Software Product Description

DESCRIPTION

The Internet Portal V1.1 software provides TCP/IP connectivity in an existing DECnet environment. The Internet Portal is a server running on dedicated hardware configured as both a DNA Phase IV/IV+ end system and an IP Gateway (IP Router). IP hosts forward IP datagrams destined for a remote host to the Internet Portal. The portal encapsulates the IP datagram into DECnet packets and forwards that packet to another portal located in another portion of the DECnet wide area network. After an IP datagram is enveloped into a DECnet packet by the Internet Portal, it is passed to a DECnet router for transport over the network backbone.

The DECnet backbone is completely transparent from the point of view of the source and destination IP nodes. The DECnet envelope is removed by the receiving portal and the original IP datagram is sent on to the receiving TCP/IP host. DECnet is responsible for the routing of the packet through the wide area network. Only one networking protocol, DECnet, is used over the long haul links. This allows the bandwidth of the long haul link to be used to its full potential with no need to multiplex multiple protocols. Use of one networking protocol also simplifies the management of the backbone and contention for resources. Multiple protocols continue to co-exist on the local Ethernet.

Internet Portals have the ability to learn of other Internet Portals and other IP routers on the DECnet network, thus providing dynamic routing and minimal configuration management. An Internet Portal may communicate with up to 31 other Internet Portals across the DECnet wide area network. Version 1.1 of the Internet Portal contains a site-configurable option on the portal discovery process. This option provides the ability to restrict this learning process to only those portals specified by the local portal manager.

The Internet Portal implements the Routing Information Protocol (RIP), an interior gateway protocol, and the Exterior Gateway Protocol (EGP), thus functioning as an IP gateway on the local area network. As such it can interoperate with other vendor IP gateway products which conform to RFC 1009. A major enhancement of the Internet Portal, Version 1.1 is the provision of a site-configurable routing manager, allowing use and control of the Routing Information Protocol (RIP) and, optionally, the Exterior Gateway Protocol (EGP). Additionally, the routing manager provides the ability to filter routing updates and configure static routes.

The Internet Portal is based upon the Internet Portal MIPS RISC-based product which is diskless with 8MB of memory, LANCE Ethernet interface with selectable thin or thickwire connectors, a serial port for terminal connection, and a mouse loopback connector. The Internet Portal V1.1 software license and hardware is packaged together and can be ordered as a single line item. The Internet Portal is also part of several packaged offerings, the DECnet/Internet Router 250 and the DECnet/Internet Router 2000.

Note: Internet Portal, Version 1.1 is not compatible with Version 1.0 of the product. To insure connectivity between portals, the customer should insure that all portals are upgraded to Version 1.1.

Standards

The Internet Portal conforms to the DECnet end node description in the DNA Phase IV/IV+ routing specification. The Internet Portal also conforms to current Internet Standards which are commonly referred to as Request for Comments (RFCs).

Performance

The Internet Portal operates at a minimum of 1,000 packets-per-second in to and out of the portal itself. The 1,000 packets-per-second assumes packets are 128 bytes long, and where message received, processed and transmitted is counted as one packet.

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Installation

The software for the Internet Portal V1.1 is downline loaded from a host supporting the Phase IV/IV+ DEC-net MOP (Maintenance Operation Protocol). The software image is installed and configured on a VMS or ULTRIX system (termed a load host) on the same LAN as the Internet Portal; this software image is then downline loaded to the portal unit from this load host.

Installation menus are provided for the load hosts that can prompt the customer for the information required for portal operation. Portal software installation can be completed within an hour.

System Management

A dedicated console port is available on the Portal to allow the customer to display output information at boot time, hardware diagnostics, and software error messages.

During normal operation, a remote network manager may access the portal via the DECnet Network Management Listener (NML) and modify or examine various DECnet parameters of the system. Under DECnet Phase IV/IV+, NCP parameters are utilized as the portal is seen by the DECnet side as an end node.

