Version 5.0-2 Cover Letter

AV-LX25C-TE

Dear Customer,

VMS Version 5.0-2 is the second maintenance update to VMS Version 5.0. The
"-2" part of the version number indicates that this is a maintenance release that
contains no new functionality. VMS maintenance releases contain software fixes
to the operating system. Some of these fixes correct visible problems; other fixes
increase system integrity in ways that are not visible to users.

Your system must be running VMS Version 5.0-1 or A5.0-1 before you can update
to VMS Version 5.0-2. VMS Version 5.0-2 also supports a rolling update in which
different versions of the VMS operating system coexist in a VAXcluster environment.
Sections 1.4.1 and 1.4.2 of the attached update procedure explain in detail the
supported mixed-version VAXcluster configurations.

If your site uses the VMS Run-Time Library (RTL) math routines MTH$DTAND,
MTH$DCOSD, and MTH$DSIND, you should be aware that in Versions 5.0 and
5.0-1 of the VMS operating system there was a problem with these routines (for more
information see the *VMS Version 5.0-1 Release Notes* and the *VMS Version 5.0-2 Release
Notes*). Version 5.0-2 of the VMS operating system corrects these problems. If you
use these routines, DIGITAL recommends that you update to Version 5.0-2 as soon
as possible.

Store this cover letter in the binder that contains the *VMS Version 5.0 Release Notes*.

Mandatory Update

Also included in this kit is an additional piece of media that contains the mandatory
update (MUP). The mandatory update is labeled *VMS V4/V5 BIN MANDATORY
UPDATE* and contains fixes to to recently discovered security problems in Version 4.7
of the MicroVMS operating system and Versions 4.7, 4.7A, 5.0 and 5.0-n of the VMS
operating system. These problems could permit a valid, authorized, but unprivileged
user to gain privileged status. They do not, however, allow unauthorized access to
the system.

It is essential to apply these fixes immediately to protect the integrity of systems that
are running these VMS and MicroVMS versions. If your system is running a version
of VMS prior to 4.7, DIGITAL recommends that you upgrade immediately to at least
Version 4.7, and to Version 5.0 if your application permits.

NOTE

This mandatory update is not the same as the mandatory update which you
apply during a Version 5.0 installation or upgrade. You must apply both
mandatory updates to a Version 5.0 system.

Kit Contents

Enclosed are the VMS Version 5.0-2 media and the mandatory update. If you receive the VMS operating system on compact disk, magnetic tape, or a TK50 tape cartridge, your media also contains the Version 5.0-1 update. The Version 5.0-2 distribution kit is available on the following pieces of media:

- One nine-track, 1600 bpi magnetic tape

- Three RX50 diskettes

- One RX33 diskette

- Four RX01 diskettes

- Four TU58 cassettes

- One TK50 tape cartridge

- One Compact Disk

The *VMS V4/V5 MUP* is available on the following pieces of media:

- One nine-track, 1600 bpi magnetic tape

- One RX50 diskette

- One RX33 diskette

- One RX01 diskette

- One TU58 cassette

- One TK50 tape cartridge

NOTE

The *VMS V4/V5 MANDATORY UPDATE* is not available on compact disk. If you receive compact disk distribution media, please contact your local DIGITAL representative to receive the mandatory update on another type of media.

Update Procedure

Attached to this letter are instructions on how to update your system. Chapter 1 describes maintenance updates. You can use this procedure for both the Version 5.0-1 and 5.0-2 updates. Chapter 2 explains how to apply the mandatory update. Skip directly to Chapter 2 if you are only applying the mandatory update. The amount of time it takes to update your system depends on the type of media you use. The following are approximate times for updating 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–30 minutes

It takes slightly less time to apply the mandatory update.

The release notes for maintenance updates are included on the distribution media. During the update, the procedure displays the following menu:

```
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 [2]:
*  Do you want to continue the installation?
```

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).

To read the release notes without updating your system (either before or after the update), choose an option from the menu and type NO when the procedure asks if you want to continue. Regardless of the method you choose, DIGITAL recommends that you read the release notes before using your updated system.

Important Documentation Ordering Information

In the *Overview of VMS Documentation*, Version 5.0, the order number for the VMS Documentation Base Set was incorrect. The correct order number for the VMS Documentation Base Set is **QA–09SAA–GZ**.

