VMS License Management Facility Installation Guide

Order Number: AA-PHGRA-TE

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This document contains instructions for installing the VMS License Management Facility, Version 1.1, on VMS systems running VMS Version 5.2 to 5.4, inclusive. It also explains how to read the online release notes before or after installing the product.

Revision/Update Information:	This is a new manual.
Operating System & Version:	VMS Version 5.2 to 5.4, inclusive.
Software Version:	VMS LMF Version 1.1

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Preface

Purpose of This Guide

This guide describes how to install an update to the VMS™ License Management Facility (LMF) on VAX™ processors that are running an earlier version of the VMS operating system. It also provides a summary of new LMF features and release notes.

Keep this document with your distribution kit in case you ever need to reinstall the LMF.

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

Intended Audience

The audience for this guide is the system manager who wishes to install LMF Version 11 on a VMS system currently running one of the following versions: 5.2, 5.3, or 5.4, including any ''dashed release'' versions such as 5.4-2, and so on.

Structure of This Document

This guide is organized as follows:

- Chapter 1 contains the release notes and provides a summary of new LMF features; be sure to read the release notes before installing the LMF.
- Chapter 2 describes the operating system and hardware requirements for the LMF installation and related procedures that you complete before beginning the installation.
- Chapter 3 contains the step-by-step installation instructions.
- Chapter 4 describes actions to take and considerations to make after the installation.

- Appendix A documents a sample LMF installation.
- Appendix B lists the files installed during this installation.

Manuals in the VMS LMF Documentation Set

In addition to this guide, the VMS LMF documentation set includes the *VMS License Management Utility Manual*.

Associated Documents

The following documents may also prove helpful:

- *VMS Install Utility Manual*
- *Introduction to VMS System Management*
- *Guide to Setting Up a VMS System*
- *VMS SYSMAN Utility Manual*
- *VMS VAXcluster Manual*

For information on how to install software, see the *VMS Upgrade and Installation Manual* for your version of VMS, and the upgrade and installation supplement for your VAX computer. Also, see the release notes and Software Product Descriptions (SPDs) for any software products you install.

Conventions

The following conventions are used in this manual:

UPPERCASE TEXT	Uppercase letters indicate the name of a command, a file, a file protection code, a parameter, a procedure, the abbreviation of a system privilege, or a utility.
`red ink`	In interactive examples in the hardcopy manual, user input is printed in red. In online versions, user input appears in boldface type.
$	The dollar sign indicates the DCL prompt. This prompt may be different on your system.
Ctrl/x	In procedures, a sequence such as Ctrl/x indicates that you must hold down the key labeled Ctrl while you press another key or a pointing device button.

. . .	A vertical ellipsis indicates the omission of items from a code example or command format; the items are omitted because they are not important to the topic being discussed.
file-spec, . . .	Horizontal ellipsis indicates that additional parameters, values, or information can be entered.
[ ]	Square brackets indicate that the enclosed item is optional. (Square brackets are not, however, optional in the syntax of a directory name in a file specification or in the syntax of a substring specification in an assignment statement.)

1
Release Notes

1.1 New Features of the LMF

The VMS License Management Facility (LMF) has been enhanced to include a number of new features. This section briefly describes most of these enhancements, but the reader should consult the *VMS License Management Utility Manual* for complete, detailed information.

1.1.1 Moving and Copying Licenses

The new LICENSE COPY and LICENSE MOVE commands allow the transfer of licenses between databases.

The LICENSE MOVE command creates a new license registration in the target license database and then deletes the license record and its history records from the source database.

The LICENSE COPY command creates a new license registration in the target license database, disables the license record in the source database, and retains the history records in the source database.

Note that the LICENSE MOVE and LICENSE COPY commands do not transfer to the target database any user supplied data such as reservation lists; modified termination dates; modified units; include or exclude node lists; or comments.

1.1.2 Deleting Licenses

The new LICENSE DELETE command allows you to delete a license and its history records from a license database.

