VAX BASIC

Installation Guide

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This guide describes how to install VAX BASIC on a VAX processor (OpenVMS VAX architecture) running the OpenVMS VAX operating system.

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Preface

This guide describes how to install VAX BASIC Version 3.7 on a VAX processor running the OpenVMS operating system.

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

Associated Documentation

The *Read Before Installing or Using VAX BASIC Version 3.7 for OpenVMS VAX systems* cover letter identifies the manuals in the VAX BASIC documentation set.

The following are other related documents:

- *DEC BASIC and VAX BASIC for OpenVMS Systems User's Manual*
- *DEC BASIC and VAX BASIC for OpenVMS Systems Reference Manual*
- *VAX BASIC Release Notes*

Conventions

Table 1 describes the conventions used in this guide.

Table 1 Conventions Used in this Guide

Convention	Meaning
UPPERCASE	Uppercase letters indicate the name of a command, a file, a parameter, a procedure, or utility.
user input	In interactive examples, this typeface indicates input entered by the user.
`system`	In text, this typeface indicates a prompt or displayed text.

(continued on next page)

Table 1 (Cont.) Conventions Used in this Guide

Convention	Meaning
$	The dollar sign is used to indicate 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 press the key labeled Ctrl while you press another key or a pointing device button.

1
Preparing for VAX BASIC Installation

This chapter discusses the preparations and requirements necessary for installing VAX BASIC.

Your distribution kit includes a letter titled *Read Before Installing or Using VAX BASIC*. This letter discusses important information that might not be included in this guide. You should read this letter now. You should also install the VAX BASIC Release Notes and read them before continuing with the installation. For information on installing the Release Notes, see Chapter 2.

1.1 Registering Your Software License

Before you install and run VAX BASIC Version 3.7 on a newly licensed node or cluster, you must first register a License Product Authorization Key (License PAK) using the License Management Facility (LMF). The License PAK may be shipped along with the kit if you ordered the license and media together; otherwise, it is shipped separately to a location based on your license order. If you are installing VAX BASIC as an update on a node or cluster already licensed for this software, you have already completed the License PAK registration requirements.

If you are installing prerequisite or optional software along with VAX BASIC, review the PAK status and install the PAKs for any prerequisite or optional software before you install VAX BASIC.

You must register and load your license for VAX BASIC *before* you start the installation in order to run the Installation Verification Procedure (IVP) and use the software.

To register a license under the OpenVMS operating system, first log in to a priviliged account. 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.

If you plan to use VAX BASIC on more than one node in a VMScluster, you will need to perform a license load on the other nodes after you complete this installation. See Section 3.2 for more information.

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

1.2 Required Hardware, Operating System Components, and Software

The following sections discuss hardware and software requirements of VAX BASIC.

1.2.1 Required Hardware

For a complete list of required hardware and supported processors, see the VAX BASIC Version 3.7 SPD.

1.2.2 Operating System Components and Software

VAX BASIC Version 3.7 requires VMS Version 5.5-2 or higher.

The OpenVMS operating system comes with a variety of support options, or classes. Classes include such features as networking and RMS journaling.

The following OpenVMS classes are required for full use of features of this layered product:

- OpenVMS Required Saveset
- Programming Support

For more information on OpenVMS classes and tailoring, refer to the OpenVMS Operating System Software Product Description (SPD 25.01.xx).

The following is a list of optional software that you can use together with VAX BASIC:

- CDD/Repository Version 5.3
- DEC Language-Sensitive Editor (LSE)

The SPD contains a complete list of prerequisite and optional software and their required version numbers.

1.3 Installation Procedure Requirements

This section describes the requirements for installing VAX BASIC (process account quotas, system parameters, disk space, and so on).

Standard procedures for checking and setting various parameters are described in Section 1.4.

1.3.1 VMSINSTAL Checks

VMSINSTAL checks the following parameters and conditions:

- If the user is logged into a privileged account
- If any other processes are running on the system
- If the minimum account quotas are met

  See Table 1–1 for the minimum account quotas required to install VAX BASIC.

1.3.2 Privileges

To use VAX BASIC, 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.

To install VAX BASIC, 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.

1.3.3 Process Account Quotas

The account you use to install VAX BASIC must have sufficient quotas to enable you to perform the installation. Table 1–1 summarizes the requirements.

