

VMS

digital

VMS Version 5.1 Installation Guide

Order Number: AA-MG15A-TE

VMS Version 5.1 Installation Guide

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December 1988

This guide supplements your processor-specific installation and operations guide and describes how to update your system to VMS Version 5.1.

Revision/Update Information: This is a new manual.

**digital equipment corporation
maynard, massachusetts**

December 1988

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Preface

This guide describes the procedures to update VMS to Version 5.1 and to install VMS DECwindows.

You can add this guide to the binder that contains the current version of the *VMS Release Notes*. Place it in the section after the release notes.

Intended Audience

This guide is intended for users who manage VMS systems.

Document Structure

This guide is organized into two chapters and two appendices:

- Chapter 1 describes the VMS update procedures.
- Chapter 2 describes the VMS DECwindows installation procedures.
- Appendix A lists the modified VMS components.
- Appendix B lists the new DECwindows components.

Associated Documents

For additional information on topics discussed in this document, see the following manuals:

- The installation and operations guide for your VAX computer system
- *VMS Version 5.0 Release Notes*
- *VMS Version 5.1 Release Notes*

Conventions

The following conventions are used in this guide:

mouse	The term <i>mouse</i> is used to refer to any pointing device, such as a mouse, a puck, or a stylus.
MB1, MB2, MB3	MB1 indicates the left mouse button, MB2 indicates the middle mouse button, and MB3 indicates the right mouse button. (The buttons can be redefined by the user.)
PB1, PB2, PB3, PB4	PB1, PB2, PB3, and PB4 indicate buttons on the puck.
SB1, SB2	SB1 and SB2 indicate buttons on the stylus.

Preface

`Ctrl/x`

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.

`PF1 x`

A sequence such as `PF1 x` indicates that you must first press and release the key labeled PF1, then press and release another key or a pointing device button.

`Delete`

A key name is shown enclosed to indicate that you press a key on the keyboard.

...

In examples, a horizontal ellipsis indicates one of the following possibilities:

- Additional optional arguments in a statement have been omitted.
- The preceding item or items can be repeated one or more times.
- Additional parameters, values, or other information can be entered.

.
. .
. . .

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.

()

In format descriptions, parentheses indicate that, if you choose more than one option, you must enclose the choices in parentheses.

[]

In format descriptions, brackets indicate that whatever is enclosed is optional; you can select none, one, or all of the choices.

{ }

In format descriptions, braces surround a required choice of options; you must choose one of the options listed.

red ink

Red ink indicates information that you must enter from the keyboard or a screen object that you must choose or click on.

boldface text

Boldface text represents the introduction of a new term.

italic text

Italic text represents information that can vary in system messages (for example, Internal error *number*).

UPPERCASE TEXT

Uppercase text indicates the name of a routine, the name of a file, the name of a file protection code, or the abbreviation for a system privilege. Uppercase text can also indicate that you must enter a command (for example, enter OPEN/READ).

1

Updating the VMS Operating System

This chapter describes how to update the VMS operating system to Version 5.1.

1.1 Update Considerations

Before updating to VMS Version 5.1, each system to be updated must be running Version 5.0-2 or 5.0-2A. To determine the VMS version your system is running, enter the following DCL command:

```
$ SHOW SYSTEM
```

The first line displayed on your terminal will show what version you are running.

If you are installing VMS for the first time, you must first install Version 5.0, Version 5.0-1, and Version 5.0-2. You must update to VMS Version 5.1 before installing the VMS DECwindows software. The following list shows the version numbers in the order they must be installed:

- VMS Version 5.0
- VMS Version 5.0-1
- VMS Version 5.0-2
- VMS Version 5.1

The amount of time it takes to update your system depends on the type of media you use. The following list shows approximate times for updating one Version 5.0 disk to Version 5.0-1 or one Version 5.0-1 system disk to Version 5.0-2:

- Magnetic tape kit: 15 minutes
- RX50 kit: 20 minutes
- RX33 kit: 15 minutes
- RX01 kit: 40 minutes
- TU58 kit: two hours
- TK50 kit: 20 minutes
- Compact Disk (CDROM):30 minutes

The following list shows approximate times for updating one Version 5.0-2 system disk to Version 5.1:

- Magnetic tape kit: 35-45 minutes
- RA60: 50 minutes
- RC25: 1 1/2 hours

Updating the VMS Operating System

1.1 Update Considerations

- RK07: 3 1/2 hours
- RL02: 1 1/4 hours
- RX33 kit: 1 1/2 hours
- TK50 kit: 1 hour
- Compact Disk (CDROM): 15 minutes

1.2 Overview of System Configurations

The update procedures you need to follow depend on the type of system configuration you have. See the section that is appropriate for your system configuration.

- Section 1.3: To update VAXcluster environments (either CI-only, mixed-interconnect, or local area).
- Section 1.4: To update mixed-version VAXcluster environments.

Go to the section that describes your system environment:

- Section 1.4.1: Mixed-version environments that combine Version 4.7 systems with A5.0, A5.0-1, A5.0-2, or A5.1 systems.
- Section 1.4.2: Mixed-version environments that contain only Version 5.0 and 5.1 systems.

- Section 1.5: To update local area VAXcluster environments with one boot server and two system disks.
- Section 1.6: To prepare to update a standalone system.

After preparing your system, go to the section that describes the update instructions of the version you want to update to:

- Section 1.7: To update to Version 5.0-1.
- Section 1.8: To update to Version 5.0-2.
- Section 1.9: To update to Version 5.1.

1.3 Updating VAXcluster Environments

Use the following procedures to update VAXcluster environments (not including mixed-version VAXclusters and local area VAXclusters with one boot server and two system disks):

- 1 Make sure that you have prepared your system for the update, as described in Section 1.6.
- 2 Log in to the SYSTEM account on a node that uses the system disk that you are updating.
- 3 Update your system. See the section that describes the version you want to update to.
 - Section 1.7: To update to Version 5.0-1.
 - Section 1.8: To update to Version 5.0-2.

Updating the VMS Operating System

1.3 Updating VAXcluster Environments

— Section 1.9: To update to Version 5.1.

- 4 If the VAXcluster environment uses several system disks, repeat the previous steps (steps 1 through 3) for each system disk in the VAXcluster environment.

Note: After completing this procedure, all the systems in your VAXcluster environment will be running the same version of the VMS operating system. If you want different versions of the VMS operating system to exist in the same cluster, see Section 1.4.

- 5 Follow the steps in Section 1.10.

1.4 Mixed-Version VAXcluster Environments — Rolling Update

You use a rolling update when a VAXcluster environment has several nodes that run different versions of the VMS operating system. Since you apply the update only to certain system disks, the systems that are not being updated remain available to users. DIGITAL recommends that all nodes in a cluster run the same version of the VMS operating system.

For example, VMS Versions 4.7 and A5.0-2 (an intermediate version of Version 5.0-2) of the VMS operating system can coexist in a VAXcluster environment. The VMS Version 5.1 rolling update produces an A5.1 system that can also coexist in a VAXcluster with a Version 4.7 system. During the VMS Version 5.1 rolling update, the Version 4.7 systems are available to users.

A rolling update is *not* applicable when all systems boot from a single system disk. If all systems boot from a single system disk, you must follow the steps in Section 1.3.

If your mixed-version VAXcluster environment contains VMS Version 4.7 systems, see Section 1.4.1.

If your mixed-version VAXcluster environment contains only VMS Version 5.0-1 or Version 5.0-2, and Version 5.1 systems, see Section 1.4.2.

When the update is finished, you must reboot your system. See the installation and operations guide for your VAX computer for information about rebooting your system.

1.4.1 VMS Version 4.7 Systems

This section describes the restrictions that apply to mixed-version VAXcluster environments that combine Version 4.7 systems with A5.0, A5.0-1, A5.0-2, or A5.1 systems. Read this section before you attempt to update this type of VAXcluster environment.

Table 1-1 shows the supported types of mixed-version VAXclusters with Version 4.7 systems. Each horizontal row of the table represents a valid combination of VMS versions in a VAXcluster environment.

Updating the VMS Operating System

1.4 Mixed-Version VAXcluster Environments — Rolling Update

Table 1–1 Support for Mixed-Version VAXclusters with Version 4.7 Systems

V4.7	A5.0	A5.0-1	A5.0-2	A5.1
X	X	X		
X		X	X	
X			X	X

Note that, A5.0-1, A5.0-2, and A5.1 systems in the cluster cannot run more than two consecutive VMS versions. For example, Table 1–1 shows that while VMS Versions A5.0-1 and A5.0-2 are supported in the same cluster, Versions A5.0, A5.0-1, and A5.0-2 are not. Similarly, Versions A5.0-1 and A5.1 are not supported in the same cluster.

VMS Versions A5.0-1, A5.0-2, or A5.1 systems, and 4.7 systems should be intermixed in VAXcluster environments only to update the various nodes in the cluster incrementally and to test newly installed operating systems on VAXcluster members.

While the two versions of the VMS operating system are operating in a cluster, consider the following factors:

- When a VMS Version A5.0-1, A5.0-2, or A5.1 system boots in a VAXcluster environment that includes a VMS Version 4.7 system, the system displays the following informational message:

```
%CSP-I-DIFSWVER, Different versions of VAX/VMS exist in
cluster
```

- You should update from Version 4.7 to Version 5.0 and then apply updates to all the systems in the cluster as soon as possible.

Because a mixed-version VAXcluster environment supports only two consecutive A5.0 or later VMS versions, there are special considerations for updating Version 4.7 systems. If your VAXcluster environment contains a Version A5.0-2 or later system *and* a Version 4.7 system, you cannot perform a rolling upgrade on the Version 4.7 system. If you did perform a rolling upgrade on the Version 4.7 system, the resulting A5.0 system would fail to boot because it is incompatible with the A5.0-2 or later system in the cluster.

There are three ways to avoid this problem:

- 1 Shut the Version 4.7 system down and reboot it from a root on the A5.0-2 or later system disk.
- 2 Bring all Version 4.7 systems to Version A5.0-1 *before* you update any systems to Version A5.0-2, and to Version A5.0-2 before you update any systems to Version A5.1.
- 3 Take the Version 4.7 system out of the cluster, update to the current version, and boot the system back into the cluster.

Updating the VMS Operating System

1.4 Mixed-Version VAXcluster Environments — Rolling Update

- You should then convert the original Version 5.0 nodes from A5.0, A5.0-1, A5.0-2, or A5.1 to the corresponding B5.0 version and then to the corresponding V5.1 version. There is a program you can run that does the conversion. For a description of the conversion program, see the *VMS Version 5.0 Release Notes*, Chapter 4.

Note: The *VMS Version 5.0 Release Notes* assume that you will be updating a Version 5.0 system. The original VMS_ATOB050 and VMS_BTOC050 procedures are replaced during the Version 5.1 update to versions that will convert an A5.0, A5.0-1, A5.0-2, or A5.1 system to the corresponding Version 5.0 system.

For instructions on how to perform a rolling update, see Section 1.4.3.

1.4.2 VMS Version 5.0-1, 5.0-2, and Version 5.1 Systems

This section describes the restrictions that apply to mixed-version VAXcluster environments that contain only Version 5.0-1, 5.0-2, and 5.1 systems. Read this section before you attempt to update this type of VAXcluster environment.

Table 1–2 shows the supported types of Version 5.0-1 and 5.0-2 mixed-version VAXclusters. Each horizontal row of the table represents a valid combination of VMS versions.

Table 1–2 Support for Mixed-Version VAXclusters With Version 5.0-1 and 5.0-2 Systems

V5.0	V5.0-1	V5.0-2	V5.1
X	X		
	X	X	
		X	X

Note that Version 5.0-1, 5.0-2 and 5.1 systems in the cluster cannot run more than two consecutive VMS versions. For example, Table 1–2 shows that while Versions 5.0-2 and 5.1 are supported in the same cluster, Versions 5.0, 5.0-1, and 5.0-2 are not. Similarly, Version 5.0 and 5.1 are not supported in the same cluster.

