Compaq DECset for OpenVMS

Installation Guide

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This guide explains how to install the Compaq DECset for OpenVMS software on the Compaq OpenVMS Operating System.

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Preface

This guide explains how to install the *Compaq DECset for OpenVMS* software on systems running the Compaq OpenVMS Operating System. Throughout this guide, OpenVMS systems refers to both the OpenVMS VAX and OpenVMS Alpha platforms, unless explicitly stated.

The DECset software consists of the following components:

- Compaq Code Management System for OpenVMS (CMS)
- Compaq Language-Sensitive Editor for OpenVMS (LSE)
- Compaq Source Code Analyzer for OpenVMS (SCA)
- Compaq Digital Test Manager for OpenVMS (DTM)
- Compaq Performance and Coverage Analyzer for OpenVMS (PCA)
- Compaq Module Management System for OpenVMS (MMS)
- Compaq DECset Environment Manager for OpenVMS (ENVMGR)

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 preparatory information for installing the DECset components.
- Chapter 2 describes how to start the DECset installation procedure to install any or all of the DECset components.
- Chapter 3 describes how to install CMS.
- Chapter 4 describes how to install DTM.
- Chapter 5 describes how to install LSE.

- Chapter 6 describes how to install MMS.
- Chapter 7 describes how to install PCA.
- Chapter 8 describes how to install SCA.
- Chapter 9 gives post-installation information.
- Appendix A gives a sample script for upgrading all the DECset components.
- Appendix B gives lists of data files installed on your system by VMSINSTAL, grouped by component application.
- Appendix C gives information on dealing with errors during the installation or use of the DECset product.

Associated Documents

The following documentation may be helpful when installing the DECset software:

- *Guide to Detailed Program Design for OpenVMS Systems*
- *Guide to DIGITAL Performance and Coverage Analyzer for OpenVMS Systems*
- *DIGITAL Performance and Coverage Analyzer Command-Line Interface Guide*
- *DIGITAL Performance and Coverage Analyzer for OpenVMS Reference Manual*
- *Guide to DIGITAL Module Management System for OpenVMS Systems*
- *Guide to DIGITAL Language-Sensitive Editor for OpenVMS Systems*
- *DIGITAL Language-Sensitive Editor/Source Code Analyzer for OpenVMS Reference Manual*
- *DIGITAL Language-Sensitive Editor Command-Line Interface and Callable Routines Manual*
- *Guide to DIGITAL Source Code Analyzer for OpenVMS Systems*
- *DIGITAL Source Code Analyzer Command-Line Interface and Callable Routines Manual*
- *Guide to DIGITAL Test Manager for OpenVMS Systems*
- *DIGITAL Test Manager for OpenVMS Reference Manual*
- *Guide to DIGITAL Code Management System for OpenVMS Systems*

- *DIGITAL Code Management System Reference Manual*
- *DIGITAL Code Management System Callable Routines Reference Manual*
- *OpenVMS System Manager's Manual*
- *OpenVMS System Management Utilities Reference Manual*
- *OpenVMS License Management Utility Manual*

You may also find the following documents useful:

- *Using DECset for OpenVMS Systems* describes how to use the DECset tools and platform software to create an effective application development environment.
- *Compaq DECset for OpenVMS Cookbook for an Integrated Product Development Environment* contains further examples of how to use the DECset tools in specific application development environments.

References to Other Products

Some older products that DECset components previously worked with might no longer be available or supported by Compaq. Any reference in this manual to such products does not imply actual support, or that recent interoperability testing has been conducted with these products.

Note

These references serve only to provide examples to those users who continue to use these products with DECset.

See the Software Product Description for a current list of the products that the DECset components are warranted to interact with and support.

Conventions

The following conventions are 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.
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.
. . .	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 described.
( )	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.

Convention	Description
UPPERCASE	Uppercase indicates the name of a command, routine, file, 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 Components

This chapter describes the preparations and requirements necessary for installing the components of the *Compaq DECset for OpenVMS* software. 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 Compaq representative.

Note

DECset provides online release notes. Compaq strongly recommends that you read the release notes before proceeding with the installation. For information on accessing these release notes, see Section 1.3. When installing a product update, read the *Read Before Installing or Using Compaq DECset for OpenVMS Version n.nn* letter before you begin.

1.1 Required Operating System and Prerequisite Hardware and Software

The Compaq DECset for OpenVMS, Version 12.4 software requires Compaq OpenVMS Operating System, Version 6.2, 7.1, or 7.2 (7.2-1 for Alpha systems) software.

For a complete list of the required operating system components, current hardware requirements, and prerequisite and optional software and their required version numbers, see the Software Product Description (SPD).

1.2 License Registration

The OpenVMS License Management Facility (LMF) is available on the OpenVMS Alpha and OpenVMS VAX operating systems. Before you install any DECset components, you must register your component software licenses, 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 component. The PAK is a paper certificate that contains information about the license.

During the installation, you are asked if you have registered the component 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.

Note

DECset components can be licensed individually, or a single license can encompass all components. The IVP requires that the applicable license be loaded.

To register a license under OpenVMS, 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. Next, enter the LICENSE LOAD command with the appropriate qualifiers.

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

1.3 Accessing Online Documentation

Each DECset media kit includes online release notes for each component application as well as a journal of technical notes entitled, the *Compaq DECset for OpenVMS Cookbook for an Integrated Product Development Environment*. The prompts to display or print this material during the installation is described in Section 2.5 and Section 2.6.

To access this documentation, print the ASCII text files shown in Table 1–1.

Table 1–1 Online Documentation Files for DECset

Document	File Name
Compaq DECset for OpenVMS Cookbook for an Integrated Product Development Environment	SYS$COMMON:[SYSHLP.EXAMPLES.DECSET] DECSET_COOKBOOK.TXT [1]
DECset Release Notes[2]	SYS$HELP:DECSET124.RELEASE_NOTES[3]
Environment Manager Release Notes	SYS$HELP:ENVMGR014.RELEASE_NOTES
Code Management System Release Notes	SYS$HELP:CMS041.RELEASE_NOTES
Module Management System Release Notes	SYS$HELP:MMS034.RELEASE_NOTES
Digital Test Manager Release Notes	SYS$HELP:DTM040.RELEASE_NOTES
Language-Sensitive Editor Release Notes	SYS$HELP:LSE047.RELEASE_NOTES
Source Code Analyzer Release Notes	SYS$HELP:SCA047.RELEASE_NOTES
Performance and Coverage Analyzer Release Notes	SYS$HELP:PCA047.RELEASE_NOTES

[1] PostScript (.PS) and hypertext (.HTML) versions of the cookbook are also available.

[2] This file is a pointer to the release notes for ENVMGR and all DECset elements or tools.

[3] PostScript (.PS) versions of the release notes are also available.

Online help also provides a pointer to the release notes file. After the installation, enter the following command line:

```
$ HELP component RELEASE_NOTES [Return]
```

In the previous command line, *component* represents the DECset component for which you want help.

```
$ HELP DECset RELEASE_NOTES [Return]
```

In the previous command line, *DECset* represents both DECset and the Environment Manager. The system displays a pointer to the release notes for each one.

1.4 Installation Procedure Requirements

This section describes various requirements for installing the DECset software on OpenVMS systems.

If done individually, the installation of each component takes approximately 1 to 10 minutes, depending on the type of media, your system configuration, and whether you are performing a product upgrade or a new installation.

1.4.1 Privileges

Before installing any DECset component, you must be logged into an account that has SETPRV, or at least the following privileges:

- CMKRNL
- WORLD
- SYSPRV

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

1.4.2 System Parameters and Disk Space

Table 1–2 and Table 1–3 list the following system resources for each DECset component 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 all the options for each component. If some options are not installed, such as the DECwindows interface, the actual amount of space required will be reduced.

Note

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

Table 1–2 DECset Installation Requirements (Alpha Systems)

DECset Component	Disk Space During Installation	Disk Space After Installation	Global Pagelets Required[1]	Global Sections Required
ENVMGR	13,500	12,000	1,000	8
CMS	44,000	5,000	3,500	10
DTM	25,000	16,500	3,000	10
LSE	45,000	32,500[2]	10,000	15
MMS	7,500	4,500	1,900	6
PCA	40,000	8,000[3]	2,500	7
SCA	25,000	22,000	12,000	15
Requirements for Complete DECset Installation				
All DECset Components	200,000	100,500	33,900	71

[1]Plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation.

[2]Includes all the supported LSE languages. This number can be reduced by approximately 300 for every language not selected.

[3]Includes the PCA demo package, which requires 110 blocks.

Table 1–3 DECset Installation Requirements (VAX Systems)

DECset Component	Disk Space During Installation	Disk Space After Installation	Global Pages Required[1]	Global Sections Required
ENVMGR	13,500	12,000	700	6
CMS	9,000	2,500	1,500	15
DTM	15,000	10,000	800	15[4]
LSE	40,000	27,500[2]	6,000	15
MMS	4,500	3,000	1,000	8[5]
PCA	23,000	5,000[3]	1,200	8
SCA	18,000	15,500	5,000	15
Requirements for Complete DECset Installation				
All DECset Components	123,000	75,500	16,200	82

[1]Plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation.

[2]Includes all the supported LSE languages. This number can be reduced by approximately 300 for every language not selected.

[3]Includes the PCA demo package, which requires 110 blocks.

[4]After installation, 12 global sections are used.

[5]After installation, 6 global sections are used.

1.4.3 VMSINSTAL Requirements

When you invoke VMSINSTAL, it checks the following:

- Whether you are logged in to a privileged account (such as SYSTEM)
- Whether any users are logged in to the system
- Whether you have adequate quotas for installation

If VMSINSTAL detects any 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. See Section 2.5 for more details.

1.4.4 Backing Up Your System Disk

At the beginning of the installation, VMSINSTAL asks if you have backed up your system disk. Compaq recommends that you do a system backup before installing any software.

Use the backup procedures established at your site. For details on performing a system disk backup, see the section on the OpenVMS Backup Utility in the *OpenVMS System Manager's Manual*.

1.5 User Account Quotas and Privileges

To use any DECset component, each account must meet 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)
- Buffered I/O limit (BIOLM)
- Direct I/O limit (DIOLM)
- Subprocess limit (PRCLM)
- Working set default (WSDEF)
- Pagefile quota (PGFLQUOTA)
- Process privileges (TMPMBX and NETMBX)

Table 1–4 and Table 1–5 list specific requirements in each of these areas for each DECset component you are installing. Use the OpenVMS Authorize Utility (AUTHORIZE) to compare the current values of these quotas with the requirements for each component. 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 MODIFY command. For example:

```
UAF> MODIFY SYSTEM /ASTLM=100 Return
```

For more information, see the *OpenVMS System Management Utilities Reference Manual*.

Table 1–4 lists the DECset account quotas for OpenVMS Alpha systems.

Table 1–4 DECset Account Quotas (Alpha Systems)

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

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

[2]3,000 pagelets (optimum).

Table 1–5 lists the DECset account quotas for OpenVMS VAX systems.

Table 1–5 DECset Account Quotas (VAX Systems)

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

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

[2]3,000 pages (optimum).

1.6 Standard System Maintenance Procedures

The following sections show how to do various standard procedures:

- Check UAF parameters.
- Calculate values for the GBLPAGES and GBLSECTIONS system parameters.
- Change parameter values with the AUTOGEN command procedure.

1.6.1 Checking UAF Parameters

Before you install DECset, you should check whether your account has sufficient quotas to perform the installation. You can check the quotas by entering the following command at the DCL prompt to invoke the AUTHORIZE utility:

```
$ RUN SYS$SYSTEM:AUTHORIZE Return
UAF> SHOW SYSTEM Return
```

After checking your quotas, enter the EXIT command at the UAF> prompt to return to DCL level.

1.6.2 Calculating the Values for GBLPAGES and GBLSECTIONS

To install and run DECset, you must have sufficient shared memory space available. This memory space is expressed in terms of free global sections and free global pagelets (Alpha systems) or global pages (VAX systems). Each global section defines an area of virtual memory for shared use, and each global pagelet/page represents a set of contiguous-byte locations within a global section that is used for memory mapping and management.

In order to determine whether there is adequate available memory, you must first find out how many free global pagelets/pages and global sections you have on your system. You can then use AUTOGEN if you need to increase the GBLSECTIONS or GBLPAGES system parameters.

