



Software Product Description

**PRODUCT NAME: HP SNA APPC/LU6.2 Programming
Interface for OpenVMS, Version 2.6**

SPD 26.88.12

This SPD describes the *HP SNA APPC/LU6.2 Programming Interface for OpenVMS*, which is available for the OpenVMS Operating System for OpenVMS I64, OpenVMS Alpha and OpenVMS VAX platforms. All information applies to all the platforms unless otherwise indicated.

DESCRIPTION

The *HP SNA Advanced Program-to-Program Communications/Logical Unit 6.2 (APPC/LU6.2) Programming Interface for OpenVMS* (the APPC product) is a layered software product that allows user-written applications running on suitably configured OpenVMS systems, either within a DECnet or TCP/IP network or on suitably configured OpenVMS systems within an OpenVMS SNA environment to exchange messages with cooperating applications in an IBM® host. The APPC software exists in the OpenVMS system as a shareable image. Access between the cooperating HP and IBM applications is via one of the following 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 product that supports local access as well as TCP/IP and DECnet clients

DECnet Only Connections

- *HP SNA Gateway for Synchronous Transport*
- *HP DECnet SNA Gateway for Channel Transport*

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

The APPC product is a set of subroutines that are called by OpenVMS programs which act as LU6.2 transaction application programs. These subroutines allow an OpenVMS transaction application to:

- Activate and deactivate sessions
- Allocate and deallocate LU6.2 basic and mapped conversations
- Send and receive data
- Request confirmation and confirm transactions
- Send and receive error information
- Define and delete local LU names and TP names
- Supply program initialization parameters
- Supply session-level security and inbound conversation level security
- Allow outbound conversation allocation
- Notify the user application of session failure
- Notify the user application of conversation deallocation (not applicable to *HP SNA Access Server for Windows NT®*)

Features

The APPC product provides features to assist the user in writing and executing the OpenVMS transaction program. The APPC product performs the SNA communications function on the programmer's behalf, allowing the user to concentrate on solving the application

problem rather than having to learn about the underlying communications medium. Because the APPC product performs all the SNA functions on the user's behalf, users are not required to have a knowledge of SNA.

The verbs comprising the APPC product are defined to make the individual subroutine calls correspond to the verbs defined in the IBM manual, *SNA Transaction Programmers Reference Manual* for Logical Unit 6.2. This makes it easier for IBM application-level programmers to code OpenVMS LU6.2 programs.

The APPC product implements both the basic and mapped conversation verb set using the same procedure calls. The OpenVMS programmer may choose which type of conversation is desired by specifying the appropriate symbolic code in the TYPE parameter of the SNALU62\$ALLOCATE procedure.

Both sets of verbs can be synchronous or asynchronous. Asynchronous completion of verbs allows for multithreaded applications to use the LU6.2 interface without blockage.

The following sections describe the supported and unsupported verbs.

Supported Verbs

The following basic conversation verbs are supported:

- Allocate
- Confirm
- Confirmed
- Deallocate
- Flush
- Get_attributes
- Get_type[B
- Post_on_receipt
- Prepare_to_receive
- Receive_and_wait
- Receive_immediate
- Request_to_send
- Send_data
- Send_error
- Wait

The following mapped conversation verbs are supported:

- Get_type
- MC_Allocate
- MC_Confirm

- MC_Confirmed
- MC_Deallocate
- MC_Flush
- MC_Get_attributes
- MC_Post_on_receipt
- MC_Prepare_to_receive
- MC_Receive_immediate
- MC_Receive_and_wait
- MC_Request_to_send
- MC_Send_data
- MC_Send_error
- MC_Wait

The following control operator verbs are supported:

- Activate_session
- Deactivate_session
- Define_remote
- Define_tp
- Delete

Refer to the APPC product documentation for complete descriptions of the use of these verbs.