To perform a rolling update, go to Section 1.4.3.

1.4.3 Performing a Rolling Update

To perform a rolling update, complete the following steps:

- 1 Make sure you have prepared your system for the update (described in Section 1.6).
- 2 Log in to the SYSTEM account on a node that uses the system disk that you are updating.

Updating the VMS Operating System

1.4 Mixed-Version VAXcluster Environments — Rolling Update

- 3 Update your system. See the section that describes the version you want to update to.
 - Section 1.7: To update to Version 5.0-1.
 - Section 1.8: To update to Version 5.0-2.
 - Section 1.9: To update to Version 5.1.

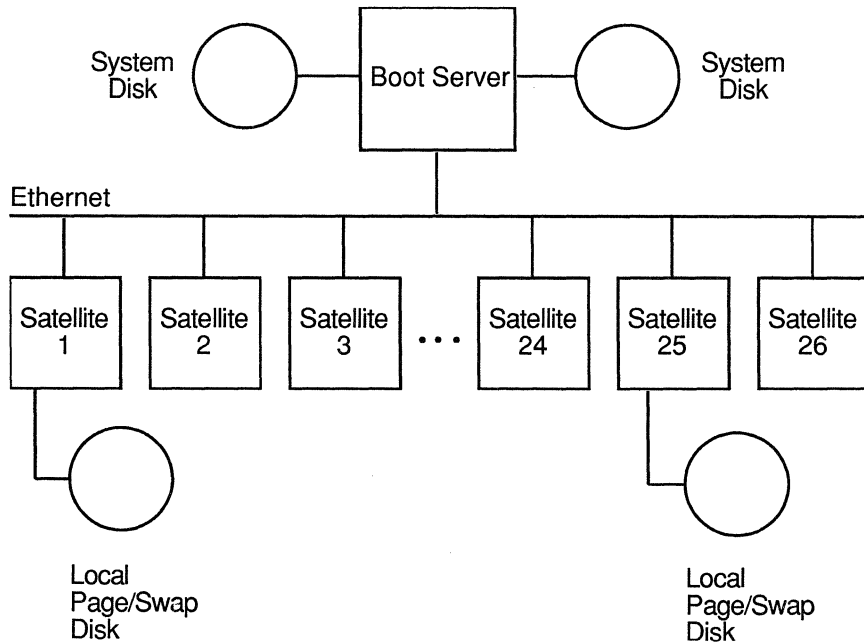
Note that, while you update the system, users can remain logged in to any systems in the VAXcluster environment that are not booted from the disk being updated.

- 4 If you are updating several system disks, repeat the previous steps (steps 1 through 3) for each system disk that you are updating.
- 5 Follow the steps in Section 1.10.

1.5 Local Area VAXclusters with One Boot Server and Two System Disks

Figure 1-1 shows a local area VAXcluster with one boot server and two system disks.

Figure 1-1 Local Area VAXcluster with One Boot Server and Two System Disks



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Updating the VMS Operating System

1.5 Local Area VAXclusters with One Boot Server and Two System Disks

To update a local area VAXcluster with one boot server and two system disks, do the following:

- 1 Follow the steps in Section 1.3 to update the first system disk.
- 2 Repeat these same steps to update the second system disk.
- 3 Follow the steps in Section 1.10.

1.6 Preparing to Update Your System

This section describes how to prepare your system for an update. Before performing the update, follow the steps in this section.

- 1 Make sure the system disk has enough free space. See the following list for the amount of free blocks you need on your system disk:
 - VMS Version 5.0-1: 5000 free blocks.
 - VMS Version 5.0-2: 5000 free blocks.
 - VMS Version 5.1: 8500 free blocks. However, it is recommended that you have more than 22,000 free blocks to ensure a successful update.

If you have less than the recommended amount of free blocks, updated files are installed immediately. If you have more than the recommended number of free blocks, updated files are held in a temporary directory until the end of the procedure.

Enter the following command to show how many free blocks are on your system disk:

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

If your system disk has at least 75 blocks more than the required free blocks, go to step 2.

If your system disk has less than the required free blocks, create some free space by doing the following:

- a. Log in to an account that has sufficient privileges to delete files in order to create space on the system disk. To avoid the possibility of accidentally deleting important files, DIGITAL recommends that you use an account with limited privileges rather than the SYSTEM account.
- b. Delete or purge all unwanted files from the system disk. You can run the VMSTAILOR program to do this. See your VMS installation and operations guide for information about the VMSTAILOR program.
- c. If there still is not enough free space, back up the following files to another disk or tape and delete them from the system disk:
 - All files with file types of JNL, MAP, and LOG

Updating the VMS Operating System

1.6 Preparing to Update Your System

- Files in SYS\$EXAMPLES and SYS\$TEST

Note: Deleting these files may cause some “file not found” error messages during the update. You can ignore these error messages.

For a VMS Version 5.1 update, if your system disk still has less than 22,000 free blocks, you can still proceed with the update as long as you have at least 8500 blocks. Note, however, that your system may experience problems in the event of a system failure or interruption during the update.

In order to update to VMS Version 5.1, the system disk should contain a complete and unmodified version of VMS Version 5.0-2 or 5.0-2A. If you have modified or deleted (tailored OFF) files by running the VMSTAILOR program, you may get an incomplete update. If this happens, restore the missing or modified files (tailor ON) and update again (go to Section 1.9).

- 2 Back up and restore the system disk. Backing up the system disk preserves the original system disk in case the update fails. Restoring the system disk improves disk performance by storing all files contiguously and making all free disk space contiguous. For more information about backing up your system disk, see the VMS installation and operations guide for your VAX computer.

CAUTION: A system failure at a critical point in the update procedure might destroy the contents of the disk. Back up the system disk so that you always have a working copy. Also note that the update may fail if your system disk is badly fragmented.

- 3 For Version 5.1, if you need to boot standalone BACKUP from RX01 media, you must be certain that you have a bootable copy from Version 5.0, 5.0-1 or 5.0-2 before proceeding with the Version 5.1 update. See the *VMS Version 5.1 Release Notes* for more information.

Standalone BACKUP does continue to build on all other supported media (for example, RA series disks, TK50, RL02, etc.). This problem should be corrected in the next update after Version 5.1.

CAUTION: The standalone BACKUP kit for Version 5.1 will not successfully build on RX01 media (the console media for VAX-11/78x series processors). There are no problems building standalone BACKUP on any other media.

Refer to the *VMS Backup Utility Manual*, for details on how to build a standalone BACKUP kit.

- 4 Use the following procedure to make sure that the SYSTEM account has sufficient quotas and limits:
 - a. Log in to the SYSTEM account.
 - b. Enter the following commands:

```
$ SET DEFAULT SYSS$SYSTEM
$ RUN AUTHORIZE
UAF> SHOW SYSTEM
```

Updating the VMS Operating System

1.6 Preparing to Update Your System

- c. Compare the SYSTEM account's limits and quotas to the following values:

Open file quota (Fillm)	40
Buffered I/O limit (BIOIm)	18
Direct I/O limit (DIOIm)	18
AST limit (ASTIm)	24
Enqueue quota (EnqIm)	200
Buffered byte quota count (BytIm)	32768

- d. Adjust the limits and quotas, as needed, to ensure that they are equal to or greater than the required values. You can change each value by entering a command in the following format:

```
UAF> MODIFY SYSTEM/limit=new_value
```

For example:

```
UAF> MODIFY SYSTEM/DIOLM=18
```

- e. Enter the following command:

```
UAF> EXIT
```

If you adjusted any of the SYSTEM account's values, log out and log in again so that the new values take effect.

- 5 For a VMS Version 5.0-1 and 5.0-2 update, you must have at least 10 unused global sections and 50 unused global pages. For a VMS Version 5.1 update, you must have at least 10 unused global sections and 1200 unused global pages. To make sure that sufficient unused global sections and global pages are available, use the following procedure:

- a. Display the number of unused global sections by entering the following command:

```
$ WRITE SYS$OUTPUT F$GETSYI("FREE_GBLSECTS")
```

- b. If the number of unused global sections is less than 10, add the following line to SYS\$SYSTEM:MODPARAMS.DAT:

```
ADD_GBLSECTIONS = 10
```

- c. Display the number of unused global pages by entering the following command:

```
$ WRITE SYS$OUTPUT F$GETSYI("FREE_GBLPAGES")
```

- d. If the number of unused global pages is less than the required amount, add the following line to SYS\$SYSTEM:MODPARAMS.DAT, depending on the version you are updating:

For a VMS Version 5.0-1 or 5.0-2 update:

```
ADD_GBLPAGES = 50
```

For a VMS Version 5.1 update:

```
ADD_GBLPAGES = 1200
```

Updating the VMS Operating System

1.6 Preparing to Update Your System

For a VMS Version 5.1 update, peak global page utilization during the update is about 1030 pages. After rebooting, usage will be about 400 pages higher than on a VMS Version 5.0-2 system.

- e. If you added a line to MODPARAMS.DAT to modify either the GBLPAGES or GBLSECTIONS parameters, run AUTOGEN as follows:

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

Note: If you receive AUTOGEN errors about feedback information, either add the NOFEEDBACK parameter to the previous command to ignore feedback or refer to the *Guide to Setting Up a VMS System* for more information about AUTOGEN.

- 6 Log in to the SYSTEM account and make sure that you are the only user logged in by doing the following:
 - a. Notify current users that they must log out by entering the following command:

```
$ REPLY/ALL "Logout please..."
```

- b. Prevent new users from logging in by entering the following command:

```
$ SET LOGINS/INTERACTIVE=0
```

Note: Do not ignore this step. Portions of the update, such as modifying HELPLIB, will fail if anyone is accessing the files.

- 7 If your system is running DECnet-VAX software, shut it down by entering the following commands:

```
$ RUN SYS$SYSTEM:NCP
NCP> SET EXECUTOR STATE OFF
NCP> EXIT
```

To verify that the network has shut down, or if you are not sure whether your system includes DECnet-VAX software, enter the following command:

```
$ SHOW NETWORK
```

If the system is shut down the following message is displayed:

```
%SHOW-I-NONET, network unavailable
```

- 8 The VMS Version 5.1 update will automatically terminate by shutting down the system. If your system does not have the logical name SHUTDOWN\$MINIMUM_MINUTES defined for a reasonable shut down time, you should do so before starting the procedure. Use the following command to set the shut down time to five minutes:

```
$ DEFINE/SYSTEM SHUTDOWN$MINIMUM_MINUTES 5
```

- 9 Find the version your system is running in the following list. See the appropriate section for update instructions:
 - VMS Version 4.7: You must upgrade to Version 5.0. See the *VMS Version 5.0 Release Notes*.

Updating the VMS Operating System

1.6 Preparing to Update Your System

- VMS Version 5.0: You must update to Version 5.0-1. See Section 1.7.
- VMS Version 5.0-1: You must update to Version 5.0-2. See Section 1.8.
- VMS Version 5.0-2 or 5.0-2A: You must update to Version 5.1. See Section 1.9.

1.7 Updating to VMS Version 5.0-1

To update your system to VMS Version 5.0-1, perform the following steps:

- 1 Determine the device you will use to do the update. For information about the format of device names on your system, see the VMS installation and operations guide for your VAX computer.
- 2 Start the VMSINSTAL command procedure. You must specify a product name on the command line. The product name for the Version 5.0-1 update is VMSU1050. To update to Version 5.0-1, enter the following command:

```
$ @SYS$UPDATE:VMSINSTAL VMSU1050 ddcu: OPTIONS N
```

The variable *ddcu*: is the device name of the drive that will hold the update distribution media. If the source drive is an HSC drive, precede the device name with an HSC name and a dollar-sign (\$). For more information about the format of device names on your system, see the VMS installation and operations guide for your VAX computer.

