VAX Language-Sensitive Editor/ Source Code Analyzer Installation Guide

Order Number: AA–DB34J–TE

September 1990

This document contains instructions for installing the VAX Language-Sensitive Editor/Source Code Analyzer (VAX LSE/SCA) on the VMS operating system. It also explains how to read the online release notes before or after installing the product. This document applies to VAX LSE/SCA Version 3.1 and all maintenance updates throughout that version.

Revision/Update Information:	This revised manual supersedes the *VAX Language-Sensitive Editor Installation Guide* (Order Number AA–DB34H–TE) and the *VAX Source Code Analyzer Installation Guide* (Order Number AA–JE76D–TE).
Operating System and Version:	VMS Version 5.1 or higher for LSE. VMS Version 5.2 or higher for SCA. Future maintenance releases may require higher versions.
Software Version:	VAX Language-Sensitive Editor/ Source Code Analyzer Version 3.1

digital equipment corporation
maynard, massachusetts

First Printing, March 1985
Revised, April 1987
Revised, April 1989
Revised, August 1989
Revised, December 1989
Revised, September 1990

The information in this document is subject to change without notice and should not be construed as a commitment by Digital Equipment Corporation. Digital Equipment Corporation assumes no responsibility for any errors that may appear in this document.

The software described in this document is furnished under a license and may be used or copied only in accordance with the terms of such license.

No responsibility is assumed for the use or reliability of software on equipment that is not supplied by Digital Equipment Corporation or its affiliated companies.

Restricted Rights: Use, duplication, or disclosure by the U.S. Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013.

© Digital Equipment Corporation 1985, 1987, 1989, 1990.

All Rights Reserved.
Printed in U.S.A.

The postpaid Reader's Comments forms at the end of this document request your critical evaluation to assist in preparing future documentation.

The following are trademarks of Digital Equipment Corporation:

CDA	MASSBUS	VAX RMS
DDIF	PrintServer 40	VAXstation
DEC	Q-bus	VMS
DECnet	ReGIS	VT
DECUS	ULTRIX	XUI
DECwindows	UNIBUS	
DIGITAL	VAX	digital™
LN03	VAXcluster	

ZK5541

Contents

Preface v

Chapter 1 Installing the VAX Language-Sensitive Editor

1.1 Preparing to Install LSE 1–1
1.1.1 Accessing the Online Release Notes 1–1
1.1.2 Installation Procedure Requirements 1–2
1.1.3 User Account Quotas and Privileges 1–3
1.1.4 VMS License Management Facility 1–5
1.1.5 Using VMSINSTAL 1–5

1.2 Installing LSE 1–7
1.2.1 Installing LSE on a VAXcluster 1–12

1.3 After the Installation 1–13

1.4 Running the Installation Verification Procedure Separately 1–14

1.5 Error Conditions 1–14

1.6 Maintenance Updates 1–15

1.7 Determining and Reporting Problems 1–15

1.8 Sample Installation 1–16

Chapter 2 Installing the VAX Source Code Analyzer

2.1 Preparing to Install SCA 2–1
2.1.1 Accessing the Online Release Notes 2–1
2.1.2 Installation Procedure Requirements 2–2
2.1.3 User Account Quotas and Privileges 2–3
2.1.4 SCA Server Installation 2–4
2.1.5 VMS License Management Facility 2–6
2.1.6 Using VMSINSTAL 2–6

2.2 Installing SCA 2–8
2.2.1 Installing SCA on a VAXcluster 2–18

2.3 After the Installation 2–18

2.4 Running the Installation Verification Procedure Separately 2–19

2.5 Error Conditions 2–19

2.6 Maintenance Updates 2–20

2.7 Determining and Reporting Problems 2–20

2.8 Sample Installation 2–21

Preface

This document describes how to install VAX Language-Sensitive Editor/Source Code Analyzer (VAX LSE/SCA) on the VMS operating system. It is intended for system managers. This document applies to VAX LSE/SCA Version 3.1 and all maintenance updates in that version. A major version number is represented by the digits to the left of the decimal point, and the maintenance update version number is indicated by the digits to the right of the decimal point.

Keep this document with your distribution kit. You will need it to install maintenance updates or to reinstall VAX LSE/SCA for any other reason.

At the back of this document are two Reader's Comments forms. If you have any comments about this document, fill out one form and mail it; your comments will be considered for the next revision of the installation guide.

For more information about installing VAX LSE/SCA on VMS systems, see your processor-specific installation/operations guide.

The installation procedures are described step-by-step and are, for the most part, self-explanatory. The system prompts you to answer questions and to change volumes, and waits for you to tell it to continue. Chapter 1 describes how to install the VAX Language-Sensitive Editor. Chapter 2 describes how to install the VAX Source Code Analyzer.

Defaults appear in brackets ([ ]) throughout the installation procedure. Text you type is indicated in red.

Chapter 1

Installing the VAX Language-Sensitive Editor

1.1 Preparing to Install LSE

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

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

1.1.1 Accessing the Online Release Notes

The VAX Language-Sensitive Editor (LSE) provides online release notes. The prompt to display or print the release notes during the installation appears in step 5 of Section 1.2 when you invoke VMSINSTAL with the OPTIONS N parameter (the OPTIONS N parameter is available only with VMS Version 4.4 or higher).

To obtain the release notes after the installation, type or print the file SYS$HELP:LSE031.RELEASE_NOTES. Online help also directs you to the release notes file. After the installation, type the following command:

```
$ HELP LSEDIT RELEASE_NOTES RETURN
```

1.1.2 Installation Procedure Requirements

This version of the editor requires VMS Version 5.1 or higher. See the System Support Addendum (SSA) for this product for additional information about required and optional software. Also, see the SSA for information about required VMS classes and tailoring.

