Software
Product Description

PRODUCT NAME: HP SNA 3270 Terminal Emulator
for OpenVMS, Version 1.9

This SPD describes HP SNA 3270 Terminal Emulator
for OpenVMS, which is available for the OpenVMS I64,
OpenVMS Alpha and OpenVMS VAX platforms. All in-
formation applies to all platforms unless otherwise indi-
cated.

DESCRIPTION

The HP SNA 3270 Terminal Emulator for OpenVMS
(3270 TE) is a layered software product that allows
users of a VTxxx terminal (or other terminal or per-
sonal computer in VT100, VT200, or VT300 mode) on
suitably configured OpenVMS systems within a DECnet
or TCP/IP network to interactively access IBM® host-
based applications. These applications have been origin-
ally developed for IBM 3270 display stations in a Sys-
tems Network Architecture (SNA) networking environ-
ment. Access to the IBM host-based applications sys-
tem from OpenVMS systems is via one of the following
SNA server or gateway products:

TCP/IP or DECnet connections

- HP SNA Peer Server
- HP SNA Domain Gateway
- HP SNA Access Server for Windows NT®
- HP SNA Server for OpenVMS Alpha, a layered prod-
  uct that supports local access as well as TCP/IP and
  DECnet clients

DECnet only connections

- HP DECnet SNA Gateway for Synchronous Trans-
  port
- HP DECnet Gateway for Channel Support

HP SNA Server for OpenVMS VAX, an OpenVMS
VAX layered product that supports local access as well as remote DECnet clients

In normal operation, an IBM system transfers a format-
ted screen, much like a "form," to the 3270 block mode
terminal, and the user fills in any data required by the
form. The completed form is sent to the IBM host as
a single unit. This mechanism is emulated with a char-
acter mode terminal by buffering the form in the host's
memory and displaying it on the terminal. When the
screen form is complete, it is sent to the IBM host sys-
tem via the SNA server or gateway product.

Translation tables on the respective systems convert
ASCII terminal input (either Digital Multinational Char-
acter Set or National Replacement Character Set) to
a subset of IBM multinational EBCDIC code for trans-
fer through the SNA server or gateway product. These
translation tables may be modified to fit nonstandard
character sets.

Users invoke the 3270 utility using the local OpenVMS
system's command language, including qualifiers to
specify the target IBM system and system resources.
While the emulation utility is operating, the terminal
screen is formatted like a 3270 display. When the user
has finished work on the IBM system, the 3270 emu-
lator is dismissed and the terminal is "restored" as an
OpenVMS command terminal.

Features

The 3270 Terminal Emulator supports emulation of the
following features of an IBM 3270 display station when
attached to an IBM 3274 1C controller with the following features:

December 2006
• Category A terminal adapter (for 32 terminals)
• Configuration support D
• Common communications adapter
• External modem interface
• 3270 TE allows, on supported SNA servers and gateways, secured LUs (Logical Units) to be accessed via a password.
• 3270 TE allows up to 16 alphanumeric characters to be coded in the ACCESS-NAME parameter.
• 3270 TE provides the ability to display status information on the hardware status line when using a VT device (or VT emulator) that supports the hardware status line.
• 3270 TE supports HP’s License Management Facility.

IBM 3178 display station with the following features:
• 87-key keyboard with 24 program function (PF) keys and 3 program assist (PA) keys
• Audible alarm
• Up to 1920 characters
• Protected and unprotected fields
• Local and host copy and printer order FF (form-feed)
• Alphanumeric and numeric data
• Intensified display, display and nondisplay characters
• Auto-repeat keys (as available as a VT keyboard SET-UP feature)
• Click and ALT CURSR (as available, as a VT keyboard SET-UP feature)
• SYS REQ (Allows user to switch between SSCP-LU and LU-LU sessions)

Unsupported features of the IBM 3178 display:
• Selector pen, security lock, magnetic strip card, and operator
• <! (new line) as an auto-repeat key
• <!<! (fast left) and !>!> (fast right) keys
• TEST REQ or TEST, IDENT, DEV CNCL, and CURSR BLINK functions
• Structured fields
• Blinking fields
• 3270 Extended Data Stream
• Local function keys (keys that, when operated, do not transmit any interface codes to the host applications) other than those supported as VT100/VT200/VT300 SET-UP features

