DECosap for OpenVMS Installation Guide

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This guide contains instructions for installing DECosap/AP and DECosap/H1 on an OpenVMS system.

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Preface

Purpose of this Guide

This guide describes how to install the DECosap/AP and DECosap/H1 software for OpenVMS.

Intended Audience

This manual is intended for system managers responsible for installing DECosap /AP and DECosap/H1 on OpenVMS. You must be familiar with the OpenVMS installation procedure.

Structure of this Document

This manual is organized as follows:

- Chapter 1 describes the operating system and hardware requirements for installation and related procedures that you must complete before installing DECosap/AP and DECosap/H1 for OpenVMS.
- Chapter 2 describes the DECosap/AP and DECosap/H1 for OpenVMS installation procedure.
- Chapter 3 describes the Installation Verification Procedure (IVP) and any post-installation tasks that you must complete in order to use DECosap/AP and DECosap/H1 for OpenVMS.
- Appendix A describes the hierarchy and contents of the DECosap/AP and DECosap/H1 directories on a OpenVMS system.
- Appendix B contains a sample log of a DECosap/AP and DECosap/H1 installation on an OpenVMS Alpha system.

DECosap/AP and DECosap/H1 Documentation Set

The DECosap/AP and DECosap/H1 Version 3.1 documentation set also includes the following manual:

- *DECosap/AP and DECosap/H1 for OpenVMS AXP Network Manager's and Programmer's Guide*

Conventions

This manual uses the following conventions:

Convention	Meaning
DECosap/AP and DECosap/H1	The term ‘‘ DECosap/AP and DECosap/H1’’ refers to the DECosap /AP and DECosap/H1 product or to functions and services provided by the DECosap/AP and DECosap/H1 software.
OpenVMS	The term ‘‘OpenVMS’’ refers to the OpenVMS product or to operations and functions performed by the OpenVMS operating system.
Boldface type	Boldface type emphasizes user input to system prompts.
`system output`	This typeface indicates system output in interactive examples.
Ctrl/x	Hold down the Ctrl key while you press another key, indicated here by x.
italic type	Italic type emphasizes important information and indicates the complete titles of documents.
n	A lowercase italic *n* indicates the generic use of a number.
x	A lowercase italic *x* indicates the generic use of a letter.
argument, . . .	Indicates that multiple arguments can be used in a command string if separated by commas.
. . .	Vertical ellipses (dots) in examples represent data that has been omitted for clarity.

Part I

Installing DECosap/AP and DECosap/H1

This part contains three chapters that divide the installation process into the following sections:

- Pre-installation tasks — describing the tasks and checks you must perform before beginning the installation of DECosap/AP and DECosap/H1.
- The installation procedure
- Post-installation tasks — describing the tasks you must perform immediately after the installation of DECosap/AP and DECosap/H1.

1

Preparing for the Installation of DECosap/AP and DECosap/H1

This chapter discusses the preparations and requirements necessary for installing DECosap/AP and DECosap/H1.

This manual applies to Version 3.1 of DECosap/AP and DECosap/H1 and all subsequent maintenance releases up to the next major product release.

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

DECosap/AP and DECosap/H1 provides online release notes. DIGITAL strongly recommends that you read the release notes before proceeding with the installation. For information on accessing the online release notes, see Section 2.1.

1.1 Required Operating System Components

The OpenVMS operating system comes with a variety of support options, or classes. Classes include such features as networking and RMS journaling. For a complete list of the classes, refer to the Software Product Description (SPD).

1.2 Pre-requisite Hardware

Table 1–1 describes the hardware items needed to install DECosap/AP and DECosap/H1.

Table 1–1 Hardware Requirements for Installing DECosap/AP and DECosap/H1

Item	Purpose
RRD40 CD Reader	To install from media.
Hardcopy or video terminal	To communicate with the operating system and respond to prompts.
IEEE 802.3 Communication Controller	To communicate with SINEC devices.

1.3 Pre-requisite and Optional Software

Table 1–2 provides information on the software you must have installed on your system before installing DECosap/AP and DECosap/H1. The table also includes information about optional software that you can use together with DECosap/AP and DECosap/H1. The Software Product Description (SPD) contains a complete list of pre-requisite and optional software and their required version numbers.

Table 1–2 Pre-requisite and Optional Software

Pre-requisite Products	Purpose
OpenVMS Version 6.1, 6.2, 7.0 or 7.1	Operating system
VMS OSI Transport Service Version 6.3 to 7.1	DECnet/OSI Transport Communications Services
DEComni API for OpenVMS Version 3.1	High-level programming interface support

Optional Products	Purpose
ORACLE Rdb Version 5.1 (VAX), or Version 6.0 or 6.1 (Alpha)	Required if you wish to use the OSF component
OpenVMS DECwindows Motif Version 1.2	Required if you wish to use the OmniView component

1.4 License Registration

DECosap for OpenVMS Alpha kit includes two protocols:

- SIEMENS H1
- SIEMENS AP

If you want to run the Installation Verification Procedure (IVP) and use the software, you must register and load the license for the AP and/or the H1 protocol. The installation procedure completes even though a license for DECosap /AP and DECosap/H1 has not been registered and loaded.