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

- SETPRV privileges, or CMKRNL, WORLD, and SYSPRV privileges.
- A minimum of 10,000 blocks of free disk space during the installation; 6700 blocks of free disk space after the installation of LSE. Approximately 275 blocks of free disk space should be added to the above numbers for each language that you choose to have supported by LSE.
- A minimum of 2 MB of physical memory.
- A minimum of 3860 free global pages plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation; for most efficient operation, you will need a total of 3860 free global pages plus the size of SYS$LIBRARY:DCLTABLES.EXE after installation.
- A minimum of 9 free global sections at installation; 9 global sections are used after installation.

NOTE

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

To determine the number of available global pages on your system, invoke the VMS Install Utility by typing the following command:

```
$ INSTALL RETURN
```

Then type the following commands:

```
INSTALL>  LIST/GLOBAL/SUMMARY RETURN

        Summary of Local Memory Global Sections

?? Global Sections Used,  ???/???? Global Pages Used/Unused

INSTALL>  EXIT RETURN
```

When you enter these commands, the system displays a summary of the number of global sections used, the number of global pages used, and the number of global pages unused. To exit from the VMS Install Utility, type the EXIT command.

LSE requires approximately 3860 global pages. If there are fewer than 3860 pages available, you can delete an existing known image with the VMS Install Utility, or you can increase the GBLPAGES system parameter with the VMS System Generation Utility (SYSGEN) by editing the file SYS$SYSTEM:MODPARAMS.DAT and then invoking the AUTOGEN command procedure, SYS$UPDATE:AUTOGEN.COM. For more information on the AUTOGEN command procedure, see your processor-specific installation/operations guide.

You can determine the number of available global sections by invoking SYSGEN as follows:

```
$  RUN SYS$SYSTEM:SYSGEN RETURN
SYSGEN>  USE CURRENT RETURN
SYSGEN>  SHOW GBLSECTIONS RETURN

SYSGEN>  EXIT RETURN
```

The last number displayed is the maximum number of global sections. Compare this number to the number of global sections in use displayed by the VMS Install Utility. LSE requires 8 global sections. Therefore, if the number of global sections used plus 8 exceeds the maximum number of global sections, you must increase the number of available global sections before you can install LSE. To increase the number, you must increase the GBLSECTIONS system parameter with SYSGEN by editing the file SYS$SYSTEM:MODPARAMS.DAT and then invoking the SYS$UPDATE:AUTOGEN.COM procedure. For more information on the AUTOGEN.COM procedure, see your processor-specific installation/operations guide.

If the number of global sections used plus 9 is less than the maximum number of global sections, you can exit from SYSGEN and continue.

1.1.3 User Account Quotas and Privileges

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

- AST limit (ASTLM) 24 (minimum)
- Buffered I/O quota (BIOLM) 18 (minimum)
- Buffered I/O byte count quota (BYTLM) 4096 (minimum)

- Direct I/O quota (DIOLM) 18 (minimum)
- Enqueue quota (ENQLM) 30 (minimum)
- Open file limit (FILLM) 20 (minimum)
- Paging file quota (PGFLQUOTA) 20,000 pages (minimum)

  Paging file quota (PGFLQUOTA) recommended to be 40,000 pages if using the REPORT command
- Subprocess creation quota (PRCLM) 5 (minimum)
- Working set size (WSDEF) 1024 pages (minimum); 2048–4096 pages (optimum)

A FILLM of 20 is appropriate for a typical LSE usage pattern and allows LSE to exhibit full functionality. It may be necessary to grant higher FILLM quotas to user accounts where LSE is frequently used to edit a large number of files simultaneously. Buffer-change journaling, which was new for LSE Version 3.0, causes user accounts to consume increased quantities of FILLM. One buffer-change journal file is maintained for each editing buffer. For example, 30 user buffers that are journaled require a total of 30 units of FILLM.

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

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

Use the VMS 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 VMS Authorize Utility's MODIFY command. For more information, see the *VMS Authorize Utility Manual*.

1.1.4 VMS License Management Facility

The VMS License Management Facility (LMF) is available with Version 5.0 and higher of the VMS operating system. You must register your VAX LSE/SCA software license. This license is the same license that enables the VAX Source Code Analyzer (SCA) to run.

The license registration information you need is contained in the Product Authorization Key (PAK) that is shipped with VAX LSE/SCA. The PAK is a paper certificate that contains information about the license you have to run a particular piece of software.

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

To register a license under VMS Version 5.0, 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 Product Authorization Key (PAK).
- Issue the LICENSE REGISTER DCL command with the appropriate qualifiers that correspond to information on the PAK.

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

1.1.5 Using VMSINSTAL

After you log in to a privileged account to install LSE, invoke VMSINSTAL, the command procedure that installs this product. An example of this procedure is shown in steps 1 and 2 of Section 1.2.

The VMSINSTAL command procedure has the following syntax:

```
$ @SYS$UPDATE:VMSINSTAL LSE03n ddcu: [OPTIONS N]
```

n
Represents the maintenance update of LSE. Refer to the label on the VAX LSE/SCA distribution kit or VAX LSE/SCA BOM for the maintenance update number of your kit. You can also type an asterisk (*) in place of LSE03n. If you are installing from magnetic tape, you can use the asterisk to save installation time; the asterisk causes VAX LSE/SCA to be installed with a minimum of tape passes.

ddcu:
Represents a device name where the distribution volumes will be mounted for the LSE installation media, where *dd* is the device code, *c* is the controller code, and *u* is the unit number. It is not necessary to use the console drive to install LSE. If you do use the console drive, you should replace any media you removed from the drive. CSA1: is the device name used in examples in this document.

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

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

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

When you invoke VMSINSTAL, it checks the following:

- Whether you logged in to a privileged account. Digital recommends that you install software from the system manager's account with your default device and directory set to SYS$UPDATE.
- Whether you have adequate quotas for installation. VMSINSTAL checks for the following quota values:
  - ASTLM = 24
  - BIOLM = 18
  - BYTLM = 18000

- DIOLM = 18
- ENQLM = 30
- FILLM = 20

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

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

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

Register the information contained in the Product Authorization Key (PAK) that is shipped with VAX LSE/SCA by using either the VMS License command procedure (VMSLICENSE) or the LICENSE REGISTER and LICENSE LOAD commands, as described in the *VMS License Management Utility Manual*.