IBM 3278 display station Models 1, 2, 3, 4, and 5 with the following features:
• 87-key keyboard with 24 program function (PF) keys and 3 program assist (PA) keys
• Audible alarm
• Up to 3564 characters
• Protected and unprotected fields
• Local and host copy and printer order FF (form-feed)
• Alphanumeric and numeric data
• Intensified display, display and nondisplay characters
• Auto-repeat keys (as available as a VT keyboard SET-UP feature)
• Click and ALT CURSR (as available, as a VT keyboard SET-UP feature)

Unsupported features of the IBM 3180 display:
• Selector pen, security lock, magnetic strip card, and operator
• <! (new line) as an auto-repeat key
• <!<! (fast left) and !>!> (fast right) keys
• TEST REQ or TEST, IDENT, DEV CNCL, and CURSR BLINK functions
• Structured fields
• Blinking fields
• 3270 Extended Data Stream
• Local function keys (keys that, when operated, do not transmit any interface codes to the host applications) other than those supported as VT100/VT200/VT300 SET-UP features

IBM 3180 display station with the following features:
• 87-key keyboard with 24 program function (PF) keys and 3 program assist (PA) keys
• Audible alarm
• Up to 3564 characters
• Protected and unprotected fields
• Local and host copy and printer order FF (form-feed)
• Alphanumeric and numeric data
• Intensified display, display and nondisplay characters
• Auto-repeat keys (as available as a VT keyboard SET-UP feature)
• Click and ALT CURSR (as available, as a VT keyboard SET-UP feature)
• SYS REQ (Allows user to switch between SSCP-LU and LU-LU sessions)
• SYS REQ (Allows user to switch between SSCP-LU and LU-LU sessions)

Screen sizes supported by the various models of 3278 are:

Model 1 - Up to 960 characters
Model 2 - Up to 1920 characters
Model 3 - Up to 2560 characters
Model 4 - Up to 3440 characters
Model 5 - Up to 3564 characters

Unsupported features of the IBM 3278 display station models 1, 2, 3, 4, 5 are:

• Selector pen, security lock, magnetic strip card, and operator identification card reader
• <! (new line) as an auto-repeat key
• <!<! (fast left) and !>!> (fast right) keys
• TEST REQ or TEST, IDENT, DEV CNCL, and CURSR BLINK functions
• Structured fields
• Blinking fields
• Local function keys (keys that, when operated, do not transmit any interface codes to the host applications) other than those supported as VT100/VT200/VT300 SET-UP features
• Field inherit keys
• Programmed symbol selection keys

This product has been designed such that it can be used with most IBM applications; however, those applications written using features not supported by the emulator (for example, 3270 Extended Data Stream) must be modified.

A readily available online help facility provides information on keys with altered 3270-oriented functions. The status line as implemented on an actual 3270 display is not supported, however much of the same information is reported on a special status line that may be overlaid on the VT200's twenty-fourth line. In addition, the OpenVMS system manager has the ability to remap certain IBM key functions onto different locations on the VT keyboard.

INSTALLATION

Only experienced customers should attempt installation of this product. Installation services from HP are recommended for all other customers. These services provide for installation of the software product by an experienced software specialist.

PREREQUISITE SUPPORT

For HP SNA 3270 Terminal Emulator for OpenVMS to be HP-supported, the customer must have a support agreement for the selected prerequisite SNA server or gateway product.

HARDWARE REQUIREMENTS

Processors Supported

For information about supported processors, refer to the OpenVMS Operating System for I64, Alpha and VAX Software Product Description (SPD 82.35.xx and 25.01.xx).

Processors Not Supported

The 3270 TE product is not supported on VAX-11/730, VAX-11/750, VAX-11/780, and VAX-11/785 processors.

Disk Space Requirements (Block Cluster Size = 1)

For Itanium-Based Systems:

<table>
<thead>
<tr>
<th>Component</th>
<th>Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation</td>
<td>3400 blocks (1700 KB)</td>
</tr>
<tr>
<td>Permanent Use</td>
<td>2721 blocks (1360 KB)</td>
</tr>
</tbody>
</table>

For Alpha-Based Systems:

<table>
<thead>
<tr>
<th>Component</th>
<th>Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation</td>
<td>1518 blocks (759 KB)</td>
</tr>
<tr>
<td>Permanent Use</td>
<td>684 blocks (342 KB)</td>
</tr>
</tbody>
</table>