Alternative licences exist for each one these two protocols. For every protocol you can use an unlimited license named, DECOSAP-AP or DECOSAP-H1, or a limited license, DECOSAP-AP-USER or DECOSAP-H1-USER, based on the connections number. It is recommended that you skip installation of the protocol whose associated license has not been registered and loaded.

A user with a limited license supporting just one connection may use DECosap to build up a connection with a device different from the machine running DECosap. However, in this case, you cannot run the IVP.

To register a license under OpenVMS, first log in to the system manager's account, SYSTEM. You then have a choice of two ways to perform the registration:

- Invoke the SYS$UPDATE:VMSLICENSE.COM procedure. When it prompts you for information, respond with data from your License PAK.
- At the DCL prompt, enter the LICENSE REGISTER command with the appropriate qualifiers that correspond to License PAK information, then load the license by issuing the following command:

  ```
  LICENSE LOAD DECOSAP-AP
  ```

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

1.5 Special Requirements for Installing DECosap/AP and DECosap/H1

Ensure that the appropriate IEEE 802.3 communication controller has been installed on your Alpha or VAX system. This communication controller should meet the hardware requirements specified in the DECosap/AP and DECosap/H1 SPD that comes with the DECosap/AP and DECosap/H1 kit.

1.6 Installation Procedure Requirements

This section and those that follow discuss various requirements for installing DECosap/AP and DECosap/H1 for OpenVMS.

The installation takes approximately 3 to 5 minutes (OpenVMS Alpha), or 8 to 10 minutes (OpenVMS VAX), depending on the type of media and system configuration that you are using.

1.6.1 Privileges and Disk Space

To install DECosap/AP and DECosap/H1, you must be logged in to an account that has SETPRV or at least the following privileges:

- CMKRNL
- WORLD
- SYSPRV

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

DECosap/AP and DECosap/H1's requirements for free disk storage space are different during installation and after installation. Table 1–3 summarizes the storage requirements.

Table 1–3 Disk Space Requirements

Kit	Blocks During Installation	Blocks After Installation
DECosap/AP and DECosap/H1 Version 3.1	42,000 (Alpha) 30,000 (VAX)	26,000 (Alpha) 18,000 (VAX)

To determine the number of free disk blocks on the current system disk, enter the following command at the DCL prompt:

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

1.6.2 System Parameters

Installing DECosap/AP and DECosap/H1 uses the same system parameter settings of DEComni API for OpenVMS. Therefore, you do not need to change them. However, Table 1–4 lists the minimum required system parameter values for the installation.

Table 1–4 Minimum Required System Parameter Values

System Parameter	Minimum Value
GBLPAGES[1]	4000 (Alpha) 2000 (VAX)
GBLSECTIONS[1]	10

[1]The values listed for these system parameters represent the number of free global pages and global sections required for the installation, not the total number you need to run your system and other software. These are the values that you set when installing DEComni API for OpenVMS.

The following sections show you how to:

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

1.6.2.1 Checking System Parameter Values

To check the values of your system parameters, enter the following command at the DCL prompt to invoke the System Generation Utility (SYSGEN):

```
$ RUN SYS$SYSTEM:SYSGEN
SYSGEN>
```

At the SYSGEN> prompt, enter the SHOW command to display the value of a system parameter. The values displayed should equal or exceed the value of each system parameter listed in Table 1–4. The following example displays the value for the GBLPAGES system parameter:

```
SYSGEN> SHOW GBLPAGES
```

After checking the parameters with the SHOW command, enter the EXIT command at the SYSGEN> prompt to return to DCL level.

1.6.2.2 Calculating the Values for GBLPAGES and GBLSECTIONS

To install and run DECosap/AP and DECosap/H1, you must have sufficient free global pages and global sections. You must first find out how many free global pages and sections you have on your system. Then use AUTOGEN if you need to increase the GLBPAGES and GBLSECTIONS system parameters.

Section 1.6.2.3 describes the procedures for increasing these values using AUTOGEN.

1.6.2.3 Changing System Parameter Values with AUTOGEN

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, edit the following file:

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

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:

```
GBLPAGES = 200
```

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

```
ADD_GBLPAGES = 2000
```

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

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

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

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 OpenVMS System Management Subkit.

1.6.3 Process Account Quotas

The account you use to install DECosap/AP and DECosap/H1 must have sufficient quotas to enable you to perform the installation. Table 1–5 summarizes the process quotas required for the installation account.