Table 1–1 Process Account Quotas for the Installing Account

Account Quota	Value
ASTLM	24
BIOLM	18
BYTLM	18000
DIOLM	18
ENQLM	30
FILLM	20

1.3.4 System Parameters

Table 1–2 lists the minimum required system parameter values for the installation.

Table 1–2 Minimum Required System Parameter Values

Global pages [1]	958
Global sections[1]	4

[1]These values 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.

1.3.5 Disk Space

VAX BASIC requires different free disk storage space 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
VAX BASIC Version 3.7	1950	1200
VAX BASIC HELP	+500	+500
VAX BASIC sample graphics	+250	+250
VAX BASIC system definitions	+5800	+5000

(continued on next page)

Table 1–3 (Cont.) Disk Space Requirements

Kit	Blocks During Installation	Blocks After Installation
VAX BASIC Motif bindings and examples	+1500	+1500

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

```
$ SHOW DEVICE
device_name
```

1.3.6 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 OpenVMS Backup Utility in the OpenVMS System Management Subkit.

1.4 Standard System Maintenance Procedures

This section explains various standard procedures:

- Check and set process account quotas
- Check system parameter values
- Calculate values for global pages and global sections
- Change parameter values with the OpenVMS AUTOGEN command procedure
- Set dynamic parameter values with the OpenVMS System Generation Utility (SYSGEN)

1.4.1 Checking and Setting Process Account Quotas

User account quotas are stored in the file SYSUAF.DAT. Use the OpenVMS Authorize Utility (AUTHORIZE) to verify and change user account quotas. First set your directory to SYS$SYSTEM and then run AUTHORIZE:

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

At the UAF> prompt, enter the SHOW command with an account name to check a particular account. For example:

```
UAF> SHOW SMITH
```

To change a quota, enter the MODIFY command. The following example changes the FILLM quota for the SMITH account and then exits from the utility:

```
UAF> MODIFY SMITH /FILLM=50
UAF> EXIT
```

After you exit from the utility, the system displays messages indicating whether or not changes were made. Once the changes have been made, you must log out and log in again for the new quotas to take effect.

For more information on modifying account quotas, see the description of the Authorize Utility in the OpenVMS System Management Subkit.

1.4.2 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 following example displays the value for the WSMAX system parameter:

```
SYSGEN> SHOW WSMAX
```

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

1.4.3 Calculating the Values for Global Pages and Global Sections

To install and run VAX BASIC, 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 global pages and global sections system parameters.

Enter the following DCL command to determine the number of global pages required by SYS$LIBRARY:DCLTABLES.EXE:

```
$ DIR/SIZE SYS$LIBRARY:DCLTABLES.EXE
```

This command returns the size (in blocks) of SYS$LIBRARY:DCLTABLES.EXE. As an approximation, use this figure as the number of global pages for the file.

You can use the WRITE command with the F$GETSYI lexical function to find the number of free global pages and global sections. The following example shows how to get this information at your terminal (the default for SYS$OUTPUT):

```
$ WRITE SYS$OUTPUT F$GETSYI("FREE_GBLPAGES")
15848
$ WRITE SYS$OUTPUT F$GETSYI("FREE_GBLSECTS")
24
```

If the values displayed by the system are greater than the values in Table 1–2, you do not need to increase the values for these parameters. If the value of free global pages or global sections is less than the value in Table 1–2, you must increase the system parameter setting.

Section 1.4.4 describes the procedures for increasing these values using AUTOGEN.

1.4.4 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
```

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:

```
WSMAX = 8096
```

To modify incremental parameters such as free global pages and global sections, 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. The following command recalculates your system parameters and reboots the system:

```
$ @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 command procedure 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 documentation.

1.4.5 Setting Dynamic Parameter Values

Use the System Generation Utility (SYSGEN) to set dynamic parameter values. Dynamic parameters changed with the SYSGEN WRITE ACTIVE command become active immediately without any need to reboot your system. Rebooting returns the dynamic parameter values to their previous settings.

After you change the dynamic parameter values, complete the installation before rebooting the system. After you finish with the installation, you can reset the dynamic parameters to their previous values or let them be reset automatically when you next reboot your system.

The required parameter values for VAX BASIC are listed in Table 1–2.

