DECforms Installation Guide

Order Number: AA–LC23D–TE

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This manual describes the DECforms installation and verification procedures.

Operating System and Version: VAX VMS Version 5.0 or higher.

Software Version: DECforms Version 1.3

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Preface

This manual describes how to install DECforms Version 1.3 and how to verify the installation.

This manual refers to Digital products by their abbreviated names:

- DECforms software is referred to as DECforms.
- VAX Language-Sensitive Editor software is referred to as LSE.
- VAX CDD/Plus software is referred to as CDD/Plus.

Intended Audience

This manual is intended for those who install and maintain DECforms software. You should read this manual before installing DECforms.

Operating System Information

This manual includes information about the versions of the operating system and related software that are compatible with this version of DECforms.

For information on the compatibility of other software products with this version of DECforms, see the System Support Addendum (SSA) that comes with the Software Product Description (SPD). You can use the SSA and SPD to verify which versions of your operating system are compatible with this version of DECforms.

Structure

This manual has three chapters and two appendixes.

Chapter 1	Describes the preparations and requirements for installing DECforms.
Chapter 2	Describes the installation procedure.
Chapter 3	Describes the tasks you should do after installing DECforms.
Appendix A	Reproduces typical installation sessions.
Appendix B	Lists the files that are installed or modified and the logical names that are defined or modified during the installation procedure.

Related Documents

For additional information on installing DECforms, see the VMS operating system documentation for these topics:

- VMSINSTAL procedure
- INSTALL Utility
- System management and operations

Conventions

The following table lists the special symbols used in this manual.

Symbol	Meaning
CTRL/x	This symbol tells you to press the CTRL (control) key and hold it down while pressing the specified letter key.
$	The dollar sign is used to indicate the DCL prompt. This prompt may be different on your system.
Red type	Red type in examples shows user input.

Acknowledgment

DECforms is a Digital implementation of a proposed Form Interface Management System (FIMS) ANSI/ISO standard prepared by the CODASYL Form Interface Management System Committee. The FIMS standard is documented in the *CODASYL Form Interface Management System Journal of Development*. If you would like information about this proposed standard, contact:

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The Form Interface Management System is an industry software system and is not the property of any company or group of companies, or of any organization or group of organizations.

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Chapter 1

Preparing to Install DECforms Software

This chapter discusses the preparations and requirements for installing DECforms software.

Your bill of materials (BOM) and indented bills report (BIL) specify the number of media in your kit and the contents of your kit. Make sure you compare your kit with this information. If your kit is damaged or incomplete, contact your Digital representative.

DECforms provides online Release Notes. You can read or print the Release Notes before you begin the DECforms installation.

NOTE

Digital strongly recommends that you read the Release Notes before you proceed with the installation.

1.1 Required Operating System Components

To install DECforms, you must have certain operating system components. The components you need depend on whether you are installing the DECforms full development kit or the run-time only kit.

The DECforms full development kit contains the DECforms run-time system and development utilities. To install this kit, you must have installed the following VMS classes:

- VMS Required Save Set
- Programming Support (for STARLET.OLB and IMAGELIB.OLB)
- Utilities (for HELPLIB.OLB)

The DECforms run-time only kit contains only the DECforms run-time system. To install the DECforms run-time only kit, you must have installed the VMS Required Save Set class.

1.2 Required and Optional Software

This section discusses the software you must have installed on your system before installing DECforms. The section also includes information about software that you can use with DECforms.

To install DECforms you must have installed on your system:

- A valid VMS operating system configuration, VMS Version 5.0 or higher.
- If you intend to store definitions in CDD/Plus software, you must have installed VAX CDD/Plus Version 4.1 or higher, and if you intend to use the LSE templates for the DECforms Independent Form Description Language (IFDL), you must have installed VAX Language-Sensitive Editor Version 2.3 or higher.

For a complete list of the products that are compatible with this version of DECforms, see the Software Product Description.

1.3 Required Hardware

DECforms supports Digital VT100-, VT200-, VT300-, and VT400-series terminals.

1.4 License Registration

You must register the DECforms software license with the VMS License Management Facility (LMF). The LMF is available with Version 5.0 of the VMS operating system.

The Product Authorization Key (PAK) that is shipped with DECforms contains the license registration information you need. The PAK is a paper certificate that contains information about the license you have purchased to run a particular piece of software.

It is best to register your DECforms license *before* you do the installation. During the installation, you are asked whether you have registered the DECforms license and loaded the appropriate authorization key. If you have not registered the DECforms license and loaded the appropriate authorization keys, you can complete the installation; however, you cannot

run either the DECforms software or its Installation Verification Procedure (IVP). Once you register the license and load an authorization key, you can run the IVP and use DECforms.

To register a license under Version 5.0 or greater of the VMS operating system, log in to the system manager's account, SYSTEM. You then can register a license in one of the following ways:

- Run the SYS$UPDATE:VMSLICENSE.COM procedure. When the procedure prompts you for information, enter data from your PAK.
- Enter the LICENSE REGISTER command with the appropriate qualifiers that correspond to information on the PAK.

If you are installing DECforms on a VAXcluster system, you must register your license on each licensed node in the VAXcluster system.

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

1.5 Software Product Installation Order

To install the LSE templates for the IFDL, you must install LSE before you install DECforms.

1.6 Installation Requirements

The following sections discuss various requirements for installing DECforms.

1.6.1 Time

Installing DECforms and running the IVP requires approximately 5 to 30 minutes, depending on your system configuration and the distribution media you are using.

1.6.2 Privileges

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

- CMKRNL
- WORLD
- SYSPRV

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

1.6.3 Disk Space

Installing DECforms requires a certain amount of free storage space before and after the installation. Table 1–1 summarizes the storage requirements.