To determine the number of available global pagelets/pages and global sections 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

393 Global Sections Used,  59856/33244 Global Pages Used/Unused
```

When you enter this command, the system displays a summary of the number of global sections used, the number of global pagelets/pages used, and the number of global pagelets/pages available.

You can then 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          512       250        60       4095  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 10 global sections. Therefore, if the number of global sections used (displayed by INSTALL) plus 10 exceeds the current number of global sections, you must increase the number of available global sections before you can install CMS.

If the values the system displays are greater than the values listed in Table 1–2 and Table 1–3, you do not need to increase the values for these parameters. If the value of free global pagelets/pages and global sections is less than the value in Table 1–2 and Table 1–3, you must increase the system parameter settings.

Section 1.6.3 describes the procedures for increasing these values using AUTOGEN.

1.6.3 Changing System Parameter Values with AUTOGEN

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

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

To add a new parameter, add a line to the file that includes both the name of the parameter and its value, as follows:

```
WSMAX = 1024
```

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

```
ADD_GBLPAGES = 2000
```

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

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

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

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

For more information about using AUTOGEN, see the *OpenVMS System Manager's 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 each of the selected DECset components

This chapter describes the preliminary installation steps performed for whatever installation you are planning. Whether you are performing a complete DECset installation, or any combination of components, these steps are completed first. The following chapters describe the subsequent installation steps for each of the DECset components.

2.1 Prerequisite Software

DECset requires a valid OpenVMS operating system configuration. If you plan to use the DECwindows interface for any component, you must also have Compaq DECwindows Motif for OpenVMS software installed on your system.

For a complete list of versions of these products compatible with this version of DECset, refer to the Software Product Description (SPD).

2.2 Accessing the Online Release Notes

When you invoke VMSINSTAL by specifying DECSET*nnn*, DECset copies online release notes for all the components to the SYS$HELP directory. If you invoke VMSINSTAL with the OPTIONS N parameter, DECset prompts you to display and print the release notes before installation begins. See Step 4 of Section 2.6.

To obtain the release notes after the installation, print the following file, which serves as a pointer to the separate component files:

```
$ PRINT SYS$HELP:DECSET124.RELEASE_NOTES
```

This file identifies the files containing release notes for individual components (see Section 1.3 for a listing).

Note

Compaq recommends that you read the release notes before continuing with the installation.

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.

The DECset requirements for free disk storage space are different during installation and after installation. Table 2–1 lists the storage requirements.

Table 2–1 Disk Space Storage Requirements

Operating System	During Installation	After Installation
OpenVMS Alpha	200,000	100,500
OpenVMS VAX	123,000	75,500

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.

In most cases, installation can be direct from the distribution media. If you need to copy the distribution kit onto disk, see Table 2–1 to determine how many free blocks you will need for the disk where you plan to copy the kit.

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

- CMKRNL
- WORLD
- SYSPRV

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

2.4 Backing Up Your System Disk

At the beginning of the installation, VMSINSTAL asks if you have backed up your system disk. Compaq recommends that you do a system backup before installing any software.

Use the backup procedures established at your site. For details on performing a system disk backup, see the section on the OpenVMS Backup Utility in the *OpenVMS System Manager's Manual*.

2.5 Using VMSINSTAL

After you log in to a privileged account to install DECset, set the default directory to SYS$UPDATE. Next, 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 saveset-name *device-name* [option-list]

VMSINSTAL is in the SYS$UPDATE directory. The elements that make up the VMSINSTAL command line are the VMSINSTAL command, *saveset-name*, *device-name*, and *option-list*. The elements that follow the command are defined as follows:

saveset-name

The installation name for the component. For DECset, use the following installation name:

DECSET*nnn*

The *nnn* represents the release number (such as DECSET124 for Version 12.4).

To obtain the directory location of the DECset save sets on the CD, refer to the *OpenVMS Software Product Library Master Index* that accompanies the CD distribution kit.

Another method is to complete these steps before starting installation:

1. Enter the following command to determine whether the CD drive is already mounted:

   ```
   $ SHOW DEVICE DKA400:
   ```

2. If it is not mounted, enter the appropriate MOUNT command to mount the CD (omit the /FOREIGN qualifier).

3. To obtain the name of the save set, use a DIRECTORY command specifying the directory file from the previous command:

   ```
   $ DIRECTORY DKA300:[DECSET124...]*.A
   ```

device-name

The name of the device on which you plan to mount the media and the directory containing the DECset save set. For example, DKA300: is the device name used in examples in this guide. The directory is [DECSET*nnn*], where *nnn* is the DECset release number.

To specify the device name on the @VMSINSTAL command line, you might enter the following command:

```
DKA300:[DECSET124.KIT]
```

option-list

The word OPTIONS followed by one or more of the option designators A, G, L, N, and R, as shown in Table 2–2. By default, none of these optional distribution, logging, or installation functions are activated unless the designators are specified with the OPTIONS key.

Table 2–2 Installation Option Designators

Option	Name	Description
A	**A**uto_answer	Creates a file that contains your initial answers to VMSINSTAL questions and prompts. You can then use the option (and the answer file) to save time during a reinstallation (typically after upgrading your system).
G	**G**et saveset G *device:[directory]*	Copies kit save sets to *DEVICE:[DIRECTORY]*. Specifying a fast system storage device can speed up installations, if you install from there. This can also serve as a group distribution resource.
L	File **L**og	Logs all activity to the terminal during installation.
N	Display or Print the Release **N**otes	Indicates that you want to see the installation question on release notes. If you do not include the N option, VMSINSTAL does not ask you about them. You should review the release notes before proceeding with an installation, in case they contain additional information about the installation. If you are restarting the installation and have already reviewed the release notes, you can omit the N option. (The DECset release notes are available regardless, because VMSINSTAL copies them to the SYS$HELP directory.)
R	Alternate **R**oot	Lets you install DECset on a system other than that of the running system.

For detailed information on these software installation options, see the *OpenVMS System Manager's Manual*. If you specify more than one option, separate the options with commas. For example:

```
OPTIONS A,N
```

The following example invokes VMSINSTAL to install DECset and shows the system response. This example uses the OPTIONS N option to access the release notes during the installation.

```
$ @VMSINSTAL DECSET124 DKA300:[DECSET124.KIT] OPTIONS N

      OpenVMS AXP Software Product Installation Procedure V7.2-1

It is 31-MAY-2000 at 15:31.
Enter a question mark (?) at any time for help.
```

If you omit either the product name or device name, VMSINSTAL prompts you for them later in the installation procedure.

When you invoke VMSINSTAL, it checks the following:

- Whether you are logged in to a privileged account. Compaq 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, for both OpenVMS Alpha and OpenVMS VAX:

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 determines 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. For example, you might accept the default as follows:

```
%VMSINSTAL_W_ACTIVE, The following processes are still active:
      DECW$SERVER_0
      DECW$MWM
* Do you want to continue anyway [NO]? Return
```

2.6 Installing DECset

This section contains excerpts from the installation procedure and explains each step. Default values appear in brackets ([ ]) throughout the installation procedure. When you accept a default value or enter another selection, press Return to advance. You can obtain help information on any question by responding with a question mark (?).

Note

Whether you are installing one, several, or all DECset components, the installation process always starts with these steps. For details on the balance of the installation, see the chapters for the individual components you have selected. Other details can include language support, installation options, and so forth.

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 returns you to DCL level. If you want to retry the installation after pressing Ctrl/Y, you must proceed from Step 2.

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
```

2. **Invoke VMSINSTAL with a kit on CD-ROM.**

   In this example, DECset Version 12.4 is to be installed, and the release notes option is requested.

```
$ @VMSINSTAL DECSET124 DKA300:[DECSET124.KIT] OPTIONS N

      OpenVMS AXP Software Product Installation Procedure V7.2-1


It is 31-MAY-2000 at 15:31.
Enter a question mark (?) at any time for help.
```

3. **Confirm system backup.**

```
* 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.

```
* Where will the distribution volumes be mounted :
```

   If you did not specify a device name when you invoked VMSINSTAL (see Step 2), you are prompted for that information. In either case, your answers enable the installation to continue as follows:

```
The following products will be processed:

  DECSET V12.4


    Beginning installation of DECSET V12.4 at 15:31

%VMSINSTAL-I-RESTORE, Restoring product save set A...
    Release notes included in this kit are always copied to SYS$HELP.
   .
   .
   .
```

4. **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
```

- **Option 1**—VMSINSTAL displays the release notes online immediately. To terminate the display of a component's release notes at any time, press Ctrl/C.
- **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
```

- **Option 3**—VMSINSTAL displays the release notes online immediately. To terminate the display of a component's release notes 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 the SYS$HELP directory.
- **Option 4**—VMSINSTAL does not display or print the release notes at this time. However, the release notes are always copied to SYS$HELP, for future use.

Next, VMSINSTAL displays the following prompt:

```
* Do you want to continue the installation [NO]?: YES Return
%VMSINSTAL-I-RELMOVED, Product's release notes have been 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.

5. **Select components to install.**

After displaying a component list and DECset copyright information, the installation program offers a menu selection to choose the components you want to install.

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

        - DECset Collective Installation Procedure -

    This is the collective installation procedure for all of the
    DECset components:
    .
    .
    .
    These are the options provided by this collective
    installation procedure:

    DECset components:

                - all the Compaq DECset for OpenVMS components
                - Compaq Language-Sensitive Editor for OpenVMS (LSE)
                - Compaq Source Code Analyzer for OpenVMS (SCA)
                - Compaq Code Management System for OpenVMS (CMS)
                - Compaq Digital Test Manager for OpenVMS (DTM)
                - Compaq Performance Coverage Analyzer for OpenVMS (PCA)
                - Compaq Module Management System for OpenVMS (MMS)
                - DECset Cookbook - PostScript Format
                - DECset Cookbook - HTML Format
                - DECset Cookbook - Text Format

                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 [YES]?
  * Are you sure you want to install all the options [YES]?
```

For example, if you choose LSE, SCA, and CMS, VMSINSTAL displays the following:

```
        .
        .
        .
          These are the selections you made:

                - Language-Sensitive Editor for OpenVMS
                - Source Code Analyzer for OpenVMS
                - Code Management System for OpenVMS

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

Note that the *Compaq DECset for OpenVMS Cookbook for an Integrated Product Development Environment* is also offered as an installation option. This guide provides examples of how to use the DECset tools in specific development environments and is provided online in ASCII text (.TXT), hypertext (.HTML), and PostScript (.PS) formats. If you choose to install the cookbook, the appropriate files are are placed in the SYS$COMMON:[SYSHLP.EXAMPLES.DECSET] directory after all of the selected component installations are complete.

6. **Install the ENVMGR component.**

   No matter which components you selected for installation, the ENVMGR component is installed:

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

%DECSET-I-START_ENVMGR, The following questions relate to DECset ENVMGR
installation

   The DECset Environment Manager (ENVMGR) comprises:

        . 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]?
```

   Answer YES if you want DECset to install both the DCL and DECwindows interfaces for the ENVMGR component.

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

   The Installation Verification Procedure (IVP) procedure checks the integrity of the installed files. Choose YES to have VMSINSTAL perform the IVP automatically at the end of the installation procedure. If you choose NO, you can still run the IVP manually after the installation is complete.

```
%DECSET-I-DONEASK, You have answered all the questions for DECset ENVMGR
installation.
```

2.7 Installing the DECset Components

After the Environment Manager installation is complete, the DECset installation procedure continues for the selected components. Details and examples for each DECset component can be found in the following chapters, such as Chapter 3, Installing the Compaq Code Management System for OpenVMS.

The steps that follow are performed in order on each of the components for which you are licensed, whether you are installing the entire DECset product or just a few components. The installation performs the following steps:

1. Prompts you for installation information for each component you selected
2. Performs the installation of each component
3. Performs the IVP for each component
4. Displays a summary of the IVP results for the selected components

See Appendix A for an example of an upgrade to DECset and all its components.

3

Installing the Compaq Code Management System for OpenVMS

This chapter gives specific instructions on installing the Compaq Code Management System for OpenVMS (CMS) software.

The first two sections present installation and user account requirements. Section 3.3 continues the installation process from where it left off in Section 2.6. Finally, the chapter describes how to run CMS on multiple nodes of an OpenVMS Cluster. This structure is used for each of the component chapters, except when a component has specific requirements not common to the other components.

Note

CMS release notes, up to and including this version, can be found in SYS$HELP:CMS*nnn*.RELEASE_NOTES (where *nnn* is the version and update number, such as 041 for Version 4.1).

3.1 Installation Procedure Requirements

The Compaq DECset Environment Manager for OpenVMS (ENVMGR) is installed as part of the installation of the CMS component. ENVMGR consists of the following:

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

The DCL and DECwindows interface components are optional.

If DTM is to be used with CMS, DTM requires the CMS files SYS$SHARE:CMSSHR.EXE and CMSPROSHR.EXE. 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 DTM.

The CMS installation takes approximately 2 to 6 minutes, depending on the type of media, your system configuration, and whether you are performing a product upgrade or a new installation. Before installing CMS, you must have SETPRV privileges, or CMKRNL, WORLD, and SYSPRV privileges. In addition, you must have the available resources specified in Table 3–1.

Table 3–1 CMS Installation Requirements (Minimum)

Operating System	Disk Space During Installation	Disk Space After Installation	Global Page/Pagelets Required	Global Sections Required
OpenVMS Alpha	44,000	5,000	3,500 pagelets[1]	10
OpenVMS VAX	9,000	2,500	1,500 pages[1]	15

[1]Plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation

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 minimum requirements shown in Table 3–2.

Table 3–2 CMS Account Quotas

Resource Name	OpenVMS Alpha Pagelets Required	OpenVMS VAX Pages Required
ASTLM (AST limit)	14	14
BYTLM (Buffered I/O byte count quota)	14,000	14,000
ENQLM (Enqueue quota)	30	30
FILLM (Open file limit)	6	6
TQELM (Timer queue entry limit)	1	1
PGFLQUOTA (Paging file quota)	30,000	30,000

Use the OpenVMS Authorize Utility (AUTHORIZE) to compare the current values of these quotas with the requirements for each component. 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 MODIFY command. For example:

```
UAF> MODIFY SYSTEM /ASTLM=100 Return
```

For more information, see the *OpenVMS System Management Utilities Reference Manual*.

3.3 Installing CMS

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

The following steps are performed as part of any DECset installation, and are accomplished *before* the subsequent component-specific steps described in this chapter:

1. Log in to a privileged account and set your default device and directory to SYS$UPDATE.
2. Invoke VMSINSTAL with a kit on CD-ROM.
3. Confirm system backup.
4. Select a release notes option.
5. Select components to install.
6. Install the ENVMGR component.

See Section 2.6 for full descriptions of these universal, preliminary installation steps.

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 returns you to DCL level. To retry the installation procedure after pressing Ctrl/Y, proceed from Step 2 in Section 2.6.

7. **Start the CMS installation.**

```
%DECSET-I-START_CMS, The following questions relate to CMS
installation.
* Do you want to install the CMS DECwindows interface [YES]? Return
```

Answer YES if you want DECset to install interface.

If you are installing CMS on an Alpha system running OpenVMS Version 7.2 or later, you are asked if you want to install support for the Extended File Specifications feature.

```
  On OpenVMS Alpha, CMS can support element names using Extended
  File Specifications. The option exists to install CMS with or
  without support for Extended File Specifications.