1.2 Installing LSE

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

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

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

```
RETURN
Username:  SYSTEM   RETURN
Password:           RETURN

    Last interactive login on Wednesday,  4-OCT-1990 15:47
$  SET DEFAULT SYS$UPDATE  RETURN
```

Step 2: Invoke VMSINSTAL.

```
$  @VMSINSTAL LSE031 CSA1: OPTIONS N RETURN

      VAX/VMS Software Product Installation Procedure V3.1


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

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

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

Step 3: Insert the first installation kit volume.

```
Please mount the first volume of the set on CSA1:.
* Are you ready?  YES RETURN
The following products will be processed:

  LSE V3.1


Beginning installation of VAX Language-Sensitive Editor V3.1 at hh:mm

%VMSINSTAL-I-RESTORE, Restoring product saveset A...
```

To indicate that you want to continue the installation, mount volume 1, type YES, and press RETURN.

Step 4: Insert the subsequent installation kit volumes.

```
%BACKUP-I-READYREAD, mount volume 2 on _CSA1: for reading

Enter "YES" when ready:  YES RETURN
```

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

Step 5: Select a release notes option.

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

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

    Additional Release Notes Options:

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

* Select option [2]:  RETURN
```

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

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

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

If you select option 3, VMSINSTAL displays the release notes on line immediately. You can terminate the display at any time by pressing CTRL/C. VMSINSTAL then prompts you for a queue name. Either type a queue name or press RETURN to send the file to the default output print device. The LSE release notes are then copied to SYS$HELP:LSE031.RELEASE_NOTES.

If you select option 4, VMSINSTAL neither prints nor displays the release notes. The LSE release notes are copied to SYS$HELP:LSE031.RELEASE_NOTES.

NOTE

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

Next, VMSINSTAL displays the following prompt:

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

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

Step 6: 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 may contain previous versions of LSE files. These files are replaced during the installation with new files, but the old files are not automatically purged. Purging is recommended. In response to the purging prompt, press RETURN to purge the files or type NO to keep them.

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

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

Step 7: Respond to license registration queries.

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

```
Product:       LSE
Producer:      DEC
Version:       3.1
Release Date:  dd-mmm-yyyy

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

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

Step 8: Select language support.

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

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

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

* Do you want to install language support for VAX ADA [YES]?  RETURN
* Do you want to install language support for VAX BASIC [YES]?  RETURN
* Do you want to install language support for VAX BLISS [YES]?  RETURN
* Do you want to install language support for VAX C [YES]?  RETURN
* Do you want to install language support for VAX COBOL [YES]?  RETURN
* Do you want to install language support for VAX FORTRAN [YES]?  RETURN
* Do you want to install language support for VAX LSE [YES]?  RETURN
* Do you want to install language support for VAX MACRO [YES]?  RETURN
* Do you want to install language support for VAX PASCAL [YES]?  RETURN
* Do you want to install language support for VAX PLI [YES]?  RETURN
```

Step 9: Read informational messages.

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

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

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

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

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

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

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

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

Step 10: Observe the Installation Verification Procedure.

If you chose to run the IVP in step 6, VMSINSTAL now calls the IVP to verify that LSE was installed successfully.

```
%TPU-S-FILEIN, 26 lines read from file SYS$COMMON:[SYSTEST.LSE]LSE$IVP.TPU
36 lines written to file DEV$:[USER]LSE$IVP.LIS;1

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

Step 11: End the installation procedure.

```
   Installation of VAX Language-Sensitive Editor V3.1 completed at hh:mm

   VMSINSTAL procedure done at hh:mm

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

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

VMSINSTAL 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.

1.2.1 Installing LSE on a VAXcluster

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

1. Enter the LICENSE LOAD command to activate the license on each node in the VAXcluster on which LSE is to be executed as described in the *VMS 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_V5.COM (the site-specific startup file):

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

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

   a. Log in to a node on the cluster.

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

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

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

1.3 After the Installation

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

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

You must take steps to ensure that the LSE startup command procedure is executed at system bootstrap time. If your site is using the STARTUP facility, then enter the proper STARTUP ADD command to execute LSE$STARTUP.COM. If the STARTUP facility is not used at your site, then edit SYS$MANAGER:SYSTARTUP_V5.COM to include the following line:

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

NOTE

The command procedure that should be executed at system bootstrap time to make the LSE executables known images now resides in SYS$STARTUP. In LSE Version 2.0, Version 2.1, and Version 2.2, the LSE startup command procedure was located in SYS$MANAGER. Make sure that upon completion of the installation, the file specification in the site-specific startup command procedure used to execute the LSE startup command procedure is modified to be SYS$STARTUP:LSE$STARTUP.COM. SYS$MANAGER:LSE$STARTUP.COM is obsolete and is removed as part of the LSE installation procedure.

You can use LSE to read and compose messages from the MAIL Utility. You can define the logical name MAIL$EDIT as CALLABLE_LSE in order to use the editor from MAIL. Note that LSE must be installed as a known image. This is accomplished through the editor's startup command procedure. Also, VAX DEC/CMS and VAX Source Code Analyzer (SCA) must be installed as known images to be used from LSE when LSE is invoked from the MAIL Utility. (See Chapter 2 for instructions on installing SCA.)

1.4 Running the Installation Verification Procedure Separately

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

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

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

```
*** VAX Language-Sensitive Editor IVP has failed. ***
```

1.5 Error Conditions

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

```
%VMSINSTAL-E-INSFAIL, The installation of VAX Language-Sensitive Editor V3.1 has failed.
```

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

- Operating system version is incorrect
- Prerequisite software version is incorrect
- Quotas necessary for successful installation are insufficient (see Section 1.1.2)
- Process quotas required by VMSINSTAL are incorrect (see Section 1.1.5)
- The VMS HELP library is currently in use
- The product was registered incorrectly or not registered

For descriptions of the error messages generated by these conditions, see your processor-specific installation/operations guide, or the *VMS License Management Utility Manual*.

