DECset

Installation Guide for OpenVMS Systems

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This guide explains how to install DECset for OpenVMS Systems, Version 12.0.

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Preface

This guide explains how to install DECset for OpenVMS systems, Version 12.0. Throughout this guide, OpenVMS systems refers to OpenVMS VAX and OpenVMS Alpha systems unless explicitly stated.

DECset for OpenVMS systems consists of the following tools:

- DEC Code Management System (CMS)
- DEC Language-Sensitive Editor (LSE)
- Source Code Analyzer (SCA)
- DEC Test Manager
- DEC Performance and Coverage Analyzer (PCA)
- DEC Module Management System (MMS)

Included in the DECset kit are save sets containing documentation in PostScript or text format.

Intended Audience

This guide is intended for system managers of OpenVMS systems.

Document Structure

This guide contains the following chapters and appendices:

- Chapter 1 gives preinstallation information for installing the DECset tools.
- Chapter 2 describes how to run the DECset installation procedure to install any or all of the DECset components.
- Chapter 3 tells how to install CMS individually.
- Chapter 4 tells how to install LSE individually.
- Chapter 5 tells how to install SCA individually.
- Chapter 6 tells how to install DEC Test Manager individually.

- Chapter 7 tells how to install PCA individually.
- Chapter 8 tells how to install MMS individually.
- Chapter 9 gives post installation information.
- Appendix A gives a sample script of installing a few of the DECset components.
- Appendix B gives a sample script of installing the DECset online documentation.

Associated Documents

The following documents may also be helpful when installing DECset for OpenVMS systems:

- *Using DECset for OpenVMS Systems* describes how to use the DEC Software Engineering Tools and platform software to create an effective software development environment.
- The DECset media also contains an online documentation kit that can be installed in a public area on your system. For more information on the names and location of these online files, please refer to the DECset release notes. For information on installing the documentation kit, see Appendix B in this guide.

Conventions

Table 1 lists the conventions used in this guide.

Table 1 Conventions Used in this Guide

Convention	Description
$	A dollar sign ($) represents the OpenVMS DCL system prompt.
Return	In interactive examples, a label enclosed in a box indicates that you press a key on the keyboard, for example, Return.
Ctrl/*x*	The key combination Ctrl/*x* indicates that you must press the key labeled Ctrl while you simultaneously press another key, for example, Ctrl/Y or Ctrl/Z.

(continued on next page)

Table 1 (Cont.) Conventions Used in this Guide

Convention	Description
KP*n*	The phrase KP*n* indicates that you must press the key labeled with the number or character *n* on the numeric keypad, for example, KP3 or KP-.
file-spec, ...	A horizontal ellipsis following a parameter, option, or value in syntax descriptions indicates additional parameters, options, or values you can enter.
`boldface monospace text`	Boldface monospace text represents user input in interactive examples in the hardcopy and online versions of this guide.
. . .	A horizontal ellipsis in a figure or example indicates that not all of the statements are shown.
. . .	A vertical ellipsis indicates the omission of items from a code example or command format; the items are omitted because they are not important to the topic being discussed.
( )	In format descriptions, if you choose more than one option, parentheses indicate that you must enclose the choices in parentheses.
[ ]	In format descriptions, brackets indicate that whatever is enclosed is optional; you can select none, one, or all of the choices.
{ }	In format descriptions, braces surround a required choice of options; you must choose one of the options listed.
boldface text	Boldface text represents the introduction of a new term.
italic text	Italic represents parameters, arguments, and information that can vary in system messages (for example, Internal error *number*), as well as book titles.
UPPERCASE	Uppercase indicates the name of a command, routine, the name of a file, the name of a file protection code, or the abbreviation of a system privilege.
lowercase	Lowercase in examples indicates that you are to substitute a word or value of your choice.

1
Preparing to Install the DECset Tools

This chapter presents the following information on preparing to install the DECset tools:

- Your bill of materials (BOM)
- Prerequisite software
- Accessing the online release notes
- Installation procedure requirements
- User account quotas and privileges
- OpenVMS License Management Facility (LMF)
- Using VMSINSTAL

Where appropriate, this chapter gives specific information on each tool.

1.1 DECset Bill of Materials

Your bill of materials (BOM) specifies the number and contents of your media. Be sure to check the contents of your kit against this information. If your kit is damaged or if you find that parts of it are missing, call your Digital representative.

Distribution media must be mounted in numerical order. The installation procedure prompts you to mount the volumes. For more information on how to mount distribution media, see your processor-specific installation/operations guide. This guide details several options to the installation procedure.

1.2 Prerequisite Software

On OpenVMS Alpha systems, each DECset, Version 12.0, tool requires OpenVMS Alpha operating system, Version 1.5 or higher.

If you are using the DECwindows interface for any tool, you must have OpenVMS Alpha operating system, Version 1.5 or higher, and DECwindows Motif for OpenVMS Alpha, Version 1.1 or higher, installed on your system.

On OpenVMS VAX systems, each DECset, Version 12.0, tool requires OpenVMS Version 5.5 or higher.

If you are using the DECwindows interface for any tool, you must have OpenVMS, Version 5.5 or higher, and DECwindows Motif, Version 1.1 or higher, installed on your system.

1.3 Accessing Online Release Notes

Each DECset tool provides online release notes. The prompt to display or print the release notes during the installation is described in Section 1.7.

To obtain the release notes for each of the DECset tools after the installation, print the files shown in Table 1–1.

Table 1–1 DECset Online Release Notes File Names

Tool	File Name
DECset Component Release Notes	SYS$HELP:DECSETDOCS120.RELEASE_NOTES
Environment Manager	ENVMGR010.RELEASE_NOTES
DEC Code Management System	SYS$HELP:CMS037.RELEASE_NOTES
DEC Module Management System	SYS$HELP:MMS030.RELEASE_NOTES
DEC Test Manager	SYS$HELP:DTM036.RELEASE_NOTES
DEC Language-Sensitive Editor	SYS$HELP:LSE043.RELEASE_NOTES
Source Code Analyzer	SYS$HELP:SCA043.RELEASE_NOTES
DEC Performance and Coverage Analyzer	SYS$HELP:PCA043.RELEASE_NOTES

Online help also directs you to the release notes file. After the installation, enter the following command line:

```
$ HELP tool RELEASE_NOTES Return
```

In the previous command line, `tool` represents the DCL command that invokes the tool on which you want help.

1.4 Installation Procedure Requirements

The installation of each tool takes approximately 10 to 45 minutes, depending on the type of media and your system configuration. Before installing any DECset tool, you must have the SETPRV privileges, or CMKRNL, WORLD, and SYSPRV privileges.

When a DECset tool is started up within the DECwindows interface, it will also start up the Environment Manager interface, if the Environment Manager is not already running. The Environment Manager comes up iconified when it is invoked in this indirect manner.

Table 1–2 and Table 1–3 list the following system resources for each DECset tool you are installing:

- The minimum amount of free disk space during and after installation.
- The minimum number of free global pagelets plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation.
- The minimum number of free global sections at installation.

These resources reflect the amount of space needed when installing the DECwindows interface to each tool.

Note

You must ensure that your system has the necessary global pagelet and global section SYSGEN quotas for the installation. Failure to do so could cause the DCL tables to be corrupted in some situations.

To determine the number of available global pagelets on your system, invoke the OpenVMS Install Utility (INSTALL) and enter the following command:

```
$ INSTALL LIST/GLOBAL/SUMMARY Return

        Summary of Local Memory Global Sections

nnn Global Sections Used,  nnnn/nnnn Global pagelets Used/Unused
```

When you enter this command, the system displays a summary of the number of global sections used, the number of global pagelets used, and the number of global pagelets unused. Exit from INSTALL by entering the EXIT command.

If there are not enough pagelets available, you can delete an existing known image with INSTALL, or increase the GBLPAGES system parameter with the OpenVMS System Generation Utility (SYSGEN) by editing the file SYS$SYSTEM:MODPARAMS.DAT and then invoking the

SYS$UPDATE:AUTOGEN.COM procedure. For more information on the AUTOGEN.COM procedure, see your processor-specific installation/operations guide.

You can determine the number of available global sections by invoking SYSGEN and entering the following commands:

```
$ RUN SYS$SYSTEM:SYSGEN Return
SYSGEN> USE CURRENT Return
SYSGEN> SHOW GBLSECTIONS Return
Parameter Name   Current   Default   Minimum   Maximum   Unit   Dynamic
--------------   -------   -------   -------   --------  ----   -------
GBLSECTIONS          nnn       nnn       nnn        nnn  Sections
SYSGEN> EXIT Return
```

The first number displayed is the current number of global sections. Compare this to the number of global sections in use as displayed by INSTALL. For example, CMS requires 14 global sections. Therefore, if the number of global sections used (displayed by INSTALL) plus 14 exceeds the current number of global sections, you must increase the number of available global sections before you can install CMS. To increase the number, you must increase the GBLSECTIONS system parameter with SYSGEN by editing the file SYS$SYSTEM:MODPARAMS.DAT and then invoking the SYS$UPDATE:AUTOGEN.COM procedure. For more information on the AUTOGEN.COM procedure, see your processor-specific installation/operations guide.

If the number of global sections used plus the number of global sections needed by the tool you are installing is less than the current number of global sections, you can exit from SYSGEN and continue.

Table 1–2 lists the OpenVMS Alpha system resources required for each DECset tool. Table 1–3 lists the OpenVMS VAX system resources required for each DECset tool.

Table 1–2 DECset for OpenVMS Alpha Installation Requirements

Tool	Disk Space During Installation	Disk Space After Installation	Global Pagelets Required	Global Sections Required
ENVMGR	2,000	600	700	3
CMS	21,000	12,500	3,500	14
LSE	42,000	20,000[1]	8,200	15
SCA	18,000	14,000	8,700	15
DEC Test Manager	25,000	16,500	1,200	8
PCA	21,000	8,000[2]	2,000	10
MMS	4,000	600	500	5

[1]Includes all of the supported LSE languages.

[2]Includes the PCA demo package.

LSE and SCA also require at least 2 MB of physical memory.

Table 1–3 DECset for OpenVMS VAX Installation Requirements

Tool	Disk Space During Installation	Disk Space After Installation	Global Pagelets Required	Global Sections Required
ENVMGR	2,000	600	700	3
CMS	9,000	7,000	1,500	14
LSE	40,000	13,500[1]	6,000	15
SCA	13,000	9,000	5,000	15
DEC Test Manager	15,000	10,000	800	15
PCA	12,000	5,000[2]	1,305	10
MMS	2,800	300	500	5

[1]Includes all of the supported LSE languages.

[2]Includes the PCA demo package.

1.4.1 Requirements for the Environment Manager System

Before installing the Environment Manager System, you must have the following resources:

- A minimum of 2,000 blocks of free disk space during installation; 600 blocks are used after installation.
- A minimum of 700 free global pagelets, plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation.
- A minimum of 3 free global sections at installation.

1.4.2 Requirements for DEC Code Management System

Before installing DEC Code Management System (CMS), you must have the following resources:

- A minimum of 9,000 blocks of free disk space during installation; 7,000 blocks are used after installation.
- A minimum of 1,500 free global pagelets, plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation.
- A minimum of 14 free global sections at installation.
- The minimum number of OpenVMS classes necessary for full functionality as described in the *CMS Software Product Description* (SPD).

1.4.3 Requirements for DEC Language-Sensitive Editor

Before installing DEC Language-Sensitive Editor (LSE), you must have the following resources:

- A minimum of 40,000 blocks of free disk space during the installation; 13,500 blocks of free disk space after the installation of LSE. Approximately 300 blocks of free disk space should be added to the disk space after installation for each language that you choose to have supported by LSE.
- A minimum of 2 MB of physical memory.
- A minimum of 6,000 free global pagelets, plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation. For most efficient operation, you will need a total of 8,000 free global pagelets, plus the size of SYS$LIBRARY:DCLTABLES.EXE after installation.
- A minimum of 15 free global sections at installation.

1.4.4 Requirements for Source Code Analyzer

Before installing Source Code Analyzer (SCA), you must have the following resources:

- A minimum of 13,000 blocks of free disk space during installation; 9,000 blocks are used after installation.
- A minimum of 2 MB of physical memory.
- A minimum of 4,200 free global pagelets, plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation. For most efficient operation, you will need a total of 4,200 free global pagelets, plus the size of SYS$LIBRARY:DCLTABLES.EXE after installation.
- A minimum of 15 free global sections at installation.

1.4.5 Requirements for DEC Test Manager

Before installing DEC Test Manager, you must have the following resources:

- A minimum of 9,000 blocks of free disk space during installation; 6,000 blocks are used after installation.
- A minimum of 1,200 free global pagelets, plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation. For most efficient operation, you will need a total of 2,100 free global pagelets, plus the size of SYS$LIBRARY:DCLTABLES.EXE after installation.
- A minimum of 15 free global sections at installation.

1.4.6 Requirements for DEC Performance and Coverage Analyzer

Before installing DEC Performance and Coverage Analyzer (PCA), you must have the following resources:

- A minimum of 12,000 blocks of free disk space during installation; 5,000 blocks are used after installation with the demo package.
- A minimum of 1,305 free global pagelets, plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation. For most efficient operation, you will need a total of 100 free global pagelets, plus the size of SYS$LIBRARY:DCLTABLES.EXE after installation.
- A minimum of 10 free global sections at installation.

1.4.7 Requirements for DEC Module Management System

Before installing DEC Module Management System (MMS), you must have the following resources:

- A minimum of 2,800 blocks of free disk space during installation; 300 blocks are used after installation.
- A minimum of 2 MB of physical memory.
- A minimum of 500 free global pagelets, plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation.
- A minimum of 5 free global sections at installation.

1.5 User Account Quotas and Privileges

To use any DECset tool, each account must have a minimum number of privileges and minimum requirements for each of the following areas:

- AST limit (ASTLM)
- Buffered I/O byte count quota (BYTLM)
- Enqueue quota (ENQLM)
- Open file limit (FILLM)
- Timer queue entry limit (TQELM)

Table 1–4 and Table 1–5 list specific requirements in each of these areas for each DECset tool you are installing. Use the OpenVMS Authorize Utility (AUTHORIZE) to compare the current values of these quotas with the requirements for each tool. The account used in the following example is the SYSTEM account:

```
$ SET DEFAULT SYS$SYSTEM Return
$ RUN AUTHORIZE Return
UAF> SHOW SYSTEM Return
```

To change the values of these quotas, use the OpenVMS Authorize Utility's MODIFY command. For more information, see the *OpenVMS System Management Utilities Reference Manual*.

Table 1–4 DECset for OpenVMS Alpha Account Quotas and Privileges

Resource Name	LSE	SCA	DEC Test Manager	CMS	PCA	MMS
ASTLM	24	24	100	14	30	14
BYTLM	4,096	18,000	60,000	14,000	4,096	13,000
ENQLM	30	30	10	1	–	–
FILLM	20	20	9	6	20	6
TQELM	–	5	–	1	–	–
BIOLM	18	18	–	–	–	–
DIOLM	18	18	–	–	–	–
PRCLM	5	2	4	–	–	2
WSDEF	1,024	600[2]	–	–	–	–
PGFLQUOTA	20,000[1]	20,000	–	–	–	–

[1]A quota of 40,000 pagelets is recommended if you are using the REPORT command.

[2]3000 pagelets (optimum).

Table 1–5 DECset for OpenVMS VAX Account Quotas and Privileges

Resource Name	LSE	SCA	DEC Test Manager	CMS	PCA	MMS
ASTLM	24	24	100	14	30	14
BYTLM	4,096	18,000	60,000	14,000	4,096	13,000
ENQLM	30	30	10	1	–	–
FILLM	20	20	9	6	20	6
TQELM	–	5	–	1	–	–
BIOLM	18	18	–	–	–	–
DIOLM	18	18	–	–	–	–
PRCLM	5	2	4	–	–	2
WSDEF	1,024	600[2]	–	–	–	–
PGFLQUOTA	20,000[1]	20,000	–	–	–	–

[1]A quota of 40,000 pages is recommended if you are using the REPORT command.

[2]3,000 pages (optimum).

To use any of the DECset tools, each account must have TMPMBX and NETMBX privileges.

1.5.1 Quotas and Privileges for CMS

To use CMS, it is recommended that each account have TMPMBX and NETMBX privileges and the following requirements:

- AST limit (ASTLM) of 14
- Buffered I/O byte count quota (BYTLM) of 14,000
- Enqueue quota (ENQLM) of 1
- Open file limit (FILLM) of 6
- Timer queue entry limit (TQELM) of 1

1.5.2 Quotas and Privileges for LSE

To use LSE, it is recommended that each account have TMPMBX and NETMBX privileges and the following requirements:

- AST quota (ASTLM) 24 (minimum)
- Buffered I/O limit (BIOLM) 18 (minimum)
- Buffered I/O byte count quota (BYTLM) 4,096 (minimum)
- Direct I/O limit (DIOLM) 18 (minimum)
- Enqueue quota (ENQLM) 30 (minimum)
- Open file quota (FILLM) 20 (minimum)
- Paging file quota (PGFLQUOTA) 20,000 pagelets (minimum)

  A paging file quota (PGFLQUOTA) of 40,000 pagelets is recommended if you are using the REPORT command.
- Subprocess creation quota (PRCLM) 5 (minimum)
- Working set size (WSDEF) 1,024 pagelets (minimum); 2,048 to 4,096 pagelets (optimum)

1.5.3 Quotas and Privileges for SCA

To use SCA, it is recommended that each account have TMPMBX and NETMBX privileges and the following requirements:

- AST limit (ASTLM) 24 (minimum)
- Buffered I/O quota (BIOLM) 18 (minimum)
- Buffered I/O byte count quota (BYTLM) 18,000 (minimum)
- Direct I/O quota (DIOLM) 18 (minimum)
- Enqueue quota (ENQLM) 30 (minimum)
- Open file limit (FILLM) 20 (minimum)
- Paging file quota (PGFLQUOTA) 20,000 pagelets (minimum)
- Subprocess creation quota (PRCLM) 2 (minimum)
- Timer queue entry limit (TQELM) 5 (minimum)
- Working set size (WSDEF) 600 pagelets (minimum); 3,000 pagelets (optimum)

1.5.4 Quotas and Privileges for DEC Test Manager

To use DEC Test Manager, it is recommended that each account have TMPMBX and NETMBX privileges and the following requirements:

- AST limit (ASTLM) of 100
- Buffered I/O byte count quota (BYTLM) of 60,000
- Enqueue quota (ENQLM) of 10
- Open file limit (FILLM) of 9
- Subprocess creation quota (PRCLM) of 4

1.5.5 Quotas and Privileges for PCA

To use PCA, it is recommended that each account have TMPMBX and NETMBX privileges and the following requirements:

- AST limit (ASTLM) 30 (minimum)
- Buffered I/O byte count quota (BYTLM) 4,096 (minimum)
- Open file limit (FILLM) 20 (minimum)

1.5.6 Quotas and Privileges for MMS

To use MMS, it is recommended that each account have TMPMBX and NETMBX privileges and the following requirements:

- AST limit (ASTLM) 14 (minimum)
- Buffered I/O byte count quota (BYTLM) 13,000 (minimum)
- Open file limit (FILLM) 6 (minimum)
- Subprocess creation quota (PRCLM) 2 (minimum)

1.6 OpenVMS License Management Facility

The OpenVMS License Management Facility (LMF) is available with Version 1.5 (and higher) of the OpenVMS Alpha operating system and Version 5.5 or higher of the OpenVMS VAX operating system. Before you install a DECset tool, you must register your tool software license or an equivalent license such as the DECset software license.

The license registration information you need is contained in the Product Authorization Key (PAK) that is shipped with each tool. The PAK is a paper certificate that contains information about the license.

During the installation, you are asked if you have registered the tool license and loaded the appropriate authorization key. You must register and load your license before you start the installation in order to run the Installation Verification Procedure (IVP) and use the software.

To register a license under OpenVMS Alpha, Version 1.5, or under OpenVMS VAX, Version 5.5, 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.
- Enter the DCL command LICENSE REGISTER with the appropriate qualifiers that correspond to information on the PAK.

For complete information on using the LMF, see the manual on the License Management Utility in the OpenVMS documentation set.

1.7 Using VMSINSTAL

After you log in to a privileged account to install a DECset tool, set the default device to SYS$UPDATE: and then invoke VMSINSTAL, the command procedure that installs this product. VMSINSTAL has the following format:

@SYS$UPDATE:VMSINSTAL toolmn device_name: [OPTIONS N]

tool
Represents the tool you are installing; for example, DECset. Note that the DECset kit has a collective installation procedure for the DECset components. The procedure will prompt you for which DECset tools to install.

m
Represents the version number of the tool you are installing; for example, 120 for Version 12.0. Refer to the DECset BIL or BOM for the version number of the tool you are installing.

n
Represents the maintenance update of the tool you are installing. Refer to the DECset BIL or BOM for the maintenance update number of your kit.

device_name
Represents a device name on which you plan to mount the media. For example, SYS$SYSDEVICE:[KITS] is the device name used in examples in this document.

