP/IP to a printer with a network interface card (NIC) that supports the bidirectional Raw TCP/IP socket protocol or LPD protocol
 - Ethernet via TCP/IP to a printer connected to a print server or a terminal server that supports the bidirectional Raw TCP/IP socket protocol or LPD protocol
 - Ethernet via TCP/IP to a remote LPD queue on another system
 - Ethernet to a PrintServer printer via DECnet or TCP/IP using Common Printer Access Protocol (CPAP)
 - Local Area Transport (LAT)
 - USB connection
 - Serial line
- Translators to convert various non-PostScript files into the PostScript language for printing.
- Page formatting capabilities such as the ability to print multiple page images on a single side of a sheet of paper and to specify borders, margins and page offsets.
- A series of PostScript tools for application developers. These include a PostScript error handler and Font Encoding Vectors for the ISO Latin Alphabet Number 1 (ISO 8859/1) and DIGITAL Multinational Character Set for use with all the PostScript text fonts that are built into DIGITAL and selected Compaq PostScript printers.

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Install DECprint Supervisor software on each node that has print queues for PostScript printers.

A system running DECprint Supervisor software can transmit print requests to printers on a TCP/IP, DECnet or LAT network. Note that not all printers support all these protocols.

To communicate with a printer on a TCP/IP network, VSI TCP/IP Services for OpenVMS software, Process Software MultiNet for OpenVMS or Process Software TCPware for OpenVMS software must be installed on your system.

For DIGITAL PrintServer printers, whether using the TCP/IP or DECnet protocol, PrintServer Software must be installed on at least one system in your network.

PRINTING FEATURES

VSI DECprint Supervisor for OpenVMS provides the following features:

- PostScript printing. The print symbiont passes PostScript files directly to the printer. DECprint Supervisor does not interpret or translate PostScript files. Therefore, they must be created using standard PostScript Level 1, Level 2 or Level 3 operators as defined within the printer itself.
- ANSI (DEC PPL3) printing. DECprint Supervisor translates ANSI files into PostScript for printing on the output device. These ANSI files may contain ASCII text, sixel graphics and other features of VSI's ANSI-compliant Printing Protocol Level 3.
- Selection of input tray via INPUT_TRAY, MEDIA_TYPE, PAGE_SIZE or SHEET_SIZE parameters and output tray via OUTPUT_TRAY, within the limitations of the printer and the tray-naming conventions to provide such features.
- Rotation of the page via the PAGE_ORIENTATION parameter for nonPostScript files only.
- Selection of single-sided, double-sided, or tumble printing when available on the printer, via the SIDES parameter.
- Formatting of ANSI text files via the /HEADER, /FORM, /SPACE and /FEED qualifiers and the TAB parameter.
- Control of ANSI file margins, page setup and wrap or truncate options as specified by the DEFINE/FORM command.
- Status and error messages sent to the user's terminal, may be printed on the job trailer page or job log page, written to a log file, or displayed on the operator's console.
- Use of device control modules for basic data types via the /SETUP qualifier. PostScript modules may contain any PostScript operators supported by the printer in the printing context.
- Collection of accounting information for each print job as follows: sheets of paper printed, the number of RMS Gets and the number of QIO Writes. All Compaq, DIGITAL and GENICOM printers support this feature except where noted in the Other Hardware Required section of the SPD. This feature may not be available with other printers.
- Access to the PCL interpreter native to selected printers. Printers for which the native PCL interpreter is supported are listed in the Other Hardware Required section of the SPD.
- Support for printers via network interface cards, print servers and terminal servers that support bidirectional Raw TCP/IP sockets or LPD.
- Support for printers via remote LPD queues on other systems.
- Support for PrintServer printers on DECnet or TCP/IP interconnects using CPAP protocol.
- Automatic data type detection and switching. The software attempts to determine the data type of the file. If successful, it will automatically translate, if necessary, and print the file. If it cannot determine the file data type, it will use the default data type defined by DATA_TYPE=AUTOMATIC.