Table 1–5 Process Account Quotas for the Installing Account

Account Quota	Value
BYTLM	30.480
ENQLM	2000
FILLM	50
PGFLQUOTA	20,000
PRCLM	1
WSDEF	256[1]
WSEXT	3072
WSQUO	768

[1]The values for WSEXT and WSQUO must be equal to or greater than the WSDEF value.

1.6.4 VMSINSTAL Requirements

When you invoke VMSINSTAL, it checks whether:

- You have set your default device and directory to SYS$UPDATE
- You are logged in to a privileged account
- You have adequate quotas for installation
- Any users are logged in to the system

Note that the VMSINSTAL requires that the installation account have a minimum of the following quotas:

- ASTLM = 300
- BIOLM = 50
- DIOLM = 50

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

1.6.5 Backing Up Your System Disk

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

Use the backup procedures that are established at your site. For details of how to perform a system disk backup, see the section on the Backup Utility in the OpenVMS System Management Subkit.

1.6.6 DECosap/AP and DECosap/H1 Requirements

During installation, DECosap/AP and DECosap/H1 checks for the required versions of the following software:

- OpenVMS Version 6.1, 6.2, 7.0 or 7.1
- DECnet/OSI Version 6.3 or 7.0 (installed and running)
- DEComni API for OpenVMS (installed and running)

1.6.7 Configuring DECnet/OSI for Use with DECosap/AP and DECosap/H1

Before you can use DECosap/AP and DECosap/H1 DECosap/AP and DECosap/H1 with an external device, you must:

- Configure a DECnet template for NULL-INTERNET with the *loopback* attribute set to false.

Configuration Examples

Below is an example of how to configure a template for Null-Internet called IEEE.

```
$ @SYS$MANAGER:NET$CONFIGURE ADVANCED

        Configuration Options:

        [0]     Exit this procedure

        [1]     Perform an entire configuration
        [2]     Change node name/namespace name
        [3]     Configure Devices on this machine
        [4]     Configure Transports
        [5]     Configure Timezone Differential Factor
        [6]     Configure Event Dispatcher
        [7]     Configure Application database
        [8]     Configure MOP Client database
        [9]     Configure Cluster Alias

* Which configuration option to perform?                [0] : 4
```

```
* Which configuration option to perform?                [0] : 4
* Configure the NSP Transport?                         [YES] :
* Configure the OSI Transport?                          [NO] : YES
* Do you want to replace the existing NSP transport script? [NO] :
* Username for OSI loopback test application to use? [SYSTEST] : OSIT$DEFAULT
%NET$CONFIGURE-I-CREDEFOSITEMPLATE, created default OSI templates
* Do you wish to create additional OSI templates?       [NO] : YES
* Name of the template?                  [OSI$DEC_Default0] : IEEE
* Type of network service (CLNS/CONS)?               [CLNS] :
* Transport Classes to support?                         [4] :
* Allow use of expedited data?                        [YES] :
* Allow use of Checksums?                             [YES] :
* Routing protocol (Internet or Null Internet)?   [INTERNET] : NULL
* Which routing circuit is this template for?         [SVA-0] :
* Inactive Area address?                          [49::FF-00] :
* Do you wish to create additional OSI templates?       [NO] : YES

sys$manager:net$shutdown

  sys$startup:net$startup
```

2

Installing DECosap/AP and DECosap/H1

This chapter explains how to install DECosap/AP and DECosap/H1. Section 2.1 contains a step-by-step description of the installation procedure.

2.1 The Installation Procedure

The DECosap/AP and DECosap/H1 installation procedure consists of a series of questions and informational messages. See Appendix B for a sample 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 up to that point and exits. You can then start the installation again.

1. **Invoke VMSINSTAL.**

   ```
   @SYS$UPDATE:VMSINSTAL saveset-name device-name OPTIONS N
   ```

   To start the installation, invoke the VMSINSTAL command procedure from a privileged account, such as the SYSTEM account. VMSINSTAL is in the SYS$UPDATE directory. The following list defines the elements of the VMSINSTAL command procedure:

   saveset-name
   The installation name for the component. For DECosap/AP and DECosap/H1, use the following installation name:

   ```
   OSAPA031
   ```

   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. It is not necessary to use the console drive for this installation. However, if you do use the console drive, you should replace any media you removed once the installation is complete.

   OPTIONS N
   An optional parameter that indicates you want to see the question on release notes. If you do not include the OPTIONS N parameter, VMSINSTAL does not ask you about the release notes. You should review the release notes before proceeding with the installation in case they contain additional information about the installation. If you are restarting the installation and have already reviewed the release notes, you do not need to specify OPTIONS N.

   Note that there are several other options you can select when you invoke VMSINSTAL.

   - Auto_answer option (A): Initially creates a file that contains your answers to VMSINSTAL questions and prompts. You can then use the option (and the answer file) to save time during a reinstallation (typically after upgrading your system).