OPTIONS N
Is an optional parameter you must provide if you want to be prompted to display or print the release notes. If you do not include the OPTIONS N parameter, VMSINSTAL does not prompt you to display or print the release notes. VMSINSTAL permits the use of several other options: A, G, L, and R; for more information on these options, see your processor-specific installation/operations guide.

If you do not supply the first two parameters, VMSINSTAL prompts you for the product and device names. If you want to be prompted for the product and device names and be prompted to display or print the release notes, enter the following command:

```
$ @SYS$UPDATE:VMSINSTAL OPTIONS N Return
```

When you invoke VMSINSTAL, it checks the following:

- Whether you logged in to a privileged account. Digital recommends that you install software from the system manager's account with your default device and directory set to SYS$UPDATE.
- Whether you have adequate quotas for installation. VMSINSTAL checks for the following quota values:
  - ASTLM = 24
  - BIOLM = 18
  - BYTLM = 32,768
  - DIOLM = 18
  - ENQLM = 30
  - FILLM = 20

VMSINSTAL then checks whether the following conditions exist. If so, discontinue the conditions before resuming the installation procedure.

- Whether DECnet is up and running
- Whether any users are logged in to the system

If VMSINSTAL detects either of these conditions, you will be asked whether you want to continue the installation. If you want to continue, type YES. If you want to stop the installation, press Return.

You must register the information contained in the PAK that is shipped with DECset by using either the OpenVMS LICENSE command procedure (SYS$UPDATE:VMSLICENSE) or the LICENSE REGISTER and LICENSE LOAD commands, as described in the *OpenVMS License Management Utility Manual*.

2
Installing the DECset Kit

The purpose of the DECset installation procedure is two-fold: to provide the installer a single point of entry for installing any or all DECset components, and to minimize the need for user interaction during installation.

This collective procedure acts as a parent KITINSTAL procedure to the individual component installations. The procedure spawns off one subprocess per DECset component with default instructions on how to install the respective component.

The DECset installation procedure does the following:

- Queries for which components to install
- Checks system resources required to perform serial installations of the components
- Queries for responses to the questions asked as each component is installed
- Installs the selected DECset components one by one

Section 2.8 explains how to install the optional save sets that contain documentation for DECset. Please refer to the Online Documentation release notes for the contents of these save sets.

2.1 Prerequisite Software

To use the command-line interface, all DECset for OpenVMS, Version 12.0, components require OpenVMS VAX operating system, Version 5.5 or higher.

To use the DECwindows user interface, all DECset for OpenVMS, Version 12.0, components require both OpenVMS Alpha operating system, Version 1.5 or higher, and DECwindows Motif, Version 1.1 or higher.

2.2 Accessing the DECset Online Release Notes

DECset provides online release notes for all the components when you invoke VMSINSTAL by specifying DECSET120. The prompt to display or print the release notes before installation appears in step 3 of the installation procedure when you invoke VMSINSTAL with the OPTIONS N parameter.

To obtain the release notes after the installation, print the following file:

```
SYS$HELP:DECSET120.RELEASE_NOTES
```

2.3 Installation Procedure Requirements

Minimum free disk space, global pages, and global section requirements will depend on which components you choose to install through the collective procedure.

DECset's requirements for free disk storage space are different during installation and after installation. Table 2–1 and Table 2–2 list the storage requirements.

Table 2–1 Disk Space Storage Requirements for OpenVMS Alpha Systems

Kit Component	During Installation	After Installation
DECset complete kit	124,000	57,600
DECset online documentation kit	150,000	150,000

Table 2–2 Disk Space Storage Requirements for OpenVMS VAX Systems

Kit Component	During Installation	After Installation
DECset complete kit	85,800	37,800
DECset online documentation kit	150,000	150,000

Note

On systems with limited disk space, install two or three DECset components then repeat the installation procedure until you have installed the entire kit. If you have all or part of DECset already installed, your space requirements will be less. See Chapter 1 for individual component installation requirements to calculate totals for system resource needs.

You will need 150,000 free blocks for the disk where you plan to copy the distribution kit. The 150,000 free blocks include the DECset online documentation save sets.

To install DECset you must be logged in to an account that has the SETPRV privilege or the following privileges:

- CMKRNL
- WORLD
- SYSPRV

2.4 Using VMSINSTAL

After you log in to a privileged account to install DECset, set the default directory to SYS$UPDATE. Then invoke the VMSINSTAL command procedure to install this product. An example of this procedure is shown in steps 1 and 2 of Section 2.6.

The VMSINSTAL command procedure has the following syntax:

@SYS$UPDATE:VMSINSTAL DECSET120 *ddn*: [OPTIONS N]

ddn:
The name of the device where the distribution volumes will be mounted for the DECset installation media. In this format, *dd* is the device code and *n* is the unit number. You do not have to use the console drive to install DECset. If you do use the console drive, replace any media you removed from the drive. (The examples in this guide use MUA0: for the device name.)

OPTIONS N
An optional parameter you provide if you want to be prompted to display or print the release notes. If you omit the OPTIONS N parameter, VMSINSTAL does not prompt you to display or print the release notes.

If you omit the first two parameters, VMSINSTAL prompts you for the product and device names. If you want to be prompted for the product and device names and to display or print the release notes, enter the following DCL command:

```
$ @SYS$UPDATE:VMSINSTAL
```

The VMSINSTAL procedure checks the following:

- Whether you are logged in to a privileged account. Digital recommends that you install software from the system manager account with your default device and directory set to SYS$UPDATE.
- Whether you have adequate quotas for installation. The VMSINSTAL procedure checks for the following quota values:

  ASTLM = 18
  BIOLM = 20
  BYTLM = 60,000
  DIOLM = 11
  ENQLM = 6
  FILLM = 50
  PGFLQUO = 30,000
  PRCLM = 18
  TQELM = 10
  WSDEF = 512
  WSQUO = 1,024
  WSEXTENT = 3,600

  The VMSINSTAL procedure then checks whether the following conditions exist. If so, discontinue the conditions before resuming the installation procedure.

  — Whether DECnet is up and running

  — Whether any users are logged in to the system

  If VMSINSTAL detects either of these conditions, the procedure asks whether you want to continue the installation. If you want to continue, enter YES and press the Return key. If you want to stop the installation, press Return.

2.5 Preparing for DECset Component Installation

Use the OpenVMS License Management Facility (LMF) to register your DECset component licenses. The license registration information you need is contained in the Product Authorization Key (PAK) that is shipped with DECset. The PAK is a paper certificate that contains information about the license you have to load in order to run some of the DECset components. All DECset components require a license.

2.6 Installing DECset Components

This section contains excerpts from the installation procedure and explains each step. Defaults appear in brackets ([]) throughout the installation procedure.

To abort the installation procedure at any time, press Ctrl/Y. When you press Ctrl/Y, the installation procedure deletes all the files it has created up to that point and then returns you to DCL level. If you want to retry the installation after pressing Ctrl/Y, you must proceed from step 2.

Step 1: Log in to a privileged account and set your default device and directory to SYS$UPDATE.

```
   .
   .
   .
Username: SYSTEM [Return]
Password:  [Return]
$ SET DEFAULT SYS$UPDATE [Return]
```

Step 2: Invoking VMSINSTAL with a kit on CD-ROM.

```
$ @VMSINSTAL DECSET120 SYS$SYSDEVICE:[KITS] OPTIONS N

      OpenVMS Software Product Installation Procedure Vn.n

It is 26-MAY-1995 at 09:00.
Enter a question mark (?) at any time for help.

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

If you are satisfied with the backup of your system disk, press Return. Otherwise, enter NO and press the Return key to discontinue the installation.

```
The following products will be processed:

  DECset V12.0

    Beginning installation of DECset V12.0 at 09:03

%VMSINSTAL-I-RESTORE, Restoring product save-set A...
%VMSINSTAL-I-RELMOVED, Product's release notes have been moved to SYS$HELP.
   .
   .
   .
```

Step 3: Select a release notes option.

This step applies only if you specified OPTIONS N in step 2.

```
Release Notes Options:

    1. Display release notes
    2. Print release notes
    3. Both 1 and 2
    4. Copy release notes to SYS$HELP
    5. Do not display, print, or copy release notes

* Select option [2]: Return
```

If you select option 1, VMSINSTAL displays the release notes on line immediately. To terminate the display at any time, press Ctrl/C.

If you select option 2 (the default), VMSINSTAL prompts you for a queue name. You can then enter a queue name or press the Return key, which sends the file to the default output print device.

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

If you select option 3, VMSINSTAL displays the release notes on line immediately. To terminate the display at any time, press Ctrl/C. The VMSINSTAL procedure prompts you for a queue name for printing the release notes. Either enter a queue name or press the Return key to send the file to the default output print device. The DECset release notes are then copied to SYS$HELP:DECSET120.RELEASE_NOTES.

If you select option 4, VMSINSTAL copies the release notes to SYS$HELP immediately.

If you select option 5, VMSINSTAL does not display, print, or copy the release notes, but moves them to SYS$HELP. Typically, you select this option when you want to end the installation.

Next, VMSINSTAL displays the following prompt:

```
* Do you want to continue the installation [N]?: YES Return
%VMSINSTAL-I-RELMOVED, The product release notes have been
    successfully moved to SYS$HELP.
```

If you want to continue the installation, enter YES and press the Return key. If you enter NO (or press Return), VMSINSTAL discontinues the installation. In either case, VMSINSTAL moves the release notes to SYS$HELP.

Step 4: Selecting components to install.

Now you will get a menu selection to choose the component you want to install.

```
.
.
.
These are the options provided by this collective
installation procedure:

- all the DECset components
- Language-Sensitive Editor (LSE)
- Source Code Analyzer (SCA)
- Code Management System (CMS)
- DEC Test Manager
- Performance Coverage Analyzer (PCA)
- Module Management System (MMS)

Please choose your option(s):
```

You can either elect to choose all the options or you can select a combination of options.

```
* Do you want all the DECset components [NO]?  YES
* Are you sure you want to install all the options [YES]?
```

For example, if you were to choose LSE, SCA, and CMS, it would look like this:

```
        .
        .
        .
* Do you want Language-Sensitive Editor (LSE) [NO]? YES
* Do you want Source Code Analyzer (SCA) [NO]? YES
* Do you want Code Management System (CMS) [NO]? YES
* Do you want DEC Test Manager [NO]?
* Do you want Performance Coverage Analyzer (PCA) [NO]?
* Do you want Module Management System (MMS) [NO]?

         These are the selections you made:

              - Language-Sensitive Editor (LSE)
              - Source Code Analyzer (SCA)
              - Code Management System (CMS)

* Would you like a chance to select your options again [NO]?
```

You then need to answer the questions for each of the DECset components that you have selected.

2.7 Running the Installation Verification Procedures

The Installation Verification Procedure (IVP) for each DECset component checks the integrity of installed files. We strongly urge you to run the IVPs after you install the components. Each component installation puts a command procedure in SYS$TEST for you to invoke. The following list shows the DECset component IVPs:

Component	Procedure Name
ENVMGR	ENVMGR$IVP
CMS	CMS$IVP
DEC Test Manager	DTM$IVP
LSE	LSE$IVP
MMS	MMS$IVP
PCA	PCA$IVP
SCA	SCA$IVP

The following example shows how to invoke the LSE component IVP:

```
$ @SYS$TEST:LSE$IVP.COM
```

2.8 Installing the DECset Online Documentation

Many DECset components have online documentation files. The DECset kit provides separate save sets for these online documentation files allowing you to install the files independent of the DECset kit, and also provides an option to install the files on a device other than the system disk. The DECset online documentation files are provided by the save sets DECSETDOCS120.A through DECSETDOCS120.F. The total number of free blocks needed to install the online documentation files is 150,000 blocks.

To install the DECset online documentation files, invoke the VMSINSTAL command procedure as follows:

```
@SYS$UPDATE:VMSINSTAL DECSETDOCS120 ddn: [OPTIONS N]
```

For more information about the DECset online documentation, see Appendix B.

3

Installing the DEC Code Management System

This chapter gives specific instructions on installing the DEC Code Management System (CMS).

3.1 Preparing to Install CMS

Before installing CMS, Version 3.7, you must enter the CMS command VERIFY on all CMS pre-Version 3 libraries. To correct any problems displayed by the VERIFY command, enter the CMS command VERIFY/REPAIR. To use CMS Version 3.7, you are required to convert any CMS pre-Version 3 libraries. After CMS, Version 3.7 is installed, if you try to access a pre-Version 3 library you receive the following message:

```
%CMS-E-CONVERTLIB, library is a pre-Version 3 library and cannot be
        used without conversion
```

After CMS, Version 3.7 is installed, use the CMS command CONVERT LIBRARY to convert pre-Version 3 libraries.

If you intend to use DEC Test Manager with CMS, see Section 3.3.

Note

CMS release notes up to and including Version 3.7 can be found in SYS$HELP:CMSvvu.RELEASE_NOTES (where *vv* represents the major version number, and *u* represents the update number). Also, the dollar sign ($) was included in the release notes format in Versions 3.1, 3.2, 3.3, and 3.4 only.

3.1.1 Installation Procedure Requirements

The installation takes approximately 10 to 45 minutes, depending on the type of media and your system configuration. Before installing CMS, you must have the following privileges and resources:

- SETPRV privileges, or CMKRNL, WORLD, and SYSPRV privileges
- A minimum of 9,000 blocks of free disk space during installation; 7,000 blocks are used after installation.
- A minimum of 1,500 free global pages, plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation.
- A minimum of 14 free global sections at installation.
- The minimum number of OpenVMS classes necessary for full functionality as described in the *CMS Software Product Description (SPD)*.

These resources reflect the amount of space needed when installing the CMS DECwindows interface and the CMS software.

3.2 User Account Quotas and Privileges

To use CMS, each account must have a minimum of TMPMBX and NETMBX privileges and the following minimum requirements:

- AST limit (ASTLM) of 14
- Buffered I/O byte count quota (BYTLM) of 14,000
- Enqueue quota (ENQLM) of 1
- Open file limit (FILLM) of 6
- Timer queue entry limit (TQELM) of 1

3.3 Using CMS with Other Tools

The DECset Environment Manager is installed as part of the installation of the CMS component. The DECset Environment Manager consists of:

- Run-time component used by DECset layered products
- DCL interface
- DECwindows interface

The DCL and DECwindows interface components are optional.

DEC Test Manager requires the CMS files SYS$SHARE:CMSSHR.EXE and CMSPROSHR.EXE. Correct installation of CMS is necessary in order to use it with DEC Test Manager. Be aware that whenever you install or reinstall CMS (for example, as the result of an incorrect installation or upgrading to a higher version of CMS), you will also need to reinstall DEC Test Manager.

Note

The file CMSPROSHR.EXE is no longer used by CMS, and may not be supported in future versions of CMS. CMSPROSHR.EXE is included in the CMS installation procedure only because it is used by DEC Test Manager.

3.4 Installing CMS

This section contains excerpts from the installation procedure and explains each step. Defaults appear in brackets throughout the installation procedure.

To abort the installation procedure at any time, press Ctrl/Y. When you press Ctrl/Y, the installation procedure deletes all files it has created up to that point and then returns you to DCL level. To retry the installation procedure after pressing Ctrl/Y, proceed from step 2.

Step 1: Log in to a privileged account and set your default device and directory to SYS$UPDATE.

```
Return
Username: SYSTEM  Return
Password:  Return
$ SET DEFAULT SYS$UPDATE  Return
```

Step 2: Invoke VMSINSTAL.

```
$ @VMSINSTAL CMS037 MUA0: OPTIONS N  Return

      OpenVMS Software Product Installation Procedure Vn.n


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

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

If you are satisfied with the backup of your system disk, enter YES and press the Return key. Otherwise, enter NO and press Return to discontinue the installation.

Step 3: Insert the first installation kit volume.

```
Please mount the first volume of the set on MUA0:.
* Are you ready? YES Return
The following products will be processed:

  CMS V3.7

    Beginning installation of CMS V3.7 at hh:mm

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

To indicate that you want to continue the installation, mount volume 1, enter YES and press the Return key.

Step 4: Insert the subsequent installation kit volumes.

```
%BACKUP-I-READYREAD, mount volume 2 on _MUA0: for reading

Enter "YES" when ready: YES Return
```

The VMSINSTAL procedure prompts you to insert the next volume and waits for you to enter YES after inserting it. If you enter NO, VMSINSTAL displays the prompt again. This prompt is displayed only if your installation kit contains more than one volume.

Step 5: Select a release notes option.

This step applies only if you specified OPTIONS N in step 2.

```
Release Notes Options:

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

* Select option [2]: Return
```

If you select option 1, VMSINSTAL displays the release notes on line immediately. You can terminate the display at any time by pressing Ctrl/C.

If you select option 2, VMSINSTAL prompts you for a queue name. Either enter a queue name or press the Return key to send the file to the default output printer.

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

If you select option 3, VMSINSTAL displays the release notes on line immediately and then prompts you for a queue name. Either enter a queue name or press the Return key to send the file to the default output printer. The CMS release notes are then copied to SYS$HELP:CMS$037.RELEASE_NOTES.

If you select option 4, VMSINSTAL does not display or print the release notes, but copies them to SYS$HELP. Typically, you select this option to terminate the installation.

Next, VMSINSTAL displays the following prompt:

```
* Do you want to continue the installation [NO]? YES Return
%VMSINSTAL-I-RELMOVED, The product's release notes have been successfully
moved to SYS$HELP.
```

Note

The release notes file installed by VMSINSTAL is labeled with the current product name and version number (for example, CMS037). Take care not to delete release notes for previous versions of CMS.

Step 6: Select installation options.

```
* Do you want to install the interface components [YES]? YES Return
* Do you also wish to install the CMS DECwindows
interface [YES]? YES Return
* Do you also wish to install the Server for CMS Client for Windows? -
[YES]? YES Return
* Do you want to purge files replaced by this installation [YES]? YES Return
```

The directories SYS$HELP, SYS$MANAGER, SYS$MESSAGE, SYS$SHARE, SYS$SYSTEM, SYS$STARTUP, and SYS$TEST may contain previous versions of CMS files. These files are replaced during the installation with new files, but the old files are not automatically purged. Purging is recommended. In response to the purging prompt, press Return to purge the files, or enter NO to keep them.

Step 7: Respond to license registration queries.

CMS supports the OpenVMS License Management Facility (LMF). The installation procedure displays license information about your product and then asks if you have registered and loaded your product authorization key (PAK) for CMS. The following is an example of such information:

```
Product:       CMS
Producer:      DEC
Version:       3.7
Release Date:  dd-mmm-yyyy

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

If you have not registered and loaded your PAK, you must answer NO to this question. You must then stop the installation, register and load your PAK, and then restart the installation. If you answer YES and you have not registered and loaded your PAK, you are asked if you would like to complete the installation without running the Installation Verification Procedure (IVP). However, the next time you invoke CMS, you receive a message indicating that you are not licensed to run the product.

You are then asked the following question:

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

The IVP runs tests to check whether the installation procedure was successful. If the installation procedure determines that you have insufficient quotas to run the IVP, it tells you which quotas need to be increased and asks if you would like to complete the installation without running the IVP. Press Return to run the IVP after the installation. If you do not want to run the IVP, enter NO in response to the prompt.

Step 8: Read the informational messages.

The CMS installation procedure produces a number of informational messages that report on the progress of the installation. The success of the installation is indicated by the following message:

```
%VMSINSTAL-I-MOVEFILES, files will now be moved to their target
directories...
```

If the installation procedure is successful, the new or modified files are moved to their target directories. In addition, the SYS$HELP:HELPLIB.HLB and SYS$LIBRARY:DCLTABLES.EXE files are updated to include the new versions of the CMS help text and the CMS command-line definition.

This installation will add or modify the following files:

DECW$SYSTEM_DEFAULTS:CMS$DW.UID
DECW$SYSTEM_DEFAULTS:CMS$DW_DEFAULTS.DAT
SYS$HELP:CMS$DW_HELP.HLB
SYS$HELP:CMS037.RELEASE_NOTES
SYS$HELP:HELPLIB.HLB
SYS$HELP:CMS_V37_COMMANDS.PS
SYS$HELP:CMS_V37_COMMANDS.TXT
SYS$HELP:CMS_V37_MESSAGES.PS
SYS$HELP:CMS_V37_MESSAGES.TXT
SYS$HELP:CMS_V37_CALLROUTINES.PS
SYS$HELP:CMS_V37_CALLROUTINES.TXT
SYS$MSG:CMSMSG.EXE
SYS$SHARE:CMS$EVENT_ACTION.EXE

```
SYS$SHARE:CMSPROSHR.EXE
SYS$SHARE:CMSSHR.EXE
SYS$SHARE:DCLTABLES.EXE
SYS$STARTUP:CMS$STARTUP.COM
SYS$SYSTEM:CMS$DW.EXE
SYS$SYSTEM:CMS.EXE
SYS$TEST:CMS$IVP.COM
VUE$LIBRARY:CMS$PROFILE.VUE$DAT
VUE$LIBRARY:CMS$VUE_STARTUP.COM
```

If you entered YES in response to the prompt that requests a file purge in step 6, previous versions of the CMS files are now purged.

