VAX DEC/Code Management System Installation Guide

Order Number: AA–Z338F–TE

August 1990

This document contains instructions for installing the VAX DEC/Code Management System (CMS) on the VMS operating system. It also explains how to read the online release notes before or after installing the product. This document applies to the VAX DEC/Code Management System Version 3.4 and all maintenance updates that follow.

Revision/Update Information:	This revised manual supersedes the *VAX DEC/Code Management System Installation Guide* (Order Number AA–Z338E–TE).
Operating System and Version:	VMS Version 5.3 or higher
Software Version:	VAX DEC/Code Management System Version 3.4

digital equipment corporation
maynard, massachusetts

First Printing, October 1984
Revised, April 1987
Revised, April 1988
Revised, May 1989
Revised, December 1989
Revised, August 1990

The information in this document is subject to change without notice and should not be construed as a commitment by Digital Equipment Corporation. Digital Equipment Corporation assumes no responsibility for any errors that may appear in this document.

The software described in this document is furnished under a license and may be used or copied only in accordance with the terms of such license.

No responsibility is assumed for the use or reliability of software on equipment that is not supplied by Digital Equipment Corporation or its affiliated companies.

Restricted Rights: Use, duplication, or disclosure by the U.S. Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013.

© Digital Equipment Corporation 1984, 1987, 1988, 1989, 1990.

All Rights Reserved.
Printed in U.S.A.

The postpaid Reader's Comments forms at the end of this document request your critical evaluation to assist in preparing future documentation.

The following are trademarks of Digital Equipment Corporation:

CDA	MASSBUS	VAX RMS
DDIF	PrintServer 40	VAXstation
DEC	Q-bus	VMS
DECnet	ReGIS	VT
DECUS	ULTRIX	XUI
DECwindows	UNIBUS	
DIGITAL	VAX	digital™
LN03	VAXcluster	

ZK5567

Contents

Preface v
Preparing to Install CMS 1
Prerequisite Software 1
Accessing the Online Release Notes 1
Installation Procedure Requirements 2
User Account Quotas and Privileges 4
VMS License Management Facility 4
Using CMS with Other Tools 5
Using VMSINSTAL 5
Installing CMS 7
Installing CMS on a VAXcluster 11
After the Installation 12
Running the Installation Verification Procedure Separately 12
Error Conditions 13
Maintenance Updates 14
Reporting Problems 14
Sample Installation 15

Preface

This document describes how to install the VAX DEC/Code Management System (CMS) on the VMS operating system. It is intended for system managers. This document applies to CMS Version 3.4.

Keep this document with your distribution kit. You will need it to install maintenance updates or to reinstall CMS for any other reason.

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.

For more information about installing CMS on VMS systems, see your processor-specific installation/operations guide.

The installation procedure is described step-by-step and is, for the most part, self-explanatory. The system prompts you to answer questions and waits for you to tell it to continue.

Defaults appear in brackets ([ ]) throughout the installation procedure. Text you should type is indicated in red.

Preparing to Install CMS

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

Distribution media must be mounted in numerical order. The installation procedure prompts you to mount the volumes. For more information on how to mount distribution media, see your processor-specific installation/operations guide, which also details several options to the installation procedure.

NOTE

Before installing CMS Version 3.4, you must issue the CMS VERIFY command on all CMS Version 2.n libraries. To rectify any problems displayed by the VERIFY command, you can then issue the CMS VERIFY/REPAIR command. To use CMS Version 3.4, you are required to convert any CMS Version 2.n libraries. Once CMS Version 3.4 is installed, if you try to access a Version 2.n library you receive the following message:

```
%CMS-E-CONVERTLIB, library is a Version 2 library and cannot be
        used without conversion
```

After CMS Version 3.4 is installed, use the CMS command CONVERT LIBRARY to convert Version 2 libraries.

If you intend to use *VAX DEC/Test Manager* with CMS, see the Using CMS with Other Tools section before installing CMS.

Prerequisite Software

CMS Version 3.4 requires VMS Version 5.3; the CMS DECwindows interface requires VMS Version 5.3.

Accessing the Online Release Notes

CMS provides online release notes. The prompt to display or print the release notes during the installation appears in step 5 of the installation procedure when you invoke VMSINSTAL with the OPTIONS N parameter (the OPTIONS N parameter is available only with VMS Version 4.4 or higher).

