DEC Remote Operation Service Development Kit Installation Guide

Order Number AA-PGFNA-TE

This guide describes how to install the DECros Development Kit on your VMS system.

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Software Version: DECrosDK version 4.0

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Preface

The DEC Remote Operation Service (DECros) is a software tool, conforming to Open Systems Interconnection (OSI) standards, which can be used by programmers to develop OSI-compliant applications. This guide shows you how to install the DECros Development Kit (DECrosDK) software on a VAX/VMS system.

Intended Audience

This guide is for the system manager or user who is responsible for installing the DECros Development Kit on the local system. It is assumed that the reader already knows DCL, and is familiar with the mounting of peripheral devices. In addition, the reader may need some working knowledge of the system on which the DECros Development Kit is to be installed.

A full glossary of acronyms and abbreviations can be found in the *DEC Remote Operation Service Operator's Guide.*

Structure of This Guide

Chapter 1 covers the preparations for installing the DECros Development Kit. Chapters 2 through 4 describe how to install the DECros Development Kit on your system. Further reference material is contained in the appendixes.

The guide is structured as follows:

- Chapter 1 explains the prerequisites for the installation of the DECros Development Kit software.
- Chapter 2 explains how to license your system.
- Chapter 3 describes the steps for installing the DECrosDK files.
- Chapter 4 describes how to make the DECros Distribution Kit available for use.
- Appendix A gives a list of the files which should be present after sucessful installation.
- Appendix B provides sample logs and examples.

Associated Documents

The following documents contain additional related material:

- *PLC409 The ASN.1 Compiler User Manual*
- *DEC Remote Operation Service Operator's Guide*

Conventions

The following conventions are used in this guide:

Boldface	Boldface type indicates emphasis on an important word or concept
Italics	Italics type indicates an associated document
<XXX>	This 1- to 3-character symbol indicates that you press a key on the terminal keyboard. For example, <RET> is the return key, <DEL> is the delete key
<CTRL/X>	This symbol indicates that you press the CTRL key at the same time as you press another key. For example, <CTRL/C> or <CTRL/Y>
[option]	Square brackets indicate optional arguments used when typing a command
Messages	Messages displayed on the user's terminal screen are shown proportionally spaced. For example: `Beginning installation of PLC409 V4.0 at 10:35:23`
Commands	Commands entered by the user are shown in the type below with representative parameter names printed in italics. For example: `$ SHOW DEVICE` *`device-name`*
YES	Used for options to be entered by the user, when described in the text that accompanies output from the system

Chapter 1
Preparing to Install DECrosDK

1.1 Pre-installation Procedure

Before you install the DECros Development Kit, check the following:

1. Ensure that you have the proper distribution kit. The DECros Development Kit can be installed onto a VAX or MicroVAX system from the following types of media:

Table 1–1: DECros DK Distribution Kits for VMS

Medium	Label
TK50 (MicroVAX)	DECrosDK
1600 BPI Magtape	DECrosDK

2. Have your Product Authorization Key (PAK) for the DECros development Kit to hand, and license your system to run DECros as described in Chapter 2. For details of using the License Management Utility, refer to the *VMS License Management Utility Reference Manual.*
3. Make sure that you are logged into the **System Manager**'s account before you start the installation.

4. Make sure that there is sufficient space on the system disk for the DECros Development Kit files. If you try to install DECros with fewer than 2000 free blocks, the installation procedure fails, and you are returned to the system prompt.

   To find out how much free space is on the system disk, enter:

   ```
   $ SHOW DEVICE device-name
   ```

   where *device-name* is the name of your system disk. The displayed information includes the number of free blocks on the disk.

5. If you are about to re-install the DECros Development Kit, the installation procedure replaces the older versions of the files with those from the distribution kit.

6. Before you start the installation, make sure that your users log off from the system. The installation of DECros can then be started with the command SYS$UPDATE:VMSINSTAL.COM to copy the DECros Development Kit files from the distribution kit to the installation disk.

Chapter 2

Licensing DECrosDK on Your System

The VMS License Management Facility is available with version 5.3 of the VMS operating system. Before installing the DECros Development Kit, you must register your software license. You cannot use the DECros Development Kit unless you have run the LMF procedure.