Step 9: Observe the Installation Verification Procedure.

If you chose to run the IVP in step 7, VMSINSTAL now calls the IVP to verify that CMS was successfully installed:

```
%CMS-I-IVPBEGIN, Begin Installation Verification Procedure
       .
       .
       .
%CMS-I-IVPEND, End Installation Verification Procedure
```

Step 10: End the installation procedure.

```
   Installation of CMS V3.7 completed at hh:mm

   VMSINSTAL procedure done at hh:mm

$ LOGOUT Return
SYSTEM     logged out at dd-mmm-yyyy hh:mm:ss.ss
```

When the product installation procedure is complete, you can choose to install more products or to log out (as shown here). If you removed any media from the console drive before beginning the installation, you must replace it now.

The VMSINSTAL procedure deletes or changes entries in the process symbol tables during the installation. Therefore, if you are going to continue using the system manager's account and you want to restore these symbols, you must log out and log in again.

3.4.1 Installing CMS on a VAXcluster

If you want to run CMS on multiple nodes of a VAXcluster, first check to see that you have the appropriate software license. Then, follow these steps after installing CMS:

1. Enter the LICENSE LOAD command to activate the license on each node in the VAXcluster on which CMS is to be executed as described in the *OpenVMS License Management Utility Manual*.
2. Run SYS$STARTUP:CMS$STARTUP.COM on each node of the cluster that has a software license. In addition, you must add the following line to your system startup procedure, SYS$MANAGER:SYSTARTUP_V5.COM:

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

   To use the product on other nodes in the VAXcluster, you must replace the version of the DCL tables that is installed on the other VAXcluster nodes. To do this, perform the following steps:

   a. Log in to a node on the cluster.

   b. Enter the following command at the DCL prompt:

      ```
      $ INSTALL REPLACE SYS$LIBRARY:DCLTABLES.EXE Return
      ```

   c. Repeat steps a and b for each node of the cluster.

See Chapter 9 for information on post installation procedures.

4

Installing the DEC Language-Sensitive Editor

This chapter explains how to install the DEC Language-Sensitive Editor (LSE).

4.1 Installation Procedure Requirements

LSE, Version 4.3 requires the OpenVMS VAX operating system, Version 5.5 or higher, OpenVMS Alpha operating system, Version 1.5 or higher, and DECwindows Motif, Version 1.1. See the SPD for this product for additional information about required and optional software. Also, see the SPD for information about required OpenVMS classes and tailoring.

The DECset Environment Manager is installed as part of the installation of the LSE component. The DECset Environment Manager consists of:

- Run-time component used by DECset layered products
- DCL interface
- DECwindows interface

The DCL and DECwindows interface components are optional.

The installation takes approximately 5 to 30 minutes, depending on the type of media and your system configuration. Before installing LSE, you must have the following privileges and resources:

- SETPRV privileges, or CMKRNL, WORLD, and SYSPRV privileges.
- A minimum of 40,000 blocks of free disk space during the installation; 13,500 blocks of free disk space after the installation of LSE. Approximately 300 blocks of free disk space should be added to the disk space after installation for each language that you choose to have supported by LSE.
- A minimum of 2 MB of physical memory.

- A minimum of 6,000 free global pages, plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation, For most efficient operation, you will need a total of 6,000 free global pages, plus the size of SYS$LIBRARY:DCLTABLES.EXE after installation.
- A minimum of 15 free global sections at installation; 12 global sections are used after installation.

Note

You must ensure that your system has the necessary global page and global section SYSGEN quotas for the installation. Failure to do so could cause the DCL tables to be corrupted in some situations.

4.1.1 User Account Quotas and Privileges

To use LSE, each account must have TMPMBX and NETMBX privileges and the following requirements:

- AST quota (ASTLM) 24 (minimum)
- Buffered I/O limit (BIOLM) 18 (minimum)
- Buffered I/O byte count quota (BYTLM) 4,096 (minimum)
- Direct I/O limit (DIOLM) 18 (minimum)
- Enqueue quota (ENQLM) 30 (minimum)
- Open file quota (FILLM) 20 (minimum)
- Paging file quota (PGFLQUOTA) 20,000 pages (minimum)

  A paging file quota (PGFLQUOTA) of 40,000 pages is recommended if you are using the REPORT command.
- Subprocess creation quota (PRCLM) 5 (minimum)
- Working set size (WSDEF) 1,024 pages (minimum); 2,048 to 4,096 pages (optimum)

A FILLM of 20 is appropriate for a typical LSE usage pattern and allows LSE to exhibit full functionality. It may be necessary to grant higher FILLM quotas to user accounts where LSE is frequently used to edit a large number of files simultaneously. Buffer-change journaling causes user accounts to consume increased quantities of FILLM. One buffer-change journal file is maintained for each editing buffer. For example, 30 user buffers that are journaled require a total of 30 units of FILLM.

The items in the following list all require additional units of FILLM. This list is provided to help you determine your FILLM requirements.

- Buffer-change journal files
- SCA databases
- Reading and writing of source files
- Diagnostic file for the REVIEW command
- Keystroke journaling
- Image activation of other tools, such as Source Code Analyzer (SCA) and DEC Code Management System (CMS)

Use the OpenVMS Authorize Utility (AUTHORIZE) to compare the current values of these quotas with the requirements for LSE. For example, the account used in the following example is the SYSTEM account:

```
$ SET DEFAULT SYS$SYSTEM Return
$ RUN AUTHORIZE Return
UAF> SHOW SYSTEM Return
```

To change the values of these quotas, use the OpenVMS Authorize Utility's MODIFY command. For more information, see the *OpenVMS System Management Utilities Reference Manual*. After you log in to a privileged account to install LSE, invoke VMSINSTAL, the command procedure that installs this product. An example of this procedure is shown in steps 1 and 2 of Section 4.2.

The VMSINSTAL command procedure has the following syntax:

```
$ @SYS$UPDATE:VMSINSTAL LSE04n ddcu: [OPTIONS N]
```

n
Represents the maintenance update of LSE. Refer to the label on the LSE distribution kit or LSE BOM for the maintenance update number of your kit. You can also enter an asterisk (*) in place of LSE04n. If you are installing from magnetic tape, you can use the asterisk to save installation time; the asterisk causes LSE to be installed with a minimum of tape passes.

ddcu:
Represents a device name where the distribution volumes will be mounted for the LSE installation media, where *dd* is the device code, *c* is the controller code, and *u* is the unit number. It is not necessary to use the console drive to install LSE. If you do use the console drive, you should replace any media you removed from the drive. MUA0: is the device name used in examples in this guide.

OPTIONS N

Is an optional parameter you should provide if you want to be prompted to display or print the release notes. If you do not include the OPTIONS N parameter, VMSINSTAL does not prompt you to display or print the release notes. The VMSINSTAL procedure permits the use of several other options. For more information on the other options, see your processor-specific installation/operations guide.

If you do not supply the first two parameters, VMSINSTAL prompts you for the product and device names. If you wish to be prompted for the product and device names and to display or print the release notes, enter the following command:

```
$ @SYS$UPDATE:VMSINSTAL Return
```

When you invoke VMSINSTAL, it checks the following:

- Whether you logged in to a privileged account. Digital recommends that you install software from the system manager's account with your default device and directory set to SYS$UPDATE.
- Whether you have adequate quotas for installation. The VMSINSTAL procedure checks for the following quota values:
  - ASTLM = 24
  - BIOLM = 18
  - BYTLM = 18,000
  - DIOLM = 18
  - ENQLM = 30
  - FILLM = 20

The VMSINSTAL procedure then checks whether the following conditions exist. If so, discontinue the conditions before resuming the installation procedure.

- Whether DECnet is up and running
- Whether any users are logged in to the system

If VMSINSTAL detects either of these conditions, you will be asked whether you want to continue the installation. If you want to continue, enter YES. If you want to stop the installation, press the Return key.

4.2 Installing LSE

This section contains excerpts from the installation procedure and explains each step. Defaults appear in brackets throughout the installation procedure.

To abort the installation procedure at any time, press Ctrl/Y. When you press Ctrl/Y, the installation procedure deletes all files it has created up to that point and then returns you to DCL level. If you want to retry the installation procedure after pressing Ctrl/Y, you must proceed from step 2.

Step 1: Log in to a privileged account and set your default device and directory to SYS$UPDATE.

```
Return
Username: SYSTEM  Return
Password:         Return

    Last interactive login on Wednesday,  6-JUL-1994 15:47

$ SET DEFAULT SYS$UPDATE Return
```

Step 2: Invoke VMSINSTAL.

```
$ @VMSINSTAL LSE043 MUA0: OPTIONS N Return

      OpenVMS Software Product Installation Procedure Vn.n


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

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

If you are satisfied with the backup of your system disk, press Return. Otherwise, enter NO and press the Return key to discontinue the installation.

Step 3: Insert the first installation kit volume.

```
Please mount the first volume of the set on MUA0:.
* Are you ready? YES Return
The following products will be processed:

  LSE V4.3


Beginning installation of DEC Language-Sensitive Editor V4.3 at hh:mm

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

To indicate that you want to continue the installation, mount volume 1, enter YES, and press the Return key.

Step 4: Insert the subsequent installation kit volumes.

```
%BACKUP-I-READYREAD, mount volume 2 on _MUA0: for reading

Enter "YES" when ready: YES Return
```

The VMSINSTAL procedure prompts you to insert the next volume and waits for you to enter YES after inserting it. If you enter NO, VMSINSTAL displays the prompt again. This prompt is displayed only if your installation kit contains more than one volume.

Step 5: Install LSE source files option.

The installation procedure prompts you if you wish to install LSE source files. These files occupy approximately 15,000 blocks of space.

Step 6: Select a release notes option.

This step applies only if you specified OPTIONS N in step 2.

```
    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]: Return
```

If you select option 1, VMSINSTAL displays the release notes on line immediately. You can terminate the display at any time by pressing Ctrl/C.

If you select option 2, VMSINSTAL prompts you for a queue name. Either enter a queue name or press the Return key to send the file to the default output print device.

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

If you select option 3, VMSINSTAL displays the release notes on line immediately. You can terminate the display at any time by pressing Ctrl/C. The VMSINSTAL procedure then prompts you for a queue name. Either enter a queue name or press the Return key to send the file to the default output print device. The LSE release notes are then copied to SYS$HELP:LSE043.RELEASE_NOTES.

If you select option 4, VMSINSTAL neither prints nor displays the release notes. The LSE release notes are copied to SYS$HELP:LSE043.RELEASE_ NOTES.

Note

This version of the release notes file installed by VMSINSTAL is labeled with the current product name and version number. Take care not to delete release notes for previous versions of LSE.

Next, VMSINSTAL displays the following prompt:

```
* Do you want to continue the installation [N]?: YES Return
%VMSINSTAL-I-RELMOVED, The product release notes have been successfully
    moved to SYS$HELP.
```

If you want to continue the installation, enter YES and press the Return key. If you enter NO or press Return, VMSINSTAL discontinues the installation. In either case, VMSINSTAL moves the release notes to SYS$HELP.

Step 7: Select installation options.

```
* Do you want to install the interface components [YES]? YES Return
* Do you also wish to install the LSE DECwindows interface [YES]? YES Return
* Do you want to purge files replaced by this installation [YES]? Return
```

The directories SYS$EXAMPLES, SYS$TEST, SYS$HELP, SYS$LIBRARY, SYS$MESSAGE, SYS$STARTUP, VUE$LIBRARY, LSE$EXAMPLE, and SYS$SYSTEM may contain previous versions of LSE files. These files are replaced during the installation with new files, but the old files are not automatically purged. Purging is recommended. In response to the purging prompt, press Return to purge the files or enter NO to keep them.

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

The Installation Verification Procedure (IVP) runs tests to check whether the installation procedure was successful. Press Return to run the IVP after the installation. If you do not want to run the IVP, enter NO in response to the prompt.

Step 8: Respond to license registration queries.

LSE supports the OpenVMS License Management Facility (LMF). The installation procedure displays license information about your product and then asks if you have registered and loaded your product authorization key (PAK) for LSE. The following is an example of such information:

```
Product:       LSE
Producer:      DEC
Version:       4.3
Release Date:  dd-mmm-yyyy

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

If you have not registered and loaded your PAK, you must answer NO to this question. You have to register and load your PAK to successfully complete the installation. If you have not done so, you should stop the installation, register and load your PAK, and then restart the installation.

Step 9: Select language support.

Templates for some languages are shipped in the LSE kit. The installation procedure displays the names of the language templates that are available in the LSE kit and then asks which ones should be installed. Language templates for other layered products that support LSE not mentioned in this installation procedure are provided in the installation kits for those layered products.

```
Language templates for VAX Ada, BASIC, BLISS, C, C++, COBOL, DCL, FORTRAN,
MACRO, Pascal and PL/I as well as templates for the LSE command language
are included in this kit. Templates for other languages that support LSE
and are not mentioned are provided in the installation kits for those
languages.

Please choose the languages for which you would like to install support:

* Do you want to install language support for VAX ADA [YES]? Return
* Do you want to install language support for VAX BASIC [YES]? Return
* Do you want to install language support for VAX BLISS [YES]? Return
* Do you want to install language support for VAX C [YES]? Return

* Do you want to install language support for VAX COBOL [YES]? Return
* Do you want to install language support for VAX DCL [YES]? Return
* Do you want to install language support for VAX FORTRAN [YES]? Return
* Do you want to install language support for VAX MACRO [YES]? Return
* Do you want to install language support for VAX PASCAL [YES]? Return
* Do you want to install language support for VAX PLI [YES]? Return
* Do you want to install language support for DEC LSE [YES]? Return
* Do you want to install language support for DEC PLSE [YES]? Return
```

Step 10: Read informational messages.

The LSE installation procedure produces a number of informational messages that report on the progress of the installation.

The success of the installation is indicated by the following message:

```
%VMSINSTAL-I-MOVEFILES, files will now be moved to their target directories...
```

If the installation procedure is successful, the new or modified files are moved to their target directories.

The SYS$HELP:HELPLIB.HLB and SYS$LIBRARY:DCLTABLES.EXE files are updated to include the new versions of the LSE HELP text and the LSEDIT command-line definition:

```
This installation added or modified the following files:

        SYS$LIBRARY:DCLTABLES.EXE
        SYS$SYSTEM:LSEDIT.EXE
        SYS$LIBRARY:LSESHR.EXE
        SYS$MESSAGE:LSEMSG.EXE
        SYS$LIBRARY:LSE$CCTSHR.EXE
        SYS$LIBRARY:LSE$DECWSHR.EXE
        SYS$LIBRARY:PSE$COMMENTS.EXE
        SYS$LIBRARY:LSE$DEFAULTS.DAT
        SYS$LIBRARY:LSE$SYSTEM_ENVIRONMENT.ENV
        SYS$LIBRARY:LSE$SECTION.TPU$SECTION
        SYS$LIBRARY:LSE$WIDGETS.UID
        SYS$LIBRARY:LSE$DEBUG.TPU
        SYS$HELP:LSE$HELP.HLB
        SYS$HELP:LSE$MENU.HLB
        SYS$HELP:LSE$KEYPAD.HLB
        SYS$HELP:LSE$CLIHELP.HLB
        SYS$STARTUP:LSE$STARTUP.COM
        SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$USER.DIA
        SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$USER.EXAMPLE
        SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$USER2.EXAMPLE
        SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$USER3.EXAMPLE
        SYS$TEST:LSE$IVP.COM
        SYS$SYSROOT:[SYSTEST.LSE]LSE$IVP.TPU
        SYS$SYSROOT:[VUE$LIBRARY.USER]LSE$EDIT_QUALIFIERS.EXE
        SYS$SYSROOT:[VUE$LIBRARY.USER]LSE$EDIT_OPTIONS.UID
        SYS$SYSROOT:[VUE$LIBRARY.USER]LSE$EDIT.COM
        SYS$SYSROOT:[VUE$LIBRARY.USER]LSE$PROFILE.VUE$DAT
```

If you entered YES in response to the prompt that requests a file purge at step 7, previous versions of the LSE files are now purged.

Step 11: Observe the Installation Verification Procedure.

If you chose to run the IVP in step 7, VMSINSTAL now calls the IVP to verify that LSE was installed successfully:

```
?? lines written to file DEV$:[USER]LSE$IVP.LIS;1

DEC Language-Sensitive Editor IVP was successful.
```

Step 12: End the installation procedure.

```
   Installation of DEC Language-Sensitive Editor V4.3 completed at hh:mm

   VMSINSTAL procedure done at hh:mm

$ LOGOUT [Return]
SYSTEM     logged out at dd-mmm-yyyy hh:mm:ss.ss
```

When the product installation procedure is complete, you can choose to install more products or to log out (as shown here). If you removed any media from the console drive before beginning the installation, you should replace it now.

The VMSINSTAL procedure deletes or changes entries in the process symbol tables during the installation. 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.

4.3 Installing LSE on a VAXcluster

If you want to run LSE on multiple nodes of a VAXcluster, first check to see that you have the appropriate software license. Then, follow these steps after installing LSE:

1. Enter the LICENSE LOAD command to activate the license on each node in the VAXcluster on which LSE is to be executed as described in the *OpenVMS License Management Utility Manual*.
2. Run SYS$STARTUP:LSE$STARTUP.COM on each node of the cluster that has a software license.

   To ensure that LSE is installed each time the system is bootstrapped, include the following line in SYS$STARTUP:SYSTARTUP_V6.COM (the site-specific startup file):

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

3. To use the product on other nodes in the VAXcluster, you must replace the version of the DCL tables that is installed on the other VAXcluster nodes. To do this, perform the following steps:

   a. Log in to a node on the cluster.

   b. Run INSTALL and enter the following command at the INSTALL> prompt:

      ```
      INSTALL> REPLACE SYS$LIBRARY:DCLTABLES.EXE [Return]
      ```

   c. Repeat steps a and b for each node of the cluster.

4.4 After the Installation

LSE is now installed and can be invoked by all users with the LSEDIT command.

The installation procedure modifies the DCL command table so that the LSEDIT command is recognized and processed. However, the previous command table is still in effect for those users who are currently logged in. All logged-in users who want to use the LSEDIT command must log out of the system and log in again.

You must take steps to ensure that the LSE startup command procedure is executed at system bootstrap time. If your site is using the STARTUP facility, enter the proper STARTUP ADD command to execute LSE$STARTUP.COM. If the STARTUP facility is not used at your site, edit SYS$MANAGER:SYSTARTUP_V6.COM to include the following line:

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

Note

The command procedure that should be executed at system bootstrap time to make the LSE executables known images now resides in SYS$STARTUP. Make sure that upon completion of the installation, the file specification in the site-specific startup command procedure used to execute the LSE startup command procedure is modified to be SYS$STARTUP:LSE$STARTUP.COM.

You can use LSE to read and compose messages from the MAIL Utility. You can define the logical name MAIL$EDIT as CALLABLE_LSE in order to use the editor from MAIL. Note that LSE must be installed as a known image. This is accomplished through the editor's startup command procedure. Also, the DEC Code Management System (CMS) and Source Code Analyzer (SCA) must be installed as known images to be used from LSE when LSE is invoked from the MAIL Utility. (See Chapter 5 for instructions on installing SCA.)

5
Installing the Source Code Analyzer

This chapter explains how to install the Source Code Analyzer (SCA).

5.1 Installation Procedure Requirements

The DECset Environment Manager is installed as part of the installation of the SCA component. The DECset Environment Manager consists of:

- Run-time component used by DECset layered products
- DCL interface
- DECwindows interface

The DCL and DECwindows interface components are optional.

The installation of SCA, Version 4.3, takes approximately 5 to 40 minutes, depending on the type of media and your system configuration. Before installing SCA, you must have the following privileges and resources:

- SETPRV privileges, or CMKRNL, WORLD, and SYSPRV privileges.
- A minimum of 13,000 blocks of free disk space during installation; 9,000 blocks are used after installation.
- A minimum of 2 MB of physical memory.
- A minimum of 5,000 free global pages, plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation. For most efficient operation, you will need a total of 5,000 free global pages, plus the size of SYS$LIBRARY:DCLTABLES.EXE after installation.
- A minimum of 15 free global sections at installation; 12 global sections are used after installation.

5.2 User Account Quotas and Privileges

To use SCA, each account must have TMPMBX and NETMBX privileges and the following requirements:

- AST limit (ASTLM) 24 (minimum)
- Buffered I/O quota (BIOLM) 18 (minimum)
- Buffered I/O byte count quota (BYTLM) 18,000 (minimum)
- Direct I/O quota (DIOLM) 18 (minimum)
- Enqueue quota (ENQLM) 30 (minimum)
- Open file limit (FILLM) 20 (minimum)
- Paging file quota (PGFLQUOTA) 20,000 pages (minimum)
- Subprocess creation quota (PRCLM) 2 (minimum)
- Timer queue entry limit (TQELM) 5 (minimum)
- Working set size (WSDEF) 600 pages (minimum); 3,000 pages (optimum)

Use the OpenVMS Authorize Utility (AUTHORIZE) to compare the current values of these quotas with the requirements for SCA. For example, the account used in the following example is the SYSTEM account:

```
$ SET DEFAULT SYS$SYSTEM Return
$ RUN AUTHORIZE Return
UAF> SHOW SYSTEM Return
```

To change the values of these quotas, use the OpenVMS Authorize Utility's MODIFY command. For more information, see the *OpenVMS System Management Utilities Reference Manual*.

5.3 SCA Server Installation

SCA provides a server that allows remote users to access your local SCA libraries. The installation of this server is optional.

You will be prompted during the installation as to whether you would like to install both the SCA server and the SCA client, or whether you would like to install only the SCA client.

If you elect to install only the SCA client, remote users will not be able to access your local SCA libraries. SCA users on your local system will not be affected. They will have the ability to use local libraries and libraries on remote nodes where the SCA server has been installed.

If you elect to install the optional SCA server, accounts named SCA$SERVER and SCA$DEFAULT are created for the SCA server. The accounts are given the following quotas:

```
Username: SCA$SERVER                    Owner:  SCA SERVER
Account:  DECNET                        UIC:    [370,355] ([SCA$SERVER])
CLI:      DCL                           Tables: DCLTABLES
Default:  SYS$SYSDEVICE:[SCA$SERVER]
LGICMD:   SYS$SYSTEM:SCA$SERVER_LOGIN
Login Flags:  Dismail Restricted

Primary days:   Mon Tue Wed Thu Fri
Secondary days:                     Sat Sun
Primary   000000000011111111112222  Secondary 000000000011111111112222
Day Hours 012345678901234567890123  Day Hours 012345678901234567890123
Network:  ##### Full access ######            ##### Full access ######
Batch:    -----  No access  ------             -----  No access  ------
Local:    -----  No access  ------             -----  No access  ------
Dialup:   -----  No access  ------             -----  No access  ------
Remote:   -----  No access  ------             -----  No access  ------
Expiration:            (none)    Pwdminimum:  8   Login Fails:     0
Pwdlifetime:        180 00:00    Pwdchange:   (pre-expired)
Last Login:            (none) (interactive),  (none) (non-interactive)
Maxjobs:         0  Fillm:       300  Bytlm:        32767
Maxacctjobs:     0  Shrfillm:      0  Pbytlm:           0
Maxdetach:       0  BIOlm:       120  JTquota:       1024
Prclm:          15  DIOlm:       120  WSdef:         1024
Prio:            4  ASTlm:       120  WSquo:         2232
Queprio:         0  TQElm:        10  WSextent:      4464
CPU:        (none)  Enqlm:       200  Pgflquo:      20480
Authorized Privileges:
  TMPMBX
Default Privileges:
  TMPMBX
```

```
Username: SCA$DEFAULT                     Owner:  SCA
Account:  DECNET                          UIC:    [371,345] ([SCA$DEFAULT])
CLI:      DCL                             Tables: DCLTABLES
Default:  SYS$SYSDEVICE:[USER]
LGICMD:   LOGIN
Login Flags:  Dismail Captive
Primary days:   Mon Tue Wed Thu Fri
Secondary days:                      Sat Sun
Primary   000000000011111111112222  Secondary 000000000011111111112222
Day Hours 012345678901234567890123  Day Hours 012345678901234567890123
Network:  -----  No access  ------            -----  No access  ------
Batch:    -----  No access  ------            -----  No access  ------
Local:    -----  No access  ------            -----  No access  ------
Dialup:   -----  No access  ------            -----  No access  ------
Remote:   -----  No access  ------            -----  No access  ------
Expiration:            (none)    Pwdminimum:  8   Login Fails:     0
Pwdlifetime:        180 00:00    Pwdchange:   (pre-expired)
Last Login:            (none) (interactive),  (none) (non-interactive)
Maxjobs:         0  Fillm:         0  Bytlm:           0
Maxacctjobs:     0  Shrfillm:      0  Pbytlm:          0
Maxdetach:       0  BIOlm:         0  JTquota:      1024
Prclm:           0  DIOlm:         0  WSdef:        1024
Prio:            4  ASTlm:         0  WSquo:           1
Queprio:         0  TQElm:        10  WSextent:        1
CPU:        (none)  Enqlm:         0  Pgflquo:         0
Authorized Privileges:
Default Privileges:
```

In addition, an access control list (ACL) is set on the file SYS$SYSTEM:NETPROXY.DAT, giving the SCA$SERVER account read and execute access.

If any problems occur at run time, the SCA server creates an error log file in SYS$SPECIFIC:[SCA$SERVER]. One possible error is server failure due to insufficient virtual memory. If this occurs frequently, you may want to increase PGFLQUO for the SCA$SERVER account.

If you are reinstalling SCA, stop any previous SCA servers (network processes named SCA$SERVER_nnnn) so that they will be restarted using the new server code. Use the DCL commands SHOW SYSTEM/NETWORK and STOP/IDENTIFICATION, respectively.

5.4 Installing SCA

This section contains excerpts from the installation procedure and explains each step. Defaults appear in brackets throughout the installation procedure.

To abort the installation procedure at any time, press Ctrl/Y. When you press Ctrl/Y, the installation procedure deletes all files it has created up to that point and then returns you to DCL level. If you want to retry the installation procedure after pressing Ctrl/Y, you must proceed from step 2.

Step 1: Log in to a privileged account and set your default device and directory to SYS$UPDATE.

```
Return
Username: SYSTEM  Return
Password:         Return
$ SET DEFAULT SYS$UPDATE  Return
```

Step 2: Invoke VMSINSTAL.

```
$ @VMSINSTAL SCA043 MUA0: OPTIONS N  Return

      OpenVMS Software Product Installation Procedure Vn.n


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

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

If you are satisfied with the backup of your system disk, press Return. Otherwise, enter NO and press the Return key to discontinue the installation.

Step 3: Insert the first installation kit volume.

```
Please mount the first volume of the set on MUA0:.
* Are you ready? YES  Return
The following products will be processed:

  DEC Source Code Analyzer V4.3


    Beginning installation of DEC Source Code Analyzer V4.3 at hh:mm

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

To indicate that you want to continue the installation, mount volume 1, enter YES, and press the Return key.

Step 4: Select a release notes option.

This step applies only if you specified OPTIONS N in step 2. 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]: Return
```

If you select option 1, VMSINSTAL displays the release notes immediately. You can terminate the display at any time by pressing Ctrl/C.

If you select option 2, VMSINSTAL prompts you for a queue name. Either type a queue name or press Return to send the file to the default output print device.

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

If you select option 3, VMSINSTAL displays the release notes immediately. You can terminate the display at any time by pressing Ctrl/C. The VMSINSTAL procedure then prompts you for a queue name. Either enter a queue name or press the Return key to send the file to the default output print device.

If you select option 4, VMSINSTAL neither prints nor displays the release notes. The SCA release notes are copied to SYS$HELP:SCA043.RELEASE_NOTES.

Note

This version of the release notes file installed by VMSINSTAL is labeled with the current product name and version number. Take care not to delete release notes for previous versions of SCA.

Next, VMSINSTAL displays the following prompt:

```
* Do you want to continue the installation [N]?: YES Return
%VMSINSTAL-I-RELMOVED, The product release notes have been successfully
    moved to SYS$HELP.
```

If you want to continue the installation, enter YES and press the Return key. If you enter NO or press Return, VMSINSTAL discontinues the installation. In either case, VMSINSTAL moves the release notes to SYS$HELP.

Step 5: Insert the subsequent installation kit volumes.

```
%BACKUP-I-READYREAD, mount volume 2 on _MUA0: for reading

Enter "YES" when ready: YES Return
```

The VMSINSTAL procedure prompts you to insert the next volume and waits for you to enter YES after inserting it. If you enter NO, VMSINSTAL displays the prompt again. This prompt is displayed only if your installation kit contains more than one volume.

Step 6: Select installation options.

```
* Do you want to continue the installation [NO]? YES Return
%VMSINSTAL-I-RELMOVED, The product's release notes have been successfully moved to SYS$HELP.

          Please indicate the components of SCA that you wish to install:

              1 - Both SCA client and server
              2 - SCA client only

* Enter the number corresponding to the SCA components to install [1]: Return

The DECset Environment Manager is installed as part of the installation
of this DECset component.

The DECset Environment Manager consists of:

A run-time component used by DECset layered products,
a DCL interface, and
a DECwindows interface.

The DCL and DECwindows interface components are optional.

* Do you want to install the interface components [YES]? YES Return
* Do you want to purge files replaced by this installation [YES]? Return
```

If you elect to install only the SCA client, remote users will not be able to access your local SCA libraries. SCA users on your local system will not be affected. They will have the ability to use local libraries and libraries on remote nodes where the SCA server has been installed.

The files in SYS$SYSTEM and SYS$LIBRARY contain previous versions of SCA files. These files are replaced during the installation with new files, but the old files are not automatically purged. Purging is recommended. In response to the purging prompt, press Return to purge the files or enter NO to keep them. The system HELP files are updated in either case.

Step 7: Choosing the Installation Verification Procedure (IVP) options.

The IVP runs tests to check whether the installation procedure was successful. There are two parts to the SCA IVP: one that tests the character-cell version of SCA, and one that tests the DECwindows version. If you want to run the character cell or both parts of the IVP, press Return in response the following IVP prompt:

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

Entering YES to this prompt causes the following to appear:

```
The IVP has two sections, a character cell section and a DECwindows
section. In order for the DECwindows section to run correctly, the
logical name DECW$DISPLAY must be appropriately set (using the SET
DISPLAY command). If at this time you are not prepared to run the
DECwindows portion of the IVP, enter NO at the following prompt.

You can rerun the IVP later by issuing the command:

@SYS$TEST:SCA$IVP

* Do you wish to run the whole IVP [YES]?
```

If you do not want to run the DECwindows part of the IVP because, for example, you do not have an appropriate display device, enter NO to the previous prompt. It is highly recommended that you run the IVP not only to verify that the installation succeeded, but also to set up a sample SCA library and to have the logical name SCA$EXAMPLE refer to that library. The installation places the necessary files in the sample directory and the IVP creates the sample SCA library in that directory. The IVP also sets up an example library for the program design facility (PDF), referred to by the logical name SCA$2167A. If you choose not to run the IVP, enter NO at the previous prompt. You can run the IVP after the installation by entering the following command:

```
$ @SYS$TEST:SCA$IVP Return
```

Step 8: Respond to license registration queries.

SCA supports the OpenVMS License Management Facility (LMF). The installation procedure displays license information about your product and then asks if you have registered and loaded your product authorization key (PAK) for SCA. The following is an example of such information:

```
Product:       LSE
Producer:      DEC
Version:       4.3
Release Date:  dd-mmm-yyyy


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

If you have not registered and loaded your PAK, you must answer NO to this question. You have to register and load your PAK in order to run the IVP. If you have not registered the product, the installation may be completed; however, Digital recommends you register and load your PAK and then restart the installation.

Step 9: Server Installation

If you install the SCA server, two accounts are created: SCA$SERVER and SCA$DEFAULT.

The server code itself runs under the SCA$SERVER account. This account has no special privileges, but is granted access to all SCA library directories by an access control list (ACL) that is added when libraries are created. This installation also grants READ and EXECUTE access for the SCA$SERVER account to the NETPROXY database, which it uses to verify remote users' access to SCA libraries where the server is running. The image executed by the SCA server, SCA$SERVER_MAIN, is installed with SYSPRV and SYSNAM privileges.

This installation defines the SCA$SERVER object in the network database. A password for the SCA$SERVER account is automatically generated and added to the Network Control Program (NCP) database. If you decide to change the SCA$SERVER account password in the future, you must remember to update the SCA$SERVER object password also by using NCP.

Another account, SCA$DEFAULT, is created by this installation to grant access to remote users who do not have proxy access to the local node. This account has no special privileges.

Both these accounts must have unique User Identification Codes (UICs). You are prompted to enter information for these accounts as in the following example:

```
   In order to grant access to remote users who do not have a proxy
   account for the local node, SCA creates the SCA$DEFAULT account,
   which is used as a default proxy account for SCA library access.

   This account has no special privileges.

      You must specify a unique UIC for this account in order
      to ensure proper security of your libraries.

   SCA generates a long password for this account that is hard to guess.

* Enter UIC for SCA$DEFAULT account (include brackets) [[371,345]]:
%SCA-I-CREACC, Creating account SCA$DEFAULT
%VMSINSTAL-I-ACCOUNT, This installation creates an ACCOUNT named
SCA$DEFAULT.
%UAF-I-ADDMSG, user record successfully added
%UAF-I-RDBADDMSGU, identifier SCA$DEFAULT value: [000371,000345] added
to rights database
%SCA-I-MODACC, Modifying account SCA$DEFAULT quotas...
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named
SCA$DEFAULT.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named
SCA$DEFAULT.
%UAF-I-MDFYMSG, user record(s) updated

   In order to ensure that the SCA server runs with the proper
   quotas, this installation procedure will create an account for the
   server. This account, SCA$SERVER, has no special privileges and
   is set up only for network operation.

   You must specify a unique UIC for this account in order to ensure
   proper security of your libraries. The SCA server account is
   automatically granted access to each library created, via Access
   Control Lists.

SCA generates a long password for this account that is hard to guess.

If you want to change the name of this account after the installation
has completed, you must also change the password in the NCP database
with the SET OBJECT SCA$SERVER PASSWORD command.
```

```
* Enter UIC for SCA$SERVER account (include brackets) [[370,355]]:
%SCA-I-CREACC, Creating account SCA$SERVER for the SCA server
%VMSINSTAL-I-ACCOUNT, This installation creates an ACCOUNT named
SCA$SERVER.
%UAF-I-ADDMSG, user record successfully added
%UAF-I-RDBADDMSGU, identifier SCA$SERVER value: [000370,000355] added to
rights data base
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
SYS$SYSDEVICE:[SCA$SERVER].
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named
SCA$SERVER.
%UAF-I-MDFYMSG, user record(s) updated
%SCA-I-MODACC, Modifying account SCA$SERVER quotas...
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named
SCA$SERVER.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named
SCA$SERVER.
%UAF-I-MDFYMSG, user record(s) updated

  The network object SCA$SERVER has been defined. If you wish
  to view this, run SYS$SYSTEM:NCP and enter the command
        NCP> LIST OBJECT SCA$SERVER CHAR
```

Step 10: Read the informational messages.

The SCA installation procedure produces a number of informational messages that report on the progress of the installation:

```
%SCA-I-NOMORQST, No further questions will be asked during the installation
%VMSINSTAL-I-RESTORE, Restoring product save-set B ...
%VMSINSTAL-I-SYSDIR, This product creates system disk directory VMI$ROOT:[SYSTEST.SCA$IVP].
%VMSINSTAL-I-SYSDIR, This product creates system directory [SYSHLP.EXAMPLES.SCA].
%CREATE-I-EXISTS, VMI$COMMON:[SYSHLP.EXAMPLES.SCA] already exists
%CREATE-I-EXISTS, VMI$SPECIFIC:[SYSHLP.EXAMPLES.SCA] already exists

    If you intend to execute this layered product on other nodes in your
    VAXcluster, and you have the appropriate software license, you must
    prepare the system-specific roots on the other nodes by entering the
    following command on each node (using a suitably privileged account):

$ CREATE /DIRECTORY SYS$SPECIFIC:[SYSHLP.EXAMPLES.SCA]
%VMSINSTAL-I-SYSDIR, This product creates system directory [SYSHLP.EXAMPLES.SCA.EXAMPLE].
%CREATE-I-EXISTS, VMI$SPECIFIC:[SYSHLP.EXAMPLES.SCA.EXAMPLE] already exists

    If you intend to execute this layered product on other nodes in your
    VAXcluster, and you have the appropriate software license, you must
    prepare the system-specific roots on the other nodes by entering the
    following command on each node (using a suitably privileged account):

$ CREATE /DIRECTORY SYS$SPECIFIC:[SYSHLP.EXAMPLES.SCA.EXAMPLE]
%VMSINSTAL-I-SYSDIR, This product creates system directory [SYSHLP.EXAMPLES.SCA.2167A].
%CREATE-I-EXISTS, VMI$SPECIFIC:[SYSHLP.EXAMPLES.SCA.2167A] already exists
```

```
    If you intend to execute this layered product on other nodes in your
    VAXcluster, and you have the appropriate software license, you must
    prepare the system-specific roots on the other nodes by entering the
    following command on each node (using a suitably privileged account):

$ CREATE /DIRECTORY SYS$SPECIFIC:[SYSHLP.EXAMPLES.SCA.2167A]
%VMSINSTAL-I-SYSDIR, This product creates system directory [SYSHLP.EXAMPLES.SCA.UNSUPPORTED].
%CREATE-I-EXISTS, VMI$SPECIFIC:[SYSHLP.EXAMPLES.SCA.UNSUPPORTED] already exists

    If you intend to execute this layered product on other nodes in your
    VAXcluster, and you have the appropriate software license, you must
    prepare the system-specific roots on the other nodes by issuing the
    following command on each node (using a suitably privileged account):

 $ CREATE /DIRECTORY SYS$SPECIFIC:[SYSHLP.EXAMPLES.SCA.UNSUPPORTED]
%VMSINSTAL-I-SYSDIR, This product creates system directory [SYSHLP.EXAMPLES.SCA.UNSUPPORTED.RECOMP].
%CREATE-I-EXISTS, VMI$SPECIFIC:[SYSHLP.EXAMPLES.SCA.UNSUPPORTED.RECOMP] already
exists

    If you intend to execute this layered product on other nodes in your
    VAXcluster, and you have the appropriate software license, you must
    prepare the system-specific roots on the other nodes by issuing the
    following command on each node (using a suitably privileged account):

 $ CREATE /DIRECTORY SYS$SPECIFIC:[SYSHLP.EXAMPLES.SCA.UNSUPPORTED.RECOMP]

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

        Upon completion of this installation, please do the following:

        - If this installation is being done on a cluster, you must do
                @SYS$STARTUP:SCA$STARTUP.COM on all nodes.

