DEC Remote Operation Service Installation Guide

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

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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 software on a VAX/VMS system in an OSI computer network.

Intended Audience

This guide is for the system manager or user who is responsible for installing DECros 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 following:

- The system on which DECros is to be installed
- VAX OSI Application Kernel (OSAK), the session service that supports DECros
- VAX OSI Transport Service (VOTS), the transport service that supports OSAK
- VAX Packetnet System Interface (P.S.I.), the X.25 network service

Associated Documents

This guide is part of a documentation set. The other documents in this set are:

- *DEC Remote Operation Service Operator's Guide*
- *DEC Remote Operation Service Programmer's Guide*

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 DEC ROS. Chapters 2 through 5 describe, as a set of procedures, how to install, verify and run DECros 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 software.
- Chapter 2 explains how to license your system.
- Chapter 3 describes the steps for installing the DECros files.
- Chapter 4 shows how to check that resources are correctly defined before loading and starting up DECros.
- Chapter 5 explains how to verify the installation and update important files.
- Appendix A and Appendix B provide file information, sample logs and examples.

Other Documents of Interest

The following documents contain additional related material:

- *VAX OSI Application Kernel Installation Guide* describes how to install OSAK
- *VAX OSI Application Kernel System Manager's Guide* shows how to manage a VAX/VMS system running OSAK software in an OSI computer network
- *VAX OSI Application Kernel User's Guide* gives a full description of the session service (OSAK) used by DECros

- *Introduction to the VAX OSI Transport Service* gives a brief account of the OSI model and an introductory description of the transport service (VOTS)
- *VAX OSI Transport Service Installation Guide* describes how to install VOTS
- *VAX OSI Transport Service System Manager's Guide* describes how to operate and configure VOTS
- *VAX P.S.I. Installation Procedures* describes how to install VAX P.S.I.
- *VAX P.S.I. Management Guide* explains how to use VAX P.S.I. to communicate with remote systems connected to a Packet Switching Data Network (PSDN).

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: `VOTS not accessible`
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 DECros

1.1 Pre-installation Procedure

Before you install DECros, you must check the following:

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

Table 1–1: DECros Distribution Kits for VMS

Medium	Label
TK50 (MicroVAX)	DECros
1600 BPI Magtape	DECros

2. Have your Product Authorization Key (PAK) for DECros 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 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. You can attempt a reinstallation of DECros with less than this.

   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.

   The following system resources quotas are used in the DECros startup file SYS$STARTUP:ROS$STARTUP.COM.

Parameter name	RUN parameter	value
AST LIMIT	(ast_limit)	512
FILE LIMIT	(file_limit)	256
QUEUE LIMIT	(queue_limit)	256
ENQUEUE LIMIT	(enqueue_limit)	512
BUFFER LIMIT	(buffer_limit)	400000
BUFFERED INPUT & OUTPUT	(io_buffered)	256
WORKING SET	(working_set)	1024

   Your local system must be compatible with these values (DECros will not run if the System **minimum** values are **greater than** those above).

5. Make sure that VAX OSI Transport Service Version 2.0 and VAX OSI Application Kernel Version 1.1 are installed on your system, and that the operating system is VMS Version 5.3 or later. If an up-to-date version of VMS, VOTS or OSAK is not installed, the installation of DECros will fail.

   Refer to the *VAX OSI Transport Service Installation Guide* and the *VAX OSI Application Kernel* for details of how to install and configure these two products.

6. If you intend to use the installation procedure to run the Installation Verification Program (IVP), make sure that both VAX P.S.I. and VOTS are running and that the Network Access Point (NAP) is defined and in the ENABLED state. To check that VOTS and OSAK are running, run OSIT$CONTROL by entering the following commands:

```
$  RUN SYS$SYSTEM:OSIT$CONTROL
OSITCP>  SHOW TRANSPORT
```

When VOTS is not running, the followibg message is displayed:

```
VOTS not accessible
```

If VOTS is running, enter the following command to find out if OSAK has been installed:

```
OSITCP>  SHOW KNOWN TSAP
```

OSIT$CONTROL displays the following contents of the Transport database when OSAK has been installed:

```
TSAP information timed at 'date' 'time'
TSAP name = VOTSIVP
         Username = not set
         Password =
         File = SYS$TEST:OSIT$IVPRESP.COM
```

For details of installing and running VOTS, and using OSIT$CONTROL, refer to the *VAX OSI Transport Service Installation Guide* and the *VAX OSI Transport Service System Manager's Guide.*