1.1.3 Automating License Registration

The LICENSE ISSUE command now accepts the /PROCEDURE qualifier. This qualifier causes the LICENSE ISSUE command to produce output formatted such that it can be invoked as a DCL command procedure to register a license in another license database.

1.1.4 Creating License Reservation Lists

The LICENSE MODIFY command now accepts the /RESERVE qualifier, which allows system managers or privileged users to attach a list of names to a product license. This list of names, called a reservation list, restricts use of the product to the names in the list.

You can add a reservation list to *any* Product Authorization Key (PAK).

The following example shows how to add a reservation list to a product license using the MODIFY/RESERVE command:

```
$ LICENSE MODIFY FORTRAN/RESERVE=(DOE,SMITH,JONES)
$ LICENSE UNLOAD FORTRAN
$ LICENSE LOAD FORTRAN
```

This command example restricts the use of VAX FORTRAN™ to the users named Doe, Smith, and Jones.

1.1.5 Support for PAKs with the RESERVE_UNITS Option

The LMF now allows software vendors to issue PAKs with the RESERVE_ UNITS option. This option may be used by license issuers whose terms and conditions require that use of the product be restricted to a specified number of named users.

When registering a PAK that makes use of the RESERVE_UNITS option, a customer must specify a reservation list and the number of names in this list must be no larger than that allowed by the product license. Use the LICENSE MODIFY/RESERVE command to associate this reservation list with the product license.

Note that at this time PAKs making use of this option can be registered and used only on systems that both are running VMS Versions 5.2 to 5.4-3, inclusive, and have installed LMF Version 1.1 (this kit).

1.1.6 Ease of Use Features

To ease license management, license managers can now perform operations on groups of licenses. For example, to disable five different VAX FORTRAN licenses on a single machine, you can now issue a single command instead of five separate commands.

The ability to operate on groups of licenses is provided by support for the following:

- Standard VMS wildcard characters (* and %), which may be used with most parameters and qualifiers
- Lists of product names in the *product-name* parameter of most commands
- A new /ALL qualifier that expands the command operation to affect all licenses that match the specification provided

1.1.7 Revised SYS$UPDATE:VMSLICENSE.COM

The command procedure SYS$UPDATE:VMSLICENSE.COM has been significantly expanded to include support for most of the new features available.

For information about this command procedure, issue the following command:

```
$ @SYS$UPDATE:VMSLICENSE
```

1.2 Reinstallation of LMF Version 1.1

Reinstalling the LMF means installing the LMF on a system where it has already been installed. LMF reinstallation occurs in two situations, which the following sections describe.

Note that the messages displayed during reinstallation may vary slightly from the messages documented in this manual. This variation is not a problem and occurs only because the installation procedure detects the presence of the previously installed LMF environment.

1.2.1 Reinstallation Without VMS Upgrade (Optional)

You can reinstall LMF Version 1.1 on a system where it has already been installed and where the VMS operating system has not been upgraded since the previous installation of LMF Version 1.1. In other words, with everything else remaining constant, you can reinstall LMF Version 1.1 on top of itself.

Users might decided to reinstall the LMF when, for example, a failure was encountered during a previous installation attempt, or the integrity of already installed LMF components was in question.

1.2.2 Reinstallation After VMS Upgrade (Mandatory)

Once you install LMF Version 1.1, you must reinstall LMF Version 1.1 whenever you upgrade your VMS operating system to a higher version number.

This reinstallation is required because the old LMF Version 1.0 has been an integral component of VMS since VMS Version 5.0, and when you upgrade your VMS operating system, you are overlaying the new LMF Version 1.1 with the old LMF Version 1.0.

However, a future release of VMS will contain as an integral component the new LMF Version 1.1, with its new technical features and support for new business practices. Once you install this future release of VMS, you will never again need to reinstall LMF Version 1.1 as a separate component, since it will be included with the operating system.

Note

After the normal system shutdown following a VMS operating system installation, you will be required to reboot the system. At this point in time, LMF Version 1.0 has been installed over LMF Version 1.1; so when you attempt to reboot, you could receive error messages and be unable to log in to the system (because LMF Version 1.0 is confronted with an LMF Version 1.1 license database that it does not understand). If this situation occurs, simply go to the operator's console, log in, install LMF Version 1.1, reboot the system, and then install your layered products.