- Get save set option (G): Lets you store product save sets temporarily on a magnetic tape or in a disk directory.
- File log option (L): Logs all activity to the terminal during installation.
- Alternate root option (R): Lets you install the product to a system root other than that of the running system.

See the OpenVMS documentation on software installation in the VMS System Management Subkit for detailed information on these options. If you specify more than one option, separate the options with commas (OPTIONS A,N).

The following example invokes VMSINSTAL to install DECosap/AP and DECosap/H1 from tape drive MTA0: and shows the system response. This example uses the OPTIONS N release note parameter.

```
$ @SYS$UPDATE:VMSINSTAL OSAPA031 MTA0: OPTIONS N

   OpenVMS ALPHA Software Product Installation Procedure V7.1


It is 01-JAN-1997 at 15:18.
Enter a question mark (?) at any time for help.
```

If you do not supply either the product name or the device name, VMSINSTAL prompts you for this information later in the installation procedure. VMSINSTAL does not prompt you for any options, so be sure to include OPTIONS N on the VMSINSTAL command line to access the release notes during the installation.

2. **Confirm system backup.**

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

VMSINSTAL asks if you are satisfied with your system backup. You should always back up your system disk before performing an installation. If you are satisfied with the backup of your system disk, press RETURN. Otherwise, enter NO to discontinue the installation. After you back up your system disk, you can restart the installation.

3. **Select a release notes option.**

```
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 specified OPTIONS N when you invoked VMSINSTAL, you are now asked to choose one of the four options for reviewing the release notes.

If you select option 1, VMSINSTAL displays the release notes immediately on the console terminal. You can terminate the display at any time by pressing 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]:
```

You can press RETURN to send the file to the default output print device or you can enter another queue name.

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

Select option 4 if you have already reviewed the release notes and are restarting the installation.

Note that hardcopy release notes are included with the documentation set for DECosap/AP and DECosap/H1.

Next, VMSINSTAL displays the following question:

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

To continue the installation, enter YES. Otherwise, press RETURN. In either case, the release notes are copied to a file in the SYS$HELP directory:

```
SYS$HELP:OSAPA031.RELEASE_NOTES
```

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 DECosap/AP and DECosap/H1.

4. **Select the protocol to install and respond to license registration queries**

```
* Do you want to install DECosap SINEC-AP [YES]?

* Do you want to install DECosap SINEC-H1 [YES]?

        Product:      DECOSAP-AP
        Producer:     DEC
        Version:      3.1
        Release Date: 15-APR-1997

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

        Product:      DECOSAP-H1
        Producer:     DEC
        Version:      3.1
        Release Date: 15-APR-1997

* Does this product have an authorization key registered and loaded? y
 The installation procedure asks if you want to install the support
  for AP and/or H1 protocol, then displays license information about
  the selected product(s) and asks if the correspondent Product Authorization
  Keys have been registered.

  If you have not registered and loaded the required PAKs you must
  answer NO to the question.  DECosap for OpenVMS ALPHA does not require
  license registration and loading to complete installation, However, the
  installation Verification Procedure fails if you do not have a PAK
  registered and loaded.

  If you have PAKs named DECOSAP-AP-USER and/or DECOSAP-H1-USER, at least
  200 units must be loaded in order to successfully run the IVP.
  That means that at least two DECOSAP-<x>-USER packs with 100 units
  must be registered and loaded.
```

5. **Purge files.**

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

You have the option to purge files from previous versions of DECosap/AP and DECosap/H1 that are superseded by this installation. Purging is recommended; however, if you need to keep files from the previous version, enter NO in response to the question.

6. **Choose the Installation Verification Procedure (IVP) option.**

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

The installation procedure now asks if you want to run the IVP. The IVP for DECosap/AP and DECosap/H1 checks to be sure that the installation is successful. It is recommended that you run the IVP.

After DECosap/AP and DECosap/H1 is installed, you can run the IVP independently to verify that the software is available on your system. You might need to run the IVP after a system failure to make sure that users can access DECosap/AP and DECosap/H1.

7. **Continue with the installation.**

```
* Do you wish to continue with this installation [YES]?
```

The installation procedure now asks if you want to continue with the installation. To continue the installation, enter YES. Otherwise, press RETURN.

At this point, the installation procedure starts logging relevant messages that you can read to know about the operations being performed.

8. **Read informational messages.**

At this point, 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 procedure has been successful up to this point, VMSINSTAL moves the new or modified files to their target directories, updates help files, and updates DCL tables, if necessary. If you chose to have files purged, that work is done now. The following messages are displayed:

```
%VMSINSTAL-I-SYSDIR, this product creates system directory
                                [SYSHLP.EXAMPLES.DECOSAP]
%VMSINSTAL-I-MOVEFILES, files will now be moved to their target
                                directories...
```

Before running the IVP (if required), the installation procedure informs you about which DECnet configuration you need to work with an external device. For details see Section 1.6.7.