To obtain the CMS Version 3.4 release notes after the installation, type or print the file SYS$HELP:CMS$034.RELEASE_NOTES. Online help also directs you to the release notes file. After the installation, type the following:

```
$ HELP CMS RELEASE_NOTES RETURN
```

NOTE

CMS release notes up to and including Version 3.1 can be found in SYS$HELP:CMSvvu.RELEASE_NOTES (where **vv** represents the major version number, and **u** represents the update number). Also, the dollar sign ($) was not included in the release notes format prior to Version 3.1.

Installation Procedure Requirements

The installation takes approximately 10 to 45 minutes, depending on the type of media and your system configuration. Before installing CMS, you must have the following privileges and resources:

- SETPRV privileges, or CMKRNL, WORLD, and SYSPRV privileges
- A minimum of 7000 blocks of free disk space during installation; 3900 blocks are used after installation
- A minimum of 1500 free global pages plus the size (in number of disk blocks) of the file SYS$LIBRARY:DCLTABLES.EXE at installation
- A minimum of 14 free global sections at installation
- The minimum number of VMS classes necessary for full functionality as described in the *CMS System Support Addendum* (SSA)

These resources reflect the amount of space needed when installing the CMS DECwindows interface and the CMS software.

NOTE

You must ensure that your system has the necessary global page and global section SYSGEN quotas for the installation. Failure to do so could cause the DCL tables to be corrupted in some situations.

To determine the number of available global pages on your system, invoke the VMS Install Utility (INSTALL) and type the following commands:

```
$ INSTALL LIST/GLOBAL/SUMMARY RETURN

        Summary of Local Memory Global Sections

nnn Global Sections Used,  nnnn/nnnn Global Pages Used/Unused
```

When you issue these commands, the system displays a summary of the number of global sections used, the number of global pages used, and the number of global pages unused. Exit from INSTALL by typing the EXIT command.

CMS requires approximately 1500 global pages plus the size of the file SYS$LIBRARY:DCLTABLES.EXE. If there are not enough pages available, you can delete an existing known image with INSTALL, or increase the GBLPAGES system parameter with the VMS System Generation Utility (SYSGEN) by editing the file SYS$SYSTEM:MODPARAMS.DAT and then invoking the SYS$UPDATE:AUTOGEN.COM procedure. For more information on the AUTOGEN.COM procedure, see your processor-specific installation/operations guide.

You can determine the number of available global sections by invoking SYSGEN and typing the following commands:

```
$ RUN SYS$SYSTEM:SYSGEN RETURN
SYSGEN>  USE CURRENT RETURN
SYSGEN>  SHOW GBLSECTIONS RETURN
Parameter Name   Current   Default   Minimum   Maximum   Unit   Dynamic
--------------   -------   -------   -------   --------  ----   -------
GBLSECTIONS          nnn       nnn       nnn        nnn  Sections
SYSGEN>  EXIT RETURN
```

The first number displayed is the current number of global sections. Compare this to the number of global sections in use as displayed by INSTALL. CMS requires 14 global sections. Therefore, if the number of global sections used (displayed by INSTALL) plus 14 exceeds the current number of global sections, you must increase the number of available global sections before you can install CMS. To increase the number, you must increase the GBLSECTIONS system parameter with SYSGEN by editing the file SYS$SYSTEM:MODPARAMS.DAT and then invoking the SYS$UPDATE:AUTOGEN.COM procedure. For more information on the AUTOGEN.COM procedure, see your processor-specific installation/operations guide.

If the number of global sections used plus 14 is less than the current number of global sections, you can exit from SYSGEN and continue.

User Account Quotas and Privileges

To use CMS, each account must have a minimum of TMPMBX and NETMBX privileges and the following minimum requirements:

- AST limit (ASTLM) of 14
- Buffered I/O byte count quota (BYTLM) of 14000
- Enqueue quota (ENQLM) of 1
- Open file limit (FILLM) of 6
- Timer queue entry limit (TQELM) of 1

Use the VMS Authorize Utility (AUTHORIZE) to compare the current values of these quotas with the requirements for CMS. The account used in the following example is the SYSTEM account:

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

To change the values of these quotas, use the VMS Authorize Utility's MODIFY command. For more information, see the *VMS Authorize Utility Manual*.