If the dynamic parameter values on your system are less than the values in Table 1–2, use the following series of commands to change the values. This example changes the value of CLISYMTBL:

```
$ RUN SYS$SYSTEM:SYSGEN
SYSGEN> USE ACTIVE
SYSGEN> SET CLISYMTBL new_value
SYSGEN> WRITE ACTIVE
SYSGEN> EXIT
```

2
Installing VAX BASIC

This chapter explains how to install VAX BASIC.

After you register and load your License PAK, the installation takes approximately 15 to 45 minutes, depending on your system configuration and the kit components chosen.

If you encounter any failures during installation, see Appendix C.

2.1 Installation Procedure

Mount the media.

To abort the installation procedure at any time, press Ctrl/Y. When you press Ctrl/Y, the installation procedure deletes all the files it has created up to that point and exits. You can then start the installation again.

When the system prompts you with a question during the installation procedure, the default answer is often listed in brackets ([ ]).

To install VAX BASIC, perform the following steps:

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

```
Username: SYSTEM
Password:

$ SET DEFAULT SYS$UPDATE
```

2. **Invoke VMSINSTAL:**

```
@VMSINSTAL saveset-name device-name option-list
```

VMSINSTAL is in the SYS$UPDATE directory. The elements that you specify when you invoke the VMSINSTAL command procedure are as follows:

saveset-name

The installation name for the component. For VAX BASIC, enter the following installation name:

```
BASIC037
```

device-name

The name of the device on which you plan to mount the media and the directory containing the VAX BASIC save set. For example, MTA0: is the device name used in examples in this guide.

To specify the device name on the @VMSINSTAL command line, enter the following:

```
MTA0:
```

option-list

The word OPTIONS followed by one or more of the following option designators—A, G, L, N, R—allows you to select the following options:

- 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 saveset 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.

- Display or print the release notes (N)

  Indicates that you want to see the installation question on release notes. If you do not include the N option, 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 the N option. (Even if you omit the N option when you invoke VMSINSTAL, the VAX BASIC release notes are copied automatically to the SYS$HELP directory.)

- Alternate root option (R)

  Lets you install the product to a system root other than that of the running system.

For detailed information on these software installation options, see the OpenVMS operating system documentation. If you specify more than one option, separate the options with commas, as follows:

```
OPTIONS A,N
```

The following example invokes VMSINSTAL to install VAX BASIC and shows the system response. This example uses the OPTIONS N release note option.

```
$ @VMSINSTAL BASIC037 MTA0: OPTIONS N

      OpenVMS VAX Software Product Installation Procedure Vn.n

It is dd-mmm-yyyy at hh:mm.
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.

When you invoke VMSINSTAL, it checks the following:

- Whether you are 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 quota values shown in Table 1–1.

VMSINSTAL then checks to determine whether any users are logged in to the system. If users are logged in, VMSINSTAL asks whether you want to continue the installation:

```
* Do you want to continue anyway [NO]?
```

If you want to continue, enter YES. If you want to stop the installation, press Return.

3. **Confirm system backup and mount the media.**

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

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.

If you omitted the device name on the VMSINSTAL command line, the following prompt appears:

```
* Where will the distribution volumes be mounted:
MTA0:
```

If this prompt appears, enter the name of the distribution (media) device and directory that contains the VAX BASIC kit (save set). For example, if the media is contained on a CD located on unit MTA0:, enter MTA0: in reply to this question

Depending on the type of device and whether the device is already mounted, the following prompt may or may not appear:

```
Please mount the first volume of the set on MTA0:.
* Are you ready? YES
%MOUNT-I-MOUNTED, MTA0:  mounted
```

If you have not already done so, you should now insert the distribution volume on the device you specified when you invoked VMSINSTAL. The device name appears in the line preceding the question. VMSINSTAL then asks if you are ready to continue with the installation.

If you respond YES to indicate that you are ready, VMSINSTAL displays a message indicating that the media containing VAX BASIC 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. **Verify the product being installed**.

```
 The following products will be processed:

   BASIC Vn.n

     Beginning installation of BASIC Vn.n  at hh:mm

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

The product name and version are displayed. The first save set (A) is restored to a subdirectory of SYS$UPDATE:.