The license registration information you need is contained in the Product Authorization Key (PAK) shipped with the DECros Development Kit. The PAK is a paper certificate that contains information about the license you need in order to run a particular piece of software.

2.1 When to Register Your License

It is best to register your DECros Development Kit license before you perform the installation. During the installation, you are asked if you have registered the DECros Development Kit license and loaded the appropriate authorization key. If you have not already done so, you can complete the installation; however, you will not be able to use the DECros Development Kit software.

Once you perform the license registration and have loaded the authorization key, you will be able to use the DECros Development Kit.

2.2 Registering Your License to Use DECros

To register a license under VMS Version 5.3, first log into the system manager's account, SYSTEM, and then invoke the licensing procedure by entering the following command:

```
$ @SYS$UPDATE:VMSLICENSE.COM
```

Select choice **1** and when you are prompted for information, respond with data from your Product Authorization Key.

Note

If you are installing DECros on a cluster, you only need to enter the above command on one node.

On each of the other nodes in the cluster you should then enter the command:

```
$ LICENSE LOAD PLC409
```

The LMF software loads the necessary license on the node where you issue this command, and returns you to the system prompt.

For complete information on using the LMF, see the *License Management Utility Manual* in the VMS Version 5.3 documentation set.

Chapter 3
Installing the DECrosDK Files

To start the installation procedure, enter the following command:

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

Note

You can specify the name of the product, the associated device, and various other installation parameters in the VMSINSTAL command line. For further details, refer to the *Guide to VAX/VMS Software Installation.*

The following display appears:

```
 VAX/VMS Software Product Installation Procedure 'version number'
It is 'date' at 'time'
Enter a question mark (?) at any time for help.
* Are you satisfied with the backup of your system disk [YES] ?
```

If you enter **NO**, the installation procedure fails, and the following display appears before returning you to the system prompt.

```
VMSINSTAL Procedure done at 'time'
```

If you enter **YES** or **<RET>**, the next prompt is:

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

Enter the name of the device on which the distribution kit is to be mounted. For example, if the kit is to be mounted on device MTA1, enter **MTA1**

The procedure continues:

```
Enter the products to be processed from the first distribution volume set.
* Products:
```

Enter **PLC409040**

Next, VMSINSTAL displays the prompt:

```
* Enter installation options you wish to use (none) :
```

No option is necessary, enter **<RET>**

The installation procedure then begins as follows:

```
The following products will be processed:
  PLC409 V4.0

 Beginning installation of PLC409 V1.0 at 'time'

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

        Product:          PLC409
        Producer:         DEC
        Version:          4.0
        Release Date:

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

If you answer **NO**, this message is displayed:

```
DEC ROS Development Kit has not been licensed to run on this system.
You must license DEC ROS Development Kit before it can be used.
Refer to the DEC ROS Development Kit for VMS Installation Guide.
```

The next question to be displayed is:

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

Answer **YES** or **<RET>** if you wish VMSINSTAL to purge the installation files after the installation is over.

The procedure continues:

```
To load DEC ROS Development Kit each time your system loads, add the
following line to your SYS$STARTUP:SYSSTARTUP_V5.COM file:

 @SYS$STARTUP:PLC409$LOAD.COM
```

The DECros Development Kit is loaded and the procedure continues:

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

Installation of PLC409 V4.0 completed at 'time'

Enter the products to be processed from the first distribution volume set.
* Products:
```

Answer **CTRL/Z** or **<RET>**. The installation procedure stops and the following message is displayed:

```
VMSINSTAL procedure done at 'time'
```

3.1 Errors During the Installation

If your system fails during the installation, VMSINSTAL displays this message:

```
%VMSINSTAL-I-RECOVER, PLC409 was being installed when the system failed.
Some files may have been lost.
```

In this case, check whether the files listed in Appendix A are all present in the up-to-date versions. If not, the simplest thing to do is to start the installation procedure from the beginning again.

Chapter 4
Using the DECros Development Kit

Before loading the DECros Development Kit you have to check that the mandatory logical name exists.

