COMPAQ

Software Product Description

PRODUCT NAME: Compaq SNA Server for OpenVMS VAX, Version 2.3 **SPD 27.01.11**

DESCRIPTION

Compaq SNA Server for OpenVMS VAX is a layered software product that allows suitably configured OpenVMS VAX systems to directly participate in an IBM Systems Network Architecture (SNA) networking environment. After installing the SNA Server software and one or more DECnet SNA access routines, users can perform functions such as accessing IBM application programs or other system resources, act as a 3270 display station, exchange data files and documents with an IBM host, and implement distributed application programs that run between the OpenVMS VAX and IBM systems.

Architecturally, an OpenVMS VAX system running *Compaq SNA Server for OpenVMS VAX* appears to the SNA network as a Physical Unit Type 2 node, and is attached to the SNA network through a synchronous communications device to an IBM 37xx Communications Controller. The SNA server software supports one synchronous communications line at speeds of 9.6 Kbps to 64 Kbps, depending on the communications device being used. The SNA server software supports a maximum of 16 to 64 concurrent SNA logical unit sessions depending on the VAX CPU and memory on which it is running. Both local and remote DECnet connections are supported from the Compaq SNA server into the IBM SNA network, using switched or leased lines in point-to-point or multipoint environments.

Compaq SNA Server for OpenVMS VAX also supports connections over X.25 switched virtual circuits using Qualified Logical Link Control (QLLC). An X.25 license is required for SNA over X.25 connections. Refer to the Software Requirements section of this Software Product Description.

Compaq SNA Server for OpenVMS VAX can send Record Formatted Maintenance Statistics (RECFMS) messages to the IBM system. These messages contain counters requested by the IBM Netview Hardware Monitor using Request Maintenance Statistics (REQMS) messages. Not all RECFMS messages are supported by *Compaq SNA Server for OpenVMS VAX*. Refer to the SNA Server documentation for more information.

The functions provided by the SNA server software are comparable to those provided by the DECnet SNA Gateway product. Users on one or more Compaq systems with SNA access routines can simultaneously perform functions such as accessing IBM application programs or other system resources, act as a 3270 display station, perform data transfer between Compaq and IBM file systems, exchange electronic documents and mail messages, submit jobs to IBM batch subsystems acting as a Remote Job Entry workstation, and implement distributed, task-to-task application programs that run between Compaq and IBM systems.

Systems wishing access to the SNA environment must be configured with the appropriate SNA access routines. For additional information about which access routines are supported, see the Optional Software section of this Software Product Description.

A variety of communications devices are supported. Please refer to the *DECnet-Plus for OpenVMS VAX* Software Product Description (SPD 25.03.xx) for information about the devices supported by the *Compaq SNA Server for OpenVMS*. Each device supports different configurations. See Table 1 in the Minimum Recommended Configuration section of this product's Software Product Description for details.

For connection via Synchronous Data Link Control

(SDLC) circuits can be set full duplex. Data can be sent and received simultaneously on full-duplex lines. This setting corresponds to DATMODE=FULL in the IBM ACF/NCP PU macro.

Compaq SNA Server for OpenVMS VAX supports connections over X.25 switched virtual circuits (QLLC) as well as SDLC circuits. The QLLC circuit can be configured to use either incoming or outgoing X.25 switched virtual circuits (SVCs). *Compaq SNA Server for OpenVMS VAX* does not support X.25 permanent virtual circuits (PVCs). *Compaq SNA Server for OpenVMS VAX* requires the IBM Network Packet Switched Interface (NPSI) in order to use QLLC circuits. The IBM NPSI software should be generated to support "Boundary Network Node, Qualified Logical Link control" (BNN QLLC) type-3 switched virtual circuits.