* Install Extended File Specifications support [YES]? Return
```

Answer YES if you want CMS to install the Extended File Specifications support.

8. **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:       VAXSET
   Producer:      DEC
   Version:       12.4

   Product:       CMS
   Producer:      DEC
   Version:       4.1

   * Is one of these authorization keys registered and loaded [YES]? Return
   ```

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

   If you incorrectly answer YES, DECset enables you to complete the installation without running the Installation Verification Procedure (IVP). However, when you try to invoke CMS, you will receive a message indicating that you are not licensed to run the product.

9. **Select installation options.**

   You are then asked the following question:

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

   The IVP runs tests to verify that 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. 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. For more IVP information, see Section 9.3.

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

The directories SYS$HELP, SYS$MANAGER, SYS$MESSAGE, SYS$SHARE, SYS$SYSTEM, SYS$STARTUP, and SYS$TEST might 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.

10. **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 this part of the installation is indicated by the following message:

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

If CMS installation is successful, 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.

Note

For a list of the CMS files installed (or modified) on your system, see Appendix B.

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

11. **Observe the Installation Verification Procedure.**

If you chose to run the IVP in Step 8, VMSINSTAL calls the IVP to verify that CMS was successfully installed:

```
%CMS-I-IVPBEGIN, Begin CMS V4.1 Installation Verification Procedure
%CMS-S-CREATED, CMS Library $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] created
%CMS-I-LIBIS, library is $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
%CMS-S-LIBSET, library set
%CMS-I-LIBIS, library is $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
%CMS-S-LIBSET, library set
-CMS-I-SUPERSEDE, library list superseded
%CMS-S-CREATED, element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CMS$IVP_TEST.FILE created
%CMS-S-RESERVED, generation 1 of element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] -
        CMS$IVP_TEST.FILE reserved

Reservations in CMS Library $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
```

```
CMS$IVP_TEST.FILE
    (1)   SYSTEM     1      31-MAY-2000 15:47:49 ""
%CMS-S-GENCREATED, generation 2 of element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
        CMS$IVP_TEST.FILE created
-CMS-I-NOCHANGES, no changes
%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 $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CMS$IVP_TEST.FILE verified
%CMS-I-VEREDFS, element data files verified
%CMS-S-VERIFIED, library $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] verified
%CMS-S-FETCHED, generation 1 of element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] -
        CMS$IVP_TEST.FILE fetched
%CMS-I-FILEXISTS, file already exists, $2$DKA300:[SYS0.SYSUPD.DECSET124]CMS$IVP_TEST.FILE;2 created
%CMS-S-FETCHED, generation 2 of element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] -
        CMS$IVP_TEST.FILE fetched
%CMS-S-IDENTICAL, files are identical
%CMS-S-CREATED, class $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL1 created
%CMS-S-GENINSERTED, generation 1 of element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] -
        CMS$IVP_TEST.FILE inserted into class $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL1
%CMS-S-CREATED, class $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL2 created
%CMS-S-GENINSERTED, generation 2 of element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] -
        CMS$IVP_TEST.FILE inserted into class $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL2
%CMS-S-FETCHED, generation 2 of element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] -
        CMS$IVP_TEST.FILE fetched

Elements in CMS Library $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]

CMS$IVP_TEST.FILE ""

Element generations in CMS Library
        $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]

CMS$IVP_TEST.FILE
  2     31-MAY-2000 15:47:50 SYSTEM ""
  1     31-MAY-2000 15:47:48 SYSTEM ""

Classes in CMS Library $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]

CL1             "Test1"
CL2             "Test2"

Element generations in CMS Library $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
```

```
CMS$IVP_TEST.FILE/2
%CMS-S-GENREMOVED, generation 2 of element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] -
        CMS$IVP_TEST.FILE removed from class $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL2
%CMS-S-DELETED, class $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL2 deleted
%CMS-S-GENREMOVED, generation 1 of element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] -
        CMS$IVP_TEST.FILE removed from class $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL1
%CMS-S-DELETED, class $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL1 deleted
%CMS-S-CREATED, group $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR1 created
%CMS-S-CREATED, group $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR2 created
%CMS-S-INSERTED, group $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR1 inserted into group
$2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR2
%CMS-S-REMOVED, group $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR1 removed from group
$2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR2
%CMS-S-MODIFIED, group $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR1 modified

Groups in CMS Library $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]

GR2                 GR3

%CMS-S-IVPSUCCESS, CMS V4.1 IVP completed successfully
%CMS-I-IVPEND, End Installation Verification Procedure
```

12. **End the installation procedure.**

    If you selected only the CMS installation, the VMSINSTAL procedure ends at the same time, as follows:

    ```
    %DECSET-I-DONECMS, The installation of CMS V4.1 completed

       VMSINSTAL procedure done at 15:49
    ```

    When the product installation procedure is complete, you can choose to install more products or log out. 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 Installing CMS on an OpenVMS Cluster

If you want to run CMS on multiple nodes of an OpenVMS Cluster, 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 OpenVMS Cluster 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_VMS.COM:

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

   To use the product on other nodes in the OpenVMS Cluster, you must replace the version of the DCL tables installed on the other OpenVMS Cluster 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 Compaq Digital Test Manager for OpenVMS

This chapter explains how to install the Compaq Digital Test Manager for OpenVMS (DTM) software.

The first two sections present installation and user account requirements. Section 4.3 continues the installation process from where it left off in Section 2.6. Finally, the chapter describes how to run DTM on multiple nodes of an OpenVMS Cluster. This structure is used for each of the component chapters, except when a component has specific requirements not common to the other components.

Note

DTM release notes, up to and including this version, can be found in SYS$HELP:DTM*nnn*.RELEASE_NOTES (where *nnn* is the version and update number, such as 040 for Version 4.0).

4.1 Installation Procedure Requirements

The Compaq DECset Environment Manager for OpenVMS (ENVMGR) is installed as part of the installation of the DTM component. ENVMGR consists of the following:

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

The DCL and DECwindows interface components are optional.

If DTM is to be used with CMS, DTM requires the CMS files SYS$SHARE:CMSSHR.EXE and CMSPROSHR.EXE. 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 DTM.

The installation of DTM takes approximately 1 to 3 minutes, depending on the type of media, your system configuration, and whether you are performing a product upgrade or a new installation. Before installing DTM, you must have SETPRV privileges, or CMKRNL, WORLD, and SYSPRV privileges. In addition, you must have the available resources specified in Table 4–1.

Table 4–1 DTM Installation Requirements (Minimum)

Operating System	Disk Space During Installation	Disk Space After Installation	Global Page/Pagelets Required	Global Sections Required
OpenVMS Alpha	25,000	16,500	3,000 pagelets[1]	10
OpenVMS VAX	15,000	10,000	800 pages[1]	15[2]

[1]Plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation.

[2]After installation, 12 global sections are used.

4.2 User Account Quotas and Privileges

To use DTM, each account must have TMPMBX and NETMBX privileges, and the minimum requirements shown in Table 4–2.

Table 4–2 DTM Account Quotas

Resource Name	OpenVMS Alpha Pagelets Required	OpenVMS VAX Pages Required
ASTLM (AST limit)	100	100
BYTLM (Buffered I/O byte count quota)	60,000	60,000
ENQLM (Enqueue quota)	30	30
FILLM (Open file limit)	20	20
PRCLM (Subprocess creation quota)	4	4
PGFLQUOTA (Paging file quota)	20,000	20,000

Note

DECwindows testing might require quotas for other applications being tested.

A minimum required page file quota for using DTM varies depending on 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 observe the resources consumed at peak system usage. Then set the page file quota to a value somewhat beyond that required at peak usage.

Use the OpenVMS Authorize Utility (AUTHORIZE) to compare the current values of these quotas with the requirements for DTM. 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 MODIFY command. For example:

```
UAF> MODIFY SYSTEM /ASTLM=100 Return
```

For more information, see the *OpenVMS System Management Utilities Reference Manual*.

4.3 Installing DTM

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

The following steps are performed as part of any DECset installation, and are accomplished *before* the subsequent component-specific steps described in this chapter:

1. Log in to a privileged account and set your default device and directory to SYS$UPDATE.
2. Invoke VMSINSTAL with a kit on CD-ROM.
3. Confirm system backup.
4. Select a release notes option.

5. Select components to install.

6. Install the ENVMGR component.

See Section 2.6 for full descriptions of these universal, preliminary installation steps.

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 returns you to DCL level. If you want to retry the installation procedure after pressing Ctrl/Y, you must proceed from Step 2.

7. **Respond to license registration queries.**

   DTM 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 DTM. The following is an example of such information:

   ```
   Product:       VAXSET
   Producer:      DEC
   Version:       12.4

   Product:       DTM
   Producer:      DEC
   Version:       4.0

   * Is one of these authorization keys registered and loaded? [YES]? Return
   ```

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

   If you incorrectly answer YES, DECset enables you to complete the installation without running the Installation Verification Procedure (IVP). However, when you try to invoke DTM, you will receive a message indicating that you are not licensed to run the product.

8. **Select installation options.**

   You are then asked the following question:

   ```
   * Do you want to run the IVP after the installation [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, 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 at the prompt.

```
* 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 might contain previous versions of DTM 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.

9. **Read the informational messages.**

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

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

   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 DTM Help text and the DTM command-line definition.

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

10. **Observe the installation verification procedure.**

    If you chose to run the IVP in Step 8, VMSINSTAL calls the IVP to verify that DTM was installed successfully:

```
%DTM-I-BEGINIVP, Beginning Digital Test Manager V4.0 IVP
%DTM-S-CREATED, Digital Test Manager library $2$DKA300:[SYS0.SYSUPD.DECSET124.DTMTEST] created
%DTM-S-LIBIS, Digital Test Manager  library is $2$DKA300:[SYS0.SYSUPD.DECSET124.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 Digital Test Manager Library
$2$DKA300:[SYS0.SYSUPD.DECSET124.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 Digital Test Manager Library $2$DKA300:[SYS0.SYSUPD.DECSET124.DTMTEST]

VAR1            "first variable"
    Value = NEWVALUE
%DTM-S-CREATED, group GROUP1 created

Groups in Digital Test Manager Library $2$DKA300:[SYS0.SYSUPD.DECSET124.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 Digital Test Manager Library $2$DKA300:[SYS0.SYSUPD.DECSET124.DTMTEST]

GROUP1              GROUP2
%DTM-S-CREATED, collection COLL1 created

Collections in Digital Test Manager Library $2$DKA300:[SYS0.SYSUPD.DECSET124.DTMTEST]

COLL1          1 test    31-MAY-2000 15:48:20
       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, Digital Test Manager library $2$DKA300:[SYS0.SYSUPD.DECSET124.DTMTEST]
verified
%DTM-I-ENDIVP, Digital Test Manager V4.0 IVP SUCCESSFUL.
```

11. **End the installation procedure.**

If you selected only the DTM installation, the VMSINSTAL procedure ends at the same time, as follows:

```
Installation of DTM V4.0 completed at 15:49

VMSINSTAL procedure done at 15:49
```

When the product installation procedure is complete, you can choose to install more products or log out. 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.

4.4 Installing DTM on an OpenVMS Cluster

If you want to run DTM on multiple nodes of an OpenVMS Cluster, first check to see that you have the appropriate software license. Then, follow these steps after installing DTM:

1. Enter the LICENSE LOAD command to activate the license on each node in the OpenVMS Cluster on which DTM 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. In addition, you must add the following line to your system startup procedure, SYS$MANAGER:SYSTARTUP_VMS.COM:

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

   To use the product on other nodes in the OpenVMS Cluster, you must replace the version of the DCL tables installed on the other OpenVMS Cluster 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.

4.5 Running DTM on a Mixed OpenVMS Cluster

You might want to run DTM on a mixed OpenVMS Cluster that supports various versions of OpenVMS software on different nodes. If so, you cannot install DTM on only one system. For example, if DTM is to be used for interactive terminal testing on an OpenVMS Cluster that includes two systems running OpenVMS Versions 6.2 and 7.2, DTM must be installed on both systems.

5 Installing the Compaq Language-Sensitive Editor for OpenVMS

This chapter explains how to install the Compaq Language-Sensitive Editor for OpenVMS (LSE) software.

The first two sections present installation and user account requirements. Section 5.3 continues the installation process from where it left off in Section 2.6. Finally, the chapter describes how to run LSE on multiple nodes of an OpenVMS Cluster. This chapter also includes some post-installation information.

Note

LSE release notes, up to and including this version, can be found in SYS$HELP:LSE*nnn*.RELEASE_NOTES (where *nnn* is the version and update number, such as 047 for Version 4.7).

5.1 Installation Procedure Requirements

The Compaq DECset Environment Manager for OpenVMS (ENVMGR) is installed as part of the installation of the LSE component. ENVMGR consists of the following:

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

The DCL and DECwindows interface components are optional.

The LSE installation takes approximately 3 to 10 minutes, depending on the type of media, your system configuration, and whether you are performing a product upgrade or a new installation. Before installing LSE, you must have SETPRV privileges, or CMKRNL, WORLD, and SYSPRV privileges. In addition, you must have the available resources specified in Table 5–1.

Table 5–1 LSE Installation Requirements (Minimum)

Operating System	Disk Space During Installation	Disk Space After Installation	Global Page/Pagelets Required	Global Sections Required
OpenVMS Alpha	45,000	32,500[2]	10,000 pagelets[1]	15
OpenVMS VAX	40,000	27,500[2]	6,000 pages[1]	15

[1]Plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation.

[2]Includes all supported LSE languages. This number can be reduced by approximately 300 for every language not selected.

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.

5.2 User Account Quotas and Privileges

To use LSE, each account must have TMPMBX and NETMBX privileges, and the minimum requirements shown in Table 5–2.