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

If the installation fails, you must restart the installation procedure from step 2 in Section 1.2. If the installation fails due to an IVP failure, contact a Digital field service representative.

1.6 Maintenance Updates

Digital may periodically issue maintenance updates of VAX LSE/SCA. Each update consists of an installation kit. You should install this kit as described in this document or in any documentation that may accompany the maintenance update.

Each time a maintenance update is released, the version number changes. For example, if the current version is 3.0, the version number of the first maintenance update will be 3.1. In addition, each maintenance update includes new release notes. The release notes describe the changes that have been made to LSE since the previous release.

Update release notes are provided on line. You should read the release notes when you first install LSE; they are also accessible at any time after the product is installed. For information on reading the release notes at the time that you install LSE, follow the installation procedure through step 5 in Section 1.2. To locate the release notes after LSE is installed, display or print the file SYS$HELP:LSE03n.RELEASE_NOTES, or type the following command:

```
$ HELP LSEDIT RELEASE_NOTES RETURN
```

1.7 Determining and Reporting Problems

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

- If you purchased VAX LSE/SCA within the past 90 days and you think the problem is caused by a software error, you can submit a Software Performance Report (SPR).
- If you have a Basic or DECsupport Software Agreement, you should call your Customer Support Center. With these services, you receive telephone support that provides high-level advisory and remedial assistance. For more information, contact your local Digital representative.

- If you have a Self-Maintenance Software Agreement, you can submit a Software Performance Report (SPR).

If you find an error in the VAX LSE/SCA documentation, you should fill out and submit a Reader's Comments form from the back of the document in which the error was found. Include the section and page number where the error was found.

1.8 Sample Installation

This section contains a sample installation of LSE Version 3.1. Note that this is only a sample. Sometimes the installation procedure is modified in maintenance updates of this product. Because this installation guide is not usually revised for maintenance updates, be sure to read the *Read Before Installing or Using VAX Language-Sensitive Editor/Source Code Analyzer Version 3.1* letter before you install this product. This letter notes any significant changes in the installation that vary from this sample.

```
Username: SYSTEM
Password:

    Last interactive login on Wednesday,  4-OCT-1990 15:47

$ SET DEFAULT SYS$UPDATE
$ @SYS$UPDATE:VMSINSTAL LSE030 CSA1: OPTIONS N

        VAX/VMS Software Product Installation Procedure V5.2


It is 4-OCT-1990 at 18:00.

Enter a question mark (?) at any time for help.

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

The following products will be processed:

  LSE V3.1

        Beginning installation of LSE V3.1 at 18:01

%VMSINSTAL-I-RESTORE, Restoring product saveset A ...
%VMSINSTAL-E-READYREAD, mount volume 2 ON _CSA1: for reading

Enter "YES" when ready: YES

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

    Additional Release Notes Options:

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

* Select option [2]: 4
* Do you want to continue the installation [NO]? YES
%VMSINSTAL-I-RELMOVED , The product's release notes have been successfully moved to SYS$HELP.
* Do you want to purge files replaced by this installation [YES]? YES
* Do you want to run the IVP after the installation [YES]? YES
```

```
        Product:      LSE
        Producer:     DEC
        Version:      3.1
        Release Date: 1-SEP-1990

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

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

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

* Do you want to install language support for VAX ADA [YES]? NO
* Do you want to install language support for VAX BASIC [YES]? YES
* Do you want to install language support for VAX BLISS [YES]? NO
* Do you want to install language support for VAX C [YES]? YES
* Do you want to install language support for VAX COBOL [YES]? NO
* Do you want to install language support for VAX FORTRAN [YES]? NO
* Do you want to install language support for VAX LSE [YES]? YES
* Do you want to install language support for VAX MACRO [YES]? NO
* Do you want to install language support for VAX PASCAL [YES]? YES
* Do you want to install language support for VAX PLI [YES]? NO

No further questions will be asked during the installation.  The second
save set of this kit will be restored and then the system environment
file will be created or updated.  Informational and success messages will
be displayed indicating these events.

%VMSINSTAL-I-RESTORE, Restoring product saveset B ...
%TPU-S-FILEIN, 39 lines read from file DRA0:[SYS0.SYSUPD.LSE030]LSEENV.TPU;2
%TPU-S-SAVEENV, environment written to DRA0:[SYS0.SYSUPD.LSE030]LSE$SYSTEM_ENVIRONMENT.ENV;1
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  VMI$ROOT:[SYSTEST.LSE].
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  VMI$ROOT:[SYSHLP.EXAMPLES.LSE].
%LSE-I-DELETED, Deleted obsolete version of SYS$SYSROOT:[SYSMGR]LSE$STARTUP.COM
%LSE-I-DELETED, Deleted obsolete version of SYS$SYSROOT:[VUE$LIBRARY.SYSTEM]LSE$EDIT_OPTIONS.UID
%LSE-I-DELETED, Deleted obsolete version of SYS$SYSROOT:[VUE$LIBRARY.SYSTEM]LSE$EDIT.COM
%LSE-I-DELETED, Deleted obsolete version of SYS$SYSROOT:[VUE$LIBRARY.SYSTEM]LSE$PROFILE.VUE$DAT
%LSE-I-DELETED, Deleted obsolete version of SYS$SYSROOT:[VUE$LIBRARY.SYSTEM]LSE$EDIT_QUALIFIERS.EXE
This installation added or modified the following files:
```

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

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


         +------------------------------------------------------------+
         |      Installation verification command procedure for       |
         |               VAX Language-Sensitive Editor                |
         +------------------------------------------------------------+

%TPU-S-FILEIN, 26 lines read from file SYS$COMMON:[SYSTEST.LSE]LSE$IVP.TPU;1
36 lines written to file SYS$COMMON:[SYSUPD]LSE$IVP.LIS;1

VAX Language-Sensitive Editor IVP was successful.