Management support for monitoring the Internet parameters, as defined in the Internet Management Information Base, is provided in the Internet Portal through support of the SNMP (Simple Network Management Protocol) management agent. Digital Field Service or customers with access to third party SNMP management station software will have read access to the Portal's SNMP management agent.

HARDWARE REQUIREMENTS

VAX, MicroVAX, VAXstation, VAXserver, DECstation or DECsystem configuration as specified in the System Support Addendum (SSA 31.61.02-x).

The Internet Portal V1.1 software runs only on the Internet Portal (DEPTL-**) hardware (and the Internet Portal part of the DECnet/Internet Router 250 (DSRVT-D*) and DECnet/Internet Router 2000 (DEMSP-D*) package offerings).

SOFTWARE REQUIREMENTS

For each VAX system acting as a load host or dump receiver:

• VMS Operating System running DECnet-VAX (either end-node or full function)

   or

• ULTRIX Operating System

   While DECnet-ULTRIX is not mandatory, Digital recommends the use of DECnet-ULTRIX for full management capabilities of the Internet Portal.

For each DECstation or DECsystem acting as a load host or dump receiver:

• ULTRIX Operating System

   While DECnet-ULTRIX is not mandatory, Digital recommends the use of DECnet-ULTRIX for full management capabilities of the Internet Portal.

Refer to the System Support Addendum for availability and required versions of prerequisite software (SSA 31.61.02-x).

ORDERING INFORMATION

For VMS Operating Systems:

Software License: QL-VZSA9-**
Software Media: QA-VZSAA-**
Software Documentation: QA-VZSAA-GZ
Software Product Services: QT-VZS**-**

For ULTRIX Operating Systems:

Software License: QL-VZTA9-**
Software Media: QA-VZTAA-**
Software Documentation: QA-VZTAA-GZ
Software Product Services: QT-VZT**-**

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

SOFTWARE LICENSING

A separate license us needed for each Internet Portal unit on which the software product will be used (except as otherwise specified by Digital Equipment Corporation.

The licensing provisions of Digital Equipment Corporation's Standard Terms and Conditions provide in part that the software and any part thereof (but excluding those parts specific to the load hosts) may be used only on the single Internet Portal (DEPTL-XX) hardware unit on which the software is operated, but may be copied, in whole or in part (with the proper inclusion of Digital's copyright notice and any proprietary notices on the software) between multiple load hosts on the same LAN.

This product does not provide support for the VMS License Management Facility (LMF). A Product Authorization Key (PAK) is not required for installation or use of this version of the product.

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.

SOFTWARE PRODUCT SERVICES

A variety of service options are available. For more information, please 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.

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™   DECnet, DECstation, DECsystem, MicroVAX, ULTRIX, VAX, VAXstation, VAXserver and VAXstation are trademarks of Digital Equipment Corporation.

System Support Addendum

PRODUCT NAME: Internet Portal, Version 1.1

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SSA 31.61.02-A

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HARDWARE REQUIREMENTS

Processors Supported:

For VMS Load Host Systems:

VAX: VAX 6000 Model 200 Series,
VAX 6000 Model 300 Series,
VAX 6000 Model 400 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 8842,
VAX 8974, VAX 8978

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

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 Series, VAXstation 3200,
VAXstation 3500, VAXstation 3520,
VAXstation 3540

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

VAXserver 6000-210, VAXserver 6000-310,
VAXserver 6000-410, VAXserver 6000-420

For ULTRIX Load Host Systems:

VAX-Based Processors:

VAX: VAX 6000-210, VAX 6000-220,
VAX 6000-310, VAX 6000-320,
VAX 6000-410, VAX 6000-420

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-11/750, VAX-11/780, VAX-11/785

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

VAXserver: VAXserver 100, VAXserver 3100,
VAXserver 3300, VAXserver 3400,
VAXserver 3500, VAXserver 3600,
VAXserver 3602, VAXserver 3800,
VAXserver 3900

VAXserver 6000-210, VAXserver 6000-310,
VAXserver 6000-410, VAXserver 6000-420

RISC-Based Processors:

DECstation: DECstation 2100, DECstation 3100,
DECstation 3100s

DECsystem: DECsystem 3100, DECsystem 5400,
DECsystem 5810

Processors Not Supported:

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

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Other Hardware Required

Since the Internet Portal is downline loaded over the Ethernet from a load host, a valid Ethernet configuration is required for the Internet Portal.