Finally, to prove that a NAP is enabled, type the command:

```
OSITCP>  SHOW KNOWN NAP
```

7. If you are about to reinstall DECros, you need to stop the existing DECros server process before starting to install the new version. If the DEC ROS server process is still running when the installation starts, the startup procedure will fail. To stop the current DECros enter the DCL command:

```
$  STOP ROS$SRV
```

8. Before you start the installation, make sure that your users log off from the system. Use the **BACKUP** facility to back up your system disk. The installation of DECros can then be started with the command SYS$UPDATE:VMSINSTAL.COM, and the DECros files are copied from the distribution kit to the installation disk.

Note

The installation procedure replaces the older versions of the files with the files from the distribution kit. However, important changes you may have made to files are not destroyed. See Section 4.5 for details.

1.2 Importance of the Release Notes

The installation procedure begins with a menu that offers you the choice of reading the *DEC Remote Operation Service Release Notes* on line or printing them. DIGITAL recommends that you take the time, at the beginning of the installation procedure, to read the *Release Notes* carefully.

Chapter 2

Licensing DECros on Your System

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

The license registration information you need is contained in the Product Authorization Key (PAK) shipped with DECros. 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 license before you perform the installation. During the installation, you are asked if you have registered the DECros 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 run either the DECros software or its Installation Verification Program (IVP).

Once you perform the license registration and have loaded an authorization key, you will be able to run the IVP and use DECros.

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 OSI-REMOTE-OPERATION
```

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 DECros Files

3.1 Release Notes Installation Only

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 **ROS010**

Next, VMSINSTAL displays the prompt:

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

DIGITAL recommends that you specify option N (which gives you the choice of printing or displaying the release notes). Enter **N**

The installation procedure then begins as follows:

```
The following products will be processed:
  ROS V1.0

 Beginning installation of ROS V1.0 at 'time'

%VMSINSTAL-I-RESTORE, Restoring product saveset 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]:
```

If you select Option **1**, the following is displayed:

```
VMI$ROOT:[SYSUPD.DECROS010]ROS010.RELEASE_NOTES;1
```

The release notes will then start scrolling on your screen.

If you select Option **2**, you are asked on which queue you wish the file to be printed:

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

Press **<RET>** for the default, or specify another print queue.

If you select Option **3**, you are asked on which queue you wish the file to be printed. The release notes will then **also** be displayed on your terminal screen.

Note

While reading the release notes, check for any problems that might affect installation of the DECros software.

When the release notes have been queued to a printer and/or displayed at your terminal, the procedure asks:

```
* Do you want to continue the installation ?
```

If you enter **N**, the VMSINSTAL procedure creates a file for the release notes. This file is called ROS010.RELEASE_NOTES and is located in the SYS$HELP: directory. After your option has been dealt with by the installation, the following message and question will appear:

```
%VMSINSTAL-I-RELMOVED, The product's release notes have been
successfully moved to SYS$HELP.
Enter the products to be processed from the first distribution volume set.
* Products:
```

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

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

3.2 Full (Files) Installation

Repeat the first steps as in Section 3.1 by entering the command:

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

After 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:
  ROS V1.0

       Beginning installation of ROS V1.0 at 'time'

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

%VMSINSTAL-I-RELMOVED , The product's release notes have been
successfully moved to SYS$HELP.
```

The installation procedure tests if a DECros server process is running on your system (see Chapter 1, Preparing to Install DECros). If this is the case, the installation procedure fails and the following display appears:

```
DEC ROS process is already running on your system.
You need to stop the DEC ROS process on your system before installing
it again.
Refer to the DEC ROS Installation Guide.
%VMSINSTAL-E-INSFAIL, The installation of DECROS V1.0 has failed.

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

Answer **<CTRL/Z>** or **<RET>** to exit from the installation procedure. Now, enter the following DCL command to stop the DECros server process, before installing the DECros files again from the beginning:

```
$  STOP ROS$SRV
```

If no DECros server process was running on your system, the procedure continues:

```
       Product:          OSI-REMOTE-OPERATION
        Producer:        DEC
        Version:         1.0
        Release Date:

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

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

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

If necessary, continue with the installation and then follow the instructions in the *VMS License Management Utility Reference Manual* before running the IVP as explained in Chapter 5. However, as the IVP uses DECros (which runs only if your system is licensed), you will not see the following prompt, which appears next in the installation procedure:

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

Answer **YES** or **<RET>** if you wish the installation procedure to run the IVP immediately after the installation is over. 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 installation procedure deletes any DECros files that were put there in the course of a previous installation, with two exceptions:

- If there is an old version of ROS$STARTUP.COM in either:

  SYS$SPECIFIC:[SYSMGR] or
  SYS$SPECIFIC:[SYSTARTUP]

  the file is renamed to ROS$STARTUP.OLD and the following text is displayed, where *logical-name* is either SYS$MANAGER or SYS$STARTUP:

  ```
  An old version of the file ROS$STARTUP.COM exists in the system
  specific logical-name directory. This file will be renamed to
  logical-name:ROS$STARTUP.OLD. If you have previously modified
  logical-name:ROS$STARTUP.COM to include system specific commands
  you will need to add these commands to the new
  SYS$STARTUP:ROS$STARTUP.COM.
  ```

- If there is an old version of ROS$PROFILE.TXT either in

  SYS$SPECIFIC:[SYSMGR] or
  SYS$SPECIFIC:[SYSTARTUP]

  the file is renamed to ROS$PROFILE.OLD and the following text is displayed, where *logical-name* is either SYS$MANAGER or SYS$STARTUP:

  ```
  An old version of the file ROS$PROFILE.TXT exists in the system
  specific logical-name directory. This file will be renamed to
  logical-name:ROS$PROFILE.OLD. If you have previously modified
  logical-name:ROS$PROFILE.TXT to include system specific commands
  you will need to add these commands to the new SYS$STARTUP:ROS$PROFILE.TXT.
  ```

The procedure continues:

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

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

DECros starts up and the procedure continues:

```
%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories
%RUN-S-PROC_ID, identification of created process is 'identifier'
```

If you specified earlier that the IVP should be run, the installation procedure will now run the IVP. The following display indicates the start of the IVP:

```
Beginning of Installation Verification Program
```

For displays that appear during the IVP, see Section 5.4. After the installation is over, the following message appears:

```
End of Installation Verification Program

Installation of ROS V1.0 completed at 'time'

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

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

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

3.3 Errors During the Installation

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

```
%VMSINSTAL-I-RECOVER, DEC ROS 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
Running DECros

Before starting DECros, you have to check that the mandatory logical names are defined and that the DECros process resource quotas are set to well-sized values.

4.1 The DECros Local Address

The DECros process is seen by OSAK as a normal user's process with its own local address. When DECros starts, it signals to OSAK that it is ready to receive a new connection request. To do so, DECros needs to know its own local address for a session connection.

DECros will use the default local address defined in the system logical name **ROS$LOCAL_ADDRESS**. This logical name contains three components consisting of a combination of the names of the DECros Session, Transport Service Access Points (SSAP and TSAP), and the VOTS-address.

When DECros is installed, the furnished start up procedure contains the following logical name definition:

```
$ DEFINE /SYSTEM ROS$LOCAL_ADDRESS "ROS$SSAP.ROS$TSAP.ROS$NAP"
```

where:

- ROS$SSAP is the name of the SSAP
- ROS$TSAP is the name of the TSAP

- ROS$NAP is the logical name defined in the OSIT$NAMES logical name table which represents the VOTS-address.

If you wish to modify this address to fit in with your own existing naming convention, you have to substitute your address string (SSAP.TSAP.VOTS-address) for the default string in the logical name definition.

Refer to the *VAX OSI Transport Service Management Guide* and the *VAX OSI Application Kernel System's Manager Guide* for details of how to set the Transport and Session Service Access Points values.