Also, it is very important that you reinstall LMF Version 1.1 *immediately*, even before you reinstall any layered products. License database corruption could occur if you fail to follow this instruction.

1.3 Increasing License Capacity

At times you may need to increase the license capacity of a product. Vendors issue two kinds of PAKs to increase license capacity: replacement PAKs and additive PAKs.

This section describes what to do when you receive these ''upgrade'' PAKs. However, always check with your software vendor to be sure you are complying with the terms and conditions of the license you have been granted.

1.3.1 Replacement PAKs

For certain products, some vendors have chosen to issue replacement (noncombinable) PAKs. Replacement PAKs are PAKs whose size (in license units) reflects the new level of license usage for which you are authorized. If you receive a replacement PAK, you typically delete or disable the older PAK before registering the replacement PAK, since the replacement PAK already reflects the license authorization contained in the older PAK plus the additional number of new license units.

1.3.2 Additive PAKs

Vendors of other products may choose to issue additive (combinable) PAKs. If you receive an additive PAK, you should leave the older PAK enabled because the LMF automatically adds (or combines) the license usage of the additive PAK to the license usage of the older PAK in order to establish your new level of license authorization.

In most cases, additive PAKs represent new, independent licenses, which work with your old license to provide a higher level of license authorization; whereas replacement PAKs represent an upgrade to an existing license.

1.3.3 PAKs with the NOSHARE option

With this release of the LMF, the behavior of the NOSHARE option has changed. PAKS issued with the NOSHARE option can now be combined by the LMF; previously they could not be combined.

Previously, all NOSHARE PAKs were replacement PAKs; however, now vendors may choose to issue additive NOSHARE PAKs, as well as replacement NOSHARE PAKs. If you are unsure what kind of PAK you have, contact the vendor who issued the PAK to you.

1.4 List Size Restrictions

Due to a limitation in the LMF, two restrictions apply to the size of lists (reserve lists, include lists, or exclude lists). These restrictions apply to PAKs of all license types (availability, activity, and reserved user licenses).

1.4.1 The Per PAK Limit

On any single PAK, the sum of characters contained in all lists must not exceed 5000.

Because the length of names vary and some overhead is used for each name, this 5000 character limit cannot be expressed as an exact number of permissible names. However, Digital guarantees that at least 400 names, in total, can be specified in the various types of list. For example, each of the following represents the minimally guaranteed number of names:

- Reserve list with up to 400 user names
- Reserve list with up to 200 user names plus an include list with up to 200 node names (totalling up to 400)
- Reserve list with up to 200 user names plus an exclude list with up to 200 node names (totalling up to 400)
- Include list with up to 400 node names
- Exclude list with up to 400 node names

Note

If you enter more names than are permitted, the LICENSE LIST command may not be able to display all names entered. In this case, you will receive the error message LICENSE-F-CORRUP. However, the license database is not actually corrupt and the PAKs may still be loaded in memory (though the names are not displayed).

1.4.2 The Per Product Limit

The LICENSE LOAD and LICENSE START commands can load into memory a reserve list with no more 30,000 characters. (Include and exclude lists, which are not loaded into memory, are irrelevant to the 30,000 character limit.)

Because the length of names vary and some overhead is used for each name, this 30,000 character limit cannot be expressed as an exact number of permissible names. But Digital guarantees that, for each product, at least 2000 user names may appear on reserve lists. In the case of a VAXcluster™, this is a per-node limit.

Note that, because 2000 user names is a per-product limit, and because there may be more than one PAK per product, the number of user names on a per-product basis is the *sum of* the user names specified on each PAK.

For example, if three activity PAKs for the product DECwrite™ were registered on a system, and each PAK specified a reserve list with 200 user names, the total number of user names for that product is 600. This is safely below the 30,000 character (2000 user name) limit, and below the 5,000 character limit (400 user name) limit described in Section 1.4.1.