        - Be sure to edit the system startup file to add
                @SYS$STARTUP:SCA$STARTUP.COM

*  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...
```

If the installation procedure is successful, the following files are moved to their target directories:

- SYS$LIBRARY:SCA$SHARE.EXE
- SYS$SYSTEM:SCA$MAIN.EXE
- SYS$LIBRARY:SCA$PRO_SHARE.EXE
- SYS$SYSTEM:SCA$DECW.EXE
- SYS$LIBRARY:SCA.UID
- SYS$LIBRARY:SCA$CONVERTLIB.EXE
- SYS$MESSAGE:SCA$MESSAGES.EXE
- SYS$STARTUP:SCA$STARTUP.COM

If the installation procedure is successful and the server is installed, the following files are moved to its target directory:

- SYS$SYSTEM:SCA$SERVER_LOGIN.COM
- SYS$SYSTEM:SCA$SERVER_MAIN.EXE

In addition, the file SYS$HELP:HELPLIB.HLB is updated to contain the new DCL level SCA help, and the following files containing the SCA internal help and context-sensitive help are created:

- SYS$HELP:SCA$HELP.HLB
- SYS$HELP:SCA$NEUTRAL_HELP.HLB
- SYS$HELP:SCA$MENU.HLB

The release notes are also copied to SYS$HELP:SCA043.RELEASE_NOTES. The SYS$LIBRARY:DCLTABLES.EXE file is updated to include the new version of the SCA command-line definition.

In addition, the installation procedure creates or modifies the following files:

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]BUILDTABLE.ANA

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]BUILDTABLE.C

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]COPYFILE.ANA

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]COPYFILE.C

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]DESIGN_EXAMPLE.C

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]DESIGN_EXAMPLE.ANA

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]EXPANDSTRING.ANA

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]EXPANDSTRING.C

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]OPENFILES.H

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]TRANSLIT.ANA

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]TRANSLIT.C

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]TYPE_EXAMPLE.C

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]TYPE_EXAMPLE.H

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]TYPE_EXAMPLE.ANA

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]TYPES.H

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_APPENDIX.SDML

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_DATA.SDML

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_DATA_FILES.SDML

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_DESIGN.SDML
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_FRONT.SDML
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_NOTES.SDML
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_PRELIMINARY.SDML
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_PROFILE.RNO
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_PROFILE.SDML
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_REFERENCED.SDML
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_REQUIREMENTS.SDML
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_SCOPE.RNO
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_SCOPE.SDML
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]TR1_ADA.ADA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]TR1_ADA.ANA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]TR2_ADA.ADA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]TR2_ADA.ANA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]TR3_ADA_.ADA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]TR3_ADA_.ANA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.UNSUPPORTED.RECOMP]LM.H
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.UNSUPPORTED.RECOMP]LM.OBJ
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.UNSUPPORTED.RECOMP]PSE_STR.H
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.UNSUPPORTED.RECOMP]PSE_STR.OBJ
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.UNSUPPORTED.RECOMP]RECOMP.C
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.UNSUPPORTED.RECOMP]RECOMP.EXE
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.UNSUPPORTED.RECOMP]RECOMP.H
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.UNSUPPORTED.RECOMP]RECOMP_LINK.COM
SYS$LIBRARY:SCA$QUERY_CALLABLE.ADA
SYS$LIBRARY:SCA$QUERY_CALLABLE.BAS
SYS$LIBRARY:SCA$QUERY_CALLABLE.FOR
SYS$LIBRARY:SCA$QUERY_CALLABLE.H
SYS$LIBRARY:SCA$QUERY_CALLABLE.MAR
SYS$LIBRARY:SCA$QUERY_CALLABLE.PAS
SYS$LIBRARY:SCA$QUERY_CALLABLE.PLI
SYS$LIBRARY:SCA$QUERY_CALLABLE.R32
SYS$LIBRARY:SCA$QUERY_CALLABLE.SDI

SYS$LIBRARY:SCA$QUERY_CALLABLE.TPU

SYS$LIBRARY:SCA$REPORT_2167A_DESIGN.TPU

SYS$LIBRARY:SCA$REPORT_CUSTOMIZATIONS.TPU

SYS$LIBRARY:SCA$REPORT_FORMAT.TPU

SYS$LIBRARY:SCA$REPORT_FORMAT_DOCUMENT.TPU

SYS$LIBRARY:SCA$REPORT_FORMAT_RUNOFF.TPU

SYS$LIBRARY:SCA$REPORT_FORMAT_TEXT.TPU

SYS$LIBRARY:SCA$REPORT_GLOBALS.TPU

SYS$LIBRARY:SCA$REPORT_HELP.TPU

SYS$LIBRARY:SCA$REPORT_INTERNALS.TPU

SYS$LIBRARY:SCA$REPORT_OUTPUT.TPU

SYS$LIBRARY:SCA$REPORT_PACKAGE.TPU

SYS$LIBRARY:SCA$REPORT_PORTABLE_SYNTAX.TPU

SYS$LIBRARY:SCA$REPORT_UTILITIES.TPU

SYS$LIBRARY:SCA$REPORT_VALIDATE.TPU

SYS$HELP:SCACOMMANDS.PS

SYS$HELP:SCACOMMANDS.TXT

SYS$HELP:SCA$VAX_VMS.TXT

SYS$TEST:SCA$IVP.COM

SYS$TEST:[SCA$IVP]SCA$IVP_TEST.COM

SYS$TEST:[SCA$IVP]SCA$IVP_TEST.LIS

If the server is installed, the installation procedure creates or modifies the following files:

SYS$SYSTEM:NETNODE_REMOTE.DAT

SYS$SYSTEM:NETOBJECT.DAT

SYS$SYSTEM:NETPROXY.DAT

SYS$SYSTEM:RIGHTSLIST.DAT

SYS$SYSTEM:SYSUAF.DAT

Step 11: Observe the Installation Verification Procedure.

If you chose to run the IVP in step 7, VMSINSTAL now calls the IVP to verify that SCA was installed successfully. If you answered YES to running the entire IVP, the DECwindows portion requires user action. The SCA main window appears on the screen. Use the mouse to choose the Exit menu option from the File pull-down menu. The IVP then continues.

Additionally, the following files are created by the IVP for the SCA and PDF sample libraries:

- SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]SCA$EVENT.DAT
- SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]SCA$EVENT.DAT

Also, if you typed YES in response to the prompt that requests a file purge, previous versions of SCA files are now purged.

Step 12: End the installation procedure.

```
   Installation of Source Code Analyzer 4.3 completed at hh:mm

   VMSINSTAL procedure done at hh:mm

$ LOGOUT [Return]
SYSTEM     logged out at dd-mmm-yyyy hh:mm:ss.ss
```

When the product installation procedure is complete, you can choose to install more products or to log out (as shown here). If you removed any media from the console drive before beginning the installation, you should replace it now.

The VMSINSTAL procedure deletes or changes entries in the process symbol tables during the installation. Therefore, if you are going to continue using the system manager's account and you want to restore these symbols, you must log out and log in again.

5.4.1 Installing SCA on a VAXcluster

If you want to run SCA on multiple nodes of a VAXcluster, first check to see that you have the appropriate software license. Then, follow these steps after installing SCA:

1. Enter the LICENSE LOAD command to activate the license on each node in the VAXcluster on which SCA is to be executed as described in the *OpenVMS License Management Utility Manual*.
2. Run SYS$STARTUP:SCA$STARTUP.COM on each node of the cluster that has a software license.

   To ensure that SCA is installed each time the system is bootstrapped, include the following line in SYS$STARTUP:SYSTARTUP_V6.COM (the site-specific startup file):

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

3. To use the product on other nodes in the VAXcluster, you must replace the version of the DCL tables that is installed on the other VAXcluster nodes. To do this, perform the following steps:

   a. Log in to a node on the cluster.

   b. Run INSTALL and enter the following command at the INSTALL> prompt:

      ```
      INSTALL> REPLACE SYS$LIBRARY:DCLTABLES.EXE Return
      ```

   c. Repeat steps a and b for each node of the cluster.

6
Installing the DEC Test Manager

This chapter explains how to install the DEC Test Manager.

6.1 Installation Procedure Requirements

The DECset Environment Manager is installed as part of the installation of the DEC Test Manager component. The DECset Environment Manager consists of:

- Run-time component used by DECset layered products
- DCL interface
- DECwindows interface

The DCL and DECwindows interface components are optional.

The installation of DEC Test Manager, Version 3.6, takes approximately 10 to 20 minutes, depending on the type of media and your system configuration. Before installing DEC Test Manager, you must have the following privileges and resources:

- SETPRV privileges, or CMKRNL, WORLD, and SYSPRV privileges.
- A minimum of 15,000 blocks of free disk space during installation; 10,000 blocks are used after installation.
- A minimum of 800 free global pages, plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation. For most efficient operation, you will need a total of 800 free global pages, plus the size of SYS$LIBRARY:DCLTABLES.EXE after installation.
- A minimum of 15 free global sections at installation; 12 global sections are used after installation.
- The minimum number of OpenVMS classes necessary for full functionality as described in the DEC Test Manager SPD.

6.2 User Account Quotas and Privileges

To use DEC Test Manager, each account must have TMPMBX and NETMBX privileges and the following minimum requirements:

- AST limit (ASTLM) of 100
- Buffered I/O byte count quota (BYTLM) of 60,000
- Enqueue quota (ENQLM) of 10
- Open file limit (FILLM) of 9
- Subprocess creation quota (PRCLM) of 4

Note

DECwindows testing may require quotas for other applications being tested.

A minimum required page file quota for using DEC Test Manager varies depending upon the application under test. If you encounter unexplained exceeded quota errors, increase your page file quota. One approach to determine an appropriate value is to set the page file quota high (90,000 or more) and decrease it until the threshold at which the problem occurs is encountered.

Use the OpenVMS Authorize Utility (AUTHORIZE) to compare the current values of these quotas with the requirements for DEC Test Manager. For example, the account used in the following example is the SYSTEM account:

```
$ SET DEFAULT SYS$SYSTEM
$ RUN AUTHORIZE
UAF> SHOW SYSTEM
```

To change the values of these quotas, use the OpenVMS Authorize Utility's MODIFY command. For more information, see the *OpenVMS System Management Utilities Reference Manual*.

6.2.1 Special Requirements

The executable file SYS$LIBRARY:DECW$TERMINALSHR.EXE must be installed with the /OPEN and /SHARE qualifiers. DEC Test Manager does this automatically during the startup procedure.

6.3 Installing DEC Test Manager

This section contains excerpts from the installation procedure and explains each step. Defaults appear in brackets throughout the installation procedure.

To abort the installation procedure at any time, press Ctrl/Y. When you press Ctrl/Y, the installation procedure deletes all files it has created up to that point and then returns you to DCL level. If you want to retry the installation procedure after pressing Ctrl/Y, you must proceed from step 2.

Step 1: Log in to a privileged account and set your default device and directory to SYS$UPDATE.

```
Return
Username: SYSTEM Return
Password:          Return
$ SET DEFAULT SYS$UPDATE Return
```

Step 2: Invoke VMSINSTAL.

```
$ @VMSINSTAL DTM03n MUA0: OPTIONS N Return

      OpenVMS Software Product Installation Procedure Vn.n


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

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

If you are satisfied with the backup of your system disk, press Return. Otherwise, enter NO and press the Return key to discontinue the installation.

Step 3: Insert the first installation kit volume.

```
Please mount the first volume of the set on MUA0:.
* Are you ready? YES Return
The following products will be processed:

  DTM V3.6


    Beginning installation of DTM V3.6 at hh:mm

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

To indicate that you want to continue the installation, mount volume 1, enter YES, and then press the Return key.

Step 4: Insert the subsequent installation kit volumes.

```
%BACKUP-I-READYREAD, mount volume 2 on _MUA0: for reading

Enter "YES" when ready: YES Return
```

The VMSINSTAL procedure prompts you to insert the next volume and waits for you to enter YES after inserting it. If you enter NO, VMSINSTAL displays the prompt again. This prompt is displayed only if your installation kit contains more than one volume.

Step 5: Select a release notes option.

This step applies only if you specified OPTIONS N in step 2.

```
Release Notes Options:

    1. Display release notes
    2. Print release notes
    3. Both 1 and 2
    4. Copy release notes to SYS$HELP
    5. Do not display, print, or copy release notes

* Select option [2]: Return
```

If you select option 1, VMSINSTAL displays the release notes on line immediately. You can terminate the display at any time by pressing Ctrl/C.

If you select option 2, VMSINSTAL prompts you for a queue name. Either enter a queue name or press the Return key to send the file to the default output print device.

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

If you select option 3, VMSINSTAL displays the release notes on line immediately. You can terminate the display at any time by pressing Ctrl/C. The VMSINSTAL procedure then prompts you for a queue name. Either enter a queue name or press the Return key to send the file to the default output print device. The DEC Test Manager release notes are then copied to SYS$HELP:DTM036.RELEASE_NOTES.

If you select option 4, VMSINSTAL copies the release notes to SYS$HELP immediately.

If you select option 5, VMSINSTAL does not display, print, or copy the release notes, but moves them to SYS$HELP. Typically, this option is selected when the user wants to end the installation.

Note

The release notes file installed by VMSINSTAL is labeled with the current product name and a version number (for example, DTM036). Take care not to delete release notes for previous versions of DEC Test Manager.

Next, VMSINSTAL displays the following prompt:

```
* Do you want to continue the installation [N]?: YES Return
%VMSINSTAL-I-RELMOVED, The product release notes have been successfully
    moved to SYS$HELP.
```

If you want to continue the installation, enter YES and press the Return key. If you enter NO or press the Return key, VMSINSTAL discontinues the installation. In either case, VMSINSTAL moves the release notes to SYS$HELP.

Step 6: Respond to license registration queries.

DEC Test Manager supports the OpenVMS License Management Facility (LMF). The installation procedure displays license information about your product and then asks if you have registered and loaded your product authorization key (PAK) for DEC Test Manager. The following is an example of such information:

```
Product:       DTM
Producer:      DEC
Version:       3.6
Release Date:  dd-mmm-yyyy

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

If you have not registered and loaded your PAK, you must answer NO to this question. You have to register and load your PAK to successfully complete the installation. If you answer YES to this question and you have not registered and loaded the PAK, you are asked if you would like to complete the installation without running the Installation Verification Procedure (IVP). However, the next time you invoke DEC Test Manager you will receive a message indicating that you are not licensed to run the product.

Step 7: Select installation options.

```
* Do you want to install the interface components [YES]? YES Return
* Do you also wish to install the DTM DECwindows interface [YES]? YES Return
* Do you want to purge files replaced by this installation [YES]? Return
```

The directories SYS$EXAMPLES, SYS$HELP, SYS$LIBRARY, SYS$MANAGER, and SYS$SYSTEM may contain previous versions of DEC Test Manager files. These files are replaced during the installation with new files, but the old files are not automatically purged. Purging is recommended. In response to the purging prompt, press Return to purge the files or enter NO to keep them.

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

The IVP runs tests to verify that the installation was successful. If the IVP determines that you have insufficient quotas to run the IVP, you are notified as to which quotas need to be increased and are then asked if you would like to complete the installation without running the IVP. Press Return to run the IVP after the installation. If you do not want to run the IVP, enter NO at the prompt.

Step 8: Read the informational messages.

The DEC Test Manager installation procedure produces a number of informational messages that report on the progress of the installation.

The success of the installation is indicated by the following message:

```
%VMSINSTAL-I-MOVEFILES, files will now be moved to their target directories...
```

If the installation procedure is successful, the new or modified files are moved to their target directories.

The SYS$HELP:HELPLIB.HLB and SYS$LIBRARY:DCLTABLES.EXE files are updated to include the new versions of the DEC Test Manager Help text and the DEC Test Manager command-line definition.

If you entered YES in response to the prompt that requests a file purge at step 7, previous versions of the DEC Test Manager files are now purged.

Note

When installing DEC Test Manager on OpenVMS VAX Version 5.5, the following warning message is displayed:

```
%DECSET-I-LINKPCDRIVER, Linking PCDRIVER.EXE, ignore no transfer address
warning.
%LINK-W-USRTFR, image DKA200:[SYS0.SYSUPD.DECSET120]PCDRIVER.EXE;1 has no
user transfer address.
```

This warning message can be ignored. It does not affect the performance of DEC Test Manager. This warning message is not displayed when installing DEC Test Manager on OpenVMS VAX Version 6.0 or higher, or when installing DEC Test Manager on any version of OpenVMS Alpha.

Step 9: Observe the installation verification procedure.

If you chose to run the IVP in step 6, VMSINSTAL calls the IVP to verify that DEC Test Manager was installed successfully.

```
%DTM-I-IVPBEGIN, Begin Installation Verification Procedure
.
.
.
%DTM-I-IVPEND, End Installation Verification Procedure
```

Step 10: End the installation procedure.

```
   Installation of DEC Test Manager V3.6 completed at hh:mm

   VMSINSTAL procedure done at hh:mm

$ LOGOUT Return
SYSTEM     logged out at dd-mmm-yyyy hh:mm
```

The VMSINSTAL procedure deletes or changes entries in the process symbol tables during the installation. Therefore, if you are going to continue using the system manager's account and you want to restore these symbols, you must log out and log in again.

6.3.1 Installing DEC Test Manager on a VAXcluster

If you want to run DEC Test Manager on multiple nodes of a VAXcluster, first check to see that you have the appropriate software license. Then, follow these steps after installing DEC Test Manager:

1. Enter the LICENSE LOAD command to activate the license on each node in the VAXcluster on which DEC Test Manager is to be executed as described in the *OpenVMS License Management Utility Manual*.
2. Run SYS$STARTUP:DTM$STARTUP.COM on each node of the cluster that has a software license.

   To use the product on other nodes in the VAXcluster, you must replace the version of the DCL tables that is installed on the other VAXcluster nodes. To do this, perform the following steps:

   a. Log in to a node on the cluster.

b. Enter the following command at the DCL prompt:

```
$ INSTALL REPLACE SYS$LIBRARY:DCLTABLES.EXE Return
```

c. Repeat steps a and b for each node of the cluster.

6.3.2 Running DEC Test Manager on a Mixed VAXcluster

Some users may want to run DEC Test Manager, Version 3.6, on a mixed VAXcluster that supports various versions of OpenVMS software on different nodes. If DEC Test Manager, Version 3.6, is to be used for interactive terminal testing with a system running OpenVMS, Version 6.0, on the VAXcluster, then DEC Test Manager has to be installed on the Version 6.0 system.

6.3.3 DEC Test Manager Files

The DEC Test Manager installation places the following files in the following directories on the system:

Directory	File Name
SYS$STARTUP	DTM$STARTUP.COM
SYS$SYSTEM	DTM.EXE DXDTMCONVERT.EXE DXDTMCOMPARE.EXE DXDTMPLAYREC.EXE DXDTMSCREDIT.EXE
SYS$LIBRARY	DTM$DW_DEFAULTS.DAT DTM$DW.UID DTM_MASK_TEMPLATE.DAT DTMIMGSHR.EXE DTMPLAYREC.UID DTMSCREDIT.UID DTM_SCANSHR.EXE DTMSHR.EXE
SYS$LOADABLE_IMAGES	PCDRIVER.EXE
VUE$LIBRARY	DTM$PROFILE.VUE$DAT VUE$DTM.COM
SYS$HELP	DTM$DW_HELPLIB.HLB DTM036.RELEASE_NOTES DTMCOMMANDS.PS DTMCOMMANDS.TXT DTMMESSAGES.PS DTMMESSAGES.TXT
SYS$TEST	DTM$IVP.COM

7

Installing the DEC Performance and Coverage Analyzer

This chapter explains how to install the DEC Performance and Coverage Analyzer (PCA).

7.1 Required Operating System Components

The OpenVMS operating system comes with a variety of support options, or classes. Classes include such features as networking and Record Management System (RMS) journaling. For a complete list of the required classes, see the Software Product Description (SPD).

7.2 Prerequisite Software

DEC PCA, Version 4.3, requires the OpenVMS VAX operating system, Version 5.5 or higher; OpenVMS Alpha operating system, Version 1.5 or higher; and DECwindows Motif, Version 1.1.

The OpenVMS DECwindows Compute Server component must be installed before PCA is installed. The DECwindows compute server consists of the OpenVMS Run-Time Library (RTL) images DECW$DWTLIBSHR.EXE, DECW$XLIBSHR.EXE, and DECW$TRANSPORT_COMMON.EXE.

7.3 Optional Software

You can use the following optional software with DEC PCA Version 4.3:

- DEC Ada, Version 1.0, or VAX Ada, Version 2.0 or later
- DEC BASIC, Version 3.2 and Version 3.3 or later
- DEC BLISS-32 Implementation Language, Version 4.5 or later
- DEC C, Version 2.4 through Version 4.0 or later
- DEC COBOL, Version 4.2 or later

- DEC DIBOL, Version 4.0 or later
- DEC Fortran, Version 5.5 or later
- DEC Fortran HPO, Version 1.0 or later
- DEC Pascal, Version 3.9 and 4.0 or later
- DEC PL/I, Version 3.2 or later
- DEC RPG II, Version 2.1 or later
- DEC SCAN, Version 1.1 or later
- DEC Test Manager, Version 3.6
- DEC Language-Sensitive Editor/Source Code Analyzer, Version 4.3

All features of PCA are available to each of these languages. The DEC Test Manager and the DEC Language-Sensitive Editor/Source Code Analyzer can be used in conjunction with PCA.

7.4 Installation Procedure Requirements

The DECset Environment Manager is installed as part of the installation of the PCA component. The DECset Environment Manager consists of:

- Run-time component used by DECset layered products
- DCL interface
- DECwindows interface

The DCL and DECwindows interface components are optional.

The installation takes approximately 5 to 25 minutes, depending on the type of media and your system configuration. Before installing DEC PCA, you must have the following privileges and resources:

- SETPRV privileges, or CMKRNL, WORLD, and SYSPRV privileges.
- A minimum of 12,000 blocks of free disk space during installation; 5,000 blocks are used after installation with the demo package.
- A minimum of 1,305 free global pages, plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation. For most efficient operation, you will need a total of 100 free global pages, plus the size of SYS$LIBRARY:DCLTABLES.EXE after installation.
- A minimum of 10 free global sections at installation.

7.5 User Account Quotas and Privileges

To use DEC PCA, it is recommended that each account have TMPMBX and NETMBX privileges and the following requirements:

- AST limit (ASTLM) 30 (minimum)
- Buffered I/O byte count quota (BYTLM) 4,096 (minimum)
- Open file limit (FILLM) 20 (minimum)

7.6 Installing DEC PCA

This section contains excerpts from the installation procedure and explains each step. Defaults appear in brackets throughout the installation procedure.

To abort the installation procedure at any time, press Ctrl/Y. When you press Ctrl/Y, the installation procedure deletes all files it has created up to that point and then returns you to DCL level. If you want to retry the installation procedure after pressing Ctrl/Y, you must proceed from step 2.

Step 1: Log in to a privileged account and set your default device and directory to SYS$UPDATE.

```
Return
Username: SYSTEM  Return
Password:         Return
$ SET DEFAULT SYS$UPDATE  Return
```

Step 2: Invoke VMSINSTAL.

```
$ @VMSINSTAL PCA043 MUA0: OPTIONS N  Return

      OpenVMS Software Product Installation Procedure Vn.n


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

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

If you are satisfied with the backup of your system disk, press Return. Otherwise, enter NO and press the Return key to discontinue the installation.

Step 3: Insert the first installation kit volume.