If the file is printed using the data type defined by DATA_TYPE=AUTOMATIC, the symbiont will look for a switch to PostScript command (%!) and continue to process the rest of the file as PostScript. This switch may occur only once per file. The switch to PostScript feature is not available when DCPS uses a printer's native PCL interpreter to process the file.

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- Printing non-PostScript data types on the PostScript printer. Translators are provided to translate the following data types into PostScript for printing:
 - DDIF (bitonal Image subset only; requires DECwindows Motif software)
 - PCL Level 4 (as implemented on the HP LaserJet IID)
 - IBM Proprinter XL24
 - ReGIS (monochrome output only)
 - Tektronix 4010/4014
 - ASCII LIST translator that formats and numbers ASCII files. This translator numbers each line of text, creates alternating bars of gray and white in the background and creates a running head of the file name and page number.
- Printing two or more page images on a single side of a sheet via the NUMBER_UP parameter.
- Specifying page layout features via the LAYUP_DEFINITION parameter. Page layout features include Borders, Margins, Margin Alternation, Pages Per Sheet, First Page, Page Order and Page Grid. Layout definition options may be provided directly, as arguments to the LAYUP_DEFINITION parameter, or indirectly, as the contents of a file specified by that parameter.
- Specifying a range of pages of the file to be printed via the PAGE_LIMIT parameter.
- Printing jobs with finishing options with the PUNCH and STAPLE parameters, on supported printers equipped with such options.
- Automatically scaling a page created for one paper size so that it fits on a different paper size via use of both the PAGE_SIZE and SHEET_SIZE parameters on the same print command.
- Printing multiple uncollated copies of each sheet via the SHEET_COUNT parameter.
- Use of device control modules for all data types via the /SETUP qualifier. ANSI modules may include control sequences. PCL modules may include binary font data.
- Support for OpenVMS autostart queues, simplifying startup and ensuring high availability of print queues.

ANSI (DEC PPL3) Emulation

Printing of ANSI text and sixel graphics is compatible with DIGITAL's ANSI-compliant PPL3 printers.

Note: PostScript printers differ in the amount of virtual memory they have available for printing and font storage. Files that require downloading of fonts may be printed differently, may print more slowly or may fail to print on some printers.

HARDWARE REQUIREMENTS

Processors Supported:

Refer to the latest VSI OpenVMS Integrity or Alpha Software Product Description for information about supported servers.

Disk Space Requirements

Disk space required for kit installation:	11,500 blocks (Integrity)	8,200 (Alpha)
Disk space required for use (permanent):	11,000 blocks (Integrity)	7,700 (Alpha)

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

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Other Hardware Required

At least one PostScript printer, as follows:

Apple

- LaserWriter IIG, LaserWriter IIf¹, LaserWriter II NT¹, LaserWriter II NTR¹, LaserWriter II NTX¹, LaserWriter Plus¹, LaserWriter Pro 600¹, LaserWriter Pro 630¹

Compaq

- Laser Printer LN16², LN32, LNC02³, LNM40

DIGITAL

- Colormate PS (LF01R)¹
- Colorwriter: LSR 2000 and 2000[+] (LNC01)¹
- DECcolorwriter 1000 (LF02)¹
- DECclaser: 1150 (LN07R)¹, 1152 (LN07C)¹, 2150 (LN05R)¹, 2250 (LN06R)¹, 3250 (LN08R)¹, 3500 (LN14)⁴, 5100 (LN09)⁴
- Laser Printer: LN15², LN15+², LN17+ps, LN20³, LN40³, LNC02³
- LN17ps
- PrintServer 17 (LPS17), 17/600, 20 (LPS20)¹, turbo PrintServer 20¹, 32 (LPS32)¹, 32 plus, 40 (LPS40)¹, 40 Plus¹
- ScriptPrinter (LN03R)¹

GENICOM

- Intelliprint cL160, mL260, mL402, mL450
- LN21, LN28, LN45, LNM40
- microLaser 170², 210, 280, 320, 401