Caution

If the 30,000 character limit is exceeded, the LMF truncates the reserve list that is loaded into memory; no error message is issued.

See Section 9, License Combination, in the *VMS License Management Utility Manual* for more information on how the LMF combines PAKs for the same product.

1.5 Logical Name LMF$DISPLAY_OPCOM_MESSAGE

A previous version of the *VMS License Management Utility Manual* incorrectly stated that you must define LMF$DISPLAY_OPCOM_MESSAGE in order for messages to appear. This statement has been removed from the new version of the *VMS License Management Utility Manual*.

However, many users may have already defined this logical name. If you did, you should delete the definition of this logical name.

Define the LMF$DISPLAY_OPCOM_MESSAGE logical name only if you are explicitly directed by Digital™ to do so (for debugging purposes). When defined, this logical name causes many ''noise'' messages to be displayed on the operator's console; some of these messages may be confusing and misleading to the point of suggesting that a product is not licensed, when in fact it is.

To see if this logical name has been defined on your system, issue the following command:

```
$ SHOW LOGICAL LMF$DISPLAY_OPCOM_MESSAGE
```

1.5.1 Determining the LMF Version Number

To determine which version of the LMF is installed on your system, issue the following command:

```
$ LICENSE COPY
```

If LMF Version 1.1 (the new LMF) is installed on your system, you will be prompted for the name of the product you want copied. If the old LMF (LMF Version 1.0) is installed on your system, you will receive an error message stating that COPY is an unrecognized keyword.

Note

Do not use the LICENSE LIST command to determine which version of the LMF is running on the system. This command produces a display of information, one field of which is the *LMF Version*. But this LMF

version number is the version number of the LMF that was running on the system at the time the license database was created, not the version number of the LMF that is running now.

1.6 Installation Considerations for VAXclusters

Digital recommends that you install LMF Version 1.1 on all system disks in a VAXcluster. Doing this ensures that all nodes in the VAXcluster are running the latest version of the LMF.

If you upgrade some but not all system disks in a VAXcluster, you will be running what is called a ''mixed version VAXcluster''. Some nodes in the VAXcluster are running the old LMF Version 1.0, and some are running the new LMF Version 1.1.

In this case, you must separate your license databases in such a way that LMF Version 1.0 can never read or write to a license database that has been modified by LMF Version 1.1. However, you can use the LICENSE MOVE and LICENSE COPY features of LMF Version 1.1 to move and copy PAKs among all license databases and still access those databases with LMF Version 1.0.

Figure 1–1 depicts a mixed version VAXcluster in which one node is running LMF Version 1.1 and the other node is running LMF Version 1.0. Since the license databases (LDBs) used by each node are separate, no problems should arise.

On the other hand, Figure 1–2 depicts a mixed version VAXcluster in which two nodes running different versions of the LMF are sharing the same license database. This configuration could bring about corruption of the license database (LDB), as well as instances of denial of service.