```
Please mount the first volume of the set on MUA0:.
* Are you ready? YES Return
The following products will be processed:

  DEC PCA V4.3


    Beginning installation of DEC PCA V4.3 at hh:mm

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

To indicate that you want to continue the installation, mount volume 1, enter YES, and press the Return key.

Step 4: Insert the subsequent installation kit volumes.

```
%BACKUP-I-READYREAD, mount volume 2 on _MUA0: for reading

Enter "YES" when ready: YES Return
```

The VMSINSTAL procedure prompts you to insert the next volume and waits for you to enter YES after inserting it. If you enter NO, VMSINSTAL displays the prompt again. This prompt is displayed only if your installation kit contains more than one volume.

Step 5: Select a release notes option.

This step applies only if you specified OPTIONS N in step 2.

```
Release Notes Options:

    1. Display release notes
    2. Print release notes
    3. Both 1 and 2
    4. Copy release notes to SYS$HELP
    5. Do not display, print or copy release notes

* Select option [3]: Return
```

If you select option 1, VMSINSTAL displays the release notes on line immediately. You can terminate the display at any time by pressing Ctrl/C.

If you select option 2, VMSINSTAL prompts you for a queue name. Either enter a queue name or press the Return key to send the file to the default output print device.

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

If you select option 3, VMSINSTAL displays the release notes on line immediately. You can terminate the display at any time by pressing Ctrl/C. VMSINSTAL then prompts you for a queue name. Either enter a queue name or press the Return key to send the file to the default output print device. The DEC PCA release notes are then copied to SYS$HELP:PCA043.RELEASE_NOTES.

If you select option 4, VMSINSTAL copies the release notes to SYS$HELP immediately.

If you selected release note option 5, which specified that the release notes be copied to SYS$HELP, you will not be able to access the release notes without installing the product kit again.

Note

This version of the release notes file installed by VMSINSTAL is labeled with the current product name and version number. Take care not to delete release notes for previous versions of DEC PCA.

Next, VMSINSTAL displays the following prompt:

```
* Do you want to continue the installation [N]?: YES Return
%VMSINSTAL-I-RELMOVED, The product release notes have been
      successfully moved to SYS$HELP.
```

If you want to continue the installation, enter YES and press the Return key. If you enter NO or press Return, VMSINSTAL discontinues the installation. In either case, VMSINSTAL moves the release notes to SYS$HELP.

Step 6: Respond to license registration queries.

DEC PCA supports the OpenVMS License Management Facility (LMF). The installation procedure displays license information about your product and then asks if you have registered and loaded your product authorization key (PAK) for DEC PCA. The following is an example of such information:

```
Product:       PCA
Producer:      DEC
Version:       4.3
Release Date:  dd-mmm-yyyy

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

You must have a PCA license installed and loaded on the system. If you do not have a license installed, answer NO. The installation of PCA will continue but the Installation Verification Procedure (IVP) will not be executed. The IVP will be placed on the system. It is recommended that you execute the IVP upon completion of installation once you have registered and loaded the PCA license. See step 10 on how to execute the IVP.

Step 7: Select installation options.

```
The DECset Environment Manager is installed as part of the installation
of this DECset component.

The DECset Environment Manager consists of:

A run-time component used by DECset layered products,
a DCL interface, and
a DECwindows interface.

The DCL and DECwindows interface components are optional.

* Do you want to install the interface components [YES]? YES Return
* Do you also wish to install the PCA DECwindows collector [YES]? YES Return
* Do you want to purge files replaced by this installation [YES]? Return
* Do you want to install the PCA demo package [YES]? Return
```

The directories SYS$EXAMPLES, SYS$HELP, SYS$LIBRARY, SYS$MANAGER, and SYS$SYSTEM may contain previous versions of DEC PCA files. These files are replaced during the installation with new files, but the old files are not automatically purged. Purging is recommended. In response to the purging prompt, press Return to purge the files or enter NO to keep them.

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

The IVP runs tests to check whether the installation procedure was successful. Press Return to run the IVP after the installation. If you do not want to run the IVP, enter NO in response to the prompt.

Step 8: Install the PCA demo package.

```
* Do you want to install the PCA demo package [YES]? YES Return
%VMS-I-SYSDIR, This product creates system directory
      [SYSHLP.EXAMPLES.PCA]
```

The VMSINSTAL procedure asks you if you want to install the optional PCA demo package. If you enter YES (the default), then the SYS$COMMON:[SYSHLP.EXAMPLES.PCA] directory is created, and all the demo files are copied into it. The system logical name PCA$EXAMPLES, pointing to this directory, is also defined. After the installation, you will be able to run the demos with @PCA$EXAMPLES:PCA_DEMO.

Step 9: Read the informational messages.

The DEC PCA installation procedure produces a number of informational messages that report on the progress of the installation.

The success of the installation is indicated by the following message:

```
%VMSINSTAL-I-MOVEFILES, files will now be moved to their target
      directories...
```

If the installation procedure is successful, the new or modified files are moved to their target directories.

The SYS$HELP:HELPLIB.HLB and SYS$LIBRARY:DCLTABLES.EXE files are updated to include the new versions of the DEC PCA Help text and the PCA command-line definition.

This installation will add the following files:

- SYS$SYSTEM:PCA$ANALYZER.EXE
- SYS$LIBRARY:PCA$COLLECTOR.EXE
- SYS$LIBRARY:PCA$OBJ.OBJ
- SYS$HELP:PCA043.RELEASE_NOTES
- SYS$HELP:PCA$HELP.HLB
- DECW$SYSTEM_DEFAULTS:PCAC.UID
- DECW$SYSTEM_DEFAULTS:PCAA.UID
- SYS$HELP:PCAA_HELP.HLB
- SYS$HELP:PCAC_HELP.HLB
- SYS$HELP:PCA_COMMANDS.PS
- SYS$HELP:PCA_COMMANDS.LINE
- SYS$HELP:PCA_COMMAND_REFERENCE.PS
- SYS$HELP:PCA_COMMAND_REFERENCE.LINE
- SYS$HELP:PCA_MESSAGES.PS
- SYS$HELP:PCA_MESSAGES.LINE
- SYS$MESSAGE:PCA$MSG.MSG
- SYS$STARTUP:PCA$STARTUP.COM
- SYS$COMMON:[SYSTEST]PCA.DIR
- VUE$LIBRARY:*.COM (PCA VUE Files)

- SYS$COMMON:[SYSTEST.PCA]*.*
- SYS$TEST:PCA$IVP.COM

The PCA, Version 4.3, installation optionally adds or replaces the SYS$COMMON:[SYSHLP.EXAMPLES.PCA] directory and its contents.

If you typed YES in response to the prompt that requests a file purge at step 7, previous versions of the DEC PCA files are now purged.

Step 10: Observe the Installation Verification Procedure.

If you chose to run the IVP in step 7, VMSINSTAL now calls the IVP to verify that PCA was successfully installed.

If PCA has been successfully installed, the IVP displays the following message:

```
Running the IVP...

The IVP ran successfully for PCA Version V4.3
```

If you answered NO to the LMF question in step 6, you can run the IVP after installation, and after loading and registering the PCA license.

To execute the IVP command procedure, enter the following command:

```
$ @SYS$TEST:PCA$IVP Return
```

Step 11: End the installation procedure.

```
   Installation of DEC PCA V4.3 completed at hh:mm

   VMSINSTAL procedure done at hh:mm

$ LOGOUT Return
SYSTEM     logged out at dd-mmm-yyyy hh:mm:ss.ss
```

When the product installation procedure is complete, you can choose to install more products or to log out (as shown here). If you removed any media from the console drive before beginning the installation, you must replace it now.

The VMSINSTAL procedure deletes or changes entries in the process symbol tables during the installation. Therefore, if you are going to continue using the system manager's account and you want to restore these symbols, you must log out and log in again.

7.6.1 Installing DEC PCA on a VAXcluster

If you want to run DEC PCA on multiple nodes of a VAXcluster, first check to see that you have the appropriate software license. Then, follow these steps after installing DEC PCA:

1. Enter the LICENSE LOAD command to activate the license on each node in the VAXcluster on which DEC PCA is to be executed as described in the *OpenVMS License Management Utility Manual*.
2. Execute PCA$STARTUP.COM on each node of the cluster that has a software license.
3. To use the product on other nodes in the VAXcluster, you must replace the version of the DCL tables that is installed on the other VAXcluster nodes. To do this, perform the following steps:
   a. Log in to a node on the cluster.
   b. Run INSTALL and enter the following command at the INSTALL> prompt:

      ```
      INSTALL> REPLACE SYS$LIBRARY:DCLTABLES.EXE Return
      ```

   c. Repeat steps a and b for each node of the cluster.

7.7 After the Installation

DEC PCA is now installed and can be invoked by all users with the PCA command.

The installation procedure modifies the DCL command table so that the PCA command is recognized and processed. However, the previous command table is still in effect for those users who are currently logged in. All logged-in users who want to use the PCA command must log out of the system and log in again.

To reinstall PCA at system bootstrap time, modify the system-specific startup procedure. Include the following line in the SYS$STARTUP:SYSTARTUP_V6.COM file:

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

The PCA$STARTUP.COM file contains commands to install PCA$COLLECTOR.EXE. The PCA installation procedure puts the PCA$STARTUP.COM file in the SYS$STARTUP directory.

8

Installing the DEC Module Management System

This chapter explains how to install the DEC Module Management System (MMS).

8.1 Prerequisite Software

MMS, Version 3.0, requires the OpenVMS VAX operating system, Version 5.5 or higher; OpenVMS Alpha operating system, Version 1.5 or higher; and DECwindows Motif, Version 1.1.

For OpenVMS VAX, Version 5.5 (or higher) systems, the following OpenVMS classes are required for full functionality of MMS:

- OpenVMS required save set
- Utilities
- Programming support

For more information on OpenVMS classes and tailoring them, see the *OpenVMS Operating System Software Product Description*.

8.2 Installation Procedure Requirements

The installation takes approximately 5 to 45 minutes, depending on the type of media and your system configuration. Before installing MMS, you must have the following privileges and resources:

- SETPRV privileges, or CMKRNL and SYSPRV privileges.
- A minimum of 2,800 blocks of free disk space during installation; 300 blocks are used after installation.
- A minimum of 2 MB of physical memory.
- A minimum of 500 free global pages, plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation.

- A minimum of 5 free global sections at installation; 5 global sections are used after installation.

8.3 User Account Quotas and Privileges

To use MMS, each account must have a minimum of TMPMBX privilege and have the following minimum requirements:

- AST limit (ASTLM) 14 (minimum)
- Buffered I/O byte count quota (BYTLM) 13,000 (minimum)
- Open file limit (FILLM) 6 (minimum)
- Subprocess creation quota (PRCLM) 2 (minimum)

8.4 Using MMS with Other Tools

The DECset Environment Manager is installed as part of the installation of the MMS component. The DECset Environment Manager consists of:

- Run-time component used by DECset layered products
- DCL interface
- DECwindows interface

The DCL and DECwindows interface components are optional.

MMS includes support for forms in VAX FMS libraries. If FMS is not installed on your system, the procedure prints the following message:

```
%MMS-I-NOFMSSUPP, MMS will not contain support for VAX FMS.
```

To use MMS to access forms stored in FMS libraries, you must have already installed FMS on your system. If you install or reinstall FMS after you have installed MMS, FMS support will not be available. You must reinstall MMS for FMS support.

8.5 Installing MMS

This section contains excerpts from the installation procedure and explains each step. Defaults appear in brackets throughout the installation procedure.

To abort the installation procedure at any time, press Ctrl/Y. When you press Ctrl/Y, the installation procedure deletes all files it has created up to that point and then returns you to DCL level. If you want to retry the installation procedure after pressing Ctrl/Y, you must proceed from step 2.

Step 1: Log in to a privileged account and set your default device and directory to SYS$UPDATE.

```
Return
Username: SYSTEM  Return
Password:         Return
$ SET DEFAULT SYS$UPDATE  Return
```

Step 2: Invoke VMSINSTAL.

```
$ @VMSINSTAL MMS030 MUA0: OPTIONS N  Return

      OpenVMS Software Product Installation Procedure Vn.n

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

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

If you are satisfied with the backup of your system disk, press Return. Otherwise, enter NO and press the Return key to discontinue the installation.

Step 3: Insert the first installation kit volume.

```
Please mount the first volume of the set on MUA0:.
* Are you ready? YES  Return
The following products will be processed:

  MMS V3.0


    Beginning installation of MMS V3.0 at hh:mm

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

To indicate that you want to continue the installation, mount volume 1, enter YES, and press the Return key.

Step 4: Insert the subsequent installation kit volumes.

```
%BACKUP-I-READYREAD, mount volume 2 on _MUA0: for reading

Enter "YES" when ready: YES  Return
```

The VMSINSTAL procedure prompts you to insert the next volume and waits for you to enter YES after inserting it. If you enter NO, VMSINSTAL displays the prompt again. This prompt is displayed only if your installation kit contains more than one volume.

Step 5: Select a release notes option.

This step applies only if you specified OPTIONS N in step 2.

```
Release Notes Options:

    1. Display release notes
    2. Print release notes
    3. Both 1 and 2
    4. Copy release notes to SYS$HELP
    5. Do not display, print or copy release notes

* Select option [2]: Return
```

If you select option 1, VMSINSTAL displays the release notes on line immediately. You can terminate the display at any time by pressing Ctrl/C.

If you select option 2, VMSINSTAL prompts you for a queue name. Either enter a queue name or press the Return key to send the file to the default output printer.

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

If you select option 3, VMSINSTAL displays the release notes on line immediately, and then prompts you for a queue name. Either enter a queue name or press the Return key to send the file to the default output printer. The MMS release notes are then copied to SYS$HELP:MMS030.RELEASE_NOTES.

If you select option 4, VMSINSTAL copies the release notes to SYS$HELP immediately.

If you select option 5, VMSINSTAL does not display or print the release notes, but copies them to SYS$HELP. Typically, you select this option to terminate the installation.

Note

The release notes file installed by VMSINSTAL is labeled with the current product name and version number (for example, MMS030). Take care not to delete release notes for previous versions of MMS.

Next, VMSINSTAL displays the following:

```
* Do you want to continue the installation ? YES Return
%VMSINSTAL-I-RELMOVED, The product's release notes have been successfully
moved to SYS$HELP.
```

If you want to continue the installation, enter YES and press Return. If you enter NO or press Return, VMSINSTAL discontinues the installation. In either case, VMSINSTAL moves the release notes to SYS$HELP.

Step 6: Respond to license registration queries.

MMS supports the OpenVMS License Management Facility (LMF). The installation procedure displays license information about your product and then asks if you have registered and loaded your product authorization key (PAK) for MMS. The following is an example of such information:

```
Product:       MMS
Producer:      DEC
Version:       3.0
Release Date:  dd-mmm-yyyy

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

You must register and load your PAK to successfully complete the installation. If you have not done so, you must answer NO to this question. Register and load your PAK and then restart the installation.

Step 7: Select installation options.

```
The DECset Environment Manager is installed as part of the installation
of this DECset component.

The DECset Environment Manager consists of:

A run-time component used by DECset layered products,
a DCL interface, and
a DECwindows interface.

The DCL and DECwindows interface components are optional.

* Do you want to install the interface components [YES]? YES Return
* Do you also wish to install the MMS DECwindows interface [YES]? YES Return
* Do you want to purge files replaced by this installation [YES]? Return
```

The directories SYS$EXAMPLES, SYS$HELP, and SYS$SYSTEM may contain previous versions of MMS files. These files are replaced during the installation with new files, but the old files are not automatically purged. Purging is recommended. In response to the purging prompt, press Return to purge the files or enter NO to keep them.

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

The Installation Verification Procedure (IVP) runs tests to check whether the installation procedure was successful. Press Return to run the IVP after the installation. If you do not want to run the IVP, enter NO in response to the prompt.

Step 8: Read the informational messages.

The MMS installation procedure produces a number of informational messages that report on the progress of the installation.

```
No further questions will be asked. The MMS installation
will now continue for approximately 5 to 45 minutes, depending
on your type of media and your system configuration.

%VMSINSTAL-I-RESTORE, Restoring product save-set B ...
%MMS-I-NOFMSSUPP, MMS will not contain support for VAX FMS.
%MMS-I-LINKIMAGE, Linking V3.0.
```

Note

You see the previous message only if VAX FMS is not installed on your system.

The success of the installation is indicated by the following message:

```
%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...
```

If the installation procedure is successful, the new or modified files are moved to their target directories. In addition, the SYS$HELP:HELPLIB.HLB and SYS$LIBRARY:DCLTABLES.EXE files are updated to include the new versions of MMS help text and the MMS command-line definition.

The following files are created or modified by the installation procedure:

SYS$HELP:HELPLIB.HLB
SYS$HELP:MMS030.RELEASE_NOTES
SYS$LIBRARY:DCLTABLES.EXE
SYS$SYSTEM:MMS.EXE
SYS$TEST:MMS$IVP.COM
[SYSHLP.EXAMPLES.MMS]MMS$DEFAULT_RULES.MMS
[SYSHLP.EXAMPLES.MMS]MMS$DEFAULT_SHELL_RULES.MMS

If you entered YES in response to the prompt that requests a file purge at step 7, previous versions of the MMS files are now purged.

Step 9: Run the Installation Verification Procedure.

If you chose to run the IVP in step 7, VMSINSTAL now calls the IVP to verify that MMS was installed successfully, and displays the following:

```
%MMS-I-BEGINIVP, Beginning V3.0 IVP.
%MMS-I-ENDIVP, V3.0 IVP SUCCESSFUL.
```

Step 10: End the installation procedure.

```
   Installation of MMS V3.0 completed at hh:mm

   VMSINSTAL procedure done at hh:mm

$ LOGOUT [Return]
SYSTEM     logged out at dd-mmm-yyyy hh:mm:ss.ss
```

When the product installation procedure is complete, you can choose to install more products or to log out (as shown here). If you removed any media from the console drive before beginning the installation, you must replace it now.

The VMSINSTAL procedure deletes or changes entries in the process symbol tables during the installation. Therefore, if you are going to continue using the system manager's account and you want to restore these symbols, you must log out and log in again.

8.5.1 Installing MMS on a VAXcluster

To run MMS on multiple nodes of a VAXcluster, first check to see that you have the appropriate software license. Then, follow these steps after installing MMS:

1. Enter the LICENSE LOAD command to activate the license on each node in the VAXcluster on which MMS is to be executed as described in the *OpenVMS License Management Utility Manual*.
2. Enter the following command on each node in the VAXcluster on which MMS is to be executed:

   ```
   $ CREATE/DIRECTORY SYS$SPECIFIC:[SYS$HLP.EXAMPLES.MMS] [Return]
   ```

3. To use the product on other nodes in the VAXcluster, you must replace the version of the DCL tables that is installed on the other VAXcluster nodes. To do this, perform the following steps:

   a. Log in to a node on the cluster.

   b. Enter the following command at the DCL prompt:

      ```
      $ INSTALL REPLACE SYS$LIBRARY:DCLTABLES.EXE [Return]
      ```

   c. Repeat steps a and b for each node of the cluster.

9
After the Installation

Your DECset tools are now installed and can be invoked by all users.

The installation procedure modifies the DCL command table so that the tool invocation command is recognized and processed. However, the previous command table is still in effect for those users who are currently logged in. All logged-in users who want to use the updated version of each tool must log out of the system and log in again.

You must edit SYS$MANAGER:SYSTARTUP_VMS.COM, the site-specific startup file, and add the following line:

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

The DECset installation procedure puts the startup command file for each tool in the SYS$STARTUP directory.

9.1 Running the Installation Verification Procedure Separately

The Installation Verification Procedure (IVP) is usually run at installation. If you want to run the IVP separately to ensure the integrity of installed files if system problems occur, execute the following command procedure:

```
$ @SYS$TEST:tool$IVP.COM Return
```

The IVP creates a temporary subdirectory in your current default directory, and places a library for each tool in this subdirectory. The IVP then creates two additional levels of subdirectories; therefore, your current default directory must not be a subdirectory deeper than six levels. Additionally, your current default directory must not be defined as a directory search list. The temporary subdirectory is deleted at the end of the execution of the IVP.

9.2 Error Conditions

If the installation procedure fails for any reason, the following message is displayed:

```
%VMSINSTAL-E-INSFAIL, The installation of [tool] has failed.
```

Note that your default directory must not be set as a search list.