9. **Observe the Installation Verification Procedure (IVP).**

If you chose to run the IVP, VMSINSTAL runs it now. If the IVP terminates successfully, you see the following display:

```
%OSAP-S-IVP, the

 DECosap/AP and

 DECosap/H1 SINEC-AP IVP has
successfully completed
```

The IVP creates a DECnet template called OSAPIVP. This template is used to establish a VAX to AXP connection (Alpha systems) or a VAX to VAX connection (VAX systems). If you have already created a routing circuit for NULL INTERNET, a NULL INTERNET OSAPIVP template is created, otherwise the IVP fails. To use DECosap/AP and DECosap/H1 with an external device, you must configure a template which is similar to the OSAPIVP template, except for the loopback attribute that must be set to "true".

10. **End the installation procedure.**

```
Installation of OSAPA V3.1 completed at 15:54

VMSINSTAL procedure done at 15:54
```

The previous messages indicate that the entire installation procedure is complete.

You can now log out of the privileged account:

```
$ LOGOUT
SYSTEM  logged out at 01-JAN-1997 15:55:23:14.22
```

Note that VMSINSTAL deletes or changes entries in the process symbol tables during the installation. Therefore, if you are going to continue using the system manager's account and you want to restore these symbols, you should log out and log in again.

2.2 Error Recovery

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

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

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

```
The OSAPA V3.1 Installation Verification Procedure failed.

%VMSINSTAL-E-IVPFAIL, The IVP for OSAPA V3.1 has failed.
```

Errors can occur during the installation if any of the following conditions exist:

- The operating system version is incorrect
- A prerequisite software version is incorrect
- Quotas necessary for successful installation are insufficient
- System parameter values for successful installation are insufficient
- The OpenVMS help library is currently in use.

An errors may occur while you are running the IVP due to one of the following conditions:

- The product license has not been registered and loaded
- DECnet has not been configured as appropriate
- The protocol software has not been integrated correctly with DEComni API.

For descriptions of the error messages generated by these conditions, refer to the OpenVMS documentation on system messages, recovery procedures, and OpenVMS software installation. If you receive notification that one of these conditions exist, take the appropriate action as described in the message.

If an error occurs while using DECosap/AP and DECosap/H1 and you believe the error is caused by a problem with the product, take the appropriate action as described in Section 3.4.

3

After Installing DECosap/AP and DECosap/H1

The following tasks are associated with the post-installation phase:

- Executing the Installation Verification Procedure separately
- Editing the system startup and shutdown files
- Setting user account quotas
- Reporting any problems.

3.1 Running the Installation Verification Procedure Separately

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

```
$ @SYS$TEST:OSAP_IVP
```

3.2 Editing the System Files

You must edit the system startup and shutdown files to provide for automatic startup and shutdown of DECosap/AP and DECosap/H1 when your system is rebooted.

Add the command line that starts DECosap/AP and DECosap/H1 to the SYS$MANAGER:SYSTARTUP_VMS.COM system startup file:

DECosap/AP and DECosap/H1 cannot start until after the network has started. If you want to use DECosap/AP and/or DECosap/AP protocols from within BASEstar Open, execute the following command:

```
$ @SYS$STARTUP:OSAP_STARTUP
```

Otherwise, use the following:

```
$ @SYS$STARTUP:OSAP_STARTUP AST
```

In this second case, the installation procedure installs the AST-based DECosap shareable images.

3.3 User Account Requirements

To work with DECosap/AP and DECosap/H1, user accounts on your system must have certain privileges and quotas. The next two sections contain information on these requirements.

3.3.1 Privileges

To use DECosap/AP and DECosap/H1, each account must have at least the TMPMBX and NETMBX privileges. Use the OpenVMS Authorize Utility to determine whether users have the privileges they require.

3.3.2 User Account Quotas

You must make sure that the appropriate user accounts have sufficient quotas to be able to use DECosap/AP and DECosap/H1. Table 3–1 summarizes the required user account quotas.

Table 3–1 User Account Quotas for Using DECosap/AP and DECosap/H1

Account Quota	Value
ASTLM	300
BIOLM	50
BYTLM	30,480
DIOLM	50
ENQLM	2000
FILLM	50
PGFLQUOTA	20,000
PRCLM	1
WSDEF	256[1]
WSEXT	3072
WSQUO	768

[1]The values for WSEXT and WSQUO must be equal to or greater than the WSDEF value.

See Section 1.6.3 for a description of how to verify and change account quotas.