Also, the order numbers for the following documentation were inadvertently omitted:

- VMS Documentation Release Notes Kit (order number **QA–001AY–GZ**). When ordering the VMS Documentation Base Set or the VMS Documentation Extended Set, you must also specify the order number for the VMS Documentation Release Notes Kit.

- VMS Documentation Extended Set without Base Set (order number **QA–001A4–GZ**). This kit includes the following:

    — General User Subkit

    — System Management Subkit

    — Programming Subkit

    — Obsolete Features Kit
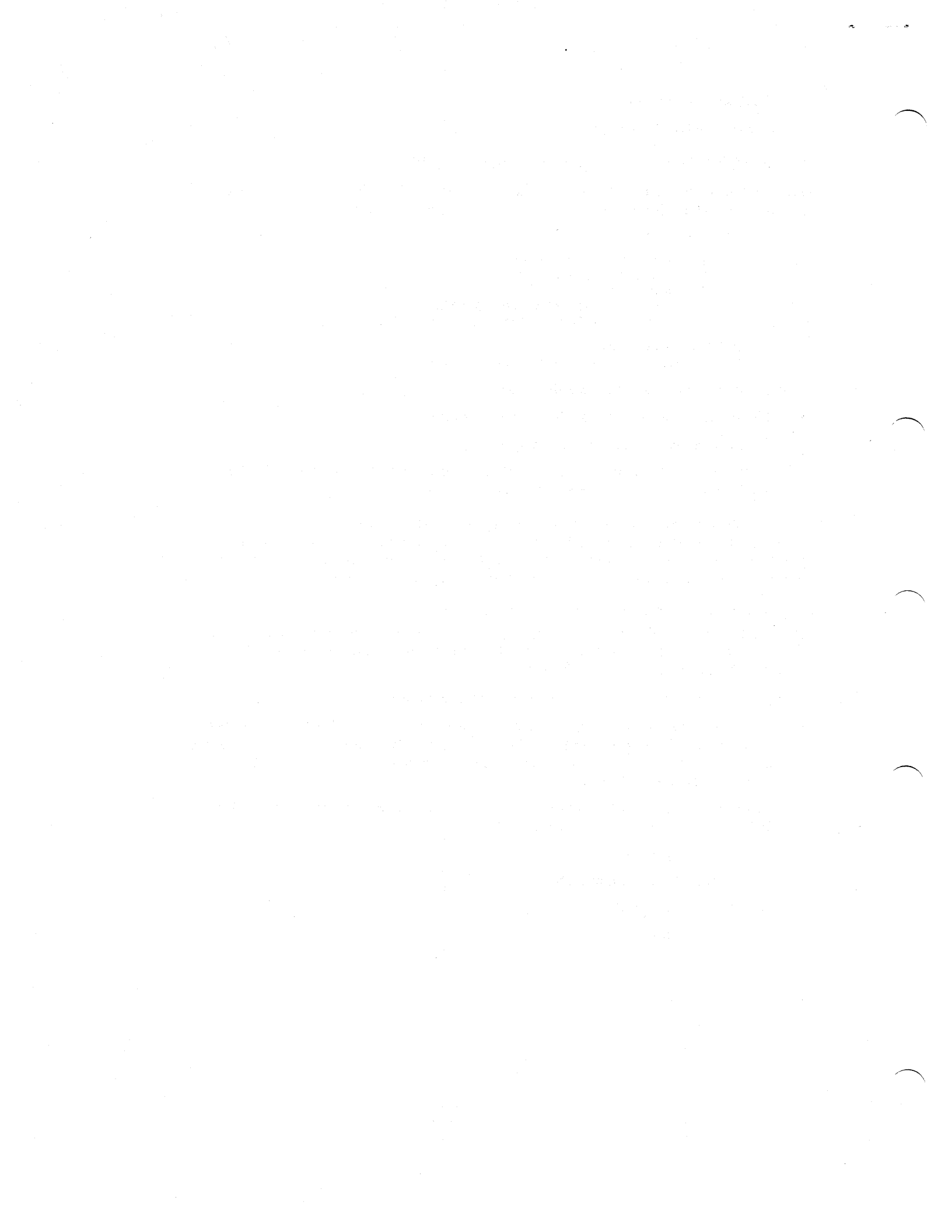
- VMS Obsolete Features Kit (order number **QA–001AZ–GZ**). Note that if you use the order number for the manual rather than the order number for the kit, you do not receive a binder.

