Software Product Description

PRODUCT NAME: VAX Message Router X.400 Gateway, Version 2.3 **SPD 27.50.06**

DESCRIPTION

VAX Message Router X.400 (MRX) Gateway is a network server layered software product that resides on an OpenVMS™ VAX™ system and provides interconnection between MAILbus™ (Digital Equipment Corporation's Message Router-based electronic message transfer service) and a CCITT 1984 X.400 Message Handling System. Together, VAX Message Router X.400 Gateway and VAX Message Router (MR) form a Message Transfer Agent conforming to the CCITT 1984 X.400 Series of Recommendations for Message Handling Systems, and can act as either a Private Management Domain (private messaging network) or an Administration Management Domain (public messaging network).

The MRX Gateway allows users of systems connected to MAILbus (for example, user agents such as DEC MAILworks™ or ALL–IN–1™ Integrated Office System) to communicate with users of X.400 Message Handling Systems. Users of systems connected through other gateways to MAILbus can also access the MRX Gateway and systems connected through it. The MRX Gateway can be connected to an X.400 Gateway from another system vendor, to an X.400 Private Management Domain, or to an X.400 Administration Management Domain. Applications such as DEC/EDI (Digital's Electronic Data Interchange) software can also use MRX as a connection to public and private networks.

The VAX Message Router X.400 Gateway interworks with systems that conform to the CCITT X.400 1984 recommendations as defined in the profiles produced by:

- Stable Implementation Agreements for Open Systems Interconnection Protocols: Part 7 - 1984 Message Handling Systems, Output from December 1992 OSI Implementors Workshop (NIST - National Institute of Science and Technology).
- CEN/CENELEC ENV 41 201 (profile(A/3211) for private domains)
- CEN/CENELEC ENV 41 202 (profile(A/311) for administration domains)

These profiles are not uniform and where differences exist, the product follows the NIST profile. Some restrictions on the level of service obtained between message originator and recipient may apply if all the systems involved in the message transfer do not conform to the X.400 Recommendations.

Standards Conformance

VAX Message Router X.400 Gateway, Version 2.3, is being submitted for conformance testing by an accredited testing institution.

The previous version (V2.2G) of VAX Message Router X.400 Gateway successfully completed conformance testing according to the European ENV 41202 (A/311 profile and U.K. GOSIP profile). The conformance testing was carried out by the United Kingdom National Computing Centre, an accredited Open Systems Test Consortium (OSTC) Eurolab, who produced OSTC test reports, which are valid in all European Community Member states. This prior version (V2.2G) of VAX Message Router X.400 Gateway has been registered by NIST as conformant to the U.S. GOSIP Version 1.0 profile and has been certified, by the Deutsche Bundespost Telekom, as being in compliance with the following standards:

- CCITT series X.400 Version 1984 and
- ENV 41 202 (ADMD) Version 1987

Please contact your local Digital™ office for information on the conformance status, test reports and registration.

Message Content Conversion

The MRX Gateway provides translation and conversion services between the NIST/NBS protocols and service elements of MAILbus and those specified by the X.400 Recommendations. Message content conversion is also performed by MRX. Digital's WPS–PLUS™, DECdx™, ASCII (Digital Multi-National Character Set), DDIF (Digital Document Interchange Format) and text document formats are converted to IA5, Teletex or ISO 6937 formats when passed from the MAILbus to the X.400 network. IA5, Teletex or ISO 6937 documents received

from the X.400 network are passed into MAILbus as ASCII (Digital Multi-National Character Set) text files.

With the addition of the DEC ODA (Office Document Architecture) Compound Document Architecture (CDA) Gateway for OpenVMS (SPD 32.10.xx), a set of document conversion routines which reconcile Digital's Compound Document Architecture and the ISO Office Document Architecture, DDIF documents can be passed into the X.400 network as OdaBodyPart (Tag 12) messages; as defined in the NIST Stable Implementation Agreements for Open Systems Interconnection Protocols, Version 6, 1992. In the reverse direction, ODA documents are converted into DDIF format for onward transmission through MAILbus.

The MRX Gateway also supports the transmission and receipt of binary data using the Undefined BodyPart (Tag 14) feature described in the CCITT X.400-Series Implementor's Guide, 1986 and the NIST Stable Implementation Agreements for Open Systems Interconnection Protocols, Version 6, 1992. The product documentation describes the capabilities and limitations of binary file transfer using the MRX Gateway.

Unconverted transmission and receipt of WPS–PLUS and all Digital RMS file formats directly to and from another domain with which a bilateral agreement has been made and which also uses VAX Message Router X.400 Gateway for the connection is possible using the USABodyPart (Tag 310), as described in the NIST Stable Implementation Agreements for Open Systems Interconnection Protocols, Version 6, 1992.

Conversion alternatives are chosen on a gateway wide basis during the configuration process for VAX Message Router X.400 Gateway.

Content and identity conversion for Digital's MAILbus to X.400 transfers are summarized in the following table.