VMS License Management Facility

The VMS License Management Facility (LMF) is available with Version 5.0 (and higher) of the VMS operating system. Before you install CMS, you must register your CMS software license, or an equivalent license, such as the VAXset software license.

The license registration information you need is contained in the Product Authorization Key (PAK) that is shipped with CMS. The PAK is a paper certificate that contains information about the license.

During the installation, you are asked if you have registered the CMS license and loaded the appropriate authorization key. You must register and load your license for CMS *before* you start the installation in order to run the Installation Verification Procedure (IVP) and use the software.

To register a license under VMS Version 5.0, 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 Product Authorization Key (PAK).
- Enter the LICENSE REGISTER DCL command with the appropriate qualifiers that correspond to information on the PAK.

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

Using CMS with Other Tools

VAX DEC/Test Manager requires the CMS files SYS$SHARE:CMSSHR.EXE and CMSPROSHR.EXE. Correct installation of CMS is necessary in order to use it with *VAX DEC/Test Manager*. Be aware that whenever you install or reinstall CMS (for example, as the result of an incorrect installation or upgrading to a higher version of CMS), you will also need to reinstall *VAX DEC/Test Manager*.

NOTE

The file CMSPROSHR.EXE is no longer used by CMS, and may not be supported in future versions of CMS. CMSPROSHR.EXE is included in the CMS installation procedure only because it is used by *VAX DEC/Test Manager*.

Using VMSINSTAL

After you log in to a privileged account to install CMS, set the default device to SYS$UPDATE: and then invoke VMSINSTAL, the command procedure that installs this product. VMSINSTAL has the following format:

```
@SYS$UPDATE:VMSINSTAL CMS03n ddcu: [OPTIONS N]
```

n
Represents the maintenance update of CMS. Refer to the label on the CMS distribution kit or the CMS BIL or BOM for the maintenance update number of your kit.

ddcu:
Represents a device name where the distribution volumes will be mounted, where *dd* is the device code, *c* is the controller code, and *u* is the unit number. It is not necessary to use the console drive to install CMS. If you do

use the console drive, you should replace any media you removed from the drive. DUA0: is the device name used in examples in this document.

OPTIONS N

Is an optional parameter you should provide if you want to be prompted to display or print the release notes. If you do not include the OPTIONS N parameter, VMSINSTAL does not prompt you to display or print the release notes. VMSINSTAL permits the use of several other options: A, G, L, and R; for more information on these options, see your processor-specific installation/operations guide.

If you do not supply the first two parameters, VMSINSTAL prompts you for the product and device names. If you want to be prompted for the product and device names and be prompted to display or print the release notes, type the following:

```
$ @SYS$UPDATE:VMSINSTAL OPTIONS N RETURN
```

When you invoke VMSINSTAL, it checks the following:

- Whether you logged in to a privileged account. Digital recommends that you install software from the system manager's account with your default device and directory set to SYS$UPDATE.
- Whether you have adequate quotas for installation. VMSINSTAL checks for the following quota values:
  - ASTLM = 24
  - BIOLM = 18
  - BYTLM = 18000
  - DIOLM = 18
  - ENQLM = 30
  - FILLM = 20

VMSINSTAL then checks whether the following conditions exist. If so, discontinue the conditions before resuming the installation procedure.

- Whether DECnet is up and running
- Whether any users are logged in to the system

If VMSINSTAL detects either of these conditions, you will be asked whether you want to continue the installation. If you want to continue, type YES. If you want to stop the installation, press RETURN.

You must register the information contained in the Product Authorization Key (PAK) that is shipped with CMS or VAXset by using either the VMS License command procedure (SYS$UPDATE:VMSLICENSE) or the LICENSE REGISTER and LICENSE LOAD commands, as described in the *VMS License Management Utility Manual*.

Installing CMS

This section contains excerpts from the installation procedure and explains each step. Defaults appear in brackets throughout the installation procedure.

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 then returns you to DCL level. To retry the installation procedure after pressing CTRL/Y, proceed from step 2.