4.2 DECros Logical Names

All the DECros logical names have 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 logical-name equivalent-string
```

The following logical names can be defined :

- **ROS$LOCAL_ADDRESS**

  Defines the local session connection address of DECros. See Section 4.1 for more details about its contents.

- **ROS$TRACE**

  Defines if DECros works with or without tracing all the session primitives sent to or received from OSAK. The trace will be put into a file named ROS$SRV.LOG located in the SYS$MANAGER directory. The possible values are "ON" if a trace is requested, "OFF" if not (the trace "ON" option is present in the ROS$STARTUP.COM but commented out, so the default value is "OFF").

- **ROS$SRV**

  Contains the name of the mailbox device used by all the user's processes which will access the services provided by the DECros server. This logical name is created each time the DECros process starts and is deleted each time the DECros process stops.

Caution

No direct use of this logical name may be made by a user process.

4.3 System Resource Quotas

DECros is configured to authorize 64 connections.

In the standard startup procedure, quotas are passed with the RUN command and are sized to ensure that no quota will be exceeded during the life of the DECros process. See Section 1.1 to obtain these values and check if your system can support them.

Caution

If you want to reduce these quotas because you require a lower number of simultaneous connections, be sure to reduce them in direct proportion to the reduction you apply to the number of connections. See the *DEC Remote Operation Service Operator's Guide* for how to redefine the DECros configuration.

4.4 Defining the DECros Configuration

The DECros server process needs to be started with an input file called the DECros Profile. This file contains DECros commands to be executed before the main task of the process starts. This feature allows the customisation of the DECros server objects according to a given system configuration.

The profile allows the definition of the suffixes associated with the SAPs or allows the setting on of the debug mode for test purposes.

For example, you may want to change the SAP names in the profile to fit in with your existing naming convention.

By default, the DECros startup procedure uses the profile:

- SYS$STARTUP:ROS$PROFILE.TXT

Note

Always ensure that the last entry in the profile is the **start** command. See Appendix B, Example B–4.

For detailed information about the DECros commands, refer to the *DEC Remote Operation Service Operator's Guide.*

4.5 Update of DECros Files

During the installation of the DECros files it was noted that the default option was for old files to be purged with the following two exceptions:

- ROS$STARTUP.OLD
- ROS$PROFILE.OLD

as described in Section 3.2. For example, you may have previously modified the profile to fit in with your own existing naming convention or be running DECros with a different number of SAPs than the default value.

In this case, you must copy the ***.OLD files** back to:

- SYS$STARTUP:ROS$STARTUP.COM and
- SYS$STARTUP:ROS$PROFILE.TXT

or modify these files with your desired changes **before starting up DECros**.

4.6 Starting up DECros

To load and start DECros, use the command:

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

Note

If you want DECros to restart 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$STARTUP:ROS$STARTUP.COM on each node that you want DECros to run.

Chapter 5
Verifying the Installation

You may want to run the Installation Verification Program (IVP) to verify the installation if you did not specify that the IVP should run immediately after the installation is over, or if the IVP ran as part of the installation procedure and it failed for any reason.

If you did not run the IVP immediately after installation, you may want to run it before the first time you use DECros and as the first step whenever you detect problems with DECros. See Section 5.3 for details of how to run the IVP.

After you have finished the Installation Verification and you are sure that DECros is properly installed, make a backup of the system disk. Save the distribution kit for future installations.

5.1 The Installation Verification Program (IVP)

The IVP requests the registration and deregistration for each type of Service Access Point (SAP) provided by DECros. Note that as the IVP exercises DECros, and as you need a license to use DECros, you can install DECros but you cannot run the IVP without first installing a license. If you try to use DECros on an unlicensed system, you get the following error message:

```
DEC ROS has not been licensed to run on this system.
You must license DEC ROS before it can be started.
```

If you get this message when you try to install the product, register and load the necessary license by following the instructions given in Chapter 2.

5.2 Preparing to Run the IVP

You can issue the Installation Verification command from any directory on your system. Before you run the IVP, make sure that VOTS and OSAK are installed and started. You may also want to check that the VOTS IVP and the OSAK IVP both run before verifying DECros itself.

To check that VOTS and OSAK are both running, and that the DECros Network Access Point (NAP) and Transport Service Access Point (TSAP) are available, use the same OSIT$CONTROL procedure that you used to check that DECros could be installed, as outlined in Section 1.1.

If a TSAP exists which can be used by the DECros Server process identifier, you can run the DECros IVP. The TSAP is named ROS$TSAP (the default value) or is the one you defined in the ROS$LOCAL_ADDRESS logical-name (see Section 4.1 for details about the DECros local address definition).

For full details of using OSIT$CONTROL, refer to the *VAX OSI Transport Service System Manager's Guide.*

For details of running the VOTS IVP, refer to the *VAX OSI Transport Service Installation Guide.*

5.3 Running the IVP

You can issue the DECros Installation Verification command from any directory on your system by entering the following command:

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

5.4 Displays During the IVP

When the IVP starts, the following display appears:

```
Beginning of Installation Verification Program
```

The IVP first checks that the DECros license is registered and loaded. The following display appears when the DECros license has been successfully registered and loaded:

```
Check licensing of DEC OSI-REMOTE-OPERATION... Success
```

If the DECros license is not available on the system, the following display appears.