        Installation of LSE V3.1 completed at 18:08

        VMSINSTAL procedure done at 18:08


$ LOGOUT
  SYSTEM      logged out at  4-OCT-1990 18:16:15.48
```

Chapter 2

Installing the VAX Source Code Analyzer

2.1 Preparing to Install SCA

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

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

2.1.1 Accessing the Online Release Notes

The VAX Source Code Analyzer (SCA) provides online release notes. The prompt to display or print the release notes during the installation appears in step 5 of Section 2.2 when you invoke VMSINSTAL with the OPTIONS N parameter (the OPTIONS N parameter is available only with VMS Version 4.4 or higher).

To obtain the release notes after the installation, type or print the file SYS$HELP:SCA031.RELEASE_NOTES. Online help also directs you to the release notes file. After the installation, type the following command:

```
$ HELP SCA RELEASE_NOTES RETURN
```

2.1.2 Installation Procedure Requirements

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

- SETPRV privileges, or CMKRNL, WORLD, and SYSPRV privileges
- A minimum of 8000 blocks of free disk space during installation; 5300 blocks are used after installation
- A minimum of 2 MB of physical memory
- A minimum of 2000 free global pages plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation; for most efficient operation, you will need a total of 2000 free global pages plus the size of SYS$LIBRARY:DCLTABLES.EXE after installation
- A minimum of 10 free global sections at installation; 10 global sections are used after installation

NOTE

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

To determine the number of available global pages on your system, invoke the VMS Install Utility by typing the following command:

```
$ INSTALL RETURN
```

Then type the following commands:

```
INSTALL>  LIST/GLOBAL/SUMMARY RETURN
        Summary of Local Memory Global Sections
?? Global Sections Used,  ???/???? Global Pages Used/Unused
INSTALL>  EXIT RETURN
```

When you enter these commands, the system displays a summary of the number of global sections used, the number of global pages used, and the number of global pages unused. To exit from the VMS Install Utility, type the EXIT command.

SCA requires approximately 2000 global pages. If there are fewer than 2000 pages available, you can delete an existing known image with the VMS Install Utility, or you can increase the GBLPAGES system parameter with the VMS System Generation Utility (SYSGEN) by editing the file

SYS$SYSTEM:MODPARAMS.DAT and then invoking the AUTOGEN command procedure, SYS$UPDATE:AUTOGEN.COM. For more information on the AUTOGEN command procedure, see your processor-specific installation/operations guide.

You can determine the number of available global sections by invoking SYSGEN as follows:

```
$ RUN SYS$SYSTEM:SYSGEN RETURN
SYSGEN> USE CURRENT RETURN
SYSGEN> SHOW GBLSECTIONS RETURN

SYSGEN> EXIT RETURN
```

The last number displayed is the maximum number of global sections. Compare this number to the number of global sections in use displayed by the VMS Install Utility. SCA requires 10 global sections. Therefore, if the number of global sections used plus 10 exceeds the maximum number of global sections, you must increase the number of available global sections before you can install the SCA. To increase the number, you must increase the GBLSECTIONS system parameter with SYSGEN by editing the file SYS$SYSTEM:MODPARAMS.DAT and then invoking the SYS$UPDATE:AUTOGEN.COM procedure. For more information on the AUTOGEN.COM procedure, see your processor-specific installation/operations guide.

If the number of global sections used plus 10 is less than the maximum number of global sections, you can exit from SYSGEN and continue.

2.1.3 User Account Quotas and Privileges

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

- AST limit (ASTLM) 24 (minimum)
- Buffered I/O quota (BIOLM) 18 (minimum)
- Buffered I/O byte count quota (BYTLM) 18000 (minimum)
- Direct I/O quota (DIOLM) 18 (minimum)
- Enqueue quota (ENQLM) 30 (minimum)
- Open file limit (FILLM) 20 (minimum)
- Paging file quota (PGFLQUOTA) 20,000 pages (minimum)
- Subprocess creation quota (PRCLM) 2 (minimum)
- Timer queue entry limit (TQELM) 5 (minimum)

- Working set size (WSDEF) 600 pages (minimum); 3000 pages (optimum)

Use the VMS 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 VMS Authorize Utility's MODIFY command. For more information, see the *VMS Authorize Utility Manual*.

2.1.4 SCA Server Installation

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

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

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

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

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

```
Primary days:   Mon Tue Wed Thu Fri
Secondary days:                      Sat Sun
Primary   00000000001111111112222  Secondary 00000000001111111112222
Day Hours 01234567890123456789012  Day Hours 01234567890123456789012
Network:  ##### Full access ######            ##### Full access ######
Batch:    -----  No access  ------            -----  No access  ------
Local:    -----  No access  ------            -----  No access  ------
Dialup:   -----  No access  ------            -----  No access  ------
Remote:   -----  No access  ------            -----  No access  ------
Expiration:           (none)    Pwdminimum:  8   Login Fails:     0
Pwdlifetime:       180 00:00    Pwdchange:   (pre-expired)
Last Login:           (none) (interactive),  (none) (non-interactive)
Maxjobs:         0  Fillm:       300  Bytlm:        32767
Maxacctjobs:     0  Shrfillm:      0  Pbytlm:           0
Maxdetach:       0  BIOlm:       120  JTquota:       1024
Prclm:          15  DIOlm:       120  WSdef:         1024
Prio:            4  ASTlm:       120  WSquo:         2232
Queprio:         0  TQElm:        10  WSextent:      4464
CPU:        (none)  Enqlm:       200  Pgflquo:      20480
Authorized Privileges:
  TMPMBX
Default Privileges:
  TMPMBX