Table 5–2 LSE Account Quotas

Resource Name	OpenVMS Alpha Pagelets Required	OpenVMS VAX Pages Required
ASTLM (AST limit)	24	24
BYTLM (Buffered I/O byte count quota)	13,000	13,000
ENQLM (Enqueue quota)	30	30
FILLM (Open file limit)	20	20
BIOLM (Buffered I/O limit)	18	18
DIOLM (Direct I/O limit)	18	18
PRCLM (Subprocess creation quota)	5	5
WSDEF (Working set size)	1,024	1,024
PGFLQUOTA (Paging file quota)[1]	20,000	20,000

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

A FILLM of 20 is appropriate for a typical LSE usage pattern and enables LSE to exhibit full functionality. It might 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 require additional units of FILLM:

- Buffer-change journal files
- SCA databases
- Reading and writing of source files
- Diagnostic file for the REVIEW command
- Keystroke journaling
- Image activation of other components, such as SCA and 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 MODIFY command. For example:

```
UAF> MODIFY SYSTEM /ASTLM=100 Return
```

For more information, see the *OpenVMS System Management Utilities Reference Manual*.

After you log in to a privileged account to install SCA, invoke VMSINSTAL, the command procedure that installs this product. For an example of this procedure and a description of its options, see Section 2.5.

5.3 Installing LSE

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

The following steps are performed as part of any DECset installation, and are accomplished *before* the component-specific steps described in this chapter:

1. Log in to a privileged account and set your default device and directory to SYS$UPDATE.
2. Invoke VMSINSTAL with a kit on CD-ROM.
3. Confirm system backup.
4. Select a release notes option.
5. Select components to install.
6. Install the ENVMGR component.

See Section 2.6 for full descriptions of these universal, preliminary installation steps.

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 returns you to DCL level. If you want to retry the installation procedure after pressing Ctrl/Y, you must proceed from Step 2.

7. **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:

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

Product:       VAXSET
Producer:      DEC
Version:       12.4

Product:       LSE
Producer:      DEC
Version:       4.7

* Is one of these authorization keys registered and loaded [YES]? Return
```

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

If you incorrectly answer YES, you will receive a message indicating that you are not licensed to run the product, and the installation procedure will be terminated.

8. **Select installation options.**

```
* 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 might 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 IVP runs tests to verify that the installation 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. For more IVP information, see Section 9.3.

9. **Install LSE source files option.**

The installation procedure asks you if you want to install LSE source files. The following OpenVMS Alpha example shows these files occupying approximately 16,000 blocks of space.

```
 Please note that the total system disk space consumed by the unsupported
 LSE source files is approximately 16,000 blocks.  Compaq 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 [YES]? Return

 The files will be installed in SYS$SYSROOT[SYSHLP.EXAMPLES.LSE]
```

10. **Select default command language option.**

```
1 line written to file SYS$SYSDEVICE:[SYS0.SYSUPD.DECSET nnn]
COMM_LANG.OUT;1

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

To select the PORTABLE command language as your system-wide default command language, press Return to accept the default PORTABLE language.

To select the VMSLSE command language, which is compatible with the command language available in versions of LSE prior to Version 4.0, type VMSLSE and press Return.

Individual users can override the system default command language. See the *Guide to DIGITAL Language-Sensitive Editor for OpenVMS Systems* for more information.

11. **Select language support.**

    Templates for some languages are shipped on the LSE kit. The installation procedure displays the names of the language templates available on the LSE kit and 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 Ada, Ada95, BASIC, BLISS, C, COBOL, C++, FORTRAN,
FORTRAN 90, MACRO, Pascal, and PL/I 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 ADA95 [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 F90 [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
```

12. **Read the informational messages.**

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

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

    ```
    %DECSET-I-DONEASK, You have answered all the questions for LSE
    installation
        .
        .
        .
    This installation added or modified the following files:
    ```

    If the installation procedure is successful, 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. For a list of the added or modified files, see Appendix B.

    If you entered YES in response to the prompt that requests a file purge at Step 8, previous versions of the LSE files are now purged.

13. **Observe the Installation Verification Procedure.**

    If you chose to run the IVP in Step 8, VMSINSTAL now calls the IVP to verify that LSE was installed successfully:

    ```
    %LSE-I-BEGINIVP, Beginning Language-Sensitive Editor V4.7 IVP
    36 lines written to file DISK:[SYSTEM.SCRATCH]LSE$IVP.LIS;1

    %LSE-I-ENDIVP, Language-Sensitive Editor V4.7 IVP SUCCESSFUL.
    36 lines written to file $1$DIA3:[VMS$COMMON.SYSMGR]LSE$IVP.LIS;1
    ```

14. **End the installation procedure.**

    If you selected only the LSE installation, the VMSINSTAL procedure ends at the same time, as follows:

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

       VMSINSTAL procedure done at 15:49
    ```

    When the product installation procedure is complete, you can choose to install more products or log out. 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.

5.4 Installing LSE on an OpenVMS Cluster

If you want to run LSE on multiple nodes of an OpenVMS Cluster, 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 OpenVMS Cluster 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_VMS.COM (the site-specific startup file):

   ```
   @SYS$STARTUP:LSE$STARTUP.COM
   ```
3. To use the product on other nodes in the OpenVMS Cluster, you must replace the version of the DCL tables installed on the other OpenVMS Cluster nodes. To do this, perform the following steps:

   a. Log in to a node on the cluster.

   b. Run INSTALL, then enter the following command:

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

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

Note

The installation procedure modifies the DCL command table so 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.

6
Installing the Compaq Module Management System for OpenVMS

This chapter explains how to install the Compaq Module Management System for OpenVMS (MMS) software.

The first two sections present installation and user account requirements. Section 6.3 continues the installation process from where it left off in Section 2.6. Finally, the chapter describes running MMS on multiple nodes of an OpenVMS Cluster. This structure is used for each of the component chapters, except when a component has specific requirements not common to the other components.

Note

MMS release notes, up to and including this version, can be found in SYS$HELP:MMS*nnn*.RELEASE_NOTES (where *nnn* is the version and update number, such as 034 for Version 3.4).

6.1 Installation Procedure Requirements

The Compaq DECset Environment Manager for OpenVMS (ENVMGR) is installed as part of the installation of the MMS component. ENVMGR consists of the following:

- 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 Compaq FMS for OpenVMS (FMS) libraries. If FMS is not installed on your system, the procedure prints a message similar to the following:

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

The MMS installation takes approximately 1 to 3 minutes, depending on the type of media, your system configuration, and whether you are performing a product upgrade or a new installation. Before installing MMS, you must have SETPRV privileges, or CMKRNL, WORLD, and SYSPRV privileges. In addition, you must have the available resources specified in Table 6–1.

Table 6–1 MMS Installation Requirements (Minimum)

Operating System	Disk Space During Installation	Disk Space After Installation	Global Page/Pagelets Required	Global Sections Required
OpenVMS Alpha	7,500	4,500	1,900 pagelets[1]	6
OpenVMS VAX	4,500	3,000	1,000 pages[1]	8[2]

[1]Plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation.

[2]After installation, 6 global sections are used.

6.2 User Account Quotas and Privileges

To use MMS, each account must have a minimum of TMPMBX privilege, and the minimum requirements shown in Table 6–2.

Table 6–2 MMS Account Quotas

Resource Name	OpenVMS Alpha Pagelets Required	OpenVMS VAX Pages Required
ASTLM (AST limit)	14	14
BYTLM (Buffered I/O byte count quota)	13,000	13,000

(continued on next page)

Table 6–2 (Cont.) MMS Account Quotas

Resource Name	OpenVMS Alpha Pagelets Required	OpenVMS VAX Pages Required
ENQLM (Enqueue quota)	30	30
FILLM (Open file limit)	20	20
PGFLQUOTA (Paging file quota)	20,000	20,000
PRCLM (Subprocess creation quota)	2	2

Use the OpenVMS Authorize Utility (AUTHORIZE) to compare the current values of these quotas with the requirements for each component. 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 MODIFY command. For example:

```
UAF> MODIFY SYSTEM /ASTLM=100 Return
```

For more information, see the *OpenVMS System Management Utilities Reference Manual*.

6.3 Installing MMS

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

The following steps are performed as part of any DECset installation, and are accomplished *before* the subsequent component-specific steps described in this chapter:

1. Log in to a privileged account and set your default device and directory to SYS$UPDATE.
2. Invoke VMSINSTAL with a kit on CD-ROM.
3. Confirm system backup.
4. Select a release notes option.
5. Select components to install.
6. Install the ENVMGR component.

See Section 2.6 for full descriptions of these universal, preliminary installation steps.

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 returns you to DCL level. If you want to retry the installation procedure after pressing Ctrl/Y, you must proceed from Step 2.

7. **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:

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

Product:       VAXSET
Producer:      DEC
Version:       12.4

Product:       MMS
Producer:      DEC
Version:       3.4

* Is one of these authorization keys registered and loaded [YES]? Return
```

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

   If you incorrectly answer YES, DECset enables you to complete the installation without running the Installation Verification Procedure (IVP). However, when you try to invoke MMS, you will receive a message indicating that you are not licensed to run the product.

8. **Select installation options.**

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

   The IVP runs tests to verify that the installation 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.

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

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

The directories SYS$EXAMPLES, SYS$HELP, and SYS$SYSTEM might 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.

9. **Read the informational messages.**

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

```
%DECSET-I-START_MMS, MMS V3.4 installation in progress

%VMSINSTAL-I-RESTORE, Restoring product save set B ...
%MMS-I-NOFMSSUPP, MMS will not contain support for FMS.
%MMS-I-LINKIMAGE, Linking V3.4.
```

   Note

   You see the NOFMSSUPP message only if the FMS software is not installed on your system.

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

```
%DECSET-I-DONEMMS, The installation of MMS V3.4 completed
```

   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.

   If you entered YES in response to the prompt that requests a file purge at Step 8, previous versions of the MMS files are now purged.

10. **Observe the Installation Verification Procedure.**

    If you chose to run the IVP in Step 8, VMSINSTAL now calls the IVP to verify that MMS was installed successfully, and displays the following:

```
%MMS-I-BEGINIVP, Beginning Module Management System V3.4 IVP
%MMS-I-ENDIVP, Module Management System V3.4 IVP SUCCESSFUL.
```

11. **End the installation procedure.**

```
Installation of MMS V3.4 completed at 15:49

VMSINSTAL procedure done at 15:49
```

When the product installation procedure is complete, you can choose to install more products or log out. 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.

6.4 Installing MMS on an OpenVMS Cluster

To run MMS on multiple nodes of an OpenVMS Cluster, 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 OpenVMS Cluster on which MMS is to be executed, as described in the *OpenVMS License Management Utility Manual*.
2. Run SYS$STARTUP:MMS$STARTUP.COM on each node in the cluster that has a software license. In addition, you must add the following line to your system startup procedure, SYS$MANAGER:SYSTARTUP_VMS.COM:

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

3. To use the product on other nodes in the OpenVMS Cluster, you must replace the version of the DCL tables installed on the other OpenVMS Cluster 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

Installing the Compaq Performance and Coverage Analyzer for OpenVMS

This chapter explains how to install the Compaq Performance and Coverage Analyzer for OpenVMS (PCA) software.

The first two sections present installation and user account requirements. Section 7.3 continues the installation process from where it left off in Section 2.6. Finally, the chapter describes how to run PCA on multiple nodes of an OpenVMS Cluster. This structure is used for each of the component chapters, except when a component has specific requirements not common to the other components.

Note

PCA release notes, up to and including this version, can be found in SYS$HELP:PCA*nnn*.RELEASE_NOTES (where *nnn* is the version and update number, such as 047 for Version 4.7).

Note that PCA is compatible with the following software and languages:

Compaq ADA	DIGITAL DIBOL
Compaq Basic for OpenVMS	DIGITAL FORTRAN HPO
Compaq C for OpenVMS	DIGITAL RPG II
Compaq C++ for OpenVMS	VAX BLISS-32
Compaq COBOL for OpenVMS	VAX PL/I
Compaq Fortran for OpenVMS Systems	VAX SCAN
Compaq Pascal for OpenVMS Systems	

All features of PCA are available to each of these languages. DTM, LSE, and SCA can also be used in conjunction with PCA. See the Software Product Description (SPD) for information on specific versions of this software supported by PCA.

7.1 Installation Procedure Requirements

The Compaq DECset Environment Manager for OpenVMS (ENVMGR) is installed as part of the installation of the PCA component. ENVMGR consists of the following:

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

The DCL and DECwindows interface components are optional.

The PCA installation takes approximately 2 to 7 minutes, depending on the type of media, your system configuration, and whether you are performing a product upgrade or a new installation. Before installing PCA, you must have SETPRV privileges, or CMKRNL, WORLD, and SYSPRV privileges. In addition, you must have the available resources specified in Table 7–1.

Table 7–1 PCA Installation Requirements (Minimum)

Operating System	Disk Space During Installation	Disk Space After Installation	Global Page/Pagelets Required	Global Sections Required
OpenVMS Alpha	40,000	8,000[2]	2,500 pagelets[1]	7
OpenVMS VAX	23,000	5,000	1,200 pages[1]	8

[1]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.

[2]Includes the PCA demo package.

7.2 User Account Quotas and Privileges

To use PCA, each account must have a minimum of TMPMBX and NETMBX privileges, and the minimum requirements shown in Table 7–2.

Table 7–2 PCA Account Quotas

Resource Name	OpenVMS Alpha Pagelets Required	OpenVMS VAX Pages Required
ASTLM (AST limit)	30	30
BYTLM (Buffered I/O byte count quota)	13,000	13,000
ENQLM (Enqueue quota)	30	30
FILLM (Open file limit)	20	20
PGFLQUOTA (Paging file quota)	30,000	30,000

Use the OpenVMS Authorize Utility (AUTHORIZE) to compare the current values of these quotas with the requirements for each component. 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 MODIFY command. For example:

```
UAF> MODIFY SYSTEM /ASTLM=100 Return
```

For more information, see the *OpenVMS System Management Utilities Reference Manual*.

7.3 Installing PCA

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

The following steps are performed as part of any DECset installation, and are accomplished *before* the subsequent component-specific steps described in this chapter:

1. Log in to a privileged account and set your default device and directory to SYS$UPDATE.
2. Invoke VMSINSTAL with a kit on CD-ROM.
3. Confirm system backup.

4. Select a release notes option.
5. Select components to install.
6. Install the ENVMGR component.

See Section 2.6 for full descriptions of these universal, preliminary installation steps.

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 returns you to DCL level. If you want to retry the installation procedure after pressing Ctrl/Y, you must proceed from Step 2.

7. **Respond to license registration queries.**

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

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

   Product:       VAXSET
   Producer:      DEC
   Version:       12.4

   Product:       PCA
   Producer:      DEC
   Version:       4.7

   * Is one of these authorization keys registered and loaded [YES]? Return
   ```

   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 restart the installation.