Table 1

Digital Message Format	Default Conversion	Optional Conversion
ASCII, WPS–PLUS, DECdx, and DDIF Text	IA5	Teletex or ISO 6937
DDIF Text, Graphics and Image	USABodyPart (Tag 310)	OdaBodyPart (Tag 12)
Binary Files DECbodypart 7	USABodyPart (Tag 310)	Undefined BodyPart (Tag 14)

Content and identity conversion for X.400 to Digital's MAILbus transfers are summarized in the following table.

Table 2

X.400 Message Format	Default Conversion	Optional Conversion
IA5	ASCII	
Teletex	ASCII	
ISO 6937	ASCII	
OdaBodyPart (Tag 12)	Non-Delivery Notice returned to sender	DDIF
Undefined BodyPart (Tag 14)	DECbodypart 7	
USABodyPart (Tag 310)	DECbodypart 7	

The VAX Message Router X.400 Gateway is designed to conform with U.S. GOSIP, Version 1.0 and U.K. GOSIP, Version 3.1.

The Directory Service (DDS), part of VAX Message Router, is used for address translation between X.400 Originator/Recipient (O/R) Names and MAILbus addresses when messages are transferred to or from the X.400 network. This directory is also used to authorize originators of outgoing messages to the X.400 network.

The MRX Gateway may use either an X.25 wide area network link or an IEEE 802.3/ISO 8802-3/Ethernet local area network to communicate with:

- Another X.400 Gateway (back-to-back) within the same network
- Another vendor's X.400 MTA within the same network
- A private domain (from a private or administration domain)
- An administration domain (from a private or administration domain)

To provide connection to MAILbus, the VAX Message Router software is required by and included with the software license and media kit for VAX Message Router X.400 Gateway.

INSTALLATION

MRX forms only one part of a distributed multi-vendor electronic messaging application. Important activities, such as coordination with other messaging components, modification of OSI network parameters, and the creation or update of subscriber entries in the Directory Service, must precede the installation of this product. Digital offers a number of services to assist customers with these tasks. Refer to the *SOFTWARE PRODUCT SERVICES* section of this SPD for more information.

A customer's first purchase of this product should include Digital Installation Services. For subsequent purchases of this product, only experienced customers should attempt installation. Digital recommends that all other customers purchase Digital's Installation Services. These services provide for installation of the software product by an experienced Digital Software Specialist.

HARDWARE REQUIREMENTS

Processor and/or hardware configurations as specified in the System Support Addendum (SSA 27.50.06-x).

SOFTWARE REQUIREMENTS

- OpenVMS VAX Operating System
- DECnet™/OSI for OpenVMS
- VAX Message Router (included in the software license and media kit for VAX Message Router X.400 Gateway)

Refer to the System Support Addendum (SSA 27.50.06-x) for availability and required versions of prerequisite /optional software.

ORDERING INFORMATION

Software Licenses: QL-VDMA*-**
Software Media: QA-VDMA*-**
Software Documentation: QA-VDMA*-GZ
Software Product Services: QT-VDMA*-**

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

VAX Message Router X.400 Gateway software license and media kit includes the software media kit for the required VAX Message Router software.

SOFTWARE LICENSING

This software is furnished under the licensing provisions of Digital Equipment Corporation's Standard Terms and Conditions. For more information about Digital's licensing terms and policies, contact your local Digital office.

License Management Facility Support

This layered product supports the OpenVMS License Management Facility. A separate product authorization key (PAK) is not provided for the VAX Message Router product.

License units for this layered product are allocated on an unlimited system use basis.

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

SOFTWARE PRODUCT SERVICES

MAILbus products are components of larger distributed messaging applications, which may involve multiple vendors' systems in multiple locations. Digital offers a number of consulting services to assist customers in the planning, installation, and management of these messaging applications and related directory services, integration of PC-based messaging systems, and the provision of network-wide directory services.

A variety of service options are available from Digital. For more information, contact your local Digital office.

SOFTWARE WARRANTY

Warranty for this software product is provided by Digital with the purchase of a license for the product as defined in the Software Warranty Addendum of this SPD.

Warranty Limitations

Achievement of the full level of messaging services specified in the CCITT 1984 X.400 Recommendations is only possible if all systems involved in the origination, transfer and delivery of a message conform to those X.400 Recommendations.

Absolute fidelity between an original document and the resulting document as printed or displayed by the receiving system is not guaranteed. The differences between vendors' approaches to word processing systems, the transformations required for the transfer and printing of a document, and the types of printers used may all affect the resulting printed document.