Username: SCA$DEFAULT                     Owner:  VAX SCA
Account:  DECNET                          UIC:    [371,345] ([SCA$DEFAULT])
CLI:      DCL                             Tables: DCLTABLES
Default:  SYS$SYSDEVICE:[USER]
LGICMD:   LOGIN
Login Flags:  Dismail Captive
Primary days:   Mon Tue Wed Thu Fri
Secondary days:                      Sat Sun
Primary   00000000001111111112222  Secondary 00000000001111111112222
Day Hours 01234567890123456789012  Day Hours 01234567890123456789012
Network:  -----  No access  ------            -----  No access  ------
Batch:    -----  No access  ------            -----  No access  ------
Local:    -----  No access  ------            -----  No access  ------
Dialup:   -----  No access  ------            -----  No access  ------
Remote:   -----  No access  ------            -----  No access  ------
Expiration:           (none)    Pwdminimum:  8   Login Fails:     0
Pwdlifetime:       180 00:00    Pwdchange:   (pre-expired)
Last Login:           (none) (interactive),  (none) (non-interactive)
Maxjobs:         0  Fillm:         0  Bytlm:            0
Maxacctjobs:     0  Shrfillm:      0  Pbytlm:           0
Maxdetach:       0  BIOlm:         0  JTquota:       1024
Prclm:           0  DIOlm:         0  WSdef:         1024
Prio:            4  ASTlm:         0  WSquo:            1
Queprio:         0  TQElm:        10  WSextent:         1
CPU:        (none)  Enqlm:         0  Pgflquo:          0
Authorized Privileges:
Default Privileges:
```

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

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

2.1.5 VMS License Management Facility

The VMS License Management Facility (LMF) is available with Version 5.0 and higher of the VMS operating system. You must register your VAX LSE/SCA software license. This license is the same license that enables the VAX Language-Sensitive Editor (LSE) to run.

The license registration information you need is contained in the Product Authorization Key (PAK) that is shipped with VAX LSE/SCA. The PAK is a paper certificate that contains information about the license you have to run a particular piece of software.

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

To register a license under VMS Version 5.0, 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 Product Authorization Key (PAK).
- Enter the DCL command LICENSE REGISTER with the appropriate qualifiers that correspond to information on the PAK.

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

2.1.6 Using VMSINSTAL

After you log in to a privileged account to install SCA, invoke VMSINSTAL, the command procedure that installs this product. An example of this procedure is shown in steps 1 and 2 of Section 2.2.

The VMSINSTAL commmand procedure has the following syntax:

```
$ @SYS$UPDATE:VMSINSTAL SCA03n ddcu: [OPTIONS N]
```

n
Represents the maintenance update of SCA. Refer to the label on the VAX LSE/SCA distribution kit or VAX LSE/SCA BOM for the maintenance update number of your kit. You can also type an asterisk (*) in place of SCA03n. If you are installing from magnetic tape, you can use the asterisk to save installation time; the asterisk causes VAX LSE/SCA to be installed with a minimum of tape passes.

ddcu:
Represents a device name where the distribution volumes will be mounted for the SCA installation media, where *dd* is the device code, *c* is the controller code, and *u* is the unit number. It is not necessary to use the console drive to install SCA. If you do use the console drive, you should replace any media you removed from the drive. CSA1: is the device name used in examples in this document.

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

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

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

When you invoke VMSINSTAL, it checks the following:

- Whether you logged in to a privileged account. Digital recommends that you install software from the system manager's account with your default device and directory set to SYS$UPDATE.
- Whether you have adequate quotas for installation. VMSINSTAL checks for the following quota values:
  - ASTLM = 24
  - BIOLM = 18
  - BYTLM = 18000
  - DIOLM = 18
  - ENQLM = 30
  - FILLM = 20

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

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

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

Register the information contained in the Product Authorization Key (PAK) that is shipped with VAX LSE/SCA by using either the VMS License command procedure (VMSLICENSE) or the LICENSE REGISTER and LICENSE LOAD commands, as described in *VMS License Management Utility Manual*.

2.2 Installing SCA

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

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

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

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

Step 2: Invoke VMSINSTAL.

```
$  @VMSINSTAL SCA031 CSA1: OPTIONS N  RETURN

      VAX/VMS Software Product Installation Procedure V5.2


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

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

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

Step 3: Insert the first installation kit volume.

```
Please mount the first volume of the set on CSA1:.
* Are you ready?  YES RETURN
The following products will be processed:

  VAX Source Code Analyzer V3.1


    Beginning installation of VAX Source Code Analyzer V3.1 at hh:mm

%VMSINSTAL-I-RESTORE, Restoring product saveset A...
```

To indicate that you want to continue the installation, mount volume 1, type YES, and press RETURN.

Step 4: Select a release notes option.

This step applies only if you specified OPTIONS N in step 2. Release notes included with this kit are always copied to SYS$HELP.

```
Additional Release Notes Options:

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

* Select option [2]:  RETURN
```

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

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

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

If you select option 3, VMSINSTAL displays the release notes on line immediately. You can terminate the display at any time by pressing CTRL/C. VMSINSTAL then prompts you for a queue name. Either type a queue name or press RETURN to send the file to the default output print device.

If you select option 4, VMSINSTAL neither prints nor displays the release notes. The SCA release notes are copied to SYS$HELP:SCA031.RELEASE_NOTES.

NOTE

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

Next, VMSINSTAL displays the following prompt:

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

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

Step 5: Insert the subsequent installation kit volumes.

```
%BACKUP-I-READYREAD, mount volume 2 on _CSA1: for reading

Enter "YES" when ready:  YES RETURN
```

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

Step 6: Select installation options.

