DECmcc Management Station Installation

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This manual explains how to install the DECmcc Management Station software on a VAX system configured with the VMS operating system and DECwindows software.

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Preface

This installation guide explains how to install the DECmcc Management Station software onto a VAX system configured with the VMS operating system and DECwindows software. This software includes the network management applications supported by DECmcc Management Station.

Intended Audience

This guide is for the system manager or network manager responsible for installing the DECmcc Management Station software on a VAX system. A system manager is responsible for the VAX system. A network manager is responsible for the local area network or DECnet wide area network.

To use this guide effectively, you should be familiar with the VMS operating system and the VMSINSTAL Utility.

Associated Documents

You can refer to the following documentation for information about DECmcc Management Station and the products it supports:

- *DECmcc Management Station Use*

  This manual introduces DECmcc Management Station and describes its use.

- *DECmcc Management Station Release Notes* (online)

  This collection of notes contains information and updates not included in the DECmcc Management Station manuals. The release notes are delivered online as part of the software distribution kit.

The following lists some of the documentation available for the network management applications supported by DECmcc Management Station:

- *DECmcc Introduction*

  This manual introduces concepts and terminology and provides a technical description of the DECmcc Basic Management System.

- *DECmcc Director Use*

  This manual describes how to use the presentation modules (user interfaces) and the features of the DECmcc Director software.

- *DECmcc Basic Management System Use*

  This manual describes how to use the value-added features of the DECmcc Basic Management System.

- *DECmcc Alarms Function Module Use*

  This manual describes how to use the Alarms Function Module to detect network events and conditions.

- *DECmcc Performance Analyzer Function Module Use*

  This manual describes how to make effective use of the DECmcc Performance Analyzer.

- *DECmcc DECnet Phase IV Access Module Use*

  This manual describes how to use DECmcc to manage a DECnet Phase IV network.

- *DECmcc DECnet/OSI Access Module Use*

  This manual describes how to use DECmcc to manage a DECnet/OSI network.

- *DECmcc Ethernet Access Module Use*

  This manual describes how to use DECmcc to manage Ethernet stations.

- *DECmcc Bridge Access Module Use*

  This manual describes how to use DECmcc to manage LAN bridges.

- *Enterprise Management Architecture General Description*

  This guide provides an overview of Digital's Enterprise Management Architecture (EMA). The EMA defines a framework for managing heterogeneous, multivendor, distributed computing environments and the communications facilities that link them.

- *Guide to Terminal Server Manager*

  This manual provides information about using the Terminal Server Manager.

- *LAN Traffic Monitor User's Guide*

  This manual describes how to use the menus and informational displays of the LAN Traffic Monitor.

- *DECelms Use*

  This manual describes how to use DECelms to configure, manage, and monitor the LAN Bridge 100, LAN Bridge 150, LAN Bridge 200, DECbridge 500, and DECconcentrator 500.

- *NMCC/DECnet Monitor Introduction*

  This manual describes how to use the NMCC/DECnet Monitor to monitor and report on network activity.

- *NMCC/DECnet Monitor Implementation*

  This manual describes how to create the NMCC/DECnet Monitor database, how to add data to the database, and how to create and manipulate the online network map.

- *NMCC/DECnet Monitor User's Guide*

  This manual describes the NMCC/DECnet Monitor user interface.

- *NMCC/VAX ETHERnim User's Guide*

  This manual describes how to use NMCC/VAX ETHERnim to monitor local area network activity.

- *Network Troubleshooting Guide* (online version)

  This manual provides an overview of network troubleshooting tools and methodologies, and detailed troubleshooting procedures for specific network problems. The DECwindows Bookreader (online) version of this manual will be on the media with the DECmcc Management Station software. You can select to install this book in your Bookreader library.

- *Release Notes*

  Each of the above products has online release notes that describe new features not contained in the product documentation.

Conventions

Familiarizing yourself with the conventions discussed in this section will help you use this manual more effectively.

Convention	Meaning
`Monospace`	Indicates system output or user input.
`UPPERCASE`	In command lines, indicates keywords to be entered. Note that you can type the characters in either uppercase or lowercase. Command keywords can be abbreviated to the smallest number of characters that your system accepts. For example, the following two commands are the same: `NCP> SHOW NODE` *`node-name`* `NCP> SH N` *`node-name`*
`italics`	In command lines, indicates a variable to be entered. You enter an appropriate value for the variable. For example, node-name is a variable in the following command: `NCP> SHOW NODE` *`node-name`*
bold	Indicates an important term that is defined in the text.

Convention	Meaning
[ ]	In installation dialogs, indicates that the enclosed value is the default. To choose the default, just press Return. To choose another value, type it after the brackets and press Return. In command lines, indicates that you can enter one, and only one, of the enclosed options, but that none is required. Do not type the brackets when you enter the option.
{ }	Indicates that you must enter one, and only one, of the enclosed options. Do not type the braces when you enter the option.
Key	Indicates that you should press the specified key.
Enter	Means that after the user input you must press Return.
Ctrl/*x*	Indicates that you should hold down the Ctrl key, while pressing the key specified by *x*.

The following conventions apply to numbers:

- All Ethernet addresses are given in hexadecimal number form.
- All other numbers are decimal unless indicated otherwise.

1 Before Installing the DECmcc Management Station Software

This chapter discusses the following requirements and preparations necessary for installing the DECmcc Management Station software and the applications that run under it:

- Required software
- Hardware considerations
- Registering the software license
- Performing a system backup
- Reading release notes
- Time required for installation
- Required system privileges
- Required disk space
- Required system parameters
- Required process quotas
- Product-specific preinstallation procedures

1.1 Overview

The DECmcc Management Station is available in two packages: DECmcc Site Management Station (SMS) and DECmcc Enterprise Management Station (EMS). This guide describes the step-by-step procedures that you follow to install either the SMS package or the EMS package.

If you are installing the DECmcc Site Management Station package (SMS), you can install the following applications:

- DECmcc Basic Management System (BMS)
- Terminal Server Manager (TSM)
- DEC Extended LAN Management Software (DECelms)
- LAN Traffic Monitor (LTM)
- NMCC/VAX Ethernet Network Integrity Monitor (ETHERnim)

If you are installing the DECmcc Enterprise Management Station package (EMS), you can install all the SMS applications plus the following application:

- NMCC/DECnet Monitor

1.2 Required Software

This section lists the software that must be licensed, installed, and running on your system before you install and run DECmcc Management Station:

- VMS operating system; you also need DECwindows software for workstations running DECwindows.
- DECnet-VAX
- VAX Distributed Naming Service (VAX DNS)

  VAX DNS must be installed and started before you install DECmcc BMS. At a minimum, you need to have the VAX DNS Client running on your system. After installing BMS, you need to set up directories in the VAX DNS namespace. See Section 4.8.2 in Chapter 4 for information on setting up the directories. To start VAX DNS, enter the following command:

  ```
  $ @SYS$STARTUP:DNS_CLIENT$STARTUP.COM
  ```

If you plan to use the BMS Performance Analyzer Function Module Reports Package, you need the following:

- DATATRIEVE
- CDD/PLUS
- DECgraph
- VAX Rdb/VMS

If you plan to install the NMCC/DECnet Monitor application, you need to have at least the run-time version of the following installed and running on your system:

- DEC GKS for VMS

  To start GKS, enter the following command:

  ```
  $ @SYS$STARTUP:GKSTARTUP.COM
  ```

- VAX Rdb/VMS

  To start Rdb, enter the following command:

  ```
  $ @SYS$STARTUP:RMONSTART.COM
  ```

For the required version numbers, refer to the System Support Addendum (SSA). The SSA also lists the required classes of VMS.

To verify the VMS software version and to ensure that the correct VAX DNS and DECnet processes are running, enter the following command:

```
$ SHOW SYSTEM
```

The VMS version number is displayed in the first line. To verify that the prerequisite software is installed and running, make sure that the appropriate processes, shown in Table 1–1, are running.

Table 1–1: Checking for Prerequisite Software

Software	Look For	If Not Running, Refer To
VAX DNS	DNS$ADVER on client system and DNS$TA and DNS$BACK on server system.	VAX Distributed Name Service Installation Guide
DECnet	NIGHTCAP	DECnet/VAX Installation Guide
VAX Rdb/VMS	RDMON	VAX Rdb Installation Guide

1.3 Hardware Considerations

The performance of the DECmcc Management Station depends on a number of factors, including the following:

- Host system CPU size
- Other applications being run on the host system
- Size of the network being monitored
- Management application functions being invoked

System tuning is the responsibility of the system manager. For information on system tuning, see the VMS System Management Subkit.

The DECmcc Management Station host system should not be a designated area router because designated area routers typically handle large amounts of traffic. If the host system were a designated area router, the management application would have to compete with DECnet for system resources and this could result in timeouts for the LAN. This is not a failure condition, but the performance of the network and the Ethernet application will suffer.

The following sections describe hardware issues you need to consider before installing particular Management Station applications.

1.3.1 NMCC/DECnet Monitor Hardware Considerations

The NMCC/DECnet Monitor application in the DECmcc EMS package performs best on the node that is at the logical center of the network. To keep delays and monitoring costs to a minimum, you should choose the node with the fewest hops to all other nodes that you are monitoring.

The node on which the NMCC/DECnet Monitor kernel runs is called the **executor**. The executor should be a node on an Ethernet wire with one high-speed line connecting it to a router on a different wire.

Digital recommends that no more than 50 network nodes be monitored (using default polling parameters) with a single VAXstation 3100. If more than 50 nodes are to be monitored from a single system, a more powerful CPU should be used or another kernel should be installed on another system.

1.3.2 LTM Hardware Considerations

Before you start the LTM software installation, make sure that the LAN Bridge 100 or 150 used as a Listener is properly installed. See the *LAN Bridge 100 Hardware Installation/Owner's Guide* or the *LAN Bridge 150 Hardware Installation/Owner's Guide* for bridge installation instructions. Also, determine which systems are designated as load hosts for the LTM Listener. (Digital Equipment Corporation strongly recommends that you designate more than one load host on the extended LAN.) You must install either LTM or the DECmcc Management Station package (which includes LTM) onto all load hosts.

In a VAXcluster environment, you need to install the LTM distribution software on only one node of the cluster.

If you have not already obtained the *LAN Traffic Monitor Identification Card* from the system/network manager, do so at this time. This card should list the following:

- Serial number of the LAN Bridge 100 or 150 unit
- Ethernet address(es) of the LAN Bridge 100 or 150 unit
- Location of the LAN Bridge 100 or 150 unit
- Name of person who installed the LAN Bridge 100 or 150 unit

In addition, the system/network manager should have added the following information:

- DECnet node name of the load host(s)
- DECnet node address(es) of the load host(s)

1.3.3 TSM Hardware Considerations

For a VMS system to act as management host, it must be located on the same LAN as the terminal servers being managed.

1.4 Registering the Software License

To run DECmcc Management Station software, you must register your software license with the VMS License Management Facility (LMF). To run DECmcc Management Station software on a cluster, you must register the license on each node in the cluster.

The license registration information you need is contained in the Product Authorization Key (PAK) that is shipped with DECmcc Management Station. The PAK is a paper certificate that contains information about your license to run the software product.

It is best to register your DECmcc Management Station license before you perform the installation. During the installation, you are asked if you have registered the DECmcc Management Station license and loaded the appropriate authorization key. If you have not, you can still complete the installation; however, you will not be able to run the Installation Verification Procedure (IVP), the DECmcc Management Station software, or any of the management applications. Once you perform the license registration and have loaded an authorization key, you will be able to run the IVP and use DECmcc Management Station.

To register a license, first log in to the system manager's account, SYSTEM. You then have a choice of two ways to perform the registration:

- Invoke the SYS$UPDATE:VMSLICENSE.COM procedure. When it prompts you for information, respond with data from your PAK.
- Issue the LICENSE REGISTER command at the DCL prompt with the appropriate qualifiers that correspond to information on the PAK.

For complete information on using LMF, see the *VMS License Management Utility Manual*.

1.5 Performing a System Backup

Before installing DECmcc Management Station and its supported applications, it is a good idea to back up your system disk to ensure its integrity. Early in the installation procedure, VMSINSTAL asks whether you are satisfied with your system backup and gives you a chance to terminate the installation if you wish to do so.

1.6 Release Notes

The distribution kit includes release notes, which contain information that is not in the documentation. Digital Equipment Corporation recommends that you read this information before proceeding with the installation.

The release notes for DECmcc Site and Enterprise Management Stations (SMS and EMS) include notes about all the management applications in the package.

You can display or print the release notes during product installation. Include OPTIONS N in the command that invokes VMSINSTAL, so that the installation procedure asks if you want to display or print the release notes. See Chapter 2 for more information on the options for displaying and printing release notes.

It is important to review the DECmcc Management Station release notes before you continue with the installation in case they contain information that might affect the product installation.

The DECmcc EMS and SMS package release notes contain release notes for the applications included in the package. VMSINSTAL copies the release notes for each installed product, including individual management applications, to the text files listed in Table 1–2.

Table 1–2: File Names for Release Notes

Application	Release Notes File Name
DECmcc SMS	SYS$HELP:MCCSMS021.RELEASE_NOTES
DECmcc EMS	SYS$HELP:MCCEMS021.RELEASE_NOTES
DECmcc BMS	SYS$HELP:MCCBMS011.RELEASE_NOTES
NMCC/VAX ETHERnim	SYS$HELP:ENIM023.RELEASE_NOTES
DECelms	SYS$HELP:ELMS011.RELEASE_NOTES
NMCC/DECnet Monitor	SYS$HELP:NMCC023.RELEASE_NOTES
LTM	SYS$HELP:LTM012.RELEASE_NOTES
TSM	SYS$HELP:TSM014.RELEASE_NOTES

1.7 Time Required for Installation

The amount of time required for the DECmcc Management Station installation depends on the type of media, system configuration, and DECmcc Management Station package you are installing. The amount of time required for installation means the amount of time it takes VMSINSTAL to install the entire package; it is assumed that all preinstallation procedures have been completed.

Installing the DECmcc Site Management Station package from tape on a standalone VAXstation 3100 system should take no more than 45 minutes.

Installing the DECmcc Enterprise Management Station package from tape on a standalone VAXstation 3100 system should take no more than 75 minutes.

1.8 System Privileges

To install DECmcc Management Station, one of the following must apply:

- You must be logged in to the system manager's account, SYSTEM.
- You must be logged in to an account that has either of the following:
  - SETPRV privilege
  - CMKRNL, NETMBX, SYSPRV, TMPMBX, and WORLD privileges.

Note that VMSINSTAL turns off the BYPASS privilege at the start of the installation.

Digital Equipment Corporation recommends that you be logged in to the SYSTEM account. Once DECmcc Management Station is installed, you do not need all the privileges listed to run the software.

1.8.1 Additional System Privileges Required for Installing TSM

If you choose to install TSM as part of the DECmcc Management Station installation, you need the following system privileges in addition to those listed above:

- OPER
- SYSNAM

1.8.2 Additional System Privileges Required for Installing DECelms

If you choose to install DECelms as part of the DECmcc Management Station installation, you need the following system privileges in addition to those listed above:

- PHY_IO
- PRMMBX
- SYSNAM

1.9 Disk Space

Installing DECmcc Management Station requires a certain amount of free storage disk space during the installation. Once DECmcc Management Station is installed, less storage space is required. Table 1–3 shows the storage requirements for each of the network management applications within DECmcc Management Station and shows the total space required for the SMS package and for the EMS package.

Table 1–3: Disk Space Requirements (in Blocks)

Kit	During Installation	After Installation
DECmcc BMS	51,000	49,000
TSM	5,000	3,000
DECelms	2,700	2,500
LTM	1,100	600
NMCC/VAX ETHERnim	4,000	5,500[1]
SMS Package Total	63,800	60,600
NMCC/DECnet Monitor	45,000[2]	45,000
EMS Package Total	108,800	105,600

[1]ETHERnim installs a database with a default size of 1500 blocks.

[2]To install NMCC/DECnet Monitor without installing new databases requires 7,500 blocks. To install just new databases requires 35,000 blocks.

These figures refer to the disk space required on the system disk. These disk space requirements are approximations; actual sizes can vary, depending on the system environment, configuration, and software options selected.

To determine the number of free disk blocks on the current system disk, enter the following command at the DCL prompt:

```
$  SHOW DEVICE SYS$SYSDEVICE
```

1.10 System Parameters

This section lists the minimum required system parameter values for installing and using DECmcc Management Station and its management applications. The default values are sufficient for those parameters not specifically listed. Depending on the types of programs and applications running at your site, you might need higher values for some settings.

Default system parameter values for LTM and TSM are sufficient to install those applications.

1.10.1 DECmcc BMS System Parameter Settings

The minimum value for the GBLPAGES system parameter required for installing and using DECmcc BMS is 2,000 global page table entries.

1.10.2 NMCC/VAX ETHERnim System Parameter Settings

The minimum value for the MAXBUF system parameter required for installing and using ETHERnim is 1584. MAXBUF is a dynamic system parameter and must be set permanently to a value equal to or greater than the values listed. Do not lower the value after the installation.

1.10.3 DECelms System Parameter Settings

The minimum value for the GBLPAGES system parameter required for installing and using DECelms is 500 unused global page table entries. The minimum value for the GBLSECTIONS parameter is 3 unused sections.

1.10.4 NMCC/DECnet Monitor System Parameter Settings

Table 1–4 lists the system parameters and their required values for installing and running NMCC/DECnet Monitor. Note that the values indicated in Table 1–4 are NMCC/DECnet Monitor requirements only. Consult the GKS and Rdb installation manuals for GKS and Rdb requirements.

Table 1–4: System Parameter Values Required for Installing and Running NMCC/DECnet Monitor

Parameter	Minimum	Unit
GBLPAGES	1,050 unused	Global page table entries
GBLSECTIONS	24 unused	Sections
LOCKIDTBL[1]	1,024	Entries
LOCKIDTBL_MAX[1]	4,096	Entries
RESHASHTBL	2,048	Entries
SRPCOUNT	4,096	Packets
SRPCOUNTV	10,000	Packets
VIRTUALPAGECNT	20,000	Pages

[1]These dynamic system parameters must be set permanently to values equal to or greater than the values listed. Do not lower these values after the installation.

The following sections show you how to:

- Check system parameter values
- Calculate values for the GBLPAGES and GBLSECTIONS system parameters
- Change parameter values with the VMS AUTOGEN command procedure
- Set dynamic parameters such as LOCKIDTBL_MAX with the VMS System Generation Utility (SYSGEN)

1.10.5 Checking System Parameter Values

To check the values of your system parameters, enter the following command at the DCL prompt to invoke the System Generation Utility (SYSGEN):

```
$  RUN SYS$SYSTEM:SYSGEN
SYSGEN>
```

At the SYSGEN> prompt, enter the SHOW command to display the value of a system parameter. The values displayed should equal or exceed the value of each system parameter listed in the previous sections. The following example displays the value for the SRPCOUNT system parameter:

```
SYSGEN>  SHOW SRPCOUNT
```

Compare the system parameter settings with those required by each network management application that you will install. Note which system parameters must be modified.

After checking the parameters with the SHOW command, enter the EXIT command at the SYSGEN> prompt to return to DCL level.

1.10.6 Calculating the Values for GBLPAGES and GBLSECTIONS

You must have sufficient free global pages and global sections for all of the applications that you plan to install and run with DECmcc Management Station. You must first find out how many free global pages and sections you have on your system. Then use AUTOGEN if you need to increase the GBLPAGES and GBLSECTIONS system parameters.

If you are installing DECmcc Management Station on a VMS Version 5.3 or later system, you can use the WRITE command with the F$GETSYI lexical function to find the number of free global pages and global sections. The following example shows how to get this information at your terminal (the default for SYS$OUTPUT):

```
$  WRITE SYS$OUTPUT F$GETSYI("FREE_GBLPAGES")
15848
$  WRITE SYS$OUTPUT F$GETSYI("FREE_GBLSECTS")
24
```

If the values displayed by the system are greater than the required values, you do not need to increase the values for these parameters. If the value of free global pages or global sections is less than the required value, you must increase the system parameter setting.

Section 1.10.7 describes the procedures for increasing these values by using AUTOGEN.

1.10.7 Changing System Parameter Values with AUTOGEN

Use the AUTOGEN command procedure to change system parameters. AUTOGEN automatically adjusts values for parameters that are associated with the values you reset manually. To change system parameters with AUTOGEN, edit the following file:

```
SYS$SYSTEM:MODPARAMS.DAT
```

Use an editor to access the file. To change a parameter value listed in this file, delete the current value associated with that parameter and enter the new value.

To add a new parameter, add a line to the file that includes both the name of the parameter and its value. For example:

```
SRPCOUNT = 4096
```

To modify incremental parameters such as GBLPAGES and GBLSECTS, use ADD_. The following example increases the global page setting by 2000:

```
ADD_GBLPAGES = 2000
```

Note that when you set the page file quota, do not use a value that exceeds the amount of page file space available on the system.

After you make all your changes, exit from the editor and execute the AUTOGEN procedure to recalculate your system parameters. Enter the following command at the DCL prompt:

```
$  @SYS$UPDATE:AUTOGEN GETDATA REBOOT
```

When you specify REBOOT, AUTOGEN performs an automatic system shutdown and then reboots the system. Any users logged on to the system are immediately disconnected during the shutdown. The automatic reboot puts the new parameter values into effect.

The AUTOGEN Utility automatically adjusts some of the SYSGEN parameters based on the consumption of resources since the last reboot. If you do not want to take advantage of this automatic adjustment, include the NOFEEDBACK qualifier on the AUTOGEN command line.

For more information about using AUTOGEN, see the VMS System Management Subkit.

1.10.7.1 Setting Dynamic System Parameter Values

Use the System Generation Utility (SYSGEN) to set dynamic parameters. Dynamic parameters changed with the SYSGEN WRITE ACTIVE command become active immediately without any need to reboot your system. In fact, rebooting returns dynamic system parameter values to their previous settings.

Once you change dynamic parameter values, you should complete the installation before rebooting the system. After you finish with the installation, you can reset the dynamic parameters to their previous values or let them be reset automatically when you next reboot your system.

If you plan to install NMCC/VAX ETHERnim, you must have the dynamic parameter value shown in Table 1–5.

Table 1–5: Required Dynamic Parameter Values for NMCC/VAX ETHERnim

Dynamic Parameter	Value
MAXBUF	1,584

If you plan to install NMCC/DECnet Monitor, you must have the dynamic parameter values shown in Table 1–6.

Table 1–6: Required Dynamic Parameter Values for NMCC/DECnet Monitor

Dynamic Parameter	Value
LOCKIDTBL	1,024
LOCKIDTBL	4,096

If the dynamic parameter values on your system are less than the values previously listed, use the following series of commands to change the values. This example changes the MAXBUF value to 1584:

```
$  RUN SYS$SYSTEM:SYSGEN
SYSGEN>  USE ACTIVE
SYSGEN>  SET MAXBUF 1584
SYSGEN>  WRITE ACTIVE
SYSGEN>  EXIT
```

1.11 Process Quotas

This section lists the minimum required process quota values for installing and using DECmcc Management Station and its management applications. The default values are sufficient for those quotas not specifically listed. Depending on the types of programs and applications running at your site, you may need higher values for some settings.

See Section 1.11.2 for information on modifying the settings.

Default process quota values for NMCC/VAX ETHERnim, DECelms, NMCC/DECnet Monitor, LTM and TSM are sufficient to install those applications.

1.11.1 DECmcc BMS Process Quota Settings

Table 1–7 lists the process quotas and their required values for installing and running DECmcc BMS. Note that the values indicated in Table 1–7 are DECmcc BMS requirements only. Consult the VAX DNS installation manual for VAX DNS requirements.

Table 1–7: Process Quota Values Required for Installing and Running DECmcc BMS

Process Quota	Value	Unit
ASTLM	48	ASTs
BIOLM	36	Buffered I/O operations
DIOLM	18	Direct I/O operations
ENQLM	512	Blocks
PGFLQUOTA	30,000	Pages
PRCLM	2	Subprocess creations
TQELM	128	Entries in queue
WSQUOTA	2048	Pages

1.11.2 How to Modify Process Quota Settings

This section gives some examples of how to show the current process quota settings and how to modify them. Before modifying process quotas, you should understand how they are used by VMS and you should know how to use the VMS tools to modify settings. For more information, refer to the VMS System Management Subkit.

The following procedure is an example of how you can determine the current process quota values and modify them to satisfy the requirements listed in the previous sections (you must have system manager privileges before you begin):

1. To verify that your process quotas are set correctly, enter the following commands:

   ```
   $ SET DEFAULT SYS$SYSTEM
   $ RUN AUTHORIZE
   UAF> SHOW account-name
   ```

   This command will show your process quota settings.

2. To change a quota, use the MODIFY command, which has the following format:

   ```
   UAF> MODIFY account-name / quota-name=nnnn
   ```

   The following example changes the ASTLM quota for the SYSTEM account:

   ```
   UAF> MODIFY SYSTEM /ASTLM=64
   ```

3. To exit from the Authorize utility, enter EXIT and press Return. After you exit from the utility, messages will indicate whether changes have been made. Once the changes have been made, you must log out and log in again for the new quotas to take effect.

1.12 Preparing to Install DECmcc BMS

This section contains information specific to installing DECmcc BMS.

1.12.1 Location of the BMS Files

The DECmcc BMS command files are created in a directory called SYS$COMMON:[MCC]. If you choose to have the files in a directory on a nonsystem disk, you can specify a different target directory by defining the logical name BMS$DEFAULT_DIRECTORY.

The DECmcc BMS installation procedure gives you the option of defining (or redefining) the directory name, or leaving it at the default name, SYS$COMMON:[MCC].

1.12.2 Obtaining Your Network Address Initial Domain Part

If your network is or will be connected with other OSI networks, you must obtain a network address Initial Domain Part (IDP) from one of the recognized allocation authorities such as Consultative Committee for International Telephony and Telegraphy (CCITT).

The installation procedure asks you for your network address IDP. The format of a network address IDP is AFI:IDI:, where:

- AFI is the Authority and Format Identifier. This is two decimal digits indicating the IDP allocation authority.
- IDI is the Initial Domain Identifier. This is a string of decimal digits that the allocation authority allocates specifically for your network.

If your network will not ever be interconnected with other OSI networks, you can use the default value of "49".

If you are not sure whether your network will be interconnected with other OSI networks in the future, Digital Equipment Corporation recommends that you obtain an IDP from one of the recognized allocation authorities. Refer to Table 1–8 for IDP parameter values and to Table 1–9 for sample IDPs.

Table 1–8: IDP Parameter Values

Allocation Authority	Value of AFI	Number of Digits in the IDI[1]	Selection for Leading IDI Digit
X.121	37	0 to 14	1 to 9
	53	0 to 14	0, 2 to 9
F.69	41	0 to 8	1 to 9
	55	0 to 8	0, 2 to 9
E.163	43	0 to 12	1 to 9
	57	0 to 12	0, 2 to 9
E.164	45	0 to 15	1 to 9
	59	0 to 15	0, 2 to 9
ISO DCC	39	3 (exactly)	0 to 9
ISO 6523 - ICD	47	4 (exactly)	0 to 9
Private network	49	0	N/A

[1]Digits in the IDI must be decimal (0 to 9)

You can change your IDP value at any time after installation by changing the value of the MCC_NODE_IDP logical. See Section 4.8.1 for information on changing the IDP value.

Digital Equipment Corporation recommends that you construct the IDI by doing the following:

1. Use an AFI that refers to a telecommunications authority and construct the IDI part by using a number already allocated for that type of telecommunications. Register this IDI value with the appropriate authority.
   - X.121 is the CCITT numbering plan for X.21 and X.25 networks. Construct the IDI from a DTE number you are using.
   - F.69 is the CCITT numbering plan for the telex network. Construct the IDI from the TELEX number you are using.

- E.163 is the CCITT numbering plan for the telephone network. Construct the IDI from a POTS (telephone network) number you are using.
- E.164 is the CCITT numbering plan for ISDN networks. Construct the IDI from an ISDN number you are using.