5. **Select a release notes option.**

```
Release Notes Options:

 1.  Display release notes
 2.  Print release notes
 3.  Both 1 and 2
 4.  Copy release notes to SYS$HELP

* Select option [2]:
```

If you specified OPTIONS N when you invoked VMSINSTAL, you are now asked to choose one of the options for reviewing the release notes. All options copy the release notes to SYS$HELP.

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. Either supply the name of the print queue that you want to use or press Return to send the file to the default output print device. For example:

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

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.

If you select option 4, the installation procedure will only copy the release notes to the SYS$HELP directory.

Next, VMSINSTAL displays the following message:

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

       VAX BASIC Installation beginning at hh:mm:ss.cc

  (c) Digital Equipment Corporation, 1995.  All rights reserved.
```

The release notes are copied to the following file in the SYS$HELP directory:

```
SYS$HELP:BASIC037.RELEASE_NOTES
```

After the installation, you can enter the following command to view the location of the release notes through the Help facility:

```
$ HELP BASIC RELEASE_NOTES
```

6. **Select installation options.**

   The installation procedure lets you select the components of the kit that you want to install. The choices are as follows:

   - Normal installation
   - Install OpenVMS VAX system definitions
   - Obtain a copy of the BASIC message text

```
There are three possible installation options.  They are described
as follows:

1) Perform a normal installation of BASIC.

2) Install OpenVMS VAX system definitions text library only
   (10-45 minutes).

3) Obtain a copy of the BASIC message text for modification.

* Which option do you want to use [1]:
```

   If you specifiy choice 1, which is the default, the installation continues.

   Select the components you want to install by answering YES or NO to the questions. If you want a more detailed description of any component, enter a question mark (?). After the explanation is displayed, you will be prompted again for a response.

   If you enter YES, the installation procedure installs the component.

7. **Install BASIC HELP files**.

```
* Do you want to install the BASIC HELP files [YES]?
```

   The HELP file describes how to invoke VAX BASIC from the DCL command line and describes BASIC language features. The HELP file requires 500 blocks of disk space. Digital recommends that you install this file.

8. **Install OpenVMS VAX system definitions.**

```
* Do you want to install the OpenVMS VAX system definitions [YES]?
```

   This option generates a text library ([SYSLIB]BASIC$STARLET.TLB) that contains OpenVMS VAX system definitions. Depending on your processor and system load, creating this library requires approximately 10 to 45 minutes. The OpenVMS VAX system definitions require 5000 blocks of disk space.

9. **Install VAX BASIC graphics support examples.**

```
* Do you want to install the sample graphic programs [YES]?
```

Answering YES to this options puts the VAX BASIC sample graphic programs into the SYS$SYSROOT:[SYSHLP.EXAMPLES.BASIC] directory. These programs require 250 blocks of disk space and illustrate how to use VAX BASIC graphics.

10. **Install Motif definitions.**

```
* Do you want to install the Motif definitions [YES]?
```

Answering YES to this option puts the VAX BASIC version of the Motif definitions, DECW$MOTIF.BAS, into the SYS$LIBRARY directory. These definitions require 1500 blocks of disk space and contain the Constant, Record, and External declarations needed to do Motif programming.

11. **Purge files.**

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

The directories SYS$HELP, SYS$LIBRARY, SYS$MESSAGE, SYS$SYSTEM, and SYS$TEST may contain previous versions of VAX BASIC 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 or enter YES to purge the files, or enter NO to keep the previous versions.

12. **Respond to license registration queries.**

VAX BASIC supports the OpenVMS License Management Facility (LMF). The installation procedure displays license information about VAX BASIC. It asks whether you have registered and loaded your Product Authorization Key (PAK) for each product. The following is an example of the information and the queries presented by the installation procedure:

```
   In order to run VAX BASIC, you must have
   its product authorization key registered and loaded.

      Product:      BASIC
      Producer:     DEC
      Version:      3.7
      Release Date: dd-mmm-yyy

* Does this product have an authorization key registered and loaded?
No further questions will be asked.  Installation continuing...
```

If you have not registered and loaded your PAK, you must answer NO to this question. You have to register and load your PAKs to successfully complete the installation (see Section 1.1). If you have not done so, you should stop the installation, register and load your PAKs, and then restart the installation.

13. **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.

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

    The SYS$HELP:HELPLIB.HLB and SYS$LIBRARY:DCLTABLES.EXE files are updated to include the new versions of the VAX BASIC help text and the BASIC command-line definition.

    Also, if you answered YES in response to the prompt that requests a file purge, previous versions of the VAX BASIC files are now purged.

14. **End the installation procedure.**

    The end of the installation is indicated by the following message:

```
Installation of VAX BASIC Vn.n completed at hh:mm

VMSINSTAL procedure done at hh:mm
```

    Depending on whether you specified parameters on the VMSINSTAL command line, the `* Products:` prompt or the DCL prompt `($)` may appear. If the `* Products:` prompt appears, you can return to the DCL prompt `($)` by pressing Ctrl/Z.

    VMSINSTAL deletes or changes entries in the process symbol tables during the installation. Therefore, if you are going to continue using the installation account (such as SYSTEM) and you want to restore these symbols, you should log out and log in again.

3
After Installing VAX BASIC

After VAX BASIC is installed, it can be invoked by all users with the BASIC command.

The installation procedure modifies the DCL command table so that the BASIC 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 BASIC command must log out and log in again, or use the following DCL command:

```
$ SET COMMAND /TABLES=SYS$LIBRARY:DCLTABLES
```

You can perform the following tasks after VAX BASIC is installed:

- Running the Installation Verification Procedure (IVP) separately
- Making the product usable on a VMScluster

3.1 Running the Installation Verification Procedure Separately

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

```
$ @systest:basic$ivp.com
```

3.2 Making the Product Usable on a VMScluster

If you want to run VAX BASIC on multiple nodes of a VMScluster, first check to see that you have the appropriate software license (see Section 1.1). Then, perform the following steps after you install VAX BASIC:

1. Enter the LICENSE LOAD command to activate the license on each node in the VMScluster on which VAX BASIC is to be executed.

2. Use the OpenVMS SYSMAN utility to execute a set of commands on all cluster nodes, whether or not the nodes are licensed to use VAX BASIC; failure to do so may cause unexpected errors for users.

Note

If you are using a dual-architecture (OpenVMS VAX and OpenVMS Alpha systems) heterogeneous cluster, before executing these commands, make sure the appropriate logical names have been set to define the scope of the SYSMAN DO commands. For more information, see the OpenVMS system management documentation.

While logged in as SYSTEM, or as another username that has the SETPRV privilege or the CMKRNL and SYSPRV privileges, use the SYSMAN utility to update the version of DCLTABLES.EXE available, as follows:

```
$ RUN SYS$SYSTEM:SYSMAN
SYSMAN> SET ENVIRONMENT/CLUSTER
%SYSMAN-I-ENV, current command environment:
        Clusterwide on local cluster
        Username SYSTEM       will be used on nonlocal nodes
SYSMAN> DO INSTALL REPLACE SYS$LIBRARY:DCLTABLES.EXE
%SYSMAN-I-OUTPUT, command execution on node NODE1
%SYSMAN-I-OUTPUT, command execution on node NODE2
```

The SYSMAN utility will cause each DO command to be executed on all nodes of the local cluster.

3. If VAX BASIC is installed as a known image, then do the following:

```
SYSMAN> DO INSTALL REPLACE SYS$SYSTEM:BASIC.EXE
%SYSMAN-I-OUTPUT, command execution on node NODE1
%SYSMAN-I-OUTPUT, command execution on node NODE2
```

4. If the VAX BASIC messages file is installed as known image, then do the following:

```
SYSMAN> DO INSTALL REPLACE SYS$MESSAGE:BASIC$MSG.EXE
%SYSMAN-I-OUTPUT, command execution on node NODE1
%SYSMAN-I-OUTPUT, command execution on node NODE2
```

5. Exit from SYSMAN:

```
SYSMAN> EXIT
$
```

A
Sample Installation

Example A–1 provides a sample listing for the installation of a VAX BASIC full development kit.

This installation was performed on a system that had no previous version of VAX BASIC installed. Depending on which layered products you have on your system, you might see additional messages and questions when you perform your installation.

Example A–1 Sample VAX BASIC Installation

```
 Welcome to OpenVMS VAX version V5.5-2 on node CHAR
    Last interactive login on Tuesday, dd-mmm-yyyy hh:mm
    Last non-interactive login on Sunday, dd-mmm-yyyy hh:mm
$ @sys$update:vmsinstal basic037 mka100: options n