Compaq SNA Server for OpenVMS VAX also supports the following optional facilities for QLLC circuits:

- Flow Control Negotiation
- Closed User Groups
- Reverse Charging

Management Utilities

The *Compaq SNA Server for OpenVMS VAX* provides the management utilities SNANCP and SNAEVL. SNANCP is used to manage and monitor SNA server components such as line, circuit, physical unit (PU), and logical unit (LU). SNANCP provides the human interface for the Compaq system manager to monitor, control, and troubleshoot the SNA server and its IBM SNA environment. All management functions pertaining to SNA server software are performed on VAX system. The SNANCP commands allow users to display and modify information pertaining to the line, circuit, PU, LUs, and access names. Online help is provided. SNAEVL is used to log events generated by these components.

Management of the Compaq SNA Server node should be viewed as part of the Compaq environment; the management of the line connecting the OpenVMS VAX system to the IBM system is a joint responsibility of the IBM and Compaq system managers.

Problem Isolation and Determination Tools

The Common Trace Facility (CTF) is the problem-determination tool that provides frame-level tracing of a circuit to help in debugging application programs and identifying system problems. A privileged DECnet-Plus user can run a trace at the PU level, SDLC level, or session level. The trace feature is helpful for identifying an error for remedial action.

The Installation Verification Procedure (IVP) for the *Compaq SNA Server for OpenVMS VAX*, SNAVMS$IVP, is also useful for problem isolation. SNAVMS$IVP is run separately from any access routine, and can be used to verify connectivity to specific IBM applications over specific LU sessions. In failure cases, SNAVMS$IVP displays an expanded error text that attempts to diagnose the cause of the failure.

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 by an experienced software specialist.

HARDWARE REQUIREMENTS

Processors Supported

The *Compaq SNA Server for OpenVMS VAX* supports the following processors and session maximums for local user connections, and an additional 128 sessions for DECnet connections. Restrictions are based on processor memory, line speeds, and CPU. For information about supported processors, refer to the OpenVMS Operating System for VAX and Alpha Software Product Description (SPD 25.01.xx).

MicroVAX	
Processor	**Model**
MicroVAX II	16
MicroVAX 2000	16
MicroVAX 3100 Models 10E, 20E, 88, and 98	16
MicroVAX 3100 Models 30, 40, 80, and 90	32
MicroVAX 3300	32
MicroVAX 3400	32
MicroVAX 3600	32
MicroVAX 3800	32
MicroVAX 3900	32

VAXstation	
Processor	**Model**
VAXstation II	16
VAXstation 3200	16
VAXstation 3500	16
VAXstation 3520	16
VAXstation 3540	16
VAXstation 4000 Models 60, 90, and 96	32

VAXserver	
Processor	**Model**
VAXserver 3100 Models 10E, 20E	16
VAXserver 3300	16
VAXserver 3400	16
VAXserver 3500	16
VAXserver 3600	16
VAXserver 3602	16
VAXserver 3800	16
VAXserver 3900	16
VAXserver 4000 Model 200	32
VAXserver 4000 Model 300	32
VAXserver 6000 Model 220, 220	48
VAXserver 6000 Model 310, 320	48
VAXserver 6000 Models 410	48
VAXserver 6000 Models 510, 520	48

VAX	
Processor	**Model**
VAX 4000 Model 100	32
VAX 4000 Model 106A, 108	64
VAX 4000 Model 200	32
VAX 4000 Model 300	48
VAX 4000 Model 505	32
VAX 4000 Model 505, 505A	64
VAX 4000 Model 705A	64
VAX 6000 Model 210, 220, 230	48
VAX 6000 Model 240	64
VAX 6000 Model 310, 320, 330	48
VAX 6000 Model 340, 350, 360	64
VAX 6000 Model 410	48
VAX 6000 Model 420, 430, 440, 450, 460	64
VAX 6000 Model 510	48
VAX 6000 Model 520, 530, 540, 550, 560	64
VAX 6000 Model 610, 620, 630, 640, 660	64
VAX 7000 Model 810, 820, 830, 840, 850, 860	64
VAX 8200	32
VAX 8250	32
VAX 8300	32
VAX 8350	32
VAX 8500	48
VAX 8530	48
VAX 8550	48
VAX 8700	48
VAX 8810	48
VAX 8800	64
VAX 8820	64
VAX 8830	64
VAX 8840	64
VAX 9000 All Models	64
VAX 10000 All Models	64
VAXft 3000 Model 110	32
VAXft 3000 Model 310, 410, 610, 612	48

Users can configure their IBM line to activate more logical unites (LUs) than the maximum number of sessions allowed for the processor. The maximum number of active LUs is twice the maximum number of sessions. For example, 64 LUs can be activated on a MicroVAX 3600.