2. Go to an ISO (International Standards Organization) geographic or nongeographic IDP allocation authority and ask for a unique IDI. Geographic is for national organizations or networks; nongeographic is for international organizations such as the UN, the Red Cross, and others.
   - ISO Geographic, an ISO-defined scheme that allows a country to assign addressing domains independently of public networks according to geographic locations.
   - ISO Nongeographic, an ISO-defined scheme that allows international organizations to assign domains that do not imply the location of systems within the domain.

Table 1–9: Sample IDPs

If the Authority is:	Then the IDP will look like:
X.121 (37 or 53)	The IDI consists of the globally unique address prefix, identifying the Data Network and the Private Network (the company using the address), and one or more addresses within that Private Network. ■ Address prefix identifying the company's subnetwork is 8107654 ■ Address within the company's subnetwork is 1234 ■ Resulting X.121 address is 81076541234 ■ Used as an IDP, the value is 37:81076541234:
F.69 (41 or 55)	The IDI consists of a country-specific or a network-specific number as defined by CCITT F.69 recommendation, plus the local telex local number. Note that some telex numbers do not conform to the CCITT F.69 recommendation, and should not be used. ■ Country or network number is 45 (Switzerland) ■ Local telex number is 43 61 92 ■ Resulting F.69 number is 45 43 61 92 ■ Used as an IDP, the value is 41:45436192:
E.163 (43 or 57)	The IDI consists of the world zone number, country or geographic area number, and local number. ■ World zone number is 1 (USA) ■ Geographic area number is 508 (MA) ■ Local number is 494-5892 ■ Resulting E.163 address is 15084945892 ■ Used as an IDP, the value is 43:15084945892:

1.12.3 Determining Your TDF

The DECmcc BMS installation procedure requires that you enter your Time Differential Factor (TDF). Your TDF is the time difference between your time zone and Coordinated Universal Time (UTC).

The TDF is a constant (a fixed number of hours and minutes) used to determine the local time. DECmcc BMS calculates the local time by adding the TDF to the UTC. The UTC (formerly GMT, Greenwich Mean Time) is based in Greenwich, England.

By defining your TDF as a logical, DECmcc BMS makes it easy to change your local time if you change during spring or summer and change back in fall or winter. For each time change, simply redefine your logical and edit your SYS$STARTUP:MCC_STARTUP_DIR.COM file, and re-execute the DECmcc startup procedure. See Section 4.8.1 for more information.

To calculate your TDF, determine what time zone you are in and calculate the difference between your time zone and the UTC. The range is from -12:00 to +13:00. A negative (-) TDF value means that you are located west of Greenwich, England. A positive (+) TDF means that you are located east of Greenwich, England. The format is +hh:mm or -hh:mm, where hh indicates the number of hours and mm indicates the number of minutes. Examples of different TDFs are shown below:

- California (Pacific Standard Time) is -8:00 hours from UTC.
- Oklahoma (Standard Time) is -6:00 hours from UTC.
- New York (Eastern Standard Time) is -5:00 hours from UTC.
- New York (Eastern Daylight Time) is -4:00 hours from UTC.
- Ontario, west of longitude W.63 degrees is -5:00 hours from UTC.
- Ontario, east of longitude W.63 degrees is -4:00 hours from UTC.
- Newfoundland is -3:30 hours from UTC.
- Great Britain, Iceland, Portugal, Upper Volta are at UTC, or 0:0.
- Great Britain (Summer Time) is +1:00 hour from UTC.
- Greece is +2:00 hours from UTC.
- India is +5:30 hours from UTC.
- Singapore is +7:30 hours from UTC.

- Japan is +9:00 hours from UTC.
- Australia Capital Territory is +10:00 hours from UTC.

1.12.4 Installing the DECmcc Reports Package

The DECmcc Reports Package allows you to use DATATRIEVE to create reports by using data exported from the DECmcc Basic Management System. To use the Reports Package, you need to have the following products installed:

- DATATRIEVE
- CDD/PLUS
- DECgraph
- VAX Rdb/VMS

The DECmcc Reports package requires 1100 blocks. See the Reports package section in *DECmcc Performance Analyzer Use* for information on using DECmcc Reports with DATATRIEVE.

1.13 Preparing to Install NMCC/DECnet Monitor

This section contains information specific to installing the NMCC/DECnet Monitor software.

1.13.1 Determining the User Identification Code for the Kernel Process

You must define an account for the kernel process by specifying a user identification code (UIC) during the installation. The installation procedure prompts you for the UIC, which consists of two integers separated by a comma. The system manager should select the UIC for the NMCCKERNEL account. The UIC should not belong to another user or VMSINSTAL will terminate the installation. The first number in the UIC pair should not be between 1 and 8 because these are reserved for system UICs. The following are examples of valid UICs: [123, 456] , [12, 3].

1.13.2 Installing a User Interface Separately from the Kernel

NMCC/DECnet Monitor software installation provides the option of installing the user interface (UI) portion of the NMCC/DECnet Monitor separately from the kernel to improve NMCC/DECnet Monitor performance (see Section 2.2). Note that NMCC/DECnet Monitor reports cannot be produced on a system with only the user interface.

To install a separate user interface, first install the user interface and kernel on the system that will run the kernel. Once this installation is completed, install the user interface on the system that will run only the user interface.

VAX Rdb/VMS should be installed and running on the same system on which you install the kernel; GKS should be installed and running on each system on which you install the user interface.

1.13.3 Installing a User Interface and the Kernel

If you are installing an NMCC/DECnet Monitor user interface and kernel on a system that previously contained only a user interface, you must delete the SYS$MANAGER:NMCCLOGICALS.COM file before installing the UI and kernel.

1.13.4 Defining the GKS Workstation Type

The installation procedure prompts you to define the GKS workstation type (GKS$WSTYPE) that will be the default workstation type whenever the NMCC/DECnet Monitor is invoked. The correct GKS$WSTYPE value is required to ensure the accurate display of GKS graphics. At the prompt, enter a number to identify the type of workstation you are using, for example:

```
* Define GKS$WSTYPE: 13
```

Some accepted values are the following:

- 0 – Default workstation type
- 14 – VT240/41 with black and white display
- 13 – VT240/41 with color option, VT340/41
- -1 – VT100 (non_ReGIS terminal)

Not all workstation types are supported by NMCC/DECnet Monitor. For a complete listing of values for GKS workstation types, see the GKS documentation or enter the following command:

```
$ HELP GKS WORKSTATION
```

If you find later that the workstation on which you are using the NMCC/DECnet Monitor is different from the device specified at software installation, specify an alternate GKS$WSTYPE value before you invoke the NMCC/DECnet Monitor software.

To define the workstation type, add the following statement to your LOGIN.COM file:

```
$ DEFINE GKS$WSTYPE n
```

where n is the value for your workstation type.

1.13.5 Starting GKS

To start GKS, enter the following command:

```
$ @SYS$STARTUP:GKSTARTUP.COM
```

1.14 Preparing to Install TSM

This section contains information specific to installing TSM.

For the installation to succeed, a system must have DECnet running. In addition, if you are also installing terminal server software, you should install all terminal server software before you install the TSM software. Refer to the installation guide for your terminal server software for more information.

1.14.1 Location of the TSM Files

The TSM command files are created in the SYS$COMMON:[DECSERVER] directory. If you choose to have the files in a directory on a nonsystem disk, you can specify a different target directory by defining the logical name TSM$DEFAULT_DIRECTORY.

The TSM installation procedure gives you the option of defining (or redefining) the directory name, or leaving it at the default name, SYS$COMMON:[DECSERVER].

1.14.2 Location of the TSM Management Directory

TSM requires that a file containing the TSM management directory be available during installation. TSM creates this file if it does not already exist. The default file specification for this file is:

SYS$COMMON:[DECSERVER] TSM$CONFIG.DAT.

If the logical TSM$DEFAULT_DIRECTORY is defined, the default file specification is:

TSM$DEFAULT_DIRECTORY:TSM$CONFIG.DAT.

TSM checks the logical name TSM$DIRECTORY to locate and identify the management directory. If you have assigned a different location than the default, TSM accesses TSM$CONFIG.DAT (or the new name you assigned) in the location specified by TSM$DIRECTORY. The definition of TSM$DIRECTORY takes precedence over the definition of TSM$DEFAULT_DIRECTORY.

2

Installing the DECmcc Management Station Software

This chapter describes how to install the DECmcc Management Station software and the management applications it supports. You can install the entire DECmcc Management Station package or you can select individual management applications in the DECmcc Management Station package to install. The detailed procedure includes information about installing each management application. Section Section 2.1 contains a step-by-step description of the installation procedure.

2.1 The Installation Procedure — Step by Step

The installation dialog consists of a series of questions and informational messages. See Appendix A for a sample installation procedure.

To terminate the installation procedure at any time, press Ctrl/Y. The installation procedure deletes all files it has created up to that point and exits. You can then start the installation again.

Each question in the installation starts with an asterisk (*). Some questions show the default response in brackets; for example [YES]. If you want to give the default response, press Return.

The following is a step-by-step discussion of the installation procedure.

1. Invoke VMSINSTAL.

   To start the installation, invoke the VMSINSTAL command procedure from a privileged account, such as the SYSTEM account. VMSINSTAL is in the SYS$UPDATE directory.

   ```
   $  @SYS$UPDATE:VMSINSTAL saveset-name device-name-
   _$ OPTIONS N, AWD=disk:[directory]
   ```

   The following list defines the elements of the VMSINSTAL command procedure:

   saveset-name

   The installation name for the component. For DECmcc Enterprise Management Station (EMS), use the following installation name:

   ```
   MCCEMS021
   ```

   For DECmcc Site Management Station (SMS), use the following installation name:

   ```
   MCCSMS021
   ```

   device-name

   The name of the device on which you plan to mount the media. For example, MUA0: is the device name for a tape drive. It is not necessary to use the console drive for this installation. However, if you do use the console drive, you should replace any media you removed once the installation is completed.

   OPTIONS N

   An optional parameter that indicates you want to be prompted to display or print the release notes. If you do not include the OPTIONS N parameter, VMSINSTAL does not ask you about the release notes. You should review the release notes before proceeding with the installation in case they contain additional information about the installation. If you are restarting the installation and have already reviewed the release notes, you do not need to specify OPTIONS N.

Note that there are several other options you can select when you invoke VMSINSTAL:

- Alternate working device (AWD) option: An optional parameter that lets you specify an alternate working device for the temporary working directory, thus enabling you to perform an installation with fewer free blocks on the system disk than is otherwise required.
- Auto_answer option (A): Initially creates a file that contains your answers to VMSINSTALL questions and prompts. You can then use the option (and the answer file) to save time during a reinstallation (typically after upgrading your system).
- Get save set option (G): Lets you store product save sets temporarily on a magnetic tape or in a disk directory.
- File log option (L): Logs all activity to the terminal during installation.
- Alternate root option (R): Lets you install the product to a system root other than that of the running system.

See the VMS documentation on software installation in the VMS System Management Subkit for detailed information on these options. If you specify more than one option, separate the options with commas (OPTIONS A, N).

The following example invokes VMSINSTAL to install DECmcc Enterprise Management Station (EMS) from tape drive MUA0: and displays the system response. This example uses the OPTIONS N release note parameter, and uses DUA2:[INSTALL] for the AWD parameter.

```
$  @SYS$UPDATE:VMSINSTAL MCCEMS021 MUA0: OPTIONS N, AWD=DUA2:[INSTALL]

      VAX/VMS Software Product Installation Procedure V5.3


It is dd-mmm-yyyy at hh:mm.
Enter a question mark (?) at any time for help.
```

If you do not supply either the product name or the device name, VMSINSTAL prompts you for this information in the installation procedure. VMSINSTAL does not prompt you for any options, so be sure to include OPTIONS N on the VMSINSTAL command line to access the release notes during the installation.

2. Check active processes.

   VMSINSTAL displays a list of all active processes and asks if you want to continue the installation. The default response to the question is NO.

   ```
   %VMSINSTAL-W-ACTIVE, The following processes are still active:
    DECW$WM_1
   * Do you want to continue anyway [NO]?
   ```

   Enter YES and press Return to continue. Press Return to answer NO if you want to exit the installation procedure to stop any of the active processes before you install this product. You can restart the installation from Step 1.

3. Confirm system backup.

   VMSINSTAL asks if you are satisfied with your system backup.

   ```
   * Are you satisfied with the backup of your system disk [YES]?
   ```

   You should always back up your system disk before performing an installation. If you are satisfied with the backup of your system disk, press Return. Otherwise, enter NO and press Return to discontinue the installation. After you back up your system disk, you can restart the installation.

4. Mount the media.

   VMSINSTAL identifies the device name on which the distribution volume is to be mounted and asks if you are ready to continue with the installation.

   ```
   Please mount the first volume of the set on MUA0:
   * Are you ready?
   ```

   You should now mount the first distribution volume on the device you specified when you invoked VMSINSTAL. If you entered the wrong device name when you invoked VMSINSTAL and need to restart the installation, enter NO and press Return in response to the prompt.

   Enter YES and press Return to indicate that you are ready. VMSINSTAL displays a message that the media containing DECmcc Enterprise Management Station (or DECmcc Site Management Station) has been mounted on the specified device and that the installation has begun.

   ```
   %MOUNT-I-MOUNTED, MCCEMS021 MOUNTED ON _$$MUA0:  (NODE 1)
   The following products will be processed:
     MCCEMS V2.1

          Beginning installation of MCCEMS V2.1 at hh:mm
   %VMSINSTAL-I-RESTORE, Restoring product saveset A...
   ```

5. Select a release notes option.

   If you specified OPTIONS N when you invoked VMSINSTAL, you are now given four options for reviewing the release notes. As the installation message indicates, the release notes are always copied to SYS$HELP.

   ```
   Release notes included with this kit are always copied to SYS$HELP.

   Additional Release Notes Options:

       1.  Display release notes
       2.  Print release notes
       3.  Both 1 and 2
       4.  None of the above

   * Select option [2]:
   ```

   If you select option 1, VMSINSTAL displays the release notes immediately on the terminal. Note that these release notes are quite lengthy. You can terminate the display at any time and return to the installation by pressing Ctrl/C.

   If you select option 2, VMSINSTAL prompts you for the name of the print queue that you want to use:

   ```
   * Queue name [SYS$PRINT]:
   ```

   You can enter a queue name or press Return to send the file to the default output print device.

   If you select option 3, VMSINSTAL displays the release notes immediately on the terminal. Note that these release notes are quite lengthy. It then prompts you for the name of the print queue for the printed version.

   If you select option 4, VMSINSTAL does not display or print the release notes; however, it does automatically copy them to SYS$HELP.

6. Continue the installation.

   VMSINSTAL now asks if you want to continue the installation.

   ```
   * Do you want to continue the installation [NO]?
   ```

   To continue, enter YES and press Return. Otherwise, press Return to answer NO. In either case, the release notes are copied to SYS$HELP. If you are running VMSINSTAL just to get the release notes, press Return to terminate the installation.

If you continue, VMSINSTAL displays the following messages:

```
%VMSINSTAL-I-RELMOVED, The product's release notes have been
                       successfully moved to SYS$HELP.
   ************************************************************
   *                                                          *
   *                    DECMCC EMS V2.1                       *
   *                    Integrated Package                    *
   *                                                          *
   *                  Installation Procedure                  *
   *                                                          *
   ************************************************************
```

The DECmcc Management Station release notes are copied to one of the following files (depending on whether you installed SMS or EMS):

SMS — SYS$HELP:MCCSMS021.RELEASE_NOTES

EMS — SYS$HELP:MCCEMS021.RELEASE_NOTES

7. Confirm registration of the software license.

   If you entered YES in Step 6 to continue the installation, the installation procedure displays information about the particular license, then asks whether the authorization key has been registered and loaded.

```
Product:      DECMCC-EMS (or DECMCC-SMS)
Producer:     DEC
Version:      2.1
Release Date: 12-APR-1991

* Does this product have an authorization key registered and loaded?
```

   If you have registered and loaded the authorization key, enter YES and press Return.

   If you have not registered and loaded your authorization key, you must answer NO to this question. You will be able to install DECmcc Management Station but you will not be able to run the Installation Verification Procedure (IVP) or use the software until you register and load the authorization key.

   For more information about registering the software license, see Section 1.4.

8. Purge files.

   VMSINSTAL now asks whether it should purge files that are superseded by this installation.

   ```
   * Do you want to purge files replaced by this installation [YES]?
   ```

   If you press Return to answer YES to this question, VMSINSTAL purges files from previous versions of DECmcc Management Station and previous versions of the management applications. If you are installing NMCC/DECnet Monitor and want to retain existing database files, you can answer YES to this prompt and VMSINSTAL will not delete existing database files. VMSINSTAL will prompt you later in the installation procedure about purging or retaining these database files.

   Purging is recommended; however, if you need to keep files from the previous version of DECmcc Management Station or any of the management applications, enter NO and press Return in response to the question.

9. Choose the Installation Verification Procedure option.

   VMSINSTAL asks if you want to run the DECmcc EMS (or SMS) IVP automatically after the end of the installation. The IVP ensures that the product is installed successfully.

   ```
   * Do you want to run the DECMCC EMS IVP after the installation [YES]?
   ```

   Press Return to run the IVP immediately after the installation. If you did not register and load the PAK for the DECmcc EMS, the installation procedure will not run the IVP. See Chapter 3 for more information on the IVP.

10. Install the Management Station applications.

    VMSINSTAL asks whether you want to install all the applications in the package (DECmcc EMS or SMS) you have selected.

    ```
    * Do you want to install the entire EMS product set [YES]?
    ```

    Press Return to answer YES and to install all the applications in the DECmcc Management Station package. If you answer NO, you can choose to install particular applications by responding to the following prompts. (Note that the NMCC/DECnet Monitor prompt appears only if you are installing the EMS package.)

```
* Do you want to install DECmcc BMS [YES]?

* Do you want to install DECmcc ETHERnim  [YES]?

* Do you want to install DECmcc LTM  [YES]?

* Do you want to install DECelms  [YES]?

* Do you want to install DECmcc TSM  [YES]?

* Do you want to install the Network Troubleshooting Guide [YES]?

* Do you want to install DECmcc NMCC [YES]?
```

If you select a product, VMSINSTAL displays a message confirming that the product will be installed. VMSINSTAL then proceeds to install the management applications you select and displays the following messages:

```
%VMSINSTAL-I-RESTORE, Restoring product save set B ...
%VMSINSTAL-I-RESTORE, Restoring product save set C ...
%VMSINSTAL-I-RESTORE, Restoring product save set D ...
%VMSINSTAL-I-RESTORE, Restoring product save set E ...
%VMSINSTAL-I-RESTORE, Restoring product save set F ...
%VMSINSTAL-I-RESTORE, Restoring product save set G ...
%VMSINSTAL-I-RESTORE, Restoring product save set H ...
```

The *Network Troubleshooting Guide* is shipped on the media with your DECmcc Management Station software. The guide provides an overview of network troubleshooting tools and methodologies, and detailed troubleshooting procedures for specific network problems.

If you choose to install the *Network Troubleshooting Guide*, the installation procedure will install it in your Bookreader library. You can use the Bookreader application in DECwindows to select and view the contents of the guide online. Similarly, if you choose to install all products in the EMS (or SMS) product set, the installation procedure automatically installs the *Network Troubleshooting Guide* in your Bookreader library.

The remainder of this chapter discusses the installation of individual management applications. It displays the questions VMSINSTAL asks and the responses it provides for each application you install.

Appendix A shows a sample DECmcc EMS installation where the user has selected the entire EMS package for installation.

2.2 Installing Specific Management Applications

This section describes the questions VMSINSTAL asks when it installs each of the management applications that you can install as part of the DECmcc Management Station. The questions that VMSINSTAL asks you and their order of appearance within the installation procedure depends on which products you select for installation. If you choose to install all of the applications, VMSINSTAL asks the questions in the order that the following sections appear. If you choose to install only some (or one) of the applications, refer to the appropriate section(s).

- Section 2.2.1 describes the DECmcc BMS installation.
- Section 2.2.2 describes the NMCC/VAX ETHERnim installation.
- Section 2.2.3 describes the DECelms installation.
- Section 2.2.4 describes the NMCC/DECnet Monitor installation.
- Section 2.2.5 describes the LTM installation.
- Section 2.2.6 describes the TSM installation.

2.2.1 Installing DECmcc BMS

If you install the DECmcc Basic Management System (BMS), VMSINSTAL displays an introductory message and proceeds as follows:

```
Asking DECmcc BMS Questions ...
```

1. Name a directory for system common files.

   You must specify the directory where VMSINSTAL copies the DECmcc common files. The default directory is SYS$COMMON:[MCC].

   ```
      DECmcc requires a directory where the DECmcc common files will be
      installed.  If the logical MCC_COMMON is defined, the default is
      for the files to be installed in that directory. If the logical is
      not defined, the default is for the files to be installed in a
      directory on the system disk called SYS$COMMON:[MCC].  The installer
      can override the default. The target directory for the files (as it
      is now defined) is shown below.

      Press RETURN to use the value shown or enter a new disk and
      directory specification.

   * Target directory for DECmcc Common files [SYS$COMMON:[MCC]]:
   ```

   Press Return to select the value shown, or enter a new disk and directory specification.

VMSINSTAL displays the following messages:

```
%VMSINSTAL-I-RESTORE, Restoring product save set I ...

%VMSINSTAL-I-RESTORE, Restoring product save set J ...
%VMSINSTAL-I-RESTORE, Restoring product save set K ...
```

2. Enter your Time Differential Factor (TDF).

   The Time Differential Factor (TDF) is a constant (a fixed number of hours and minutes) used to determine the local time. The DECmcc Director calculates the local time by adding the TDF to the Coordinated Universal Time (UTC). To calculate your TDF, determine in what time zone you are and calculate the difference between your time zone and the UTC. The installation procedure provides you with examples of TDFs.

```
   The Time Differential Factor (TDF) is the difference between your
    time zone and the international standard Coordinated Universal
    Time (UTC).

    A negative (-) TDF value means that this node is west of UTC.
    A positive (+) TDF value means that this node is east of UTC.

    The range is from -12:00 to +13:00. The format is +hh:mm or
    -hh:mm with hh indicating the number of hours and mm indicating
    the number of minutes. For example:

    California (Pacific Standard Time) is -8:00 hours from UTC.
    Oklahoma (Standard Time) is -6:00 hours from UTC.
    Eastern Standard Time is -5:00 hours from UTC.
    Eastern Daylight Time is -4:00 hours from UTC.
    Ontario, west of longitude W.63 degrees is -5:00 hours from UTC.
    Ontario, east of longitude W.63 degrees is -4:00 hours from UTC.
    Newfoundland is -3:30 hours from UTC.
    Great Britain, Iceland, Portugal, Upper Volta are at UTC or 0:0.
    Great Britain, Summer Time +1:00 hour from UTC.
    Greece is +2:00 hours from UTC.
    India is +5:30 hours from UTC.
    Singapore is +7:30 hours from UTC.
    Japan is +9:00 hours from UTC.
    Australian Capital Territory is +10:00 hours from UTC.

* Time Differential Factor  [-4:00]:
```

   Enter your TDF and press Return.

3. Enter your network address IDP.

   VMSINSTAL prompts for your network address Initial Domain Part (IDP). VMSINSTAL uses this IDP for the DECmcc BMS startup procedure.

```
    You must specify the IDP (or network address initial domain
     part) for your network. This must either be the default
     value of "49::", or a value explicitly allocated for your
     network by one of the recognized allocation authorities.

     The format is:
            afi:idi:
     where:

     afi =  The "authority and format identifier."  This is two
            decimal digits indicating the IDP allocation
            authority.

     idi =  The "initial domain identifier."  This is a string of
            decimal digits that has been allocated specifically
            for your network.

     An IDP of "49::" can be used if your network will not be
     interconnected with other OSI networks (there is no "idi"
     associated with the "afi").

* Initial Domain Part  [49::]:
```

   Enter your IDP and press Return.

4. Specify whether you want to install the DECmcc Reports package.

   The DECmcc Reports package allows you to use DATATRIEVE to create reports with data exported to a VAX Rdb/VMS database from DECmcc. VMSINSTAL displays information about the Reports package and asks if you want to install the package:

```
   The DECmcc Reports package consists of files that allow you
   to use DATATRIEVE to create reports using data exported from
   DECmcc. Please see the Reports package section of the
   DECmcc Performance Analyzer Use manual for information
   on using the DECmcc Reports package with DATATRIEVE.

   The Reports package requires 1100 blocks.

* Do you want to install the DECmcc Reports Package [No]?
```

   Enter YES and press Return to install the package; or, press Return if you do not want to install the package.

If you choose to install the Reports package, VMSINSTAL asks you to specify a directory for the files.

```
* Target directory for DECmcc Reports files
  [SYS$COMMON:[MCC.MCC_REPORTS_FILES]]:
```

Enter a target directory and press Return; or, press Return to use the default, which is the subdirectory:

SYS$COMMON:[MCC.MCC_REPORTS_FILES].

The directory you select defines the logical name MCC_REPORTS_FILES. When you want to move the reports files to another directory, edit the file SYS$STARTUP:MCC_LOGICAL_BMS.COM to redefine that logical name.

5. Add a command to your system startup command procedure.

   VMSINSTAL directs you to modify your local system startup command procedure to set up DECmcc BMS automatically. Refer to Section 4.1 for more information on how to modify your system startup procedure.

```
   To automatically set up DECmcc BMS on your system,
   edit your local system startup command procedure

   SYS$MANAGER:SYSTARTUP_V5.COM

   so that it invokes the DECmcc BMS startup command
   procedure.  Add:

   @SYS$STARTUP:MCC_STARTUP_BMS.COM

   after the statement that invokes the DECnet startup
   command file (STARTNET.COM).

NOTE: If you have previously installed the DECmcc DIRECTOR
   on this system, you should REMOVE the line:

   @SYS$STARTUP:MCC_STARTUP_DIR.COM

   from your SYS$MANAGER:SYSTARTUP_V5.COM procedure.

NOTE: The DECdns clerk must be started up before
      the MCC_STARTUP_BMS command procedure is invoked.
```

2.2.2 Installing NMCC/VAX ETHERnim

If you choose to install NMCC/VAX ETHERnim, the installation displays an introductory message and proceeds as follows:

```
Asking DECmcc ETHERnim Questions ...
```

VMSINSTAL asks for the device name and directory name for the NMCC/VAX ETHERnim files.

```
    See the NMCC/VAX ETHERnim Installation Guide for help in changing values.

   This installation procedure will now prompt for the device name and
   directory name for the ETHERnim files.

                     NOTE!
   Previous versions of ETHERnim created a separate account for ETHERnim.
   This version does not create a separate account for ETHERnim.
   It is recommended that the ETHERnim account be disabled from the UAF
   for security purposes.

* Device for the files [SYS$SYSDEVICE:]:
* Directory for the files [ETHERNIM]:
```

To choose the current defaults, press Return at each prompt.

VMSINSTAL displays a message stating that it has created the directory. If you already have ETHERnim installed on your system, VMSINSTAL displays a message stating that SYS$SYSDEVICE:[ETHERNIM] already exists. VMSINSTAL will copy the ETHERnim files to the existing directory.

2.2.3 Installing DECelms

If you choose to install DECelms, the installation displays an introductory message and proceeds as follows:

```
Asking DECmcc ELMS Questions ...
```

1. Convert the RBMS directory.

   VMSINSTAL displays the following information and prompt, indicating that you can convert an RBMS (Remote Bridge Management Software) directory, if one exists, into the DECelms registry during the installation procedure.

```
You can convert your RBMS directory (if one exists) into
the DECelms registry at any time with the following command:

$ RUN SYS$MANAGER:ELMS$CONVERT.EXE

 There are the following restrictions:

 o The RBMS detached process, NMS_RBMS$BMLPRC, must be running.

 o The DECelms detached process, ELMS$NIMUX, cannot be running.

 This install procedure can perform both these operations,
 if requested.

 You can convert your RBMS directory into the DECelms registry during
 this installation procedure. Answer NO if you are not upgrading from
 RBMS or if you do not want to convert your RBMS directory during the
 installation. This does not imply that RBMS will have to be
 shutdown, if you have reasons for keeping RBMS running.

* Do you want to convert your RBMS database during the installation
  [YES]?
```

Enter NO and press Return if you are not upgrading from RBMS or if you do not want to convert your RBMS directory during the installation. This does not imply that RBMS will have to be shutdown, if you have reasons for keeping RBMS running.