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

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

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

* Enter the number corresponding to the SCA components to install [1]: RETURN
* Do you want to purge files replaced by this installation [YES]?  RETURN
* Do you want to run the IVP after the installation [YES]?  RETURN
```

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

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

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

A sample SCA library is set up by the installation verification procedure and the logical name SCA$EXAMPLE is set up to refer to the library. The installation places the necessary files in the sample directory and the IVP creates the sample SCA library in that directory. The installation verification procedure also sets up two example libraries for PDF, referred to by the logical names SCA$PDF and SCA$2167A.

Step 7: Respond to license registration queries.

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

```
Product:       LSE
Producer:      DEC
Version:       3.1
Release Date:  dd-mmm-yyyy


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

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

Step 8: Server Installation

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

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

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

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

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

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

   This account has no special privileges.

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

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

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

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

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

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

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

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

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

Step 9: Read informational messages.

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

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

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

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

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

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

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

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

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

$ CREATE /DIRECTORY SYS$SPECIFIC:[SYSHLP.EXAMPLES.SCA.2167A]

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

        Upon completion of this installation, please do the following:

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

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

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

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

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

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

- SYS$SYSTEM:SCA$MAIN.EXE
- SYS$SYSTEM:SCA$SERVER_MAIN.EXE

In addition, the file SYS$HELP:HELPLIB.HLB is updated to contain the new DCL level SCA help, and the file SYS$HELP:SCA$HELP.HLB containing the SCA internal help is created. The release notes are also copied to SYS$HELP:SCA031.RELEASE_NOTES. SYS$LIBRARY:DCLTABLES.EXE is updated to include the new version of the SCA command-line definition.

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

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

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

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]COPYFILE.ANA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]COPYFILE.PAS
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]EXPANDSTRING.ANA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]EXPANDSTRING.PAS
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]OPENFILES.ANA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]OPENFILES.PAS
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]TRANSLIT.ANA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]TRANSLIT.PAS
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]TRANSLITC.CLD
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]TRANSLITM.MSG
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]TYPES.ANA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.EXAMPLE]TYPES.PAS
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.PDF]PDF_BUILDTABLE.ANA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.PDF]PDF_BUILDTABLE.PAS
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.PDF]PDF_COPYFILE.ANA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.PDF]PDF_COPYFILE.PAS
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.PDF]PDF_EXPANDSTRING.ANA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.PDF]PDF_EXPANDSTRING.PAS
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.PDF]PDF_OPENFILES.ANA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.PDF]PDF_OPENFILES.PAS
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.PDF]PDF_TRANSLIT.ANA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.PDF]PDF_TRANSLIT.PAS
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.PDF]PDF_TYPES.ANA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.PDF]PDF_TYPES.PAS
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_APPENDIX.SDML
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_DATA.SDML
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_DATA_FILES.SDML
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_DESIGN.SDML
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_FRONT.SDML
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_NOTES.SDML
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_PRELIMINARY.SDML
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_PROFILE.RNO
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_PROFILE.SDML

SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_REFERENCED.SDML
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_REQUIREMENTS.SDML
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_SCOPE.RNO
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]2167A_SCOPE.SDML
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]TR1_ADA.ADA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]TR1_ADA.ANA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]TR2_ADA.ADA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]TR2_ADA.ANA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]TR3_ADA_.ADA
SYS$SYSROOT:[SYSHLP.EXAMPLES.SCA.2167A]TR3_ADA_.ANA
SYS$LIBRARY:SCA$QUERY_CALLABLE.ADA
SYS$LIBRARY:SCA$QUERY_CALLABLE.BAS
SYS$LIBRARY:SCA$QUERY_CALLABLE.FOR
SYS$LIBRARY:SCA$QUERY_CALLABLE.H
SYS$LIBRARY:SCA$QUERY_CALLABLE.MAR
SYS$LIBRARY:SCA$QUERY_CALLABLE.PAS
SYS$LIBRARY:SCA$QUERY_CALLABLE.PLI
SYS$LIBRARY:SCA$QUERY_CALLABLE.R32
SYS$LIBRARY:SCA$QUERY_CALLABLE.SDI
SYS$LIBRARY:SCA$QUERY_CALLABLE.TPU
SYS$LIBRARY:SCA$REPORT_2167A_DESIGN.TPU
SYS$LIBRARY:SCA$REPORT_CUSTOMIZATIONS.TPU
SYS$LIBRARY:SCA$REPORT_FORMAT.TPU
SYS$LIBRARY:SCA$REPORT_FORMAT_DOCUMENT.TPU
SYS$LIBRARY:SCA$REPORT_FORMAT_RUNOFF.TPU
SYS$LIBRARY:SCA$REPORT_FORMAT_TEXT.TPU
SYS$LIBRARY:SCA$REPORT_GLOBALS.TPU
SYS$LIBRARY:SCA$REPORT_HELP.TPU
SYS$LIBRARY:SCA$REPORT_INTERNALS.TPU
SYS$LIBRARY:SCA$REPORT_OUTPUT.TPU
SYS$LIBRARY:SCA$REPORT_PACKAGE.TPU
SYS$LIBRARY:SCA$REPORT_UTILITIES.TPU

SYS$LIBRARY:SCA$REPORT_VALIDATE.TPU

SYS$TEST:SCA$IVP.COM

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

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

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

SYS$SYSTEM:NETNODE_REMOTE.DAT

SYS$SYSTEM:NETOBJECT.DAT

SYS$SYSTEM:NETPROXY.DAT

SYS$SYSTEM:RIGHTSLIST.DAT

SYS$SYSTEM:SYSUAF.DAT

Step 10: Observe the Installation Verification Procedure.