   If you incorrectly answer YES, DECset enables you to complete the installation without running the Installation Verification Procedure (IVP). However, when you try to invoke PCA, you will receive a message indicating that you are not licensed to run the product.

8. **Select installation options.**

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

The IVP runs tests to verify that the installation 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.

```
* 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 might contain previous versions of 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 wish to install the PCA DECwindows analyzer [YES]? Return
* Do you wish to install the PCA DECwindows collector [YES]? Return
```

The PCA product consists of two major components, which can be installed individually:

- The Collector—Gathers various performance and test data on your running application
- The Analyzer—Processes and displays that data graphically, as a standalone utility

9. **Install the PCA demo package.**

```
* Do you want to install the PCA demo package [YES]? Return

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

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

10. **Read the informational messages.**

    The 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:

    ```
    %DECSET-I-DONEPCA, The installation of PCA completed
    ```

    If the installation procedure is successful, 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 PCA Help text and the PCA command-line definition.

    The PCA 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 8, previous versions of the PCA files are now purged.

11. **Observe the Installation Verification Procedure.**

    If you chose to run the IVP in Step 8, VMSINSTAL now calls the IVP to verify that PCA was successfully installed.

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

    ```
    %PCA-I-BEGINIVP, Beginning PCA V4.7 IVP

        Saving previously defined PCA logical names...
        Linking IVP image file...
        Running Collector test...
        Running Analyzer test...
        Checking test results...

    %PCA-I-IVPPASS, PCA V4.7 IVP Successful

        Deleting temporary files...
        Restoring logical names...
    ```

12. **End the installation procedure.**

    ```
       Installation of PCA V4.7 completed at 15:49

       VMSINSTAL procedure done at 15:49
    ```

    When the product installation procedure is complete, you can choose to install more products or log out. 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.

7.4 Installing PCA on an OpenVMS Cluster

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

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

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

3. To use the product on other nodes in the OpenVMS Cluster, you must replace the version of the DCL tables installed on the other OpenVMS Cluster 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.

Note

The installation procedure modifies the DCL command table so 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.

8 Installing the Compaq Source Code Analyzer for OpenVMS

This chapter explains how to install the Compaq Source Code Analyzer for OpenVMS (SCA) software.

The first two sections present installation and user account requirements. Section 8.3 continues the installation process from where it left off in Section 2.6. Finally, the chapter describes how to run SCA on multiple nodes of an OpenVMS Cluster. This structure is used for each of the component chapters, except when a component has specific requirements not common to the other components.

Note

SCA release notes, up to and including this version, can be found in SYS$HELP:SCA*nnn*.RELEASE_NOTES (where *nnn* is the version and update number, such as 047 for Version 4.7).

8.1 Installation Procedure Requirements

The Compaq DECset Environment Manager for OpenVMS (ENVMGR) is installed as part of the installation of the SCA component. ENVMGR consists of the following:

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

The DCL and DECwindows interface components are optional.

The installation of SCA takes approximately 2 to 5 minutes, depending on the type of media, your system configuration, and whether you are performing a product upgrade or a new installation. Before installing SCA, you must have SETPRV privileges, or CMKRNL, WORLD, and SYSPRV privileges. In addition, you must have the available resources specified in Table 8–1.

Table 8–1 SCA Installation Requirements (Minimum)

Operating System	Disk Space During Installation	Disk Space After Installation	Global Page/Pagelets Required	Global Sections Required
OpenVMS Alpha	25,000	22,000	12,000 pagelets[1]	15
OpenVMS VAX	18,000	15,500	5,000 pages[1]	15

[1]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.

8.2 User Account Quotas and Privileges

To use SCA, each account must have TMPMBX and NETMBX privileges, and the minimum requirements shown in Table 8–2.

Table 8–2 SCA Account Quotas

Resource Name	OpenVMS Alpha Pagelets Required	OpenVMS VAX Pages Required
ASTLM (AST limit)	24	24
BYTLM (Buffered I/O byte count quota)	18,000	18,000
ENQLM (Enqueue quota)	30	30
FILLM (Open file limit)	20	20
TQELM (Timer queue entry limit)	5	5
BIOLM (Buffered I/O limit)	18	18
DIOLM (Direct I/O limit)	18	18

(continued on next page)

Table 8–2 (Cont.) SCA Account Quotas

Resource Name	OpenVMS Alpha Pagelets Required	OpenVMS VAX Pages Required
PRCLM (Subprocess creation quota)	2	2
WSDEF (Working set size)	600[1]	600[1]
PGFLQUOTA (Paging file quota)	30,000	30,000

[1] 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 MODIFY command. For example:

```
UAF> MODIFY SYSTEM /ASTLM=100 [Return]
```

For more information, see the *OpenVMS System Management Utilities Reference Manual*.

8.3 Installing SCA

This section contains excerpts from the installation procedure and explains each step. Default values appear in brackets throughout the installation procedure. The following steps are performed as part of any DECset installation, and are accomplished *before* the subsequent component-specific steps described in this chapter:

1. Log in to a privileged account and set your default device and directory to SYS$UPDATE.
2. Invoke VMSINSTAL with a kit on CD-ROM.
3. Confirm system backup.
4. Select a release notes option.
5. Select components to install.
6. Install the ENVMGR component.

See Section 2.6 for full descriptions of these universal, preliminary installation steps.

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 returns you to DCL level. If you want to retry the installation procedure after pressing Ctrl/Y, you must proceed from Step 2.

7. **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:

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

        Product:       VAXSET
        Producer:      DEC
        Version:       12.4

        Product:       LSE
        Producer:      DEC
        Version:       4.7

        Note: LSE and SCA share the LSE license.

* Is one of these authorization keys registered and loaded [YES]?
```

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

   If you incorrectly answer YES, DECset enables you to complete the installation without running the Installation Verification Procedure (IVP). However, when you try to invoke SCA, you will receive a message indicating that you are not licensed to run the product.

8. **Choose the Installation Verification Procedure (IVP) options.**

   The IVP runs tests to verify that the installation 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 to the following IVP prompt:

```
       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
```

   Entering YES to this prompt causes the following information to be displayed:

```
    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. If you are running the installation at a remote node, set your DECwindows display using the following command:

```
$ SET DISPLAY/CREATE/NODE=nodename Return
```

   The *nodename* is the name of your local node where the display should appear. See the online Help for more information on setting your DECwindows display device.

   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
```

For more information on running the IVP manually after the installation is complete, see Section 9.3.

9. **Select installation options.**

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

       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]:
```

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 can either be generated randomly or defined manually. In either case, the password is 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 the 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.
```

```
   The password for the account should normally be automatically
   generated by SCA.  A user-supplied password may also be given
   (minimum size 10).  If a user-supplied password is provided, it
   will not be logged in the Auto Answer file and cannot be used for
   automated installs.

* Do you want to specify a password [NO]? yes

   Please enter a password of at least 10 characters.

* Password:
* Verification:

* 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 grant access to remote users who do not have a proxy
   account for the local node, SCA creates the SCA$SERVER 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.

   The password for the account should normally be automatically
   generated by SCA.  A user-supplied password may also be given
   (minimum size 10), a reason for a user-supplied password is
   when multiple network databases need updating in a cluster.
   If a user-supplied password is provided, it will not be
   logged in the Auto Answer file and cannot be used for
   automated installs.

* Do you want to specify a password [NO]? yes

   Please enter a password of at least 10 characters.

* Password:
* Verification:

* 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
```

See Section 8.5 for information on the SCA server installation and the quotas assigned to the SCA$SERVER and SCA$DEFAULT accounts.

10. **Read the informational messages.**

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

    ```
    %DECSET-I-DONESCA, The installation of SCA completed
    ```

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

    If the installation procedure is successful, 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 SCA HELP text and the SCA command-line definition. For a list of the added or modified files, see Appendix B.

11. **Observe the Installation Verification Procedure.**

    If you chose to run the IVP in Step 8, 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. See Section C.1 to see what to do in the event of a failure.

Event files are created by the IVP for the SCA and PDF sample libraries.

```
%SCA-I-BEGINIVP, Beginning Source Code Analyzer V4.7 IVP.

****  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  ****

The character cell portion of the IVP has completed successfully.
The DECwindows section will now execute.

The SCA main window should appear on your display.  It
will be set to the SCA Example library.  Verify that
this is the case, and then choose EXIT from the FILE menu.

If the DECset Environment Manager did not already appear on
your display, please verify that it appears as an icon as a
result of executing this IVP; then, restore the icon and
choose EXIT from the FILE menu.  (If the DECset Environment Manager
was on your display prior to the execution of this IVP and a
context had previously been applied via the DECset Environment
Manager's main window, that context will be applied to SCA as
part of SCA initialization.)

%SCA-I-ENDIVP, Source Code Analyzer V4.7 IVP SUCCESSFUL.
```

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

12. **End the installation procedure.**

```
   Installation of SCA V4.7 completed at 15:49

 Adding history entry in VMI$ROOT:[SYSUPD]VMSINSTAL.HISTORY

 Creating installation data file:  VMI$ROOT:[SYSUPD]SCA047.VMI_DATA

   VMSINSTAL procedure done at 15:49
```

When the product installation procedure is complete, you can choose to install more products or log out. 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.

8.4 Installing SCA on an OpenVMS Cluster

If you want to run SCA on multiple nodes of an OpenVMS Cluster, 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 OpenVMS Cluster 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_VMS.COM (the site-specific startup file):

   ```
   @SYS$STARTUP:SCA$STARTUP.COM
   ```
3. To use the product on other nodes in the OpenVMS Cluster, you must replace the version of the DCL tables installed on the other OpenVMS Cluster 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.

8.5 SCA Server Installation

SCA provides a server that enables 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$SERVER                       Owner:  DEC_SCA_SERVER
Account:  DECNET                           UIC:    [370,355] ([SCA$SERVER])
CLI:      DCL                              Tables: DCLTABLES
Default:  SYS$SYSDEVICE:[SCA$SERVER]
LGICMD:   SYS$SYSTEM:SCA$SERVER_LOGIN
Flags:  Restricted DisMail

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:  6   Login Fails:     0
Pwdlifetime:         90 00:00    Pwdchange:   (pre-expired)
Last Login:    (none) (interactive), 1-JUN-2000 13:22 (non-interactive)
Maxjobs:         0  Fillm:       300  Bytlm:       32767
Maxacctjobs:     0  Shrfillm:      0  Pbytlm:          0
Maxdetach:       0  BIOlm:       120  JTquota:      4096
Prclm:           8  DIOlm:       120  WSdef:        1024
Prio:            4  ASTlm:       120  WSquo:       15237
Queprio:         4  TQElm:        10  WSextent:    30474
CPU:        (none)  Enqlm:       200  Pgflquo:     20480
Authorized Privileges:
Default Privileges:
```

```
Username: SCA$DEFAULT                      Owner:  DEC_SCA
Account:  DECNET                           UIC:    [371,345] ([SCA$DEFAULT])
CLI:      DCL                              Tables: DCLTABLES
Default:  SYS$SYSDEVICE:[SCA$DEFAULT]
LGICMD:
Flags:  DisCtlY DefCLI LockPwd 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:  6   Login Fails:     0
Pwdlifetime:         90 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:      4096
Prclm:           0  DIOlm:         0  WSdef:        2000
Prio:            4  ASTlm:         0  WSquo:           1
Queprio:         4  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 might 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 they will be restarted using the new server code. Use the DCL commands SHOW SYSTEM/NETWORK and STOP/IDENTIFICATION, respectively.

8.6 Installing SCA Server on an OpenVMS Cluster

When the SCA server is installed, it creates or modifies the SCA$SERVER network object and the SCA$SERVER user account. If a password is not manually supplied during installation, a random password is generated and set on both the object and the account for each node in the cluster. If the SCA server is installed in a cluster with a common user authorization file but distinct network databases, then the password will not be set correctly in some of the network databases.

To resolve this problem, you must manually set the password in the authorization file and in all network databases during the main SCA installation. Make sure to use the same account password for all subsequent nodes in the cluster. See step 9 in Section 8.3 for an example of supplying a user-defined password during installation.

9
After the Installation

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

The installation procedure modifies the DCL command table so the component 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 component must log out of the system and log in again.

9.1 OpenVMS Cluster Setup

After you install DECset in an OpenVMS Cluster, you must perform the following tasks on each licensed node that does not share common system files:

- Modify the SYS$MANAGER:SYSTARTUP_VMS.COM file and execute the startup procedures for the installed components.
- Install DCLTABLES.EXE.
- Register the licenses for DECset.

You must edit SYS$MANAGER:SYSTARTUP_VMS.COM, the site-specific startup file, and add the following lines for the Environment Manager and each of the installed components:

```
@SYS$STARTUP:ENVMGR$STARTUP.COM
@SYS$STARTUP:[component]$STARTUP.COM
```

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

For more details, see the section on OpenVMS Cluster installation in the appropriate component chapter.