If the IVP fails during the installation, the IVP displays a message, such as the following:

```
%CMS-E-IVPFAILURE, CMS V3.7 IVP failed.
%VMSINSTAL-E-IVPFAIL, The IVP for CMS V3.7 has failed.
```

An error during the installation can occur if one or more of the following conditions exist:

- The operating system version is incorrect.
- The prerequisite software version is incorrect.
- Quotas necessary for successful installation are insufficient (see Section 2.3).
- Process quotas required by VMSINSTAL are incorrect (see Section 1.7).
- The OpenVMS help library is currently in use.
- The product license was registered incorrectly or not registered and loaded.

For descriptions of the error messages generated by these conditions, see the *OpenVMS System Messages and Recovery Procedures Reference Manual*, your processor-specific installation/operations guide, or the *OpenVMS License Management Utility Manual*.

If you are notified that any of these conditions exist, you must take the appropriate action as described in the message. You may need to change a system parameter or increase an authorized quota value.

If the installation fails, you must restart the installation procedure from step 2 for the installation procedure for each tool. If the installation fails due to an IVP failure, contact your Digital field service representative.

9.3 Maintenance Updates

Digital may periodically issue maintenance updates of DECset. Each update consists of an installation kit. You must install this kit as described in this document or in any documentation that may accompany the maintenance update.

Each time a maintenance update is released, the version number changes. For example, if the current version is 1.0, the version number of the first maintenance update will be 1.1. In addition, the maintenance update includes new release notes. The release notes describe the changes that have been made to each DECset tool since the previous release.

The update release notes are provided on line. You must read the release notes before you install any DECset tools; they are also accessible at any time after the product is installed. For information on reading the release notes before installing any DECset tools, follow the installation procedure for each tool. To locate the release notes after installation, display or print the release notes file as described in Section 1.3.

9.4 Reporting Problems

If an error occurs while you are using DECset and you believe that the error is caused by a problem with one of the tools, take one of the following actions:

- If you purchased a DECset license within the past 90 days and you think the problem is caused by a software error, contact your Digital support representative.
- If you have a BASIC or DECsupport Software Agreement, you must call your Customer Support Center. With these services, you receive telephone support that provides high-level advisory and remedial assistance. For more information, contact your local Digital support representative.
- If you have a Self-Maintenance Software Agreement, contact your Digital support representative.

A

Sample Installation Procedure

This appendix contains a sample script of installing a few of the DECset components on an OpenVMS Alpha system. Note that this is only a sample. Sometimes the installation procedure is modified in maintenance updates of this product. Because this installation guide is not usually revised for maintenance updates, be sure to read the *Read Before Installing or Using DECset Version 12.0* letter for your system before you install this product. This letter notes any significant changes in the installation that vary from this sample.

```
 Node EDSDSA Running V6.1

Username: SYSTEM [Return]
Password:

    ****************************************************
    *       *
    *   WELCOME.TXT   *
    *       *
    * This is a placeholder file only. The true file *
    * is built by DISKITBLD.COM when building the *
    * distribution kit.    *
    *       *
    ****************************************************

    Last interactive login on Thursday, 30-MAR-1995 17:57:19.22
    Last non-interactive login on Thursday, 30-MAR-1995 18:00:00.25

SYSTEM>set def sys$update [Return]
SYSTEM>@vmsinstal [Return]
 OpenVMS AXP Software Product Installation Procedure V6.1 It is 31-MAR-1995 at 06:47. -
 Enter a question mark (?) at any time for help. %VMSINSTAL-W-ACTIVE, The following -
 processes are still active:
 DECW$FD
 DECW$SERVER_0
 DECSET$EM_1
* Do you want to continue anyway [NO]? yes [Return]
* Are you satisfied with the backup of your system disk [YES]? [Return]
* Where will the distribution volumes be mounted : decset$:[decset.staging.decset.v12_0.alpha.ssb] -
  [Return]
```

```
Enter the products to be processed from the first distribution volume set.
* Products: decset Return
* Enter installation options you wish to use (none): Return
The following products will be processed:
  DECSET V12.0
 Beginning installation of DECSET V12.0 at 06:48


%VMSINSTAL-I-RESTORE, Restoring product save set A ...
%VMSINSTAL-I-RELMOVED, Product's release notes have been moved to SYS$HELP.

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

  - DECset V12.0 Collective Installation Procedure -

    This is a collective installation procedure for the DECset components.
    This procedure first asks which DECset components to install.  Then it
    checks the system resources required to perform the installation of all
    the components selected.  If there are enough system resources, it will
    perform serial installation for each of the component you have selected.
    If the system resources are not enough for all components, it will inform
    the user about insufficient system resources but continues to install as
    many components as possible.  This will allow user to later install only
    those components which were not installed in the previous attempt.

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

         These are the options provided by this collective
         installation procedure:

             DECset components:

        -     All the DECset components
        -     Language-Sensitive Editor (LSE)
        -     Source Code Analyzer (SCA)
        -     Code Management System (CMS)
        -     DEC Test Manager
        -     Performance and Coverage Analyzer (PCA)
        -     Module Management System (MMS)

  Please choose your option(s):

*     Do you want     All the DECset components [NO]? yes Return
*     Are you sure you want to install all the options [YES]? Return

%DECSET-I-AGGREGATE, Checking resources required to install selected products.


%DECSET-I-START_AENVMGR, The following questions relate to ENVMGR installation.

   The DECset Environment Manager consists of:

 A run-time component used by DECset layered products,
 a DCL interface, and
 a DECwindows interface.

   The DCL and DECwindows interface components are optional.

* Do you want to install the interface components [Y]? Return
* Do you want to run the IVP after the installation [YES]? Return

%DECSET-I-START_ACMS, The following questions relate to CMS installation.
```

```
* Do you also wish to install the CMS DECwindows interface [YES]? Return
* Do you also wish to install the Server for CMS Client for Windows? [YES]? Return
* Do you want to purge files replaced by this installation [YES]? Return

        Product:      VAXSET
        Producer:     DEC
        Version:      12.0
        Release Date: 26-MAY-1995

        Product:      CMS
        Producer:     DEC
        Version:      3.7
        Release Date: 26-MAY-1995

* Is one of these authorization keys registered and loaded? yes Return
* Do you want to run the IVP after the installation [YES]? Return

%DECSET-I-DONEASK, You have answered all the questions for CMS installation

%DECSET-I-START_ADTM, The following questions relate to DEC Test Manager installation.

        Product:      VAXSET
        Producer:     DEC
        Version:      12.0
        Release Date: 26-MAY-1995

 Product:      DTM
 Producer:     DEC
 Version:      3.6
 Release Date: 26-MAY-1995


* Is one of these authorization keys registered and loaded?: yes Return
* Do you want to run the IVP after the installation [YES]? Return
* Do you want to purge files replaced by this installation [YES]? Return

%DECSET-I-DONEASK, You have answered all the questions for DEC Test Manager installation

%DECSET-I-START_ALSE, The following questions relate to LSE installation.

* Do you want to purge files replaced by this installation [YES]? Return
* Do you want to run the IVP after the installation [YES]? Return

    Please note that the total system disk space consumed by the unsupported
    LSE source files is approximately 16,000 blocks.  Digital recommends not
    to answer yes to the following prompt if you are constrained by the free
    space available on your system disk.

* Would you like to install the unsupported LSE source files [NO]? yes Return

    The LSE that is currently installed on your system contains two
    command languages:  the VMSLSE command language, and the PORTABLE
    command language.

    If you would like to continue with the same system-wide default command
    language that you are currently using, you should accept the default
    answer provided to you at the prompt below.

    If you would like to have the new PORTABLE command language as your
    system-wide default command language, you should specify the PORTABLE
    language.
```

```
    If you would like to have a system-wide default command language that
    is compatible with the command language available in versions of LSE
    prior to V4.0, you should specify the VMSLSE language.

    Individual users may override the system default command language.
    See the release notes for more information.

1 line written to file $12$DKB100:[SYS0.SYSUPD.DECSET120]COMM_LANG.OUT;1


* Do you want default command language to be PORTABLE or VMSLSE  [PORTABLE]: Return

    Language templates for Ada, BASIC, BLISS, C, COBOL, CXX, FORTRAN, MACRO,
    Pascal, PL/I , and VAXC as well as templates for the LSE command languages
    are included in this kit.  Templates for other languages that support LSE
    and are not mentioned are provided in the installation kits for those
    languages.

    Please choose the languages for which you would like to install support:

* Do you want to install language support for ADA [YES]? Return
* Do you want to install language support for BASIC [YES]? Return
* Do you want to install language support for BLISS [YES]? Return
* Do you want to install language support for C [YES]? Return
* Do you want to install language support for COBOL [YES]? Return
* Do you want to install language support for CXX [YES]? Return
* Do you want to install language support for FORTRAN [YES]? Return
* Do you want to install language support for MACRO [YES]? Return
* Do you want to install language support for PASCAL [YES]? Return
* Do you want to install language support for PLI [YES]? Return
* Do you want to install language support for LSE [YES]? Return
* Do you want to install language support for PLSE [YES]? Return

You have answered all the questions for LSE installation.  During the LSE
installation the system environment file will be created or updated.
Informational and success messages will be displayed indicating these events.

%DECSET-I-START_AMMS, The following questions relate to MMS installation.

  +----------------------------+
  | Installation of MMS V3.0-03 |
  +----------------------------+

 The installation can be aborted at any time by pressing CTRL/Y.

       Product:      VAXSET
       Producer:     DEC
       Version:      12.0
       Release Date: 26-MAY-1995

 Product:      MMS
 Producer:     DEC
 Version:      3.0
 Release Date: 26-MAY-1995

* Is one of these authorization keys registered and loaded? yes Return
```

```
 This kit contains an Installation Verification Procedure (IVP)
 to verify the correct installation of MMS.  It can be run
 prior to the conclusion of this procedure by answering "YES" to
 the IVP prompt or invoked after the installation as follows:

  @SYS$TEST:MMS$IVP

* Do you want to run the IVP after the installation [YES]? Return
* Do you want to purge files replaced by this installation [YES]? Return

 You have answered all the questions for MMS installation.

%DECSET-I-START_APCA, The following questions relate to PCA installation.

    *** PCA V4.3-3 installation procedure. ***

        Product:      VAXSET
        Producer:     DEC
        Version:      12.0
        Release Date: 26-MAY-1995

        Product:      PCA
        Producer:     DEC
        Version:      4.3
        Release Date: 26-MAY-1995

* Does this product have one of these authorization keys registered and loaded? yes Return
* Do you want to run the IVP after the installation [YES]? Return
* Do you want to purge files replaced by this installation [YES]? Return
* Do you wish to install the PCA DECwindows collector [YES]? Return
* Do you want to install the PCA demo package [YES]? Return

    You have answered all the questions required for the PCA installation.


%DECSET-I-START_ASCA, The following questions relate to SCA installation.

        Product:      VAXSET
        Producer:     DEC
        Version:      12.0
        Release Date: 26-MAY-1995

 Product:      LSE
 Producer:     DEC
 Version:      4.3
 Release Date: 26-MAY-1995

* Does this product have one of these authorization keys registered and loaded? yes Return

        As well as verifying that the installation succeeded, the IVP also
        creates the SCA example library.  It is therefore recommended that
        you run the IVP.

* Do you want to run the IVP after the installation [YES]? Return

 The IVP has two sections, a character-cell section and a DECwindows
 section.  In order for the DECwindows section to run correctly, the
 logical name DECW$DISPLAY must be appropriately set (using the SET
 DISPLAY command).  If at this time you are not prepared to run the
 DECwindows portion of the IVP, enter NO at the following prompt.

 You can rerun the IVP later by entering the command:
```

```
 @SYS$TEST:SCA$IVP

* Do you wish to run the whole IVP [YES]? no Return
* Do you want to purge files replaced by this installation [YES]? Return

 Please indicate the components of SCA that you wish to install:

     1 - Both SCA client and server
     2 - SCA client only

* Enter the number corresponding to the SCA components to install [1]: Return

%DECSET-I-NOMORQST, You have answered all the questions for SCA installation


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

    If you are satisfied with your answers, answer YES to the following
    prompt.  If not, answer NO to start the auto-answer session again.
    The default is YES.

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

*   Are you satisfied with your answers to selected DECset components ?  [YES]? Return

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

    This parent installation procedure will now install selected DECset
    components one by one.

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

%DECSET-I-START_ENVMGR, ENVMGR installation in progress

%VMSINSTAL-I-RESTORE, Restoring product save set B ...
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  VMI$ROOT:[SYSTEST.ENVMGR].
%CREATE-I-EXISTS, VMI$ROOT:[SYSTEST.ENVMGR] already exists
%DECSET-I-DELETED, Deleted old version of SYS$MANAGER:DECSET$ENVMGR_STARTUP.COM
The installation of the DECset Environment Manager has added or modified:

    SYS$TEST:ENVMGR$IVP.COM
    SYS$TEST:ENVMGR$SAMPLE.DECSET_CONTEXT_DB
    SYS$TEST:ENVMGR$SAMPLE.DECSET_CONTEXT
    SYS$LIBRARY:DCLTABLES.EXE
    SYS$HELP:HELPLIB.HLB
    SYS$SYSTEM:DECSET$ENVMGRCCT.EXE
    SYS$SHARE:DECSET$ENVMGRCCTSHR.EXE
    SYS$SHARE:DECSET$ENVMGRSHR.EXE
    SYS$SYSTEM:DECSET$START_ENVMGR.EXE
    SYS$SYSTEM:DECSET$ENVMGR.EXE
    SYS$SHARE:DECSET$ENVMGR.DAT
    SYS$SHARE:DECSET$ENVMGR.UID
    SYS$HELP:DECSET$ENVMGR.HLB
    VUE$LIBRARY:DECSET$MENU.VUE$DAT
    SYS$STARTUP:DECSET$ENVMGR_STARTUP.COM

You should add the following line to your system startup procedure:

    $ @SYS$STARTUP:DECSET$ENVMGR_STARTUP.COM

%DECSET-I-DONEENVMGR, The installation of the DECset Environment Manager completed
```

```
%DECSET-I-START_CMS, CMS installation in progress

%VMSINSTAL-I-RESTORE, Restoring product save set C ...
%DECSET-I-ENDRESTORE, All required savesets have been successfully restored
%DECSET-I-CMSSHR, Linking shareable image
%DECSET-I-CMS, Linking main image
%DECSET-I-EVENTACT, Linking the event action image
%DECSET-I-PROHELP, Providing help
%DECSET-I-PRODCL, Providing DCL verb
%DECSET-I-PROEXE, Providing images

 ****************************************************************
 *                                                              *
 * The CMS IVP has been moved to the SYS$TEST directory.  To    *
 * run it after the installation, enter @SYS$TEST:CMS$IVP.COM. *
 *                                                              *
 ****************************************************************

%DECSET-I-PROSTART, Providing startup procedure

 ****************************************************************
 *                                                              *
     * If this installation is performed on a cluster, you must    *
 * execute                                                      *
 *                                                              *
 *    $ @SYS$STARTUP:CMS$STARTUP.COM                            *
 *                                                              *
 * on all other nodes in the cluster.  In addition, you must    *
 * add the above line to your system startup procedure.         *
 *                                                              *
 ****************************************************************

%DECSET-I-DONECMS, The installation of CMS completed

%DECSET-I-START_DTM, DEC Test Manager installation in progress


%VMSINSTAL-I-RESTORE, Restoring product save set D ...
%DECSET-I-ENDRESTORE, All DEC Test Manager savesets have been restored.
%DECSET-I-PROHELP, Providing DEC Test Manager DCL and DECwindows help.
%DECSET-I-PRODCL, Providing DCL verb for DEC Test Manager.
%DECSET-I-PROEXE, Providing DEC Test Manager files.
*******************************************************************************
*                                                                             *
*  The DEC Test Manager IVP has been moved to the SYS$TEST directory.  To run  *
*  the IVP after installation, enter @SYS$TEST:DTM$IVP.COM.                   *
*                                                                             *
*******************************************************************************
*******************************************************************************
*                                                                             *
*  If this installation is being performed on a cluster, you must execute     *
*                                                                             *
*                       $ @SYS$STARTUP:DTM$STARTUP.COM                        *
*                                                                             *
*  on all nodes in the cluster.  In addition, you must add the above line to   *
*  your system startup procedure.                                             *
*                                                                             *
*******************************************************************************

%DECSET-I-DONEDTM, The installation of DEC Test Manager completed
```

```
%DECSET-I-START_LSE, LSE installation in progress

%VMSINSTAL-I-RESTORE, Restoring product save set E ...
%TPU-S-SAVEENV, environment written to $12$DKB100:[SYS0.SYSUPD.DECSET120]LSE$SYSTEM_ENVIRONMENT.ENV;1
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  VMI$ROOT:[SYSTEST.LSE].
%CREATE-I-EXISTS, VMI$ROOT:[SYSTEST.LSE] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  VMI$ROOT:[SYSHLP.EXAMPLES.LSE].
%CREATE-I-EXISTS, VMI$ROOT:[SYSHLP.EXAMPLES.LSE] already exists
This installation added or modified the following files:


        SYS$LIBRARY:DCLTABLES.EXE
        SYS$SYSTEM:LSEDIT.EXE
        SYS$LIBRARY:LSESHR.EXE
 SYS$LIBRARY:LSESHR.IIF
        SYS$MESSAGE:LSEMSG.EXE
        SYS$LIBRARY:LSE$CCTSHR.EXE
        SYS$LIBRARY:LSE$DECWSHR.EXE
        SYS$LIBRARY:LSE$SECTION.TPU$SECTION
        SYS$LIBRARY:LSE$DEFAULTS.DAT
        SYS$LIBRARY:LSE$SYSTEM_ENVIRONMENT.ENV
        SYS$LIBRARY:LSE$DEBUG.TPU
        SYS$LIBRARY:LSE$WIDGETS.UID
 SYS$LIBRARY:PSE$COMMENTS.EXE
        SYS$HELP:LSE$KEYPAD.HLB
        SYS$HELP:LSE$MENU.HLB
 SYS$HELP:LSE$HELP.HLB
 SYS$HELP:LSE$CLIHELP.HLB;
        SYS$STARTUP:LSE$STARTUP.COM
        SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$USER.EXAMPLE
        SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$USER2.EXAMPLE
        SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$USER3.EXAMPLE
        SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$USER.DIA
        SYS$SYSROOT:[SYSTEST.LSE]LSE$IVP.TPU
        SYS$TEST:LSE$IVP.COM
```

```
       SYS$SYSROOT:[VUE$LIBRARY.USER]LSE$EDIT_QUALIFIERS.EXE
       SYS$SYSROOT:[VUE$LIBRARY.USER]LSE$EDIT_OPTIONS.UID
       SYS$SYSROOT:[VUE$LIBRARY.USER]LSE$EDIT.COM
SYS$SYSROOT:[VUE$LIBRARY.USER]LSE$PROFILE.VUE$DAT
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$DECWINDOWS.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$GRAMMAR.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$GRAMMAR_ADJUSTMENT.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$GRAMMAR_ALIAS.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$GRAMMAR_LANGUAGE.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$GRAMMAR_PLACEHOLDER.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$GRAMMAR_TOKEN.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$GRAMMAR_UTIL.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$PROMPT.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$PARSER.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$SHOW.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$SHOW_LIST.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$HIGHLIGHT.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$KEY.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$INITIALIZE.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$EVE_ADVANCED.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$EVE_CORE.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$EVE_DECWINDOWS.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$EVE_EDIT.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$EVE_EDT.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$EVE_EXTEND.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$EVE_EXTRAS.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$EVE_FILE.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$EVE_FORMAT.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$EVE_HELP.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$EVE_MENUS.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$EVE_MOUSE.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$EVE_PARSER.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$EVE_SHOW.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$EVE_TERMINALS.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$EVE_WINDOWS.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$METHOD.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$MENUS.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$MOUSE.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$VMS_SCA.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$VMS_CMS.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$VMS_HELP.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$EDIT_ICONS.UIL
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$EDIT_OPTIONS.UIL
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$WIDGETS.UIL
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LSE$CONSTANTS.UIL
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]EVE$CONSTANTS.UIL
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]TPU.ENV
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]PACK_HEADERS.TXT
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]PACK_HEADERS_CLI.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]PACK_HEADERS_PORT.TPU
```

```
 ****************************************************************
 *                                                              *
     * If this installation is performed on a cluster, you must    *
 * execute                                                      *
 *                                                              *
 *    $ @SYS$STARTUP:LSE$STARTUP.COM                            *
 *                                                              *
 * on all other nodes in the cluster.  In addition, you must    *
 * add the above line to your system startup procedure.         *
 *                                                              *
 ****************************************************************

%DECSET-I-DONELSE, The installation of LSE completed

%DECSET-I-START_MMS, MMS installation in progress

%VMSINSTAL-I-RESTORE, Restoring product save set F ...
%DECSET-I-LINKIMAGE, Linking V3.0-03.
%VMSINSTAL-I-SYSDIR, This product creates system directory [SYSHLP.EXAMPLES.MMS].
%CREATE-I-EXISTS, VMI$COMMON:[SYSHLP.EXAMPLES.MMS] already exists

 ****************************************************************
 *                                                              *
     * If this installation is performed on a cluster, you must    *
 * execute                                                      *
 *                                                              *
 *    $ @SYS$STARTUP:MMS$STARTUP.COM                            *
 *                                                              *
 * on all other nodes in the cluster.  In addition, you must    *
 * add the above line to your system startup procedure.         *
 *                                                              *
 ****************************************************************

%DECSET-I-DONEMMS, The installation of MMS completed


%DECSET-I-START_PCA, PCA installation in progress

%VMSINSTAL-I-RESTORE, Restoring product save set G ...
%VMSINSTAL-I-RESTORE, Restoring product save set H ...
%VMSINSTAL-I-SYSDIR, This product creates system directory [SYSTEST.PCA].
%CREATE-I-EXISTS, VMI$COMMON:[SYSTEST.PCA] already exists
%VMSINSTAL-I-RESTORE, Restoring product save set I ...
%VMSINSTAL-I-SYSDIR, This product creates system directory [SYSHLP.EXAMPLES.PCA].
%CREATE-I-EXISTS, VMI$COMMON:[SYSHLP.EXAMPLES.PCA] already exists

    The name of the PCA startup command file is: PCA$STARTUP.COM in the
    SYS$STARTUP directory area.

    In order to start up PCA when your system boots, you should add the
    following line to your system startup procedure:

 $ @SYS$STARTUP:PCA$STARTUP.COM

    The release notes are available online by typing HELP PCA RELEASE_NOTES.

    A pointer to the DECset documentation can be found in
    SYS$HELP:DECSETDOCS*.RELEASE_NOTES.

%DECSET-I-DONEPCA, The installation of PCA completed

%DECSET-I-START_SCA, SCA installation in progress
```

```
%VMSINSTAL-I-RESTORE, Restoring product save set J ...
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  VMI$ROOT:[SYSTEST.SCA$IVP].
%CREATE-I-EXISTS, VMI$ROOT:[SYSTEST.SCA$IVP] already exists
%VMSINSTAL-I-SYSDIR, This product creates system directory [SYSHLP.EXAMPLES.SCA].
%CREATE-I-EXISTS, VMI$COMMON:[SYSHLP.EXAMPLES.SCA] already exists
%CREATE-I-EXISTS, VMI$SPECIFIC:[SYSHLP.EXAMPLES.SCA] already exists

    If you intend to execute this layered product on other nodes in your
    cluster, and you have the appropriate software license, you must
    prepare the system-specific roots on the other nodes by issuing the
    following command on each node (using a suitably privileged account):

 $ CREATE /DIRECTORY SYS$SPECIFIC:[SYSHLP.EXAMPLES.SCA]
%VMSINSTAL-I-SYSDIR, This product creates system directory [SYSHLP.EXAMPLES.SCA.EXAMPLE].
%CREATE-I-EXISTS, VMI$SPECIFIC:[SYSHLP.EXAMPLES.SCA.EXAMPLE] already exists


    If you intend to execute this layered product on other nodes in your
    cluster, and you have the appropriate software license, you must
    prepare the system-specific roots on the other nodes by issuing the
    following command on each node (using a suitably privileged account):

 $ CREATE /DIRECTORY SYS$SPECIFIC:[SYSHLP.EXAMPLES.SCA.EXAMPLE]
%VMSINSTAL-I-SYSDIR, This product creates system directory [SYSHLP.EXAMPLES.SCA.2167A].
%CREATE-I-EXISTS, VMI$SPECIFIC:[SYSHLP.EXAMPLES.SCA.2167A] already exists

    If you intend to execute this layered product on other nodes in your
    cluster, and you have the appropriate software license, you must
    prepare the system-specific roots on the other nodes by issuing the
    following command on each node (using a suitably privileged account):

 $ CREATE /DIRECTORY SYS$SPECIFIC:[SYSHLP.EXAMPLES.SCA.2167A]

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

 Upon completion of this installation, please do the following:

     - If this installation is being done on a cluster, you must do
  @SYS$STARTUP:SCA$STARTUP.COM on all nodes.

 - Be sure to edit the system startup file to add
      @SYS$STARTUP:SCA$STARTUP.COM

*  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
%DECSET-I-EXISTS, SCA$DEFAULT account already exists
%DECSET-I-MODACC, Modifying account SCA$DEFAULT quotas...
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SCA$DEFAULT.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SCA$DEFAULT.
%UAF-I-MDFYMSG, user record(s) updated
%DECSET-I-EXISTS, SCA$SERVER account already exists
%DECSET-I-MODACC, Modifying account SCA$SERVER quotas...
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SCA$SERVER.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SCA$SERVER.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SCA$SERVER.
%UAF-I-MDFYMSG, user record(s) updated
```

```
  The network object SCA$SERVER has been defined.  If you wish
  to view this, run SYS$SYSTEM:NCP and enter the command
        NCP> LIST OBJECT SCA$SERVER CHAR

%DECSET-I-DONESCA, The installation of SCA completed

%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...

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

    The DECset V12.0 collective installation will now run the Installation
    Verification Procedure for the each of the component you selected to
    run the IVP.

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

         +-----------------------------------------------------------+
         |      Installation verification command procedure for      |
         |               DECset Environment Manager                  |
         +-----------------------------------------------------------+

   Starting IVP for DECset Environment Manager

   IVP for DECset Environment Manager completed successfully

%CMS-I-IVPBEGIN, Begin CMS V3.7-1 Installation Verification Procedure
$ SET NOVERIFY
$ CMS SHOW VERSION
CMS Version V3.7-1
$ CMS CREATE LIBRARY $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
%CMS-S-CREATED, CMS Library $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] created
%CMS-I-LIBIS, library is $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
%CMS-S-LIBSET, library set
$ CMS SET LIBRARY $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
%CMS-I-LIBIS, library is $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
%CMS-S-LIBSET, library set
-CMS-I-SUPERSEDE, library list superseded
$ CMS CREATE ELEMENT CMS$IVP_TEST.FILE ""
%CMS-S-CREATED, element $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CMS$IVP_TEST.FILE created
$ CMS RESERVE CMS$IVP_TEST.FILE ""
%CMS-S-RESERVED, generation 1 of element $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] -
 CMS$IVP_TEST.FILE reserved
$ CMS SHOW RESERVATIONS


Reservations in CMS Library $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
```

```
CMS$IVP_TEST.FILE
    (1)   SYSTEM     1      31-MAR-1995 07:00:46 ""
$ CMS REPLACE CMS$IVP_TEST.FILE ""
%CMS-S-GENCREATED, generation 2 of element $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] -
 CMS$IVP_TEST.FILE created
-CMS-I-NOCHANGES, no changes
$ CMS VERIFY
%CMS-I-VERCLS, class list verified
%CMS-I-VERCMD, command list verified
%CMS-I-VERELE, element list verified
%CMS-I-VERGRP, group list verified
%CMS-I-VERRES, reservation list verified
%CMS-I-VERFRE, internal free space list verified
%CMS-I-VERFRE, internal free space list verified
%CMS-I-VERFRE, internal free space list verified
%CMS-I-VERFRE, internal free space list verified
%CMS-I-VERFRE, internal free space list verified
%CMS-I-VERFRE, internal free space list verified
%CMS-I-VERFRE, internal free space list verified
%CMS-I-VERARC, archive control block verified
%CMS-I-VER2, internal contiguous space verified
%CMS-I-VERCON, control file verified
%CMS-I-VEREDF, element $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CMS$IVP_TEST.FILE verified
%CMS-I-VEREDFS, element data files verified
%CMS-S-VERIFIED, library $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] verified
$ CMS FETCH CMS$IVP_TEST.FILE/GEN=1 ""
%CMS-S-FETCHED, generation 1 of element $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] -
 CMS$IVP_TEST.FILE fetched
$ CMS FETCH CMS$IVP_TEST.FILE/GEN=2 ""
%CMS-I-FILEXISTS, file already exists, $12$DKB100:[SYS0.SYSUPD.DECSET120]CMS$IVP_TEST.FILE;2 created
%CMS-S-FETCHED, generation 2 of element $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] -
 CMS$IVP_TEST.FILE fetched
$ CMS DIFF CMS$IVP_TEST.FILE;-1 CMS$IVP_TEST.FILE;0
%CMS-S-IDENTICAL, files are identical
$ SET NOVERIFY
$ CMS CREATE CLASS CL1 "Test1"
%CMS-S-CREATED, class $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL1 created
$ CMS INSERT GENERATION CMS$IVP_TEST.FILE/GEN=1 CL1 ""
%CMS-S-GENINSERTED, generation 1 of element $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] -
 CMS$IVP_TEST.FILE inserted into class $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL1
$ CMS CREATE CLASS CL2 "Test2"
%CMS-S-CREATED, class $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL2 created
$ CMS INSERT GENERATION CMS$IVP_TEST.FILE/GEN=2 CL2 ""
%CMS-S-GENINSERTED, generation 2 of element $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]-
CMS$IVP_TEST.FILE inserted into class $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL2
$ CMS FETCH CMS$IVP_TEST.FILE/GEN=CL2 ""
%CMS-S-FETCHED, generation 2 of element $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] -
 CMS$IVP_TEST.FILE fetched
$ SET NOVERIFY
$ CMS SHOW ELEMENT

Elements in CMS Library $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]

CMS$IVP_TEST.FILE ""
$ CMS SHOW GENERATION/DESCENDANTS CMS$IVP_TEST.FILE

Element generations in CMS Library
        $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
```

```
CMS$IVP_TEST.FILE
  2     31-MAR-1995 07:00:48 SYSTEM ""
  1     31-MAR-1995 07:00:45 SYSTEM ""

$ CMS SHOW CLASS

Classes in CMS Library $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]

CL1             "Test1"
CL2             "Test2"
$ CMS SHOW GENERATION *.*/GEN=CL2/BRIEF


Element generations in CMS Library
$12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]

CMS$IVP_TEST.FILE/2
$ CMS REMOVE GENERATION CMS$IVP_TEST.FILE CL2 ""
%CMS-S-GENREMOVED, generation 2 of element $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] -
 CMS$IVP_TEST.FILE removed from class $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL2
$ CMS DELETE CLASS CL2 ""
%CMS-S-DELETED, class $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL2 deleted
$ CMS REMOVE GENERATION CMS$IVP_TEST.FILE CL1 ""
%CMS-S-GENREMOVED, generation 1 of element $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] -
 CMS$IVP_TEST.FILE removed from class $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL1
$ CMS DELETE CLASS CL1 ""
%CMS-S-DELETED, class $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL1 deleted
$ CMS CREATE GROUP GR1 ""
%CMS-S-CREATED, group $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR1 created
$ CMS CREATE GROUP GR2 ""
%CMS-S-CREATED, group $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR2 created
$ CMS INSERT GROUP/NOCONFIRM GR1 GR2 ""
%CMS-S-INSERTED, group $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR1 inserted into group -
 $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR2
$ CMS REMOVE GROUP GR1 GR2 ""
%CMS-S-REMOVED, group $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR1 removed from group -
 $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR2
$ CMS MODIFY GROUP GR1/NAME=GR3/READ_ONLY ""
%CMS-S-MODIFIED, group $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR1 modified
$ CMS SHOW GROUP */BRIEF

Groups in CMS Library $12$DKB100:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]

GR2                GR3
$ SET NOVERIFY

%CMS-S-IVPSUCCESS, CMS V3.7-1 IVP completed successfully
%CMS-I-IVPEND, End Installation Verification Procedure
```

```
*******************************************************************************
*                                                                             *
*           Beginning the DEC Test Manager verification procedure             *
*                                                                             *
*******************************************************************************
DEC Test Manager Version V3.6-3
%DTM-S-CREATED, DEC Test Manager library $12$DKB100:[SYS0.SYSUPD.DECSET120.DTMTEST] created
%DTM-S-LIBIS, DEC Test Manager library is $12$DKB100:[SYS0.SYSUPD.DECSET120.DTMTEST]
%DTM-I-DEFAULTED, benchmark file name defaulted to TESTX.BMK
%DTM-S-CREATED, test description TESTX created
%DTM-S-MODIFIED, test description TESTX modified
%DTM-I-DEFAULTED, benchmark file name defaulted to DECWX.BMK
%DTM-I-DEFAULTED, template file name defaulted to DECWX.SESSION
%DTM-S-CREATED, test description DECWX created

Test Descriptions in DEC Test Manager Library
$12$DKB100:[SYS0.SYSUPD.DECSET120.DTMTEST]

DECWX           "decwindows test"
    Template        = DECWX.SESSION
    Benchmark       = DECWX.BMK
    Prologue        = None Specified
    Epilogue        = None Specified

TESTX           "first test"
    Template        = DTM$IVP.COM
    Benchmark       = DTM$IVP.COM
    Prologue        = None Specified
    Epilogue        = None Specified
%DTM-S-CREATED, symbol variable VAR1 created
%DTM-S-MODIFIED, variable VAR1 modified

Variables in DEC Test Manager Library $12$DKB100:[SYS0.SYSUPD.DECSET120.DTMTEST]

VAR1            "first variable"
    Value = NEWVALUE
%DTM-S-CREATED, group GROUP1 created

Groups in DEC Test Manager Library $12$DKB100:[SYS0.SYSUPD.DECSET120.DTMTEST]

GROUP1          "test group"
%DTM-S-CREATED, group GROUP2 created
%DTM-S-INSERTED, group GROUP1 inserted into group GROUP2
%DTM-S-REMOVED, group GROUP1 removed from group GROUP2

Groups in DEC Test Manager Library $12$DKB100:[SYS0.SYSUPD.DECSET120.DTMTEST]

GROUP1              GROUP2
%DTM-S-CREATED, collection COLL1 created

Collections in DEC Test Manager Library
$12$DKB100:[SYS0.SYSUPD.DECSET120.DTMTEST]

COLL1          1 test    31-MAR-1995 07:01:29
       Command: CREATE COLLECTION/NOVERIFY COLL1 TESTX "test collection"
       Status: not run
```

```
%DTM-S-DELETED, collection COLL1 deleted
%DTM-I-DELETED, test_description DECWX deleted
%DTM-I-DELETED, test_description TESTX deleted
%DTM-S-DELETIONS, 2 deletions completed
%DTM-I-DELETED, variable VAR1 deleted
%DTM-S-DELETIONS, 1 deletion completed
%DTM-I-DELETED, group GROUP1 deleted
%DTM-I-DELETED, group GROUP2 deleted
%DTM-S-DELETIONS, 2 deletions completed
%DTM-I-VERFRE, free space list verified
%DTM-I-VERSTR, string list verified
%DTM-I-VERCOL, collection list verified
%DTM-I-VERGRO, group list verified
%DTM-I-VERTD, test description list verified
%DTM-I-VERVAR, variables list verified
%DTM-I-VERARC, archive list verified
%DTM-I-VERHEAD, user header information verified
%DTM-I-VERSPACE, contiguous space verified
%DTM-I-VERCOLDIR, collection directory structure verified
%DTM-S-VERIFIED, DEC Test Manager library $12$DKB100:[SYS0.SYSUPD.DECSET120.DTMTEST] verified
******************************************************************************
*                                                                            *
*           DEC Test Manager verification procedure successful               *
*                                                                            *
******************************************************************************

         +-----------------------------------------------------------+
         |      Installation verification command procedure for      |
         |               DEC Language-Sensitive Editor               |
         +-----------------------------------------------------------+

36 lines written to file $1$DIA1:[VMS$COMMON.SYSMGR]LSE$IVP.LIS;1

 DEC Language-Sensitive Editor IVP was successful.

  Beginning IVP for MMS

%MMS-I-BEGINIVP, Beginning V3.0-03 IVP.
%MMS-I-ENDIVP, V3.0-03 IVP SUCCESSFUL.

  MMS IVP successful

    Starting the IVP procedure for PCA Version V4.3-3

    The IVP procedure is complete for PCA Version V4.3-3

      The IVP ran successfully for PCA Version V4.3-3

****  Beginning IVP for DEC SCA V4.3-03  ****

****  Client testing complete  ****
%SCA-I-CONNECTING, Requesting connection to 0::
%SCA-S-LIB, your SCA Library is 0::SCA$EXAMPLE:
%SCA-I-CONNECTING, Requesting connection to 0::
****  Server testing complete  ****
****  IVP for SCA V4.3-03 completed successfully  ****

 Installation of DECSET V12.0 completed at 07:02

    Adding history entry in VMI$ROOT:[SYSUPD]VMSINSTAL.HISTORY

    Creating installation data file: VMI$ROOT:[SYSUPD]DECSET120.VMI_DATA
```

```
Enter the products to be processed from the next distribution volume set.
* Products: exit Return
 VMSINSTAL procedure done at 07:09
SYSTEM>logout Return
  SYSTEM       logged out at 31-MAR-1995 07:09:31.29
```