If you press Return to answer YES, then VMSINSTAL displays the following additional prompt:

```
* Do you want to start RBMS so that your database can be converted [YES]?
```

Press Return to answer YES to perform the conversion procedure.

If RBMS is already running, VMSINSTAL displays the following additional prompt:

```
RBMS is already running. Do you want to restart? [yes]:
```

Enter NO and press Return, because there is normally no need to restart RBMS.

VMSINSTAL displays the following message:

```
You may ignore ELMS$CONVERT status messages such as:
     "The current bridge that is selected -
      did not respond to message"
```

When the conversion is completed, VMSINSTAL displays:

```
Your RBMS database has been converted to a DECelms database.
```

VMSINSTAL then prompts you to stop RBMS if it is running:

```
RBMS is running. You must stop RBMS if you want to perform the
following tasks during the DECelms installation procedure:

  o Start DECelms

  o Run the DECelms Installation Verification Procedure (IVP)

* Do you want to stop RBMS [YES]?
```

Press Return to answer YES to stop RBMS.

2. Start ELMS.

   VMSINSTAL asks if you want to start the ELMS network multiplexer. VMSINSTAL displays the following information and prompt:

```
The ELMS$NIMUX (Network Multiplexer) module of DECelms must run
as a permanent detached process.  The installation procedure
normally starts the ELMS$NIMUX process.  If you wish, you may
defer starting this process until a later time. DECelms cannot be
run until this is done. The command to manually start the ELMS$NIMUX
process is:

 $  @SYS$STARTUP:ELMS$STARTUP

Also, if the ELMS$NIMUX process is not started by the installation
procedure, the installation verification procedure cannot be run.
Any time after the ELMS$NIMUX process has started, the verification
procedure can be manually run by typing the following command:

$  @SYS$COMMON:[SYSTEST]ELMS$IVP

If you let this installation procedure start the  ELMS$NIMUX
process, the installation procedure can verify the installation
automatically. Note that the installation verification procedure
does not require a bridge to be installed on the network.

* Do you want to start ELMS [YES]?
```

   Press Return to answer YES to start ELMS.

3. Start the device listener.

   If you decided to start DECelms during the installation procedure, VMSINSTAL prompts you about starting the device listener function.

```
You can start the device listener function during the DECelms
installation. The device listener function enters devices in the
DECelms registry by listening to MOP system ID messages. At any
time after the installation, you can control the device listener
function with the DECelms commands START LISTENER and STOP
LISTENER, as described in the DECelms documentation.
```

```
                     NOTE

    The device listener function conflicts with
    other applications, such as NMCC/VAX ETHERnim,
    that use the MOP Remote Console channel in
    shared default mode. The device listener function
    will not start if one of these applications is
    running.

* Do you want to start the device listener function ?
```

Enter YES and press Return to start the device listener. Enter NO and press Return if you do not want to start the device listener.

4. Start the background poller.

   If you decided to start DECelms during the installation procedure, VMSINSTAL next prompts you about starting the background poller function.

```
   You can start the background poller function during the DECelms
   installation. The background poller function polls the devices
   listed in the DECelms registry. When it detects a change in device
   state, it displays an event message and logs an event code in the
   event log. At any time after the installation, you can control the
   background poller function with the DECelms commands START POLLER
   and STOP POLLER, as described in the DECelms documentation.

* Do you want to start the background poller function ?
```

   Enter YES and press Return to start the background poller. Enter NO and press Return if you do not want to start the background poller.

   VMSINSTAL completes the DECelms installation and displays the following messages:

```
    Files ELMS$NIMUX.EXE, ELMS$BCP.EXE, ELMS$DISPLAYS.BIN,
    ELMS$BCPPRS.BIN installed in SYS$COMMON:[SYSEXE].
    File ELMS$HELP.HLB installed in SYS$HELP.
    File ELMS$STARTUP.COM installed in SYS$STARTUP.
    File ELMS$SHUTDOWN.COM installed in SYS$COMMON:[SYSMGR].
    File ELMS$CONVERT.EXE installed in SYS$COMMON:[SYSMGR].
    File ELMS$IVP.COM installed in SYS$SYSTEST.
    ELMS$HELP_DCL.HLP inserted into system command table.
    Logical name ELMS$UNA defined as Ethernet adapter device id.
    Logical name ELMS$NIMUX_MBX defined as mbx number.
    Logical name ELMS$BCPPRS defined as SYS$COMMON:[SYSEXE]
    Logical name ELMS$DISPLAYS defined as SYS$COMMON:[SYSEXE]
    Logical name ELMS$HELP defined as SYS$HELP:ELMS$HELP.HLB
    Logical name ELMS$HOME defined as SYS$COMMON:[ELMS$DIRECTORY]
```

2.2.4 Installing NMCC/DECnet Monitor

If you choose to install NMCC/DECnet Monitor, the installation displays an introductory message and proceeds as follows:

```
Asking DECmcc NMCC/DECnet Monitor Questions ...
```

1. Install the database files.

   VMSINSTAL displays the following messages, then asks whether you want to install just the database files.

   ```
   The NMCC/DECnet Monitor installation procedure now asks if you wish
   to install JUST the blank NMCC database files. The database files
   may only be installed on a system that has an NMCCKERNEL account.
   If you wish to install the entire NMCC/DECnet Monitor product,
   answer NO to the following question.

   A YES answer to the next prompt will install JUST the NMCC database
   files.

   * Do you want to install just the NMCC database files [NO]?
   ```

   To proceed with the installation of the entire NMCC/DECnet Monitor application, press Return or enter NO. To install just the database files, enter YES; VMSINSTAL installs the database files and terminates the DECnet Monitor installation.

2. Install the user interface.

   VMSINSTAL asks if you want to install only the user interface on this system. For more information about installing the user interface separately from the kernel, see Section 1.13.

   ```
   * Do you want to install just the NMCC user interface [NO]?
   ```

   Press Return to accept the default (NO) and proceed to step 3. To install only the user interface, enter YES and proceed to step 4.

3. Install new NMCC database files.

   If you choose to proceed with the installation, VMSINSTAL provides informative text, then asks whether you want to install new NMCC database files.

   ```
   This installation will give you the option of keeping the old NMCC
   database files or installing new (empty) NMCC database files.  If
   this is a new NMCC installation, you must install new NMCC database
   files.

   * Do you want to install the NMCC database files [YES]?
   ```

If you press Return to answer YES, VMSINSTAL displays the following message and installs new database files.

```
DECmcc NMCC/DECnet Monitor databases files will be installed...
Any previously existing NMCC database files will be purged.
```

```
* Is this correct? [YES]?
```

VMSINSTAL will purge existing files if you chose to purge files, or retain them if you did not choose to purge files.

If you choose not to install new NMCC/DECnet Monitor database files by answering NO, then VMSINSTAL proceeds with the installation with the existing database files.

VMSINSTAL displays the following messages:

```
%VMSINSTAL-I-RESTORE, Restoring product save set L ...
%VMSINSTAL-I-RESTORE, Restoring product save set M ...
```

This installation puts all NMCC/DECnet Monitor files on the system disk. To move them to another disk after the installation, see the *NMCC/DECnet Monitor Implementation* manual.

4. Define the GKS Workstation type.

   VMSINSTAL prompts you to enter a value to identify the GKS workstation type.

```
   The installation procedure prompts you to define the GKS
   workstation type (GKS$WSTYPE) that will be the default
   workstation type whenever the NMCC/DECnet Monitor is invoked.
   The correct GKS$WSTYPE value is required to ensure the accurate
   display of GKS graphics. At the prompt, you enter a number to
   identify the type of workstation you are using. Some specifiable
   values are the following:

         0 -- Default workstation type
        14 -- VT240/41 with black and white display
        13 -- VT240/41 with color option, VT340/41
        -1 -- VT100 (non_ReGIS terminal)

   Not all workstation types are supported by NMCC/DECnet Monitor.
   For a complete listing of values for GKS workstation types, see
   the GKS documentation or enter the HELP GKS WORKSTATION command
   at the dollar sign ($) prompt.

* Define GKS$WSTYPE:
```

   Enter the GKS workstation type value that identifies the terminal or workstation on which you will run the NMCC/DECnet Monitor.

5. Check for prerequisite software.

   If you are installing the kernel and user interface, VMSINSTAL determines whether GKS and Rdb are installed and running on the system. If you are installing just the user interface, VMSINSTAL determines whether GKS is installed on the system. The installation fails if the requisite software is not installed or if licenses for the software are not found on the system. If the prerequisite software is found, VMSINSTAL displays the applicable message:

   ```
   %MCCEMS-I-GKSOK, GKS found
   %MCCEMS-I-RDBOK, RDB license found
   ```

6. Enter the GMT offset.

   If you are installing the NMCC/DECnet Monitor for the first time, VMSINSTAL displays the following messages and prompt.

   ```
      If you are installing the NMCC/DECnet Monitor for the first time,
      VMSINSTAL prompts you for the Greenwich Mean Time (GMT) offset for
      your area.

      The GMT offset is the number of hours that you have to add to your
      local time to get Greenwich Mean Time.
      For example, if your node is on the east coast of the United States
      and your local time is Eastern Standard Time, your GMT offset is +5.
      You would have to add five hours to your time to get Greenwich Mean
      Time.

   * Please enter the current GMT offset for your time zone [0]:
   ```

   Enter the GMT offset (the number of hours that you have to add to your local time to get Greenwich Mean Time) and press Return.

   The format for the GMT offset is ± hh. For example, if your local time is Eastern Standard Time, your GMT offset is +5. You add five hours to your time to get Greenwich Mean Time.

   VMSINSTAL creates the NMCC/DECnet Monitor logical names. These messages do not appear if you have installed a previous version of the NMCC/DECnet Monitor:

   ```
   %MCCEMS-I-CRELOGICALS, Creating file NMCCLOGICALS.COM

   %MCCEMS-I-NMCCLOGICALS, Invoking NMCCLOGICALS.COM to define NMCC
                           logical names
   ```

7. Create the NMCCKERNEL account.

   VMSINSTAL describes an account for the kernel and asks whether you want to create the NMCCKERNEL account.

```
If you are creating the NMCCKERNEL account, the installation
procedure prompts you for the User Identification Code (UIC),
which consists of two integers separated by a comma. The system
manager should select the UIC for the NMCCKERNEL account.
The UIC should not belong to another user or VMSINSTAL will
terminate the installation. The first number in the UIC pair
should not be between 1 and 8 because these are reserved for
system UICs. The following are examples of valid UICs:

[123,456]

[12,3]

The NMCC installation procedure may create an account under which
the NMCC Kernel runs. All privileges and quotas required by the
Kernel are set up in this account by the installation procedure.
If this account does not already exist, and you wish it to be
created, then you should answer YES to the following question.
Otherwise answer NO or just press RETURN.
```

```
* Would you like the NMCCKERNEL account to be created [NO]?
```

   If this is the first time you have installed the NMCC/DECnet Monitor, enter YES and press Return. Otherwise, press Return to answer NO. You are finished with the DECnet Monitor installation.

8. Enter a UIC for the kernel account.

   If you ask for an NMCCKERNEL account to be created, VMSINSTAL asks for a UIC for the kernel account:

```
* UIC for Kernel account:
```

   The system manager should select the UIC for the NMCCKERNEL account. The UIC should not belong to to another user or VMSINSTAL will terminate the installation. The first number in the UIC pair should not be between 1 and 8 because these are reserved for system UICs.

   Type the UIC and press Return. You can type square brackets around it if you wish.

9. Enter a password for the kernel account.

   After you enter the UIC for the kernel account, VMSINSTAL displays informative text about the account password and asks you to press Return when you are ready to continue.

```
************************************************************
This installation requires the creation of the NMCCKERNEL
account.  You MUST choose a password for this account.
 ************************************************************

* Please press RETURN to continue:
```

   VMSINSTAL then displays information about valid passwords and prompts you for the password.

```
************************************************************
  The entire installation will FAIL if you do not enter a valid
password for the NMCCKERNEL account.  You will be given
3 chances to verify your password.  This installation
procedure requires at least 15 characters for the
RDB$REMOTE password.  Valid characters for a password are:

   A through Z
   a through z
   0 through 9
   $ (dollar sign)
   _ (underscore)

As with the DCL SET PASSWORD command, your input will not
appear on the terminal.  And to protect against typing errors
that are not seen when you are entering the password, you must
enter the password twice.
  ************************************************************

* Please enter PASSWORD to be used for NMCCKERNEL account:
```

   Choose a password by using the guidelines shown in the display. Enter a password for the NMCCKERNEL account and press Return.

   VMSINSTAL displays the following prompt:

```
* Please verify the PASSWORD entered for NMCCKERNEL account:
```

   Verify the password by entering it again and pressing Return.

   VMSINSTAL displays a message to indicate that it is creating the NMCCKERNEL account.

2.2.5 Installing LTM

The installation procedure asks no LTM-specific questions when it installs LTM. The installation of LTM displays the following messages:

```
Displaying DECmcc LTM Installation Information ...

*********************************************************************
The files in the distribution kit will be copied to the
appropriate system directories.

File                          System directory
----------------------        ----------------
LTM$SETUP.COM                 SYS$COMMON:[DECSERVER]
LTM$LOAD_CONFIG.COM           SYS$COMMON:[DECSERVER]
LTM$TYPE_NAME.DAT             SYS$COMMON:[DECSERVER]
LTM$MC_NAME.DAT               SYS$COMMON:[DECSERVER]
LTM$ADDR_NAME.DAT             SYS$COMMON:[DECSERVER]
LTMLIS0200.SYS                SYS$COMMON:[DECSERVER]
LTM$REGRESSION.COM            SYS$COMMON:[SYSTEST.LTM]
LTM$REGRESSION.BMK            SYS$COMMON:[SYSTEST.LTM]
LTM$IVP.COM                   SYS$COMMON:[SYSTEST]
LTM$UI.EXE                    SYS$SYSTEM:
LTM012.RELEASE_NOTES          SYS$HELP:
----------------------        ----------------

                        NOTE

 PLEASE place the command "$ @SYS$SYSROOT:[DECSERVER]LTM$SETUP"
 in SYS$MANAGER:SYSTARTUP_V5.COM to initialize LTM logical names
 at system boot time.  Place it after the DECnet startup command.

*********************************************************************
```

The following text is displayed if this installation updates LTM. The messages that follow the next line of asterisks appear for updated and new LTM installations.

```
By default, LTM files will be placed in the SYS$COMMON:[DECSERVER]
directory.  If the following LTM user-updateable files are found
in the SYS$COMMON:[DECSERVER] directory, no new installation files
will be copied over them:

   File Name
   ---------
   LTM$ADDR_NAME.DAT
   LTM$TYPE_NAME.DAT
   LTM$MC_NAME.DAT
```

```
   If the following file is found in the SYS$COMMON:[DECSERVER]
   directory, it will be copied by this installation:

       Old File Name                          New File Name
       -------------                          -------------
       LTM$SETUP.COM;                         LTM$SETUP.OLD_COM;

   NOTE: If you run in a cluster common environment and change or copy
         newly tailored files in the LTM directory, you may wish to
         check whether any files exist in the system-specific directory.
         These system-specific files will override files created during
         the installation of LTM V1.2. Also, these files will not be
         accessible from all nodes in the cluster. You may wish to move
         these files to the common directory once the installation is
         completed.

         This installation will warn you if it finds any LTM files in
         the SYS$SPECIFIC:[DECSERVER] directory.
   ***************************************************************************

    Placing LTM files in their final destinations...
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
 VMI$ROOT:[SYSTEST.LTM].
```

2.2.6 Installing TSM

If you choose to install TSM, the installation displays an introductory message and proceeds as follows:

```
Asking DECmcc TSM Questions ...
```

1. Enable a service circuit.

   VMSINSTAL asks if you want to enable a Network Control Program (NCP) service circuit.

   ```
      The TSM installation procedure normally enables service on the
      first circuit that it finds on the node. This allows the node
      to downline load and upline dump terminal servers.

      If you answer "No" to the following question, service
      will not be enabled.

   * Do you want service enabled in the installation procedure [YES]?
   ```

   Press Return to enable service, or enter NO if you do not want to enable service.

2. Select the TSM directory.

   VMSINSTAL then asks where you want to install the TSM command files and library files.

```
   TSM requires a directory where the TSM command files and library
   will be installed.  If the logical TSM$DEFAULT_DIRECTORY is
   defined, the files will be installed in that directory.  If
   the logical is not defined, the files will be installed in a
   directory on the system disk called SYS$COMMON:[DECSERVER].
   The target directory for the files as it is now defined is shown
   below.

   Press RETURN to use the value shown or enter a new disk and
   directory specification.

* Target directory for TSM files [SYS$COMMON:[DECSERVER]]:
```

   Press Return to select the value shown, or enter a new disk and directory specification.

   VMSINSTAL completes the TSM installation and displays the following messages:

```
   Linking Terminal Server Manager VMS V1.4...

   DECmcc TSM requires defining and setting OBJECT NML to
   PROXY BOTH ALIAS OUTGOING ENABLED.

   DECmcc TSM enabling SERVICE on QNA-0...

   After the installation use AUTHORIZE to create proxy accounts for
   all the TSM users on this node (if you have not done so already).
```

2.3 Postinstallation Messages

If the installation procedure has been successful thus far, VMSINSTAL moves the new or modified files to their target directories, updates help files, and updates DCL tables, if necessary. If you asked for files to be purged, the purging is done now.

The installation procedure displays messages that provide postinstallation information and setup suggestions. If you chose to install all of the applications, the installation procedure displays the messages in the order in which the following sections appear. If you chose to install only some (or one) of the applications, refer to the appropriate section(s). See Chapter 4 for information on performing the postinstallation tasks.

If the installation determines that DECwindows has not been installed on your system, the installation continues but management applications must be run from the DCL prompt; the following error messages and prompt appear:

```
%MCCEMS-E-NOVIEWLIB, Cannot find public profile library for DECmcc Station
%MCCEMS-E-NOVIEWLIB, Installation will not install DECmcc Station FileView
                     file

*Do you want to continue with DECmcc Station install [NO]?
```

Answer NO to stop the installation, or YES to continue.

The following sections show the postinstallation messages displayed for each DECmcc Management Station application.

2.3.1 Postinstallation Messages for DECmcc BMS

The installation procedure for DECmcc BMS creates and deletes an alarm rule. It displays the following postinstallation messages for DECmcc BMS:

```
   Beginning DECMCC BMS Postinstallation Procedure ...

   Deleting obsolete DECMCC verbs...

The MCC_STARTUP_BMS startup procedure for DECmcc V1.1.0 is now running.

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MCC 0 ALARMS RULE __DUMMY_TEST
AT  24-MAR-1991 15:10:15
Entity created successfully.

MCC 0 ALARMS RULE __DUMMY_TEST
AT  24-MAR-1991 15:10:15
Entity deleted successfully.

 The MCC_STARTUP_BMS procedure for DECmcc V1.1.0 is now ending.

   Completing DECMCC BMS Postinstallation Procedure ...
```

2.3.2 Postinstallation Messages for NMCC/VAX ETHERnim

The installation procedure displays no specific postinstallation messages for NMCC/VAX ETHERnim; it displays only the following messages to mark the beginning and end of the postinstallation procedure:

```
   Beginning DECMCC ETHERnim Postinstallation Procedure ...

   Completing DECMCC ETHERnim Postinstallation Procedure ...
```

2.3.3 Postinstallation Messages for LTM

The installation procedure displays no specific postinstallation messages for LTM; it displays only the following messages to mark the beginning and end of the postinstallation procedure.

```
Beginning DECMCC LTM Postinstallation Procedure ...

Completing DECMCC LTM Postinstallation Procedure ...
```

2.3.4 Postinstallation Messages for DECelms

The installation procedure displays the following postinstallation messages for DECelms:

```
Beginning DECMCC ELMS Postinstallation Procedure ...

*****************************************************************

         POSTINSTALLATION RECOMMENDATIONS


It is suggested that a call to the ELMS startup command procedure
SYS$STARTUP:ELMS$STARTUP.COM be added to the site-specific startup
command procedure SYS$MANAGER:SYSTARTUP_V5.COM as shown below. Be
sure to place this command after the commands that start DECnet and LAT.

$ @SYS$STARTUP:ELMS$STARTUP  !Extended LAN Mgt startup procedure

Note that the ELMS_LAN_MANAGEMENT command will not take effect until
a user logs on after the installation is complete.

Note that DECelms and the older product "RBMS" cannot be run on the
same system at the same time.

**********************************************************************

Completing DECMCC ELMS Postinstallation Procedure ...
```

2.3.5 Postinstallation Messages for TSM

The installation procedure displays no specific postinstallation messages for TSM; it displays only the following messages to mark the beginning and end of the postinstallation procedure.

```
Beginning DECMCC TSM Postinstallation Procedure ...

Completing DECMCC TSM Postinstallation Procedure ...
```

2.3.6 Postinstallation Messages for NMCC/DECnet Monitor

The installation procedure displays the following postinstallation messages for NMCC/DECnet Monitor. The messages concerned with the creation of the NMCCKERNEL account are displayed only if that account is created during this installation.

```
   Beginning NMCC/DM Postinstallation procedure...

********************************************************************************
********************************************************************************

 Please remember to insert

  $ @SYS$STARTUP:NMCCLOGICALS

 in SYS$STARTUP:SYSTARTUP_V5.COM.

 Before creating your database files, or starting the kernel, please
 ensure that the devices pointed to by the logical names in
 SYS$STARTUP:NMCCLOGICALS.COM do not have DISKQUOTA enabled. If
 any of those devices DO have DISKQUOTA enabled, please ensure
 that the NMCCKERNEL account has adequate quota on the device(s)
 in question. (Using the VMS Utility DISKQUOTA, which is invoked
 by typing  $ MCR DISKQUOTA).


 To start the NMCC Kernel running, type

  $ @NMCC$EXE:NMCCBOOTSTRAP


 To run the Installation Verification Procedure for NMCC, type

  $ @SYS$TEST:NMCCIVP

********************************************************************************
********************************************************************************

   Completing NMCC/DM Postinstallation procedure...
```

2.4 Running the IVP

VMSINSTAL automatically runs the Installation Verification Procedure (IVP) for DECmcc EMS (or SMS), provided you answered YES to the question at the beginning of the installation that asked if you wanted the IVP to run. Refer to Chapter 3 for information about the IVPs for DECmcc EMS (or SMS) and the IVPs for the individual applications.

2.5 Completing the Installation

The following messages indicate that the installation is completed (the first message identifies the DECmcc Management Station product that you installed):

```
Installation of MCCEMS V2.1 completed at hh:mm

VMSINSTAL procedure done at hh:mm
```

You can now log out of the privileged account. Note that VMSINSTAL deletes or changes entries in the process symbol tables during the installation for the duration of the session. Therefore, if you are going to continue using the system manager's account and you want to restore these symbols, you should log out and log in again.

The DECmcc Management Station installation procedure adds directories and files to your system. See Appendix B for lists of those directories and files.

2.6 Installation Errors

If errors occur during the installation, VMSINSTAL displays descriptive error messages. If the installation fails, the following message is displayed:

```
%VMSINSTAL-E-INSFAIL, The installation of DECmcc Management Station V2.1
 has failed.
```

Errors can occur during the installation if any of the following conditions exist:

- The operating system version is incorrect.
- A prerequisite software version is incorrect.
- Quotas necessary for successful installation are insufficient.
- System parameter values for successful installation are insufficient.
- The VMS help library is currently in use.

For descriptions of the error messages generated by these conditions, see the VMS documentation on system messages, recovery procedures, and VMS software installation. If you are notified that any of these conditions exist, you should take the appropriate action, as described in the message. See Chapter 1 for information on installation requirements.

3
Verifying the Installation of the DECmcc Management Station Software

This chapter discusses the Installation Verification Procedures (IVPs), which you can run to verify that the DECmcc Management Station software was installed properly. The IVPs can be run automatically by the installation procedure or independently after the installation. To run the IVPs apart from the installation, you run the IVP for each installed network management product separately.

Section 3.1 describes how to run the IVP for an individual management product. Section 3.2 discusses the failure of an IVP.

3.1 Running the IVPs on Individual Applications

This section describes how to run the IVPs on individual management applications. First, set the default directory to SYS$TEST:

```
$  SET DEFAULT SYS$TEST
```

Then enter the command that initiates the IVP, as listed in Table 3–1.

Table 3–1: Commands to Run the IVP for Individual Applications

Application	Command
DECmcc BMS	@MCC_BMS_IVP
NMCC/VAX ETHERnim	@ENIM$IVP
LTM	@LTM$IVP
DECelms	@ELMS$IVP
TSM	@TSM$IVP
NMCC/DECnet Monitor	@NMCCIVP[1] or @NMCCUI_IVP[2]

[1]IVP for system with kernel and user interface.

[2]IVP for system with user interface only.

The next sections describe the messages the IVP provides for successful verification of each management application. Section 3.2 discusses the failure of an IVP.

3.1.1 DECmcc BMS Installation Verification Procedure

The output of the IVP for DECmcc BMS follows:

```
   Beginning DECmcc BMS Installation Verification Procedure ..

   The IVP for DECmcc BMS will now be run.

DECmcc (V1.1.0)

MCC 0
AT  24-MAR-1991 15:19:10

Test Successful

DECmcc (V1.1.0)

MCC 0 FCL
AT  24-MAR-1991 15:19:31

Test Successful

DECmcc (V1.1.0)

MCC 0 CONFIG_AM
AT  24-MAR-1991 15:19:52

Test Successful
```

```
DECmcc (V1.1.0)

MCC 0 CONTROL_FM
AT  24-MAR-1991 15:20:13

Test Successful

DECmcc (V1.1.0)

MCC 0 DNA4_AM
AT  24-MAR-1991 15:20:36

Test Successful

DECmcc (V1.1.0)

MCC 0 DNA5_AM
AT  24-MAR-1991 15:21:00

Test Successful

DECmcc (V1.1.0)

MCC 0 ICONICMAP
AT  24-MAR-1991 15:21:13

Test Successful

DECmcc (V1.1.0)

MCC 0 DOMAIN_FM
AT  24-MAR-1991 15:21:36

Test Successful

DECmcc (V1.1.0)

MCC 0 SAMPLE_AM
AT  24-MAR-1991 15:22:00

Test Successful

DECmcc (V1.1.0)

MCC 0 ALARMS
AT  24-MAR-1991 15:22:21

Test Successful

DECmcc (V1.1.0)

MCC 0 BRIDGE_AM
AT  24-MAR-1991 15:22:43

Test Successful

DECmcc (V1.1.0)

MCC 0 ETHERNET_AM
AT  24-MAR-1991 15:23:04

Test Successful
```

```
DECmcc (V1.1.0)

MCC 0 HISTORIAN_FM
AT  24-MAR-1991 15:22:22

Test Successful

DECmcc (V1.1.0)

MCC 0 PA
AT  24-MAR-1991 15:22:50

Test Successful

DECmcc (V1.1.0)

MCC 0 EXPORTER_FM
AT  24-MAR-1991 15:23:16

Test Successful

DECmcc (V1.1.0)

MCC 0 NOTIFICATION_FM
AT  24-MAR-1991 15:23:39

Test Successful

   DECmcc BMS V1.1.0 Installation Successful

   Completing DECmcc BMS Installation Verification Procedure ..

   Installation of MCCBMS V1.1 completed at 15:23
   VMSINSTAL procedure done at 15:23
```

Successful completion of the IVP indicates that the DECmcc BMS software is installed correctly.

3.1.2 NMCC/VAX ETHERnim Installation Verification Procedure

Before you run the IVP for NMCC/VAX ETHERnim, you should know the name of your ETHERnim directory (default is ETHERNIM) and the location where the ETHERnim directory resides (default is SYS$SYSDEVICE). The IVP will prompt you for this information. If you did not change the names for the directory and the location when you installed NMCC/VAX ETHERnim, you can enter the default in response to the IVP prompts.