HP

- 9085 MFP⁵
- CM8050 Color MFP, Color MFP with Edgeline
- CM8060 Color MFP, Color MFP with Edgeline
- Color LaserJet 2500, 2550, 2605, 3000, 3700, 3800, 4500, 4550, 4600, 4610, 4650, 4700, 4730 MFP, 5500, 5550, 8500⁶, 8550⁶, 9500, 9500 MFP,
- Color LaserJet CM1015 MFP, CM1017 MFP, CM1312 MFP, CM2320 MFP, CM3530 MFP, CM4730 MFP, CM6030 MFP, CM6040 MFP
- Color LaserJet CP1513, CP1514, CP1515, CP1516, CP1517, CP1518, CP1519, CP2024, CP2025, CP2026, CP2027, CP3505, CP3525, CP4005, CP6015
- LaserJet 1300, 1320
- LaserJet 2100, 2200, 2300, 2410, 2420, 2430
- LaserJet 3052, 3055, 3390, 3392
- LaserJet 4000, 4050, 4100, 4100 MFP, 4200, 4240, 4250, 4300, 4345 MFP, 4350, 4M, 4M Plus, 4ML, 4MP, 4MV, 4SiMX
- LaserJet 5000, 5100, 5200, 5M (monochrome version), 5SiMX
- LaserJet 8000, 8100, 8150
- LaserJet 9000, 9000 MFP, 9040 MFP, 9050, 9050 MFP, 9055 MFP, 9065 MFP
- LaserJet III with PostScript (Level 1) cartridge¹, with PostScript-Plus (Level 2) cartridge¹
- LaserJet IIID with PostScript (Level 1) cartridge¹, with PostScript-Plus (Level 2) cartridge¹
- LaserJet IIISi with PostScript (Level 1) option, with PostScript (Level 2) option
- LaserJet M1522 MFP, M2727 MFP, M3027 MFP, M3035 MFP, M4345 MFP, M5025 MFP, M5035 MFP, M9040 MFP, M9050 MFP
- LaserJet P2015, P2055, P3004, P3005, P3011, P3015, P4014, P4015, P4515
- PaintJet XL300¹

IBM

- Infoprint 21, InfoPrint 32, InfoPrint 40

¹ Printer does not have native PCL interpreter

² Supported only when the printer is in PostScript mode

³ Does not support DCPS accounting feature

⁴ Includes support for direct printing to native PCL interpreter only when printer is in autosensing mode.

⁵ Raw TCP only

⁶ LPD and AppleTalk only

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LEXMARK

- C720, C750, C910
- Optra C710
- Optra Rt+ ¹
- Optra S 1250,1255, 1620,1625, 1650, 1855, 2420, 2450, 2455
- Optra Se 3455
- Optra T610, T612, T614, T616, W810
- T520, T522, T620, T622
- W820

RICOH

- Aficio 3035 ^{6,7}, 3045 ⁷, 3235C ^{6,7}
- Aficio AP400N ^{6,7}, AP410N ^{6,7}, AP4510 ^{6,7}
- Aficio CL3500N ^{6,7}, CL4000DN ^{6,7}, CL7000 ^{6,7}, CL7100 ^{6,7}, CL7200 ^{6,7}, CL7300 ^{6,7}
- Aficio MP 161 ^{6,7}, MP 2510 ^{6,7}, MP 3500 ^{6,7}, MP 4500 ^{6,7}, MP 5500 ^{6,7}
- Aficio SP 8100DN ^{6,7}, SP C410DN ⁷, SP C411DN ⁷, SP C811DN ^{6,7}

TEKTRONIX

- Phaser 200e ¹, 200i ¹, 220e ¹, 740 ¹, 750 ¹, 780 ¹, 850 ¹

XEROX

- DocuPrint N2025, N2125, N24, N2825, N32, N3225, N40, N4025, N4525
- Phaser 4500 ⁶, 4510 ⁶, 5500 ⁶, 6250 ⁶, 7300 ⁶, 7750 ⁶, 8400 ⁶
- WorkCentre Pro 232 ⁶, Pro 238 ⁶, Pro 245 ⁶, Pro 255 ⁶, Pro 265 ⁶, Pro 275 ⁶, Pro 35 ⁶, Pro 45 ⁶, Pro 55 ⁶, Pro 65 ⁶, Pro 75 ⁶, Pro 90 ⁶, Pro C2128 ⁶, Pro C2636 ⁶, Pro C3545 ⁶