Unsupported Verbs

The following basic conversation verbs are not supported:

- Backout
- Syncpt
- Test

The following mapped conversation verbs are not supported:

- Backout
- Syncpt
- MC_Test

The APPC product supports single sessions only; parallel sessions are not supported. The following control operator verbs are not needed:

- Change_session_limit
- Define_local_lu
- Define_mode
- Display_local_lu
- Display_mode
- Display_remote_lu

- Display_tp
- Initialize_session_limit
- Process_session_limit
- Reset_session_limit

User Interface

Users of the APPC product should be experienced OpenVMS application programmers. They can use any of the OpenVMS programming languages that conform to the OpenVMS Calling Standard to create application programs that interact with application programs on an IBM system. The user documentation provides example programs written in the native form of the following languages:

- MACRO-32
- BASIC
- BLISS-32
- C
- COBOL
- FORTRAN
- PASCAL
- PL/I

Users of the APPC product are not required to have a knowledge of SNA.

INSTALLATION

Installation services from HP are recommended for a customer's first purchase of the software product. These services provide for installation of the software product by an experienced software specialist.

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).

Disk Space Requirements (Block Cluster Size = 1)

Disk space required for installation:

OpenVMS I64	21,000 blocks (10.5 MB)
OpenVMS Alpha	18,000 blocks (9.0 MB)

OpenVMS VAX	17,900 blocks (9.0 MB)
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Disk space required for use (permanent):

OpenVMS I64	11,646 blocks (5.823 MB)
OpenVMS Alpha	7,900 blocks (4.0 MB)
OpenVMS VAX	6,800 blocks (3.4 MB)

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.

SOFTWARE REQUIREMENTS

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)

Using *HP SNA Application Programming Interface for OpenVMS* software requires a networking product appropriate for the version of OpenVMS, plus one of the SNA 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:

OpenVMS	TCP/IP	DECnet IV	DECnet V
8.3 (I64)	5.6	8.3	8.3
8.2-1 (I64)	5.5	8.2-1	8.2-1
8.3 (Alpha)	5.6	8.3	8.3
8.2 (Alpha)	5.5	8.2	8.2
7.3 (VAX)	5.3	7.3	7.3

Choose *one* of the following SNA options:

- *HP DECnet SNA Gateway for Channel Support (SPD 29.76.xx)*
- *HP DECnet SNA Gateway for Synchronous Transport (SPD 25.C6.xx)*
- *HP SNA Domain Gateway (SPD 38.69.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)*
- *HP SNA Access Server for Windows NT (SPD 64.79.xx)*

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 and software requirements for any future version of this product may be different from the 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 hardcopy format can be ordered separately.

SOFTWARE LICENSING

License Management Facility Support

HP APPC/LU6.2 Programming Interface 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.

HP OpenVMS Integrity Licenses¹	
SNA APPC/LU6.2 PI Per Core License (PCL) ² :	BA477AC

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

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

HP OpenVMS Alpha Licenses	
SNA APPC/LU6.2 PI Unlimited Use License	QL-10SA*-AA ¹
SNA APPC/LU6.2 PI Unlimited Use Update License	QL-10SA*-RA ¹

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

HP OpenVMS VAX Licenses	
SNA APPC/LU6.2 PI Unlimited Use License	QL-022A*-AA ¹
SNA APPC/LU6.2 PI Unlimited Use Update License	QL-022A*-RA ¹

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.

HP OpenVMS Integrity Media and Online Documentation¹

Foundation Operating Environment	BA322AA#AJR
Enterprise Operating Environment	BA323AA#AJR
Mission Critical Operating Environment	BA324AA#AJR

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

HP OpenVMS Alpha Media and Online Documentation

Software Layered Products Library Package ¹	QA-03XAA-H8
Software Layered Products and Operating System Library Package ¹	QA-5G98A-H8

¹Quarterly Software Updates Service is available.

HP OpenVMS VAX Media and Online Documentation

Software Layered Products Library Package ¹	QA-5G88A-H8
Software Layered Products and Operating System Library Package ¹	QA-YL48A-H8

¹Quarterly Software Updates Service is available.

HP OpenVMS Documentation (Printed)

SNA APPC/LU6.2 Programming Interface Documentation	QL-022AA-GZ
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HP OpenVMS Integrity SW Update¹

HP SNA APPC/LU6.2 Programming Interface VMS I64 Media	BA477AA
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¹For the OpenVMS Integrity platform, media updates are ordered by adding SW Updates Service to individual products. The above media product numbers must be pulled into an order if SW Updates Service is planned.

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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