3.4 Getting Help and Reporting Problems

If an error occurs while you are using DECosap/AP and DECosap/H1, and you believe the error is the result of a problem associated with the product, take one of the following actions:

- If you have a basic or DECsupport Software Agreement, call your Customer Support Center (CSC). The CSC provides telephone support for high-level advisory and remedial assistance.
- If you have a Self-Maintenance Software Agreement, you can submit a Software Performance Report (SPR).
- If you purchased DECosap/AP and DECosap/H1 within the last 90 days and you think the problem is caused by a software error, you can submit an SPR.

If you submit an SPR, please take the following steps:

1. Describe as accurately as possible the circumstances and state of the system when the problem occurred. Include the description and version number of DECosap/AP and DECosap/H1 that you were using. Demonstrate the problem with specific examples.
2. Reduce the problem to as small a size as possible.

3. Remember to include listings of any command files, include files, relevant data files, and so forth.
4. Provide a listing of the program.
5. If the program is longer than 50 lines, submit a copy of it on machine-readable media (floppy diskette or magnetic tape). If necessary, also submit a copy of the program library used to build the application.
6. Report only one problem per SPR. This will facilitate a faster response.
7. Mail the SPR package to DIGITAL.

Experience shows that many SPRs do not contain enough information to duplicate or identify the problem. Concise, complete information helps DIGITAL give accurate and timely service to software problems.

If you find an error in the DECosap/AP and DECosap/H1 documentation, send an electronic mail message to *manufacturing@digital.com*.

Part II
Appendices

This section contains the following appendices:

- Files and Logical Names Installed on Your System
- Sample Installation

A

Files and Logical Names Installed on Your System

The DECosap/AP and DECosap/H1 installation procedure installs a number of files on your system and defines some logical names. Section A.1 lists the files installed. Section A.2 lists the logical names that are added to the system logical name table.

A.1 File Names

A.1.1 Files Created

The following list contains the names of all files created on your system when DECosap/AP and DECosap/H1 is installed.

- SYS$COMMON:[SYS$STARTUP]
  - OSAP_STARTUP.COM
  - OSAP_LOGICALS.COM
- SYS$COMMON:[SYSTEST]
  - OSAP_START_AP_RCVR.COM
  - OSAP_IVP.COM
  - OSAP_START_H1_RCVR.COM
  - OSAP_IVP_AP_SNDR.EXE
  - OSAP_IVP_AP_RCVR.EXE
  - OSAP_IVP_H1_SNDR.EXE
  - OSAP_IVP_H1_RCUR.EXE
- SYS$COMMON:[SYSMGR]
  - OSAP_STOP.COM
  - OSAP_CONFIG.COM
- SYS$COMMON:[SYSLIB]
  - OSAP_CODES.ADA
  - OSAP_CODES.BAS
  - OSAP_CODES.FOR
  - OSAP_CODES.H
  - OSAP_CODES.MAR
  - OSAP_CODES.PAS

  - OSAP_CODES.PLI
  - OSAP_CODES.R32
  - OMNI_INTEGRATOR2_DEFS_INCLUDE.ADA
  - OMNI_INTEGRATOR2_DEFS_INCLUDE.BAS
  - OMNI_INTEGRATOR2_DEFS_INCLUDE.FOR
  - OMNI_INTEGRATOR2_DEFS_INCLUDE.H
  - OMNI_INTEGRATOR2_DEFS_INCLUDE.MAR
  - OMNI_INTEGRATOR2_DEFS_INCLUDE.PAS
  - OMNI_INTEGRATOR2_DEFS_INCLUDE.PLI
  - OMNI_INTEGRATOR2_DEFS_INCLUDE.R32
  - OSH1_CODES.ADA
  - OSH1_CODES.BAS
  - OSH1_CODES.FOR
  - OSH1_CODES.H
  - OSH1_CODES.MAR
  - OSH1_CODES.PAS
  - OSH1_CODES.PLI
  - OSH1_CODES.R32
  - OMNI_INTEGRATOR3_DEFS_INCLUDE.ADA
  - OMNI_INTEGRATOR3_DEFS_INCLUDE.BAS
  - OMNI_INTEGRATOR3_DEFS_INCLUDE.FOR
  - OMNI_INTEGRATOR3_DEFS_INCLUDE.H
  - OMNI_INTEGRATOR3_DEFS_INCLUDE.MAR
  - OMNI_INTEGRATOR3_DEFS_INCLUDE.PAS
  - OMNI_INTEGRATOR3_DEFS_INCLUDE.PLI
  - OMNI_INTEGRATOR3_DEFS_INCLUDE.R32
  - OSAP_COM_SHR.EXE
  - OSAP_COM_AST_SHR.EXE
  - OSAP_AP_SHR.EXE (for DECosap/AP)
  - OSAP_AP_AST_SHR.EXE (for DECosap/AP)
  - OSAP_H1_SHR.EXE (for DECosap/H1)
  - OSAP_H1_AST_SHR.EXE (for DECosap/H1)
- SYS$COMMON:[SYSHLP.EXAMPLES.DECOSAP]
  - CLIENT.C
  - OSAP_CREATE_DEFINITION.C
  - OSAP_CREATE_DEFINITION.FOR

