COMPAQ

Software Product Description

PRODUCT NAME: Compaq SNA Application Programming Interface for OpenVMS, Version 2.5 **SPD 26.86.08**

This SPD describes *Compaq SNA Application Programming Interface for OpenVMS*, which is available for the OpenVMS Alpha and OpenVMS VAX platforms. All information applies to both platforms unless otherwise indicated.

DESCRIPTION

The *Compaq SNA Application Programming Interface for OpenVMS* (API) is a layered software product that allows user-written applications running on suitably configured OpenVMS systems within a DECnet or TCP/IP network or on suitably configured OpenVMS systems within an OpenVMS SNA environment to exchange information with cooperating applications on an IBM host. The API software exists in the OpenVMS system as a shareable image. Access between the cooperating Compaq and IBM applications is via one of the following SNA server or gateway products:

TCP/IP or DECnet Connections

- *Compaq SNA Peer Server*
- *Compaq SNA Domain Gateway*
- *Compaq SNA Access Server for Windows NT*
- *Compaq SNA Server for OpenVMS Alpha*, a layered product that supports local access as well as TCP/IP and DECnet clients

DECnet Only Connections

- *Compaq DECnet SNA Gateway for Synchronous Transport*
- *Compaq DECnet SNA Gateway for Channel Transport*
- *Compaq SNA Server for OpenVMS VAX*, an OpenVMS VAX layered product that supports local access as well as remote DECnet clients

Features

The *Compaq SNA Application Programming Interface for OpenVMS* (API) is a collection of subroutines designed to provide an easy-to-use interface for the OpenVMS application programmer who has a specific need to interface to an IBM application subsystem. It supports many different types of sessions between OpenVMS applications and applications running on an IBM host.

API implements all of the path control layer and portions of the transmission and data flow control layers of SNA. The interface supports a number of different applications, each of which uses the SNA function management, data flow control, and transmission control layers in a different way. API is not limited to supporting a particular application, such as 3270 terminals or Remote Job Entry (RJE) workstations; the supported session types are Logical Unit types 0, 1, 2, and 3, using the FM and TS profile types 3 and 4, as described in the product documentation.

API provides extensive parameter checking, state machine management, and other high-level services, relieving the OpenVMS application programmer of tedious protocol details such as state machine processing or "standard" SNA message format checking. The interface appears to the OpenVMS application as a set of subroutines that it calls to request the following operations:

- Establish an SNA session with an application running on an IBM host

- Respond to a session request initiated by an IBM application
- Reestablish a session if the connection is broken
- Disconnect from a session
- Receive messages from an IBM host on the normal or expedited flow
- Send messages to an IBM host on the normal or expedited flow
- Provide positive or negative responses to messages transmitted from an IBM host

Asynchronous Event Notification

API provides a mechanism for an OpenVMS user application to receive control when an asynchronous "network event" occurs, such as the disconnection of a DECnet logical link, an SNA circuit failure, or the receipt of an Unbind Type 2 from IBM. The OpenVMS application is called at a notification entry point defined by the application at connection time; an indication of the event that occurred is reported.

SNA Functions

API provides OpenVMS applications with access to the SNA functions performed by either an SNA gateway or SNA server. These include SNA path control functions, data link control functions, and upper-level functions such as checking access information. API provides assistance with some functions such as brackets and chaining. In addition, API supports negotiable binds and handles exception responses for the user application. For complete details about which SNA functions are provided by this product, refer to the product documentation.

The application must provide the remaining SNA functions it requires. For example, the application must be designed to:

- Process all FMD layer protocols
- Take into account all data flow control and session control request/response units
- Keep track of any "states" relevant to the application
- Translate between ASCII and EBCDIC, and vice versa
- Parse the bind request
- Respond to request units

User Interface

Users of API 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 following languages:

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

Users of this product should be familiar with SNA and have some knowledge of the type of logical unit that will be used.

INSTALLATION

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

HARDWARE REQUIREMENTS

Processors Supported

- Alpha and VAX configuration as specified in the OpenVMS Operating System for Alpha and VAX Software Product Description (SPD 25.01.xx).

Disk Space Requirements (Block Cluster Size = 1)

Disk space required for installation:

OpenVMS Alpha	18,000 blocks (9.0 MB)
OpenVMS VAX	17,900 blocks (9.0 MB)

Disk space required for use (permanent):

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 Alpha and VAX, Version 6.2, 7.1 (VAX), 7.1-2 (Alpha), 7.2, 7.2-1 (Alpha), or 7.3 (SPD 25.01.xx).