SUPPORTED INTERCONNECTS

A supported printer must be equipped with one or more of the following supported interconnects:

- Ethernet port or Network Interface Card (NIC) supporting CPAP, LAT, bidirectional Raw TCP/IP socket or LPD protocol
- EIA-232 (RS-232) serial port
- EIA-422 (RS-422) serial port
- Bidirectional Centronics parallel port connected through a print server or terminal server

Note: DCPS does not support the following types of printer connections:

- A unidirectional connection (for example, a parallel or Raw TCP/IP port that is unidirectional)
- The parallel port on an OpenVMS system
- The Telnet network protocol

The following notes apply when using the above interconnects:

- EIA-232 serial interfaces are optional with some printers and may need to be purchased separately.
- EIA-422 serial interfaces, such as that employed on the HP Paint-Jet XL300, require an EIA-422/EIA-232 converter/adapter.
- The HP LaserJet 4SiMX is supported for serial communication when equipped with the Extend Systems ESI-2633A interface card.
- Ethernet interfaces may require an adapter to connect the printer's Ethernet hardware to that of the local area network.
- Ethernet protocols supported for certain Desktop and Workgroup printers (not including PrintServer printers) are Raw TCP/IP socket, LPD and LAT.
- Ethernet protocols supported for DIGITAL PrintServer printers are DECnet CPAP and TCP/IP CPAP.

⁷ Optional finishers and mailboxes not supported

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For TCP/IP configurations, the following are required:

- At least one printer (listed above)
- A NIC, print server or terminal server that provides bidirectional Raw TCP/IP sockets or LPD.

A cable may also be required to connect the printer to a print server or terminal server.

For Serial Line configurations, the following are required:

- At least one printer (listed above)
- Serial interface and cable for EIA-232 or EIA-422 with converter/adaptor
- One of the following serial interfaces or servers:
 - CVAX serial interface (CXA16, CXB16, CX08, DZQ-11; 9600 baud)
 - DHV11 (9600 baud; serial interface)
 - DZQ11 (9600 baud; serial interface)
 - DLV11 (9600 baud; serial interface)
 - DHU11 (9600 baud; serial interface)
 - DMZ32 (4800 baud; serial interface)
 - DMF32 (9600 baud; serial interface)
 - DMB32 (9600 baud; serial interface)
 - DECserver 90L and 90L+ (38.4K baud; LAT)
 - DECserver 90M (57.6K baud; LAT and raw TCP/IP socket)
 - DECserver 90TL (57.6K baud; LAT and raw TCP/IP socket)
 - DECserver 100 (9600 baud; LAT)
 - DECserver 200/MC (19.2K baud; LAT)
 - DECserver 250 (19.2K baud; LAT)
 - DECserver 300 (19.2K baud; LAT)
 - DECserver 500 (9600 baud; LAT)
 - DECserver 550 (9600 baud; LAT)
 - DECserver 700 series (115.2K baud; LAT and raw TCP/IP socket)
 - DECserver 900 series (115.2K baud; LAT and raw TCP/IP socket)
 - MUXserver 100 (19.2K baud; LAT)
 - MUXserver 300 (19.2K baud; LAT)
 - NetRider 90 - see DECserver 90M
 - NetRider 900 - see DECserver 900 series
 - LATprint (38.4K baud; LAT)
 - RapidPrint 200 (115.2K baud; LAT)

A DECserver or NetRider configuration requires DECserver Network Access Software (DNAS) V2.0 or later and a minimum of 4 Mbytes of memory to support Raw TCP/IP sockets.

All of the interfaces above support EIA-232 and some support EIA-422. The customer must select an appropriate combination of host serial interface, cable and printer serial interface. In some cases, an external adaptor may be required. Also:

- The printer's communications interface must be set for 8-bit, no parity communication.
- The interface baud rate must be set to a value less than or equal to the value specified above for the chosen host interface.
- Flow control should be set to XON/XOFF for PostScript-only printers or DTR/CTS (hardware handshake) for PostScript/PCL 5 printers.