9.2 OpenVMS Mail Utility

You can use LSE to read and compose messages from the Mail utility. You can define the logical name MAIL$EDIT as CALLABLE_LSE 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. In addition, CMS and SCA must be installed as known images to be used from LSE when LSE is invoked from the Mail utility. (See Chapter 8 for instructions on installing SCA.)

9.3 Running the Installation Verification Procedure Separately

The Installation Verification Procedure (IVP) for each DECset component checks the integrity of installed files, either as part of the VMSINSTAL procedure or separately, as described here. Compaq strongly recommends that you run the IVPs after you install the components. Each component installation puts a command procedure in SYS$TEST for you to invoke. Table 9–1 lists the DECset component IVPs.

Table 9–1 DECset IVPs

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

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

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

The IVP creates a temporary subdirectory in your current, default directory, and places a library for each component 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. In addition, 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.

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

```
%CMS-E-IVPFAILURE, CMS V4.1 IVP failed.

%VMSINSTAL-E-IVPFAIL, The IVP for CMS V4.1 has failed.
```

See Section C.1 for information on what to do when a failure occurs.

9.4 Product Updates

Compaq might periodically issue 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 accompanies the update.

In addition, the update includes new release notes. The release notes describe the changes made to each DECset component since the previous release. The release notes for each update are provided online. Compaq strongly recommends that you read the release notes before you install any DECset components. They are also accessible at any time after the product is installed. For information on accessing the release notes before installing any DECset components, follow the installation procedure for each component. To locate the release notes after installation, display or print the release notes file as described in Section 1.3.

9.5 DECset as a Shared Image

When you expect a product to be used extensively on your system, you would usually reduce the system overhead and memory requirements by installing the software as a shared image. However, this process is unnecessary for DECset, because the VMSINSTAL procedure automatically installs the following components as a shared image:

- Compaq DECset Environment Manager for OpenVMS
- Compaq Code Management System for OpenVMS
- Compaq Digital Test Manager for OpenVMS
- Compaq Language-Sensitive Editor for OpenVMS

A Sample Installation Procedure

This appendix contains a sample upgrade of all the DECset components on an OpenVMS Alpha system, as well as a sample installation data file. Note that Section A.1 is only a sample. Sometimes the installation procedure is modified in updates of this product. Because this installation guide is not usually revised for updates, be sure to read the *Read Before Installing or Using Compaq DECset for OpenVMS Version n.nn* letter for your system before you install this product. This letter notes any significant changes in the installation that vary from this sample.

A.1 Sample Upgrade from Previous Version

```
@SYS$UPDATE:VMSINSTAL DKA300:[DECSET124.KIT] Return
 OpenVMS AXP Software Product Installation Procedure V7.2-1

It is 31-MAY-2000 at 15:31.

Enter a question mark (?) at any time for help.
* Are you satisfied with the backup of your system disk [YES]? Return

Enter the products to be processed from the first distribution volume set.
* Products: decset124 Return
* Enter installation options you wish to use (none): Return

The following products will be processed:
  DECSET V12.4

 Beginning installation of DECSET V12.4 at 15:31

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

          - DECset Collective Installation Procedure -

    This is the collective installation procedure for all of the
    DECset components:
```

```
          Compaq DECset Environment Manager for OpenVMS (ENVMGR)
          Compaq Code Management System for OpenVMS (CMS)
          Compaq Digital Test Manager for OpenVMS (DTM)
          Compaq Language-Sensitive Editor for OpenVMS (LSE)
          Compaq Module Management System for OpenVMS (MMS)
          Compaq Performance and Coverage Analyzer for
          OpenVMS (PCA)
          Compaq Source Code Analyzer for OpenVMS (SCA)

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

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         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)
                 - Digital Test Manager (DTM)
                 - Performance and Coverage Analyzer (PCA)
                 - Module Management System (MMS)
                 - DECset Cookbook - PostScript Format
                 - DECset Cookbook - HTML Format
                 - DECset Cookbook - Text Format

   Please choose your option(s):

* Do you want all the DECset components [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_ENVMGR, The following questions relate to DECset ENVMGR installation.

   The DECset Environment Manager (ENVMGR) 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]? Return
* Do you want to run the IVP after the installation [YES]? Return

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

* Do you want to install the CMS DECwindows interface [YES]? Return
```

```
 On OpenVMS Alpha CMS can support element names using Extended
 File Specifications.  The option exists to install CMS with or
 without support for Extended File Specifications.

* Install Extended File Specification support [YES]? no Return

        Product:      VAXSET
        Producer:     DEC
        Version:      12.4

        Product:      CMS
        Producer:     DEC
        Version:      4.1

* 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 CMS installation


%DECSET-I-START_DTM, The following questions relate to DTM installation.

        Product:      VAXSET
        Producer:     DEC
        Version:      12.4

        Product:      DTM
        Producer:     DEC
        Version:      4.0

* 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-CMSUSER, CMS concurrent use license found.

  With CMS capabilities installed, Digital Test Manager will have full
  CMS integration and perform more effectively.  If you install with CMS
  capabilities, Digital Test Manager will use a CMS concurrent use
  license unit.

  Compaq recommends you install Digital Test Manager with CMS capabilities.

* Install Digital Test Manager with built-in CMS capabilities [YES]? Return

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

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

        Product:      VAXSET
        Producer:     DEC
        Version:      12.4

        Product:      LSE
        Producer:     DEC
        Version:      4.7

* Is one of these authorization keys registered and loaded [YES]? Return
* 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.  Compaq 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 [YES]? Return

  The files will be installed in SYS$SYSROOT[SYSHLP.EXAMPLES.LSE]

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

    Language templates for Ada, Ada95, BASIC, BLISS, C, COBOL, C++, FORTRAN,
    FORTRAN 90, MACRO, Pascal, and PL/I 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 ADA95 [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 F90 [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

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


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

        Product:      VAXSET
        Producer:     DEC
        Version:      12.4

        Product:      MMS
        Producer:     DEC
        Version:      3.4

* 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 MMS installation

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

        Product:      VAXSET
        Producer:     DEC
        Version:      12.4

        Product:      PCA
        Producer:     DEC
        Version:      4.7
```

```
* 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
* Do you wish to install the PCA DECwindows analyzer [YES]? Return
* Do you wish to install the PCA DECwindows collector [YES]? Return
* Do you want to install the PCA demo package [YES]? Return

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

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

        Product:      VAXSET
        Producer:     DEC
        Version:      12.4

        Product:      LSE
        Producer:     DEC
        Version:      4.7

        Note: LSE and SCA share the LSE license.

* Is 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

  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.

  The password for the account should normally be automatically generated by SCA.

  A user-supplied password may also be given (minimum size 10).  If a
  user-supplied password is provided it will not be logged in the
  Auto Answer file and cannot be used for automated installs.

  If the account does not already exist you will be asked to specify a
  unique UIC for the account.
```

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

* Do you want to specify a password [NO]? Return
* Enter UIC for SCA$DEFAULT account (include brackets) [[371,345]]: Return

  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.

  The password for the account should normally be automatically generated by SCA.

  A user-supplied password may also be given (minimum size 10), a reason
  for a user-supplied password is when multiple network databases need updating
  in a cluster.  If a user-supplied password is provided it will not be logged
  in the Auto Answer file and cannot be used for automated installs.

  If the account does not already exist you will be asked to specify a
  unique UIC for the account.

    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.

  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.

* Do you want to specify a password [NO]? Return
* Enter UIC for SCA$SERVER account (include brackets) [[370,355]]: Return

%DECSET-I-DONEASK, 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.
    ***********************************************************************

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

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

  The installation will complete in 11-33 minutes depending
  on the installation media and processor type.

    ********************************************************************
      The installation procedure will now install the selected
      DECset components one by one.

    DECset Environment Manager V1.4
    Code Management System V4.1
    Digital Test Manager V4.0
    Language-Sensitive Editor V4.7
    Module Management System V3.4
    Performance and Coverage Analyzer V4.7
    Source Code Analyzer V4.7
    DECset Cookbook - PostScript Format
    DECset Cookbook - HTML Format
    DECset Cookbook - Text Format
    ********************************************************************
```

```
%DECSET-I-START_ENVMGR, DECset Environment Manager V1.4 installation in progress

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

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

%DECSET-I-DELETED, Deleted old version of SYS$MANAGER:DECSET$ENVMGR_STARTUP.COM
The installation of ENVMGR has added or modified:

            SYS$HELP:ENVMGR014_RELEASE_NOTES.PS
            SYS$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$ENVMGR.EXE
            DECW$SYSTEM_DEFAULTS:DECSET$ENVMGR.DAT
            DECW$SYSTEM_DEFAULTS:DECSET$ENVMGR.UID
            SYS$HELP:DECSET$ENVMGR.HLB
            VUE$LIBRARY:DECSET$MENU.VUE$DAT
            SYS$STARTUP:DECSET$ENVMGR_STARTUP.COM

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


%DECSET-I-DONEENVMGR, The installation of ENVMGR V1.4 completed


%DECSET-I-START_CMS, CMS V4.1 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
%VMSINSTAL-I-SYSDIR, This product creates system directory [SYSHLP.EXAMPLES.CMS].
%CREATE-I-EXISTS, VMI$COMMON:[SYSHLP.EXAMPLES.CMS] already exists

  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 V4.1 completed

%DECSET-I-START_DTM, DTM V4.0 installation in progress

%VMSINSTAL-I-RESTORE, Restoring product save set D ...
%DECSET-I-ENDRESTORE, All Digital Test Manager savesets have been restored.
%DECSET-I-PROHELP, Providing Digital Test Manager DCL and DECwindows help.
%DECSET-I-PRODCL, Providing DCL verb for Digital Test Manager.
%DECSET-I-PROEXE, Providing Digital Test Manager files.

  The Digital 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 performed on a cluster, you must    *
      * execute                                                     *
      *                                                             *
      *    $ @SYS$STARTUP:DTM$STARTUP.COM                           *
      *                                                             *
      * on all other nodes in the cluster.  In addition, you must   *
      * add the above line to your system startup procedure.        *
      *                                                             *
      ***************************************************************

%DECSET-I-DONEDTM, The installation of Digital Test Manager V4.0 completed

%DECSET-I-START_LSE, LSE V4.7 installation in progress

%VMSINSTAL-I-RESTORE, Restoring product save set E ...
%TPU-S-SAVEENV, environment written to $2$DKA300:[SYS0.SYSUPD.DECSET124]LSE$SYSTEM_ENVIRONMENT.ENV;1
%TPU-S-FILEIN, 91 lines read from file $2$DKA300:[SYS0.SYSUPD.DECSET124]SET_DEF_COMM_LANG.TPU;4
%TPU-I-PROCSUPERSEDED, definition of procedure LSE$$SYSTEM_MODE_SETTINGS superseded
-TPU-I-SOURCELINE, at source line 1
5 lines read from file $2$DKA300:[SYS0.SYSUPD.DECSET124]SAVE_DEF_COMM_LANG.LSE;4
File $2$DKA300:[SYS0.SYSUPD.DECSET124]LSE$SECTION.TPU$SECTION;6 created
2782 procedures, 1859 variables, 1129 keys saved


%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

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

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$PATTERNS.TPU
SYS$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
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]PACKAGE_SUPPORT.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]C-SEM-BEGIN-END.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]C-SEM-COMMON.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]C-SEM-INDENTED-BEGIN-END.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]C-SEM-K-R.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]CDU.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]DCL.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]HELP.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]HTML.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]JAVA.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LATEX.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]MAKE.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]MESSAGE.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]MMS.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]PERL.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]RUNOFF.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]SDL.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]SHELL.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]TABLE.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]TEXT.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]TPU.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]UNKNOWN.LSE
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]XLSE_COMMAND_HELP.HLP
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]XLSE_COMMANDS.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]XLSE_COMMON.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]XLSE_COMMON_KEYS.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]XLSE_EDT.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]XLSE_EDT_LK201_KEYS.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]XLSE_EDT_VT100_KEYS.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]XLSE_ENV.BUI
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]XLSE_HELP.BUI
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]XLSE_LK201_KEYS.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]XLSE_BUILD.COM
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]XLSE_SECTION.BUI
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]EMACS_SEARCH.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]RNF_DIFF.TPU
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]XLSE_READ_ME.TXT
SYS$SYSROOT:[SYSHLP.EXAMPLES.LSE]LATEX_HELPLIB.HLB
```

```
        **************************************************************
        *                                                            *
        * 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 V4.7 completed


%DECSET-I-START_MMS, MMS V3.4 installation in progress

%VMSINSTAL-I-RESTORE, Restoring product save set F ...
%DECSET-I-LINKIMAGE, Linking MMS V3.4.
%VMSINSTAL-I-SYSDIR, This product creates system directory [SYSHLP.EXAMPLES.MMS].