B

Sample Online Documentation Installation Procedure

This appendix contains a sample script of installing the DECset online documentation save sets on an OpenVMS Alpha system. This is only a sample. Sometimes the installation procedure is modified in maintenance updates of this product.

```
 Node EDSDSA Running V6.1

Username: SYSTEM [Return]
Password:

    ****************************************************
    *       *
    *   WELCOME.TXT   *
    *       *
    * This is a placeholder file only. The true file *
    * is built by DISKITBLD.COM when building the *
    * distribution kit.    *
    *       *
    ****************************************************

    Last interactive login on Friday, 31-MAR-1995 07:08:45.94
    Last non-interactive login on Thursday, 30-MAR-1995 18:00:00.25
SYSTEM>set def sys$update [Return]
SYSTEM>@vmsinstal [Return]
 OpenVMS AXP Software Product Installation Procedure V6.1 It is 31-MAR-1995 at 10:08. -
 Enter a question mark (?) at any time for help.
%VMSINSTAL-W-ACTIVE, The following processes are still active:
 DECW$FD
 DECW$SERVER_0
 DECSET$EM_1
* Do you want to continue anyway [NO]? yes [Return]
* Are you satisfied with the backup of your system disk [YES]? [Return]
* Where will the distribution volumes be mounted: decset$:[decset.staging.decset.v12_0.alpha.ssb] -
[Return]
```

```
Enter the products to be processed from the first distribution volume set.
* Products: decsetdocs Return
* Enter installation options you wish to use (none): Return
The following products will be processed:
  DECSETDOCS V12.0
 Beginning installation of DECSETDOCS V12.0 at 10:08


%VMSINSTAL-I-RESTORE, Restoring product save set A ...
%VMSINSTAL-I-RELMOVED, Product's release notes have been moved to SYS$HELP.
* Do you want to purge files replaced by this installation [YES]? Return

* Enter a directory where selected documents to be put? [SYS$HELP:]: Return

* Do you want DECset documentation installed (enter All, Some, or None)? [ALL]: some Return

* Do you want to install the DECset installation guides? [YES]? Return

* Do you want to install the DECset user guides? [YES]? Return

* Do you want to install the DECset reference manuals? [YES]? Return

* Do you want to install DECset documentation in PostScript format? [YES]? Return

* Do you want to install DECset documentation in Bookreader format? [YES]? Return

* Do you want to install DECset documentation in MAIL (.TXT) format? [YES]? Return

* Do you want Common DECset documentation installed? [YES]? Return

* Do you want CMS documentation installed? [YES]? Return

* Do you want DTM documentation installed? [YES]? Return

* Do you want LSE documentation installed? [YES]? Return

* Do you want MMS documentation installed? [YES]? Return

* Do you want PCA documentation installed? [YES]? Return

* Do you want SCA documentation installed? [YES]? Return
******************************************************************************


%DECSETDOCS-I-DONEASK, No further questions will be asked during this installation.
%VMSINSTAL-I-RESTORE, Restoring product save set B ...
%DECSETDOCS-I-ENDRESTORE, The CMS Documentation saveset has been restored.
%VMSINSTAL-I-RESTORE, Restoring product save set C ...
%DECSETDOCS-I-ENDRESTORE, The DEC Test Manager Documentation saveset has been restored.
%VMSINSTAL-I-RESTORE, Restoring product save set D ...
%DECSETDOCS-I-ENDRESTORE, The LSE Documentation saveset has been restored.
%VMSINSTAL-I-RESTORE, Restoring product save set E ...
%DECSETDOCS-I-ENDRESTORE, The PCA Documentation saveset has been restored.
%VMSINSTAL-I-RESTORE, Restoring product save set F ...
%DECSETDOCS-I-ENDRESTORE, The SCA Documentation saveset has been restored.
 Installation of DECSETDOCS V12.0 completed at 10:16

    Adding history entry in VMI$ROOT:[SYSUPD]VMSINSTAL.HISTORY

    Creating installation data file: VMI$ROOT:[SYSUPD]DECSETDOCS120.VMI_DATA
```

```
Enter the products to be processed from the next distribution volume set.
* Products: exit Return
 VMSINSTAL procedure done at 10:22
SYSTEM>logout Return
  SYSTEM       logged out at 31-MAR-1995 10:22:48.21
```