For parallel port configurations, the following are required:

- At least one printer (listed above)
- Bidirectional Centronics parallel port interface
- One of the following print servers:
 - DIGITAL RapidPrint 200 (LAT)
 - DIGITAL RapidPrint 500 (Raw TCP/IP socket, LPD and LAT)
 - GENICOM MPS100 (Raw TCP/IP socket, LPD and LAT)
 - HP JetDirect (Raw TCP/IP socket and LPD)

A parallel cable may also be required to connect the printer to the print server.

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SOFTWARE REQUIREMENTS

On Integrity servers, VSI OpenVMS Integrity Version 8.4-2 or higher is the required operating system version for this product. On AlphaServer systems, VSI OpenVMS Alpha Version 8.4-2L1 or higher is the required operating system version for this product.

However, only specific versions of networking software are supported for each version of the operating system. See the following sections for the supported versions.

TCP/IP Configurations

For TCP/IP configurations, you need one of the following TCP/IP products:

- VSI TCP/IP Services for OpenVMS
- Process Software MultiNet for OpenVMS
- Process Software TCPware for OpenVMS

PrintServer Printer Configurations

For PrintServer printer configurations, you need a supporting host and one of the following products:

- VSI DECnet for OpenVMS
- VSI DECnet-Plus for OpenVMS
- VSI TCP/IP Services for OpenVMS
- Process Software MultiNet for OpenVMS
- Process Software TCPware for OpenVMS

DDIF image printing

- DECwindows Motif software

SOFTWARE LICENSING AND ORDERING INFORMATION

A software license is required in order to use the VSI DECprint Supervisor software product.

- For Integrity servers, the license is included in the OpenVMS Base Operating Environment (BOE). Version update licenses are not available for the Integrity servers platform. Rights to use future revisions of VSI DECprint Supervisor are available only through a Support Agreement or through a new license purchase.
- For AlphaServer systems, the license to use VSI DECprint Supervisor is included in the ALPHA-LP license.

For more information about OpenVMS licensing terms and policies, contact your VSI account representative.

Information is also available at the following website:

<http://vmsoftware.com/services>

LICENSE MANAGEMENT FACILITY SUPPORT

VSI DECprint Supervisor for OpenVMS supports the *OpenVMS License Management Facility*.

For more information about the License Management Facility, refer to the *VSI OpenVMS License Management Utility Manual* in the OpenVMS documentation set.

CLUSTER ENVIRONMENT

This layered product is fully supported when installed on any valid and licensed OpenVMS Cluster configuration, which are fully described in the *OpenVMS Cluster Software Product Description (SPD DO-VIBHAA-032)*. See the HARDWARE REQUIREMENTS section in this document for hardware requirements.

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OPTIONAL SOFTWARE

The following optional software may be useful with VSI DECprint Supervisor:

- Distributed Queuing Service for OpenVMS (DQS)
- DECnet-Plus for OpenVMS I64 or Alpha when DECnet is used as the communication protocol to PrintServer printers.
- VSI TCP/IP Services for OpenVMS when TCP/IP is used as the communication protocol to PrintServer printers and to printers with NICs and print servers and terminal servers that support Raw TCP/IP socket or LPD protocols.
- Process Software MultiNet for OpenVMS when TCP/IP is used as the communication protocol to PrintServer printers and to printers with NICs and print servers and terminal servers that support Raw TCP/IP socket or LPD protocols.
- Process Software TCPware for OpenVMS when TCP/IP is used as the communication protocol to PrintServer printers and to printers with NICs and print servers and terminal servers that support Raw TCP/IP socket or LPD protocols.

GROWTH CONSIDERATIONS

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

SOFTWARE PRODUCT SERVICES

A variety of service options are available from VSI. For more information, contact your VSI account representative or distributor. Information is also available at the following website:
<http://vmsssoftware.com/services>

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This software product is provided by VSI with a 90-day conformance warranty in accordance with the VSI warranty terms applicable to the license purchase.

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