To verify the NMCC/VAX ETHERnim installation, DECnet-VAX must be running and you must be using a VT125, VT240/41, or VT340 terminal, or a DECwindows workstation with ReGIS emulation enabled. The output of the IVP for NMCC/VAX ETHERnim follows:

```
        Beginning DECmcc ETHERnim Installation Verification Procedure ...

This procedure verifies the installation of ETHERnim V2.3 on VMS

A VT125, VT240, VT241, or VT340 is required to verify installation

Do you want to continue? (Y/N) [Y]:
```

Press Return to continue or enter NO and press Return to terminate the IVP for ETHERnim. If you continued the IVP, the procedure displays this prompt:

```
ETHERnim directory [ETHERNIM]:
```

If you selected the default directory when you installed ETHERnim, press Return. If you selected a different directory, enter the directory specification here and press Return. The procedure now displays:

```
Location where ETHERnim directory resides [SYS$SYSDEVICE:]:
```

If you selected the default device when you installed ETHERnim, press Return. If you selected a different device, enter the device name and press Return. These responses inform the verification procedure where NMCC/VAX ETHERnim was installed. The verification procedure now checks to ensure that the NMCC/VAX ETHERnim files are loaded.

```
Directory SYS$SYSDEVICE:[ETHERNIM]

ENIM$MESSAGES.HLB;4

Total of 1 file.

Directory SYS$SYSDEVICE:[ETHERNIM]

ENIM$SCREENS.HLB;4

Total of 1 file.

Directory SYS$SYSDEVICE:[ETHERNIM]

ENIM$HOST_MAIN.EXE;4

Total of 1 file.

Directory SYS$COMMON:[SYS$STARTUP]

ENIM$HOST_STARTUP.COM;5

Total of 1 file.
```

```
Directory SYS$SYSDEVICE:[ETHERNIM]

ENIM$SESSION_STARTUP.COM;4

Total of 1 file.

Directory SYS$SYSDEVICE:[ETHERNIM]

ENIM$REMOTE_MAIN.EXE;4

Total of 1 file.

Directory SYS$SYSDEVICE:[ETHERNIM]

ENIM$REMOTE_STARTUP.COM;4

Total of 1 file.

Directory SYS$SYSDEVICE:[ETHERNIM]

ENIM$DTR_DEFINITIONS.COM;4

Total of 1 file.

Directory SYS$SYSDEVICE:[ETHERNIM]

ENIM$DTR_EXAMPLE.COM;4

Total of 1 file.
```

If the files are found, the verification procedure next attempts to run NMCC/VAX ETHERnim, displaying the following:

```
Running ETHERnim

You will see several warnings about file not found.  These can be ignored.

When the ETHERnim intro screen appears, Press <RETURN>.
Answer NO to the connectivity check question.
When the command menu appears, type EXIT and press <RETURN> to exit.

Press <RETURN> to continue:
```

Press Return to cause the NMCC/VAX ETHERnim introduction screen to appear. The verification procedure has just run NMCC/VAX ETHERnim and then exited.

```
ETHERnim V2.3 Initialization in progress...

Database Backup disabled by logical name ENIM$BACKUP.

Network Database contains 1 node(s) and 1 segment(s).

Want to size network/check connectivity <YES/NO> ?
```

Enter NO to suppress the connectivity check. When the NMCC/VAX ETHERnim screen appears, type EXIT, then press Return. The IVP completes its verification and displays this message:

```
ETHERnim V2.3 installation verification successful

        Completing DECmcc ETHERnim Installation Verification Procedure ...
```

The verification procedure has been successfully completed and NMCC/VAX ETHERnim is completely and correctly installed.

3.1.3 LTM Installation Verification Procedure

The output of the IVP for LTM follows:

```
        Beginning DECmcc LTM Installation Verification Procedure ...

LAN Traffic Monitor V1.2 initialization procedure
%DCL-S-SPAWNED, process ONUS_1 spawned
%DCL-S-ATTACHED, terminal now attached to process ONUS_1
%DCL-S-RETURNED, control returned to process _RTA1:

The LAN Traffic Monitor V1.2 Installation Verification Procedure
has completed successfully.

        Completing DECmcc LTM Installation Verification Procedure ...
```

3.1.4 DECelms Installation Verification Procedure

The output of the IVP for DECelms follows:

```
   Beginning DECmcc ELMS Installation Verification Procedure ...

       +------------------------------------------------------------+
       | Starting DECelms VAX Installation Verification Procedure   |
       +------------------------------------------------------------+
       | Start command completed.                                   |
       | Stop command completed.                                    |
       | PASSED VAX DECelms V1.1 installation verification          |
       +------------------------------------------------------------+

   Starting DECelms V1.1 verification procedure ...
   Start command completed.
   Stop command completed.
   Passed DECelms V1.1 installation verification test.
```

Successful completion of the IVP indicates that the DECelms software is installed correctly.

3.1.5 TSM Installation Verification Procedure

The output of the IVP for TSM follows:

```
     Beginning the DECmcc TSM V1.4 Installation Verification Procedure.

     Please ignore the following TSM test data.

Terminal Server Manager V1.4
Copyright © Digital Equipment Corporation. 1991. All Rights Reserved.
Usage is DIRECTORY

Server:         IVP_TEST_TSM       Circuit(s):      QNA-0
Address:        FE-FF-FF-FF-FF-FF  Maint. Password: 0000000000000000
Type:           DS100              Login Password:  ACCESS
Partition name: DEFAULT            DECnet Address:  0
Dump File:      SYS$COMMON:[DECSERVER]DS1IVP_TEST_TSM.DMP
Image File:     SYS$SYSROOT:[DECSERVER]PS0801ENG.SYS
Reference File: SYS$SYSROOT:[DECSERVER]IVP_TEST_TSM.TXT


 Terminal Server Manager VMS V1.4 was successfully installed.

     Completing DECmcc TSM Installation Verification Procedure.
```

Successful completion of the IVP indicates that the TSM software is installed correctly.

3.1.6 NMCC/DECnet Monitor Installation Verification Procedure

To verify the NMCC/DECnet Monitor installation, DECnet-VAX must be running, Rdb and GKS must be started, and you must be using a VT125, VT240/41, or VT340 terminal, or a DECwindows workstation with ReGIS emulation enabled. The output of the IVP for NMCC/DECnet Monitor follows:

```
        Beginning NMCC Installation Verification Procedure ...

NMCCIVP-I-IVPSTART, Starting installation verification procedure


 Checking NMCC/DECnet Monitor files ...



 This IVP procedure will attempt to start NMCCKERNEL. Make sure
 Rdb is STARTED on your system. CDD is not required for NMCC, but
 if it is installed on your system, it will be used. So, if you have
 CDD installed, make sure it is STARTED too.


Do you wish to continue [Y] ?:
```

Press Return to continue. If Rdb, GKS, or CDD (if installed) is not started, enter NO and press Return to terminate the IVP. Start Rdb and GKS (and CDD, if applicable), and restart the IVP as described in Section 3.1.

If you continue the IVP, and you installed the kernel, the following messages appear:

```
        Starting the NMCC/DECnet Monitor kernel process ...

%RUN-S-PROC_ID, identification of created process is 0000496C
%NMCC-S-NNMCCBOOTSUC, NMCCKERNEL process successfully started
```

The following messages are displayed if you installed the User Interface:

```
The User Interface will now be started. When you press RETURN, the
screen will clear and you will see an NMCC/DECnet Monitor
User Interface display.

Once the command line displays that the connection to the kernel
was successful, type SET NETWORK NAME ACE. Please note that
if you are using populated database files, you must rename
the network to the original name before exiting. After ACE
appears on the screen in the name display of the network, you
must type EXIT to exit the User Interface and end the
IVP.

To start the User Interface, press the RETURN key.

Press RETURN when ready to continue :
```

Press Return to continue. The IVP proceeds by displaying the NMCC/DECnet Monitor screen. Enter SET NETWORK NAME ACE and press Return. If the IVP is not successful, an error message will appear on the screen. If the IVP is successful, ACE appears in the Name field. Type EXIT and press Return to continue. The IVP displays the following messages:

```
Starting the User Interface ...

....Starting to cleanup and exit


The NMCC/DECnet Monitor IVP is now complete.

        Completing NMCC Installation Verification Procedure ...
```

3.2 What to Do if the IVP Fails

If you receive a failure message, the installation procedure may not have installed the required files. Ensure that you have all the prerequisite hardware and software products specified in the System Software Addendum (SSA) and described in Chapter 1. Repeat the installation procedure, described in Chapter 2, for the management application(s) not installed properly. If the problem persists, contact your Digital Equipment Corporation representative.

For example, the following message might appear if the NMCC/VAX ETHERnim IVP was not successful:

```
ETHERnim V2.3 installation has NOT been verified
```

4 After Installing the DECmcc Management Station Software

This chapter discusses tasks you need to perform after you have installed DECmcc Management Station and its supported management applications. Sections 4.1 through 4.6 describe the following tasks you need to perform for all SMS or EMS management applications:

- Editing the system startup file
- Rebooting the system
- Running an application in the cluster environment
- Setting user account privileges
- Setting user account quotas
- Enhancing DECmcc Management Station performance
- Reporting Problems

The remaining sections discuss procedures you need to perform for specific applications.

4.1 Editing the System Startup File

After installing DECmcc Management Station, you must edit the system startup file, SYS$MANAGER:SYSTARTUP_V5.COM, to provide for automatic startup of the installed products when your system is rebooted.

Startup commands for each application appear in Table 4–1. These commands must appear *after* the command that invokes the network startup command procedure. Each command must be preceded by the dollar sign prompt ($).

Table 4–1: Management Application System Startup Commands

Application	Startup Command
DECmcc BMS	@SYS$STARTUP:MCC_STARTUP_BMS
NMCC/VAX ETHERnim	@SYS$STARTUP:ENIM$HOST_STARTUP
DECelms	@SYS$STARTUP:ELMS$STARTUP
NMCC/DECnet Monitor	@SYS$STARTUP:NMCCLOGICALS and @NMCC$EXE:NMCCBOOTSTRAP
LTM	@SYS$COMMON:[DECSERVER]LTM$SETUP
TSM	None

4.1.1 DECmcc BMS Startup Command

Place the DECmcc startup commands after the startup commands for VAX Distributed Name Service (VAX DNS) and DECnet.

4.1.2 DECelms Startup Command

Place the DECelms startup commands after the startup commands for DECnet and LAT.

4.1.3 NMCC/DECnet Monitor Startup Commands

Place the NMCC/DECnet Monitor startup commands after the startup commands for Rdb, GKS, and CDD (if CDD is installed on your system).

4.2 Rebooting the System

You can reboot your system after you have installed DECmcc Management Station and edited the system startup file. A system reboot verifies that DECmcc Management Station is ready for use and ensures that the edits to the system startup command file have been made. Rebooting is optional.

4.2.1 If LTM Was Previously Installed

If your system had a previous version of LTM installed, the following command line may have been inserted in the system login command file:

```
$ LTM :== $LTM$UI
```

You can remove this line from the command file because LTM is now implemented as the following DCL verb:

```
TRAFFIC_MONITOR/LAN
```

Note, however, that the DCL verb TRAFFIC_MONITOR/LAN will not take effect until a user logs in after the completion of the installation.

4.3 Running an Application in the Cluster Environment

To run the application on a cluster, you must register the product license on each node in the cluster. For more information about the VMS License Management Facility (LMF), see Section 1.4.

4.3.1 Running DECmcc BMS in a Cluster Environment

To use DECmcc BMS in a VAXcluster environment, you must perform these tasks on each node in the cluster:

1. Prepare system-specific roots on the nodes other than the one on which you installed DECmcc BMS. Log in to the node's SYSTEM account and create a root directory by entering the following command:

   ```
   $ CREATE/DIRECTORY SYS$SPECIFIC:[MCC]/OWNER_UIC=PAR/PROT=(G:RE,W:RWE)
   ```

2. Use the Install utility to replace the DCLTABLES file.

   ```
   $  INSTALL
   INSTALL> REPLACE SYS$COMMON:[SYSLIB]DCLTABLES.EXE/HEADER/OPEN/SHARE
   INSTALL> EXIT
   ```

   This makes the DECmcc DCL command verbs accessible on all the nodes in the cluster. For more information on the Install Utility, see the *VMS Install Utility Manual*.

3. Add the MANAGE/ENTERPRISE command to the process DCL table.

   ```
   $ SET COMMAND SYS$COMMON:[MCC]MCC_COMMANDS.CLD
   ```

4. Ensure that the VAX DNS clerk is started up. Run the MCC startup command files.

```
$ @SYS$STARTUP:MCC_STARTUP_BMS.COM
```

5. Add the MCC startup command files to the system startup procedure, SYSTARTUP_V5.COM.

4.3.2 Running DECelms in a Cluster Environment

To use DECelms in a VAXcluster environment, you must perform the following steps:

1. Install DECelms on a common disk. (This is the only place where you need to install DECelms.)
2. Prepare system-specific roots on the nodes other than the one on which you installed DECelms. To do this, issue the following command on each node, preferably from the SYSTEM account:

```
$ CREATE /DIRECTORY SYS$SPECIFIC:[ELMS$DIRECTORY] -
_$ /PROTECTION=(SYSTEM:RWE,OWNER:RWE,GROUP:RE,WORLD:RE)
```

3. Enter the following command on each node:

```
$ @SYS$STARTUP:ELMS$STARTUP
```

4.3.3 Running NMCC/VAX ETHERnim in a Cluster Environment

To use NMCC/VAX ETHERnim in a VAXcluster environment, perform the installation procedure described in Chapter 2 on one node, then perform the following task on the *other* nodes in the cluster.

Use the Install utility to replace the DCLTABLES file.

```
$  INSTALL
INSTALL> REPLACE SYS$COMMON:[SYSLIB]DCLTABLES.EXE/HEADER/OPEN/SHARE
INSTALL> EXIT
```

This makes the ETHERNIM DCL command verb accessible on all the nodes in the cluster. For more information on the Install Utility, see the *VMS Install Utility Manual*.

A successful installation places the NMCC/VAX ETHERnim files in the common directory, where they can be accessed by all the nodes in the cluster. However, only one user at a time can access an NMCC/VAX ETHERnim database. Likewise, only one NMCC/VAX ETHERnim user at a time can use an Ethernet controller.

Two or more users can use NMCC/VAX ETHERnim simultaneously provided that they are accessing different databases and using different Ethernet controllers. To permit simultaneous use of NMCC/VAX ETHERnim, you must assign the ENIM$DEVICE, ENIM$NETWORK, and ENIM$SEGMENT logicals appropriately, as described in the release notes.

4.3.4 Running LTM in a Cluster Environment

If you run LTM in a VAXcluster environment and change or copy newly tailored files in the LTM directory, check to see if any files exist in the system-specific directory. These system-specific files will override files created during the installation of LTM V1.2. Also, these files will not be accessible from all nodes in the cluster; you may wish to move these files to the common directory after the installation.

The installation issues a warning message if it finds any LTM files in the SYS$SPECIFIC:[DECSERVER] directory.

4.4 Setting User Account Privileges

To use DECmcc Management Station, an account must have at least the TMPMBX and NETMBX privileges. Use the VMS Authorize utility to ensure that users have the privileges they require. Additional privileges required by individual management applications are listed in the following sections.

The following example shows how to use Authorize to grant the necessary privileges. The user name in this example is SMITH.

```
$  SET DEFAULT SYS$SYSTEM
$  RUN AUTHORIZE
UAF>  MODIFY SMITH/PRIV=TMPMBX
%UAF-I-MDFYMSG, user record(s) updated
UAF>  MODIFY SMITH/PRIV=NETMBX
%UAF-I-MDFYMSG, user record(s) updated
UAF>  EXIT
%UAF-I-DONEMSG, system authorization file modified
%UAF-I-NAFNOMODS, no modifications made to network authorization file
%UAF-I-RDBNOMODS, no modifications made to rights database
$
```

For more information on modifying user privileges, see the description of the Authorize utility in the VMS System Management Subkit.

4.4.1 Privileges Required to Run DECelms

The account from which DECelms is started up must have the following privileges:

- NETMBX
- PHY_IO
- PRMMBX
- SYSNAM
- BYPASS

All DECelms users must have the TMPMBX privilege. If DECelms is started up from the system manager account, SYSTEM, it should not be necessary for you to add privileges, since that account normally has all the required privileges.

You can implement a privileged and a nonprivileged mode for DECelms by adding the ELMS$RIGHTS_ID rights identifier to the system and granting it to privileged users. If ELMS$RIGHTS_ID is present on the system, only those users who are granted ELMS$RIGHTS_ID can use the DECelms commands that modify the DECelms registry or device characteristics. These include commands such as SET, ADD, REMOVE, MODIFY, INITIALIZE, ENABLE, and DISABLE. Nonprivileged users can use only the SHOW, LIST, and MONITOR commands.

This section explains how to implement DECelms privilege modes and assign privileges to DECelms users by using the VMS Authorize utility.

Implementing DECelms Privilege Modes

To implement DECelms privilege modes on your system, use the Authorize utility to add the ELMS$RIGHTS_ID rights identifier to the system, as shown in the following example:

```
$ SET DEFAULT SYS$SYSTEM
$ RUN AUTHORIZE
UAF> ADD/IDENT/VALUE=IDENT:%x80222 ELMS$RIGHTS_ID
%UAF-I-RDBADDMSG, identifier ELMS$RIGHTS_ID value: %X80080222
    added to RIGHTSLIST.DAT
UAF> EXIT
%UAF-I-DONEMSG, no modifications made to system authorization file
%UAF-I-NAFNOMODS, no modifications made to network authorization file
%UAF-I-DONEMSG, rights database modified
```

Allowing Privileged Use of DECelms

Privileged DECelms users must have the TMPMBX privilege required for all DECelms users as well as the ELMS$RIGHTS_ID rights identifier. The following example shows the commands to give the user, BERTHA, privileges to use the full functionality of DECelms. First, give BERTHA the TMPMBX privilege required by all DECelms users:

```
$ SET DEFAULT SYS$SYSTEM
$ RUN AUTHORIZE
UAF> MODIFY BERTHA/PRIV=TMPMBX
%UAF-I-MDFYMSG, user record(s) updated
```

Then, grant BERTHA the ELMS$RIGHTS_ID rights identifier that allows her to use SET and all the other privileged DECelms commands. In this example, 300 is BERTHA's group user identification code and 015 is her user identification code (UIC).

```
UAF> GRANT/IDENTIFIER ELMS$RIGHTS_ID [300,015]
%UAF-I-MDFYMSG, user record(s) updated
```

Exit the Authorize utility when the changes are completed.

```
UAF> EXIT
%UAF-I-DONEMSG, system authorization file modified
%UAF-I-NAFNOMODS, no modifications made to network authorization file
%UAF-I-DONEMSG, rights database modified
```

4.4.2 Enabling Privileges for TSM Operations

When you use proxy login accounts, TSM users are logged in under their own account as a Network Management Listener (NML) server process performing DECnet operations for the process running TSM. When you define TSM$NO_PROXY, TSM logs in to the specified account as an NML server process. OPER and SYSPRV privileges must be enabled from the LOGIN.COM file of the account that runs TSM. If you want to enable SYSPRV just for NML use, enable privileges in the LOGIN.COM as follows:

```
$  SET PROCESS/PRIV=OPER
$  IF F$MODE() .EQS. "NETWORK" THEN $ SET PROCESS/PRIV=(SYSPRV)
```

OPER privilege is required to run TSM and to operate on the DECnet volatile database. SYSPRV privilege is generally required to operate on the DECnet permanent database (that is, it provides write access to the permanent database files).

These privileges allow TSM to propagate server information to the DECnet database automatically when you register (using the ADD command) a terminal server in the TSM database. Similarly, these privileges make it possible to execute other TSM commands that affect the DECnet database.

4.5 Setting User Account Quotas

To use DECmcc Management Station, user accounts on your system must have sufficient quotas. Table 4–2 summarizes the required user account quotas.

Table 4–2: Required DECmcc Management Station User Account Quotas

Account Quota	SMS Value	EMS Value
ASTLM	50	60
BIOLM	50	72
BYTLM	75,000	100,000
DIOLM	50	60
ENQLM	512	512
PGFLQUO	40,000	50,000
PRCLM	10	12
TQELM	128	128
WSDEF[1]	512	512
WSQUO	2,048	2,048

[1]The values for WSEXTENT must be equal to or greater than the WSDEF value.

Refer to Section 1.11.2 for information on modifying your account quotas.

4.6 Enhancing DECmcc Management Station Performance

This section explains how to install the various DECmcc Management Station management applications as shared images to enhance their performance.

If DECmcc Management Station applications will be used extensively on your system, you can reduce the system overhead and memory requirements by installing each application as a shared image. To install an application as a shared image on a system that is currently running, use the VMS Install Utility (INSTALL). You should perform the installation on a system that has just been bootstrapped because the available space in the global page table is less likely to be fragmented.

First, determine the number of available global pages and global sections on your system. See Section 1.10 for information on displaying system parameter values.

Once you have set the system parameter values, invoke the VMS Install Utility from a privileged account and install the application as a shared image. The following commands install a shared image for a management application:

```
$  INSTALL
INSTALL>  ADD name /OPEN /SHARED
INSTALL>  EXIT
$
```

Table 4–3 provides the image name for each application; substitute the name in the table for *name* in the ADD command.

You must also add the Install commands to the appropriate system startup command file, so that each time the system is started, the application is available as a shared image. (If your site has modularized your startup procedures, be sure you add the lines to the correct file.) The default startup command file for VMS V5.x is SYS$MANAGER:SYSTARTUP_V5.COM. Add the following lines to the system startup file:

```
$  INSTALL
INSTALL>  ADD name /OPEN /SHARED
INSTALL>  EXIT
$
```

Again, replace *name* in the ADD command by the name in Table 4–3.

Table 4–3: DECmcc Management Station Executable Image Names

Application	Executable Image Name
DECmcc BMS	SYS$SYSTEM:MCC_ALARMS_EXTRACT_RULES.EXE SYS$SYSTEM:MCC_DAP_MAIN.EXE, SYS$SYSTEM:MCC_DNS_SETUP.EXE, SYS$SYSTEM:MCC_DEL_GS_POOL.EXE, SYS$SYSTEM:MCC_ENIM_CONVERT_MAIN.EXE, SYS$SYSTEM:MCC_EXPORTER_FM_BG.EXE, SYS$SYSTEM:MCC_EXPORTER_FM_WRITER.EXE, SYS$SYSTEM:MCC_HFB_MAIN.EXE, SYS$SYSTEM:MCC_HISTORIAN_FM_BG.EXE, SYS$SYSTEM:MCC_MAIN.EXE, SYS$SYSTEM:MCC_MIR_CVT_MAIN.EXE, SYS$SYSTEM:MCC_RBMS_CONVERT_MAIN.EXE
TSM	SYS$SYSTEM:TSM$MAIN.EXE
DECelms	SYS$SYSTEM:ELMS$BCP.EXE and SYS$SYSTEM:ELMS$NIMUX.EXE
LTM	SYS$SYSTEM:LTM$UI.EXE
NMCC/VAX ETHERnim	SYS$SYSTEM:ENIM$HOST_MAIN.EXE
NMCC/DECnet Monitor	SYS$SYSTEM:NMCCDBO.EXE SYS$SYSTEM:NMCCKERNEL.EXE SYS$SYSTEM:NMCCLDBSERVER.EXE SYS$SYSTEM:NMCCMSG.EXE SYS$SYSTEM:NMCCRPTNMC.EXE SYS$SYSTEM:NMCCRPTNMS.EXE SYS$SYSTEM:NMCCRPTOUT.EXE SYS$SYSTEM:NMCCRPTPRS.EXE SYS$SYSTEM:NMCCUI.EXE SYS$SHARE:NMCCSHR.EXE

4.7 Reporting Problems

If you encounter a problem with the DECmcc Management Station software or documentation, please document the problem thoroughly and submit a report on that problem to Digital.

If an error occurs and you believe that the error is due to a problem in DECmcc Management Station, document that error by using the following guidelines:

- Describe the state of the system and the circumstances when the problem occurred as accurately as possible. Ensure that you specify the version number of the DECmcc Management Station application that you are running (use SHOW VERSION). Illustrate the problem with specific examples.
- If you report a documentation error, specify the title of the document as well as the section and page number where the error was found.
- Isolate the error as much as possible.
- Submit sources on machine-readable media (magnetic tape), if possible. All media will be returned to you when the problem report is answered.
- Report only one problem at a time. This will facilitate a faster response.

Experience shows that many problem reports do not contain sufficient information to duplicate or identify the problem. Complete and concise information will help Digital give accurate and timely service to software problems.

4.8 DECmcc BMS Postinstallation Procedures

This section discusses postinstallation procedures you may need to perform to use DECmcc BMS.

4.8.1 DECmcc BMS Logical Names

You need to add commands in your DECmcc BMS startup procedure to automatically define DECmcc BMS logicals every time you reboot.

Follow these steps to modify your system's SYS$STARTUP:MCC_STARTUP_DIR.COM file. For your convenience, this command file already contains the commands shown in the steps; however, the commands are commented out. Remove the comment character (!) at the beginning of the line and enter the value of the logical in place of "value."

1. To ensure that the value of the MCC_COMMON logical equals the target directory that you selected during the installation procedure, enter the following command, replacing "value" with the name of the target directory:

   ```
   $ DEFINE/SYSTEM/EXECUTIVE_MODE MCC_COMMON "value"
   ```

2. To ensure that the value of the MCC_TDF logical equals the Time Differential Factor (TDF) that you selected during the installation procedure, enter the following command, replacing "value" with the TDF value:

   ```
   $ DEFINE/SYSTEM/EXECUTIVE_MODE MCC_TDF "value"
   ```

3. To ensure that the value of the MCC_NODE_IDP logical equals the Initial Domain Part (IDP) that you selected during the installation procedure, enter the following command, replacing "value" with the IDP value:

   ```
   $ DEFINE/SYSTEM/EXECUTIVE_MODE MCC_NODE_IDP "value"
   ```

4.8.2 Setting Up the VAX DNS Namespace

DECmcc uses the VAX Distributed Name Service (DNS) namespace as a repository for all entity names in your network. Digital assists you in setting up your namespace by providing a command procedure to partially automate this process.

For DECmcc to run, the DNS clerk and server must be running. The server must be accessible and it must contain the appropriate clearinghouse. A clearinghouse is a collection of one or more DNS directories. A clearinghouse is created on a node when a DNS server is installed on that node.

In the DNS namespace, entity names are stored in directories that are hierarchically structured, much like VMS directories and subdirectories. You need to create these directories only once per namespace.

The main directory in the namespace is called the root directory. An entity's name reflects the complete path through your namespace from the root directory to the entity entry in a particular directory. Therefore, all DNS names begin with a dot character (.), which denotes the root directory. Refer to the *VMS Version 5.3 New Features Manual* and the *VAX Distributed Name Service Management Guide* for more information about DNS and namespace management.

A DNS namespace containing the root directory was created when the DNS software was installed on a server node. The following steps describe how to modify the namespace by using the DNS Setup command procedure:

1. Enter the following command on the DNS server node:

   $ @MCC_SYSTEM:MCC_DNS_SETUP.COM

   DECmcc BMS displays the following messages:

   ```
   DECmcc namespace setup procedure

   Type a question mark (?) at any prompt to obtain help.
   Press #CTRL/Z" at any prompt to exit from a function.
   ```

   This command procedure sets up default directories for DECmcc, creates a directory for each global entity class for which Digital provides an Access Module (AM), and sets up .DNA_BackTranslation child directories for all the possible areas in a DECnet Phase IV network.

   The procedure also creates the .DNA_Registrar DNS group, which you can use to list those who have READ, WRITE, DELETE, TEST, and CONTROL access to the directories and objects registered in the DNS namespace. The procedure sets WORLD READ or WORLD READ,WRITE access privileges to the directories it creates, as appropriate.

   You can also use this procedure to set up additional DNA_BackTranslation child directories for DECnet/OSI extended areas.

   The setup procedure next displays the following prompt:

   ```
    * Namespace to use (DEF=<DECdns_default>):

   The name namespace will be used
   ```

2. Enter the name of the namespace to use. If you do not supply a name, the procedure uses the default established when the DNS software was installed.

   DECmcc requires a number of directories in the DNS root directory. The DNS Setup procedure will create the required directories for you. BMS requires the following directories:

   - .DNA_BackTranslation

     This directory is used to translate an address to a name. The directory contains one child directory for each IDP in the network. Each IDP child directory contains one child directory for each local area defined within that IDP. Each local area child directory contains one soft link for each node in that local area. The soft link for each node is created by DECmcc when you register the node.