```
Check licensing of DEC OSI-REMOTE-OPERATION... Failure
```

If this happens the IVP stops. You must then refer to the instructions given in Chapter 2 to register and load the DECros license on your system.

Now the installation verification starts:

```
Starting test of DEC ROS SAPs configuration :
```

The IVP tries to register itself to every SAP offered by DECros. Each time DECros gets a registration request to a SAP, the IVP displays the following message when registration has succeeded:

```
Registration to 'service' SAP number 'number'... Success
```

If registration has failed, the following message appears:

```
Registration to 'service' SAP number 'number'... Failure
```

After the last registration test, the IVP cancels all the registrations previously established and displays the following message when cancellation has succeeded:

```
Cancellation of registration to 'service' SAP number 'number'... Success
```

If cancellation has failed, you receive the following message:

```
Cancellation of registration to 'service' SAP number 'number'... Failure
```

In the case of both registration and cancellation messages, 'service' is replaced by one of the Presentation, CASE or ROSE services being verified, and 'number' indicates the number of the SAP being tested.

When the IVP ends, the following display appears:

```
End of Installation Verification Program
```

Note

The exit status of the Installation Verification Program always indicates a successful completion even if the IVP finds registration or cancellation errors.

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$EXAMPLES

ROS$INIT.C	Example program that lets DECros function as an initiating host
ROS$RESP.C	Example program that lets DECros function as a receiving host

Table A–2: Files in SYS$HELP

ROS010.RELEASE_NOTES	The DECros Release Notes

Table A–3: Files in SYS$LIBRARY

DECROS.OLB	VAX C object library
DECROS.H	C include file

Table A–4: Files in SYS$STARTUP

ROS$STARTUP.COM	The procedure that loads and runs DECros †
ROS$PROFILE.TXT	The standard profile used during DECros start-up phase†

†Needs to be updated if you are running a non standard configuration. See Section 4.5

Table A–5: Files in SYS$SYSTEM

ROS$SRV.EXE	The DECros Server executable image
ROS$CMU.EXE	The Control and Management Utility (CMU) executable image

Table A–6: Files in SYS$TEST

ROS$IVP.COM	The Installation Verification Program command file
ROS$IVP.EXE	The Installation Verification Program executable image

Appendix B
Sample Logs as Examples

This appendix contains some sample logs as examples of the installation and verification of DECros.

Example B–1: DECros Release Notes Files Installation Only

```
$  @sys$update:vmsinstal
 VAX/VMS Software Product Installation Procedure V5.3
It is 16-MAY-1990 at 16:44.
Enter a question mark (?) at any time for help.
* Are you satisfied with the backup of your system disk [YES]?  YES <RET>
* Where will the distribution volumes be mounted:  DUA0:[DECROS.V010] <RET>
Enter the products to be processed from the first distribution volume set.
* Products:  ROS010 <RET>
* Enter installation options you wish to use (none):  N <RET>
The following products will be processed:
  ROS V1.0
 Beginning installation of ROS V1.0 at 16:44
%VMSINSTAL-I-RESTORE, Restoring product save set A ...
Release notes included with this kit are always copied to SYS$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 <RET>
* Do you want to continue the installation [NO]?  NO <RET>
%VMSINSTAL-I-RELMOVED , The product's release notes have been successfully
moved to SYS$HELP.
Enter the products to be processed from the next distribution volume set.
* Products: <RET>
 VMSINSTAL procedure done at 16:45
$
```

Example B–2: Full DECros Files Installation