For VAX-Based Systems:

<table>
<thead>
<tr>
<th>Component</th>
<th>Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation</td>
<td>1179 blocks (590 KB)</td>
</tr>
<tr>
<td>Permanent Use</td>
<td>345 blocks (173 KB)</td>
</tr>
</tbody>
</table>

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.
Terminal Requirements

- A digital terminal capable of VT100, VT200, VT300, or VT400 compatibility (such as VT102, VT2xx, and VT3xx). Refer to the Optional Hardware section of this Software Product Description for more information.
- The Advanced Video Option (AVO) is required on the VT100 and the equivalent on other terminals for some 3270 Terminal Emulation features.

Optional Hardware

The following is a list of HP-supplied terminals that have been tested and are supported in VT100 mode by the 3270 Terminal Emulator Software:

- VT100 with Advanced Video Option (AVO)
- VT102
- VT220, VT240, VT241
- VT320, VT330, VT340, VT341
- VT400

The following is a list of HP-supplied terminals that have been tested and are supported in VT200 mode by the 3270 Terminal Emulator Software:

- VT220, VT240, VT241

The following is a list of HP-supplied terminals that have been tested and are supported in VT300 mode by the 3270 Terminal Emulator Software (emulation status information will be displayed on the hardware status line):

- VT320, VT330, VT340, VT341

Software Requirements

Using HP SNA 3270 Terminal Emulator software requires:

- OpenVMS Operating System for I64 Version 8.2-1 or 8.3 (SPD 82.35.xx)
- OpenVMS Operating System for Alpha Version 8.2 or 8.3 (SPD 82.35.xx)
- OpenVMS Operating System for VAX Version 7.3 (SPD 25.01.xx)

Using HP SNA 3270 Terminal Emulator software requires a networking product appropriate for the version of OpenVMS, plus one of the SNA server or gateway products listed below. Networking options include:

- TCP/IP Services for OpenVMS (SPD 46.46.xx)
- DECnet for OpenVMS (Phase IV, SPD 48.48.xx)
- DECnet-Plus (Phase V, SPD 50.45.xx for I64 and Alpha, SPD 25.03.xx for VAX)

Choose a networking option appropriate for the selected OpenVMS version from the following table:

<table>
<thead>
<tr>
<th>OpenVMS</th>
<th>TCP/IP</th>
<th>DECnet IV</th>
<th>DECnet V</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.3 (I64)</td>
<td>5.6</td>
<td>8.3</td>
<td>8.3</td>
</tr>
<tr>
<td>8.2-1 (I64)</td>
<td>5.5</td>
<td>8.2-1</td>
<td>8.2-1</td>
</tr>
<tr>
<td>8.3 (Alpha)</td>
<td>5.6</td>
<td>8.3</td>
<td>8.3</td>
</tr>
<tr>
<td>8.2 (Alpha)</td>
<td>5.5</td>
<td>8.2</td>
<td>8.2</td>
</tr>
<tr>
<td>7.3 (VAX)</td>
<td>5.3</td>
<td>7.3</td>
<td>7.3</td>
</tr>
</tbody>
</table>

Choose one of the following SNA server or gateway options:

- HP DECnet SNA Gateway for Channel Support (SPD 29.76.xx)
- HP DECnet SNA Gateway for Synchronous Transport (SPD 25.96.xx)
- HP SNA Domain Gateway (SPD 38.69.xx) 25.01.xx
- HP SNA Peer Server (SPD 51.08.xx)
- HP SNA Server for OpenVMS Alpha (SPD 70.89.xx)
- HP SNA Server for OpenVMS VAX (SPD 27.01.xx)

Cluster Environment

This layered product is fully supported when installed on any valid and licensed OpenVMS Cluster software configurations without restrictions. The Hardware Requirements section of this SPD details any special hardware required by this product.

OpenVMS Tailoring Classes

The following OpenVMS classes are required for full functionality of this layered product:

- OpenVMS Required Saveset
- Network Support
- Utilities

For more information on OpenVMS classes and tailoring, refer to the OpenVMS Operating System for I64, Alpha and VAX Software Product Description (SPD 82.35.xx and 25.01.xx).