Table 1–1: Disk Space Requirements

DECforms Kit	Blocks During Installation	Blocks After Installation
Run-Time Only Kit	1,500	400
Full Development Kit	17,000	16,000 (with sample and demo applications) 7,500 (without sample and demo applications)

To determine the number of free disk blocks on the system disk, enter the following command:

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

1.6.4 System Parameters

Installing DECforms requires certain system parameter settings. Table 1–2 lists the minimum required system parameter values for the installation.

Table 1–2: Required System Parameter Values

System Parameter	Value
GBLPAGES	750
GBLSECTIONS	5

The numbers shown in Table 1–2 represent the required number of unused global pages and global sections on your system for the DECforms installation to process. If your system has less than the required number, you must increase these values to the amount indicated.

If you are installing DECforms on a VMS Version 5.2 system, you can use the WRITE command with the F$GETSYI lexical function to find the number of unused global pages and global sections. The following example shows how to get this information at your terminal (the default for SYS$OUTPUT):

```
$  WRITE SYS$OUTPUT F$GETSYI("FREE_GBLPAGES")
3420
$  WRITE SYS$OUTPUT F$GETSYI("FREE_GBLSECTS")
24
```

If the values displayed by the system are greater than the values in Table 1–2, you do not need to increase the values for these parameters. If the value of free global pages or global sections is less than the value in Table 1–2, you must increase the system parameter setting.

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

1. Edit the SYS$SYSTEM:MODPARAMS.DAT file.

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

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

   WSMAX = 1024

To modify incremental parameters such as GBLPAGES and GBLSECTS, use ADD_. The following command increases the global 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.

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

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

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

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

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

1.6.5 VMSINSTAL Requirements

When you run VMSINSTAL, it checks whether:

- You are logged in to a privileged account.
- You have adequate quotas for installation.
- DECnet is up and running.
- Any users are logged in to the system.

If VMSINSTAL detects any problems during the installation, it notifies you and asks whether you want to continue the installation. In some instances, you can enter YES to continue. To stop the installation and correct the situation, enter NO or press RETURN. Correct the problem and restart the installation.

For more information about VMSINSTAL, see the VMS Install Utility Manual.

1.6.6 Backing Up Your System Disk

At the beginning of the installation, VMSINSTAL asks whether you have backed up your system disk. Digital recommends that you backup your system disk before installing any software.

Use the backup procedures that have been established at your site. For details on backing up your disk, see the section on the Backup Utility in the VMS documentation set.

Chapter 2

Installing DECforms Software

This chapter describes how to install DECforms software. Section 2.2 contains a step-by-step description of the installation procedure.

2.1 General Information

This section includes information about accessing release notes, determining what files and logical names are added to your system, running the Installation Verification Procedure (IVP), and aborting the installation.

2.1.1 Accessing the Online Release Notes

DECforms provides online Release Notes. You should review the release notes because they might contain information about changes in the installation procedures. If you specify OPTIONS N when you run VMSINSTAL, the installation procedure asks you whether you want to display or print the Release Notes. Thus, you can access the Release Notes during the installation procedure.

After you install DECforms, the Release Notes are located in SYS$HELP:FORMSnnn.RELEASE_NOTES.

The version number for DECforms is represented by the *nnn* designation (for example, 013).

2.1.2 Determining the Files and Logical Names Added to the System

The DECforms installation procedure adds a number of files to your system. It also modifies some files and defines a logical name. Appendix B describes the changes that the DECforms installation procedure makes to your system.

2.1.3 Running the Installation Verification Procedure

The IVP for DECforms verifies the installation. DECforms provides two IVPs, one for the full development kit and one for the run-time system.

When you are installing the DECforms kit, the installation procedure asks whether you want to run the IVP as part of the installation. If you respond YES, VMSINSTAL runs the appropriate kit IVP. You should run the IVP to verify that DECforms is installed correctly.

Regardless of which DECforms kit you are installing, after you complete the installation procedure, you should run the IVP for the run-time system. The run-time IVP verifies that the DECforms run-time kit is installed correctly.

To run this IVP, enter the following command on a VT100-, VT200-, VT300-, or VT400-series terminal:

```
$  @SYS$TEST:FORMS$RT_IVP.COM
```

If you need to run the full development kit IVP after you install the DECforms full development kit, enter the following command:

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

2.1.4 Aborting the Installation

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 and exits. You can start the installation again.

2.2 The Installation Procedure

The DECforms installation procedure consists of a series of questions and informational messages. The following sections explain how to run the VMSINSTAL procedure and answer the installation questions. These sections also explain the informational messages displayed by the procedure.

2.2.1 Running VMSINSTAL

To start the installation, run the VMSINSTAL command procedure from a privileged account, such as the SYSTEM account. VMSINSTAL is in the SYS$UPDATE directory. To set default to the SYS$UPDATE directory, enter the following command:

```
$  SET DEFAULT SYS$UPDATE
```

To run VMSINSTAL, enter a command with the following syntax:

@VMSINSTAL product-name device-name OPTIONS N

The following list defines the elements of the VMSINSTAL procedure:

product-name
The installation name for the product. For the DECforms full development kit, use the installation name FORMS013.

For the DECforms run-time only kit, use the installation name FORMSRT013.

device-name
The name of the device on which you plan to mount the media. For example, MTA0: is the device name for a tape drive. You do not need to use the console drive for this installation. If you do use the console drive, once the installation is complete, you should replace any media you removed.

OPTIONS N
An optional parameter that indicates you want to be prompted to display or print the Release Notes. If you do not include the OPTIONS N parameter, VMSINSTAL does not ask you about the Release Notes.

VMSINSTAL has several other options; for information, see the VMS documentation on software installation.

The following example shows the command that runs VMSINSTAL to install DECforms from tape drive MTA0: and the system response. This example uses the OPTIONS N parameter to print or display release notes.

```
$  @VMSINSTAL FORMS013 MTA0: OPTIONS N

      VAX/VMS Software Product Installation Procedure V5.n


It is 22-JAN-1991 at 10:27.
Enter a question mark (?) at any time for help.
```

If you omit the product name or the device name, VMSINSTAL asks you for this information later.