The system which is to act as the load host for the Internet Portal must have an Ethernet controller, and must be connected to the same Ethernet as the Internet Portal. Refer to the Software Product Description (SPD) for the desired load host to identify supported Ethernet controllers for that node.

VT100 compatible monitor with appropriate connector cables and, if applicable, corresponding cable adapters.

The Internet Portal software runs only on the Internet Portal (DEPTL-XX) hardware (and the Internet Portal part of the DECnet/Internet Router 250 (DSRVT-D*) and DECnet/Internet Router 2000 (DEMSP-D*) package offerings).

The following table identifies the disk space required on the load host system. The sizes are approximations; actual sizes may vary depending on the user's system environment, configuration, and software options selected.

VMS Block Space Requirements
(Block Cluster Size = 1):

Disk space required for installation:	5300 blocks (2650 Kbytes)
Disk space required for use (permanent):	5300 blocks (2650 Kbytes) plus 4850 blocks (2425 Kbytes) per Internet Portal

ULTRIX Disk Space Requirements for both VAX-based and RISC-based Systems:

Disk Space required for installation:

Root file system:	/ 0 Kbytes
Other file systems:	
/usr 2600 Kbytes	650 blocks (assuming 4 Kbytes per block)

Disk Space required for use (permanent):

Root file system:	/ 0 Kbytes
Other file systems:	
/usr 2600 Kbytes	650 blocks (assuming 4 Kbytes per block)
us/var 2425 Kbytes per Internet Portal	607 blocks (assuming 4 Kbytes per block)

OPTIONAL HARDWARE

None

CLUSTER ENVIRONMENT (VMS only)

This layered product is fully supported when installed on any valid and licensed VAXcluster* configuration without restrictions. The *HARDWARE REQUIRE-MENT* sections of this product's Software Product Description and System Support Addendum detail any specific hardware required by this product.

* V5.x VAXcluster configurations are fully described in the VAXcluster Software Product Description (29.768.xx) and include CI, Ethernet, and Mixed Interconnect configurations.

SOFTWARE REQUIREMENTS

For each VAX System acting as a load host or dump receiver:

• VMS Operating System V5.0 - V5.3 running DECnet-VAX V5.0 - V5.3 (either end-node or full-function)

   or

• ULTRIX Operating System V3.0 - V4.0

   While DECnet-ULTRIX is not mandatory, Digital recommends the use of DECnet-ULTRIX for full management capabilities of the Internet Portal

For each DECstation or DECsystem acting as a load host or dump receiver:

ULTRIX Operating System V3.1 - V4.0

While DECnet-ULTRIX is not mandatory, Digital recommends the use of DECnet-ULTRIX for full management capabilities of the Internet Portal.

VMS Tailoring

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

- VMS Required Saveset
- Network Support

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

OPTIONAL SOFTWARE

None

GROWTH CONSIDERATIONS

The minimum hardware/software requirements for future version of this product may differ from the minimum requirements for the current version.

DISTRIBUTION MEDIA

Tape: 9-track 1600 Magnetic Tape, TK50 Streaming Tape

ORDERING INFORMATION

For VMS and MicroVMS Operating Systems:

Software License: QL-VZSA9-**
Software Media: QA-VZSAA-**
Software Documentation: QA-VZSAA-GZ
Software Product Services: QT-VZS**-**

For ULTRIX Operating Systems:

Software License: QL-VZTA9-**
Software Media: QA-VZTAA-**
Software Documentation: QA-VZTAA-GZ
Software Product Services: QT-VZT**-**

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

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