For example, if you are updating to Version 5.0-1 from a TU81 magnetic tape drive on controller A with unit number 0, enter the following command:

```
$ @SYS$UPDATE:VMSINSTAL VMSU1050 VICESMUA0: OPTIONS N
```

Specify OPTIONS N on the command line. Later in the update you will be allowed to choose which release notes options you want. The VMS Version 5.0-1 and 5.0-2 release notes are included on the distribution media and also are appended to the *VMS Version 5.1 Release Notes*.

- 3 If the VMSINSTAL command fails, check to see if either of the following conditions occurred:
 - If VMSINSTAL displays the following message, you probably specified the letter “O” in the product name instead of zeros:

```
%VMSINSTAL-E-NOPRODS, None of the specified products  
were found
```
 - If VMSINSTAL displays an “invalid device” error message, you are prompted for a device name until you specify the correct name of a device existing on the system. Remember to put a colon (:) after the device name.

Updating the VMS Operating System

1.7 Updating to VMS Version 5.0-1

- 4 Answer the questions that VMSINSTAL prompts you for to proceed. Messages similar to the following are displayed:

```
VAX/VMS Software Product Installation Procedure V5.0
```

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

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

If you backed up the system disk, press the RETURN key and continue.

If you have not yet backed up your system disk, do the following:

- a. Type NO and press the RETURN key. VMSINSTAL returns to DCL command level to permit you to perform the backup.
 - b. Back up and restore your system disk (see the VMS installation and operations guide for your VAX computer).
 - c. When the backup is completed, restart the VMS Version 5.0-1 update procedure at step 2.
- 5 If you are using magnetic tape, insert the distribution media in the appropriate drive and put the drive on line. When you are ready, type YES and press RETURN. VMSINSTAL displays the following message:

```
Please mount the first volume of the set on MUA0:.
```

```
* Are you ready?
```

```
%MOUNT-I-MOUNTED, VMSU1 mounted on _MUA0:
```

If your distribution kit consists of several pieces of media, insert the first piece of the set in the drive.

- 6 VMSINSTAL then displays the following messages indicating that the update is beginning:

```
The following products will be processed:
```

```
VMSU1 V5.0
```

```
Beginning installation of VMSU1 V5.0 at hh:mm
```

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

- 7 If the distribution kit consists of only one piece of media, skip to the next step.

If the distribution kit consists of several volumes, the procedure finishes with the piece of media in the drive, and asks you to remove it and insert the next one. For example:

```
%BACKUP-I-READYREAD, mount volume 2 on _MUA0: for reading  
Enter "YES" when ready:
```

Each time the procedure asks you, remove the volume in the drive and insert the next one.

Updating the VMS Operating System

1.7 Updating to VMS Version 5.0-1

8 You can select an option from the following list:

Release Notes Options:

1. Display release notes
2. Print release notes
3. Both 1 and 2
4. Copy release notes to SYS\$HELP
5. Do not display, print or copy release notes

* Select option :

Enter a number from 1 to 5. This menu allows you to do the following:

- Display the release notes at the console terminal
- Print the release notes on a line printer
- Copy the release notes to the SYS\$HELP directory on the system disk. (this happens by default, unless you choose option 5).

Note: Regardless of the method you choose, DIGITAL recommends that you read the release notes before using your updated system disk.

The system displays the following message:

* Do you want to continue the installation?

If you want to continue with the update, type YES and press RETURN. If you only want a copy of the release notes, type NO to abort the update procedure.

9 VMSINSTAL begins to update the system disk and displays the following messages:

Installing VMS 5.0-1 update to a 5.0 system

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

If you want to purge files replaced by the update, enter YES and press RETURN. If you do not want to purge these files, type NO and press RETURN.

10 The procedure displays the following messages:

Now applying the updates...

A description of these changes is in SYS\$UPDATE:VMSU1050.TXT
:
:

Make sure that the last (or only) volume of the update media remains mounted until the update is completed.

Note: When updating a tailored system, some files might not be present. Because the update might attempt to repair these files, you should do the following:

- Ignore any “file not found” error messages that appear during the application of a VMS maintenance update.

Updating the VMS Operating System

1.7 Updating to VMS Version 5.0-1

- **If you use VMSTAILOR to restore these files at any time, reapply the update after restoring the files. You can do this by re-entering the VMSINSTAL command (see step 2 in this section).**

If you are updating a tailored system or reapplying the update, the procedure displays the following message which you can ignore:

```
%VMS-E-ERRORS, Of the nn fixes listed above, the following  
mm should be reviewed
```

- 11 VMSINSTAL creates a journal file (with a JNL file type) for each image that is patched during the update process. See Section 1.11 for additional information on the JNL files produced by the update.

When VMSINSTAL completes the update, it displays the following messages:

```
Installation of VMSU1 V5.0 completed at hh:mm
```

```
VMSINSTAL procedure done at hh:mm
```

- 12 You must shut down the system using the following command:

```
$ @SYSSYSTEM:SHUTDOWN
```

You are prompted by questions concerning the shut down of your system. For more information about shut down procedures, see the installation and operations guide for your VAX computer.

When the shut down is complete, the following message is displayed:

```
SYSTEM SHUTDOWN COMPLETE -- USE CONSOLE TO HALT SYSTEM
```

- 13 Manually reboot your system. Reboot the updated system disks. If you have a VAXcluster environment, reboot the nodes that use the newly updated system disks. When each node reboots, it will be running VMS Version 5.0-1. See the installation and operations guide for your VAX computer for information about rebooting your system.
- 14 See Section 1.10 for steps to perform after the update.
- 15 You must now update to VMS Version 5.0-2, see Section 1.8 for instructions.

1.8 Updating to VMS Version 5.0-2

To update your system to VMS Version 5.0-2, perform the following steps:

- 1 Determine the device you will use to do the update. For information about the format of device names on your system, see the VMS installation and operations guide for your VAX computer.
- 2 Start the VMSINSTAL command procedure. You must specify a product name on the command line. The product name for the Version 5.0-2 update is VMSU2050. To update to Version 5.0-2, enter the following command:

Updating the VMS Operating System

1.8 Updating to VMS Version 5.0-2

```
$ @SYS$UPDATE:VMSINSTAL VMSU2050 ddcu: OPTIONS N
```

The variable *ddcu:* is the device name of the drive that will hold the update distribution media. If the source drive is an HSC drive, precede the device name with an HSC name and a dollar-sign (\$). For more information about the format of device names on your system, see the VMS installation and operations guide for your VAX computer.

For example, if you are updating to Version 5.0-2 from a TU81 magnetic tape drive on controller A with unit number 0, enter the following command:

```
$ @SYS$UPDATE:VMSINSTAL VMSU2050 VICESM0A0: OPTIONS N
```

Specify OPTIONS N on the command line. Later in the update you will be allowed to choose which release notes options you want. The VMS Version 5.0-1 and 5.0-2 release notes are included on the distribution media and also are appended to the *VMS Version 5.1 Release Notes*.

- 3 If the VMSINSTAL command fails, check to see if either of the following conditions occurred:
 - If VMSINSTAL displays the following message, you probably specified the letter “O” in the product name instead of zeros:

```
%VMSINSTAL-E-NOPRODS, None of the specified products
were found
```
 - If VMSINSTAL displays an “invalid device” error message, you are prompted for a device name until you specify the correct name of a device existing on the system. Remember to put a colon (:) after the device name.
- 4 Answer the questions that VMSINSTAL prompts you for to proceed. Messages similar to the following are displayed:

```
VAX/VMS Software Product Installation Procedure V5.0-1
```

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

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

If you backed up the system disk, press the RETURN key and continue.

If you have not yet backed up your system disk, do the following:

- a. Type NO and press the RETURN key. VMSINSTAL returns to DCL command level to permit you to perform the backup.
- b. Back up and restore your system disk (see the VMS installations and operations guide for your VAX computer).
- c. When the backup is completed, restart the VMS Version 5.0-2 update procedure at step 2.

Updating the VMS Operating System

1.8 Updating to VMS Version 5.0-2

- 5 If you are using magnetic tape, insert the distribution media in the appropriate drive and put the drive on line. When you are ready, type YES and press RETURN. VMSINSTAL displays the following messages:

```
Please mount the first volume of the set on MUA0:.
```

```
* Are you ready?
```

```
%MOUNT-I-MOUNTED, VMSU2 mounted on _MUA0:
```

If your distribution kit consists of several pieces of media, insert the first piece of the set in the drive.

- 6 VMSINSTAL then displays the following messages indicating that the update is beginning:

```
The following products will be processed:
```

```
VMSU2 V5.0
```

```
Beginning installation of VMSU2 V5.0 at hh:mm
```

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

- 7 If the distribution kit consists of only one piece of media, skip to the next step.

If the distribution kit consists of several volumes, the procedure finishes with the piece of media in the drive, and asks you to remove it and insert the next one. For example:

```
%BACKUP-I-READYREAD, mount volume 2 on _MUA0: for reading  
Enter "YES" when ready:
```

Each time the procedure asks you, remove the volume in the drive and insert the next one.

- 8 You can select an option from the following list:

```
Release Notes Options:
```

1. Display release notes
2. Print release notes
3. Both 1 and 2
4. Copy release notes to SYS\$HELP
5. Do not display, print or copy release notes

```
* Select option :
```

Enter a number from 1 to 5. This menu allows you to do the following:

- Display the release notes at the console terminal
- Print the release notes on a line printer
- Copy the release notes to the SYS\$HELP directory on the system disk. (this happens by default, unless you choose option 5).

Note: Regardless of the method you choose, DIGITAL recommends that you read the release notes before using your updated system disk.

The system displays the following message:

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

Updating the VMS Operating System

1.8 Updating to VMS Version 5.0-2

If you want to continue with the update, type YES and press RETURN. If you only want a copy of the release notes, type NO to abort the update procedure.

- 9 VMSINSTAL begins to update the system disk and displays the following messages:

```
Installing VMS 5.0-2 update to a 5.0-1 system
```

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

```
If you want to purge files replaced by the update, type YES and press RETURN. If you do not want to purge these files, type NO and press RETURN.
```

- 10 The procedure displays the following messages:

```
Now applying the updates...
```

```
A description of these changes is in SYSS$UPDATE:VMSU2050.TXT
```

```
.  
.  
.
```

Make sure that the last (or only) volume of the update media remains mounted until the update is completed.

Note: When updating a tailored system, some files might not be present. Because the update might attempt to repair these files, you should do the following:

- Ignore any “file not found” error messages that appear during the application of a VMS maintenance update.
- If you use VMSTAILOR to restore these files at any time, reapply the update after restoring the files. You can do this by re-entering the VMSINSTAL command (see step 2 in this section).

If you are updating a tailored system or reapplying the update, the procedure displays the following message which you can ignore:

```
%VMS-E-ERRORS, Of the nn fixes listed above, the following  
mm should be reviewed
```

- 11 VMSINSTAL creates a journal file (with a JNL file type) for each image that is patched during the update process. See Section 1.11 for additional information on the JNL files produced by the update.

When VMSINSTAL completes the update, it displays the following messages:

```
Installation of VMSU2 V5.0 completed at hh:mm
```

```
VMSINSTAL procedure done at hh:mm
```

- 12 You must shut down the system using the following command:

```
$_@SYSS$SYSTEM:SHUTDOWN
```

You are prompted by questions concerning the shut down of your system. For more information about shut down procedures, see the installation and operations guide for your VAX computer.