2.2.2 Answering Installation Questions

This section discusses the questions that appear during the installation. Except where noted, the questions are the same for both the Full Development Kit and the Run-Time Only kit options. For sample installation procedures, see Appendix A.

An asterisk (*) marks the beginning of each question. Some questions show the default response in brackets, for example [YES]. To choose the default response, press RETURN.

1. **Display DECnet status.**

```
%VMSINSTAL-W-DECNET, Your DECnet network is up and running.
   .
   .
   .
* Do you want to continue anyway [NO]?
```

   You should install DECforms on a standalone system or cluster with DECnet shut down. VMSINSTAL notifies you whether DECnet is running and displays a list of active processes. The procedure asks whether you want to continue the installation. NO is the default response to the question. To abort the installation, press RETURN. Once DECnet is shut down and all active processes are stopped, restart the installation procedure.

2. **Confirm system backup.**

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

   Always back up your system disk before doing an installation. VMSINSTAL asks whether you are satisfied with your system backup. If you are satisfied with the backup of your system disk, press RETURN. Otherwise, enter NO to stop the installation. After you back up your system disk, you can restart the installation.

3. **Mount the media.**

```
Please mount the first volume of the set on MTA0:.
* Are you ready?  YES
%MOUNT-I-MOUNTED, FORMS MOUNTED ON _$$MTA0:
The following products will be processed:
  FORMS V1.3

    Beginning installation of FORMS V1.3 at 10:29

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

Mount the first distribution volume on the device you specified when you ran VMSINSTAL. VMSINSTAL asks whether you are ready to continue with the installation.

If you respond YES to indicate that you are ready, VMSINSTAL displays a message that the media containing DECforms has been mounted on the specified device and that the installation has begun.

If you entered the wrong device name when you ran VMSINSTAL and need to restart the installation, enter NO in response to the ''Are you ready?'' question. To abort the installation for other reasons, press CTRL/Y.

4. **Select a Release Notes option.**

```
Release Notes Options:

    1. Display release notes
    2. Print release notes
    3. Both 1 and 2

* Select option [3]:
```

If you specified OPTIONS N when you ran VMSINSTAL, you have three options for reviewing the release notes.

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

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

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

Press RETURN to print the Release Notes on SYS$PRINT or enter a queue name and press RETURN.

Option 3 is the default. If you select option 3, VMSINSTAL displays the release notes immediately on the console terminal and prompts you for a queue name for the printed version.

5. **Continue the installation.**

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

The installation procedure now asks whether you want to continue the installation. To continue, enter YES. Otherwise, press RETURN. In either case, the release notes are copied to the file SYS$HELP:FORMSnnn.RELEASE_NOTES. The software version number is represented by the *nnn* designation (for example, 013).

NOTE

The name of the release notes file installed by VMSINSTAL consists of the current product name and version number. Do not delete release notes for previous versions of DECforms.

6. **Purge files.**

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

You can purge files from previous versions of DECforms that this installation supersedes. Purging is recommended; however, to keep files from the previous version, enter NO in response to the question.

7. **Install the main kit.**

```
* Do you wish to install the main kit (7500 blocks) [YES]?
```

If you are installing the full development kit, the procedure asks whether you want to install the main kit. (The procedure omits this question if you are installing the run-time only kit.) The main kit contains all DECforms software except the sample and demo application programs and support for LSE.

8. **Choose an Installation Verification Procedure (IVP) option.**

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

The installation procedure asks whether you want to run the IVP. The IVP for DECforms verifies a successful installation. You should run the IVP.

9. **Respond to license registration queries.**

```
        Product:      FORMS
        Producer:     DEC
        Version:      1.3
        Release Date: 13-Mar-1991

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

The installation procedure displays license information about your product and asks whether you have registered the license for DECforms. If you have registered the license for DECforms, answer YES. If you have not registered the license, you must answer NO.

If you answer NO, the installation continues; however, if you did not register your DECforms license before you started the installation procedure, you cannot run the IVP during the installation. You should run the IVP after you install DECforms and register and load its PAK.

Section 1.4 describes registering your DECforms license and Section 2.1.3 describes verifying the installation of DECforms after it is complete.

This is the last question the installation procedure asks when you are installing the run-time only kit. The installation procedure displays the messages described in Section 2.2.3.

10. **Install optional software.**

```
* Do you wish to install Sample Application Programs (1100 blocks) [YES]?

* Do you wish to install the demonstration package (6500 blocks) [YES]?

* Do you wish to install LSEDIT support (150 blocks) [YES]?

* Do you wish to install modifiable message file procedures (500 blocks)
[YES]?
```

The last four installation questions ask whether you want to install the sample application programs, demonstration programs, LSE support, and modifiable message procedures. (If you are installing the run-time only kit, the procedure omits these questions.)

The sample applications demonstrate using DECforms. LSEDIT support includes LSE templates for the IFDL. The modifiable message file procedures allow you to translate DECforms run-time messages from English to the language of your choice.

[SYSHLP.EXAMPLES.FORMS.MESSAGES] DECFORMS_MESSAGES.TXT explains how to use the modifiable message file procedures.

For systems running Version 2.3 of LSE, the following error message may appear when you install LSE support:

%TPU-W-NOTPUVAR, section file missing variable LSE$$HIGHLIGHT required by editor
%FORMS-I-INSLSEEND, installation of LSE support completed.

The error does not affect the DECforms installation or LSE support.