Step 1: Log in to a privileged account and set your default device and directory to SYS$UPDATE.

```
RETURN
Username:  SYSTEM   RETURN
Password:           RETURN
$ SET DEFAULT SYS$UPDATE  RETURN
```

Step 2: Invoke VMSINSTAL.

```
$ @VMSINSTAL CMS034 DUA0: OPTIONS N  RETURN

      VAX/VMS Software Product Installation Procedure Vn.n


It is dd-mmm-yyyy at hh:mm.
Enter a question mark (?) at any time for help.

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

If you are satisfied with the backup of your system disk, type YES and press RETURN. Otherwise, type NO and press RETURN to discontinue the installation.

Step 3: Insert the first installation kit volume.

```
Please mount the first volume of the set on DUA0:.
* Are you ready?  YES  RETURN
The following products will be processed:

  CMS V3.4

    Beginning installation of CMS V3.4 at hh:mm

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

To indicate that you want to continue the installation, mount volume 1, type YES, and press RETURN.

Step 4: Insert the subsequent installation kit volumes.

```
%BACKUP-I-READYREAD, mount volume 2 on _DUA0: for reading

Enter "YES" when ready:  YES   RETURN
```

VMSINSTAL prompts you to insert the next volume and waits for you to type YES after inserting it. If you type NO, VMSINSTAL displays the prompt again. This prompt is displayed only if your installation kit contains more than one volume.

Step 5: Select a release notes option.

This step applies only if you specified OPTIONS N in step 2.

```
Release Notes Options:

    1. Display release notes
    2. Print release notes
    3. Both 1 and 2
    4. None of the above

* Select option [2]:   RETURN
```

If you select option 1, VMSINSTAL displays the release notes on line immediately. You can terminate the display at any time by pressing CTRL/C.

If you select option 2, VMSINSTAL prompts you for a queue name. Either type a queue name or press RETURN to send the file to the default output printer.

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

If you select option 3, VMSINSTAL displays the release notes on line immediately and then prompts you for a queue name. Either type a queue name or press RETURN to send the file to the default output printer. The CMS release notes are then copied to SYS$HELP:CMS$034.RELEASE_NOTES.

If you select option 4, VMSINSTAL does not display or print the release notes, but copies them to SYS$HELP. Typically, you select this option to terminate the installation.

Next, VMSINSTAL displays the following prompt:

```
* Do you want to continue the installation [NO]?  YES RETURN
%VMSINSTAL-I-RELMOVED, The product's release notes have been successfully
moved to SYS$HELP.
```

NOTE

The release notes file installed by VMSINSTAL is labeled with the current product name, dollar sign, and version number (for example, CMS$034). Take care not to delete release notes for previous versions of CMS.

Step 6: Select installation options.

```
* Do you also wish to install the CMS DECwindows interface [YES]?  YES RETURN
* Do you want to purge files replaced by this installation [YES]?  YES RETURN
```

The directories SYS$HELP, SYS$MANAGER, SYS$MESSAGE, SYS$SHARE, SYS$SYSTEM, SYS$STARTUP, and SYS$TEST may contain previous versions of CMS files. These files are replaced during the installation with new files, but the old files are not automatically purged. Purging is recommended. In response to the purging prompt, press RETURN to purge the files, or type NO to keep them.

Step 7: Respond to License Registration Queries.

CMS supports the VMS License Management Facility (LMF). The installation procedure displays license information about your product and then asks if you have registered and loaded your authorization key for CMS. The following is an example of such information:

```
Product:       CMS
Producer:      DEC
Version:       3.4
Release Date:  dd-mmm-yyyy

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

If you have not registered and loaded your authorization key, you must answer NO to this question. You should then stop the installation, register and load your product authorization key, and then restart the installation. If you answer YES and you have not registered and loaded your authorization key, you are asked if you would like to complete the installation without running the IVP. However, the next time you invoke CMS, you receive a message indicating that you are not licensed to run the product.

You are then asked the following question:

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

The Installation Verification Procedure (IVP) runs tests to check whether the installation procedure was successful. If the installation procedure determines that you have insufficient quotas to run the IVP, it tells you which quotas need to be increased and asks if you would like to complete the installation without running the IVP. Press RETURN to run the IVP after the installation. If you do not want to run the IVP, type NO in response to the prompt.

Step 8: Read informational messages.

The CMS installation procedure produces a number of informational messages that report on the progress of the installation. The success of the installation is indicated by the following message:

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

If the installation procedure is successful, the new or modified files are moved to their target directories. In addition, the SYS$HELP:HELPLIB.HLB and SYS$LIBRARY:DCLTABLES.EXE files are updated to include the new versions of the CMS help text and the CMS command-line definition.

This installation will add or modify the following files:

DECW$SYSTEM_DEFAULTS:CMS$DW.UID
DECW$SYSTEM_DEFAULTS:CMS$DW_DEFAULTS.DAT
SYS$HELP:CMS$DW_HELP.HLB
SYS$HELP:CMS$034.RELEASE_NOTES
SYS$HELP:HELPLIB.HLB
SYS$MSG:CMSMSG.EXE
SYS$SHARE:CMS$EVENT_ACTION.EXE
SYS$SHARE:CMSPROSHR.EXE
SYS$SHARE:CMSSHR.EXE
SYS$SHARE:DCLTABLES.EXE
SYS$STARTUP:CMS$STARTUP.COM
SYS$SYSTEM:CMS$DW.EXE
SYS$SYSTEM:CMS.EXE
SYS$TEST:CMS$IVP.COM
VUE$LIBRARY:CMS$PROFILE.VUE$DAT
VUE$LIBRARY:CMS$VUE_STARTUP.COM

If you typed YES in response to the prompt that requests a file purge in step 6, previous versions of the CMS files are now purged.

Step 9: Observe the Installation Verification Procedure.

If you chose to run the IVP in step 7, VMSINSTAL now calls the IVP to verify that CMS was successfully installed.