   - .MCC_*global-entity-class-name*_BackTranslation

     These directories contain soft links for every instance of the specified global entity registered by DECmcc.

   - .DNA_Node

     The command procedure created by function 2 on the DNS Setup menu registers Phase IV nodes in this directory.

   - .DNA_NodeSynonym

     This directory holds soft links used to translate a Phase IV node synonym to a registered fullname. This directory contains a soft link for each node that has a Phase IV node synonym. Synonym soft links for nodes are created by DECmcc when you register the nodes.

   - .DTSS_GlobalTimeServers

     This is used by DECdts to hold the names and network locations of global time servers. DECmcc does not use this directory, but it is needed for compatibility with other software.

   - .MCC

     This directory holds objects containing information about the various installed DECmcc directors known to this namespace.

After creating the .DNA_BackTranslation directory, the procedure creates the following child directories in it:

- .DNA_BackTranslation.IDP (where IDP is a string representing each Initial Domain Part as a hex number, for example, %X49; refer to "Obtaining Your Network Address Initial Domain Part" in Chapter 1.)
- .DNA_BackTranslation.IDP.area (where area is a string representing each area in your DECnet network as a four-digit hex number with leading zeros, for example, area 15 is .%X000F).

The setup procedure prompts you to start the initialization process:

```
* Initialize the namespace directories now (Y/N, DEF=Yes):
```

```
Create the initial namespace directories
Press Control-Z at any question to cancel the initialization
```

3. Press Return to initialize the namespace directories; enter NO and press Return if you are not ready to initialize the directories.

   The DNS setup procedure then prompts you to supply the names of the clearinghouses for the master and read-only replicas. The master replica is a copy of the master directory that can be updated. The read-only replica is a copy of the directory that is used for name-lookup purpose only. For the master replica, the procedure uses the default established when the DNS software was installed. The clearinghouse for the read-only replica is optional.

   ```
   * Clearinghouse for master replica (DEF=<DECdns_default>):
   * Clearinghouse for read-only replica (DEF=<none>):
   ```

4. Press Return to use the default, or enter a clearinghouse name for the master replica and press Return. Then, if you so choose, enter the clearinghouse name for the read-only replica.

   The procedure creates the .DNA_Registrar control group, which you can use to list those users who have read, write, delete, test, and control access to the directories and objects registered in the DNS namespace. The procedure then sets the proper access control for the created directories. It displays the following messages and asks if you want to continue.

```
The DECdns directories and group will now be created.  This may take
up to 33 minutes or more, depending on the speed of the DECdns server
system and the amount of traffic on the network.

Creating the ._DNA_Registrar" group
Setting READ,WRITE,DELETE,TEST,CONTROL access for name:
.DNA_Registrar
Setting READ,TEST access for WORLD (name:.*...)

Creating the name:._DNA_BackTranslation" directory (in clearinghouse
name:name)
Setting READ,WRITE,DELETE,TEST,CONTROL access for name:
.DNA_Registrar
Setting READ,WRITE,DELETE,TEST,CONTROL default access for name:.
DNA_Registrar
Setting READ,TEST access for WORLD (name:.*...)
Setting READ,TEST default access for WORLD (name:.*...)

Creating the name:._DNA_BackTranslation".%X49 directory (in
clearinghouse name:name)
Setting READ,WRITE,DELETE,TEST,CONTROL access for name:
.DNA_Registrar
Setting READ,WRITE,DELETE,TEST,CONTROL default access for name:
.DNA_Registrar
Setting READ,TEST access for WORLD (name:.*...)
Setting READ,TEST default access for WORLD (name:.*...)

Creating the ._DNA_BackTranslation".%X49.%X0001 directory (in clear-
inghouse name)
.
.
.
Creating the name:._MCC_Station_BackTranslation" directory (in clear-
inghouse name:name)
Setting READ,WRITE,DELETE,TEST,CONTROL access for name:
.DNA_Registrar
Setting READ,WRITE,DELETE,TEST,CONTROL default access for name:
.DNA_Registrar
Setting READ,WRITE,TEST access for WORLD (name:.*...)
Setting READ,TEST default access for WORLD (name:.*...)

DECdns namespace setup is complete

* Press RETURN to continue
```

5. Press Return to continue.

   The procedure displays the following messages:

```
The following were created:

     Group:        name:.DNA_Registrar
     Directory:    name:.DNA_BackTranslation
    .
    .
    .
* Press RETURN to continue
```

6. Press Return to continue; or press Ctrl/z to exit the DNS Setup procedure.

   If you are setting up the namespace for the first time, press Return and continue to the following section to create a procedure for registering Phase IV nodes.

4.8.2.1 Creating a Procedure to Register DECnet Phase IV Nodes

The DNS setup procedure can automatically create a command procedure for registering all your DECnet Phase IV nodes. Digital strongly recommends that you use this method to register DECnet Phase IV nodes. The setup procedure asks if you want to create the command procedure:

```
   If this is the first time you have set up the namespace directories,
   you should use MCC_DNS_SETUP to:

   - Create a command file to automatically register previously
     defined Phase IV nodes, and then execute that command file.
   .
   .
   .
* Press RETURN to continue
```

1. Press Return to create the command procedure for registering Phase IV nodes.

   The procedure displays the DNS Setup menu and prompts you to choose a function:

```
Choose one of the following functions by specifying its function number,
or request help by typing HELP or a question mark (?)

  0. Exit
  1. Create the initial namespace directories
  2. Create a command file to help register existing Phase IV nodes
  3. Create additional directories in the namespace
  4. Create back translation directories for new network IDPs and areas
```

```
  5. Add members to the access control group
  6. Remove members from the access control group
  7. Show members of the access control group

* Function to execute:
```

2. Select function 2 from the menu to create the registration procedure.

   The DNS setup procedure prompts you to supply a name for the file.

```
Create a command file to help register existing Phase IV nodes.
Press Control-Z at any question to cancel the function.

* Name of file to create:
```

3. Enter a name for the file and press Return.

   The DNS setup procedure creates the file you named and creates one secondary command procedure for each area in the network. The secondary procedures have the same name as the main registration procedure with "_nn" appended, where "nn" is the number of the area, for example:

   PHASE4_REGISTRATION.COM_09

   Each file created is placed in the SYS$COMMON:[MCC] directory by default.

   The primary and secondary registration procedures place the nodes they register in the .DNA_Node directory. If you want to use different directories, you can edit the procedures. The setup procedure displays the following messages and asks if you want to continue:

```
Creating the Phase IV node registration command file.  The ".DNA_Node"
directory will be used for all node registrations.

The information used to create this command file will be read from the
Phase IV permanent data file:

  SYS$SYSTEM:NETNODE_REMOTE.DAT

This data file contains definitions for all Phase IV nodes that were
entered using the "NCP DEFINE NODE" command.

Working ...

The resulting files have been named:

 Primary command file to execute:
    SYS$COMMON:[MCC]filename.COM

 Secondary command files, one for each network area #nn"
    SYS$COMMON:[MCC]filename.COM_nn

* Press RETURN to continue
```

4. Press Return to continue; or press Ctrl/z to exit the DNS Setup procedure.

   If you press Return, the DNS setup procedure again displays the menu:

   ```
   Choose one of the following functions by specifying its function
   number, or request help by typing HELP or a question mark (?)

   0. Exit
   1. Create the initial namespace directories
   2. Create a Phase IV node registration command file
   3. Create additional directories for node name objects
   4. Create additional directories for new network areas
   5. Add members to the access control group
   6. Remove members from the access control group
   7. Show members of the access control group

  * Function to execute:
   ```

   The following sections describe the remaining functions on the DNS Setup menu.

4.8.2.2 Creating Additional DNS Directories

The DNS Setup procedure menu allows you to create additional directories in the DNS root directory. In particular, Access Modules you purchase in addition to those supplied with DECmcc may require special directories. Also, if you have Digital's TCP/IP AM, you need to create the directory .MCC_IP.

Digital recommends that you use the DNS startup procedure to create all your DNS directories. The procedure automatically sets the proper access control for the directories it creates.

1. Select function 3 from the DNS Setup Menu to create additional directories, if you need them.

   The DNS Setup procedure prompts you to supply names of the clearinghouses for the master and read-only replicas. For the master replica, the procedure uses the default you specified earlier. The clearinghouse for the read-only replica is optional.

The setup procedure prompts you for a directory name for the additional directory, and the clearinghouse names:

```
Create additional directories for node names.
Press Control-Z when done.

* Directory name:
* Clearinghouse for master replica (Def=name):
* Clearinghouse for read-only replica (Def=<none>):
```

2. Enter the directory name and press Return. Press Return to use the default master replica that you specified earlier. Enter the name for the read-only replica and press Return.

   The setup procedure sets the access control for the new directory and again displays the Directory name prompt:

```
Creating the name directory (in clearinghouse name:name)
Setting READ,WRITE,DELETE,TEST,CONTROL access for name:
.DNA_Registrar
Setting READ,WRITE,DELETE,TEST,CONTROL default access for name:
.DNA_Registrar
Setting READ,TEST access for WORLD (name:.*...)
Setting READ,TEST default access for WORLD (name:.*...)

* Directory name:
```

3. Enter another directory to be added, or if you are finished creating additional directories, press Ctrl/Z.

   The DNS setup procedure displays the setup menu.

   Some independent AMs require that you create a class-specific back translation directory in the root. The directory name should use the following format:

   .MCC_*global-entity-class-name*_BackTranslation

   The variable *global-entity-class-name* is the ASCII string for the registered name of the global entity class. See each independent AM's Use manual or release notes for its DNS requirements and for the name of its global entity class.

4. Select function 4 on the DNS Setup procedure menu to create additional back translation directories for new areas you add to your network.

4.8.2.3 Managing the .DNA_Registrar Access Control Group

You can use the DNS Setup procedure to add, delete, and display members of the .DNA_Registrar access control group.

Functions 5, 6, and 7 on the DNS Setup procedure menu allow you to manage the DNA_Registrar control group, which you can use to list those who have READ, WRITE, DELETE, TEST, and CONTROL access to the directories and objects registered in the DNS namespace.

```
  Choose one of the following functions by specifying its function
  number, or request help by typing HELP or a question mark (?)
  .
  .
  .
  5. Add members to the access control group
  6. Remove members from the access control group
  7. Show members of the access control group

* Function to execute:
```

1. Select function 5 if you want to add members to the group.

   The setup procedure prompts you to specify the member to be added.

2. Supply a user name in the form *node::user*, where *node* is a DECnet Phase IV node name.

   ```
   Add members to the access control group

   Specify the members to be added, one at a time
   Press Control-Z when finished

   * Member: node::name

   Adding member name:.DNS$IV.node.name to ._DNA_Registrar"

   * Member:
   ```

3. Press Ctrl/Z when you are finished adding members.
4. Select function 6 to delete members from the group.
5. Select function 7 to show those users who are in the .DNA_Registrar group.

4.8.3 Setting File Protection for DECmcc BMS Files

If nonprivileged users need to use DECmcc BMS, you must change protection to allow them to access several files.

When DECmcc BMS is first installed, file protections are set for system, owner, and group to have full access and world to have read-only access. If a nonprivileged user attempts to execute a directive that requires privileges, the system displays error messages indicating that a file protection violation exists. Follow your company security policy to change the protection to allow nonprivileged users access to DECmcc BMS.

The following examples show how you might open a DECmcc BMS common file so that the nonprivileged user, Wanda James, can access it. See the specific access module or function module manual in the DECmcc BMS documentation set for examples of how to open specific files for access by nonprivileged users.

- This example illustrates how to change access control for only one user:

  ```
  $ SET FILE MCC_SPECIFIC:MCC_DISPATCH_TABLE.DAT /ACL=(IDENTIFIER=
    [NETMAN,W_JAMES],ACCESS=READ+WRITE)
  ```

- This example illustrates how to change the file protection:

  ```
  $ SET PROTECTION=(W:RW) MCC_SPECIFIC:MCC_DISPATCH_TABLE.DAT
  ```

Table 4–4 shows the privileges required for access to key DECmcc BMS files.

Table 4–4: DECmcc BMS File Protections

File Name	Contents	Default Protections	Access Required
MCC_SPECIFIC:	This directory contains DECmcc system specific files.	S:RWE O:RWE G:RE W:R	Change to match access of files within this directory.
MCC_COMMON:	This directory contains the remaining files listed in this table.	S:RWE O:RWE G:RE W:R	Change to match access of files within this directory.

Table 4–4 (Cont.): DECmcc BMS File Protections

File Name	Contents	Default Protections	Access Required
MCC_DISPATCH_ TABLE.DAT	Dispatch tables for DECmcc Management Modules.	S:RWED O:RWED G:RE W:R	To enroll new Management Modules you must have RW access.
MCC_META_ DICTIONARY.DAT	Dictionary hierarchy for MCC_ DICTIONARY.DAT	S:RWED O:RWED G:RWED W:R	To use DECmcc Developer's Toolkit you must have R access.
MCC_META_ DEFINITION.DAT	Data that describes all known definitions for MCC_ DEFINITION.DAT	S:RWED O:RWED G:RWED W:R	To use DECmcc Developer's Toolkit you must have R access.
MCC_MIR_ DIRECTORY.DAT	List of all known repositories for DECmcc BMS.	S:RWED O:RWED G:RWED W:R	To use DECmcc Director or DECmcc BMS you must have R access. To use DECmcc Developer's Toolkit, Historian, Exporter, and Alarms FMs, you must have RW access.
MCC_MIR_ ATTRIBUTE.DAT	Locations and RMS file attributes for all known repositories for DECmcc BMS.	S:RWED O:RWED G:RWED W:R	To use DECmcc Director or DECmcc BMS you must have R access. To use DECmcc Developer's Toolkit, Historian, Exporter, and Alarms FMs, you must have RW access.
MCC_ DICTIONARY.DAT	Entity class hierarchies.	S:RWED O:RWED G:RWED W:R	To use DECmcc Director or DECmcc BMS you must have R access. To use DECmcc Developer's Toolkit, you must have RW access.

Table 4–4 (Cont.): DECmcc BMS File Protections

File Name	Contents	Default Protections	Access Required
MCC_ DEFINITION.DAT	Entity meta-data.	S:RWED O:RWED G:RWED W:R	To use DECmcc Director or DECmcc BMS you must have R access. To use DECmcc Developer's Toolkit, you must have RW access.
MCC_PTB PARSER.BPT	Command parser information.	S:RWED O:RWED G:RWED W:R	To use DECmcc Director or DECmcc BMS you must have R access.

4.9 NMCC/VAX ETHERnim Postinstallation Procedures

This section discusses postinstallation procedures you may need to perform to use NMCC/VAX ETHERnim.

4.9.1 Setting File Protection for NMCC/VAX ETHERnim Files

You can control access to NMCC/VAX ETHERnim by setting the access protection on the NMCC/VAX ETHERnim files.

The simplest approach is to use the default file access. By default, only the system account or users with access to system protected files can run NMCC/VAX ETHERnim.

To allow any user to run NMCC/VAX ETHERnim, while retaining the right to modify and delete the files, set world read and execute (W:RE) protection for the following NMCC/VAX ETHERnim files:

ENIM$HOST_MAIN.EXE

ENIM$MESSAGES.HLB

ENIM$SCREENS.HLB

To allow selected users to run NMCC/VAX ETHERnim, set the Access Control Lists (ACLs) on the three files listed above. See the VMS System Management Subkit for complete instructions on using ACLs.

4.9.2 Performing User Task Level Tests on Remote Nodes

To perform user task level tests on remote nodes, you must install an ETHERnim task on each remote node to be tested. This task is required to gather remote node system size information. The required remote task is installed onto the host as part of the NMCC/VAX ETHERnim installation; you must copy it to an account on each remote node.

The installed task on a VMS node must be a named object with object type number 0 in the node's DECnet object database. The account that installs the task must have the SETPRV privilege. The account on which the task is installed must have NETMBX and TMPMBX privileges.

To install the task onto a remote VMS node, perform the following steps:

1. Copy the following files into the top level directory of the user account on the remote node:

   ENIM$REMOTE_STARTUP.COM

   ENIM$REMOTE_MAIN.EXE
2. Log in to an account on the remote node that has SETPRV privileges. Use SET PROCESS/PRIV=OPER to get OPER privileges for one session.
3. Use NCP to install ENIM$REMOTE as a network object with an object type number 0.
4. Use the NCP command SHOW KNOWN OBJECTS to display a listing and confirm that ENIM$REMOTE was installed as a network object with an object type number 0. An object named ENIM$REMOTE with a number 0 is listed.

The following example shows how to install the remote task into account FIXTURE with the password DINNER on the remote node TEST. It is assumed that the account MANAGER has the SETPRV privilege.

```
$ COPY ENIM$REMOTE_STARTUP.COM,ENIM$REMOTE_MAIN.EXE TEST"FIXTURE
DINNER"::
$  SET HOST TEST
Username:  MANAGER
Password:  password
$  SET PROCESS/PRIV=OPER
$  RUN SYS$SYSTEM:NCP
NCP>  DEFINE OBJECT ENIM$REMOTE NUMBER 0 FILE ENIM$REMOTE_STARTUP.COM
ACCOUNT FIXTURE  PASSWORD DINNER
NCP>  SET OBJECT ENIM$REMOTE ALL
NCP>  SHOW OBJECT ENIM$REMOTE CHARACTERISTICS
          .
          .
          .
NCP>  EXIT
$
```

The DEFINE command ensures that the network object is kept in the permanent database; the SET command keeps the object in the volatile database.

To confirm the availability of the task on the remote node, use NMCC/VAX ETHERnim to access it. You cannot access a remote node from NMCC/VAX ETHERnim unless it is entered in the NMCC/VAX ETHERnim database files. If the segment and network database files do not already exist, NMCC/VAX ETHERnim issues an informational message indicating that the files were not found and creates them. For more information about adding a node to the database files, refer to the *NMCC/VAX ETHERnim User's Guide*.

From NMCC/VAX ETHERnim on the host, use the Keypad 0 key to select the remote node and then run TEST NODE SYSTEM SIZER command. This command accesses the NMCC/VAX ETHERnim task on the remote node. You are prompted to log into the remote node (the FIXTURE account in the preceding example).

The screen display of the information returned from the remote node by the program indicates that the command has succeeded. The task has been successfully loaded in to the remote node and is available to NMCC/VAX ETHERnim. If the attempted access of the remote NMCC/VAX ETHERnim task fails for any reason, the following message appears:

```
Request to open DECnet channel failed
```

4.10 DECelms Postinstallation Procedures

This section discusses postinstallation procedures you must perform to use DECelms.

To allow only certain users to run DECelms, set an access control list (ACL) to protect the DECelms executable images, ELMS$NIMUX.EXE and ELMS$BCP.EXE. You should also protect the DECelms registry files, ELMS$DATABASE.DNE and ELMS$DATABASE.DSE. (For a full description of ACLs, refer to the VMS System Management Subkit. Note that the ACL limits who can access DECelms. Users still need the ELMS$RIGHTS_ID rights identifier, if it is present on the system, to use the full functionality of DECelms.

To set an ACL to protect DECelms, follow this procedure:

1. Set default to the SYS$SYSTEM directory:

   ```
   $ SET DEFAULT SYS$SYSTEM
   ```

2. Invoke the Authorize utility (see the VMS System Management Subkit for more information):

   ```
   $ RUN AUTHORIZE
   UAF>
   ```

3. Add an identifier for users who are allowed to run DECelms. In this example, the identifier is given the number x80222 and the name ELMS_USERS:

   ```
   UAF> ADD/IDENT/VALUE=IDENT:%x80222 ELMS_USERS
   %UAF-I-RDBADDMSG, identifier ELMS_USERS value: %X80080222
       added to RIGHTSLIST.DAT
   ```

4. Assign the identifier to each user who will be allowed to use DECelms. In this example, the ELMS_USERS identifier is assigned to the user BERTHA:

   ```
   UAF> GRANT/IDENT ELMS_USERS BERTHA
   %UAF-I-GRANTMSG, identifier ELMS_USERS granted to BERTHA
   ```

5. After you assign the identifier to all the DECelms users, exit from the Authorize utility:

```
UAF> EXIT
$
```

The system displays the following messages showing that the changes were made. The users must log out and log in again for the new rights to take effect.

```
%UAF-I-NOMODS, no modifications made to system authorization file
%UAF-I-RDBDONEMSG, rights database modified
```

6. Move to SYS$COMMON:[SYSEXE], where the DECelms executable images are stored:

```
$ SET DEFAULT SYS$COMMON:[SYSEXE]
```

7. Set the file protection on ELMS$NIMUX.EXE and ELMS$BCP.EXE to remove group and world access:

```
$ SET FILE/PROT=(G,W) ELMS$NIMUX.EXE
$ SET FILE/PROT=(G,W) ELMS$BCP.EXE
```

8. Move to SYS$COMMON:[ELMS$DIRECTORY], where the DECelms registry files are stored:

```
$ SET DEFAULT SYS$COMMON:[ELMS$DIRECTORY]
```

9. Set the file protection on ELMS$DATABASE.DNE and ELMS$DATABASE.DSE to remove group and world access:

```
$ SET FILE/PROT=(G,W) ELMS$DATABASE.DNE
$ SET FILE/PROT=(G,W) ELMS$DATABASE.DSE
```

10. Enter the following command to stop DECelms. You must stop DECelms before protecting it with ACLs.

```
$ @SYS$COMMON:[SYSMGR]ELMS$SHUTDOWN
```

11. Set an ACL for ELMS$NIMUX.EXE, ELMS$BCP.EXE, ELMS$DATABASE.DNE, and ELMS$DATABASE.DSE. Give the users who have the ELMS_USERS identifier full rights to these files:

```
$ SET ACL/ACL=(IDENT=ELMS_USERS,ACCESS=READ+EXECUTE -
_$ +CONTROL) ELMS$NIMUX.EXE
$ SET ACL/ACL=(IDENT=ELMS_USERS,ACCESS=READ+EXECUTE -
_$ +CONTROL) ELMS$BCP.EXE
$ SET ACL/ACL=(IDENT=ELMS_USERS,ACCESS=READ+WRITE+EXECUTE -
_$ +CONTROL) [ELMS$DIRECTORY]ELMS$DATABASE.DNE
$ SET ACL/ACL=(IDENT=ELMS_USERS,ACCESS=READ+WRITE+EXECUTE -
_$ +CONTROL) [ELMS$DIRECTORY]ELMS$DATABASE.DSE
```

12. Enter DIR/ACL to check the ACLs:

```
$ DIR/ACL

Directory SYS$COMMON:[SYSEXE]

ELMS$NIMUX.EXE;1
          (IDENTIFIER=ELMS_USERS,ACCESS=READ+EXECUTE+CONTROL)
ELMS$BCP.EXE;1
          (IDENTIFIER=ELMS_USERS,ACCESS=READ+EXECUTE+CONTROL)
                                  .
                                  .
                                  .
```

13. Enter the following command to restart DECelms:

```
$ @SYS$STARTUP:ELMS$STARTUP
```

4.11 NMCC/DECnet Monitor Postinstallation Procedures

This section discusses how to run the NMCCKERNEL from the Kernel account.

The installer can choose to have the installation procedure create a new user account called NMCCKERNEL. The NMCCKERNEL account runs the kernel process and owns the files used by the NMCC kernel.

During the installation, VMSINSTAL prompts you to select a UIC for the new NMCCKERNEL account. The file NMCCBOOTSTRAP.COM is then modified to include the UIC.

After the installation has been completed, log into the NMCCKERNEL account to grant the account DETACH and SYSNAM privileges needed to bootstrap the kernel. Enable those privileges with the following command:

```
$  SET PROCESS/PRIV=(DETACH,SYSNAM)
```

NMCCBOOTSTRAP creates a detached job to execute the NMCCKERNEL (process) and NMCCLDBSERVER (subprocess) images, which create output log files in the logical directory NMCC$HOME and read or update database files from their corresponding directories (NMCC$STATIC_DIR, NMCC$COUNTER_DIR, and so on). Ensure that the directories and database files are accessible by the NMCCKERNEL detached job running under your selected UIC.

An access conflict can arise if you redefine the NMCC logicals in the file SYS$MANAGER:NMCCLOGICALS.COM to point to a directory owned by a different UIC, or create database files from an account other than NMCCKERNEL and thus give them a different UIC. Note that the detached job must have access to the directory NMCC$HOME to create the output log file and record any other run-time errors.

4.12 LTM Postinstallation Procedures

This section discusses postinstallation procedures you must perform to use LTM.

4.12.1 LTM Logical Names

The LTM$SETUP procedure defines system-wide values for the LTM logical names, which you can use to customize LTM and locate files in different places. The LTM logical names are discussed in the *LAN Traffic Monitor User's Guide*.

For most systems, the default assignments will be adequate. In the case where a single node has multiple Ethernet controller devices, further customization may be necessary. See the *LAN Traffic Monitor User's Guide* for more information.

4.12.2 Installing LTM onto Alternate Load Hosts

Using alternate load hosts for each LTM Listener frees the LAN Traffic Monitor from dependence on one particular load host. Any alternate load host can perform a downline load if the original load host is unavailable.

Digital Equipment Corporation suggests that you assign a minimum of two load hosts for each LTM Listener unit. As with the original load host, an alternate VMS load host must:

- Be running DECnet Phase IV
- Have an Ethernet controller on the same Ethernet as the LTM Listener unit
- Have the distribution software installed
- Have LTM Listener entries in its node database

4.12.3 When Your Node Is a Load Host

If your node is a load host, add the following command to your system startup procedure:

```
$  @SYS$SYSROOT:[DECSERVER]LTM$LOAD_CONFIG RESTORE
```

To configure the load host's node database, run the configuration procedure, LTM$LOAD_CONFIG.COM. For more information, see Chapter 5.

4.13 TSM Postinstallation Procedures

This section discusses postinstallation procedures you must perform to use TSM.

4.13.1 Setting Up Network Management Listener (NML) for DECnet Database Operations

TSM communicates with DECnet-VAX by doing task-to-task communication with the object called Network Management Listener (NML). This image provides services such as gathering and reporting information about network status, zeroing line and node counters, and loading a standalone system image to a remote node. TSM calls upon NML to issue the equivalent of NCP SET NODE and DEFINE NODE commands for terminal server nodes.

When you first execute a TSM command that affects the DECnet database, TSM creates an NML process. The NML server process performs DECnet operations on behalf of the process running TSM. This process remains in effect until you exit TSM.

For TSM to carry out DECnet database operations (for example, NCP SET and DEFINE operations) on behalf of the TSM user, the TSM process must supply access control information to the NML object. Two ways of accomplishing this are:

- Define the logical TSM$NO_PROXY so that TSM prompts for an explicit account with the privilege necessary for DECnet database operations
- Use the proxy login mechanism (for security reasons, it is recommended that proxy accounts not be used)

First, if you use proxy login accounts, you must enable proxy access for the NML object. The TSM installation procedure does this for the node on which you install TSM. But in a cluster environment, you need to do this on each node in the cluster. This is a one-time-only procedure.

```
$  MCR NCP
NCP>  DEFINE OBJECT NML PROXY BOTH ALIAS OUTGOING ENABLED
NCP>  SET OBJECT NML PROXY BOTH ALIAS OUTGOING ENABLED
NCP>  SHOW OBJECT NML CHARACTERISTICS
NCP>  EXIT
```

Second, you must ensure that TSM users have proxy access to their own nodes. The proxy account maps the so-called "remote" user to the local user (in this case, the same account name). For example, if a user runs TSM on node XYZZY from the NETMGR account, you add a proxy that maps XYZZY::NETMGR ("remote" user) to NETMGR (local user) with the following commands.

```
$  SET DEFAULT SYS$SYSTEM
$  MCR AUTHORIZE
UAF>  ADD/PROXY/DEFAULT XYZZY::NETMGR NETMGR
UAF>  EXIT
```

In a cluster environment, use the cluster alias.

If the network user authorization file NETPROXY.DAT does not already exist, create it by issuing the CREATE/PROXY command immediately before the ADD/PROXY command.