System Support Addendum

PRODUCT NAME: VAX Message Router X.400 Gateway, Version 2.3 **SSA 27.50.06-A**

HARDWARE REQUIREMENTS

Processors Supported

VAX™: VAX 4000 Model 100 Series,
VAX 4000 Model 200 Series,
VAX 4000 Model 300 Series,
VAX 4000 Model 400 Series,
VAX 4000 Model 500 Series,
VAX 4000 Model 600 Series

VAX 6000 Model 200 Series,
VAX 6000 Model 300 Series,
VAX 6000 Model 400 Series,
VAX 6000 Model 500 Series,
VAX 6000 Model 600 Series

VAX 8200, VAX 8250, VAX 8300,
VAX 8350, VAX 8500, VAX 8530,
VAX 8550, VAX 8600, VAX 8650,
VAX 8700, VAX 8800, VAX 8810,
VAX 8820, VAX 8830, VAX 8840

VAX 9000 Model 110,
VAX 9000 Model 210,
VAX 9000 Model 300 Series,
VAX 9000 Model 400 Series

VAX–11/730, VAX–11/750, VAX–11/780,
VAX–11/785

VAXft™ Model 110
VAXft Model 310,
VAXft Model 410,
VAXft Model 610,
VAXft Model 612

MicroVAX™: MicroVAX II, MicroVAX 2000,
MicroVAX 3100, MicroVAX 3300,
MicroVAX 3400, MicroVAX 3500,
MicroVAX 3600, MicroVAX 3800,
MicroVAX 3900

VAXstation™: VAXstation II, VAXstation 2000,
VAXstation 3100, VAXstation 3200,
VAXstation 3500, VAXstation 3520,
VAXstation 3540, VAXstation 4000

VAXserver™: VAXserver 3100, VAXserver 3300,
VAXserver 3400, VAXserver 3500,
VAXserver 3600, VAXserver 3602,
VAXserver 3800, VAXserver 3900

VAXserver 4000-200, VAXserver 4000-300,
VAXserver 4000-500

VAXserver 6000-210, VAXserver 6000-220,
VAXserver 6000-310, VAXserver 6000-320,
VAXserver 6000-410, VAXserver 6000-420,
VAXserver 6000-510, VAXserver 6000-520
VAXserver 6000-610, VAXserver 6000-620,
VAXserver 6000-630

Processors Not Supported

MicroVAX I, VAXstation I, VAX–11/725, VAX–11/782, VAXstation 8000

Processor Restrictions

VAX–11/730 systems require a minimum of an R80/RL™02 or RA™60 configuration.

A TK™50 Tape Drive is required for standalone MicroVAX 2000 and VAXstation 2000 systems.

Disk Space Requirements (Block Cluster Size = 1):

Disk space required for installation	25,000 blocks (12,800 Kbytes)
Disk space required for use (permanent)	5,000 blocks (2,560 Kbytes)

These block 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 selected. Data files will require additional space.

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Refer to the VAX Message Router System Support Addendum, SSA 26.33.xx, for the disk space requirements for the pre-requisite VAX Message Router product.

CLUSTER ENVIRONMENT

This layered product is fully supported when installed as a single logical instance on any valid and licensed VAXcluster™* configuration. Multiple logically separate instances of this product installed on the same VAXcluster configuration are not supported. The *HARDWARE REQUIREMENTS* sections of this product's Software Product Description and System Support Addendum detail any special hardware required by this product.

* V5.x VAXcluster configurations are fully described in the VAXcluster Software Product Description (29.78.xx) and include CI™, Ethernet, and Mixed Interconnect configurations.

SOFTWARE REQUIREMENTS

- OpenVMS™ VAX™ Operating System V5.5-2
- DECnet™/OSI for OpenVMS V5.6B
- VAX Message Router V3.3 (included in the software license and media kit for VAX Message Router X.400 Gateway)

OpenVMS Tailoring

For OpenVMS V5.x systems, the following OpenVMS classes are required for full functionality of this layered product:

- OpenVMS Required Saveset
- Programming Support
- Secure User's Environment
- Network Support
- Utilities
- OpenVMS DECwindows™ (for DDIF conversions)

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

OPTIONAL SOFTWARE

User Agents and Applications:

- DEC MAILworks™ V1.1 - V1.2
- ALL–IN–1™ Integrated Office System V2.4 - V3.0
- DEC/EDI V1.3
- DEC ODA Compound Document Architecture (CDA)

  Gateway for OpenVMS V1.0

MAILbus™ Gateways:

- ULTRIX™ Mail Connection V1.1B
- VAX Message Router/P Gateway V1.3

  (to IBM®'s PROFS® and OfficeVision™/VM systems)
- VAX Message Router/S Gateway V1.3

  (to IBM's SNADS systems)
- VAX Message Router VMSmail Gateway V3.3

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

9-track 1600 BPI Magtape, TK50 Streaming Tape

This product is also available as part of the OpenVMS VAX Consolidated Software Distribution on CD-ROM.

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

ORDERING INFORMATION

Software Licenses: QL-VDMA*-**
Software Media: QA-VDMA*-**
Software Documentation: QA-VDMA*-GZ
Software Product Services: QT-VDMA*-**

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

VAX Message Router X.400 Gateway software license and media kit includes the software media kit for the required VAX Message Router software. No separate Product Authorization Key (PAK) is issued for the VAX Message Router software.

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