Figure 1–1 Valid Mixed Version VAXcluster with Separate License Databases

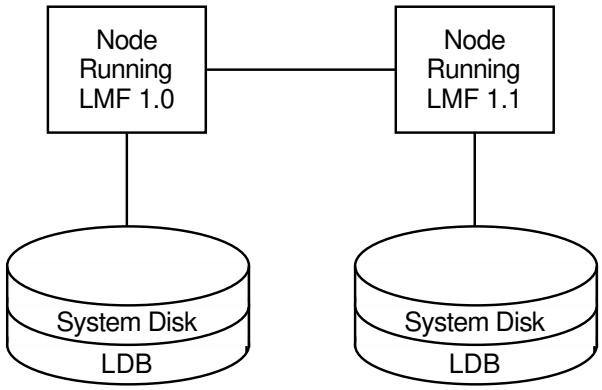
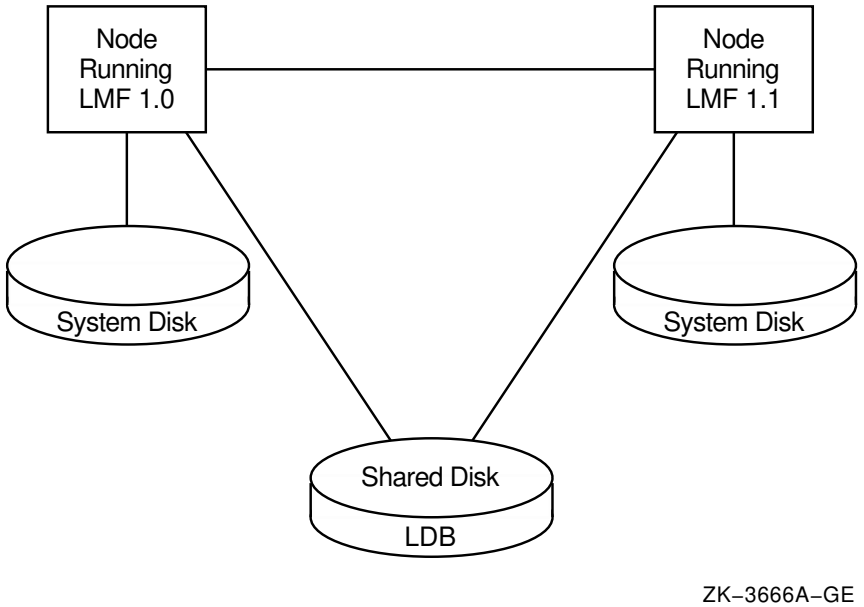


Figure 1–2 Invalid Mixed Version VAXcluster with Shared License Database



2
Preparing for LMF Installation

This chapter discusses the preparations and requirements necessary for installing the LMF.

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.

Release notes are provided both online and in hardcopy format (see Chapter 2). Digital strongly recommends that you read the release notes before proceeding with the installation. For information on accessing the online release notes, see Section 3.1.

2.1 Required Operating System Components

The VMS operating system comes with a variety of support options, or classes. Classes include such features as networking and VAX RMS™ journaling. None of these support options or classes are required for installation of the LMF.

To install VMS LMF Version 1.1, your system must be running VMS Version 5.2, 5.3, or 5.4, or any dash release of one of these versions (for example 5.3-1).

2.2 VAXcluster Considerations

Install the LMF on all system disks and reboot all nodes.

If you must defer the rebooting of some nodes, avoid issuing license commands until all nodes have been rebooted.

If your VAXcluster has multiple system disks, you must install the LMF on each system disk before rebooting the nodes attached to those system disks.

2.3 Installation Procedure Requirements

This section and those that follow discuss various requirements for installing the LMF.

The installation takes approximately 5 to 10 minutes, depending on your type of media and your system configuration.

Installing the LMF and running the Installation Verification Procedure (IVP) on a standalone VAX 3100 system takes approximately 5 minutes.

2.3.1 Privileges and Disk Space

To install the LMF, 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 the BYPASS privilege at the start of the installation.

The LMF installation requires 1000 blocks of disk space. After installation, the LMF requires 1000 blocks of disk space to run.

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
```

2.3.2 VMSINSTAL Requirements

When you invoke VMSINSTAL, it checks the following:

- Whether you are logged in to a privileged account
- Whether you have adequate quotas for installation
- Whether DECnet is running
- Whether 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 = 24
BIOLM = 18
BYTLM = 18,000
DIOLM = 18

ENQLM = 30
FILLM = 20

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.

2.3.3 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 on performing a system disk backup, see the section on the Backup Utility in the VMS System Management Subkit.

3
Installing the LMF

This chapter explains how to install the VMS License Management Facility. The following sections provide a step-by-step description of the installation procedure and describe what to do if you encounter an error during installation.

3.1 The Installation Procedure

The VMS License Management Facility installation procedure consists of a series of questions and informational messages. (See Appendix A 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 the VMS License Management Facility, use the following installation name:

   ```
   LMF011
   ```

   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 VMS 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 the VMS License Management Facility from tape drive MTA0: and shows the system response. This example uses the OPTIONS N release note parameter.