4.1 DECrosDK Logical Name

The DECros Development Kit logical name has to be defined in LNM$SYSTEM_TABLE which is the system logical name table. To do so, you need the SYSPRV privilege to be able to execute the following command:

```
$ DEFINE /SYSTEM PLC409$TABLE_NAME SYS$SYSTEM:PLC409$TABLE.DAT
```

4.2 Loading the DECros Development Kit

To load DECros Development Kit, use the following command:

```
$ @SYS$MANAGER:PLC409$STARTUP.COM
```

If you want DECros Development Kit to reload whenever you bring up the system, edit the file SYS$STARTUP:SYSTARTUP_V5.COM to include the above command.

If you have installed on a cluster, run SYS$STARTUP:PLC409$STARTUP.COM on each node that you want to load DECros Development Kit.

To be able to use the DECros Development Kit, enter the following command:

```
$ @SYS$MANAGER:PLC409$INIT.COM
```

If you want to be able to use DECros Development Kit each time you log in edit your file LOGIN.COM to include the above command.

Appendix A
List of DECros Files

After the installation is over, check that the following files have been placed in the specified directories:

Table A–1: Files in SYS$STARTUP

PLC409$STARTUP.COM	The procedure that loads and DECrosDK

Table A–2: Files in SYS$SYSTEM

PLC409$MONITOR.EXE	The PLC409 Monitor executable image
PLC409$PREPROCESSOR.EXE	The PLC409 Preprocessor executable image
PLC409$ANALYSER.EXE	The PLC409 Analyser executable image
PLC409$LINKER.EXE	The PLC409 Linker executable image
PLC409$C_GENERATOR.EXE	The PLC409 C Source Generator executable image
PLC409$LIBRARY.EXE	The PLC409 Intermediate Form Library Manager executable image
PLC409$TABLE.DAT	The PLC409 Internal Data file

Table A–3: Files in SYS$MANAGER

PLC409$INIT.COM	The procedure the user has to add to his LOGIN.COM file to be able to use DECrosDK

Table A–4: Files in SYS$LIBRARY

PLC409.OLB	The PLC409 General Encoding/Decoding Modules object library.
PLC409$GEAUPCON.H	A PLC409 High-Level Programming Interface C language include file.
PLC409$GEAUPMAC.H	A PLC409 High-Level Programming Interface C language include file.
PLC409$GEAUPTYP.H	A PLC409 High-Level Programming Interface C language include file.
PLC409$GENUPCON.H	A PLC409 High-Level Programming Interface C language include file.
PLC409$GENUPCPT.H	A PLC409 High-Level Programming Interface C language include file.
PLC409$GENUPDEF.H	A PLC409 High-Level Programming Interface C language include file.
PLC409$GENUPMAC.H	A PLC409 High-Level Programming Interface C language include file.
PLC409$GENUPTYI.H	A PLC409 High-Level Programming Interface C language include file.
PLC409$GENUPTYP.H	A PLC409 High-Level Programming Interface C language include file.

Appendix B
Sample Log as an Example

The following is an example installation:

Example B–1: DECros Development Kit Files Installation

```
$  @sys$update:vmsinstal
 VAX/VMS Software Product Installation Procedure V5.3
It is 16-MAY-1990 at 16:44.
Enter a question mark (?) at any time for help.
* Are you satisfied with the backup of your system disk [YES]?  YES <RET>
* Where will the distribution volumes be mounted:  DUA0:[PLC409.V040] <RET>
Enter the products to be processed from the first distribution volume set.
* Products:  PLC409040 <RET>
* Enter installation options you wish to use (none):  N <RET>
The following products will be processed:
  PLC 409 V4.0
 Beginning installation of PLC409 V4.0 at 16:45
%VMSINSTAL-I-RESTORE, Restoring product save set A ...

 Product:        PLC409
 Producer:       DEC
 Version:        4.0
 Release Date:

* Does this product have an authorization key registered and loaded?  YES <RET>
* Do you want to purge files replaced by this installation [YES]?  YES <RET>
To load DEC ROS Development Kit each time your system loads, add the
following line to your SYS$STARTUP:SYSTARTUP_V5.COM file:
 $ @SYS$STARTUP:PLC409$LOAD.COM
%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...
 Installation of PLC409 V4.0 completed at 16:46
Enter the products to be processed from the next distribution volume set.
* Products:  <RET>
 VMSINSTAL procedure done at 16:47
$
```