Minimum Recommended Configuration

A minimum hardware system configuration includes:

- One system disk
- A load device
- 6 MB memory
- Modems or modem eliminators
- A supported synchronous device (Table 1)

Table 1
Synchronous Controller Characteristics

Device	NRZI[1]	EIA-232-D V2.4	V.35	Max. Line Speed (Kbps)
DMB32	Yes	Yes	Yes	38.4
DSB32	Yes	Yes	Yes	64
DPV11	No	Yes	No	9.6
DSV11	Yes	Yes	Yes	64
DST32	Yes	Yes	No	19.2
DSH32	Yes	Yes	No	19.2
DSW41	Yes	Yes	No	64
DSW42	Yes	Yes	No	64
DSW21	Yes	Yes	Yes	64
DSF32	Yes	Yes	Yes	64

[1] NRZI support means the signaling mode for the lines from the Compaq SNA Server to the IBM system can be set to NORMAL or NRZI (non-return-to-zero-inverted) so the line characteristics can match those set in the IBM ACF/NCP LINE macro.

Disk Space Requirements (Block Cluster Size = 1)

Disk space required for installation:	8000 blocks
Disk space required for use (permanent):	6500 blocks

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 VAX (SPD 25.01.xx)
- DECnet-Plus for OpenVMS VAX (SPD 25.03.xx)

Table 2 summarizes the software dependencies and operating system support for the *Compaq SNA Server for OpenVMS VAX*, Version 2.3.

Table 2
SNA Server Software Requirements

OpenVMS Version	Networking Software	Data Link	Additional Software Required
7.3	DECnet-Plus V7.3	SDLC	None
		QLLC	X.25
V7.2	DECnet-Plus V7.2	SDLC	None
		QLLC	X.25
V7.1	DECnet-Plus V7.1	SDLC	None
		QLLC	X.25
V6.2	DECnet/OSI V6.3	SDLC	None
		QLLC	X.25

Note: X.25 is packaged with DECnet-Plus, but a separate license is required. Refer to the *Compaq DECnet-Plus for OpenVMS VAX* Software Product Description for further information.

Cluster Environment

This layered product is fully supported when installed on any valid and licensed VMScluster* configuration with the following restrictions:

- The *Compaq SNA Server for OpenVMS VAX* must be configured and run on each OpenVMS VAX node containing a synchronous device connected to the SNA network for SDLC circuits.
- The access routines must run on the node configured with *Compaq SNA Server for OpenVMS VAX*

*OpenVMS Cluster configurations are fully described in the OpenVMS Cluster Software Product Description (SPD 42.18.xx).

OPTIONAL SOFTWARE

The following list identifies access routines that are available for use with the *Compaq SNA Server for OpenVMS VAX*. For information about these products, consult the respective Software Product Descriptions.