```
$ @SYS$UPDATE:VMSINSTAL LMF011 MTA0: OPTIONS N

      VAX/VMS Software Product Installation Procedure V5.2


It is 08-OCT-1991 at 06:12.
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. **Mount the media.**

```
Please mount the first volume of the set on MTA0:.
* Are you ready? YES
%MOUNT-I-MOUNTED, LMF011 MOUNTED ON _$$MTA0:  (NODE 1)
The following products will be processed:
  LMF V1.1

    Beginning installation of LMF V1.1 at 06:13

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

You should now mount the first distribution volume on the device you specified when you invoked VMSINSTAL. The device name appears in the line preceding the question. VMSINSTAL then asks you if you are ready to continue with the installation.

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

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

4. **Select a release notes option.**

```
Release notes 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.

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:LMF011.RELEASE_NOTES
```

After the installation, you can enter the following command to read the release notes.

```
$ TYPE SYS$HELP:LMF011.RELEASE_NOTES
```

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 the LMF 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. **State if you wish to continue.**

   The installation procedure states that the system will be automatically shut down as part of the installation. It then states that you will need to reboot the system after shutdown.

   If you answer *yes*, the installation proceeds and the system is shut down. If you answer *no*, the installation procedure exits.

7. **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.

8. **End the installation procedure.**

   ```
   Installation of LMF V1.1 completed at 6:15

   VMSINSTAL-I-SHUTDOWN, This product requires that the system be rebooted.
   ```

   The installation procedure has now finished, and the system is starting an orderly shutdown.

   Note

   After system shutdown, you must reboot the system. Then you can run the Installation Verification Procedure (IVP). The IVP cannot be run before the system is rebooted. Section 4.1 explains how to run the IVP.

3.2 Error Recovery

If an error occurs during installation, VMSINSTAL displays an error message. If the installation fails, you see the following message:

```
%VMSINSTAL-E-INSFAIL, The installation of LMF V1.1 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 VMS help library is currently in use.

For descriptions of the error messages generated by these conditions, see the VMS documentation on system messages, recovery procedures, and VMS software installation. If you are notified that any of these conditions exist, you should take the appropriate action as described in the message. For information on installation requirements, see Chapter 2.

4
After Installing the LMF

This chapter discusses how to run the IVP to determine if the installation was successful, the privileges required to use the LMF, and what to do if you have a problem running the LMF.

Note

After system shutdown, you must reboot the system. Then you should run the Installation Verification Procedure (IVP). The IVP cannot be run before the system is rebooted.

4.1 Running the Installation Verification Procedure

You should run the Installation Verification Procedure (IVP) to ensure that the LMF was installed successfully.

VMSINSTAL does not execute the Installation Verification Procedure (IVP) as part of the LMF installation. Therefore, you must execute the IVP separately.

To run the IVP, issue the following command:

```
$  @SYS$TEST:LMF011IVP.COM
```

If the IVP succeeds, you see these messages:

```
The LMF V1.1 Installation Verification Procedure passed.

%LMF-S-IVPPASS, the LMF installation has passed the IVP.
```

If the IVP fails, you see these messages:

```
The LMF V1.1 Installation Verification Procedure failed.

%LMF-E-IVPFAIL, the LMF installation has failed its IVP.
```

If the IVP fails, issue the DCL command SET VERIFY and then run the IVP again. The messages displayed while the IVP runs will indicate the cause of the failure. You will then be able to take corrective action.

4.2 User Account Requirements

When an ordinary user requests use of a licensed product, the LMF checks if use is permitted under license terms and conditions. The user requires no special privileges to have this check performed.

System managers or license administrators require SYSNAM and CMKRNL privileges to execute various LICENSE commands such as LOAD, UNLOAD, and START.

No special account quota values are required by either category of user.

The following LICENSE commands require read access to the license database: LOAD and LIST.

The following LICENSE commands require write access to the license database: ISSUE, ENABLE, DISABLE, MODIFY, CANCEL, DELETE, REGISTER, AMEND.