%CREATE-I-EXISTS, VMI$COMMON:[SYSHLP.EXAMPLES.MMS] already exists

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

        **************************************************************
        *                                                            *
        * 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 V3.4 completed

%DECSET-I-START_PCA, PCA V4.7 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

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

%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
```

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

%DECSET-I-DONEPCA, The installation of PCA V4.7 completed


%DECSET-I-START_SCA, SCA V4.7 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].
%VMSINSTAL-I-SYSDIR, This product creates system directory [SYSHLP.EXAMPLES.SCA.EXAMPLE].
%VMSINSTAL-I-SYSDIR, This product creates system directory [SYSHLP.EXAMPLES.SCA.2167A].
%VMSINSTAL-I-SYSDIR, This product creates system directory [SYSHLP.EXAMPLES.SCA.UNSUPPORTED].
%VMSINSTAL-I-SYSDIR, This product creates system directory [SYSHLP.EXAMPLES.SCA.UNSUPPORTED.RECOMP].

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

```
%DECSET-I-EXISTS, SCA$DEFAULT account already exists
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SCA$DEFAULT.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SCA$DEFAULT.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$SYSDEVICE:[SCA$DEFAULT].
%CREATE-I-EXISTS, SYS$SYSDEVICE:[SCA$DEFAULT] already exists
%DECSET-I-MODACC, Modifying account SCA$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$SERVER account already exists
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SCA$SERVER.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SCA$SERVER.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-SYSDIR, This product creates system disk directory SYS$SYSDEVICE:[SCA$SERVER].
%CREATE-I-EXISTS, SYS$SYSDEVICE:[SCA$SERVER] already exists
%DCL-S-SPAWNED, process JONES_1 spawned
%DCL-S-ATTACHED, terminal now attached to process JONES_1
     Configuration last run by SMITH on 31-MAY-2000 15:14:39.86
%NET$CONFIGURE-I-USECOMMON, using cluster common APPLICATION script
%NET$CONFIGURE-I-USECOMMON, using cluster common EVENT script
%NET$CONFIGURE-I-USECOMMON, using cluster common MOP_CLIENT script
%NET$CONFIGURE-I-MODCHECKSUM, checksumming NCL management scripts modified by
NET$CONFIGURE
%NET$CONFIGURE-I-CONFIGCOMPLETED, DECnet-Plus for OpenVMS configuration completed

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

     If an SCA server is currently running, you may get a message indicating
     that a command failed.  This message is displayed for informational
     purposes only and does not indicate that a problem exists; therefore,
     the message may be ignored.

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

     Configuration last run by JONES on 31-MAY-2000 15:43:40.79
%NET$CONFIGURE-I-USECOMMON, using cluster common APPLICATION script
%NET$CONFIGURE-I-USECOMMON, using cluster common EVENT script
%NET$CONFIGURE-I-USECOMMON, using cluster common MOP_CLIENT script
%NET$CONFIGURE-I-MAKEACCOUNT, this procedure creates user account SCA$SERVER
$NCL @SYS$COMMON:[SYSMGR]NET$APPLICATION_STARTUP.NCL-TEMP;

Node 0 Session Control Application SCA
at 2000-05-31-15:43:56.500-04:00Iinf

command failed due to:
 process failure

Identifier already exists

Node 0 Session Control Application SCA
at 2000-05-31-15:43:57.070-04:00Iinf

Characteristics
```

```
    Addresses                         =
       {
          name = SCA$SERVER
       }
    Client                            = <Default value>
    Incoming Alias                    = True
    Incoming Proxy                    = False
    Outgoing Alias                    = False
    Outgoing Proxy                    = False
    Node Synonym                      = True
    Image Name                        = SYS$SYSTEM:SCA$SERVER_LOGIN.COM
    User Name                         = "SCA$SERVER"
    Incoming OSI TSEL                 = <Default value>

$vef = F$verify(vef)
%NET$CONFIGURE-I-MODCHECKSUM, checksumming NCL management scripts modified by
NET$CONFIGURE
%NET$CONFIGURE-I-CONFIGCOMPLETED, DECnet-Plus for OpenVMS configuration completed
%DCL-S-RETURNED, control returned to process JONES
%DECSET-I-MODACC, Modifying account SCA$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

%DECSET-I-DONESCA, The installation of SCA V4.7 completed


DECset Cookbook installation in progress...

%VMSINSTAL-I-SYSDIR, This product creates system disk directory VMI$ROOT:[SYSHLP.EXAMPLES.DECSET].
%CREATE-I-EXISTS, VMI$ROOT:[SYSHLP.EXAMPLES.DECSET] already exists
%VMSINSTAL-I-RESTORE, Restoring product save set K...
%VMSINSTAL-W-NOFILE, New file DECSET_COOKBOOK_001.HTML does not exist.
%VMSINSTAL-W-NOFILE, New file DECSET_COOKBOOK_002.HTML does not exist.
%VMSINSTAL-W-NOFILE, New file DECSET_COOKBOOK_003.HTML does not exist.
%VMSINSTAL-W-NOFILE, New file DECSET_COOKBOOK_004.HTML does not exist.
%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...

    *******************************************************************
      The DECset collective installation will now run the Installation
      Verification Procedure for each of the components you selected to
      run the IVP.
    *******************************************************************


     +------------------------------------------------------------+
     |         Installation verification command procedure for    |
     |                  DECset Environment Manager                |
     +------------------------------------------------------------+

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%ENVMGR-I-BEGINIVP, Beginning DECset Environment Manager V1.4 IVP.

%ENVMGR-I-ENDIVP, DECset Environment Manager V1.4 IVP SUCCESSFUL.

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

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

%CMS-I-IVPBEGIN, Begin CMS V4.1 Installation Verification Procedure
%CMS-S-CREATED, CMS Library $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] created
%CMS-I-LIBIS, library is $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
%CMS-S-LIBSET, library set
%CMS-I-LIBIS, library is $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
%CMS-S-LIBSET, library set
-CMS-I-SUPERSEDE, library list superseded
%CMS-S-CREATED, element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CMS$IVP_TEST.FILE created
%CMS-S-RESERVED, generation 1 of element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
CMS$IVP_TEST.FILE reserved

Reservations in CMS Library $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]

CMS$IVP_TEST.FILE
    (1)   JONES     1      31-MAY-2000 15:47:49 ""
%CMS-S-GENCREATED, generation 2 of element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
CMS$IVP_TEST.FILE created
-CMS-I-NOCHANGES, no changes
%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 $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CMS$IVP_TEST.FILE verified
%CMS-I-VEREDFS, element data files verified
%CMS-S-VERIFIED, library $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST] verified
%CMS-S-FETCHED, generation 1 of element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
CMS$IVP_TEST.FILE fetched
%CMS-I-FILEXISTS, file already exists, $2$DKA300:[SYS0.SYSUPD.DECSET124]CMS$IVP_TEST.FILE;2 created
%CMS-S-FETCHED, generation 2 of element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
CMS$IVP_TEST.FILE fetched
%CMS-S-IDENTICAL, files are identical
%CMS-S-CREATED, class $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL1 created
%CMS-S-GENINSERTED, generation 1 of element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
CMS$IVP_TEST.FILE inserted into class $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL1
%CMS-S-CREATED, class $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL2 created
```

```
%CMS-S-GENINSERTED, generation 2 of element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
CMS$IVP_TEST.FILE inserted into class $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL2
%CMS-S-FETCHED, generation 2 of element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
CMS$IVP_TEST.FILE fetched

Elements in CMS Library $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]

CMS$IVP_TEST.FILE ""

Element generations in CMS Library
        $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]

CMS$IVP_TEST.FILE
  2     31-MAY-2000 15:47:50 JONES ""
  1     31-MAY-2000 15:47:48 JONES ""

Classes in CMS Library $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]

CL1             "Test1"
CL2             "Test2"

Element generations in CMS Library
$2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]

CMS$IVP_TEST.FILE/2
%CMS-S-GENREMOVED, generation 2 of element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
CMS$IVP_TEST.FILE removed from class $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL2
%CMS-S-DELETED, class $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL2 deleted
%CMS-S-GENREMOVED, generation 1 of element $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]
CMS$IVP_TEST.FILE removed from class $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL1
%CMS-S-DELETED, class $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]CL1 deleted
%CMS-S-CREATED, group $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR1 created
%CMS-S-CREATED, group $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR2 created
%CMS-S-INSERTED, group $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR1 inserted into group
$2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR2
%CMS-S-REMOVED, group $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR1 removed from group
$2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR2
%CMS-S-MODIFIED, group $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]GR1 modified


Groups in CMS Library $2$DKA300:[SYS0.SYSCOMMON.SYSTEST.CMS$IVP_TEST]

GR2                 GR3

%CMS-S-IVPSUCCESS, CMS V4.1 IVP completed successfully
%CMS-I-IVPEND, End Installation Verification Procedure

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```

```
%DTM-I-BEGINIVP, Beginning Digital Test Manager V4.0 IVP.
%DTM-S-CREATED, Digital Test Manager library $2$DKA300:[SYS0.SYSUPD.DECSET124.DTMTEST] created
%DTM-S-LIBIS, Digital Test Manager library is $2$DKA300:[SYS0.SYSUPD.DECSET124.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 Digital Test Manager Library
$2$DKA300:[SYS0.SYSUPD.DECSET124.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 Digital Test Manager Library $2$DKA300:[SYS0.SYSUPD.DECSET124.DTMTEST]

VAR1            "first variable"
    Value = NEWVALUE
%DTM-S-CREATED, group GROUP1 created

Groups in Digital Test Manager Library $2$DKA300:[SYS0.SYSUPD.DECSET124.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 Digital Test Manager Library $2$DKA300:[SYS0.SYSUPD.DECSET124.DTMTEST]

GROUP1              GROUP2
%DTM-S-CREATED, collection COLL1 created

Collections in Digital Test Manager Library $2$DKA300:[SYS0.SYSUPD.DECSET124.DTMTEST]

COLL1          1 test    31-MAY-2000 15:48:20
       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, Digital Test Manager library $2$DKA300:[SYS0.SYSUPD.DECSET124.DTMTEST] verified
%DTM-I-ENDIVP, Digital Test Manager V4.0 IVP SUCCESSFUL.

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%LSE-I-BEGINIVP, Beginning Language-Sensitive Editor V4.7 IVP.

36 lines written to file DISK:[JONES.SCRATCH]LSE$IVP.LIS;1

%LSE-I-ENDIVP, Language-Sensitive Editor V4.7 IVP SUCCESSFUL.

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%MMS-I-BEGINIVP, Beginning Module Management System V3.4 IVP.
%MMS-I-ENDIVP, Module Management System  V3.4 IVP SUCCESSFUL.

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```

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%PCA-I-BEGINIVP, Beginning PCA V4.7 IVP

    Saving previously defined PCA logical names...
    Linking IVP image file...
    Running Collector test...
    Running Analyzer test...
    Checking test results...

%PCA-I-IVPPASS, PCA V4.7 IVP Successful

    Deleting temporary files...
    Restoring logical names...

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%SCA-I-BEGINIVP, Beginning Source Code Analyzer V4.7 IVP.

****  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  ****

%SCA-I-ENDIVP, Source Code Analyzer V4.7 IVP SUCCESSFUL.

 Installation Verification Procedure Summary
        ******************************************

 DECset Environment Manager V1.4  Passed
 Code Management System V4.1    Passed
 Digital Test Manager V4.0  Passed
 Language-Sensitive Editor V4.7  Passed
 Module Management System V3.4  Passed
 Performance and Coverage Analyzer V4.7 Passed
 Source Code Analyzer V4.7  Passed

 Installation of DECSET V12.4 completed at 15:57

    Adding history entry in VMI$ROOT:[SYSUPD]VMSINSTAL.HISTORY

    Creating installation data file: VMI$ROOT:[SYSUPD]DECSET124.VMI_DATA

 VMSINSTAL procedure done at 15:57
```

B
Files Installed on Your System

This appendix contains full listings of the files added or modified in the DECset installation. The files are grouped by logical names, Environment Manager files, and individual component files.

B.1 Logical Names Defined on Your System

The following logical names are defined by the component startup files:

- SCA_SORTSHR
- SCA$2167A
- PCA$EXAMPLES
- SCA$EXAMPLE
- SCA$ROOT
- LSE$EXAMPLE
- TPU$JOURNAL
- DTM$UFDEFINES

The following logical names are defined on OpenVMS Alpha systems only:

- LSESHR_TV
- CMSSHR_TV
- SCA$SHARE_TV

B.2 ENVMGR Files Installed

The following table lists the files created or modified during the ENVMGR installation.

Directory	ENVMGR File Name
DECW$DEFAULTS.USER	DECSET$ENVMGR.DAT DECSET$ENVMGR.UID
SYS$STARTUP	DECSET$ENVMGR_STARTUP.COM
SYS$SYSTEM	DECSET$ENVMGR.EXE DECSET$ENVMGRCCT.EXE DECSET$START_ENVMGR.EXE
SYS$HELP	DECSET$ENVMGR.HLB ENVMGR014.RELEASE_NOTES ENVMGR014_RELEASE_NOTES.PS HELPLIB.HLB
SYS$LIBRARY	DCLTABLES.EXE DECSET$ENVMGRCCTSHR.EXE DECSET$ENVMGRSHR.EXE
SYS$TEST	ENVMGR$IVP.COM ENVMGR$SAMPLE.DECSET_CONTEXT ENVMGR$SAMPLE.DECSET_CONTEXT_DB
VUE$LIBRARY.USER	DECSET$MENU.VUE$DAT

B.3 CMS Files Installed

The following table lists the files created or modified during the CMS installation.

Directory	CMS File Name
SYS$STARTUP	CMS$STARTUP.COM
SYS$SYSTEM	CMS$DW.EXE CMS.EXE
SYS$MSG	CMSMSG.EXE
SYS$SHARE	CMS$EVENT_ACTION.EXE CMSPROSHR.EXE CMSSHR.EXE CMSSHR.IIF
SYS$LIBRARY	DCLTABLES.EXE
VUE$LIBRARY	CMS$PROFILE.VUE$DAT CMS$VUE_STARTUP.COM
SYS$HELP	CMS$DW_HELP.HLB CMS041.RELEASE_NOTES CMS041_RELEASE_NOTES.PS HELPLIB.HLB
SYS$TEST	CMS$IVP.COM
DECW$SYSTEM_DEFAULTS	CMS$DW.UID CMS$DW_DEFAULTS.DAT
SYSHLP.EXAMPLES.CMS	CMS$ROUTINES.SDL

B.4 DTM Files Installed

The following table lists the files created or modified during the DTM installation.