Table 3
Access Routines

Supported on OpenVMS Alpha Systems
Compaq SNA 3270 Terminal Emulator for OpenVMS (SPD 26.84.xx)
Compaq SNA APPC/LU6.2 Programming Interface for OpenVMS (SPD 26.88.xx)
Compaq SNA Data Transfer Facility for OpenVMS (SPD 27.85.xx)
Compaq DECnet SNA Application Programming Interface for OpenVMS (SPD 26.86.xx)
Compaq DECwindows™ DECnet SNA 3270 Terminal Emulator for OpenVMS (SPD 31.58.xx)
Compaq SNA 3270 Data Stream Programming Interface for OpenVMS (SPD 26.87.xx)
Compaq SNA Printer Emulator for OpenVMS (SPD 26.70.xx)
Compaq SNA Remote Job Entry for OpenVMS (SPD 26.85.xx)
Supported on OpenVMS VAX Systems
Compaq SNA 3270 Terminal Emulator for OpenVMS (SPD 26.84.xx)
Compaq SNA APPC/LU6.2 Programming Interface for OpenVMS (SPD 26.88.xx)
Compaq SNA Data Transfer Facility for OpenVMS (SPD 27.85.xx)
Compaq DECnet SNA Application Programming Interface for OpenVMS (SPD 26.86.xx)
Compaq DECwindows DECnet SNA 3270 Terminal Emulator for OpenVMS (SPD 31.58.xx)
Compaq SNA 3270 Data Stream Programming Interface for OpenVMS (SPD 26.87.xx)
Compaq SNA Printer Emulator for OpenVMS (SPD 26.70.xx)
Compaq SNA Remote Job Entry for OpenVMS (SPD 26.85.xx)
Supported on Tru64 UNIX Systems
Compaq SNA APPC/LU6.2 Programming Interface for Tru64 UNIX (SPD 56.11.xx)
Compaq SNA LUA Programming Interface for Tru64 UNIX (SPD 70.69.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 VAX Software Product Library on CD-ROM.

The software documentation for this product is also available as part of the OpenVMS VAX Online Documentation Library on CD-ROM.

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 4
IBM Software Configurations

Software Product	Version	Release
ACF/NCP/VS (for the 3745)	5	4.0
	6	3.0
	7	3.0, 4.0, 5.0, 6.0, 7.0, 8.0
ACF/VTAM	4	3.0, 4.0
MVS/ESA SP	4	2.0, 3.0
NetView	3	1.0, 2.0
OS/390	2	7.0, 8.0, 9.0, 10.0
Tivoli TIME 10 NetView	1	2.0, 3.0
VSE/SP	3	2.0
z/OS	1	1.0

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.

For X.25 support the SNA Server for OpenVMS requires the IBM NPSI and NCP software configurations listed in the following table.

Table 5
IBM Software Required for X.25 Support

NPSI Version	Release	NCP Version	Release
3	4.0	5	4.0
3	6.0	6	3.0
3	8.0	7	8.0, 9.0

Fujitsu Support

The Fujitsu hardware and software environments listed below are supported with the following restrictions:

- These configurations are supported by Compaq Japan (Compaq Computer K.K.) for installations in the country of Japan ONLY and ONLY with the "F" version access routines listed below, which are available from and supported by Compaq Japan.
- Only SDLC circuits are supported with Fujitsu configurations.

Please contact Compaq Japan for additional information.

Hardware

- FUJITSU FACOM M-series Mainframe
- FUJITSU F2806G front end

Software

- FUJITSU NCP-G V10L20 (similar to IBM's ACF/NCP)
- FUJITSU OS IV/F4 MSP E20 (similar to IBM's MVS/XA)
- FUJITSU VTAM-G V10L20 (similar to IBM's VTAM)

"F" Access Routines

The following products provide local language support and are supported by Compaq Japan (Compaq Computer K.K) for use with Fujitsu environments in Japan.

F Access Routines	Version	SPD (Japan)
F6650 Terminal Emulator	1.0	27.J3.xx
F6650 Data Stream Programming Interface	1.0	27.J4.xx
DECwindows™ F6650 Terminal Emulator for VMS	1.0	27.T7.xx
F-RJE	1.0	27.J5.xx
F-PRE	1.0	26.T8.xx

ORDERING INFORMATION

Software Licenses: QL-362A*-AA
Hardcopy Documentation: QA-362A*-GZ

* 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 license from Compaq Computer Corporation. For more information about Compaq's licensing terms and policies, contact your local Compaq office.

License Management Utility Support

This layered product supports the OpenVMS License Management Utility.

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

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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