```
%CMS-I-IVPBEGIN, Begin Installation Verification Procedure
       .
       .
       .
%CMS-I-IVPEND, End Installation Verification Procedure
```

Step 10: End the installation procedure.

```
   Installation of CMS V3.4 completed at hh:mm

   VMSINSTAL procedure done at hh:mm

$ LOGOUT  RETURN
SYSTEM     logged out at dd-mmm-yyyy hh:mm:ss.ss
```

When the product installation procedure is complete, you can choose to install more products or to log out (as shown here). If you removed any media from the console drive before beginning the installation, you should replace it now.

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.

Installing CMS on a VAXcluster

If you want to run CMS on multiple nodes of a VAXcluster, first check to see that you have the appropriate software license. Then, follow these steps after installing CMS:

1. Enter the LICENSE LOAD command to activate the license on each node in the VAXcluster on which CMS is to be executed as described in the *VMS License Management Utility Manual*.
2. Run SYS$STARTUP:CMS$STARTUP.COM on each node of the cluster that has a software license.

To use the product on other nodes in the VAXcluster, you must replace the version of the DCL tables that is installed on the other VAXcluster nodes. To do this, perform the following steps:

a. Log in to a node on the cluster.

b. Enter the following command at the DCL prompt:

```
$ INSTALL REPLACE SYS$LIBRARY:DCLTABLES.EXE RETURN
```

c. Repeat Steps A and B for each node of the cluster.

After the Installation

CMS is now installed and can be invoked by all users with the CMS command name.

The installation procedure modifies the DCL command table so that the CMS command is recognized and processed. However, the previous command table is still in effect for those users who are currently logged in. All logged-in users who want to use the updated version of CMS must log out of the system and log in again.

You should edit SYS$MANAGER:SYSTARTUP_V5.COM, the site-specific startup file, and add the following line:

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

The file CMS$STARTUP.COM contains commands to install the CMS images. The CMS installation procedure puts the file CMS$STARTUP.COM in the SYS$STARTUP directory.

Running the Installation Verification Procedure Separately

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

```
$ @SYS$TEST:CMS$IVP.COM RETURN
```

The IVP creates a temporary subdirectory in your current default directory, and places a CMS library in this subdirectory. The IVP then creates two additional levels of subdirectories; therefore, your current default directory must not be a subdirectory deeper than six levels. Additionally, your current default directory must not be defined as a directory search list. The temporary subdirectory is deleted at the end of the execution of the IVP.

Error Conditions

If the installation procedure fails for any reason, the following message is displayed:

```
%VMSINSTAL-E-INSFAIL, The installation of CMS V3.4 has failed.
```

Note that your default directory must not be set as a search list.

If the IVP fails during the installation, the following messages are displayed:

```
%CMS-E-IVPFAILURE, DEC/CMS V3.4 IVP failed.
%VMSINSTAL-E-IVPFAIL, The IVP for CMS V3.4 has failed.
```

An error during the installation can occur if one or more of the following conditions exist:

- The operating system version is incorrect.
- The prerequisite software version is incorrect.
- Quotas necessary for successful installation are insufficient (see the Installation Procedure Requirements section).
- Process quotas required by VMSINSTAL are incorrect (see the Using VMSINSTAL section).
- The VMS help library is currently in use.
- The product license was registered incorrectly or not registered and loaded.

For descriptions of the error messages generated by these conditions, see the *VMS System Messages and Recovery Procedures Reference Volume*, your processor-specific installation/operations guide, or the *VMS License Management Utility Manual*.

If you are notified that any of these conditions exist, you should take the appropriate action as described in the message. You may need to change a system parameter or increase an authorized quota value.

If the installation fails, you must restart the installation procedure from step 2. If the installation fails due to an IVP failure, contact your Digital field service representative.

Maintenance Updates

Digital may periodically issue maintenance updates of CMS. Each update consists of an installation kit. You should install this kit as described in this document or in any documentation that may accompany the maintenance update.

Each time a maintenance update is released, the version number changes. For example, if the current version is 1.0, the version number of the first maintenance update will be 1.1. In addition, the maintenance update includes new release notes. The release notes describe the changes that have been made to CMS since the previous release.

The update release notes are provided on line. You should read the release notes before you install CMS; they are also accessible at any time after the product is installed. For information on reading the release notes before CMS is installed, follow the installation procedure through step 5. To locate the release notes after CMS is installed, display or print the file SYS$HELP:CMS$034.RELEASE_NOTES, or type the following:

```
$ HELP CMS RELEASE_NOTES RETURN
```

Reporting Problems

If an error occurs while you are using CMS and you believe that the error is caused by a problem with CMS, take one of the following actions:

- If you purchased CMS within the past 90 days and you think the problem is caused by a software error, you can submit a Software Performance Report (SPR).
- If you have a BASIC or DECsupport Software Agreement, you should call your Customer Support Center. With these services, you receive telephone support that provides high-level advisory and remedial assistance. For more information, contact your local Digital representative.
- If you have a Self-Maintenance Software Agreement, you can submit a Software Performance Report (SPR).

If you find an error in the CMS documentation, please fill out and submit a Reader's Comments form from the back of the document in which the error was found. Include the section and page number where the error was found.

Sample Installation

This section contains a sample installation of CMS. Note that this is only a sample. Sometimes the installation procedure is modified in maintenance updates of this product. Because this installation guide is not usually revised for maintenance updates, be sure to read the *Read Before Installing or Using VAX DEC/Code Management System Version 3.4* letter before you install this product. This letter notes any significant changes in the installation that vary from this sample.

```
$  SET DEFAULT SYS$UPDATE [RETURN]
$  @VMSINSTAL CMS034 DUA0: OPTIONS N [RETURN]

        VAX/VMS Software Product Installation Procedure V5.3

It is 15-JUL-1990 at 11:19.
Enter a question mark (?) at any time for help.

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

The following products will be processed:

  CMS V3.4


        Beginning installation of CMS V3.4 at 11:19

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

    Release Notes Options:

        1.  Display release notes
        2.  Print release notes
        3.  Both 1 and 2
        4.  None of the above

* Select option [2]:  [RETURN]
* Queue name [SYS$PRINT]:  [RETURN]
%VMSINSTAL-I-RELMOVED, The product's release notes have been successfully moved
to SYS$HELP.
* Do you also wish to install the CMS DECwindows interface [YES]?  YES [RETURN]
* Do you want to purge files replaced by this installation [YES]?  YES [RETURN]

        Product:      CMS
        Producer:     DEC
        Version:      3.4
        Release Date: dd-mmm-yyyy
```

```
* Does this product have an authorization key registered and loaded?  YES RETURN
* Do you want to run the IVP after the installation [YES]?  YES RETURN
%CMS-I-DONEASK, No further questions will be asked during this installation
%VMSINSTAL-I-RESTORE, Restoring product saveset B ...
%CMS-I-ENDRESTORE, All required savesets have been successfully restored
%CMS-I-CMSSHR, Linking shareable image
%CMS-I-CMS, Linking main image
%CMS-I-EVENTACT, Linking event action image
%CMS-I-PROHELP, Providing help
%CMS-I-PRODCL, Providing DCL verb
%CMS-I-PROEXE, Providing images