        VAX/VMS Software Product Installation Procedure V5.5-2

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]?
Please mount the first volume of the set on  MKA100:.
* Are you ready? Y
%MOUNT-I-MOUNTED, BASIC mounted on node$MKA100:
The following products will be processed:
  BASIC V3.7

        Beginning installation of BASIC V3.7 at hh:mm
%VMSINSTAL-I-RESTORE, Restoring product save set A ...
    Release notes included with this kit are always copied to SYS$HELP.
```

(continued on next page)

Example A–1 (Cont.) Sample VAX BASIC Installation

```
    Additional Release Notes Options:

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

* Select option [2]: 4
* Do you want to continue the installation [NO]? Y
%VMSINSTAL-I-RELMOVED, Product's release notes have been moved to SYS$HELP.
                VAX BASIC  Installation beginning at dd-mmm-yyyy hh:mm:ss.ss.

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   There are three possible installation options. They are described
   as follows:

   1) Perform a normal installation of BASIC.

   2) Install OpenVMS VAX system definitions text library only (10-45 minutes).

   3) Obtain a copy of the BASIC message text for modification.

* Which option do you want to use [1]:
* Do you want to install the BASIC HELP files [YES]?
* Do you want to install the OpenVMS VAX system definitions [YES]?
* Do you want to install the sample graphics programs [YES]?
* Do you want to install the Motif definitions [YES]?
* Do you want to purge files replaced by this installation [YES]?

  In order to run VAX BASIC, you must have its product authorization key
  registered and loaded.

        Product:      BASIC
        Producer:     DEC
        Version:      3.7
        Release Date: dd-mmm-yyyy

* Does this product have an authorization key registered and loaded? Y
No further questions will be asked.  Installation continuing...
```

(continued on next page)

Example A–1 (Cont.) Sample VAX BASIC Installation

```
%VMSINSTAL-I-RESTORE, Restoring product save set B ...
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  VMI$ROOT:[SYSTE
ST.BASIC].

    ************************************************************************
    If you have VAX GKS V2.0 or later on your system, VAX BASIC allows
    you to use graphics language statements.  The procedure:

        SYS$SYSROOT:[SYSTEST.BASIC]BASIC$GRAPHICS_IVP.COM

    will verify that VAX BASIC graphics capabilities work on your system.
    You must execute this procedure on a terminal with graphics capabilities.
    ************************************************************************

%BASIC-I-INSHELP, Installing BASIC Help files
%VMSINSTAL-I-RESTORE, Restoring product save set C ...
%BASIC-I-INSSTARLET, Installing BASIC system definitions
%BASIC-I-INSSTARLT1, Requires approximately 10 to 45 minutes
%VMSINSTAL-I-RESTORE, Restoring product save set D ...
%BASIC-I-INSSAMPLE, Installing sample programs and PICTURE libraries
%VMSINSTAL-I-RESTORE, Restoring product save set E ...
%VMSINSTAL-I-RESTORE, Restoring product save set F ...
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  VMI$ROOT:[SYSHL
P.EXAMPLES.BASIC].

    ************************************************************************
    A number of sample programs demonstrating BASIC graphics statements
    have been copied to [SYSHLP.EXAMPLES.BASIC].

    Read [SYSHLP.EXAMPLES.BASIC]BASIC_EXAMPLES.TXT for information on the
    sample programs provided.
    ************************************************************************

%BASIC-I-INSMOTIF, Installing Motif definitions and examples
%VMSINSTAL-I-RESTORE, Restoring product save set H ...

    ************************************************************************
    The Motif bindings for BASIC files, DECW$MOTIF.BAS and
    DECW$MOTIF_DEFS.BAS, have been copied to SYS$LIBRARY.

    The BASIC$HELLOMOTIF and BASIC$MOTIFBURGER example programs
    have been copied to DECW$EXAMPLES.
    ************************************************************************

Installation of VAX BASIC V3.7 completed successfully at dd-mmm-yyyy hh:mm:ss.ss.

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

Executing VAX BASIC V3.7 Installation Verification Procedure

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```

(continued on next page)

Example A–1 (Cont.) Sample VAX BASIC Installation

```
%VMSINSTAL-I-IVPSUCCESS, VAX BASIC V3.7 Installation test PASSED
The VAX BASIC V3.7 IVP has succeeded!

        Installation of BASIC V3.7 completed at hh:mm

        VMSINSTAL procedure done at hh:mm

$
```

This installation assumes that DECnet has been shut down, and that no users are logged on to your system.