```
$  @sys$update:vmsinstal
 VAX/VMS Software Product Installation Procedure V5.3
It is 16-MAY-1990 at 16:51.
Enter a question mark (?) at any time for help.
* Are you satisfied with the backup of your system disk [YES]?  YES <RET>
* Where will the distribution volumes be mounted:  DUA0:[DECROS.V010] <RET>
Enter the products to be processed from the first distribution volume set.
* Products:  ROS010 <RET>
* Enter installation options you wish to use (none):  N <RET>
The following products will be processed:
  ROS V1.0
 Beginning installation of ROS V1.0 at 16:52
%VMSINSTAL-I-RESTORE, Restoring product save set A ...
%VMSINSTAL-I-RELMOVED , The product's release notes have been successfully
moved to SYS$HELP.
 Product:        OSI-REMOTE-OPERATION
 Producer:       DEC
 Version:        1.0
 Release Date:
* Does this product have an authorization key registered and loaded?  YES <RET>
* Do you want to run the IVP after the installation [YES]?  YES <RET>
* Do you want to purge files replaced by this installation [YES]?  YES <RET>
An old version of the file ROS$STARTUP.COM exists in the system specific
SYS$MANAGER directory. This file will be renamed to
SYS$MANAGER:ROS$STARTUP.OLD. If you have previously modified
SYS$MANAGER:ROS$STARTUP.COM to include system specific commands you will need
to add these commands to the new SYS$STARTUP:ROS$STARTUP.COM.
To start up DEC ROS each time your system loads, add the
following line to your SYS$STARTUP:SYSTARTUP_V5.COM file:
 $ @SYS$STARTUP:ROS$STARTUP.COM
%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...
%RUN-S-PROC_ID, identification of created process is 0000005E
 DEC ROS for VMS - Version 1.0
           Beginning of Installation Verification Program
Check licensing of DEC OSI-REMOTE-OPERATION... Success
Starting test of DEC ROS SAPs configuration :
Registration to Presentation SAP number 11... Success
Registration to Presentation SAP number 12... Success
Registration to ACSE SAP number 21... Success
Registration to ACSE SAP number 22... Success
Registration to ACSE SAP number 23... Success
Registration to ACSE SAP number 24... Success
Registration to ROSE SAP number 31... Success
Registration to ROSE SAP number 32... Success
Registration to ROSE SAP number 33... Success
Registration to ROSE SAP number 34... Success
Cancellation of registration to Presentation SAP number 11... Success
Cancellation of registration to Presentation SAP number 12... Success
Cancellation of registration to ACSE SAP number 21... Success
```

Example B–2 (continued on next page)

Example B–2 (Cont.): Full DECros Files Installation

```
Cancellation of registration to ACSE SAP number 22... Success
Cancellation of registration to ACSE SAP number 23... Success
Cancellation of registration to ACSE SAP number 24... Success
Cancellation of registration to ROSE SAP number 31... Success
Cancellation of registration to ROSE SAP number 32... Success
Cancellation of registration to ROSE SAP number 33... Success
Cancellation of registration to ROSE SAP number 34... Success
             End of Installation Verification Program
 Installation of ROS V1.0 completed at 16:53
Enter the products to be processed from the next distribution volume set.
* Products:  YES <RET>
 VMSINSTAL procedure done at 16:53
$
```

Example B–3: DECros Installation Verification Program

```
$  @sys$test:ros$ivp
             Beginning of Installation Verification Program
Check licensing of DEC OSI-REMOTE-OPERATION... Success
Starting test of DEC ROS SAPs configuration :
Registration to Presentation SAP number 11... Success
Registration to Presentation SAP number 12... Success
Registration to ACSE SAP number 21... Success
Registration to ACSE SAP number 22... Success
Registration to ACSE SAP number 23... Success
Registration to ACSE SAP number 24... Success
Registration to ROSE SAP number 31... Success
Registration to ROSE SAP number 32... Success
Registration to ROSE SAP number 33... Success
Registration to ROSE SAP number 34... Success
Cancellation of registration to Presentation SAP number 11... Success
Cancellation of registration to Presentation SAP number 12... Success
Cancellation of registration to ACSE SAP number 21... Success
Cancellation of registration to ACSE SAP number 22... Success
Cancellation of registration to ACSE SAP number 23... Success
Cancellation of registration to ACSE SAP number 24... Success
Cancellation of registration to ROSE SAP number 31... Success
Cancellation of registration to ROSE SAP number 32... Success
Cancellation of registration to ROSE SAP number 33... Success
Cancellation of registration to ROSE SAP number 34... Success
             End of Installation Verification Program
```

Example B–4: The DECros Standard Profile

```
define suffix 11 CPST1
define suffix 12 CPST2
define suffix 21 CACS1
define suffix 22 CACS2
define suffix 23 CACS3
define suffix 24 CACS4
define suffix 31 CROS1
define suffix 32 CROS2
define suffix 33 CROS3
define suffix 34 CROS4
define suffix 50 CDECROS
start
```

Note

The "start" command must always be the last command in the profile. It starts up DECros with the specified configuration of SAPs.

The "C" before the SAP name indicates to the CMU that a character string follows e.g. SAP 11 has the name PST1.