2.2.3 Informational Messages

The installation procedure displays a number of informational messages that report on the progress of the installation. There are no further questions. If the installation has been successful, VMSINSTAL moves the new or modified files to their target directories, updates Help files, purges appropriate files, and updates DCL tables, if necessary. The procedure displays the following message:

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

2.2.4 Running the Installation Verification Procedure

If you chose to run the IVP, VMSINSTAL runs it now. The procedure displays the following messages for the full development kit:

```
Starting DECforms V1.3 Installation Verification Procedure.

  The Installation Verification Procedure has completed successfully.
  Refer to the Installation Guide for further verification procedures
```

The procedure displays the following messages for the run-time kit:

```
   Starting Installation Verification Procedure (IVP)

          for DECforms V1.3 run-time Manager
   DECforms Interactive Installation Verification Procedure Starting
         [IVP panel displayed here]
   DECforms Interactive Installation Verification Procedure Complete

   The Installation Verification Procedure has completed successfully.
   Refer to the Installation Guide for further verification procedures
```

For information on running the IVP after you have installed DECforms, see Section 2.1.3.

2.2.5 Completing the Installation Procedure

The following messages indicate that the installation is complete:

```
   Installation of FORMS013 V1.3 completed at 10:47

   VMSINSTAL procedure done at 10:47
```

Log out of the privileged account as follows:

```
$  LOGOUT
```

The following message is displayed:

```
SYSTEM     logged out at 22-JAN-1991 10:49:23.10
```

VMSINSTAL deletes or changes entries in the process symbol tables during the installation. Therefore, to continue to use the system manager's account and these symbols, log out and log in again.

2.3 Error Recovery

If errors occur during the installation or when the IVP is running, VMSINSTAL displays failure messages. If the installation fails, the procedure displays the following message:

```
%VMSINSTAL-E-INSFAIL, The installation of DECforms V1.3 has failed.
```

If the IVP fails, the procedure displays the following messages:

```
The DECforms V1.3 Installation Verification Procedure failed.
%VMSINSTAL-E-IVPFAIL, The IVP for DECforms V1.3 has failed.
```

Errors might occur during the installation if any of the following conditions exists:

- The version of the operating system is incorrect.
- A required software version is incorrect.
- Quotas are insufficient.
- System parameter values are insufficient.
- The VMS Help library is being used.
- The product license has not been registered and loaded.

For descriptions of the error messages generated by these conditions, see the *VMS System Messages and Recovery Procedures Reference Manual:Part I* or the *VMS System Messages and Recovery Procedures Reference Manual:Part II*. If any of these error messages is displayed, take the appropriate action as described in the message. (You might need to change a system parameter or increase an authorized quota value.) For information on installation requirements, see Chapter 1.

Chapter 3

After Installing DECforms Software

After installing DECforms software, you might need to do the following tasks:

- Edit the system startup file to include the DECforms startup procedure
- Set user account privileges and quotas
- Set system parameters
- Make DECforms available on each licensed node in your VAXcluster system (if you are installing DECforms on a VAXcluster)
- Install the form development utilities

This chapter explains how to do these tasks.

3.1 Editing the System Startup File

To provide for automatic startup of DECforms when your system is rebooted, you must edit the system startup file. You also might want to add the command to run a command procedure that defines output formats for dates and times other than the standard VMS format.

Add the command line that starts DECforms to the system startup file, SYS$STARTUP:SYSTARTUP_V5.COM. Put this command line with the command lines that set up other products. These command lines follow the network startup command line, as follows:

```
$ @SYS$MANAGER:STARTNET.COM
      .
      .
      .
$ @SYS$STARTUP:FORMS$STARTUP.COM
```

If you want programmers on your system to have access to spellings of date and time elements (such as months) in languages other than English, define the VMS logical name SYS$LANGUAGES. In addition, if you want programmers to have access to date and time formats other than the default standard formats, you can run a procedure named LIB$DT_STARTUP.COM in your system startup file. If you want this command procedure to define the spellings of non-English date and time elements, you must define SYS$LANGUAGES before you run the LIB$DT_STARTUP command procedure. The English spellings of date and time elements remain available.

For example, if you want French and German spellings of date and time elements and alternate date and time formats, add the following commands to SYSTARTUP_V5.COM:

```
$ DEFINE SYS$LANGUAGES FRENCH, GERMAN
$ @SYS$MANAGER:LIB$DT_STARTUP.COM
```

You can add the definition of SYS$LANGUAGES and the command to run LIB$DT_STARTUP.COM directly after the DECforms startup command line.

For more information on the SYS$LANGUAGES logical name and the LIB$DT_STARTUP command procedure, see the VMS documentation on date and time formatting routines.

3.1.1 Hebrew Installation Notes

The DECforms installation process places the Hebrew run-time message file in:

SYS$MESSAGE:FORMS$MSGMGRSHR_HEBREW.EXE

The English run-time message file is found in:

SYS$MESSAGE:FORMS$MSGMGRSHR.EXE

DECforms uses the English message file by default. To use the Hebrew messages, the system manager should replace the English file with the Hebrew file, and then re-install the image by performing @FORMS$STARTUP.

The user also can use the logical name FORMS$MSGMGRSHR to point to the desired language-specific message file.

3.2 User Account Requirements

To use DECforms, user accounts on your system must have the TMPMBX and NETMBX privileges. The accounts also must have the quotas shown in Table 3–1.

Table 3–1: Minimum User Account Quotas for Developing DECforms Applications

Account Quota	Minimum Value
BYTLM	16384
PRCLM	3

User account privileges and quotas are stored in the file SYSUAF.DAT. To verify and change user account privileges and quotas, use the Authorize Utility as follows:

1. Set your directory to SYS$SYSTEM and run the Authorize Utility:

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

2. At the Authorize Utility prompt (UAF>), to check a particular account, enter the SHOW command with an account name. For example:

```
UAF>  SHOW SMITH
```

3. To change a privilege or quota, enter the MODIFY command in the following format:

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

   The following example adds the NETMBX privilege, modifies the BYTLYM quota for the SMITH account, and exits the utility:

```
UAF>  MODIFY SMITH /PRIVILEGES=NETMBX /BYTLM=16384
UAF>  EXIT
```

   After you exit the utility, the VMS operating system displays messages indicating whether changes were made. Once you have made the changes, users must log out and log in again for the new privileges and quotas to take effect.