        ****************************************************************
        *                                                              *
        * The CMS IVP has been moved to the SYS$TEST directory.  To run *
        * it after the installation, enter @SYS$TEST:CMS$IVP.COM.      *
        *                                                              *
        ****************************************************************

%CMS-I-PROSTART, Providing startup procedure

        ****************************************************************
        *                                                              *
        * If this installation is performed on a cluster, you must     *
        * execute                                                      *
        *                                                              *
        *    $ @SYS$STARTUP:CMS$STARTUP.COM                            *
        *                                                              *
        * on all other nodes in the the cluster.  In addition, you must *
        * add the above line to your system startup procedure,         *
        *                                                              *
        *    SYS$MANAGER:SYSTARTUP_V5.COM                              *
        *                                                              *
        ****************************************************************

%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...
%CMS-I-IVPBEGIN, Begin DEC/CMS V3.4 Installation Verification Procedure
$       SET NOVERIFY
$       CMS SHOW VERSION
DEC/CMS Version V3.4
$       CMS CREATE LIBRARY SYS$COMMON:[SYSTEST.CMS$IVP_TEST]
%CMS-S-CREATED, CMS Library SYS$COMMON:[SYSTEST.CMS$IVP_TEST] created
%CMS-I-LIBIS, library is SYS$COMMON:[SYSTEST.CMS$IVP_TEST]
%CMS-S-LIBSET, library set
$       CMS SET LIBRARY SYS$COMMON:[SYSTEST.CMS$IVP_TEST]
%CMS-I-LIBIS, library is SYS$COMMON:[SYSTEST.CMS$IVP_TEST]
%CMS-S-LIBSET, library set
-CMS-I-SUPERSEDE, library list superseded
$       CMS CREATE ELEMENT CMS$IVP_TEST.FILE ""
%CMS-S-CREATED, element SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CMS$IVP_TEST.FILE created
$       CMS RESERVE CMS$IVP_TEST.FILE ""
%CMS-S-RESERVED, generation 1 of element
SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CMS$IVP_TEST.FILE reserved
$       CMS SHOW RESERVATIONS

Reservations in DEC/CMS Library SYS$COMMON:[SYSTEST.CMS$IVP_TEST]
```

```
CMS$IVP_TEST.FILE
    (1)   SYSTEM    1       15-JUL-1990 11:31:08 ""
$       CMS REPLACE CMS$IVP_TEST.FILE ""
%CMS-S-GENCREATED, generation 2 of element
SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CMS$IVP_TEST.FILE created
-CMS-I-NOCHANGES, no changes
$       CMS VERIFY
%CMS-I-VERCLS, class list verified
%CMS-I-VERCMD, command list verified
%CMS-I-VERELE, element list verified
%CMS-I-VERGRP, group list verified
%CMS-I-VERRES, reservation list verified
%CMS-I-VERFRE, internal free space list verified
%CMS-I-VERFRE, internal free space list verified
%CMS-I-VERFRE, internal free space list verified
%CMS-I-VERFRE, internal free space list verified
%CMS-I-VERFRE, internal free space list verified
%CMS-I-VERFRE, internal free space list verified
%CMS-I-VERFRE, internal free space list verified
%CMS-I-VERARC, archive control block verified
%CMS-I-VER2, internal contiguous space verified
%CMS-I-VERCON, control file verified
%CMS-I-VEREDF, element SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CMS$IVP_TEST.FILE verified
%CMS-I-VEREDFS, element data files verified
%CMS-I-VERIFIED, library SYS$COMMON:[SYSTEST.CMS$IVP_TEST] verified
$       CMS FETCH CMS$IVP_TEST.FILE/GEN=1 ""
%CMS-S-FETCHED, generation 1 of element
SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CMS$IVP_TEST.FILE fetched
$       CMS FETCH CMS$IVP_TEST.FILE/GEN=2 ""
%CMS-I-FILEXISTS, file already exists, VMI$ROOT:[SYSUPD.CMS034]CMS$IVP_TEST.FILE;2
created
%CMS-S-FETCHED, generation 2 of element
SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CMS$IVP_TEST.FILE fetched
$       CMS DIFF CMS$IVP_TEST.FILE;-1 CMS$IVP_TEST.FILE;0
%CMS-S-IDENTICAL, files are identical
$       SET NOVERIFY
$       CMS CREATE CLASS CL1 "Test1"
%CMS-S-CREATED, class SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CL1 created
$       CMS INSERT GENERATION CMS$IVP_TEST.FILE/GEN=1 CL1 ""
%CMS-S-GENINSERTED, generation 1 of element
SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CMS$IVP_TEST.FILE inserted into class
SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CL1
$       CMS CREATE CLASS CL2 "Test2"
%CMS-S-CREATED, class SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CL2 created
$       CMS INSERT GENERATION CMS$IVP_TEST.FILE/GEN=2 CL2 ""
%CMS-S-GENINSERTED, generation 2 of element
SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CMS$IVP_TEST.FILE inserted into class
SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CL2
$       CMS FETCH CMS$IVP_TEST.FILE/GEN=CL2 ""
%CMS-S-FETCHED, generation 2 of element
SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CMS$IVP_TEST.FILE fetched
$       SET NOVERIFY
$       CMS SHOW ELEMENT