The following LICENSE commands require write access to both the source and target databases: MOVE and COPY.

4.3 Determining and Reporting Problems

If you are unable to run a software product that calls the LMF for product license verification, a Product Authorization Key (PAK) for that product may not be registered in the license database. If you need a PAK or information about a PAK, you should call the business office of the software vendor from whom you purchased the product.

If you have a PAK for your software product, but the product is unable to run due to miscommunication between the product and the LMF you should call the technical office of the software vendor from whom you purchased the product.

If you are unable to issue LMF commands or to perform license management using the VMS License Management Facility, you should contact Digital.

Depending on the nature of the problem and the type of support you have, you can take one of the following actions when communicating with Digital:

- Call Digital if your software contract or warranty agreement entitles you to telephone support.
- Submit a Software Performance Report (SPR).

- Fill out and submit a Reader's Comments form if the problem has to do with the VMS License Management Facility documentation. There are Reader's Comments forms at the back of each manual. Use the form from the manual in which you found the error. Include the section and page number.

Review the Software Product Description (SPD) and Warranty Addendum for an explanation of warranty. If you encounter a problem during the warranty period, report the problem as indicated above or follow alternate instructions provided by Digital for reporting SPD nonconformance problems.

A
Sample Installation

This appendix contains a sample installation of the VMS License Management Facility.

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.

```
 Welcome to VAX/VMS V5.4

Username: SYSTEM
Password:
        Welcome to VAX/VMS version V5.4 on node GODOT
    Last interactive login on Tuesday, 10-SEP-1991 09:41
    Last non-interactive login on Monday, 22-JUL-1991 16:30

$ @SYS$UPDATE:VMSINSTAL LMF011 SYS$MANAGER OPTIONS N

VAX/VMS Software Product Installation Procedure V5.4

It is 10-SEP-1991 at 10:22.

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

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

The following products will be processed:  LMF V1.1
 Beginning installation of LMF V1.1 at 10:23

%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]: 2
```

```
* Do you want to continue the installation [NO]? YES

%VMSINSTAL-I-RELMOVED, Product's release notes have been moved to SYS$HELP.

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 You are now installing VMS LMF V1.1

 This product installation requires a System reboot to become
 effective.

Enter a Question mark (?) to get a detailed description of any option.

* Do you want to purge files replaced by this installation [YES]? NO

This installation of LMF V1.1 will automatically shutdown this system.

You will then need to reboot the system.

Other nodes in a VAXcluster will continue to run but will not be able
to use LMF V1.1 features until they too are rebooted.

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

%PATCH-I-NOLCL, image does not contain local symbols
%PATCH-I-WRTFIL, updating image file $1$DKB700:[SYS0.SYSUPD.LMF011]SYSMSG.EXE;1
%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...
 Installation of LMF V1.1 completed at 10:25

%VMSINSTAL-I-SHUTDOWN, This product requires that the system be rebooted.
    .
    .
    .
```

[installer reboots the system and logs in]

```
    .
    .
    .
$  @SYS$TEST:LMF011IVP.COM
    .
    .
    .
```

B

Files Installed on Your System

The VMS License Management Facility installation procedure installs a number of files on your system. Table B–1 lists these files and specifies whether the file was modified, replaced, or new.

Table B–1 Files Installed on Your System

File Name	Status
SYS$HELP:HELPLIB.HLB	Modified
SYS$HELP:LMF011.RELEASE_NOTES	New
SYS$LIBRARY:DCLTABLES.EXE	Modified
SYS$LOADABLE_IMAGES:SYSLICENSE.EXE	Replaced
SYS$MESSAGE:LMF_MESSAGE.EXE	Replaced
SYS$MESSAGE:SYSMSG.EXE	Modified
SYS$MESSAGE:VMSLICENSE_LANGUAGE.COM	Replaced
SYS$SYSTEM:LMF.EXE	Replaced
SYS$TEST:LMF011IVP.COM	New
SYS$UPDATE:VMSLICENSE.COM	Replaced