Updating the VMS Operating System

1.8 Updating to VMS Version 5.0-2

When the shut down is complete, the following message is displayed:

```
SYSTEM SHUTDOWN COMPLETE -- USE CONSOLE TO HALT SYSTEM
```

- 13 Manually reboot your system. Reboot the updated system disks. If you have a VAXcluster environment, reboot the nodes that use the newly updated system disks. When each node reboots, it will be running VMS Version 5.0-2. See the installation and operations guide for your VAX computer for information about rebooting your system.
- 14 See Section 1.10 for steps to perform after the update.
- 15 You must now update to VMS Version 5.1, see Section 1.9 for instructions.

1.9 Updating to VMS Version 5.1

If your system runs DECnet-VAX software, make sure it has been shut down before you start the update procedure. Refer to Section 1.6 (step 7) for directions on shutting down the DECnet-VAX software.

To update to VMS Version 5.1, perform the following steps:

- 1 Determine the device you will use to do the update. For information about the format of device names on your system, see the VMS installation and operations guide for your VAX computer.
- 2 If other systems are also booted from the disk you are updating, shut them down.

Note: If you allow other systems to remain booted on this disk during the update, the update may not be successful.

- 3 Start the VMSINSTAL command procedure. You may specify the product name (VMS051) and the device name on the command line. To update to VMS Version 5.1, enter the following command:

```
$ @SYS$UPDATE:VMSINSTAL VMS051 ddcu:
```

The variable *ddcu* is the device name of the source drive that will hold the update distribution media (for example, MUA0). If the source drive is an HSC drive, precede the device name with an HSC name and a dollar-sign (\$).

For example, if your distribution media is on a TU81 magnetic tape drive on controller A with unit number 0 and you are updating to Version 5.1, enter the following command:

```
$ @SYS$UPDATE:VMSINSTAL VMS051 MUA0:
```

If you are updating to VMS Version 5.1 from a TA81 magnetic tape drive connected to an HSC named VICE on controller A with unit number 0, enter the following command:

```
$ @SYS$UPDATE:VMSINSTAL VMS051 VICESMUA0:
```

Updating the VMS Operating System

1.9 Updating to VMS Version 5.1

- 4** If the VMSINSTAL command fails, check to see if either of the following conditions occurred:

- If VMSINSTAL displays the following message, you probably specified the letter “O” in the product or device name instead of a zero:

```
%VMSINSTAL-E-NOPRODS, None of the specified products
                        were found
```

- If VMSINSTAL displays an “invalid device” error message, it prompts for a device name until you specify the correct name of a device existing on the system. Remember to put a colon (:) after the device name.
- 5** As the update procedure begins, VMSINSTAL displays messages. You must answer the questions to proceed.

```
VAX/VMS Software Product Installation Procedure V5.0-2
```

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

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

If you backed up the system disk, press the RETURN key and continue.

If you have not yet backed up your system disk, do the following:

- a. Enter NO and press the RETURN key. VMSINSTAL returns to DCL command level to permit you to perform the backup.
 - b. Back up and restore your system disk (see the VMS installations and operations guide for your VAX computer).
 - c. When the backup is completed, restart the update procedure (step 3 of this section).
- 6** If you are using a magnetic tape, you must now put the tape in the drive and put the drive on line. When you are ready, type YES and press RETURN. The messages continue as follows:

```
Please mount the first volume of the set on MUA0:.
```

```
* Are you ready?
```

```
%MOUNT-I_MOUNTED, VMS051 mounted on _MUA0:
```

- 7** VMSINSTAL displays messages indicating that the update is beginning:

```
The following products will be processed:
```

```
VMS V5.1
```

```
Beginning installation of VMS V5.1 at hh:mm
```

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

- 8** If the distribution kit consists of only one piece of media, skip to the next step.

Updating the VMS Operating System

1.9 Updating to VMS Version 5.1

If the distribution kit consists of several volumes, the procedure will ask you to insert the next volume when it is ready for it. Remove the completed volume from the drive, insert the next one and type YES when you are ready to continue. Do not remove the media until the procedure requests the next piece of media.

9 The update continues and VMSINSTAL displays the following text:

Installing the VMS 5.1 update

This update has been split into several savesets to allow installation of systems with a limited number of free blocks on the system disk. If you have ample free space on your system disk the changes will be made in a temporary directory and will all be moved to their target directories near the end of the procedure. If you have less free space, the files will be updated and moved as the update progresses.

The end result is the same in either case, but the possibility of a partially updated system in the event of a system crash or power failure during the update is minimized if you have space to hold all of the changed files.

In either case, the last saveset is not copied until near the end of the update. Do not remove the media (except as requested by BACKUP) until the procedure has completed.

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

If you want to purge files replaced by the update, press RETURN. If you do not want to purge these files, enter NO and press RETURN.

10 Standalone backup messages are displayed as follows:

The STANDALONE BACKUP kit for V5.1 will not successfully build on RX01 media. We expect to correct this problem in the next update after V5.1

For V5.1, if you need to boot standalone backup from RX01 media, you need to be sure that you have a good working copy from V5.0, V5.0-1 or V5.0-2 before proceeding with the V5.1 update.

NOTE: This applies only to the RX01 media which is the console media for VAX-11/78x series processors. There are no problems with standalone backup on any other media

* Are you satisfied with your existing copy of standalone backup [YES]?

If you are satisfied with your copy of standalone backup answer YES. If you are not satisfied with your copy, answer NO. The VMSINSTAL procedure will terminate. Rebuild the standalone backup kit (see the *VMS Backup Utility Manual*), and restart the installation (see Section 1.9).

Completion of this update requires a system reboot. This procedure will automatically shut down the node being updated. Any other VAXcluster nodes using this system disk should be shut down before the installation.

If you have not defined SHUTDOWN\$MINIMUM_MINUTES in the system logical name table you may want to exit and do so before proceeding.

* Do you want to continue [YES]?

Updating the VMS Operating System

1.9 Updating to VMS Version 5.1

If you want to continue, type YES. If you need to define SHUTDOWN\$MINIMUM_MINUTES, see Section 1.6, step 8, and restart the procedure at Section 1.9.

11 The display continues as follows:

This kit contains about 2500 blocks of new TPU example programs which will be copied to SYS\$EXAMPLES. If you do not want to copy these files at this time, answer NO to the following question. The files also will not be copied if you have less than 3500 free blocks at that point in the upgrade.

* Do you want to copy the new TPU example files [YES]?

Now applying the updates...

A description of these changes is in SYS\$UPDATE:VMS051.TXT

.
.
.

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

.
.
.

Similar messages will appear for each product saveset restored. You will see a series of installation messages identifying the files being modified.

Make sure that the last (or only) volume of the update media remains mounted until the update is completed.

Note: If you have installed the VMS Version 5 mandatory update shipped with Version 5.0-2, you will receive an “ECO already set” message. You can ignore this message.

If you have deleted files (tailored OFF) to create more disk space by running the VMSTAILOR program, some files might not be present. Because the update might attempt to repair these files, you should do the following:

- Ignore any “file not found” error messages that appear during the application of a VMS update.
- Run the VMSTAILOR program to restore these files (tailor ON). For instructions on using the VMSTAILOR program, see the VMS installation and operations guide for your VAX computer. You will need to start the update again, see Section 1.9.

12 If you have installation errors the procedure may display a message similar to the following:

%VMS-E-ERRORS, Of the nn fixes listed above, the following mm should be reviewed:

You can ignore the following errors; however, all other error messages should be investigated.

- ECO already set in INSTALL.EXE
- File not found messages for files which have been tailored off the system

Updating the VMS Operating System

1.9 Updating to VMS Version 5.1

- Errors from reapplying the update if the original installation generated no unexplained errors

13 After the last saveset is restored, the following message is displayed:

```
Changing VMS version from V5.0-2 to V5.1...
```

VMSINSTAL creates a journal file (with a JNL file type) for each image that is patched during the update process. If a JNL file already exists, information is appended to the end of the existing journal file. See Section 1.11 for additional information on the JNL files produced by the update.

14 When the update is completed, VMSINSTAL displays the following message:

```
Installation of VMS V5.1 completed at hh:mm
```

The system now shuts down automatically. See Section 1.10 for steps to perform after the update.

1.10 Steps to Perform After the Update

After you apply this update to your system, DIGITAL recommends that you perform the following steps:

- 1 If you modified the values of GBLSECTIONS and GBLPAGES, you might want to modify the values again at this time. If so, do the following:
 - a. Log in to the SYSTEM account.
 - b. Edit SYS\$SYSTEM:MODPARAMS.DAT and modify the ADD_GBLSECTIONS and ADD_GBLPAGES lines appropriately. VMS Version 5.1 requires about 400 more global pages than Version 5.0-2.
 - c. Run AUTOGEN using the following command:

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

Note: If you receive AUTOGEN errors about feedback information, either add the NOFEEDBACK parameter to the previous command to ignore feedback or refer to the *Guide to Setting Up a VMS System* for more information about AUTOGEN.

- 2 VMS Version 5.1 includes a change to SYS\$SPECIFIC:[SYSMGR]VMSIMAGES.DAT, but you must first run AUTOGEN and then reboot the system for this change to take effect.

If a common system disk has been updated, reboot the other systems that boot from this disk. Run AUTOGEN on *each* node and reboot to complete the VMS Version 5.1 installation.

- 3 After the update, you will notice that the space used on the system disk increased (net disk block utilization). By using the following procedure, you can recover some of this space:
 - Purge the old versions of the changed files. The easiest way to do this is to copy all of the files you want to save to some location

Updating the VMS Operating System

1.10 Steps to Perform After the Update

outside of SYS\$SYSROOT:[*...] and purge the entire directory structure by entering the DCL command PURGE.

— Enter the following command:

```
$ ANALYZE/DISK/REPAIR SYS$SYSDEVICE
```

- 4 If you copied files to another location, restore them.
- 5 Proceed to Chapter 2 to install the DECwindows software.

1.11 Printing Patches Produced by the Update Kit

If you want a listing of the patches produced by the update, you can print the journal files by logging in to any account that has SYSPRV privilege and entering the following command:

```
$ PRINT SYS$SYSROOT:[*...]*.JNL/MODIFY/SINCE= date_of_installation
```

You may also want to print SYS\$UPDATE:VMS051.TXT.

2

Installing VMS DECwindows

After updating your system to VMS Version 5.1, you can install VMS DECwindows.

Note: If you do not have a satisfactory backup copy of your system disk, do not attempt to install the DECwindows software on it. You should back up the system disk (as described in the VMS installation and operations guide for your system) before you install the DECwindows software.

2.1

Preparing to Install the DECwindows Software

DIGITAL requires a minimum system configuration of 6 megabytes of memory for workstations that are members of a Local Area VAXcluster (LAVc), and 4 megabytes of memory for standalone workstation configurations. However, it is recommended that you have at least 8 megabytes and 6 megabytes, respectively. For more information about performance considerations, see the *VMS Version 5.1 Release Notes*.

Note: When DECwindows components are installed on a cluster, only one installation per system root is required. No system-specific files are installed.

Prepare to install the DECwindows software by following these steps:

- 1 Log in to a privileged account such as the system manager's (SYSTEM) account.
- 2 Check your network setup. Set the executor characteristic PipeLine Quota to be greater than or equal to 10000, as follows:

```
$ RUN SYSS$SYSTEM:NCP
NCP> DEFINE EXEC PIPELINE QUOTA 10000
NCP> EXIT
```

If this setting is incorrect, the DECwindows startup procedure corrects the problem and gives you a warning message every time the system starts up.

- 3 Save the MicroVMS Workstation Software (VWS) system parameters. If you are currently running the VWS software and expect to alternate between VWS and DECwindows, use a separate system parameter file for each. When you boot the system, choose whether you want to run DECwindows or VWS.