As an alternative to using proxy access for DECnet database operations, TSM uses an explicit account name and password to log in to the account as an NML server process. To set up an explicit account name, define the logical name TSM$NO_PROXY in a system startup file. Setting the logical to anything other than 0 or FALSE causes TSM to prompt for an account name (one with privileges for DECnet operations) and for a password (not echoed); for example:

```
$  DEFINE TSM$NO_PROXY TRUE
$  TSM
Terminal Server Manager V1.4
Usage is DIRECTORY
TSM>  SET SERVER PEACH DECNET ADDRESS 13.100
%TSM-I-ENTER_ACCOUNT, Enter username and password for non-proxy
DECNET access
Username:  SYSTEM
Password:
```

```
%TSM-I-NML_STARTUP, TSM is establishing a link to NML - please wait
TSM>
```

If you do not define TSM$NO_PROXY or if you define it to be 0 or FALSE, TSM expects the proxy access setup and does not prompt for an account name and password.

4.13.2 Propagating Server Information to the DECnet Database

If you use TSM to propagate server information to the DECnet database, do not use DSVCONFIG to perform the same function. For more information, see *Guide to Terminal Server Manager*.

4.13.3 Verifying That TSM Software Functions Correctly

To verify that the TSM software functions correctly on your VMS system, perform the following tasks, both of which use TSM:

- Add information about a terminal server to the TSM management directory.
- Perform some management functions for that terminal server.

If you have installed DECelms, you must turn off the DECelms listener before using TSM by issuing the following command:

```
$ ELMS STOP LISTENER
```

To perform these procedures, refer to the material on creating an operating environment and performing TSM management operations in the *Guide to Terminal Server Manager*.

If you complete the preceding tasks successfully, the TSM software is operating correctly. You can now begin management operations using TSM on the LAN. If you have any problems, refer to the material on checking for terminal server problems and TSM problems in the *Guide to Terminal Server Manager*.

5 Configuring the LTM Load Host's Node Database

This chapter explains how to configure a VMS load host's node database to support specific LTM Listener units. You must configure this database before you can downline load an LTM Listener's software image to the LAN Bridge 100 or LAN Bridge 150 unit.

5.1 Overview of LTM$LOAD_CONFIG

The DECmcc Management Station installation of LTM placed LTM$LOAD_CONFIG.COM in the SYS$COMMON:[DECSERVER] directory for single systems and for VAXcluster member nodes. LTM$LOAD_CONFIG.COM is an automated, menu-driven procedure you can use to define new LTM Listeners in the load host's node database.

You can also use LTM$LOAD_CONFIG to delete and modify database entries for LTM Listeners. Configuring the load host's node database means adding, swapping, or deleting LTM Listener entries in the LTM$LOAD_DB.DAT file.

You can also use LTM$LOAD_CONFIG to copy entries from this database to the DECnet load database.

You can perform the following tasks using LTM$LOAD_CONFIG:

- List LTM Listener units that are currently defined in the load host's node database.

- Add an entry for a new LTM Listener unit.

  Adding an entry supplies information that identifies the LTM Listener unit on the Ethernet and thus establishes this system as a load host for the new unit.

- Swap an existing LTM Listener unit for a new one or redefine an existing LTM Listener's DECnet identifiers.

  Swapping retains the DECnet node address of an existing bridge unit, replacing its Ethernet address with the Ethernet address of a new unit. You can also use this option to replace other DECnet identifiers, either for a new LAN Bridge 100 or LAN Bridge 150 unit or for an existing one.

- Delete an entry for an existing LTM Listener.

  Deleting an entry prevents your VMS system from recognizing the LTM Listener. Thus, the VMS system is no longer a load host for that unit. Use this option to delete a database entry when you reconfigure the network or assign a Listener to another load host.

- Restore existing units to your DECnet load database.

  Restoring units copies entries from the load host's node database to the DECnet load database. Use this option when you routinely copy your local DECnet database from a central DECnet database that does not include LTM Listener units.

Here is the LTM$LOAD_CONFIG menu with its list of options:

```
               LTM Configuration Procedure

                     Menu of Options

                1 - List known Listeners

                2 - Add a Listener

                3 - Swap an existing Listener

                4 - Delete an existing Listener

                5 - Restore existing Listeners

         <CTRL/Z> - Exit from this procedure

      Your selection?
```

5.1.1 Databases Affected by LTM$LOAD_CONFIG

The LTM$LOAD_CONFIG procedure operates on the following databases:

- The load host's node database. This database is also the **LTM Listener database**, sometimes referred to as the **downline load database**. It contains the information you see when you select option 1, List Known Listeners, from the LTM$LOAD_CONFIG menu.
- The operational DECnet load database.
- The permanent DECnet load database.

When you run LTM$LOAD_CONFIG, LTM Listener information is transferred from the load host's node database to the DECnet database. It is important that these two databases remain synchronized.

The LTM$LOAD_CONFIG procedure automatically keeps these databases in synchronization. Even though LTM$LOAD_CONFIG includes several NCP commands, do not execute them yourself in order to configure the load host's node database because NCP affects only the network's DECnet operational database.

5.1.2 Other LTM$LOAD_CONFIG Functions Needed for Downline Loading

LTM$LOAD_CONFIG also prepares your node as a load host by enabling SERVICE on the service circuit. SERVICE must be enabled before a downline load can occur.

5.2 Specifying DECnet Characteristics

Several DECnet characteristics identify LTM Listener (LAN Bridge 100 or LAN Bridge 150) units. DECnet uses these characteristics for downline loading. For each new unit, you must specify the following characteristics:

- DECnet node name
- DECnet node address
- Ethernet address
- Service circuit

The LAN Bridge 100 or LAN Bridge 150 information that you must specify should be available from the bridge installer or maintainer. Be sure that the Ethernet address is always entered correctly.

Note that the LAN Bridge 150 has two Ethernet addresses, one for each port. See the *LAN Traffic Monitor Release Notes* for information about determining the Ethernet address for LTM use on the LAN Bridge 150.

5.2.1 DECnet Node Name

Each LAN Bridge 100 or LAN Bridge 150/LTM Listener unit has a unique DECnet node name. This name must have from 1 to 6 alphanumeric characters, with at least one letter. For example, LTM2 and GORGON are valid DECnet node names.

The network manager assigns DECnet node names. During the LAN Bridge 100 or LAN Bridge 150 hardware installation, the network manager records the DECnet node name for each bridge unit.

5.2.2 DECnet Node Address

Each LAN Bridge 100 or LAN Bridge 150 unit has a unique DECnet node address. This node address must be a decimal number from 1 to 1023. If your network is divided into areas, each DECnet node address takes the form *aa.nnnn*, where *aa* is the node area (a decimal number from 1 to 63) and *nnnn* is the node address (a decimal number from 1 to 1023). The period delimits the area from the address. For example, 17.1003 is a valid DECnet node address. If you omit the node area, the area of the current load host is used as default.

The network manager assigns addresses to a DECnet node. During the hardware installation, the network manager records the DECnet node address for each bridge unit.

5.2.3 Ethernet Hardware Address

Each LAN Bridge 100 unit is delivered with a unique Ethernet hardware address. Each LAN Bridge 150 unit is delivered with two addresses. Each address is twelve hexadecimal digits in the form *nn-nn-nn-nn-nn-nn*. For example, 08-00-01-00-AB-CD is an address with a valid format.

The Ethernet address or addresses are on the rear panel of the bridge unit. During the hardware installation, the installer records the Ethernet address for each bridge unit. For the LAN Bridge 150, see the *LTM Release Notes* for information about determining the bridge hardware address.

5.2.4 Service Circuit

The load host has a service circuit-ID that corresponds to each Ethernet controller. Table 5–1 shows the service circuit-ID for the different types of Ethernet controllers.

Table 5–1: Service Circuit-ID for Ethernet Controllers

Service Circuit-ID	Ethernet Controller
UNA-*n*	DEUNA (Digital Ethernet UNIBUS Network Adapter) and DELUA (Digital Ethernet Large-Scale-Integration UNIBUS Adapter)
QNA-*n*	DELQA, DEQNA, and DESQA (Digital Ethernet Q-BUS Network Adapter)
BNT-*n*	DEBNA and AIE (Built-in Ethernet controller on binary systems; also known as DEBNT)
SVA-*n*	DESVA

Here, *n* is an integer (typically, 0).

When you run LTM$LOAD_CONFIG to add or swap more than one unit, the procedure asks you to specify the service circuit several times. The first time you are asked, the default is the service circuit for the processor type of your VMS load host. If you respond by specifying a different service circuit, that response becomes the default until you either specify another service circuit or you exit the procedure.

Table 5–2 shows the possible values for each CPU type.

Table 5–2: Service Circuit IDs for Each CPU

CPU Type	Service Circuit-ID
VAX-11/750	UNA-0
VAX-11/780, 785	UNA-0
VAX 8600, 8650	UNA-0
VAX 6*xxx*	UNA-0
VAX 8250, 8350	BNT-0
VAX 8500, 8700, 8800	BNT-0
VAX 8530, 8550	BNT-0
MicroVAX II	QNA-0
MicroVAX 3300, 3400	QNA-0
MicroVAX 3500, 3600	QNA-0
MicroVAX 3800, 3900	QNA-0
VAXstation 3100, 3150	SVA-0

If your CPU supports more than one Ethernet controller, the service circuit-ID number might be something other than zero. See the Software Support Addendum (SSA) for information on supported processors.

5.3 Preparing to Run the Configuration Procedure

Before you run the configuration procedure, do the following:

1. Check that DECnet Phase IV is running.
2. Check that DECnet NCP is installed.
3. Check that the SYS$COMMON:[DECSERVER] directory has all the distribution software installed in it. See Appendix B for a list of the distribution files.

4. Ask the hardware installer for the necessary information for each new unit:

   - DECnet node name
   - DECnet node address
   - Ethernet address (see the *LTM Release Notes* for information about determining the address of the LAN Bridge 150)

   The preceding information is necessary to answer prompts during LTM$LOAD_CONFIG.

   You can check the uniqueness of a name or address with the following NCP SHOW NODE command (the MCR NCP command runs NCP):

   ```
   $  MCR NCP
   NCP>  SHOW NODE node-name CHARACTERISTICS
   ```

   or

   ```
   NCP>  SHOW NODE node-number CHARACTERISTICS
   ```

5. Check that the directory SYS$COMMON:[DECSERVER] exists for VAXcluster nodes. If not, create this directory now with the command:

   ```
   $  CREATE/DIRECTORY SYS$COMMON:[DECSERVER]/PROTECTION=(S:RWED,O:RWED)
   ```

5.4 LTM$LOAD_CONFIG Conventions and Requirements

LTM$LOAD_CONFIG is an interactive procedure that displays a menu of options when started. When you use the Add, Swap, and Delete options from this menu, you are prompted by a series of questions. After each question, the default response, if there is one, is shown in brackets ([ ]). At the end of each question, either a colon (:) or a question mark (?) appears.

Use the following conventions when running LTM$LOAD_CONFIG:

- To select an option, type a menu number and press Return.
- To answer a question, type your response immediately after the colon or question mark, then press Return.
- To respond to a question with the default answer, simply press Return.
- To get help after any question, type a question mark (?). When you exit the help display, the system returns you to the question.

- To exit an option without making any changes, type Ctrl/Z. You are returned to the LTM$LOAD_CONFIG Menu.
- To exit LTM$LOAD_CONFIG at the menu level, type Ctrl/Z. You are returned to the DCL prompt.

LTM$LOAD_CONFIG has some additional conventions and requirements:

- When you finish an option, LTM$LOAD_CONFIG automatically returns you to the LTM$LOAD_CONFIG menu.
- At the end of the Add, Delete, and Swap options, you might get NCP messages (information, confirmations, and errors). In the case of error messages, the operation might not have been successful. For the meanings of these messages, see the *VMS System Messages and Recovery Procedures Reference Manual*.
- To run LTM$LOAD_CONFIG on a single system, the distribution software must already be installed on that system. For a VAXcluster node, the distribution software can be installed on any node of the cluster, not necessarily the node where you run the procedure.

5.5 Running LTM$LOAD_CONFIG

To run LTM$LOAD_CONFIG.COM, you need SYSPRV and OPER privileges. To start LTM$LOAD_CONFIG, do the following:

1. Log in to the SYSTEM account, or any account with OPER and SYSPRV privileges.
2. Enter the following commands:

   ```
   $  SET DEFAULT SYS$COMMON:[DECSERVER]
   $  @LTM$LOAD_CONFIG
   ```

   LTM$LOAD_CONFIG determines whether DECnet is running and whether NCP is installed. If DECnet is down or NCP is missing, LTM$LOAD_CONFIG prints a warning message and waits. If you receive a warning, exit LTM$LOAD_CONFIG immediately and correct the problem. You must have DECnet running and NCP installed to continue this procedure.

If SYS$COMMON:[DECSERVER] does not contain LTM$LOAD_DB.DAT, the procedure creates the file and displays this message:

```
The database file LTM$LOAD_DB.DAT could not be found.

A new one is being created.
```

LTM$LOAD_CONFIG informs you that each LTM Listener unit must have a unique DECnet node name and DECnet node address.

LTM$LOAD_CONFIG then asks whether you want to continue or to exit:

```
Press <RETURN> to start, or <CTRL/Z> to exit...
```

3. Press Return if you have the information you need for each LAN Bridge 100 or LAN Bridge 150/LTM Listener unit:
   - DECnet node name for Add, Swap, and Delete options
   - DECnet node address for Add option
   - Ethernet address for Add and Swap options
   - Service circuit-ID for Add and Swap options

   LTM$LOAD_CONFIG then displays:

```
          LTM Configuration Procedure

                Menu of Options

             1 - List known Listeners

             2 - Add a Listener

             3 - Swap an existing Listener

             4 - Delete an existing Listener

             5 - Restore existing Listeners

      <CTRL/Z> - Exit from this procedure

    Your selection?
```

4. Type the number that corresponds to the option you want and press Return. The following subsections discuss these options.

5.5.1 List Known LTM Listeners (Option 1)

Select Option 1 to list the LTM Listener units in the node database. The contents of the LTM$LOAD_DB.DAT file are displayed in a list like the one that appears below:

```
DECnet  DECnet  Service
Address Name    Circuit  Ethernet Address
------- ------- -------- -----------------

28.1001 TUNA    UNA-0    08-00-2B-02-24-CC
28.1002 SHRIMP  UNA-0    08-00-2B-04-AA-2B
28.1003 CONCH   UNA-0    08-00-2B-02-24-DD

Total of 3 Listeners defined.

(Press RETURN for menu)
```

This information makes up the load host's node database for LTM Listener/LAN Bridge 100 or LAN Bridge 150 units, which the load host uses for performing downline loads to LAN Bridge 100 or LAN Bridge 150 units.

5.5.2 Add an LTM Listener (Option 2)

Select Option 2 to add an entry for a new LTM Listener unit in the node database. To create an entry, you must supply:

- A unique DECnet node name for the unit
- A unique DECnet node address for the unit
- The Ethernet address of the unit
- The service circuit

To add a unit, follow these steps:

1. Select Option 2.

   LTM$LOAD_CONFIG asks for the DECnet node name:

   ```
   DECnet node name for unit?
   ```

2. Enter the DECnet node name for the new unit and press Return.

   LTM$LOAD_CONFIG asks for the DECnet node address:

   ```
   DECnet node address for unit?
   ```

3. Enter the DECnet node address for the new unit and press Return.

   LTM$LOAD_CONFIG asks for the Ethernet address:

   ```
   Ethernet address of unit?
   ```

4. Enter the Ethernet address of the new unit and press Return.

   LTM$LOAD_CONFIG asks for the DECnet Service Circuit-ID:

   `DECnet Service Circuit-ID [`*`default-id`*`]?`

5. Press Return if the service circuit needed to downline load this Listener is the same as the default shown in square brackets in the prompt. If it is not, specify the service circuit of your Ethernet controller type:

   - UNA-*n* for DEUNA or DELUA
   - QNA-*n* for DELQA, DEQNA, or DESQA
   - BNT-*n* for DEBNA or AIE
   - SVA-*n* for DESVA

   Here, *n* is an integer (typically 0 or 1). See Section 5.2.4 for a discussion of service circuits.

LTM$LOAD_CONFIG adds the entry for the new LTM Listener unit to the database and sets SERVICE ENABLED on the circuit supporting the Ethernet controller. Both of these actions are necessary for the load host to downline load the LTM Listener software image to the LAN Bridge 100 or LAN Bridge 150 unit.

If you get an error message from DECnet while you are adding an LTM Listener unit, the entry is added to the LTM$LOAD_DB.DAT file (the load host's node database), even though it is not entered in the DECnet database. To correct this synchronization problem, follow these steps:

1. Select Option 4 to delete the entry.
2. Fix the condition causing the DECnet error.
3. Select Option 2 to add the LTM Listener unit again.

If you specify a node address that is already defined in the load host's node database, you get a LTM$LOAD_CONFIG error, nothing is added, and the Add option is terminated. Check the DECnet node address of the new unit.

5.5.3 Swap an Existing LTM Listener (Option 3)

Select Option 3 to swap an existing unit with a new one. Swapping is useful if you need to replace a unit that malfunctions. When you replace units, Option 3 retains the DECnet node address of the original unit.

Swapping is also helpful for renaming units and changing other DECnet characteristics. Option 3 lets you modify the DECnet characteristics listed in Table 5–3 for both new and existing units.

Table 5–3: DECnet Characteristics for LTM Listener

DECnet Characteristic	Default
Listener type	LTM
DECnet node name	The name of the unit you are replacing.
Ethernet address	There is no default. You must specify the Ethernet address. See the *LTM Release Notes* for information about determining the Ethernet address of the LAN Bridge 150.
DECnet service circuit	The service circuit of the unit you are replacing.

To swap an existing unit or to modify any DECnet characteristics, follow these steps:

1. Select Option 3.

   LTM$LOAD_CONFIG asks for the DECnet node name:

   ```
   What is the DECnet node name of the LTM Listener you want to swap?
   ```

2. Enter the DECnet node name of the existing unit that you want to replace or modify and press Return.

   LTM$LOAD_CONFIG displays:

   ```
   LTM Listener at Ethernet address nn-nn-nn-nn-nn-nn is being modified.
   ```

3. Enter the new Ethernet address and any other DECnet characteristics you want to modify and press Return.

   LTM$LOAD_CONFIG asks for the DECnet node name:

   ```
   DECnet node name for unit [default-name]?
   ```

4. Press Return if you want the replacement unit to have the same DECnet node name as the original one. If you are changing node names, specify the name of the new unit and press Return.

   LTM$LOAD_CONFIG asks for the Ethernet address:

   ```
   Ethernet address of unit?
   ```

5. Specify the Ethernet address of the new unit you are adding or of the existing unit you are modifying and press Return.

   LTM$LOAD_CONFIG asks for the DECnet Service Circuit-ID:

   ```
   DECnet Service Circuit-ID [default-id]?
   ```

6. Press Return if the replacement unit has the same service circuit as the old unit. If the circuits are different, enter the circuit of the new unit and press Return. Valid service circuit-IDs are:

   - UNA-*n* for DEUNA or DELUA
   - QNA-*n* for DELQA, DEQNA, or DESQA
   - BNT-*n* for DEBNA or AIE
   - SVA-*n* for DESVA

   Here, *n* is an integer (typically 0 or 1). See Section 5.2.4 for a discussion of service circuits.

LTM$LOAD_CONFIG swaps the DECnet characteristics you just entered with the old ones for the unit with the same DECnet node address (this address cannot be swapped). LTM$LOAD_CONFIG also sets SERVICE ENABLED on the circuit supporting the Ethernet controller.

5.5.4 Delete an Existing LTM Listener (Option 4)

Select Option 4 to remove an entry from the database. Deleting an LTM Listener unit is useful if you are reconfiguring the network or changing load hosts for a unit. After you delete an LTM Listener unit from a load host's node database, the system is no longer a load host for that unit.

To delete units from the database, follow these steps:

1. Select Option 4.

   LTM$LOAD_CONFIG displays this prompt:

   ```
   Enter the DECnet node name of the LTM Listener entry you want to delete,
   or press <CTRL/Z> to return to menu ?
   ```

2. Enter the DECnet node name of the unit you want to remove and press Return.

LTM$LOAD_CONFIG checks that the name you entered is an entry in the load host's node database. Then, it deletes this entry, reports the successful removal, and returns you to the menu. If the entry does not exist, LTM$LOAD_CONFIG informs you, terminates the Delete option, and returns you to the menu.

5.5.5 Restore Existing LTM Listeners (Option 5)

Select Option 5 to restore your load host's DECnet database to include the LTM Listeners in its node database. The Restore option affects both the operational and permanent DECnet databases.

If your DECnet network contains a large number of nodes, you might store your DECnet database on a central, remote node and copy this database upon each system startup. However, if many LAN Traffic Monitors exist on the network, Digital Equipment Corporation advises against defining these units in that central database.

If LTM Listeners are not defined in the central database, you must restore them whenever you copy your local DECnet database from the central DECnet database. Each time you copy the central DECnet database, use Option 5 to restore existing LTM Listener configurations.

Select Option 5. The following messages confirm the restoration:

```
Restoring existing LTM Listeners to host DECnet database...

Host DECnet database successfully restored.
```

5.6 Restoring Your Database from the Startup Procedure

You can also restore your local DECnet database from your startup procedure, which you can automate. Run LTM$LOAD_CONFIG with the RESTORE parameter:

```
$  @SYS$COMMON:[DECSERVER]LTM$LOAD_CONFIG RESTORE
```

Using RESTORE bypasses the menu and lets you include this restoration in your system startup procedures. If you want to restore units to the DECnet database at system startup, edit your system startup file. Include the following statement in the appropriate place:

```
$  @SYS$COMMON:[DECSERVER]LTM$LOAD_CONFIG RESTORE
```

Note that the order of events is important. Edit your startup procedure so that it follows this sequence:

1. Starts DECnet.
2. Defines all DECnet node names.
3. Restores LTM Listener units with the following command:

   ```
   $  @SYS$COMMON:[DECSERVER]LTM$LOAD_CONFIG RESTORE
   ```

For VAXcluster members that are alternate load hosts you must keep each node database up-to-date. This is necessary for each member to continue to perform downline loads. Every time you make database changes at one cluster member, follow this procedure:

1. Use LTM$LOAD_CONFIG to make database changes at *one* VAXcluster member.
2. Issue the following command at *each* cluster member:

   ```
   $  @SYS$COMMON:[DECSERVER]LTM$LOAD_CONFIG RESTORE
   ```

5.7 Monitoring Downline Loading

DECnet downline loading activity can be monitored through the DECnet event numbers 0.3 and 0.7. Consult your DECnet-VAX documentation for instructions on how to enable the DECnet event logging facility in order to observe these events.