Elements in DEC/CMS Library SYS$COMMON:[SYSTEST.CMS$IVP_TEST]

CMS$IVP_TEST.FILE ""
$       CMS SHOW GENERATION/DESCENDANTS CMS$IVP_TEST.FILE

Element generations in DEC/CMS Library SYS$COMMON:[SYSTEST.CMS$IVP_TEST]
```

```
CMS$IVP_TEST.FILE
  2      15-JUL-1990 11:31:14 SYSTEM ""
  1      15-JUL-1990 11:31:02 SYSTEM ""

$       CMS SHOW CLASS

Classes in DEC/CMS Library SYS$COMMON:[SYSTEST.CMS$IVP_TEST]

CL1             "Test1"
CL2             "Test2"
$       CMS SHOW GENERATION *.*/GEN=CL2/BRIEF

Element generations in DEC/CMS Library SYS$COMMON:[SYSTEST.CMS$IVP_TEST]

CMS$IVP_TEST.FILE/2
$       CMS REMOVE GENERATION CMS$IVP_TEST.FILE CL2 ""
%CMS-S-GENREMOVED, generation 2 of element
SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CMS$IVP_TEST.FILE removed from class
SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CL2
$       CMS DELETE CLASS CL2 ""
%CMS-S-DELETED, class SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CL2 deleted
$       CMS REMOVE GENERATION CMS$IVP_TEST.FILE CL1 ""
%CMS-S-GENREMOVED, generation 1 of element
SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CMS$IVP_TEST.FILE removed from class
SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CL1
$       CMS DELETE CLASS CL1 ""
%CMS-S-DELETED, class SYS$COMMON:[SYSTEST.CMS$IVP_TEST]CL1 deleted
$       CMS CREATE GROUP GR1 ""
%CMS-S-CREATED, group SYS$COMMON:[SYSTEST.CMS$IVP_TEST]GR1 created
$       CMS CREATE GROUP GR2 ""
%CMS-S-CREATED, group SYS$COMMON:[SYSTEST.CMS$IVP_TEST]GR2 created
$       CMS INSERT GROUP/NOCONFIRM GR1 GR2 ""
%CMS-S-INSERTED, group SYS$COMMON:[SYSTEST.CMS$IVP_TEST]GR1 inserted into group
SYS$COMMON:[SYSTEST.CMS$IVP_TEST]GR2
$       CMS REMOVE GROUP GR1 GR2 ""
%CMS-S-REMOVED, group SYS$COMMON:[SYSTEST.CMS$IVP_TEST]GR1 removed from group
SYS$COMMON:[SYSTEST.CMS$IVP_TEST]GR2
$       CMS MODIFY GROUP GR1/NAME=GR3/READ_ONLY ""
%CMS-S-MODIFIED, group SYS$COMMON:[SYSTEST.CMS$IVP_TEST]GR1 modified
$       CMS SHOW GROUP */BRIEF

Groups in DEC/CMS Library SYS$COMMON:[SYSTEST.CMS$IVP_TEST]

GR2                GR3
$       SET NOVERIFY
%CMS-S-IVPSUCCESS, DEC/CMS V3.4 IVP completed successfully
%CMS-I-IVPEND, End Installation Verification Procedure
        Installation of CMS V3.4 completed at 11:33

        VMSINSTAL procedure done at 11:33
$  LOGOUT [RETURN]
SYSTEM     logged out at 15-JUL-1990 at 11:33:12:01
```