For more information on modifying account privileges and quotas, see the *VMS Authorize Utility Manual*.

3.3 System Parameters

Table 3–2 shows the minimum values to which certain system parameters should be set when users develop DECforms applications on your system.

Table 3–2: Minimum System Parameter Values for DECforms

System Parameter	Minimum Value
PQL_MBYTLM	16384
PQL_MPRCLM	3
MAXBUF	4096

To change system parameters, do the following:

1. Edit the file SYS$SYSTEM:MODPARAMS.DAT.

   To change the value of a parameter that is listed in the MODPARAMS.DAT file, use an editor to locate the line containing that parameter. Delete the current value associated with that parameter and enter the new value.

   To add a new value, add a line to the MODPARAMS.DAT file. Make sure you include both the name of the parameter and its value in the new line. For example, to include a setting for the PQL_MBYTLM and PQL_MPRCLM parameters, add the following lines to the MODPARAMS.DAT file:

   ```
   PQL_MBYTLM=16384
   PQL_MPRCLM=3
   ```

2. Once you modify the file and exit the editor, run the AUTOGEN procedure to recalculate your system parameters. Enter the following command:

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

   AUTOGEN does an automatic system shutdown and reboots once it has finished. Rebooting your system activates the new parameter values. For more information about using AUTOGEN, see the instructions on modifying system parameters in the VMS documentation on system management and operations.

3.4 Cluster Considerations

After you install DECforms on a VAXcluster system, you must do the following tasks on each licensed node in the VAXcluster system:

- Run the DECforms startup command procedure
- Install DCLTABLES.EXE
- Register the license for DECforms
- Run the full development kit IVP (if you are installing the full development kit) and the run-time IVP

To run the startup command procedure, log in to a node in the VAXcluster system and enter the following command:

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

To install DCLTABLES.EXE, enter the following commands:

```
$  INSTALL :== $SYS$SYSTEM:INSTALL/COMMAND_MODE
$  INSTALL REPLACE SYS$SHARE:DCLTABLES.EXE/OPEN/SHARE/HEADER
```

To register the DECforms license on a node, see Section 1.4. To run the full development kit and run-time IVPs, see Section 2.1.3.

3.5 Installing the Form Development Utilities as Shared Images

DECforms provides the following form development utilities:

- Form Development Environment (FDE)
- Panel Editor
- IFDL Translator
- Back Translator
- Extract Utility
- Test Utility
- TDMS Converter
- FMS Converter

If you use these form development utilities extensively on your system, you can install them as shared images to reduce the system overhead and memory requirements.

To install the form development utilities as shared images, do the following:

1. Determine the number of available global pages and global sections on your system. For information on how to verify and modify the number of global pages and global sections, see Section 1.6.4.

   To install the form development utilities as shareable images, you must increase the number of global pages by 4100 and the number of global sections by 23. These are increases over what is required during installation. Install the utilities just after you start your system. The available space in the global page table is less likely to be fragmented.

2. To install the form development utilities as shared images on a currently running system, enter the following command:

   ```
   $  @SYS$STARTUP:FORMS$STARTUP.COM  DEVELOP
   ```

   To install the utilities as shared images each time your system is rebooted, add the DEVELOP parameter to the line you added to the system startup procedure, SYS$STARTUP:SYSTARTUP_V5.COM, as follows:

   ```
   $ @SYS$MANAGER:STARTNET.COM
        .
        .
        .
   $ @SYS$STARTUP:FORMS$STARTUP.COM  DEVELOP
   ```

To install selected form utilities, use the VMS Install Utility (INSTALL). For example, to install only the Panel Editor as a shared image, enter the following commands:

```
$  INSTALL
INSTALL>  ADD SYS$SYSTEM:FORMS$FSESHR.EXE /OPEN /SHARED /HEADER
INSTALL>  ADD SYS$SYSTEM:FORMS$PEDSHR.EXE /OPEN /SHARED /HEADER
INSTALL>  ADD SYS$SYSTEM:FORMS$MSGPRDSHR.EXE /OPEN /SHARED /HEADER
INSTALL>  ADD SYS$SYSTEM:FORMS$PEDVTEXEC.EXE /OPEN /SHARED /HEADER
INSTALL>  EXIT
```

You must install the FORMS$FSESHR.EXE and FORMS$MSGPRDSHR.EXE with the first form development utility you install. Once you have installed these two images, you need not reinstall them to add other form development utilties.

3.6 Determining and Reporting Problems

If an error occurs while DECforms is being used and you believe that a problem with DECforms is causing the error, do one of the following actions:

- If you have a BASIC or DECsupport Software Agreement, call your Customer Support Center.
- If you have a Self-Maintenance Software Agreement, submit a Software Performance Report (SPR).
- If you purchased DECforms within the past 90 days and you think a software error is causing the error, submit an SPR.

If you find an error in the DECforms documentation, fill out and submit the Reader's Comments form at the back of the document in which you found the error. Please indicate on the form the section and page number of the error.

Appendix A

Sample Installation

This appendix contains a sample installation of DECforms software. This installation was run on a system that had no previous version of DECforms installed. Depending on which layered products you have on your system, you might see additional messages and questions when you install DECforms.

The sample installation assumes the following:

- DECnet has been shut down.
- No users are logged in to the system.
- The command line omits the device where the kit is mounted.
- OPTIONS N is specified during the full development kit installation to print the release notes. During the run-time only kit installation, OPTIONS N is not specified.
- The full development kit Installation Verification Procedure (IVP) runs after the full development kit has been installed.

A.1 Full Development Kit

Example A–1 contains a sample installation for the DECforms full development kit.