*OpenVMS Cluster Software configurations are fully described in the OpenVMS Cluster Software Product Description (29.78.xx) and include CI™, Ethernet, and Mixed Interconnect configurations.
OPTIONAL SOFTWARE

This HP OpenVMS SNA access routine has been qualified and tested to run over the Data Access Incorporated (DAI) Mainframe Gateway for OpenVMS (MGO). Questions and issues related to the DAI MGO product are managed by DAI and are not an HP OpenVMS obligation.

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

This product is available as part of the OpenVMS I64, Alpha and VAX Software Product Libraries on CD-ROM. The software documentation for this product is available as part of the OpenVMS I64, Alpha and VAX Online Documentation Libraries on CD-ROM. Documentation in hard-copy format can be ordered separately.

SOFTWARE LICENSING

License Management Facility Support

HP SNA 3270 Terminal Emulator for OpenVMS supports the OpenVMS License Management Facility (LMF). This facility allocates license units as follows:

- For OpenVMS Integrity, each Per Core License (PCL) allows any number of individuals to use the product at the same time, with one PCL license required for each processor core running OpenVMS.
- For OpenVMS Alpha and VAX, the Unlimited license allows any number of individuals to use the product at the same time.

ORDERING INFORMATION

Licenses

License types vary by platform.

<table>
<thead>
<tr>
<th>HP OpenVMS Integrity Licenses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SNA 3270 TE Per Core License (PCL)</td>
<td>BA476AC</td>
</tr>
</tbody>
</table>

1Update licenses not offered; updates available through SW Updates Service.

2Order one PCL license for each active processor core running OpenVMS.

<table>
<thead>
<tr>
<th>HP OpenVMS Alpha Licenses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SNA 3270 TE Unlimited Use License</td>
<td>QL-10ZA^AA</td>
</tr>
<tr>
<td>SNA 3270 TE Unlimited Use Update License</td>
<td>QL-10ZA^RA</td>
</tr>
</tbody>
</table>

1Asterisk denotes system tier. E=workgroup tier, G=departmental tier, Q=enterprise tier.

<table>
<thead>
<tr>
<th>HP OpenVMS VAX Licenses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SNA 3270 TE Unlimited Use License</td>
<td>QL-454A^AA</td>
</tr>
<tr>
<td>SNA 3270 TE Unlimited Use Update License</td>
<td>QL-454A^RA</td>
</tr>
</tbody>
</table>

1Asterisk denotes system tier. B=workgroup tier, 2=departmental tier, 5=enterprise tier.

Media and Documentation

Product binary kits and online documentation are delivered on consolidated media libraries. Delivery model varies by platform.

<table>
<thead>
<tr>
<th>HP OpenVMS Integrity Media and Online Documentation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation Operating Environment</td>
<td>BA322AA#AJR</td>
</tr>
<tr>
<td>Enterprise Operating Environment</td>
<td>BA323AA#AJR</td>
</tr>
<tr>
<td>Mission Critical Operating Environment</td>
<td>BA324AA#AJR</td>
</tr>
</tbody>
</table>

1Product ships on Layered Products Library media included in all Operating Environment media kits, available with initial OpenVMS OE order.

<table>
<thead>
<tr>
<th>HP OpenVMS Alpha Media and Online Documentation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Layered Products Library Package</td>
<td>QA-03XAA-H8</td>
</tr>
<tr>
<td>Software Layered Products and Operating System Library Package</td>
<td>QA-5G98A-H8</td>
</tr>
</tbody>
</table>

1Quarterly Software Updates Service is available.

<table>
<thead>
<tr>
<th>HP OpenVMS VAX Media and Online Documentation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Layered Products Library Package</td>
<td>QA-5G88A-H8</td>
</tr>
<tr>
<td>Software Layered Products and Operating System Library Package</td>
<td>QA-YL48A-H8</td>
</tr>
</tbody>
</table>

1Quarterly Software Updates Service is available.

<table>
<thead>
<tr>
<th>HP OpenVMS Documentation (Printed)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SNA 3270 Terminal Emulator Documentation</td>
<td>QL-454AA-GZ</td>
</tr>
</tbody>
</table>
NOTE: If you are adding a layered product to an existing OpenVMS Integrity system and do not have the latest software revision on site, please contact your local Sales Representative to request a Special Media kit.

SOFTWARE PRODUCT SERVICES

A variety of service options are available from HP. For more information, contact your HP account representative or distributor. Information is also available on www.hp.com/hps/software.

SOFTWARE WARRANTY

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

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