Using *Compaq 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 Alpha, SPD 25.03.xx for VAX).

Choose a networking option appropriate for OpenVMS Versions 6.2, 7.1 (VAX), 7.1-2 (Alpha), 7.2, 7.2-1 (Alpha), or 7.3 from the following table:

OpenVMS	TCP/IP	DECnet IV	DECnet V
6.2	4.2	6.2	6.3
7.1	5.1	7.1	7.1
7.1-2	5.1	7.1-2	7.1
7.2	5.1	7.2	7.2
7.2-1	5.1	7.2-1	7.2-1
7.3	5.1	7.3	7.3

Choose *one* of the following SNA options:

- *Compaq DECnet SNA Gateway for Channel Support (SPD 29.76.xx)*
- *Compaq DECnet SNA Gateway for Synchronous Transport (SPD 25.C6.xx)*
- *Compaq SNA Domain Gateway (SPD 38.69.xx)*
- *Compaq SNA Peer Server (SPD 51.08.xx)*
- *Compaq SNA Server for OpenVMS Alpha (SPD 70.89.xx)*
- *Compaq SNA Server for OpenVMS VAX (SPD 27.01.xx)*
- *Compaq SNA Access Server for Windows NT (SPD 64.79.xx)*

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 Alpha and VAX Software Product Libraries on CD-ROM.

The software documentation for this product is available as part of the OpenVMS Alpha and VAX Online Documentation Library on CD-ROM. Documentation in hardcopy format can be ordered separately.

SOFTWARE WARRANTY

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

WARRANTY LIMITATIONS

IBM Supported Configurations

This product is warranted with the IBM software configurations listed in the following table.

Table 1
IBM Software Configurations

Software Product	Version	Release
ACF/VTAM	4	3.0, 4.0
CICS/ESA	4	1.0
CICS/VSE	2	3.0
Communications Server	All	All
IMS/ESA	All	All
Transaction Server	All	All
z/OS	1	1.0

Refer to SNA server or gateway Software Product Descriptions for additional information on supported IBM

operating systems, access methods, and communications front-end software.

Note: Compaq will support IBM software configurations, version and release numbers, as long as support for such configurations is generally available from IBM. Other configurations may have been tested since this SPD was published. Please contact your local Compaq office for up-to-date information regarding listed configurations.

ORDERING INFORMATION

For OpenVMS Alpha Systems

Software Licenses: QL-10VA*-**
Software Documentation: QA-455AA-GZ

Media and documentation for this product are available on the OpenVMS Alpha Software Product Library and Online Documentation Library on CD-ROM. Documentation in hardcopy format can be ordered separately.

For OpenVMS VAX Systems

Software Licenses: QL-455A*-**
Software Documentation: QA-455AA-GZ

Media and documentation for this product are available on the OpenVMS VAX Software Product Library and Online Documentation Library on CD-ROM. Documentation in hardcopy format can be ordered separately.

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

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

SOFTWARE LICENSING

This software is furnished only under a license. For more information about Compaq's licensing terms and policies, contact your local Compaq office.

License Management Facility Support

This layered product supports the OpenVMS License Management Facility. License units for this product are allocated on a CPU-capacity basis.

For more information on the License Management Facility, refer to the OpenVMS Operating System for Alpha and VAX Software Product Description (SPD 25.01.xx) or the License Management Facility manual of the OpenVMS Operating System documentation set.

For more information about Compaq's licensing terms and policies, contact your local Compaq office.

SOFTWARE PRODUCT SERVICES

Installation

Installation provides comprehensive installation and of Compaq and non-Compaq hardware, software, and networks products. These products include systems, servers, upgrades, workstations, terminals, PCs, peripherals, network equipment, operating systems, and layered products. Optional pieces of the Installation offer include site planning and preparation, orientation, and other projects which are based on the installation of computer equipment (e.g. relocation services).

License Subscription

License Subscription provides the license rights to use all new versions of those products, which are released during the contract period. Also included are the rights to use certain server-resident products whose license is included in a corresponding client license.

Telephone Software Support

Software Support provides software problem identification and resolution and operational support for system managers, technical support/helpdesk personnel who manage Compaq and popular multivendor server software in either a standalone or networked environment. This service provides access both to technical resources to assist in problem diagnosis and resolution and to Compaq's information database. This combination of support resources will address system management questions and inquiries on a wide variety of topics including information on the latest product features, known problems and available solutions, and operational advice and assistance to help the system manager, system administrator better manage its information technology environment.

Please contact your local Compaq office for additional information on specific services in your area.

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