Example A–1: Sample Full Development Kit Installation

```
$ SET DEF SYS$UPDATE
$ @VMSINSTAL FORMS013

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

It is 15-MAR-1991 at 15:27.
Enter a question mark (?) at any time for help.

* Are you satisfied with the backup of your system disk [YES]?  YES
* Where will the distribution volumes be mounted: MUA0:

*Options: N

The following products will be processed:

  FORMS V1.3

        Beginning installation of FORMS V1.3 at 15:28

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

    Release Notes Options:

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

* Select option [2]: 4
* Do you want to continue the installation? YES
%VMSINSTAL-I-RELMOVED, The product's release notes have been successfully
moved to SYS$HELP.

    ************************************************************************
    *                                                                      *
    *                   D E C f o r m s    V 1 . 3                         *
    *               ==================================                     *
    *                        Full Development Kit                          *
    *                                                                      *
    *                     Copyright (C) 1989, 1990, 1991 BY                *
    *            Digital Equipment Corporation, Maynard, MA                *
    *                     All rights reserved.                             *
    *                                                                      *
    ************************************************************************

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

* Do you wish to install the main kit (7500 blocks) [YES]?  YES
```

(continued on next page)

Example A–1 (Cont.): Sample Full Development Kit Installation

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

(continued on next page)

Example A–1 (Cont.): Sample Full Development Kit Installation

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

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

        Product:      FORMS
        Producer:     DEC
        Version:      1.3
        Release Date: 13-MAR-1991

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

* Do you wish to install Sample Application Programs (1100 blocks) [YES]? YES

* Do you wish to install the demonstration package (6500 blocks) [YES]? YES

* Do you wish to install LSEDIT support (150 blocks) [YES]?  YES

* Do you wish to install modifiable message file procedures (500 blocks) [YES]?  YES

  The remainder of the installation is expected to take between
  5 and 30 minutes.

  No further questions will be asked during this installation.

%FORMS-I-MAINKITBEGIN, restoring main kit.
%VMSINSTAL-I-RESTORE, Restoring product saveset B ...
%FORMS-I-MAINKITEND, main kit restored.

%FORMS-I-SMPKITSTART, restoring Sample Application package.
%VMSINSTAL-I-RESTORE, Restoring product saveset C ...
%FORMS-I-SMPKITEND, Sample Application package restored.

%FORMS-I-DEMKITSTART, restoring Demonstration Package.
%VMSINSTAL-I-RESTORE, Restoring product saveset D ...
%FORMS-I-DEMKITEND, Demonstration Package restored.

%FORMS-I-INSMAINSTART, beginning installation of main kit.
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
 VMI$ROOT:[SYSTEST.FORMS].
%FORMS-I-INSMAINEND, installation of main kit complete.

%VMSINSTAL-I-SYSDIR, This product creates system disk directory
 VMI$ROOT:[SYSHLP.EXAMPLES.FORMS].
%FORMS-I-INSSMPSTART, beginning installation of Sample Application.
%FORMS-I-INSSMPEND, installation of Sample Application complete.

%FORMS-I-INSDEMSTART, beginning installation of Demonstration Package.
%FORMS-I-INSDEMEND, installation of Demonstration Package completed.

%FORMS-I-INSLSESTART, beginning installation of LSEDIT support.
%TPU-S-FILEIN, 24 lines read from file VMI$ROOT:[SYSUPD.FORMS013]
 FORMS$KIT_UPDATE_LSE_ENV.COM;1
%TPU-S-SAVEENV, environment written to VMI$ROOT:[SYSUPD.FORMS013]
 LSE$SYSTEM_ENVIRONMENT.ENV;1
%FORMS-I-INSLSEEND, installation of LSEDIT support completed.
```

(continued on next page)

Example A–1 (Cont.): Sample Full Development Kit Installation

```
%FORMS-I-INSDEMSTART, beginning installation of message support.
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
 VMI$ROOT:[SYSHLP.EXAMPLES.FORMS.MESSAGES].
%FORMS-I_INSDEMEND, installation of message support completed.

  All files installed have names beginning with the product
  facility code (FORMS$).
  The following system areas are updated by this installation:

     [SYSEXE]                - added FORMS$*.EXE
     [SYSLIB]                - added FORMS$*.EXE files
                             - added language definition files
     [SYSHLP]                - added Forms component help files
     [SYSMSG]                - added message files
     [SYS$STARTUP]           - added FORMS$STARTUP.COM
     [SYSTEST]               - added IVP procedures
     [SYSTEST.FORMS]         - added IVP files

     [SYSHLP.EXAMPLES.FORMS] - added sample application files
     [SYSHLP.EXAMPLES.FORMS] - added Demonstration Package
     [SYSHLP.EXAMPLES.FORMS.MESSAGES] - added modifiable message file
                                        procedures

     These files are modified:

     [SYSLIB]STARLET.OLB     for FORMS$MGR_OBJECT_TABLES*.OBJ
     [SYSLIB]IMAGELIB.OLB    for FORMS$MANAGER.EXE
     [SYSLIB]DCLTABLES.EXE   for FORMS$DCL_COMMAND_TABLE.CLD
     [SYSHLP]HELPLIB.HIB     for Forms help
     [SYSLIB]LSE$SYSTEM_ENVIRONMENT.ENV for Forms IFDL environment

  The final part of the installation process will now occur. Upon
  completion of this installation, please be sure to edit the system
  startup file in order to run FORMS$STARTUP.COM

  Please read the release notes before using DECforms. These contain
  important information for this release.

  These are in SYS$HELP:FORMS013.RELEASE_NOTES.

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

Starting DECforms V1.3 Installation Verification Procedure.
DECforms V1.3 Installation Verification Procedure beginning.
DECforms V1.3 Installation Verification Procedure completed successfully.