Directory	DTM File Name
SYS$STARTUP	DTM$STARTUP.COM
SYS$SYSTEM	DTM.EXE DXDTMCOMPARE.EXE DXDTMCONVERT.EXE DXDTMPLAYREC.EXE DXDTMSCREDIT.EXE
SYS$LIBRARY	DCLTABLES.EXE DTM$DW_DEFAULTS.DAT DTM$DW.UID DTM$UFDEFINES.TPU DTM_MASK_TEMPLATE.DAT DTMPLAYREC.UID DTMSCREDIT.UID DTMSHR.EXE DXDTMPLAYREC.DAT
VUE$LIBRARY	DTM$PROFILE.VUE$DAT VUE$DTM.COM
SYS$HELP	DTM$DW_HELPLIB.HLB DTM040_RELEASE_NOTES.PS DTM040.RELEASE_NOTES DTMPLAYREC.HLB DTMSCREDIT.HLB HELPLIB.HLB
SYS$TEST	DTM$IVP.COM

B.5 LSE Files Installed

The following table lists the files created or modified during the LSE installation.

Directory	LSE File Name
SYS$STARTUP	LSE$STARTUP.COM
SYS$SYSTEM	LSEDIT.EXE
SYS$MESSAGE	LSEMSG.EXE
SYS$LIBRARY	DCLTABLES.EXE LSESHR.EXE LSE$CCTSHR.EXE LSE$DECWSHR.EXE LSE$DEFAULTS.DAT LSE$SYSTEM_ENVIRONMENT.ENV LSE$SECTION.TPU$SECTION LSE$WIDGETS.UID LSE$DEBUG.TPU PSE$COMMENTS.EXE
VUE$LIBRARY.USER	LSE$EDIT_FILE.EXE LSE$EDIT_QUALIFIERS.EXE LSE$EDIT_OPTIONS.UID LSE$EDIT.COM LSE$PROFILE.VUE$DAT
SYS$HELP	HELPLIB.HLB LSE047_RELEASE_NOTES.PS LSE047.RELEASE_NOTES LSE$HELP.HLB LSE$MENU.HLB LSE$KEYPAD.HLB LSE$CLIHELP.HLB
SYS$TEST	LSE$IVP.COM
SYS$TEST.LSE	LSE$IVP.TPU

Directory	LSE File Name
SYSHLP.EXAMPLES.LSE	C-SEM-BEGIN-END.LSE
	C-SEM-COMMON.LSE
	C-SEM-INDENTED-BEGIN-END.LSE
	C-SEM-K-R.LSE
	CDU.LSE
	DCL.LSE
	EMACS_SEARCH.TPU
	EVE$CONSTANTS.UIL
	HELP.LSE
	HTML.LSE
	JAVA.LSE
	LATEX.LSE
	LATEX_HELPLIB.HLB
	LSE$CONSTANTS.UIL
	LSE$DECWINDOWS.TPU
	LSE$EDIT_ICONS.UIL
	LSE$EDIT_OPTIONS.UIL
	LSE$EVE_ADVANCED.TPU
	LSE$EVE_CORE.TPU
	LSE$EVE_DECWINDOWS.TPU
	LSE$EVE_EDIT.TPU
	LSE$EVE_EDT.TPU
	LSE$EVE_EXTEND.TPU
	LSE$EVE_EXTRAS.TPU
	LSE$EVE_FILE.TPU
	LSE$EVE_FORMAT.TPU
	LSE$EVE_HELP.TPU
	LSE$EVE_MENUS.TPU
	LSE$EVE_MOUSE.TPU
	LSE$EVE_PARSER.TPU
	LSE$EVE_SHOW.TPU
	LSE$EVE_TERMINALS.TPU
	LSE$EVE_WINDOWS.TPU
	LSE$GRAMMAR.TPU
	LSE$GRAMMAR_ADJUSTMENT.TPU
	LSE$GRAMMAR_ALIAS.TPU
	LSE$GRAMMAR_LANGUAGE.TPU
	LSE$GRAMMAR_PLACEHOLDER.TPU
	LSE$GRAMMAR_TOKEN.TPU
	LSE$GRAMMAR_UTIL.TPU
	LSE$HIGHLIGHT.TPU
	LSE$INITIALIZE.TPU
	LSE$KEY.TPU
	LSE$MENUS.TPU
	LSE$METHOD.TPU

Directory	LSE File Name
SYSHLP.EXAMPLES.LSE (Cont.)	LSE$MOUSE.TPU
	LSE$MULTI_WINDOW.TPU
	LSE$PARSER.TPU
	LSE$PATTERNS.TPU
	LSE$PROMPT.TPU
	LSE$SHOW.TPU
	LSE$SHOW_LIST.TPU
	LSE$USER.DIA
	LSE$USER.EXAMPLE
	LSE$USER2.EXAMPLE
	LSE$USER3.EXAMPLE
	LSE$VMS_CMS.TPU
	LSE$VMS_HELP.TPU
	LSE$VMS_SCA.TPU
	LSE$WIDGETS.UIL
	MAKE.LSE
	MESSAGE.LSE
	MMS.LSE
	PACKAGE_SUPPORT.TPU
	PACK_HEADERS.TXT
	PACK_HEADERS_CLI.TPU
	PACK_HEADERS_PORT.TPU
	PERL.LSE
	RNF_DIFF.TPU
	RUNOFF.LSE
	SDL.LSE
	SHELL.LSE
	TABLE.LSE
	TEXT.LSE
	TPU.ENV
	TPU.LSE
	UNKNOWN.LSE
	XLSE_BUILD.COM
	XLSE_COMMANDS.TPU
	XLSE_COMMAND_HELP.HLP
	XLSE_COMMON.TPU
	XLSE_COMMON_KEYS.TPU
	XLSE_EDT.TPU
	XLSE_EDT_LK201_KEYS.TPU
	XLSE_EDT_VT100_KEYS.TPU
	XLSE_ENV.BUI
	XLSE_HELP.BUI
	XLSE_LK201_KEYS.TPU
	XLSE_READ_ME.TXT
	XLSE_SECTION.BUI

B.6 MMS Files Installed

The following table lists the files created or modified during the MMS installation.

Directory	MMS File Name
SYS$STARTUP	MMS$STARTUP.COM
SYS$SYSTEM	MAKEMMS.EXE MMS.EXE
SYS$LIBRARY	DCLTABLES.EXE MMS$DW.UID MMS$DW_DEFAULTS.DAT
SYS$HELP	HELPLIB.HLB MMS034_RELEASE_NOTES.PS MMS034.RELEASE_NOTES MMS$DW_HELP.HLB
SYS$TEST	MMS$IVP.COM
SYSHLP.EXAMPLES.MMS	MMS$DEFAULT_RULES.MMS MMS$DEFAULT_SHELL_RULES.MMS
VUE$LIBRARY.USER	MMS$PROFILE.VUE$DAT MMS$VUE.COM

B.7 PCA Files Installed

The following table lists the files created or modified during the PCA installation.

Directory	PCA File Name
SYS$STARTUP	PCA$STARTUP.COM
SYS$SYSTEM	PCA$ANALYZER.EXE
SYS$LIBRARY	DCLTABLES.EXE PCA$COLLECTOR.EXE
VUE$LIBRARY.USER	PCA$PROFILE.VUE$DAT PCA$VUE.COM

Directory	PCA File Name
SYS$HELP	HELPLIB.HLB PCA047_RELEASE_NOTES.PS PCA047.RELEASE_NOTES PCA$HELP.HLB PCAA_HELP.HLB PCAC_HELP.HLB
SYS$TEST	PCA$IVP.COM
SYS$TEST.PCA	PCA$IVP.OBJ PCA$IVPA.LOG PCA$IVPC.LOG PCA$KITVERSION.COM PCA$SYSTEM_BUILDDEFS.COM
SYS$HELP.EXAMPLES.PCA	ALPHA_DEMO_USER_ROUTINE.OPT DEMO_USER_ROUTINE.C DEMO_USER_ROUTINE.COM DEMO_USER_ROUTINE.OBJ PCA$8QUEENS.C PCA$8QUEENS.PAS PCA$8QUEENS.PCA PCA$8QUEENS.PCAA PCA$8QUEENS.PCAC PCA$8QUEENS_C.EXE PCA$8QUEENS_C.OBJ PCA$8QUEENS_PAS.EXE PCA$8QUEENS_PAS.OBJ PCA$PRIMES.EXE PCA$PRIMES.FOR PCA$PRIMES.OBJ PCA$PRIMES.PCAA PCA$PRIMES.PCAC PRIMESIN.DAT VAX_DEMO_USER_ROUTINE.OPT
SYS$MESSAGE	PCA$MSG.EXE
DECW$SYSTEM_DEFAULTS	PCAC.UID PCAA.UID
DECW$DEFAULTS.USER	PCAC.DAT PCAA.DAT

B.8 SCA Files Installed

The following table lists the files created or modified during the SCA installation.

Directory	SCA File Name
SYS$STARTUP	SCA$STARTUP.COM
SYS$SYSTEM	SCA$MAIN.EXE SCA$DECW.EXE SCA$SERVER_LOGIN.COM SCA$SERVER_MAIN.EXE
SYS$LIBRARY	DCLTABLES.EXE SCA$SHARE.EXE SCA$PRO_SHARE.EXE SCA$QUERY_CALLABLE.ADA SCA$QUERY_CALLABLE.BAS SCA$QUERY_CALLABLE.FOR SCA$QUERY_CALLABLE.H SCA$QUERY_CALLABLE.MAR SCA$QUERY_CALLABLE.PAS SCA$QUERY_CALLABLE.PLI SCA$QUERY_CALLABLE.R32 SCA$QUERY_CALLABLE.SDI SCA$QUERY_CALLABLE.TPU SCA$REPORT_2167A_DESIGN.TPU SCA$REPORT_CUSTOMIZATIONS.TPU SCA$REPORT_FORMAT.TPU SCA$REPORT_FORMAT_DOCUMENT.TPU SCA$REPORT_FORMAT_RUNOFF.TPU SCA$REPORT_FORMAT_TEXT.TPU SCA$REPORT_GLOBALS.TPU SCA$REPORT_HELP.TPU SCA$REPORT_INTERNALS.TPU SCA$REPORT_OUTPUT.TPU SCA$REPORT_PACKAGE.TPU SCA$REPORT_PORTABLE_SYNTAX.TPU SCA$REPORT_UTILITIES.TPU SCA$REPORT_VALIDATE.TPU
SYS$MESSAGE	SCA$MESSAGES.EXE
SYS$HELP	HELPLIB.HLB SCA$HELP.HLB SCA$NEUTRAL_HELP.HLB SCA$MENU.HLB SCA047.RELEASE_NOTES.PS SCA047.RELEASE_NOTES

Directory	SCA File Name
SYS$TEST	SCA$IVP.COM
SYSTEST.SCA$IVP	SCA$IVP_TEST.COM SCA$IVP_TEST.LIS
SYSHLP.EXAMPLES.SCA. EXAMPLE	BUILDTABLE.ANA BUILDTABLE.C COPYFILE.ANA COPYFILE.C DESIGN_EXAMPLE.C DESIGN_EXAMPLE.ANA EXPANDSTRING.ANA EXPANDSTRING.C OPENFILES.H SCA$EVENT.DAT TRANSLIT.ANA TRANSLIT.C TYPE_EXAMPLE.C TYPE_EXAMPLE.H TYPE_EXAMPLE.ANA TYPES.H
SYSHLP.EXAMPLES.SCA.2167A	2167A_APPENDIX.SDML 2167A_DATA.SDML 2167A_DATA_FILES.SDML 2167A_DESIGN.SDML 2167A_FRONT.SDML 2167A_NOTES.SDML 2167A_PRELIMINARY.SDML 2167A_PROFILE.RNO 2167A_PROFILE.SDML 2167A_REFERENCED.SDML 2167A_REQUIREMENTS.SDML 2167A_SCOPE.RNO 2167A_SCOPE.SDML SCA$EVENT.DAT TR1_ADA.ADA TR1_ADA.ANA TR2_ADA.ADA TR2_ADA.ANA TR3_ADA_.ADA TR3_ADA_.ANA
VUE$LIBRARY.USER	SCA$PROFILE.VUE$DAT SCA$VUE.COM
DECW$DEFAULTS.USER	SCA.DAT SCA.UID

C
Recovering from Errors

This appendix provides information to help you with failures or errors that might occur during product installation or product use.

C.1 Failures During DECset Installation

If VMSINSTAL detects any problems during the installation, it notifies you and asks if you want to continue the installation. In some instances, you can enter Yes to continue. To stop the installation process and correct the situation, enter No and press return. Correct the problem and restart the installation.

If errors occur during the installation itself, or when the Installation Verification Procedure (IVP) is running, VMSINSTAL displays failure messages. If the installation fails, you see a message such as the following:

```
%VMSINSTAL-E-INSFAIL, The installation of CMS V4.1 has failed.
```

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

```
%CMS-E-IVPFAILURE, CMS V4.1 IVP failed.
```

```
%VMSINSTAL-E-IVPFAIL, The IVP for CMS V4.1 has failed.
```

If you have installed the SCA Server on an OpenVMS Cluster, authorization problems might cause an SCA IVP failure, such as the following:

```
**** Client testing complete ****
%SCA-I-CONNECTING, Requesting connection to 0::
%SCA-E-LINKLOST, link to 0:: has been disconnected
-SYSTEM-F-INVLOGIN, login information invalid at remote node
```

This system message indicates that the DECset Server will not start. The most common cause is that the password in the network database and the system authorization file are not the same. To verify this, enable privileges and issue the following NCP command:

```
NCP> SHOW OBJECT SCA$SERVER CHAR
```

After the password is displayed, use it to attempt to log in to the SCA$SERVER account. You should fail and receive the following message:

```
You are not authorized to login from this source
```

If instead the password is wrong, the system displays the following failure message:

```
User authorization failure
```

See Section 8.6 for an explanation of why the password might be in error, and the actions to correct this situation.

Errors can occur during the installation if any 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 2.5).
- 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: Companion Guide for Help Message Users*, your processor-specific installation and 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 might 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 of the installation procedure, as described in Section 2.6.