A
Sample Installation

This appendix describes a sample installation of DECmcc Enterprise Management Station (EMS). The sample installation includes all management applications contained in the EMS package.

```
$ @SYS$UPDATE:VMSINSTAL MCCEMS021 MUA0: OPTIONS N
 VAX/VMS Software Product Installation Procedure V5.3


It is 15-MAR-1991 at 15:12.

Enter a question mark (?) at any time for help.
%VMSINSTAL-W-ACTIVE, The following processes are still active:
 SERVER_000C
* Do you want to continue anyway [NO]? YES
* Are you satisfied with the backup of your system disk [YES]? YES

Please mount the first volume of the set on MUA0:
* Are you ready?  YES

%MOUNT-I-MOUNTED, MCCEMS021 MOUNTED ON _$$MUA0:

The following products will be processed:
  MCCEMS V2.1

 Beginning installation of MCCEMS V2.1 at 15:16

%VMSINSTAL-I-RESTORE, Restoring product save set A ...

    Release notes included with this kit are always copied to SYS$HELP.

    Additional Release Notes Options:

 1.  Display release notes
 2.  Print release notes
 3.  Both 1 and 2
 4.  None of the above
```

```
* Select option [2]:  4
* Do you want to continue the installation [NO]? YES
%VMSINSTAL-I-RELMOVED , The product's release notes have been
successfully moved to SYS$HELP.

   ************************************************************
   *                                                          *
   *                    DECMCC EMS V2.1                       *
   *                    Integrated Package                    *
   *                                                          *
   *                  Installation Procedure                  *
   *                                                          *
   ************************************************************

        Product:      DECMCC-EMS
        Producer:     DEC
        Version:      2.1
        Release Date: 12-APR-1991

* Does this product have an authorization key registered and loaded? YES

* Do you want to purge files replaced by this installation [YES]? YES

* Do you want to run the DECMCC EMS IVP after the installation [YES]? YES

* Do you want to install the entire EMS product set? [YES]? YES

%VMSINSTAL-I-RESTORE, Restoring product save set B ...
%VMSINSTAL-I-RESTORE, Restoring product save set C ...
%VMSINSTAL-I-RESTORE, Restoring product save set D ...
%VMSINSTAL-I-RESTORE, Restoring product save set E ...
%VMSINSTAL-I-RESTORE, Restoring product save set F ...
%VMSINSTAL-I-RESTORE, Restoring product save set G ...
%VMSINSTAL-I-RESTORE, Restoring product save set H ...

    Asking DECmcc BMS Questions...


   DECmcc requires a directory where the DECmcc common files
   will be installed.  If the logical MCC_COMMON is defined, the
   default is for the files to be installed in that directory.
   If  the logical is not defined, the default is for the files
   to be installed in a  directory on the system disk called
   SYS$COMMON:[MCC].  The installer may override the default.
   The target directory for the files as it is now defined is
   shown  below.

   Press RETURN to use the value shown or enter a new disk and
   directory specification.

* Target directory for DECmcc Common files [SYS$COMMON:[MCC]]:
```

```
%VMSINSTAL-I-RESTORE, Restoring product save set I ...

%VMSINSTAL-I-RESTORE, Restoring product save set J ...
%VMSINSTAL-I-RESTORE, Restoring product save set K ...

   The Time Differential Factor (TDF) is the difference between
   your time zone and the international standard Coordinated
   Universal Time (UTC)

   A negative (-) TDF value means that this node is west of UTC
   A positive (+) TDF value means that this node is east of UTC

   The range is from -12:00 to +13:00. The format is +hh:mm or
   -hh:mm with hh indicating the number of hours and mm
   indicating the number of minutes. For example:

   California (Pacific Standard Time) is -8:00 hours from UTC.
   Oklahoma (Standard Time) is -6:00 hours from UTC.
   Eastern Standard Time is -5:00 hours from UTC.
   Eastern Daylight Time is -4:00 hours from UTC.
   Ontario, west of longitude W.63 degrees is -5:00
      hours from UTC.
   Ontario, east of longitude W.63 degrees is -4:00
      hours from UTC.
   Newfoundland is -3:30 hours from UTC.
   Great Britain, Iceland, Portugal, Upper Volta are
      at UTC or 0:0.
   Great Britain, Summer Time +1:00 hour from UTC.
   Greece is +2:00 hours from UTC.
   India is +5:30 hours from UTC.
   Singapore is +7:30 hours from UTC.
   Japan is +9:00 hours from UTC.
   Australian Capital Territory is +10:00 hours from UTC.

* Time Differential Factor  [-4:00]:

   You must specify the IDP (or network address initial domain
   part) for your  network.  This must either be the default
   value of "49::", or a value explicitly allocated for your
   network by one of the recognized allocation authorities.

   The format is:

       afi:idi:

   where:

   afi = The "authority and format identifier".  This is two
         decimal digits indicating the IDP allocation
         authority

   idi = The "initial domain identifier".  This is a string of
         decimal digits that has been allocated specifically
         for your network.
```

```
   An IDP of "49::" may be used if your network will not be
   interconnected with other OSI networks (there is no "idi"
   associated with this "afi").

* Initial Domain Part  [49::]:


    The DECmcc Reports Package consists of files that allow you
    to use DATATRIEVE to create reports using data exported from
    DECmcc.  Please see the Reports Package section of the
    DECmcc Performance Analyzer Use manual for information
    on using the DECmcc Reports Package with  DATATRIEVE.

    The Reports package requires 1100 blocks.

* Do you want to install the DECmcc Reports Package [No]? YES

* Target directory for DECmcc Reports files
          [SYS$COMMON:[MCC.MCC_REPORTS_FILES]]:

   Following the copying of the files, the DECmcc BMS startup
   command procedure(s) will be invoked.  Operational tables
   will be created by this procedure.

   To automatically set up DECmcc BMS on your system,
   edit your local system start-up command procedure

             SYS$MANAGER:SYSTARTUP_V5.COM

   so that it invokes the DECmcc BMS start-up command
   procedure.  Add:

             @SYS$STARTUP:MCC_STARTUP_BMS.COM

   after the statement that invokes the DECnet start-up
   command file (STARTNET.COM).

   NOTE: If you have previously installed the DECmcc DIRECTOR
         on this system, you should REMOVE the line:

             @SYS$STARTUP:MCC_STARTUP_DIR.COM

   from your SYS$MANAGER:SYSTARTUP_V5.COM procedure.

   NOTE: The DECdns clerk must also be started up before
         the MCC_STARTUP_BMS command procedure is invoked.

   Following the DECmcc BMS start-up the DECmcc  BMS
   postinstallation command procedure will be invoked.

    Asking DECmcc ETHERnim Questions...


    See the NMCC/VAX ETHERnim Installation Guide for help in changing
    values.
```

```
This installation procedure will now prompt for the device name and
Directory name for the ETHERnim files.

   NOTE!

Previous versions of ETHERnim created a separate account for ETHERnim.  This
version does not create a separate account for ETHERnim.  It is recommended
that the ETHERNIM account be disabled from the UAF for security purposes.

* Device for the files [SYS$SYSDEVICE:]:
* Directory for the files [ETHERNIM]:
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  SYS$SYSDEVICE:[ETHERNIM].
%CREATE-I-EXISTS, SYS$SYSDEVICE:[ETHERNIM] already exists
%MCCEMS-I-CRE_ENIM_START, Creating file ENIM$HOST_STARTUP.COM


    Asking DECmcc ELMS Questions...



    You can convert your RBMS directory (if one exists) into
    the DECelms registry at any time with the following command:

    $ RUN SYS$MANAGER:ELMS$CONVERT.EXE

    There are the following restrictions:

    o The RBMS detached process, NMS_RBMS$BMLPRC, must be running.

    o The DECelms detached process, ELMS$NIMUX, cannot be running.

    This install procedure can perform both these operations,
    if requested.

             You can convert your RBMS directory into the
             DECelms registry during this installation procedure.
             Answer NO if you are not upgrading from RBMS or
             if you do not want to convert your RBMS directory
             during the installation.  This does not imply that
             RBMS will have to be shutdown, if you have reasons
             for keeping RBMS running.

* Do you want to convert your RBMS database during the installation [NO]? NO

   The ELMS$NIMUX (Network Multiplexer) module of DECelms must run as a
   permanent detached process.  The installation procedure normally starts
   the ELMS$NIMUX process.  If you wish, you may defer starting this process
   until a later time. DECelms cannot be run until this is done.
   The command to manually start the ELMS$NIMUX process is:

   $  @SYS$STARTUP:ELMS$STARTUP

   Also, if the ELMS$NIMUX process is not started by the installation
   procedure, the installation verification procedure cannot be run.
   Any time after the ELMS$NIMUX process has started, the verification
   procedure can be manually run by typing the following command:
```

```
   $  @SYS$COMMON:[SYSTEST]ELMS$IVP

   If you let this installation procedure start the  ELMS$NIMUX process
   the installation procedure can verify the installation
   automatically. Note that the installation verification procedure
   does not require a bridge to be installed on the network.

*  Do you want to start ELMS [YES]? YES
%RUN-S-PROC_ID, identification of created process is 00000099

     You can start the device listener function during the DECelms
     installation. The device listener function enters devices in the
     DECelms registry by listening to MOP system ID messages. At any
     time after the installation, you can control the device listener
     function with the DECelms commands START LISTENER and STOP
     LISTENER, as described in the DECelms documentation.

                    NOTE
        The device listener function conflicts with
        other applications, such as NMCC/VAX ETHERnim,
        that use the MOP Remote Console channel in
        shared default mode. The device listener function
        will not start if one of these applications is
        running.

* Do you want to start the device listener function [YES]? YES
Start command completed.

    You can start the background poller function during the DECelms
    installation. The background poller function polls the devices
    listed in the DECelms registry. When its detects a change in device
    state, it displays an event message and logs an event code in the
    event log. At any time after the installation, you can control the
    background poller function with the DECelms commands START POLLER
    and STOP POLLER, as described in the DECelms documentation.

* Do you want to start the background poller function [YES]? YES
Start command completed.


   Files ELMS$NIMUX.EXE, ELMS$BCP.EXE, ELMS$DISPLAYS.BIN,
   ELMS$BCPPRS.BIN installed in SYS$COMMON:[SYSEXE].
   File ELMS$HELP.HLB installed in SYS$HELP.
   File ELMS$STARTUP.COM installed in SYS$STARTUP.
   File ELMS$SHUTDOWN.COM installed in SYS$COMMON:[SYSMGR].
   File ELMS$CONVERT.EXE installed in SYS$COMMON:[SYSMGR].
   File ELMS$IVP.COM installed in SYS$SYSTEST.
   ELMS$HELP_DCL.HLP inserted into system command table.
   Logical name ELMS$UNA defined as Ethernet adapter device id.
   Logical name ELMS$NIMUX_MBX defined as mbx number.
   Logical name ELMS$BCPPRS defined as SYS$COMMON:[SYSEXE]
   Logical name ELMS$DISPLAYS defined as SYS$COMMON:[SYSEXE]
   Logical name ELMS$HELP defined as SYS$HELP:ELMS$HELP.HLB
   Logical name ELMS$HOME defined as SYS$COMMON:[ELMS$DIRECTORY]
```

```
    Asking DECmcc NMCC/DECnet Monitor Questions...

    The NMCC/DECnet Monitor installation procedure now
    asks if you wish to install JUST the blank NMCC
    database files. The database files may only be
    installed on a system that has a NMCCKERNEL account.
    If you wish to install the entire NMCC/DECnet Monitor
    product, answer NO to the following question.

    A YES answer to the next prompt will install JUST the
    NMCC database files.

*  Do you want to install JUST the NMCC database files? [NO]? NO

*  Do you want to install just the NMCC User Interface? [NO]? NO

    This installation will give you the option of keeping
    the old NMCC database files or installing new (empty)
    NMCC database files.
    If this is a new NMCC installation, you must install new
    NMCC database files.

*  Do you want to install the NMCC database files? [YES]? YES

    DECmcc NMCC/DECnet Monitor databases files will be installed...
    Any previously existing NMCC database files will be purged.

*  Is this correct? [YES]? YES
%VMSINSTAL-I-RESTORE, Restoring product save set L ...
%VMSINSTAL-I-RESTORE, Restoring product save set M ...
    The installation procedure prompts you to define the GKS workstation
    type (GKS$WSTYPE) that will be the default workstation type whenever
    the NMCC/DECnet Monitor is invoked. The correct GKS$WSTYPE value is
    required to ensure the accurate display of GKS graphics. At the prompt,
    you enter a number to identify the type of workstation you are using.
    Some specifiable values are the following:

          0 -- Default workstation type
         14 -- VT240/41 with black and white display
         13 -- VT240/41 with color option, VT340/41
         -1 -- VT100 (non_ReGIS terminal)


    Not all workstation types are supported by NMCC/DECnet Monitor. For a
    complete listing of values for GKS workstation types, see the GKS
    documentation or enter the HELP GKS WORKSTATION command at the dollar
    sign ($) prompt.
* Define GKS$WSTYPE: 13
%MCCEMS-I-GKSOK, GKS found
%MCCEMS-I-RDBOK, RDB license found
```

```
    If you are installing the NMCC/DECnet Monitor for the first time,
    you will be prompted for the Greenwich Mean Time (GMT) offset for
    your area.
    The GMT offset is the number of hours that you have to add to your
    local time to get Greenwich Mean Time.
    For example, if your node is on the east coast of the United States
    and your local time is Eastern Standard Time, your GMT offset is +5.
    You would have to add five hours to your time to get Greenwich Mean Time.

* Please enter the current GMT offset for your timezone [0]: 5

%MCCEMS-I-CRELOGICALS, Creating file NMCCLOGICALS.COM

%MCCEMS-I-NMCCLOGICALS, Invoking NMCCLOGICALS.COM to define NMCC logical names

    If you are creating the NMCCKERNEL account, the installation procedure
    prompts you for the User Identification Code (UIC), which consists of
    two integers separated by a comma. The system manager should select
    the UIC for the NMCCKERNEL account. The UIC should not belong to another
    user or VMSINSTAL will terminate the installation. The first number in
    the UIC pair should not be between 1 and 8 because these are reserved
    for system UICs. The following are examples of valid UICs:

        [123, 456]
        [12, 3]

    The NMCC installation procedure may create an account under which the
    NMCC Kernel runs. All privileges and quotas required by the Kernel are
    set up in this account by the installation procedure. If this account
    does not already exist, and you wish it to be created, then you should
    answer YES to the following question. Otherwise answer NO or simply hit
    RETURN.

* Would you like the NMCCKERNEL account to be created [NO]? YES
* UIC for Kernel account: 200,321

    *************************************************************

    This installation requires the creation of the NMCCKERNEL
    account.  You MUST choose a password for this account.

    **************************************************************

* Please enter <RETURN> to continue:

    *************************************************************

    The entire installation will FAIL if you do not enter a valid
    password for the NMCCKERNEL account.  You will be given
    3 chances to verify your password.  This installation
    procedure requires at least 15 characters for the
    RDB$REMOTE password.  Valid characters for a password are:
```

```
       A through Z
       a through z
       0 through 9
       $ (dollar sign)
       _ (underscore)

    As with the DCL SET PASSWORD command, your input will not
    appear on the terminal.  And to protect against typing errors
    that are not seen when entering the password, you must enter
    the password twice.

    *************************************************************

* Please enter PASSWORD to be used for NMCCKERNEL account:

* Please verify the PASSWORD entered for NMCCKERNEL:

%VMSINSTAL-I-ACCOUNT, This installation creates an ACCOUNT named NMCCKERNEL.
%UAF-I-ADDMSG, user record successfully added
%UAF-I-RDBADDMSGU, identifier NMCCKERNEL value: [000200,000321] added to
 rights data base
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named NMCCKERNEL.
%UAF-I-MDFYMSG, user record(s) updated


  ***********************************************************************
  * The account NMCCKERNEL has been created solely for running the      *
  * NMCCKERNEL.  You MUST change the NMCCKERNEL password the first time  *
  * the account is used.                                                 *
  ***********************************************************************


%VMSINSTAL-I-SYSDIR, This product creates system disk directory
VMI$ROOT:[NMCC]/LOG/OWNER_UIC=[200,321]/PROTECTION=(S:WRE,O:RWE,G:RWE,W:RE).
%CREATE-I-EXISTS, VMI$ROOT:[NMCC] already exists

    Displaying DECmcc LTM Installation Information...

   ******************************************************************

    The files in the distribution kit will be copied to the
    appropriate system directories.
```

```
File                                System directory
----------------------              ----------------
LTM$SETUP.COM                       SYS$COMMON:[DECSERVER]
LTM$LOAD_CONFIG.COM                 SYS$COMMON:[DECSERVER]
LTM$TYPE_NAME.DAT                   SYS$COMMON:[DECSERVER]
LTM$MC_NAME.DAT                     SYS$COMMON:[DECSERVER]
LTM$ADDR_NAME.DAT                   SYS$COMMON:[DECSERVER]
LTMLIS0200.SYS                      SYS$COMMON:[DECSERVER]
LTM$REGRESSION.COM                  SYS$COMMON:[SYSTEST.LTM]
LTM$REGRESSION.BMK                  SYS$COMMON:[SYSTEST.LTM]
LTM$IVP.COM                         SYS$COMMON:[SYSTEST]
LTM$UI.EXE                          SYS$SYSTEM:
LTM012.RELEASE_NOTES                SYS$HELP:
----------------------              ----------------

NOTE

PLEASE place the command "$ @SYS$COMMON:[DECSERVER]LTM$SETUP"
in SYS$MANAGER:SYSTARTUP_V5.COM to initialize LTM logical names
at system boot time.  Place it after the DECnet startup command.

*******************************************************************

**************************************************************************

By default, LTM files will be placed in the SYS$COMMON:[DECSERVER]
directory.  If the following LTM user updateable files are found in
the SYS$COMMON:[DECSERVER] directory, no new installation files will
be copied over them:

 File Name
 ---------
 LTM$ADDR_NAME.DAT
 LTM$TYPE_NAME.DAT
 LTM$MC_NAME.DAT

If the following file is found in the SYS$COMMON:[DECSERVER] directory,
it will be copied by this installation:

  Old File Name                         New File Name
  -------------                         -------------
  LTM$SETUP.COM;                       LTM$SETUP.OLD_COM;

 NOTE

 If you run in a cluster common environment and change or copy
 newly tailored files in the LTM directory, you may wish to
 check whether any files exist in the system specific directory.
 These system specific files will overide files created during
 the installation of LTM V1.2. Also, these files will not be
 accessible from all nodes in the cluster. You may wish to move
 these files to the common directory once the installation
 completes.
```

```
    This installation will warn you if it finds any LTM files in the
    SYS$SPECIFIC:[DECSERVER] directory.
    ***********************************************************************

%VMSINSTAL-I-SYSDIR, This product creates system disk directory
VMI$ROOT:[SYSTEST.LTM].
%CREATE-I-EXISTS, VMI$ROOT:[SYSTEST.LTM] already exists

    Asking DECmcc TSM Questions...


 The TSM installation procedure normally enables service
 on the first circuit that it finds on this node.  This
 allows the node to down-line load and up-line dump
 terminal servers.

 If you answer "No" to the following question, service
 will not be enabled.

* Do you want service enabled in the installation procedure [YES]? YES

 TSM requires a directory where the TSM command files and library
 will be installed.  If the logical TSM$DEFAULT_DIRECTORY is
 defined, the files will be installed in that directory.  If
 the logical is not defined, the files will be installed in a
 directory on the system disk called SYS$COMMON:[DECSERVER].
 The target directory for the files as it is now defined is shown
 below.

 Press return to use the value shown or enter a new disk and
 directory specification.

* Target directory for TSM files [SYS$COMMON:[DECSERVER]]:

 Linking Terminal Server Manager VMS V1.4...

     DECmcc TSM requires defining and setting OBJECT NML to
     PROXY BOTH ALIAS OUTGOING ENABLED.

      DECmcc TSM is enabling SERVICE on QNA-0...


        After the installation use AUTHORIZE to create proxy accounts for
        all the TSM users (if you have not done so already).


    VMSINSTAL asks no additional questions.




%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target
                         directories...

    Beginning DECMCC EMS V2.1 Post Installation Procedure ...


   Beginning DECmcc BMS Postinstallation Procedure ...

   Deleting obsolete DECmcc verbs...
```

```
The MCC_STARTUP_BMS startup procedure for DECmcc V1.1.0 is now running.

DECmcc (V1.1.0)
MCC 0 ALARMS RULE __dummy_test

AT 15-MAR-1991 16:35:57

Entity created successfully.
MCC 0 ALARMS RULE __dummy_test

AT 15-MAR-1991 16:35:59

Entity deleted successfully.

The MCC_STARTUP_BMS startup procedure for DECmcc V1.1.0 is now ending.

   Completing DECmcc BMS Postinstallation Procedure ...

   Beginning DECMCC ETHERnim Post Installation Procedure ...


   Completing DECMCC ETHERnim Post Installation Procedure ...

   Beginning DECMCC LTM Post Installation Procedure ...

   Completing DECMCC LTM Post Installation Procedure ...

   Beginning DECMCC ELMS Post Installation Procedure ...

   *****************************************************************
            POST INSTALLATION RECOMMENDATIONS

   It is suggested that a call to the ELMS startup command procedure
   SYS$STARTUP:ELMS$STARTUP.COM be added to the site specific startup
   command procedure SYS$MANAGER:SYSTARTUP_V5.COM as shown below. Be
   sure to place this command after the commands that start DECnet and LAT.

   $ @SYS$STARTUP:ELMS$STARTUP  !Extended LAN Mgt startup procedure

   Note that the ELMS_LAN_MANAGEMENT command will not take effect until
   a user logs on after the installation is complete.

   Note that DECelms and the older product "RBMS" cannot be run on the
   same system at the same time.

   ***********************************************************************

   Completing DECMCC ELMS Post Installation Procedure ...

   Beginning DECMCC TSM Post Installation Procedure ...


   Completing DECMCC TSM Post Installation Procedure ...
```

```
   Beginning NMCC/DM Post Installation procedure...

****************************************************************************
****************************************************************************

 Please remember to insert

  $ @SYS$STARTUP:NMCCLOGICALS

 in SYS$STARTUP:SYSTARTUP_V5.COM.

 Before creating your database files, or starting the kernel, please
 ensure that the devices pointed to by the logical names in
 SYS$STARTUP:NMCCLOGICALS.COM do not have DISKQUOTA enabled. If
 any of those devices DOES have DISKQUOTA enabled, please ensure
 that the NMCCKERNEL account has adequate quota on the device(s)
 in question. (Using the VMS Utility DISKQUOTA, which is invoked
 by typing  $ MCR DISKQUOTA).


 To start the NMCC Kernel running, type

  $ @NMCC$EXE:NMCCBOOTSTRAP


 To run the Installation Verification Procedure for NMCC, type

  $ @SYS$TEST:NMCCIVP

****************************************************************************
****************************************************************************
   Completing NMCC/DM Post Installation procedure...

    Completing DECMCC EMS V2.1 Post Installation Procedure ...

    Beginning DECMCC EMS V2.1 Installation Verification Procedure ...

   Beginning DECmcc BMS Installation Verification Procedure ...


   The IVP for DECmcc BMS will now be run.
DECmcc (V1.1.0)

MCC 0
AT 15-MAR-1991 16:36:24

Test Successful

DECmcc (V1.1.0)

MCC 0 FCL
AT 15-MAR-1991 16:36:35
```

```
Test Successful

DECmcc (V1.1.0)

MCC 0 CONFIG_FM
AT 15-MAR-1991 16:36:45

Test Successful

DECmcc (V1.1.0)

MCC 0 CONTROL_FM
AT 15-MAR-1991 16:36:54

Test Successful

DECmcc (V1.1.0)

MCC 0 DNA4_AM
AT 15-MAR-1991 16:37:05

Test Successful

DECmcc (V1.1.0)

MCC 0 DNA5_AM
AT 15-MAR-1991 16:37:15

Test Successful.

DECmcc (V1.1.0)

MCC 0 ICONICMAP
AT 15-MAR-1991 16:37:27

Test Successful

DECmcc (V1.1.0)

MCC 0 DOMAIN_FM
AT 15-MAR-1991 16:37:37

Test Successful

DECmcc (V1.1.0)

MCC 0 SAMPLE_AM
AT 15-MAR-1991 16:37:47

Test successful.

DECmcc (V1.1.0)

MCC 0 ALARMS
AT 15-MAR-1991 16:37:57
```

```
Test successful.

DECmcc (V1.1.0)

MCC 0 BRIDGE_AM
AT 15-MAR-1991 16:38:08

Test successful.

DECmcc (V1.1.0)

MCC 0 ETHERNET_AM
AT 15-MAR-1991 16:38:18

Test successful.

DECmcc (V1.1.0)

MCC 0 HISTORIAN_FM
AT 15-MAR-1991 16:38:28

Test Successful

DECmcc (V1.1.0)

MCC 0 PA
AT 15-MAR-1991 16:38:37

MCC PA Test Successful

DECmcc (V1.1.0)

MCC 0 EXPORTER_FM
AT 15-MAR-1991 16:38:48

Test Successful

DECmcc (V1.1.0)

MCC 0 NOTIFICATION_FM
AT 15-MAR-1991 16:38:58

Test Successful
   DECmcc BMS V1.1.0 Installation Successful


   Completing DECmcc BMS Installation Verification Procedure ..

   Beginning DECMCC ETHERnim Installation Verification Procedure ..

This procedure verifies the installation of NMCC/VAX ETHERnim X2.3 on VMS

A VT125, VT240, VT241, or VT340 terminal is required to verify installation
```

```
Do you want to continue? (Y/N) [Y]: Y
ETHERnim directory [ETHERNIM]:
Location where ETHERnim directory resides [SYS$SYSDEVICE:]:

Directory SYS$SYSDEVICE:[ETHERNIM]

ENIM$MESSAGES.HLB;10

Total of 1 file.

Directory SYS$SYSDEVICE:[ETHERNIM]

ENIM$SCREENS.HLB;10

Total of 1 file.

Directory SYS$SYSDEVICE:[ETHERNIM]

ENIM$HOST_MAIN.EXE;10

Total of 1 file.

Directory SYS$COMMON:[SYS$STARTUP]

ENIM$HOST_STARTUP.COM;21

Total of 1 file.

Directory SYS$SYSDEVICE:[ETHERNIM]

ENIM$SESSION_STARTUP.COM;10

Total of 1 file.

Directory SYS$SYSDEVICE:[ETHERNIM]

ENIM$REMOTE_MAIN.EXE;10

Total of 1 file.

Directory SYS$SYSDEVICE:[ETHERNIM]

ENIM$REMOTE_STARTUP.COM;10

Total of 1 file.

Directory SYS$SYSDEVICE:[ETHERNIM]

ENIM$DTR_DEFINITIONS.COM;10

Total of 1 file.

Directory SYS$SYSDEVICE:[ETHERNIM]

ENIM$DTR_EXAMPLE.COM;10

Total of 1 file.
Running ETHERnim...

 You will see several warnings about file not found.  These
 may be ignored.
```

```
 When the ETHERnim intro screen appears, Press <RETURN>.
 Answer NO to the connectivity check question.
 When the command menu appears, type EXIT and press <RETURN> to exit

Press <RETURN> to continue:

NMCC/VAX ETHERnim V2.3 installation verification successful

   Completing DECMCC ETHERnim Installation Verification Procedure ..


   Beginning DECMCC LTM Installation Verification Procedure ..

LAN Traffic Monitor V1.2.0 initialization procedure
%DCL-S-SPAWNED, process ONUS_1 spawned
%DCL-S-ATTACHED, terminal now attached to process ONUS_1
%DCL-S-RETURNED, control returned to process _RTA2:

The LAN Traffic Monitor V1.2 Installation Verification Procedure
has completed successfully.


   Completing DECMCC LTM Installation Verification Procedure ..


   Beginning DECMCC ELMS Installation Verification Procedure ..


 +------------------------------------------------------------+
 | Starting DECelms VAX Installation Verification Procedure  |
 +------------------------------------------------------------+
 | Start command completed.                                   |
 | Stop command completed.                                    |
 | PASSED VAX DECelms V1.1 installation verification          |
 +------------------------------------------------------------+


   Starting DECelms V1.1 verification procedure ...
Start command completed.
Stop command completed.
   Passed DECelms V1.1 installation verification test.


   Completed DECMCC ELMS Installation Verification Procedure ..


   Beginning DECMCC TSM Installation Verification Procedure ..


     Beginning the TSM V1.4 Installation Verification Procedure.

     Please ignore the following TSM test data.

Terminal Server Manager V1.4
Copyright © Digital Equipment Corporation. 1991. All Rights Reserved.
Usage is DIRECTORY
```

```
Server:         IVP_TEST_TSM       Circuit(s):      QNA-0
Address:        FE-FF-FF-FF-FF-FF  Maint. Password: 0000000000000000
Type:           DS100              Login Password:  ACCESS
Partition name: DEFAULT            DECnet Address:  0
Dump File:      SYS$COMMON:[DECSERVER]DS1IVP_TEST_TSM.DMP
Image File:     SYS$SYSROOT:[DECSERVER]PS0801ENG.SYS
Reference File: SYS$SYSROOT:[DECSERVER]IVP_TEST_TSM.TXT

 Terminal Server Manager VMS V1.4 was successfully installed.

   Completing DECMCC TSM Installation Verification Procedure ..

   Beginning NMCC Installation Verification Procedure ..

NMCCIVP-I-IVPSTART, Starting installation verification procedure

 Checking NMCC/DECnet Monitor files ...


 This IVP procedure will attempt to start NMCCKERNEL. Make sure
 Rdb is STARTED on your system. CDD is not required for NMCC, but
 if it is installed on your system, it will be used. So, if you have
 CDD installed, make sure it is STARTED too.

Do you wish to continue [Y] ?:  Y

 Starting the NMCC/DECnet Monitor kernel process ...

%RUN-S-PROC_ID, identification of created process is 000000A7
%NMCC-S-NNMCCBOOTSUC, NMCCKERNEL process successfully started

 The User Interface will now be started. When you press RETURN, the
 screen will clear and you will see an NMCC/DECnet Monitor
 User Interface display.

 Once the command line displays that the connection to the kernel
 was successful, type SET NETWORK NAME ACE. Please note that
 if you are using populated database files, you must rename
 the network to the original name before exiting. After ACE
 appears on the screen in the name display of the network, you
 must type EXIT to exit the User Interface and end the
 IVP.

 To start the User Interface, press the RETURN key.

Press RETURN when ready to continue :

 Starting the User Interface ...

 ....Starting to clean-up and exit


 The NMCC/DECnet Monitor IVP is now complete.
```

```
  Completing NMCC Installation Verification Procedure ..

   Completing DECMCC EMS V2.1 Installation Verification Procedure ..

Installation of MCCEMS V2.1 completed at 16:54

VMSINSTAL procedure done at 16:54
```

B

Installed Directories and Files

This appendix contains tables that list directories and files created by the installation of DECmcc Site Management Station (SMS) and DECmcc Enterprise Management Station (EMS).