  Installation of FORMS V1.3 completed at 15:46

        VMSINSTAL procedure done at 15:46
```

A.2 Run-Time Kit

Example A–2 contains a sample installation for the DECforms run-time only kit.

Example A–2: Sample Run-Time Only Kit Installation

```
$ SET DEF SYS$UPDATE
$ @VMSINSTAL

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

It is 15-MAR-1991 at 14:11.
Enter a question mark (?) at any time for help.

* Are you satisfied with the backup of your system disk [YES]?  YES
* Where will the distribution volumes be mounted: MUA0:

Enter the products to be processed from the first distribution volume set.
* Products: FORMSRT013
* Options: N
Please mount the first volume of the set on  MUA0:.
* Are you ready? YES
%MOUNT-I-MOUNTED, FORMSR mounted on _MUA0:

The following products will be processed:

  FORMSRT V1.3

       Beginning installation of FORMSRT V1.3 at 14:12

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

    Release Notes Options:

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

* Select option [2]: 4
* Do you want to continue the installation? YES
%VMSINSTAL-I-RELMOVED , The product's release notes have been successfully
moved to SYS$HELP.
```

(continued on next page)

Example A–2 (Cont.): Sample Run-Time Only Kit Installation

```
    ******************************************************************
    *                                                                *
    *                     D E C f o r m s    V 1 . 3                 *
    *                  ===================================           *
    *                            Runtime Kit                         *
    *                                                                *
    *                      Copyright (C) 1989, 1990, 1991 BY         *
    *               Digital Equipment Corporation, Maynard, MA       *
    *                        All Rights Reserved.                    *
    *                                                                *
    ******************************************************************

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

        This kit contains an Installation Verification Procedure (IVP)
        to verify the correct installation of DECforms.
        Because the IVP requires interactive operator input, it
        must be run using a VT100, VT200, VT300, or VT400 compatible
        video terminal. If you are using one of these terminal
        types, you may run the procedure as part of this
        installation by answering "YES" to the next prompt.

        You may also choose to invoke the IVP separately, at a
        later time, by typing the following at the DCL prompt:

                     @SYS$TEST:FORMS$RT_IVP.COM

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

        Product:      FORMS-RT
        Producer:     DEC
        Version:      1.3
        Release Date: 13-MAR-1991

* Does this product have an authorization key registered and loaded? YES
%VMSINSTAL-I-SYSDIR, This product creates system disk directory VMI$ROOT:[SYSTEST.FORMS].


      The following files are added by this installation:

      SYS$LIBRARY:FORMS$MANAGER.EXE
      SYS$LIBRARY:FORMS$CIOSHR.EXE
      SYS$MESSAGE:FORMS$MSGMGRSHR.EXE
      SYS$MESSAGE:FORMS$MSGMGRSHR_HEBREW.EXE
      SYS$STARTUP:FORMS$STARTUP.COM
      SYS$TEST:FORMS$RT_IVP.COM
      SYS$COMMON:[SYSTEST.FORMS]FORMS$RT_IVP.EXE
```

```
      The following files have been updated:

      SYS$LIBRARY:STARLET.OLB (inserted FORMS$MGR_OBJECT_TABLES*.OBJ)
      SYS$LIBRARY:IMAGELIB.OLB (inserted FORMS$MANAGER.EXE)

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

Starting Installation Verification Procedure (IVP)

      for DECforms V1.3 Run-Time Manager

DECforms Interactive Installation Verification Procedure Starting.

DECforms Interactive Installation Verification Procedure Complete.

    The Installation Verification Procedure has completed successfully.
    Refer to the Installation Guide for further verification procedures