B

Files Installed on Your System

The VAX BASIC installation procedure installs a number of files on your system and defines some logical names. The following is a list of the files installed on your system and their directories:

```
[SYS0.SYSCOMMON.SYSEXE]BASIC.EXE
[SYS0.SYSCOMMON.SYSHLP]BASIC037.RELEASE_NOTES
[SYS0.SYSCOMMON.SYSHLP]BASICHELP.HLB
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.BASIC]BASIC$GRAPHICS.OLB
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.BASIC]BASIC$GRAPHICS.TLB
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.BASIC]BASIC_EXAMPLES.COM
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.BASIC]BASIC_EXAMPLES.TXT
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.BASIC]CLOCK.BAS
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.BASIC]CREATE_SWAN_SWIM.BAS
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.BASIC]DRAW_HISTOGRAM.BAS
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.BASIC]ELLIPSE.BAS
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.BASIC]FONT_DEMO.BAS
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.BASIC]PARTY.BAS
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.BASIC]PIE_DRIVER.BAS
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.BASIC]PLOT_DRIVER.BAS
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.BASIC]ROTATED_SQUARES.BAS
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.BASIC]SINE.BAS
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.DECW]BASIC$HELLOMOTIF.BAS
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.DECW]BASIC$HELLOMOTIF.UIL
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.DECW]BASIC$MOTIFBURGER.BAS
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.DECW]BASIC$MOTIFBURGER_DEFS.BAS
[SYS0.SYSCOMMON.SYSHLP.EXAMPLES.DECW]BASIC$MOTIFBURGER.UIL
[SYS0.SYSCOMMON.SYSLIB]DECW$MOTIF.BAS
[SYS0.SYSCOMMON.SYSLIB]DECW$MOTIF_DEFS.BAS
[SYS0.SYSCOMMON.SYSLIB]BASIC$STARLET.TLB
[SYS0.SYSCOMMON.SYSLIB]DCLTABLES.EXE
[SYS0.SYSCOMMON.SYSMSG]BASIC$MSG.EXE
[SYS0.SYSCOMMON.SYSTEST]BASIC$IVP.COM
[SYS0.SYSCOMMON.SYSTEST.BASIC]BASIC$GRAPHICS_IVP.BAS
[SYS0.SYSCOMMON.SYSTEST.BASIC]BASIC$GRAPHICS_IVP.COM
[SYS0.SYSCOMMON.SYSTEST.BASIC]BASIC$IVP.BAS
```

C
Recovering from Errors

This appendix provides information to help you deal with failures or errors that might occur during product installation or product use.

C.1 Failures During Product Installation

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.

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 VAX BASIC
Version 3.7 has failed.
```

If the IVP fails, you see these messages:

```
The VAX BASIC Version 3.7 Installation
Verification Procedure failed.

%VMSINSTAL-E-IVPFAIL, The IVP for VAX BASIC
Version 3.7 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.
- The product license has not been registered and loaded.

For descriptions of the error messages generated by these conditions, see the OpenVMS documentation on system messages, recovery procedures, and OpenVMS 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 1.

C.2 Failures During Product Use

If you encounter a problem while using VAX BASIC, report it to Digital. Depending on the nature of the problem and the type of support you have, you can take one of the following actions:

- If your software contract or warranty agreement entitles you to telephone support, call Digital.
- Submit a Software Performance Report (SPR).
- If the problem has to do with the VAX BASIC documentation, fill out and submit a Reader's Comments form at the back of the document containing the error. Include the section and page number where the error occurred.

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 previously indicated or follow alternate instructions provided by Digital for reporting SPD nonconformance problems.

When you submit an SPR, take the following steps:

1. Describe as accurately as possible the circumstances and state of the system when the problem occurred. Include in the description the version number of VAX BASIC being used. Demonstrate the problem with specific examples.
2. Reduce the problems 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. Mail the SPR to Digital.

If the problem is related to VAX BASIC documentation, you can do one of the following:

- Report the problem to the CSC (if you have a Software Product Services Support Agreement and the problem is severe).
- Fill out the Reader's Comments form (in the back of the document that contains the error) and send the form to Digital. Be sure to include the section and page number where the error occurred.