Table B–1: Files in SYS$COMMON:[VUE$LIBRARY.USER]

SMS Files	EMS Files
DECMCCFCL$FILEVIEW .COM	DECMCCFCL$FILEVIEW .COM
ELMS$FILEVIEW.COM	ELMS$FILEVIEW.COM
ENIM$FILEVIEW.COM	ENIM$FILEVIEW.COM
LTM$FILEVIEW.COM	LTM$FILEVIEW.COM
MCC_FCL.COM	MCC_FCL.COM
MCCSMS$PROFILE .VUE$DAT	MCCEMS$PROFILE .VUE$DAT
TSM$FILEVIEW.COM	TSM$FILEVIEW.COM

Table B–2: Files in SYS$COMMON:[DECSERVER]

SMS Files	EMS Files
DSV_020_DEFAULTS.COM	DSV_020_DEFAULTS.COM
DSV_013_DEFAULTS.COM	DSV_013_DEFAULTS.COM
DSV_012_DEFAULTS.COM	DSV_012_DEFAULTS.COM
MSVA_020_DEFAULTS.COM	MSVA_020_DEFAULTS.COM
TSM$ALARM.COM	TSM$ALARM.COM
TSM$CONFIG.DAT	TSM$CONFIG.DAT
TSM$DS1_V20_GET_CHAR.COM	TSM$DS1_V20_GET_CHAR.COM
TSM$LIBRARY.OLB	TSM$LIBRARY.OLB
TSM$SAMPLE_CALLABLE.BLI	TSM$SAMPLE_CALLABLE.BLI
TSM$SAMPLE_LINK.COM	TSM$SAMPLE_LINK.COM
TSM$SAMPLE_REFERENCE.TXT	TSM$SAMPLE_REFERENCE.TXT
TSV_021_DEFAULTS.COM	TSV_021_DEFAULTS.COM
TSV_022_DEFAULTS.COM	TSV_022_DEFAULTS.COM
TSV_030_DEFAULTS.COM	TSV_030_DEFAULTS.COM
LTM$ADDR_NAME.DAT	LTM$ADDR_NAME.DAT
LTMLIS0200.SYS	LTMLIS0200.SYS
LTM$LOAD_CONFIG.COM	LTM$LOAD_CONFIG.COM
LTM$MC_NAME.DAT	LTM$MC_NAME.DAT
LTM$SETUP.COM	LTM$SETUP.COM
LTM$TYPE_NAME.DAT	LTM$TYPE_NAME.DAT

Table B–3: Files in SYS$COMMON:[SYSHLP]

SMS Files	EMS Files
ELMS$HELP.HLB	ELMS$HELP.HLB
ELMS011.RELEASE_NOTES	ELMS011.RELEASE_NOTES
ENIM023.RELEASE_NOTES	ENIM023.RELEASE_NOTES
LTM012.RELEASE_NOTES	LTM012.RELEASE_NOTES
MCCBMS011.RELEASE_NOTES	MCCBMS011.RELEASE_ NOTES
MCCSMS021.RELEASE_NOTES	MCCEMS021.RELEASE_ NOTES
MCC_CHARACTER_CELL_ HELP.HLB	MCC_CHARACTER_CELL_ HELP.HLB
MCC_DAP_HELP.HLB	MCC_DAP_HELP.HLB
MCC_DECWINDOWS_ HELP.HLB	MCC_DECWINDOWS_ HELP.HLB
MCC_TBD_HELP.HLB	MCC_TBD_HELP.HLB
TSM$HELP.HLB	TSM$HELP.HLB
TSM014.RELEASE_NOTES	TSM014.RELEASE_NOTES
	NMCCFIELDS.HLB
	NMCCRPTHELP.HLB
	NMCCUI.HLB
	NMCCVMS.HLP
	NMCC023.RELEASE_NOTES

Table B–4: Files in SYS$COMMON:[SYSHLP.EXAMPLES]

SMS Files	EMS Files
MCC.DIR	MCC.DIR

Table B–5: Files in SYS$COMMON:[SYSHLP.EXAMPLES.MCC]

SMS Files	EMS Files
MCC_YOURMM.EXE	MCC_YOURMM.EXE

Table B–6: Files in SYS$COMMON:[SYSMSG]

SMS Files	EMS Files
MCCMSG.EXE	MCCMSG.EXE
MCCMSLMSG.EXE	MCCMSLMSG.EXE
MCCTBDMSG.EXE	MCCTBDMSG.EXE
TSM$MSG.EXE	TSM$MSG.EXE
TSM$MSG.MSG	TSM$MSG.MSG

Table B–7: Files in SYS$COMMON:[SYSEXE]

SMS Files	EMS Files
ELMS$BCP.EXE	ELMS$BCP.EXE
ELMS$BCPPRS.EXE	ELMS$BCPPRS.EXE
ELMS$DISPLAYS.EXE	ELMS$DISPLAYS.EXE
ELMS$NIMUX.EXE	ELMS$NIMUX.EXE
LTM$UI.EXE	LTM$UI.EXE
MCC_ALARMS_EXTRACT_ RULES.EXE	MCC_ALARMS_EXTRACT_ RULES.EXE
MCC_DAP_MAIN.EXE	MCC_DAP_MAIN.EXE
MCC_DEL_GS_POOL.EXE	MCC_DEL_GS_POOL.EXE
MCC_DNS_SETUP.EXE	MCC_DNS_SETUP.EXE
MCC_ENIM_CONVERT_MAIN.EXE	MCC_ENIM_CONVERT_MAIN.EXE
MCC_EXPORTER_FM_ BG.EXE	MCC_EXPORTER_FM_ BG.EXE
MCC_EXPORTER_WRITER.EXE	MCC_EXPORTER_WRITER.EXE
MCC_HFB_MAIN.EXE	MCC_HFB_MAIN.EXE
MCC_HISTORIAN_FM_BG.EXE	MCC_HISTORIAN_FM_BG.EXE
MCC_MAIN.EXE	MCC_MAIN.EXE
MCC_MIR_CVT_MAIN.EXE	MCC_MIR_CVT_MAIN.EXE
MCC_RBMS_CONVERT_MAIN.EXE	MCC_RBMS_CONVERT_MAIN.EXE

Table B–7 (Cont.): Files in SYS$COMMON:[SYSEXE]

SMS Files	EMS Files
TSM$MAIN.EXE	TSM$MAIN.EXE
	NMCC.CLD
	NMCCBOOTSTRAP.COM
	NMCCCONFIG.FDL
	NMCCCRE.COM
	NMCCDBA.COM
	NMCCDBO.EXE
	NMCCEVENT.COM
	NMCCHISTORY.COM
	NMCCLDBSERVER.EXE
	NMCCKERNEL.EXE
	NMCCREFERE.FDL
	NMCCRPT.COM
	NMCCRPTNMC.EXE
	NMCCRPTNMS.EXE
	NMCCRPTOUT.EXE
	NMCCRPTPRS.EXE
	NMCCSHR.EXE
	NMCCSTARTKERNEL.COM
	NMCCSTOPKERNEL.COM
	NMCCTEMPLATE.COM
	NMCCUI.EXE
	NMCC_EXP_IMP.EXE

Table B–8: Files in SYS$COMMON:[SYSLIB]

SMS Files	EMS Files
MCC_ALARMS_FM.EXE	MCC_ALARMS_FM.EXE
MCC_BRIDGE_AM.EXE	MCC_BRIDGE_AM.EXE
MCC_CONFIG_FM.EXE	MCC_CONFIG_FM.EXE
MCC_CONTROL_FM.EXE	MCC_CONTROL_FM.EXE
MCC_DNA4_AM.EXE	MCC_DNA4_AM.EXE
MCC_DNA4_EVL.EXE	MCC_DNA4_EVL.EXE
MCC_DNA5_AM.EXE	MCC_DNA5_AM.EXE
MCC_DOMAIN_FM.EXE	MCC_DOMAIN_FM.EXE
MCC_ENET_AM.EXE	MCC_ENET_AM.EXE
MCC_EXPORTER_FM.EXE	MCC_EXPORTER_FM.EXE
MCC_FCL_PM.EXE	MCC_FCL_PM.EXE
MCC_HISTORIAN_FM.EXE	MCC_HISTORIAN_FM.EXE
MCC_ICONIC_MAP_PM.EXE	MCC_ICONIC_MAP_PM.EXE
MCC_KERNEL_INIT.OBJ	MCC_KERNEL_INIT.OBJ
MCC_KERNEL_SHR.EXE	MCC_KERNEL_SHR.EXE
MCC_MTS_PRIV_SHR.EXE	MCC_MTS_PRIV_SHR.EXE
MCC_NOTIFICATION_FM.EXE	MCC_NOTIFICATION_FM.EXE
MCC_PA_FM.EXE	MCC_PA_FM.EXE
MCC_PTB.EXE	MCC_PTB.EXE
MCC_RESOURCE.DAT	MCC_RESOURCE.DAT
MCC_SAMPLE_AM.EXE	MCC_SAMPLE_AM.EXE
MCC_UI_TBD.EXE	MCC_UI_TBD.EXE
	NMCCSHR.EXE

Table B–9: Files in SYS$COMMON:[SYS$STARTUP]

SMS Files	EMS Files
ELMS$STARTUP.COM	ELMS$STARTUP.COM
ENIM$HOST_STARTUP.COM	ENIM$HOST_STARTUP.COM
MCC_LOGICAL_BMS.COM	MCC_LOGICAL_BMS.COM
MCC_LOGICAL_DIR.COM	MCC_LOGICAL_DIR.COM
MCC_STARTUP_BMS.COM	MCC_STARTUP_BMS.COM
MCC_STARTUP_DIR.COM	MCC_STARTUP_DIR.COM
MCC_STARTUP_DNA_EVL.COM	MCC_STARTUP_DNA_EVL.COM

Table B–10: Files in SYS$COMMON:[SYSMGR]

SMS Files	EMS Files
ELMS$CONVERT.EXE	ELMS$CONVERT.EXE
ELMS$SHUTDOWN.COM	ELMS$SHUTDOWN.COM
MCC_EXPORTER_ BACKGROUND.COM	MCC_EXPORTER_ BACKGROUND .COM
MCC_HISTORIAN_ BACKGROUND .COM	MCC_HISTORIAN_ BACKGROUND .COM
	NMCCLOGICALS.COM

Table B–11: Files in SYS$COMMON:[MCC]

SMS Files	EMS Files
MCC_ALARMS_ATTRIBUTE_ MIR.DAT	MCC_ALARMS_ATTRIBUTE_ MIR.DAT
MCC_ALARMS_BROADCAST_ ALARM.COM	MCC_ALARMS_BROADCAST_ ALARM.COM
MCC_ALARMS_BROADCAST_ EXCEPTION.COM	MCC_ALARMS_BROADCAST_ EXCEPTION.COM
MCC_ALARMS_FM.HELP	MCC_ALARMS_FM.HELP
MCC_ALARMS_INSTANCE_ MIR.DAT	MCC_ALARMS_INSTANCE_ MIR.DAT

Table B–11 (Cont.): Files in SYS$COMMON:[MCC]

SMS Files	EMS Files
MCC_ALARMS_LOG_ ALARM.COM	MCC_ALARMS_LOG_ ALARM.COM
MCC_ALARMS_LOG_ EXCEPTION.COM	MCC_ALARMS_LOG_ EXCEPTION.COM
MCC_ALARMS_MAIL_ ALARM.COM	MCC_ALARMS_MAIL_ ALARM.COM
MCC_ALARMS_MAIL_ EXCEPTION.COM	MCC_ALARMS_MAIL_ EXCEPTION.COM
MCC_ALARMS_SAMPLE_ RULES.COM	MCC_ALARMS_SAMPLE_ RULE.COM
MCC_ALARMS_SECURITY.COM	MCC_ALARMS_SECURITY.COM
MCC_AUSTRALIA.MCC_ BACKDROP	MCC_AUSTRALIA.MCC_ BACKDROP
MCC_BRIDGE_AM.HELP	MCC_BRIDGE_AM.HELP
MCC_BRIDGE_ICON.DAT	MCC_BRIDGE_ICON.DAT
MCC_BRIDGE_LANBRIDGE_100_ ICON.DAT	MCC_BRIDGE_LANBRIDGE_100_ ICON.DAT
MCC_BRIDGE_LANBRIDGE_150_ ICON.DAT	MCC_BRIDGE_LANBRIDGE_150_ ICON.DAT
MCC_BRIDGE_LANBRIDGE_200_ ICON.DAT	MCC_BRIDGE_LANBRIDGE_200_ ICON.DAT
MCC_COMMANDS.CLD	MCC_COMMAND.CLD
MCC_CONTROL_FM.HELP	MCC_CONTROL_FM.HELP
MCC_CREATE_MCC_GES.COM	MCC_CREATE_MCC_GES.COM
MCC_DEFINITION.DAT	MCC_DEFINITION.DAT
MCC_DICTIONARY.DAT	MCC_DICTIONARY.DAT
MCC_DISPATCH_TABLE.DAT	MCC_DISPATCH_TABLE.DAT
MCC_DNA4_AM.HELP	MCC_DNA4_AM.HELP
MCC_DNA4_EVL.COM	MCC_DNA4_EVL.COM
MCC_DNA5AM.HELP	MCC_DNA5AM.HELP
MCC_DNS_BASIC_SETUP.COM	MCC_DNS_BASIC_SETUP.COM

Table B–11 (Cont.): Files in SYS$COMMON:[MCC]

SMS Files	EMS Files
MCC_DNS_SETUP.COM	MCC_DNS_SETUP.COM
MCC_DNS_SETUP_DIR.COM	MCC_DNS_SETUP_DIR.COM
MCC_DNS_SETUP_ IDP.COM	MCC_DNS_SETUP_ IDP.COM
MCC_DOMAIN_DELNI_ICON.DAT	MCC_DOMAIN_DELNI_ICON.DAT
MCC_DOMAIN_DEMPR_ICON.DAT	MCC_DOMAIN_DEMPR_ICON.DAT
MCC_DOMAIN_DESPR_ICON.DAT	MCC_DOMAIN_DESPR_ICON.DAT
MCC_DOMAIN_ FM.HELP	MCC_DOMAIN_ FM.HELP
MCC_DOMAIN_ ICON.DAT	MCC_DOMAIN_ ICON.DAT
MCC_ENET_AM.HELP	MCC_ENET_AM.HELP
MCC_ENROLL_BMS.COM	MCC_ENROLL_BMS.COM
MCC_ENROLL_DIR.COM	MCC_ENROLL_DIR.COM
MCC_EXPORT_AUG.COM	MCC_EXPORT_AUG.COM
MCC_EXP_SNMP.COM	MCC_EXP_SNMP.COM
MCC_GENERAL_HELP.HELP	MCC_GENERAL_HELP.HELP
MCC_HIST_AUG.COM	MCC_HIST_AUG.COM
MCC_HIST_SNMP.COM	MCC_HIST_SNMP.COM
MCC_ICONIC_MAP_PM.VID	MCC_ICONIC_MAP_PM.VID
MCC_JAPAN.MCC_BACKDROP	MCC_JAPAN.MCC_BACKDROP
MCC_KERNEL_AM.HELP	MCC_KERNEL_AM.HELP
MCC_MANAGE.HLP	MCC_MANAGE.HLP
MCC_MCC_ICON.DAT	MCC_MCC_ICON.DAT
MCC_META_DEFINITION.DAT	MCC_META_DEFINITION.DAT
MCC_META_DICTIONARY.DAT	MCC_META_DICTIONARY.DAT
MCC_MIR_ATTRIBUTE.DAT	MCC_MIR_ATTRIBUTE.DAT
MCC_MIR_DIRECTORY.DAT	MCC_MIR_DIRECTORY.DAT

Table B–11 (Cont.): Files in SYS$COMMON:[MCC]

SMS Files	EMS Files
MCC_NODE4_DECNET_HOST_ ICON.DAT	MCC_NODE4_DECNET_HOST_ ICON.DAT
MCC_NODE4_DECNET_OSI_HOST_ ICON.DAT	MCC_NODE4_DECNET_OSI_HOST_ ICON.DAT
MCC_NODE4_DECROUTER_1_ ICON.DAT	MCC_NODE4_DECROUTER_1_ ICON.DAT
MCC_NODE4_DECROUTER_2_ ICON.DAT	MCC_NODE4_DECROUTER_2_ ICON.DAT
MCC_NODE4_DECSTATION_ ICON.DAT	MCC_NODE4_DECSTATION_ ICON.DAT
MCC_NODE4_DECSTA_ULTRIX_ DECNET_ICON.DAT	MCC_NODE4_DECSTA_ULTRIX_ DECNET_ICON.DAT
MCC_NODE4_ICON.DAT	MCC_NODE4_ICON.DAT
MCC_NODE4_L1_ICON.DAT	MCC_NODE4_L1_ICON.DAT
MCC_NODE4_L2_ICON.DAT	MCC_NODE4_L2_ICON.DAT
MCC_NODE4_LAVC_ICON.DAT	MCC_NODE4_LAVC_ICON.DAT
MCC_NODE4_LOAD.COM	MCC_NODE4_LOAD.COM
MCC_NODE4_PRINT_SERVER_ ICON.DAT	MCC_NODE4_PRINT_SERVER_ ICON.DAT
MCC_NODE4_VAXSTA_VMS_ DECNET_ICON.DAT	MCC_NODE4_VAXSTA_VMS_ DECNET_ICON.DAT
MCC_NODE4_VAX_HOST_ ICON.DAT	MCC_NODE4_VAX_HOST_ ICON.DAT
MCC_NODE4_WS_VAX_ ICON.DAT	MCC_NODE4_WS_VAX_ ICON.DAT
MCC_NODE_ICON.DAT	MCC_NODE_ICON.DAT
MCC_NOTIFICATION_ FM.HELP	MCC_NOTIFICATION_ FM.HELP
MCC_PA_FM.HELP	MCC_PA_FM.HELP
MCC_PTB_PARSER.BPT	MCC_PTB_PARSER.BPT
MCC_REPORTS_FILES.DIR	MCC_REPORTS_FILES.DIR

Table B–11 (Cont.): Files in SYS$COMMON:[MCC]

SMS Files	EMS Files
MCC_SAMPLE_ICON.DAT	MCC_SAMPLE_ICON.DAT
MCC_SNMP_ICON.DAT	MCC_SNMP_ICON.DAT
MCC_SNMP_TCP_IP_HOST_ ICON.DAT	MCC_SNMP_TCP_IP_HOST_ ICON.DAT
MCC_SNMP_WS_ULTRIX_IP_ ICON.DAT	MCC_SNMP_WS_ULTRIX_IP_ ICON.DAT
MCC_STATION_ICON.DAT	MCC_STATION_ICON.DAT
MCC_UNITED_STATES.MCC_ BACKDROP	MCC_UNITED_STATES.MCC_ BACKDROP
MCC_WESTERN_EUROPE.MCC_ BACKDROP	MCC_WESTERN_EUROPE.MCC_ BACKDROP
MCC_WORLD.MCC_BACKDROP	MCC_WORLD.MCC_BACKDROP

Table B–12: Files in SYS$COMMON:[MCC.MCC_REPORTS_FILES]

SMS Files	EMS Files
MCC_RPTS.COM	MCC_RPTS.COM
MCC_RPTS_BRIDGE.MENU	MCC_RPTS_BRIDGE.MENU
MCC_RPTS_DOMAINS.DTR	MCC_RPTS_DOMAINS.DTR
MCC_RPTS_HELP.MENU	MCC_RPTS_HELP.MENU
MCC_RPTS_LGRAPH.GRG	MCC_RPTS_LGRAPH.GRG
MCC_RPTS_MAIN.MENU	MCC_RPTS_MAIN.MENU
MCC_RPTS_NODE4_CIRCT_DAILY_ GRAPH.COM	MCC_RPTS_NODE4_CIRCT_DAILY_ GRAPH.COM
MCC_RPTS_NODE4_CIRCT_DAILY_ GRAPH_DTR.COM	MCC_RPTS_NODE4_CIRCT_DAILY_ GRAPH_DTR.COM
MCC_RPTS_NODE4_CIRCT_HOURLY_ GRAPH.COM	MCC_RPTS_NODE4_CIRCT_HOURLY_ GRAPH.COM

Table B–12 (Cont.): Files in SYS$COMMON:[MCC.MCC_REPORTS_FILES]

SMS Files	EMS Files
MCC_RPTS_NODE4_CIRCT_HOURLY_ GRAPH_DTR.COM	MCC_RPTS_NODE4_CIRCT_HOURLY_ GRAPH_DTR.COM
MCC_RPTS_NODE4_LINE_ BANDWIDTH.COM	MCC_RPTS_NODE4_LINE_ BANDWIDTH.COM
MCC_RPTS_NODE4_LINE_ BANDWIDTH_DTR.COM	MCC_RPTS_NODE4_LINE_ BANDWIDTH_DTR.COM
MCC_RPTS_NODE4_LINE_ ERROR.COM	MCC_RPTS_NODE4_LINE_ ERROR.COM
MCC_RPTS_NODE4_LINE_ ERROR_ DTR.COM	MCC_RPTS_NODE4_LINE_ ERROR_ DTR.COM
MCC_RPTS_NODE4_LINE_ERROR_ SUMMARY.COM	MCC_RPTS_NODE4_LINE_ERROR_ SUMMARY.COM
MCC_RPTS_NODE4_LINE_ERROR_ SUMMARY_DTR.COM	MCC_RPTS_NODE4_LINE_ERROR_ SUMMARY_DTR.COM
MCC_RPTS_NODE4_LINE_ TRAFFIC.COM	MCC_RPTS_NODE4_LINE_ TRAFFIC.COM
MCC_RPTS_NODE4_LINE_ TRAFFIC_ DTR.COM	MCC_RPTS_NODE4_LINE_ TRAFFIC_ DTR.COM
MCC_RPTS_NODE4_LINE_TRAFFIC_ SUMMARY.COM	MCC_RPTS_NODE4_LINE_TRAFFIC_ SUMMARY.COM
MCC_RPTS_NODE4_LINE_TRAFFIC_ SUMMARY_DTR.COM	MCC_RPTS_NODE4_LINE_TRAFFIC_ SUMMARY_DTR.COM
MCC_RPTS_NODE4_NODE_ ERROR.COM	MCC_RPTS_NODE4_NODE_ ERROR.COM
MCC_RPTS_NODE4_NODE_ERROR_ DTR.COM	MCC_RPTS_NODE4_NODE_ERROR_ DTR.COM
MCC_RPTS_NODE4_NODE_ERROR_ SUMMARY.COM	MCC_RPTS_NODE4_NODE_ERROR_ SUMMARY.COM
MCC_RPTS_NODE4_NODE_ERROR_ SUMMARY_DTR.COM	MCC_RPTS_NODE4_NODE_ERROR_ SUMMARY_DTR.COM

Table B–12 (Cont.): Files in SYS$COMMON:[MCC.MCC_REPORTS_FILES]

SMS Files	EMS Files
MCC_RPTS_NODE4_NODE_ TRAFFIC.COM	MCC_RPTS_NODE4_NODE_ TRAFFIC.COM
MCC_RPTS_NODE4_NODE_ TRAFFIC_ DTR.COM	MCC_RPTS_NODE4_NODE_ TRAFFIC_ DTR.COM
MCC_RPTS_NODE4_NODE_TRAFFIC_ SUMMARY.COM	MCC_RPTS_NODE4_NODE_TRAFFIC_ SUMMARY.COM
MCC_RPTS_NODE4_NODE_TRAFFIC_ SUMMARY_ DTR.COM	MCC_RPTS_NODE4_NODE_TRAFFIC_ SUMMARY_ DTR.COM
MCC_RPTS_NODE5_LINE_ BANDWIDTH.COM	MCC_RPTS_NODE5_LINE_ BANDWIDTH.COM
MCC_RPTS_NODE5_LINE_ BANDWIDTH_ DTR.COM	MCC_RPTS_NODE5_LINE_ BANDWIDTH_DTR.COM
MCC_RPTS_NODE5_LINE_DAILY_ GRAPH.COM	MCC_RPTS_NODE5_LINE_DAILY_ GRAPH.COM
MCC_RPTS_NODE5_LINE_DAILY_ GRAPH_DTR.COM	MCC_RPTS_NODE5_LINE_DAILY_ GRAPH_DTR.COM
MCC_RPTS_NODE5_LINE_ ERROR.COM	MCC_RPTS_NODE5_LINE_ ERROR.COM
MCC_RPTS_NODE5_LINE_ERROR_ DTR.COM	MCC_RPTS_NODE5_LINE_ERROR_ DTR.COM
MCC_RPTS_NODE5_LINE_ERROR_ SUMMARY.COM	MCC_RPTS_NODE5_LINE_ERROR_ SUMMARY.COM
MCC_RPTS_NODE5_LINE_ERROR_ SUMMARY_DTR.COM	MCC_RPTS_NODE5_LINE_ERROR_ SUMMARY_DTR.COM
MCC_RPTS_NODE5_LINE_HOURLY_ GRAPH.COM	MCC_RPTS_NODE5_LINE_HOURLY_ GRAPH.COM
MCC_RPTS_NODE5_LINE_HOURLY_ GRAPH_DTR.COM	MCC_RPTS_NODE5_LINE_HOURLY_ GRAPH_DTR.COM
MCC_RPTS_NODE5_LINE_ TRAFFIC.COM	MCC_RPTS_NODE5_LINE_ TRAFFIC.COM

Table B–12 (Cont.): Files in SYS$COMMON:[MCC.MCC_REPORTS_FILES]

SMS Files	EMS Files
MCC_RPTS_NODE5_LINE_TRAFFIC_ DTR.COM	MCC_RPTS_NODE5_LINE_TRAFFIC_ DTR.COM
MCC_RPTS_NODE5_LINE_TRAFFIC_ SUMMARY.COM	MCC_RPTS_NODE5_LINE_TRAFFIC_ SUMMARY.COM
MCC_RPTS_NODE5_LINE_TRAFFIC_ SUMMARY_DTR.COM	MCC_RPTS_NODE5_LINE_TRAFFIC_ SUMMARY_DTR.COM
MCC_RPTS_NODE5_NODE_ ERROR.COM	MCC_RPTS_NODE5_NODE_ ERROR.COM
MCC_RPTS_NODE5_NODE_ERROR_ DTR.COM	MCC_RPTS_NODE5_NODE_ERROR_ DTR.COM
MCC_RPTS_NODE5_NODE_ERROR_ SUMMARY.COM	MCC_RPTS_NODE5_NODE_ERROR_ SUMMARY.COM
MCC_RPTS_NODE5_NODE_ERROR_ SUMMARY_DTR.COM	MCC_RPTS_NODE5_NODE_ERROR_ SUMMARY_DTR.COM
MCC_RPTS_NODE5_NODE_ TRAFFIC.COM	MCC_RPTS_NODE5_NODE_ TRAFFIC.COM
MCC_RPTS_NODE5_NODE_TRAFFIC_ DTR.COM	MCC_RPTS_NODE5_NODE_TRAFFIC_ DTR.COM
MCC_RPTS_NODE5_NODE_TRAFFIC_ SUMMARY.COM	MCC_RPTS_NODE5_NODE_TRAFFIC_ SUMMARY.COM
MCC_RPTS_NODE5_NODE_TRAFFIC_ SUMMARY_DTR.COM	MCC_RPTS_NODE5_NODE_TRAFFIC_ SUMMARY_DTR.COM
MCC_RPTS_PHASEV_ DOMAINS.DTR	MCC_RPTS_PHASEV_ DOMAINS.DTR
MCC_RPTS_PHASEV_PROC.DTR	MCC_RPTS_PHASEV_PROC.DTR
MCC_RPTS_PHASEV_ RECORDS.DTR	MCC_RPTS_PHASEV_ RECORDS.DTR
MCC_RPTS_PHASE_IV.MENU	MCC_RPTS_PHASE_IV.MENU
MCC_RPTS_PHASE_V.MENU	MCC_RPTS_PHASE_V.MENU
MCC_RPTS_PROC.DTR	MCC_RPTS_PROC.DTR
MCC_RPTS_RECORDS.DTR	MCC_RPTS_RECORDS.DTR

Table B–13: Files in SYS$COMMON:[ELMS$DIRECTORY]

SMS Files	EMS Files
ELMS$DATABASE.DNS	ELMS$DATABASE.DNE
ELMS$DATABASE.DSE	ELMS$DATABASE.DSE
ELMS$STATE_CHANGE.LOG	ELMS$STATE_CHANGE.LOG

Table B–14: Files in SYS$SYSDEVICE:[ETHERNIM]

SMS Files	EMS Files
ENIM$ACL.COM	ENIM$ACL.COM
ENIM$DTR_DEFINITIONS.COM	ENIM$DTR_DEFINITIONS.COM
ENIM$DTR_EXAMPLE.COM	ENIM$DTR_EXAMPLE.COM
ENIM$HOST_MAIN.EXE	ENIM$HOST_MAIN.EXE
ENIM$MESSAGES.HLB	ENIM$MESSAGES.HLB
ENIM$REMOTE_MAIN.EXE	ENIM$REMOTE_MAIN.EXE
ENIM$REMOTE_STARTUP.COM	ENIM$REMOTE_STARTUP.COM
ENIM$SCREENS.HLB	ENIM$SCREENS.HLB
ENIM$SESSION.HIS	ENIM$SESSION.HIS
ENIM$SESSION_STARTUP.COM	ENIM$SESSION_STARTUP.COM

Table B–15: Files in SYS$COMMON:[NMCC]

SMS Files	EMS Files
	NMCCCOUNTER.RDB
	NMCCCOUNTER.SNP
	NMCCDBROOT.RDB
	NMCCDBROOT.SNP
	NMCCRCOUNTER.RDB
	NMCCRCOUNTER.SNP

Table B–15 (Cont.): Files in SYS$COMMON:[NMCC]

SMS Files	EMS Files
	NMCCRPTLOGRECS.DTR
	NMCCRPTSUMRECS.DTR
	NMCCSCHEMA.RDO
	NMCCSTATIC.RDB
	NMCCSTATIC.SNP
	NMCCSTATUS.RDB
	NMCCSTATUS.SNP
	NMCCTEMPLATE.COM

Table B–16: Files in SYS$COMMON:[SYSTEST]

SMS Files	EMS Files
ELMS$IVP.COM	ELMS$IVP.COM
ENIM$IVP.COM	ENIM$IVP.COM
LTM$IVP.COM	LTM$IVP.COM
LTM.DIR	LTM.DIR
MCC.DIR	MCC.DIR
MCC_BMS_IVP.COM	MCC_BMS_IVP.COM
MCC_DIR_IVP.COM	MCC_DIR_IVP.COM
TSM$IVP.COM	TSM$IVP.COM
	NMCCUI_IVP.COM or NMCCIVP.COM
	NMCCVMS.DIR

Table B–17: Files in SYS$COMMON:[SYSTEST.NMCCVMS]

SMS Files	EMS Files
	NMCCIVPSCHEMA.RDO

Table B–18: Files in SYS$COMMON:[SYSTEST.LTM]

SMS Files	EMS Files
LTM$REGRESSION.BMK	LTM$REGRESSION.BMK
LTM$REGRESSION.COM	LTM$REGRESSION.COM