    Installation of FORMSRT V1.3 completed at 14:19

    VMSINSTAL procedure done at 14:20
```

Appendix B

Files and Logical Names Installed on Your System

The DECforms installation procedure installs a number of files on your system and defines some logical names. Section B.1 lists the files installed or modified by the DECforms full development kit. Section B.2 lists the files installed or modified by the DECforms run-time only kit. Section B.3 describes the logical name the installation procedure defines.

B.1 Files Added and Modified by the Full Development Kit

The following list contains the names of all files installed on your system when you install the DECforms full development kit:

- Directory SYS$COMMON:[SYSTEST]

  FORMS$IVP.COM
  FORMS$RT_IVP.COM

- Directory SYS$COMMON:[SYSTEST.FORMS]

  FORMS$RT_IVP.EXE

- Directory SYS$SYSROOT:[SYSEXE]

  FORMS$DISPATCH.EXE
  FORMS$TEXTEDIT.EXE

- Directory SYS$SYSROOT:[SYSHLP]

  FORMS$FDE_HELP.HLB
  FORMS$HELPLIB.HLB
  FORMS$PEDVTHELP.HLB
  FORMSnnn.RELEASE_NOTES

- Directory SYS$SYSROOT:[SYSHLP.EXAMPLES.FORMS]

  FORMS$CHECKING.EXE
  FORMS$CHECKING_ADA.ADA
  FORMS$CHECKING_BASIC.BAS
  FORMS$CHECKING_BASIC_COMMON.BAS
  FORMS$CHECKING_C.C
  FORMS$CHECKING_COBOL.COB
  FORMS$CHECKING_DATA.DAT
  FORMS$CHECKING_DIBOL.DBL
  FORMS$CHECKING_FORM.FORM
  FORMS$CHECKING_FORM.IFDL
  FORMS$CHECKING_FORTRAN.FOR
  FORMS$CHECKING_FORTRAN_COMMON.FOR
  FORMS$CHECKING_PASCAL.PAS
  FORMS$CHECKING_PLI.PLI
  FORMS$DEMO.COM
  FORMS$DEMO_CALCULATOR_FORM.EXE
  FORMS$DEMO_CALCULATOR_FORM.IFDL
  FORMS$DEMO_CALLS.COB
  FORMS$DEMO_CALLS.EXE
  FORMS$DEMO_CALLS.FORM
  FORMS$DEMO_CALLS.IFDL
  FORMS$DEMO_COMMAND_RECALL_FORM.EXE
  FORMS$DEMO_COMMAND_RECALL_FORM.IFDL
  FORMS$DEMO_COPYCAT_FORM.EXE
  FORMS$DEMO_COPYCAT_FORM.IFDL
  FORMS$DEMO_ENABLE.BAS
  FORMS$DEMO_ENABLE.EXE
  FORMS$DEMO_GLOBE_FORM.EXE
  FORMS$DEMO_GLOBE_FORM.IFDL
  FORMS$DEMO_GUIDE.PS
  FORMS$DEMO_GUIDE.TXT
  FORMS$DEMO_ORDER_ENTRY_FORM.EXE
  FORMS$DEMO_ORDER_ENTRY_FORM.IFDL
  FORMS$DEMO_PHONE.EXE
  FORMS$DEMO_PHONE.IFDL
  FORMS$DEMO_PHONE.PAS
  FORMS$DEMO_PHONE_FILE.DAT
  FORMS$DEMO_RULE_FORM.EXE
  FORMS$DEMO_RULE_FORM.IFDL
  FORMS$DEMO_SHOW_TEXTLIB.COB
  FORMS$DEMO_SHOW_TEXTLIB.EXE
  FORMS$DEMO_SHOW_TEXTLIB.FORM

FORMS$DEMO_SHOW_TEXTLIB.IFDL
FORMS$DEMO_TEXTLIB.COB
FORMS$DEMO_TIMER.EXE
FORMS$DEMO_TIMER_AST.COB
FORMS$DEMO_TIMER_AST_ROUTINE.COB
FORMS$DEMO_TIMER_CHECK_STATUS.COB
FORMS$DEMO_TIMER_COMP_ROUTINE.COB
FORMS$DEMO_TIMER_FORM.IFDL
FORMS$DEMO_TIMER_SET_TIMER.COB
FORMS$DEMO_WINDOWS_FORM.EXE
FORMS$DEMO_WINDOWS_FORM.IFDL
FORMS$SAMPLE_FORM.FORM
FORMS$SAMPLE_FORM.IFDL
FORMS$SAMPLE_PROGRAM.EXE
FORMS$SAMPLE_PROGRAM.FOR

- Directory SYS$SYSROOT:[SYSHLP.EXAMPLES.FORMS.MESSAGES]

  DECFORMS_MESSAGES.TXT
  FORMS$MSG_BUILD.COM
  FORMS$MSG_RUN_TIME.MSG

- Directory SYS$SYSROOT:[SYSLIB]

  FORMS$ADA_DEFINITIONS.ADA
  FORMS$BAS_DEFINITIONS.BAS
  FORMS$BLISS_DEFINITIONS.R32
  FORMS$CIOSHR.EXE
  FORMS$CNVSHR.EXE
  FORMS$COB_DEFINITIONS.LIB
  FORMS$C_DEFINITIONS.H
  FORMS$DBL_DEFINITIONS.DBL
  FORMS$FDESHR.EXE
  FORMS$FDE_EDIT.TPU
  FORMS$FDE_SUBPROC.COM
  FORMS$FOR_DEFINITIONS.FOR
  FORMS$FSESHR.EXE
  FORMS$MANAGER.EXE
  FORMS$PAS_DEFINITIONS.PAS
  FORMS$PEDSHR.EXE
  FORMS$PEDVTEXEC.EXE
  FORMS$PLI_DEFINTIONS.PLI
  FORMS$TRNSHR.EXE
  FORMS$UTLBCKSHR.EXE
  FORMS$UTLEXTSHR.EXE
  FORMS$UTLTSTSHR.EXE

- Directory SYS$SYSROOT:[SYSMSG]

  FORMS$MSGMGRSHR.EXE
  FORMS$MSGMGRSHR_HEBREW.EXE
  FORMS$MSGPRDSHR.EXE

- Directory SYS$SYSROOT:[SYS$STARTUP]

  FORMS$STARTUP.COM

The following list contains the names of all files modified by the DECforms installation procedure when you install the full development kit:

- SYS$LIBRARY:DCLTABLES.EXE - Add the FORMS DCL command
- SYS$LIBRARY:STARLET.OLB - Add the DECforms object tables
- SYS$LIBRARY:IMAGELIB.OLB - Add FORMS$MANAGER.EXE
- SYS$LIBRARY:LSE$SYSTEM_ENVIRONMENT.ENV - Add the DECforms LSE support (optional)
- SYS$HELP:HELPLIB.HLB - Add the DECforms help

B.2 Files Added and Modified by the Run-Time Only Kit

The following list contains the names of all files installed on your system when you install the DECforms run-time only kit:

- Directory SYS$COMMON:[SYSTEST]

  FORMS$RT_IVP.COM

- Directory SYS$COMMON:[SYSTEST.FORMS]

  FORMS$RT_IVP.EXE

- Directory SYS$SYSROOT:[SYSLIB]

  FORMS$CIOSHR.EXE
  FORMS$MANAGER.EXE

- Directory SYS$SYSROOT:[SYSMSG]

  FORMS$MSGMGRSHR.EXE

- Directory SYS$SYSROOT:[SYS$STARTUP]

  FORMS$STARTUP.COM

The following list contains the names of all files modified by the DECforms installation procedure when you install the run time only kit:

- SYS$LIBRARY:STARLET.OLB - Add the DECforms object tables
- SYS$LIBRARY:IMAGELIB.OLB - Add FORMS$MANAGER.EXE

B.3 Logical Name Added

When you install DECforms, one logical name is entered into the system logical name table. The FORMS$EXAMPLES logical is defined as SYS$SYSROOT:[SYSHELP.EXAMPLES.FORMS]. This name is stored in DECforms startup file and is entered automatically into the system logical name table whenever the system reboots or whenever you run the software.