  - OSAP_DOMAIN_SERVICES.C
  - OSAP_EXC_CLIENT.PAS
  - OSAP_EXC_SERVER.PAS
  - OSAP_GET_VAR_ATTR.C
  - OSAP_PI_SERVICES.C
  - OSAP_READ_VAR.FOR
  - OSAP_TEST.C
  - OSAP_UNSOLST.C
  - OSAP_UNSOLST_SERVER.C
  - OSAP_VAR_SERVER.FOR
  - OSAP_VAR_SERVER_A.FOR
  - OSAP_VMD_SERVICES.C
  - SERVER.C
  - SWITCH_BOARD.C
  - OSAP_EXAMPLES.README
  - DEC_CHECK.COM
  - LOAD_OSAP_VARIABLES.COM
  - OSAP_REGISTER.COM
  - OSAP_DEREGISTER.COM
- SYS$COMMON:[SYSMSG]
  - OSAP_CODES_MSG.EXE
  - OSH1_CODES_MSG.EXE

A.1.2 Files Modified

The following list contains the names of all files modified on your system when DECosap/AP and DECosap/H1 is installed.

- SYS$COMMON:[SYSLIB]
  - OMNI_REGISTRY.TAB
- ODS:[LOCAL]
  - ODS_KNOWN_ATTRIBUTE_TYPES.DAT
  - ODS_KNOWN_OBJECT_CLASSES.DAT

A.2 Logical Names

The following logical names are entered into the system logical name table when DECosap/AP and DECosap/H1 is installed. These names are stored in the product's startup file. They are automatically entered into the system logical name table whenever the system reboots or whenever the software is invoked.

- OSAP_EXAMPLES

B

Sample Installation

This appendix contains a sample installation of DECosap/AP and DECosap/H1. This sample was run on a system that had no previous version of DECosap/AP and DECosap/H1 installed. Depending on which layered products you have on your system, you might see additional messages and questions when you perform your installation.