To save the VWS system parameters, enter the following commands:

```
$ RUN SYSS$SYSTEM:SYSGEN
SYSGEN> USE CURRENT
SYSGEN> WRITE SYSS$SYSTEM:VWS.PAR
SYSGEN> EXIT
```

Installing VMS DECwindows

2.1 Preparing to Install the DECwindows Software

- 4 Before running AUTOGEN to configure a workstation to run DECwindows, it may be necessary to edit SYS\$SYSTEM:MODPARAMS.DAT to remove the line that sets WINDOW_SYSTEM . Check the file and if that line is present, see Section 2.3.2 to remove the line.
- 5 If you plan to add workstations to a cluster with the CLUSTER_CONFIG command file, install DECwindows (see Section 2.2) before running the command file. This allows you to select DECwindows for each workstation.

2.1.1 Disk Space Considerations

Approximately 55,000 blocks of free disk space are required to install all of the VMS DECwindows components. However, because you do not have to install the entire DECwindows software, your actual disk space requirements may be less.

The following list describes how many blocks are needed for each portion of the software:

- Base kit: 15,000 blocks.
- Workstation device support: 10,000 blocks. This number includes both the 75 dots per inch (2500) and 100 dots per inch (3000) fonts. You can install one or both of the font sets.
- Programming environment: 30,000 blocks. This number includes all of the programming language support. The actual block requirements may be less depending on the language support that you select.

To determine the number of free blocks that you have, enter the following DCL command:

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

If you do not have enough space, you can delete or tailor off files that you do not need by running the VMSTAILOR program. See the VMS installation and operations guide for your computer system to find information on removing files using VMSTAILOR.

2.2 Installing the DECwindows Software

The DECwindows installation takes approximately one hour, depending on the distribution media and the processor type. The VMSINSTAL procedure installs DECwindows on your system.

2.2.1 Running VMSINSTAL

Perform the following steps to run the VMSINSTAL command procedure and install the DECwindows software:

- 1 Locate the VMS Version 5.1 software media. The DECwindows kit may be on a separate piece of media than the VMS kit.

Installing VMS DECwindows

2.2 Installing the DECwindows Software

- 2 If the system is not already running, start up the system and log in to a privileged account such as the system manager (SYSTEM) account. If a password has been set for this account, you must enter the password before you can proceed.
- 3 Start the VMSINSTAL procedure. You must specify a product name on the command line. The product name for the DECwindows Version 5.1 installation is DECW051. Enter the following command:

```
$ @SYS$UPDATE:VMSINSTAL DECW051 ddcu:
```

The variable *ddcu:* is the device name of the drive that will hold the distribution media. For more information about the format of device names on your system, see the VMS installation and operations guide for your VAX computer system. For example, if you are installing Version 5.1 from a magnetic tape cartridge, enter the following command line to invoke the VMSINSTAL command procedure:

```
$ @SYS$UPDATE:VMSINSTAL DECW051 MUA0:
```

Note: The device name (MUA0:) will be different if you are using a different media to install the DECwindows software.

- 4 The VMSINSTAL procedure identifies itself. Answer YES to the following prompt if you are satisfied with the backup of your system disk:

```
VAX/VMS Software Product Installation Procedure V5.1
```

```
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]?
```

Press RETURN if your backups are current. Otherwise, you should enter NO to exit from VMSINSTAL, back up the system disk (see your VMS installation and operations guide), and begin the DECwindows installation procedure again (see Section 2.2).

- 5 If you pressed RETURN to continue, VMSINSTAL instructs you to mount the first volume of the set. Load the cartridge into the tape drive, enter YES, and press RETURN.

```
Please mount the first volume of the set on MUA0:.
```

```
* Are you ready? Y
```

```
%MOUNT-I-MOUNTED, VMS051 mounted on _MUA0:
```

- 6 When the installation begins, VMSINSTAL displays informational text similar to the following:

```
The following products will be processed:
```

```
DECW V5.1
```

```
Beginning installation of DECW V5.1 at hh:mm
```

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

```
*** Installing VMS DECwindows software ***
```

Installing VMS DECwindows

2.2 Installing the DECwindows Software

You can install the DECwindows kit completely or in selected portions. A complete installation requires 55,000 blocks. If you choose to perform a partial installation, you can tailor the device support that you want provided for DECwindows workstations and the programming support that you want provided for DECwindows application development. Whether you perform a complete or partial installation, this kit provides support for running DECwindows applications on VMS compute servers.

7 The DECwindows software can be installed in whole or in parts. The parts of the kit that you can choose to install are as follows:

- DECwindows base (always installed)
- DECwindows workstation device support
- DECwindows programming environment

To install the whole kit, answer YES to the following prompt:

```
* Do you want to install the entire kit [Y]?
```

If you are not installing this kit on a workstation, or on a VAXcluster that includes workstations, you can save up to 8,000 blocks by omitting the device support required to make workstation graphics hardware available to DECwindows.

If you do not want to install the entire kit, enter NO and press RETURN.

8 To install device support, answer YES to the following prompt:

```
* Do you want to install DECwindows device support [Y]?
```

This installation procedure provides video fonts for specific monitor resolutions. Fonts are supplied for the following monitor resolutions:

```
75 dots per inch
100 dots per inch
```

All DECwindows applications run with 75 dots per inch (dpi) fonts. Some applications take advantage of 100 dpi fonts. If you select 100 dpi fonts, 75 dpi fonts are automatically provided. Both font resolutions are provided to allow your system to run those DECwindows applications that require 100 dpi fonts and those that require 75 dpi fonts.

For instructions on how to configure your system with both 75 and 100 dpi fonts, see the installation guide or examine the template command procedure `SYS$MANAGER:DECW$PRIVATE_SERVER_SETUP.TEMPLATE`. By default, systems start up using 75 dpi fonts.

Note that this procedure deletes previously installed fonts before installing new ones. If you choose to reinstall this kit at a later date, be sure to install all required fonts.

If you answer NO, the next message is skipped and you continue to the programming environment messages in step 10.

9 If you installed device support, you must specify the type of video fonts you want installed (75 dpi or 100 dpi). You are prompted by the following message:

```
* Do you want both sets of video fonts installed [Y]?
```

Installing VMS DECwindows

2.2 Installing the DECwindows Software

Answer YES if you want both the 75 and 100 dpi fonts installed. If you answer NO, you will be prompted for which of the fonts you want installed. Note that, if you select 100 dpi fonts, 75 dpi fonts are automatically installed.

- 10** To install the DECwindows programming environment, answer YES to the following prompt:

This installation procedure provides support files for developing DECwindows applications in several programming languages. These files are needed only to develop applications and are not required to run DECwindows applications. Support for each programming language requires approximately 3,000 blocks.

* Do you want to install DECwindows programming support [Y]?

Support files are supplied for the following VAX programming languages:

Ada, BASIC, BLISS, C, FORTRAN, MACRO, Pascal, PL/1

In addition, support files are supplied for programming in the C language using conventions and standards developed at the Massachusetts Institute of Technology.

Note that this procedure deletes previously installed programming language support files before installing any new ones. If you choose to reinstall this kit at a later date, be sure to install all required programming language support files.

If you answer NO, you skip the next step and continue to step 12.

- 11** You are asked if you want to install all of the programming support files.

* Do you want to install all programming language support files [Y]?

Answer YES if you want all the languages installed.

If you only want particular languages installed, answer NO. The languages are displayed. Answer YES to each language you want installed.

- 12** The parts of the kit that you have chosen are displayed and you must verify that these are correct. A message similar to the following is displayed:

You have selected the following portions of the kit:

.
.
.

* Are these selections correct [Y]?

No further questions will be asked.

If you want to change your answers, enter NO and you will be prompted by the previous questions again starting at step 6.

- 13** If you do not have sufficient disk space to install the kits you have chosen, the installation fails and an error message similar to the following is displayed:

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```
%DECW-E-NOBLOCKS, ##### free blocks are required for peak
                        installation use
-DECW-E-NOBLOCKS, ##### free blocks are required for net
                        installation use.
%VMSINSTAL-E-INSFAIL, The installation of DECW V5.1 has failed.
```

The installation procedure checks to see if there are enough free blocks. If the blocks are available, the installation continues and no further questions are asked. If the blocks are not available, you receive a message indicating that the installation has failed. See Section 2.1.1 for information on creating more disk space.

After you delete files, check your disk space and start the DECwindows installation again (see Section 2.2).

- 14** VMSINSTAL lists the directories that are created and the savesets that are restored. These messages are similar to the following:

```
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
                        VMM$ROOT:[SYSS$KEYMAP].
%VMSINSTAL-I_RESTORE, Restoring product saveset B...
```

- 15** VMSINSTAL moves files to their target directories. The following text is displayed:

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

- 16** The installation runs AUTOGEN, depending on the type of system you are using. The types of systems are as follows:

- Workstation running VWS software – If you are installing DECwindows on a workstation that is currently running the VWS software, the following message is displayed:

```
Your workstation is already running VWS.
To run DECwindows, you must switch the
SYSGEN parameter WINDOW_SYSTEM to 1 and then reboot
```

The installation completes normally, but you must reboot as described in Section 2.3.2 before you can run DECwindows.

- A non-workstation system – If you are installing DECwindows on a non-workstation system, that is, you are installing on a VMS host system, the following message is displayed:

```
This system is not a workstation.
It will not be necessary to run AUTOGEN.
```

- Workstation running DECwindows with correct SYSGEN parameters – If you are installing DECwindows on a workstation system and your SYSGEN parameters are correct, the following message is displayed:

```
Your SYSGEN parameters are correctly set.
It will not be necessary to run AUTOGEN.
```

- Workstation running DECwindows with incorrect SYSGEN parameters – If you are installing DECwindows on a workstation system and your SYSGEN parameters need to be reset, the following message is displayed:

Installing VMS DECwindows

2.2 Installing the DECwindows Software

The VMS AUTOGEN procedure will now be automatically run so that your system parameters will be set, and your system will be properly configured. After that, your system will be automatically shut down.

When the shut down is complete, press the RESTART button to reboot the system.

After the system has been rebooted and initialized, successful installation of the workstation software will be indicated by the appearance of the Start Session window.

17 When the installation is completed, the following text is displayed:

```
Installation of DECW V5.1 completed at hh:mm  
VMSINSTAL procedure done at hh:mm
```

Your system is automatically shut down if AUTOGEN was run.

18 Start up DECwindows as described in Section 2.3.

2.3 Starting up DECwindows

The following sections show you how to start up DECwindows by using the startup command procedure and booting the system.

2.3.1 The Startup Command Procedure

To install the DECwindows startup command procedure, perform the following steps:

- 1 Use an editor to add the following line to the `SYS$SYSROOT:[SYSMGR]SYSTARTUP_V5.COM` file:

```
$ @SYS$MANAGER:DECW$STARTUP
```

The `SYSTARTUP_V5.COM` file can have entries for both DECwindows and VWS. The DECwindows or VWS parameter file determines which software to load. The `DECW$STARTUP.COM` file should run on all systems (workstation and non-workstation) where any or all DECwindows components are installed.

- 2 Shut down the system and proceed to Section 2.3.2. Do not automatically restart the system because you need to set the `WINDOW_SYSTEM` parameter before you boot DECwindows.

2.3.2 Booting DECwindows

Note: You must reboot all workstations running DECwindows.

You must specifically set the `WINDOW_SYSTEM SYSGEN` parameter to 1 the first time that you start DECwindows on a workstation.

Perform the following steps to boot DECwindows:

- 1 Press the RESTART button to reboot the system.

Installing VMS DECwindows

2.3 Starting up DECwindows

- 2 Enter the following commands at your workstation's console prompt (>>>) to set the WINDOW_SYSTEM parameter:

```
>>> B/1
SYSBOOT> SET WINDOW_SYSTEM 1
SYSBOOT> CONTINUE
```

Note: If you are booting as a member of a Local Area VAXcluster (LAVc), the SYSGEN parameter NISCS_CONV_BOOT must be set to 1 to allow a conversational boot.

The @SYS\$MANAGER:DECW\$STARTUP entry that you previously added to the SYS\$SYSROOT:[SYSMGR]SYSTARTUP_V5.COM file runs DECwindows automatically.

If you are running DECwindows on a workstation and your system's SYSGEN parameters are not correct, you will see warnings similar to the following:

```
%DECW-W-BADVALUE, SYSGEN parameter XXX is set to M, should be N
It is strongly recommended that you either contact your system
manager or run AUTOGEN via the command
```

```
    $ @SYS$UPDATE:AUTOGEN getdata reboot nofeedback
```

Note this command will cause your system to reboot.

Would you like the system to invoke AUTOGEN for you [Yes]?

Press RETURN to run AUTOGEN. AUTOGEN automatically sets your SYSGEN parameters to properly configure your system. Your system is then automatically shut down. When the shut down is complete, press the RESTART button to reboot the system.

Note: If you do not respond to the AUTOGEN prompt within approximately four minutes, the DECwindows startup will not proceed. In this case, the system startup will continue, but DECwindows will not be started. It is necessary to run AUTOGEN interactively after startup completes.

If you enter NO to the AUTOGEN prompt, the DECwindows startup proceeds without running AUTOGEN. In this case, the DECwindows system may not operate correctly because the SYSGEN parameters are wrong.

After the system is rebooted and the startup is complete, the Start Session window should appear.

The DECwindows software is now installed and is running on your system.

2.3.3 Choosing Between DECwindows and VWS

You must choose to run either DECwindows or VWS (UIS) when you boot your system. You cannot run both simultaneously, and you must reboot to switch between DECwindows and VWS.

Installing VMS DECwindows

2.3 Starting up DECwindows

As described in Section 2.1, if you expect to alternate between DECwindows and VWS, you should use a separate system parameter file for each. Then, when you boot the system, you can choose whether you want to run DECwindows or VWS.

To save the DECwindows system parameters, enter the following commands:

```
$ MC SYSGEN
SYSGEN> USE CURRENT
SYSGEN> WRITE SYS$SYSTEM:DECW.PAR
SYSGEN> EXIT
```

You can boot DECwindows by entering the following commands at the console prompt:

```
>>> B/1
SYSBOOT> USE DECW.PAR
SYSBOOT> CONTINUE
```

Or, you can boot VWS by entering the following commands at the console prompt:

```
>>> B/1
SYSBOOT> USE VWS.PAR
SYSBOOT> CONTINUE
```

2.3.4 Console Support

The DECwindows software allows you to boot all configurations from the main console. You can then toggle between displaying the operator window or not displaying the operator window by pressing CTRL/F2. The main console is always a workstation screen.

For an alternative console, you can use a terminal hooked up to the workstation by means of a terminal port.

If you boot from the main console, the alternative console is connected when you invoke the DECwindows startup command procedure.

2.4 DECwindows Logical Names

After you have run @SYS\$MANAGER:DECW\$STARTUP (see Section 2.3.1), a system-wide logical name table is created and is added to the default logical name table search lists. Table 2-1 lists the logical names contained in this table.

Table 2-1 DECW\$LOGICAL_NAMES

Logical Name	Definition
CDA\$LIBRARY	DDIF document style guide.
DECW\$BOOK	Online documentation.

(continued on next page)

Installing VMS DECwindows

2.4 DECwindows Logical Names

Table 2-1 (Cont.) DECW\$LOGICAL_NAMES

Logical Name	Definition
DECW\$EXAMPLES	DECwindows example files directory.
DECW\$INCLUDE	DECwindows MIT-compatible C language include files.
DECW\$KEYMAP	DECwindows keyboard map definitions directory used by the Session Manager.
DECW\$SERVER_TRANSPORTS	A list of transport types that the DECwindows server will load when it starts up.
DECW\$STARTVUECOM	Startup file for FileView.
DECW\$SYSTEM_DEFAULTS	The system-wide directory where DECwindows application will look for resource files.
DECW\$USER_DEFAULTS	The user directory where DECwindows applications will look for resource files.
DECW\$WINMGREXE	Window manager executable file used by the Session Manager.
DECW\$XLIBERRDB	Pointer to the Xlib error resource database
VUE\$LIBRARY	Directory containing FileView command files and the FileView default system profile

After you start the server, a per-server logical name table is created on your system but is not added to the default logical name table search lists. Table 2-2 lists the logical names.

Table 2-2 DECW\$SERVER(n)_TABLE

Logical Name	Definition
DECW\$COLOR	Determines whether the server will consider a VAXstation/GPX to be color or intensity.
DECW\$DEFAULT_FONT	Determines the font which is initially loaded in a graphics context.
DECW\$DEFAULT_KEYBOARD_MAP	Determines which keyboard map file the server uses.
DECW\$FONT	Directory where the server will look for fonts.
DECW\$KEYBOARD	Device name for system keyboard.
DECW\$KEYMAP	DECwindows keyboard map definitions directory used by the server.
DECW\$MONITOR_DENSITY	Determines what monitor density the server will use to calculate the monitor size.
DECW\$POINTER	Device name for system pointer.
DECW\$RGB_*	Definitions of color names used by the XStoreNamedColor and XAllocNamedColor requests.

(continued on next page)

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2.4 DECwindows Logical Names

Table 2–2 (Cont.) DECW\$SERVER(n)_TABLE

Logical Name	Definition
DECW\$SERVER_DISABLE_CH	If defined to be true, server exception will cause the server to crash and produce a dump file, rather than attempt to continue.
DECW\$SERVER_SCREEN	Device name used by the server. The first two characters indicate the shareable image to be loaded for device support (for example, GCA0:).
DECW\$XSIZE_IN_PIXELS	Specifies the size of the workstation screen.
DECW\$YSIZE_IN_PIXELS	Specifies the size of the workstation screen.

Note: These logical names may change in a future release.

2.4.1 Defining Print Formats

The print dialog box is used in many applications for the queuing of files or screens to a printer. (See the *VMS DECwindows User's Guide* for more information about the print dialog box.) By default, all printing devices on the system are displayed in the “Printers” listbox. However, you can take advantage of a feature where print queues can be associated with print formats through the definition of logical names. The logical name is defined to be a comma-separated or space-separated list of print queues with the first queue being the default choice.

For example, if DECW\$PRINTER_FORMAT_ANSI2 is defined to be “MY_PRINTER, CLUSTER_LN03, ANOTHER_LN03”, when you select “ANSI2” from the print format listbox, only MY_PRINTER, CLUSTER_LN03, and ANOTHER_LN03 will be shown in the printer listbox, with MY_PRINTER being the default choice.

Table 2–3 lists the logical names and the print formats associated with each:

Table 2–3 Print Dialog Box Logical Names

Logical name	Print format
DECW\$PRINTER_FORMAT_TEXT	Text
DECW\$PRINTER_FORMAT_LINE	Line Printer
DECW\$PRINTER_FORMAT_TERM	Terminal
DECW\$PRINTER_FORMAT_ANSI2	ANSI2
DECW\$PRINTER_FORMAT_ANSI	ANSI
DECW\$PRINTER_FORMAT_REGIS	ReGIS

(continued on next page)

Installing VMS DECwindows

2.4 DECwindows Logical Names

Table 2-3 (Cont.) Print Dialog Box Logical Names

Logical name	Print format
DECW\$PRINTER_FORMAT_TEK	Tektronix
DECW\$PRINTER_FORMAT_DDFD	DDFF
DECW\$PRINTER_FORMAT_DDIF	DDIF

The logical names can be defined by system managers in the appropriate logical name tables and be overridden by users.

If you have any of the logical names in Table 2-3 defined in your environment, they will serve as the list of printer queue names to be presented when the corresponding print format is selected. This method is much faster than making the print dialog box derive the names of all the queues on the system, most of which are inappropriate for the print format under consideration, as the following example shows:

```
$ define DECW$PRINTER_FORMAT_TEXT "CLUSTER_LN03,CLUSTER_PRINT, -
_$ ANSI_ARTWRK,ANSI_PROTON"
$ define DECW$PRINTER_FORMAT_LINE "CLUSTER_PRINT"
$ define DECW$PRINTER_FORMAT_ANSI2 "CLUSTER_LN03,ANSI_ARTWRK,ANSI_PROTON"
$ define DECW$PRINTER_FORMAT_ANSI "CLUSTER_LN03,ANSI_ARTWRK,ANSI_PROTON"
$ define DECW$PRINTER_FORMAT_PS "PS_ARTWRK,PS_PROTON"
$ define DECW$PRINTER_FORMAT_REGIS "SYS$NULL"
```

2.4.2 Server Startup Command Procedures

The startup command procedures automatically determine most of the configuration variables for the DECwindows server. However, there are two items which the command procedures cannot determine:

- 1 If you have a VAXstation 2000/GPX, a VAXstation 3xxx/GPX, or a VAXstation II/GPX, the startup procedures assume that you have a color monitor.
- 2 The startup procedures assume that you have a North American keyboard layout (you have an LK201-AA or -LA keyboard).

If either of these assumptions is incorrect, you must override them as follows:

- Make a copy of the file SYS\$MANAGER:DECW\$PRIVATE_SERVER_SETUP.TEMPLATE and rename it *.COM. This file shows how to customize individual workstations by adding a section of DCL commands for each workstation. The section for monochrome /GPX workstations should contain the following line:

```
$DECW$COLOR == "FALSE"
```

The section for workstations with keyboards that are not North American should contain the following line:

```
$DECW$DEFAULT_KEYMAP == "xxxxxx"
```

Installing VMS DECwindows

2.4 DECwindows Logical Names

- In the previous line, you must replace “xxxxxx” with the correct DECwindows keymap name. You can determine the correct name from the model number of your LK201 keyboard. Turn the keyboard upside down, and look for a label which specifies the model number. The model number should be in a format similar to LK201-xx. The model number may also be listed as simply LK201. In this case, the “xx” that you need is in another part of the label where there will be a number that looks similar to the following:

nn-nnnnn-xx.

- Use this number to choose a keymap name from the following table. The table is arranged based on the dialect that each keyboard is designed for. Choose the keymap ending in `_DP` for the data processing keyboard layout, or the keymap ending in `_TW` for the typewriter layout.

Table 2-4 DECwindows Keymap

Dialect	Model	DECwindows Keymap
Austrian/German	LK201-(AG, LG, BG, MG)	AUSTRIAN_GERMAN_LK201LG_DP AUSTRIAN_GERMAN_LK201LG_TW
	LK201-(NG, PG)	AUSTRIAN_GERMAN_LK201NG_DP AUSTRIAN_GERMAN_LK201NG_TW
Belgian/French	LK201-(AP, LP, BP, MP)	BELGIAN_FRENCH_LK201LP_DP BELGIAN_FRENCH_LK201LP_TW
British	LK201-(AE, LE, BE, ME)	BRITISH_LK201LE_DP BRITISH_LK201LE_TW
Canadian/French	LK201-(AC, LC, BC, MC)	CANADIAN_FRENCH_LK201LC_DP CANADIAN_FRENCH_LK201LC_TW
Danish	LK201-(AD, LD, BD, MD)	DANISH_LK201LD_DP DANISH_LK201LD_TW
	LK201-(ED, RD, FD)	DANISH_LK201RD_DP DANISH_LK201RD_TW
Dutch	LK201-(AH, LH, BH, MH)	DUTCH_LK201LH_DP DUTCH_LK201LH_TW
	LK201-(NH, PH) DUTCH_LK201NH	
Finnish	LK201-(AF, LF, BF, MF)	FINNISH_LK201LF_DP FINNISH_LK201LF_TW
	LK201-(NF, PF)	FINNISH_LK201NF_DP FINNISH_LK201NF_TW
	LK201-(NX, PX)	FINNISH_LK201NX_DP FINNISH_LK201NX_TW

(continued on next page)

Installing VMS DECwindows

2.4 DECwindows Logical Names

Table 2-4 (Cont.) DECwindows Keymap

Dialect	Model	DECwindows Keymap
Flemish	LK201-(AB,LB,BB,MB)	FLEMISH_LK201LB_DP
		FLEMISH_LK201LB_TW
Icelandic	LK201-(AU,LU,BU,MU)	ICELANDIC_LK201LU_DP
		ICELANDIC_LK201LU_TW
Italian	LK201-(AI,LI,BI,MI)	ITALIAN_LK201LI_DP
		ITALIAN_LK201LI_TW
North American	LK201-(AA,LA,BA,MA)	NORTH_AMERICAN_LK201LA
Norwegian	LK201-(AN,LN,BN,MN)	NORWEGIAN_LK201LN_DP
		NORWEGIAN_LK201LN_TW
	LK201-(EN,RN,FN)	NORWEGIAN_LK201RN_DP
		NORWEGIAN_LK201RN_TW
Portuguese	LK201-(AV,LV,BV,MV)	PORTUGUESE_LK201LV
Spanish	LK201-(AS,LS,BS,MS)	SPANISH_LK201LS_DP
		SPANISH_LK201LS_TW
Swedish	LK201-(AM,LM,BM,MM)	SWEDISH_LK201LM_DP
		SWEDISH_LK201LM_TW
	LK201-(NM,PM)	SWEDISH_LK201NM_DP
		SWEDISH_LK201NM_TW
Swiss/French	LK201-(AK,LK,BK,MK)	SWISS_FRENCH_LK201LK_DP
		SWISS_FRENCH_LK201LK_TW
Swiss/German	LK201-(AL,LL,BL,ML)	SWISS_GERMAN_LK201LL_DP
		SWISS_GERMAN_LK201LL_TW
Combined US/UK	LK201-(EE,RE,PE)	UK_LK201RE
		US_LK201RE

A

Modified VMS Version 5.1 Components

This list contains the names of the VMS components whose modification distinguishes VMS Version 5.1 from VMS Version 5.0-2. Please note that this list is likely to change from one version of the software to another.

For compound document support:

ANALYZRMS.EXE
CLIUTLMSG.EXE
CONVERT.CLD
COPY.EXE
CREATEFDL.EXE
DDIF\$RMS_EXTENSION.EXE
DIRECTORY.EXE
EDF.EXE
EDIT.CLD
EXCHANGE.CLD
EXCHANGE\$NETWORK.EXE
FAL.EXE
FDLSHR.EXE
FILMNTMSG.EXE
MAIL.EXE
MAILSHRP.EXE
MAIL_SERVER.EXE
RMS.EXE
SET.CLD
SET.EXE
SHRIMGMSG.EXE
SYSMSG.EXE

For DECwindows:

LOGINOUT.EXE
SET.CLD
SHOW.CLD
All TPU and EVE files

For support of new VAX processors:

AUTOGEN.COM
CLUSTER_CONFIG.COM
CONFIGURE.EXE
ESDRIVER.EXE
ERFBUS.EXE
ERFDISK2.EXE
ERFBRIEF.EXE
ERFCVAX.EXE
ERFLIB.EXE
ERFMSCP.EXE
ERFSHR.EXE

Modified VMS Version 5.1 Components

ERFSHR2.EXE
ERFSUMM.EXE
ERFTAPE2.EXE
LMF\$LURT.DAT
NISCS_LOAD.EXE
PIDRIVER.EXE
SHUTDOWN.COM
STANCONFIG.EXE
STANDCONF.EXE
STASYGEN.EXE
SYSGEN.EXE
SYSBOOT.EXE
SYSBOOT_XDELTA.EXE
SYSLOA640.EXE
SYSLOA64D.EXE
SYSLOA650.EXE
SYSLOA65D.EXE
STABACKIT.COM
UETINIT01.EXE
UETINIT00.EXE
VMSKITBLD.DAT
VMSKITBLD.IDX

Other changes and fixes:

AUTOGEN.COM
CLUSTER_AUTHORIZE.DAT
CLUSTER_CONFIG.COM
CNDRIVER.EXE
CONFIGURE.EXE
CPULOA.EXE
DCL.EXE
DSDRIVER.EXE
DUDRIVER.EXE
ERFCTL.EXE
ERFSHR2.EXE
ERRLOG.EXE
ESDRIVER.EXE
ETDRIVER.EXE
EXCEPTION.EXE
F11BXQP.EXE
FBDRIVER.EXE
HELPLIB.EXE
INSTAL.EXE
IO_ROUTINES.EXE
JOBCTL.EXE
LATSYM.EXE
LIBRTL.EXE
LMF.EXE
LMF\$GROUP_TABLE.EXE
LOADNET.COM
LOCKING.EXE
MAILSHR.EXE

Modified VMS Version 5.1 Components

MSCP.EXE
NETACP.EXE
PAGE_MANAGEMENT.EXE
PBDEIVER.EXE
PPLLRTL.EXE
RMS.EXE
RUNDET.EXE
SHOW.EXE
SHWCLSTR.EXE
STABACKIT.COM
STARLET.OLB
STARTNET.COM
SYSDEVICE.EXE
SYSGEN.EXE
SYSINIT.EXE
SYSLOA780.EXE
SYSLOA9CC.EXE
SYSMAN.EXE
SYSMANHELP.HLP
SYSTEM_PRIMITIVES.EXE
TERTIARY_VMB.EXE
TSDRIVER.EXE
UETINIT00.EXE
UETINIT01.EXE
UETP.COM
UETSUPDEV.DAT
UETAPE00.EXE
UETUNAS00.EXE
VMB.EXE
VMSINTAL.COM
VMSKITBLD.COM
VMSKITBLD.DAT
VMSKITBLD.IDX
XEDRIVER.EXE

B

DECwindows Software Components Table

This table contains the name of each component, the directory where the component can be found, a brief description of what the component does, and one of the following three component classifications:

- ALL—Indicates that the component is part of all installations.
- PROG—Indicates the component is part of the programming environment.
- WS—Indicates that the component is part of the workstation device support.

Table B-1 DECwindows Software Components

Directory	File	Purpose	Component Class
CDA\$LIBRARY	DEFSTYLE.DDIF	DDIF document style guide	PROG
DECW\$EXAMPLES	DEMO_BUILD.COM	Procedure to compile demo sources	PROG
	ALLOBJS.H	Demo source	PROG
	BITMAP.C	Demo source	PROG
	BITMAP.EXE	Demo source	PROG
	CLOCK.DDIF	Paint example	ALL
	DECBURGER.C	UIL DRM Demo source	PROG
	DECBURGER.COM	UIL DRM Demo file	PROG
	DECBURGER.UID	UIL DRM Demo file	PROG
	DECBURGER.UIL	UIL DRM Demo file	PROG
	DECBURGER.ADA	UIL DRM Demo source	PROG
	DECBURGER.EXE	Demo image	PROG
	DIALOG.C	Demo source	PROG
	DWTVMSPUSHTEST.B32	XUI toolkit demo	PROG
	DWTVMSPUSHTEST.EXE	Demo image	PROG
	HELLOWORLD.ADA	Demo source	PROG
	HELLOWORLD.C	XUI toolkit demo	PROG
	HELLOWORLD.UID	Demo file	PROG
	HELLOWORLD.UIL	Demo file	PROG
	HELLOWORLD.EXE	Demo image	PROG
	ICO.C	Demo source	PROG

(continued on next page)

DECwindows Software Components Table

Table B-1 (Cont.) DECwindows Software Components

Directory	File	Purpose	Component Class
	ICO.EXE	Demo image	PROG
	ICOPAS.PAS	Demo source	PROG
	OBJCUBE.H	Demo source	PROG
	OBJICO.H	Demo source	PROG
	OBJTETRA.H	Demo source	PROG
	PLAID.C	Demo source	PROG
	PLAID.EXE	Demo image	PROG
	POLYINFO.H	Demo source	PROG
	STRINGS.MAR	Low-level DECwindows utility routine	PROG
	XLIBINTRO.ADA	Demo source	PROG
	XLIBINTRO.C	Demo source	PROG
	XLIBINTRO.FOR	Demo source	PROG
	XLIBINTRO.EXE	Demo source	PROG
DECW\$FONT:	See <i>VMS DECwindows Xlib Programming Volume</i>	DECwindows fonts	WS
DECW\$INCLUDE	COMPOBJ.H	Xlib and XUI toolkit programming include files	PROG
	COMPOBJP.H	Xlib and XUI toolkit programming include files	PROG
	COMPOSITE.H	Xlib and XUI toolkit programming include files	PROG
	COMPOSITEP.H	Xlib and XUI toolkit programming include files	PROG
	CONSTRAINT.H	Xlib and XUI toolkit programming include files	PROG
	CONSTRAINP.H	Xlib and XUI toolkit programming include files	PROG
	CONVERT.H	Xlib and XUI toolkit programming include files	PROG
	CORE.H	Xlib and XUI toolkit programming include files	PROG
	COREP.H	Xlib and XUI toolkit programming include files	PROG
	CURSORFONT.H	Xlib and XUI toolkit programming include files	PROG

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DECwindows Software Components Table

Table B-1 (Cont.) DECwindows Software Components

Directory	File	Purpose	Component Class
	DECWDWTAPPLPROG.H	Xlib and XUI toolkit programming include files	PROG
	DECWDWTAPPLPROG.UIL	XUI toolkit support	PROG
	DECWDWTWIDGETPROG.H	Xlib and XUI toolkit programming include files	PROG
	DECWMHINTS.H	Xlib and XUI toolkit programming include files	PROG
	DWTAPPL.H	Xlib and XUI toolkit programming include files	PROG
	DWTAPPL.UIL	Xlib and XUI toolkit programming include files	PROG
	DWTWIDGET.H	Xlib and XUI toolkit programming include files	PROG
	EVENT.H	Xlib and XUI toolkit programming include files	PROG
	INTRINSIC.H	Xlib and XUI toolkit programming include files	PROG
	INTRINSICP.H	Xlib and XUI toolkit programming include files	PROG
	KEYSYM.H	Xlib and XUI toolkit programming include files	PROG
	KEYSYMDEF.H	Xlib and XUI toolkit programming include files	PROG
	OBJECT.H	Xlib and XUI toolkit programming include files	PROG
	OBJECTP.H	Xlib and XUI toolkit programming include files	PROG
	RECTOBJ.H	Xlib and XUI toolkit programming include files	PROG
	RECTOBJP.H	Xlib and XUI toolkit programming include files	PROG
	SELECTION.H	Xlib and XUI toolkit programming include files	PROG
	SHELL.H	Xlib and XUI toolkit programming include files	PROG