If you chose to run the IVP in step 6, VMSINSTAL now calls the IVP to verify that SCA was installed successfully. Additionally, the following files are created for the SCA and PDF sample libraries:

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

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

Step 11: End the installation procedure.

```
   Installation of VAX Source Code Analyzer V3.1 completed at hh:mm

   VMSINSTAL procedure done at hh:mm

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

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

VMSINSTAL 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.

2.2.1 Installing SCA on a VAXcluster

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

1. Enter the LICENSE LOAD command to activate the license on each node in the VAXcluster on which SCA is to be executed as described in the *VMS 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_V5.COM (the site-specific startup file):

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

3. To use the product on other nodes in the VAXcluster, you must replace the version of the DCL tables that is installed on the other VAXcluster nodes. To do this, perform the following steps:
   a. Log in to a node on the cluster.
   b. Run INSTALL and enter the following command at the INSTALL> prompt:

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

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

2.3 After the Installation

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

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

2.4 Running the Installation Verification Procedure Separately

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

```
$ @SYS$TEST:SCA$IVP.COM RETURN
```

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

```
*** IVP for SCA V3.1 failed. ***
```

2.5 Error Conditions

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

```
%VMSINSTAL-E-INSFAIL, The installation of SCA V3.1 has failed.
```

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

- Operating system version is incorrect
- Prerequisite software version is incorrect
- Quotas necessary for successful installation are insufficient (see Section 2.1.2)
- Process quotas required by VMSINSTAL are incorrect (see Section 2.1.6)
- The VMS HELP library is currently in use
- The product was registered incorrectly or not registered

For descriptions of the error messages generated by these conditions, see your processor-specific installation/operations guide, or the *VMS License Management Utility Manual*.

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

If the installation fails, you must restart the installation procedure from step 2 in Section 2.2. If the installation fails due to an IVP failure, contact a Digital field service representative.

2.6 Maintenance Updates

Digital may periodically issue maintenance updates of VAX LSE/SCA. Each update consists of an installation kit. You should install this kit as described in this document or in any documentation that may accompany the maintenance update.

Each time a maintenance update is released, the version number changes. For example, if the current version is 3.0, the version number of the first maintenance update will be 3.1. In addition, each maintenance update includes new release notes. The release notes describe the changes that have been made to SCA since the previous release.

Update release notes are provided on line. You should read the release notes when you first install SCA; they are also accessible at any time after the product is installed. For information on reading the release notes at the time that you install SCA, follow the installation procedure through step 4 in Section 2.2. To locate the release notes after SCA is installed, display or print the file SYS$HELP:SCA03n.RELEASE_NOTES, or type the following command:

```
$ HELP SCA RELEASE_NOTES RETURN
```

2.7 Determining and Reporting Problems

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

- If you purchased VAX LSE/SCA within the past 90 days and you think the problem is caused by a software error, you can submit a Software Performance Report (SPR).
- If you have a Basic or DECsupport Software Agreement, you should call your Customer Support Center. With these services, you receive telephone support that provides high-level advisory and remedial assistance. For more information, contact your local Digital representative.
- If you have a Self-Maintenance Software Agreement, you can submit a Software Performance Report (SPR).

If you find an error in the VAX LSE/SCA documentation, you should fill out and submit a Reader's Comments form from the back of the document in which the error was found. Include the section and page number where the error was found.

2.8 Sample Installation

This section contains a sample installation of SCA Version 3.1. Note that this is only a sample. Sometimes the installation procedure is modified in maintenance updates of this product. Because this installation guide is not usually revised for maintenance updates, be sure to read the *Read Before Installing or Using VAX Language-Sensitive Editor/Source Code Analyzer Version 3.1* letter before you install this product. This letter notes any significant changes in the installation that vary from this sample.

```
$  @sys$update:vmsinstal sca031 csa1: options n

     VAX/VMS Software Product Installation Procedure V5.3-1

  It is 18-MAY-1990 at 14:29.

  Enter a question mark (?) at any time for help.

  %VMSINSTAL-W-NOTSYSTEM, You are not logged in to the SYSTEM account.
  * Do you want to continue anyway [NO]? YES
  * Are you satisfied with the backup of your system disk [YES]?

  Please mount the first volume of the set on CSA1:
  * Are you ready? yes
  The following products will be processed:

    SCA V3.1

          Beginning installation of SCA V3.1 at 14:33

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

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

      Additional Release Notes Options:

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

  * Select option [2]: 4
  * Do you want to continue the installation [NO]? YES
  %VMSINSTAL-I-RELMOVED , The product's release notes have been successfully moved to SYS$HELP.

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

          Product:      LSE
          Producer:     DEC
          Version:      3.1
          Release Date: 1-JUL-1990


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

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

  This account has no special privileges.

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

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

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

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

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

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

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

* Enter UIC for SCA$SERVER account (include brackets) [[370,355]]:
%SCA-I-CREACC, Creating account SCA$SERVER for the VAX 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].
%CREATE-I-EXISTS, SYS$SYSDEVICE:[SCA$SERVER] already exists
%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$SERVER CHAR
%SCA-I-NOMORQST, No further questions will be asked during the installation
%VMSINSTAL-I-RESTORE, Restoring product saveset B ...
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  VMI$ROOT:[SYSTEST.SCA$IVP].
%VMSINSTAL-I-SYSDIR, This product creates system directory [SYSHLP.EXAMPLES.SCA].
%CREATE-I-EXISTS, VMI$COMMON:[SYSHLP.EXAMPLES.SCA] already exists
%CREATE-I-EXISTS, VMI$SPECIFIC:[SYSHLP.EXAMPLES.SCA] already exists

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

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

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

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

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

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

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

        $ CREATE /DIRECTORY SYS$SPECIFIC:[SYSHLP.EXAMPLES.SCA.2167A]

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

        Upon completion of this installation, please do the following:

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

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

*  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...
****  Beginning IVP for LSE/SCA V3.1  (SCA Installation) ****
****  Client testing complete  ****
%SCA-I-CONNECTING, Requesting connection to 0::
%SCA-S-LIB, your SCA Library is 0::SCA$EXAMPLE:
%SCA-I-CONNECTING, Requesting connection to 0::
****  Server testing complete  ****
****  IVP for SCA V3.1 completed successfully  ****
        Installation of SCA V3.1 completed at 14:59

        VMSINSTAL procedure done at 14:59
```