The sample installation assumes that DECnet has been shut down, that no users are logged on to your system, and that OPTIONS N is specified to print the release notes. The Installation Verification Procedure (IVP) runs at the end of the installation.

```
$ @sys$update:vmsinstal OSAPA031 $1$DKB0:[OSAP31]

 OpenVMS AXP Software Product Installation Procedure V7.1

It is 14-MAY-1997 at 11:22.

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

%VMSINSTAL-W-ACTIVE, The following processes are still active:
       _RTA7:

* Do you want to continue anyway [NO]? YES
* Are you satisfied with the backup of your system disk [YES]?

The following products will be processed:
  OSAPA V3.1
 Beginning installation of OSAPA V3.1 at 11:18

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

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Installation procedure for DECosap for OpenVMS Alpha V3.1


Now performing software prerequisite check...

Now checking for available disk space...

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Installation procedure for DECosap for OpenVMS Alpha V3.1


Now performing software prerequisite check...

Now checking for available disk space...

Now checking process quota values...

* Do you want to install DECosap SINEC-AP [YES]?

* Do you want to install DECosap SINEC-H1 [YES]?
```

```
        Product:      DECOSAP-AP
        Producer:     DEC
        Version:      3.1
        Release Date: 15-APR-1997

* Does this product have an authorization key registered and loaded? Y
    Product:      DECOSAP-H1
        Producer:     DEC
        Version:      3.1
        Release Date: 15-APR-1997

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

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

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

* Do you want to continue with this installation [YES]?

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

  This installation will now continue in an unattended mode
  of operation, which will not require any user interaction.

  Estimated time to completion from this point is 3 minutes.
  This estimate is based on a configuration consisting of a
  DEC 3000 and installation from CD ROM.

  The current time is: 11:19.00

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


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

Now integrating DECosap for OpenVMS Alpha V3.1 into DEComni API for OpenVMS
Alpha V3.1 ...

%VMSINSTAL-I-SYSDIR, This product creates system
                          directory [SYSHLP.EXAMPLES.DECOSAP].

 Added ODS Schema definition for Attribute Type RESPTIMER (Response Timer)
 Added ODS Schema definition for Attribute Type COMPLTIMER (Completion Timer)
 Added ODS Schema definition for Attribute Type MUX (Multiplexer Identifier)
 Added ODS Schema definition for Attribute Type NEGOTIATION (Negotiation Flag)

 Added ODS Schema definition for Object Class OSAP (OSAP Titled Application)

 Added ODS Schema definition for Object Class OSH1 (OSH1 Titled Application)

* * * * * * * * * * * * * * * * * * * * * * * * *
*                    WARNING!                   *
*   IN ORDER TO SUCCESSFULLY USE DECOSAP WITH A   *
*   A REAL DEVICE A DECNET TEMPLATE FOR NULL      *
*   INTERNET MUST BE REGISTERED.                  *
*   REFER TO DECNET DOCUMENTATION FOR MORE        *
*   INFORMATION                                   *
*   A SHORT EXPLANATION CAN BE FOUND IN DECOSAP   *
*   INSTALLATION GUIDE                            *
* * * * * * * * * * * * * * * * * * * * * * * * *

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STARTUP PROCEDURE FOR: DECosap for OpenVMS Alpha V3.1

Now checking process privileges...
```

```
Now checking for the DECosap license...


%OSAP-I-LICENSE, The following valid license was found DECOSAP-AP

%OSAP-I-LICENSE, The following valid license was found DECOSAP-H1

Now checking the DEComni sharable images...

Creating logicals now...

Install the DECosap AST based sharable images now...

%OSAP-S-STARTUP, DECOSAP STARTUP SUCCESSFULLY COMPLETED

    +-----------------------------------------------------------------+
    |                                                                 |
    | The DECosap for OpenVMS Alpha V3.1 IVP will now be invoked...   |
    |                                                                 |
    +-----------------------------------------------------------------+

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INSTALLATION VERIFICATION PROCEDURE FOR: DECOSAP for OpenVMS Alpha V3.1
Now checking process quota values...
Now checking that DEComni was started...

Now checking that OSI Transport was started...

Now checking that files have reached target directories...

Node 0 OSI Transport Template OSAPIVP
at 1996-05-30-11:20:27.305+02:00Iinf

ADDRESS = AA000400E7B9

+-------------------------------------------------------+
|   Routing inactive area defined = {49::FF-00}         |
+-------------------------------------------------------+
+-------------------------------------------------------+
|  A Null-Internet Template is created to run the IVP   |
+-------------------------------------------------------+

Node 0 OSI Transport Template OSAPIVP
at 1996-05-30-11:20:32.394+02:00Iinf


Node 0 OSI Transport Template OSAPIVP
at 1996-05-30-11:20:32.402+02:00Iinf

Characteristics

    Network Service                   = CLNS

Node 0 OSI Transport Template OSAPIVP
at 1996-05-30-11:20:32.409+02:00Iinf

Characteristics

    Classes                           =
       {
          4
       }
```

```
Node 0 OSI Transport Template OSAPIVP
at 1996-05-30-11:20:32.417+02:00Iinf

Characteristics

    CONS Template                     = ""

Node 0 OSI Transport Template OSAPIVP
at 1996-05-30-11:20:32.424+02:00Iinf

Characteristics

    Checksums                         = False

Node 0 OSI Transport Template OSAPIVP
at 1996-05-30-11:20:32.430+02:00Iinf

Characteristics

    Inbound                           = True

Node 0 OSI Transport Template OSAPIVP
at 1996-05-30-11:20:32.449+02:00Iinf

Characteristics

    Loopback                          = False

Node 0 OSI Transport Template OSAPIVP
at 1996-05-30-11:20:32.456+02:00Iinf

Characteristics

    CLNS Inactive Area Address        =
       {
          49::FF-00
       }

Now running the DECosap for OpenVMS Alpha IVP SINEC-AP receiver application...

Now running the DECosap for OpenVMS Alpha IVP SINEC-AP sender application...

accept connect...
Connect completed...
Received Value: 0
Written value = 0
Received Value: 1
Written value = 1
Received Value: 2
Written value = 2
Received Value: 3
Written value = 3
Received Value: 4
Written value = 4
Received Value: 5
Written value = 5
Received Value: 6
Written value = 6
Received Value: 7
Written value = 7
Received Value: 8
Written value = 8
Received Value: 9
Written value = 9

%OSAP-S-IVP, the DECosap SINEC-AP IVP has completed

Now running the DECosap for OpenVMS Alpha IVP SINEC-H1 receiver application...
```

```
Now running the DECosap for OpenVMS Alpha IVP SINEC-H1 sender application...

Accept connect ...
Connect completed...
Received Value: 1
Written value = 1
Received Value: 2
Written value = 2
Received Value: 3
Written value = 3
Received Value: 4
Written value = 4
Received Value: 5
Written value = 5
Received Value: 6
Written value = 6
Received Value: 7
Written value = 7
Received Value: 8
Written value = 8
Received Value: 9
Written value = 9
Received Value: 10
Written value = 10

%OSAP-S-IVP, the DECosap SINEC-H1 IVP has completed

 Installation of OSAPA V3.1 completed at 11:20

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

    Creating installation data file: VMI$ROOT:[SYSUPD]OSAPA031.VMI_DATA

 VMSINSTAL procedure done at 11:21
```