	SHELLP.H	Xlib and XUI toolkit programming include files	PROG
	STRINGDEFS.H	Xlib and XUI toolkit programming include files	PROG
	TRANSLATE.H	Xlib and XUI toolkit programming include files	PROG

(continued on next page)

DECwindows Software Components Table

Table B-1 (Cont.) DECwindows Software Components

Directory	File	Purpose	Component Class
	VENDOR.H	Xlib and XUI toolkit programming include files	PROG
	VENDORP.H	Xlib and XUI toolkit programming include files	PROG
	WINDOWOBJ.H	Xlib and XUI toolkit programming include files	PROG
	WINDOWOBJP.H	Xlib and XUI toolkit programming include files	PROG
	X.H	Xlib and XUI toolkit programming include files	PROG
	XATOM.H	Xlib and XUI toolkit programming include files	PROG
	XLIB.H	Xlib and XUI toolkit programming include files	PROG
	XMD.H	Xlib and XUI toolkit programming include files	PROG
	XOS.H	Xlib and XUI toolkit programming include files	PROG
	XPROTO.H	Xlib and XUI toolkit programming include files	PROG
	XPROTOSTR.H	Xlib and XUI toolkit programming include files	PROG
	XRESOURCE.H	Xlib and XUI toolkit programming include files	PROG
	XUTIL.H	Xlib and XUI toolkit programming include files	PROG
SYS\$LIBRARY:	CDA\$ACCESS.EXE	The DDIF toolkit and DDIF converter toolkit Run-time-library shareable image	PROG
	CDA\$CDA_.ADA	CDA Ada binding	PROG
	CDA\$DEF.*	DDIF converter language binding	PROG
	CDA\$MSG.*	DDIF message symbols	PROG
	CDA\$WRITE_ANALYSIS.EXE	CDA image	ALL
	DDIF\$DDIF_.ADA	DDIF Ada binding	PROG
	DDIF\$DEF.*	DDIF language binding	PROG
	DDIF\$READ_TEXT.EXE	Text front end shareable image	ALL

Asterisk (*) indicates that BASIC, BLISS, FORTRAN, C, Macro, Pascal, and PLI languages are supported.

(continued on next page)

DECwindows Software Components Table

Table B-1 (Cont.) DECwindows Software Components

Directory	File	Purpose	Component Class
	DDIF\$STROKE_FONT*.DAT	Fonts for use by DDIF viewers	ALL
	DDIF\$VIEW.UID	Viewer support file	ALL
	DDIF\$VIEWSHR.EXE	DDIF viewer shareable image	ALL
	DDIF\$WRITE_PS.EXE	Text image	ALL
	DDIF\$WRITE_TEXT.EXE	Text back end shareable image	ALL
	DECW\$CALC.DAT	Calculator support file	ALL
	DECW\$CALC.UID	Calculator support file	ALL
	DECW\$CALENDAR.DAT	Calendar support file	ALL
	DECW\$CARDFILER.DAT	Cardfiler support file	ALL
	DECW\$CARDFILER.UID	Cardfiler support file	ALL
	DECW\$CLOCK.DAT	Clock support file	ALL
	DECW\$CLOCK.UID	Clock support file	ALL
	DECW\$CURSOR.H	Cursor include files	PROG
	DECW\$DWT_.ADA	Toolkit Ada binding	PROG
	DECW\$DWTDEF.*	Widget include files	PROG
	DECW\$DWTDEF.UIL	Toolkit UIL definitions	PROG
	DECW\$DWTLIBSHR.EXE	XUI toolkit shareable image	PROG
	DECW\$DWTWIDGETDEF.*	Widget include files	PROG
	DECW\$LOGIN.DAT	Login data file	ALL
	DECW\$LOGINOUT.EXE	DECwindows extension to VMS loginout image	ALL
	DECW\$MAIL.DAT	DECwindows VMSmail support file	ALL
	DECW\$MAILSHR.EXE	DECwindows VMSmail shareable image	ALL
	DECW\$NOTEPAD.DAT	NOTEPAD support file	ALL
	DECW\$PAINT.DAT	DECwindows Paint support file	ALL
	DECW\$PRINTWGT.UID	Print support file	ALL
	DECW\$PUZZLE.DAT	Puzzle support file	ALL
	DECW\$PUZZLE.UID	Puzzle support file	ALL
	DECW\$SERVER_DDX_GA.EXE	Server color device support shareable image	WS
	DECW\$SERVER_DDX_GC.EXE	Server monochrome device support shareable image	WS

Asterisk (*) indicates that BASIC, BLISS, FORTRAN, C, Macro, Pascal, and PLI languages are supported.

(continued on next page)

DECwindows Software Components Table

Table B-1 (Cont.) DECwindows Software Components

Directory	File	Purpose	Component Class
	DECW\$SERVER_DIX.EXE	Server device independent support	WS
	DECW\$SESSION.DAT	Session manager support file	ALL
	DECW\$SM_BW.DAT	Session manager support file	ALL
	DECW\$SM_COLOR.DAT	Session manager support file	ALL
	DECW\$SM_GENERAL.DAT	Session manager support file	ALL
	DECW\$SM_GRAY.DAT	Session manager support file	ALL
	DECW\$TERMINAL.DAT	Terminal support file	ALL
	DECW\$TERMINAL.UID	Terminal support file	ALL
	DECW\$TERMINALSHR.EXE	Terminal shareable image	ALL
	DECW\$TRANSPORT_COMMON.EXE	Transport common shareable image	ALL
	DECW\$TRANSPORT_DECNET.EXE	Transport DECnet-specific image	ALL
	DECW\$TRANSPORT_LOCAL.EXE	Transport local image	ALL
	DECW\$UIL.ENV	LSE template for UIL compiler	PROG
	DECW\$WINMGR.DAT	Window manager support file	ALL
	DECW\$X_ADA	Xlib Ada binding	PROG
	DECW\$XLIBDEF.*	Language Xlib binding	PROG
	DECW\$XLIBMSG.*	Language message symbols	PROG
	DECW\$XLIBSHR.EXE	Xlib shareable image	PROG
	VUE\$DEFAULTS.DAT	FileView defaults file	ALL
SYS\$MANAGER:	DECW\$CHECK_PARAMS.COM	Check autogen parameters	ALL
	DECW\$DEVICE.COM	Device detection and configuration	ALL
	DECW\$LOGICALS.COM	Logical name table initialization and start	ALL
	DECW\$PRIVATE_SERVER_SETUP.TEMPLATE	Server customization template	WS
	DECW\$RGB.COM	Definitions of the color names used by the XStoreNamedColor and XAllocNamedColor requests	WS
	DECW\$STARTAPPS.COM	User environment	ALL
	DECW\$STARTLIBS.COM	Programming environment startup	PROG

Asterisk (*) indicates that BASIC, BLISS, FORTRAN, C, Macro, Pascal, and PLI languages are supported.

(continued on next page)

DECwindows Software Components Table

Table B-1 (Cont.) DECwindows Software Components

Directory	File	Purpose	Component Class
	DECW\$STARTSERVER.COM	Server initialization and startup	WS
	DECW\$STARTSM.COM	Starts the session manager	ALL
	DECW\$STARTUP.COM	Starts the DECwindows environment	ALL
	DECW\$STARTVUE.COM	Starts the FileView	ALL
	DECW\$SYLOGIN.COM	System login file	ALL
SYS\$MESSAGE	DDIF\$VIEWMSG.EXE	Viewer message file	ALL
	DECW\$DWTERRDB.EXE	DECwindows shareable image	PROG
	DECW\$DWTMSG.EXE	Toolkit message file	PROG
	DECW\$MAIL_MESSAGES.EXE	Mail message file	ALL
	DECW\$TRANSPORTMSG.EXE	Transport message image	ALL
	DECW\$XLIBERRDB.DAT	Xlib resource database	PROG
	DECW\$XLIBMSG.EXE	Message image	PROG
SYS\$SYSTEM:	CDA\$CONVERT.EXE	DDIF converter image	ALL
	DDIF\$VIEW.EXE	DDIF viewer	ALL
	DECW\$BOOKREADER.EXE	Bookreader image	ALL
	DECW\$CALC.EXE	Calculator	ALL
	DECW\$CALENDAR.EXE	Calendar	ALL
	DECW\$CARDFILER.EXE	Cardfiler	ALL
	DECW\$CLOCK.EXE	Clock	ALL
	DECW\$FONTCOMPILER.EXE	Font compiler	ALL
	DECW\$MAIL.EXE	DECwindows VMSmail	ALL
	DECW\$MAIL_CREATEDECTERM.EXE	DECwindows VMSmail support file	ALL
	DECW\$MAIL_EDIT.COM	DECwindows VMSmail support file	ALL
	DECW\$NOTEPAD.EXE	Notepad image	ALL
	DECW\$PAINT.EXE	Paint image	ALL
	DECW\$PUZZLE.EXE	Puzzle image	ALL
	DECW\$SERVER_MAIN.EXE	Server main image	WS
	DECW\$SESSION.EXE	Manages the session and contains the control panel	ALL

(continued on next page)

DECwindows Software Components Table

Table B-1 (Cont.) DECwindows Software Components

Directory	File	Purpose	Component Class
	DECW\$SETSHODIS.EXE	SET/SHOW DISPLAY command image	PROG
	DECW\$STARTLOGIN.EXE	Starts the DECwindows LOGINOUT.EXE image	ALL
	DECW\$TERMINAL.EXE	Terminal emulator controller	ALL
	DECW\$UILCOMPILER.EXE	UIL compiler	PROG
	DECW\$WINMGR.EXE	DECwindows window manager	ALL
	VUE\$MASTER.EXE	FileView image	ALL
SYS\$LOADABLE_IMAGES:	GAADRIVER.EXE	VAXstation II/GPX driver	WS
	GABDRIVER.EXE	VAXstation 2000/GPX driver	WS
	GCADRIVER.EXE	VAXstation II monochrome device driver	WS
	GCBDRIVER.EXE	VAXstation 2000 monochrome device driver	WS
	IKDRIVER.EXE	Keyboard decoder driver	WS
	IMDRIVER.EXE	Mouse decoder driver	WS
	INDRIVER.EXE	Common input function driver	WS
	PYDRIVER.EXE	Pseudo terminal driver	ALL
	TWDRIVER.EXE	Pseudo terminal driver	ALL
	WSDRIVER.EXE	Set display driver	ALL
DECW\$BOOK:	BOOKREADER.DECW\$BOOK	Online user's guide for the Bookreader	ALL
	LIBRARY.DECW\$BOOKSHELF	Bookreader bookshelf	ALL
DECW\$KEYMAP:	*.DECW\$KEYMAP	DECwindows Keymap files	WS
SYS\$HELP:	DDIF\$VIEW.HLB	View help file	ALL
	DECW\$CALC.HLB	Calculator help file	ALL
	DECW\$CALENDAR.HLB	Calendar help file	ALL
	DECW\$CARDFILER.HLB	Cardfiler help file	ALL
	DECW\$CLOCK.HLB	Clock help file	ALL
	DECW\$HELPHELP.HLB	HELP help file	PROG
	DECW\$MAIL.HLB	Mail help file	ALL
	DECW\$NOTEPAD.HLB	Notepad help file	ALL
	DECW\$PAINT.HLB	Paint help file	ALL

(continued on next page)

DECwindows Software Components Table

Table B-1 (Cont.) DECwindows Software Components

Directory	File	Purpose	Component Class
	DECW\$PRINTWGT.HLB	Print help file	ALL
	DECW\$PUZZLE.HLB	Puzzle help file	ALL
	DECW\$SESSION.HLB	Session Manager help file	ALL
	DECW\$TERMINAL.HLB	Terminal Emulator help file	ALL
	DECW\$VUE.HLB	FileView help file	ALL
SYS\$UPDATE:	DECW\$COMPILE_ADA_UNITS.COM	Ada build file	PROG
VUE\$LIBRARY:	VUE\$*.COM	FileView verb command files	ALL
	VUE\$SYSTEM_PROFILE.VUE\$DAT	FileView default system profile	ALL

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Reader's Comments

VMS Version 5.1 Installation Guide
AA-MG15A-TE

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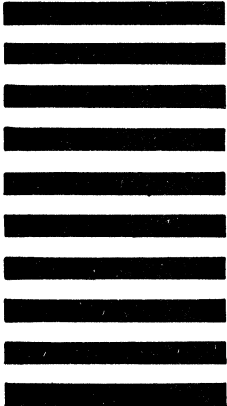
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