Software Product Description

PRODUCT NAME: DECelms, Version 1.1 (DEC Extended LAN Management Software) **SPD 31.79.01**

DESCRIPTION

DECelms (DEC Extended Local Area Network Management Software) is a VMS layered product that allows users, at a VAX host, to configure, manage, monitor, control and observe any LAN Bridge and FDDI Wiring Concentrator in the ''Extended LAN'' and FDDI network environment. The term LAN Bridge is used to refer to Digital's LAN Bridge 100, LAN Bridge 150, LAN Bridge 200, DECbridge 500, METROwave, and Chipcom's Ethermodem™ Broadband Bridge.

The LAN Bridge products are the primary building blocks of the "Extended LAN" (Local Area Network) architecture. An Extended LAN is a collection of LANs that are interconnected and logically appear as one large Local Area Network. The DECconcentrator is the primary building block of the FDDI network environment. Together these environments are physically and logically attached and extended via the DECbridge 500. The DECbridge 500 is the device which allows Ethernet and FDDI networks to transparently communicate.

The LAN Bridge products operate at the data link level, and the FDDI DECconcentrator operates at the physical link level. Both product sets are transparent to upper level protocols.

DECelms resides on a VAX host. Corresponding management firmware resides in the LAN Bridges and FDDI DECconcentrators. The management protocol is used to communicate between the VAX host and the target LAN Bridges and FDDI DECconcentrators. DECelms provides additional functionality to support the actual control and observation of the target LAN Bridges and FDDI DECconcentrators.

The general characteristics of DECelms include:

- A superset of RBMS V2.0 functionality.
- Remote management capabilities for FDDI and Ethernet devices.
- Allows for observation, monitoring, and controlling of interoperable FDDI and Ethernet networks.
- Ability to display and modify devices, lines, physical ports, and forwarding database characteristics.
- Ability to enable and disable lines and physical ports.
- Automatically build a host registry of all reachable FDDI DECconcentrators and LAN Bridges within the ''Extended LAN'' and FDDI environment.
- Automatically or manually poll the devices stored in the host registry for faults, errors, and changed information.
- Errors are displayed to the alarms window of the user's display while more detailed information is being recorded in the error logfile.
- Ability to process the logfile keying off time or type of faults.
- Ability to use standard VMS utilities such as print, type, search, etc. on the ASCII formatted versions of the DECelms error log file.
- Displaying data-link counters, status and characteristics.
- Modifying parameters: operational state, forwarding database, and spanning tree characteristics.
- Remotely invoke a device's self-test capabilities.
- Providing for the association of ASCII names with specific device physical addresses; for ease of use in management commands.
- Simultaneous management access by multiple users.
- On-line help facility.
- Command line recall.
- Improved display formats including the ability to scroll up and down through the output.
- Similar display formats for all manageable devices.
- Password protection for setable parameters (LAN Bridge 150, 200, 500, and FDDI DECconcentrator).
- Load and modify source address and protocol filtering tables LAN Bridge 200 and DECbridge 500.
- Displays network utilization statistics (LAN Bridge 200 and DECbridge 500).

- Displays the physical FDDI network topology through ring mapping capabilities.

DECelms is comprised of five major conceptual functions which exist within two processes. The Bridge and DECconcentrator UI (User Interface) is one process. The Bridge and DECconcentrator Management Layer; the Registry Listener; the Background Poller; and the message mux functionalities all exist within the NImux process.

The User Interface process allows for multiple user access. It is responsible for the parsing of the user's request, determining what protocol messages should be sent to execute the request, mapping ASCII names to physical addresses, forwarding the message to the NImux process and displaying the reply in user-readable format. Output can be directed to the terminal or to an ASCII file which can be printed using the standard VMS PRINT commands.

The NImux Process contains code which queues the management requests to the devices. It is responsible for handling all timeouts and retries to devices. The NImux Process includes the message mux functionality which demultiplexes device responses and forwards the responses to the appropriate User Interface.

The Registry Listener of the NImux process automatically builds a host Registry file of all reachable FDDI DECconcentrators and LAN bridges within the Extended LAN and FDDI environment.

The Background Poller of the NImux process polls the devices stored in the Registry and determines if there has been a change in the state of a device. If a change has occurred, the Background Poller performs the following:

- Write an informational message to the alarm window
- Keep the state of attributes on that device in the DECelms Registry, and
- Log an error in the DECelms log file

The Registry Listener and the Background Poller can be setup independently to run at installation time, at specific time intervals, or at the DECelms users command.

DECelm also allows the user to remotely downline load Digital's LAN Bridge 100 and 150 with LAN Traffic Monitor software, thereby changing the device from its default state as a bridge.

HARDWARE REQUIREMENTS

VAX, MicroVAX, VAXstation, or VAXserver configuration as specified in the System Support Addendum (SSA 31.79.01-x).

SOFTWARE REQUIREMENTS*

VMS Operating System

* Refer to the System Support Addendum (SSA 31.79.01-x) for availability and required versions of prerequisite/optional software.

ORDERING INFORMATION

Software Licenses: QL-YFPA*-**
Software Media and Documentation: QA-YFPAA-**
Software Documentation: QA-YFPAA-GZ
Software Product Services: QT-YFPA*-**

* 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 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 VMS 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 VMS Operating System Software Product Description (SPD 25.01.xx) or the License Management Facility manual of the VMS Operating System documentation set.

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, 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.

™ Ethermodem is a trademark of Chipcom Corporation.

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System Support Addendum

PRODUCT NAME: DECelms, Version 1.1 (DEC Extended LAN Management Software) **SSA 31.79.01-A**

HARDWARE REQUIREMENTS

Processors Supported

VAX: VAX 4000 Model 300, VAXft 3000-310, VAX 6000 Model 200 Series, VAX 6000 Model 300 Series, VAX 6000 Model 400 Series, VAX 6000 Model 500 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-11/730, VAX-11/750, VAX-11/780, VAX-11/785

VAX 9000-210, VAX 9000-410

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 6000-220, VAXserver 6000-310, VAXserver 6000-320, VAXserver 6000-410, VAXserver 6000-420, VAXserver 6000-510, VAXserver 6000-520

Processors Not Supported

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

Processor Restrictions

A TK50 Tape Drive is required for standalone MicroVAX 2000 and VAXstation 2000 systems.

Other Hardware Required

RA60 system disk is required at minimum.

Block Space Requirements (Block Cluster Size = 1):

Disk space required for installation:	2,700 blocks (1.3M bytes)
Disk space required for use (permanent):	2,500 blocks (1.2M bytes)

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.

CLUSTER ENVIRONMENT

This layered product is fully supported when installed on any valid and licensed VAXcluster* configuration without restrictions. 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

VMS Operating System V5.2 - V5.4

VMS Tailoring

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

- VMS Required Saveset
- Network Support
- Utilities

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

OPTIONAL SOFTWARE

LAN Traffic Monitor V1.2 (if LAN Bridge 100 or 150 is to be used as a monitor device)

GROWTH CONSIDERATIONS

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

DISTRIBUTION MEDIA

Tape: 9-track 1600 BPI Magtape (PE), TK50 Streaming Tape

This product is also available as part of the VMS Consolidated Software Distribution on CDROM.

ORDERING INFORMATION

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

* 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 Digital office for the most up-to-date information.

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