Please make these changes to your copy of the *Overview of VMS Documentation* to avoid confusion when ordering documentation.
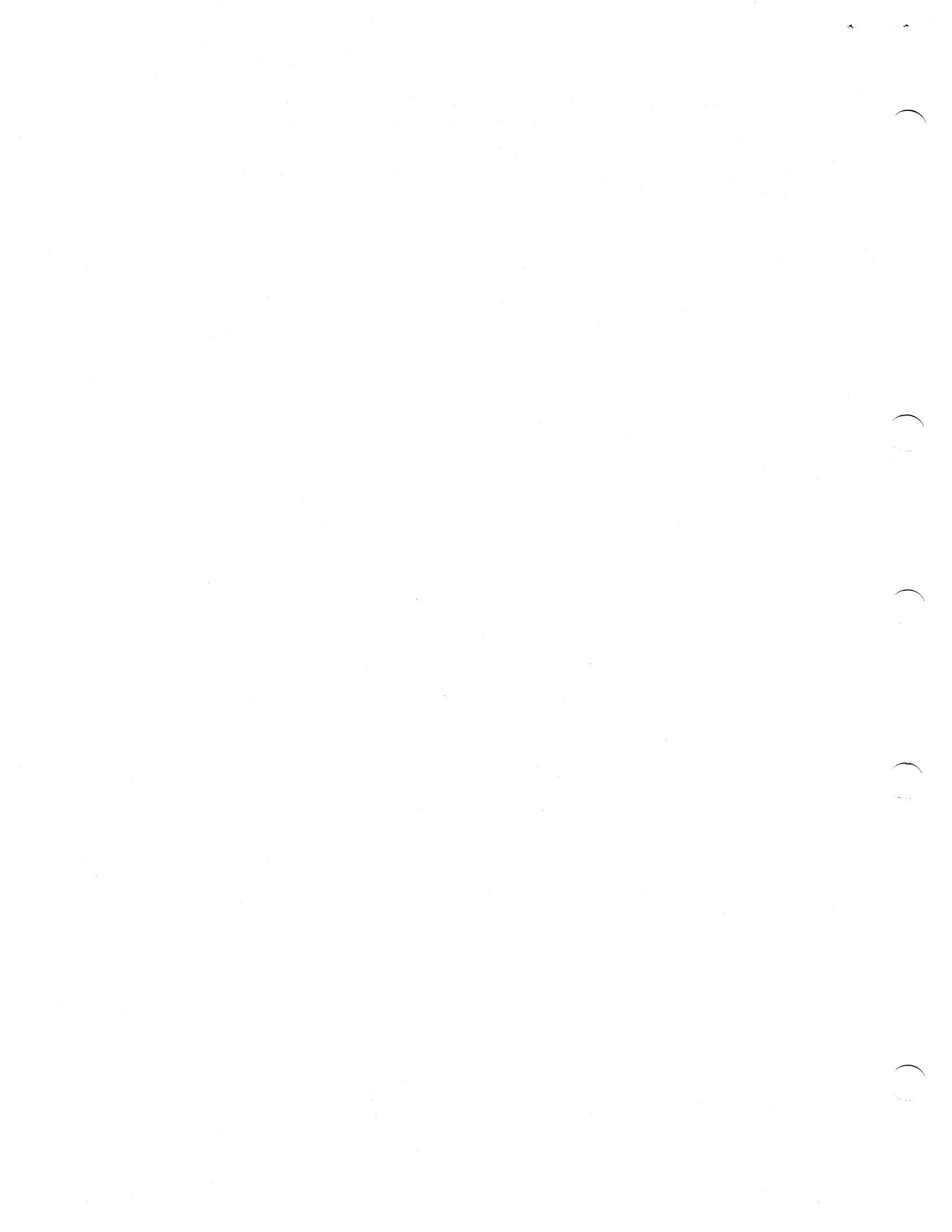
1 Updating the VMS Operating System

This document describes how to apply maintenance updates to the VMS operating system.

1.1 Preparing to Update Your System

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

1 Make sure the system disk has enough free space. VMS maintenance updates require 5000 free blocks on the system disk (peak disk block utilization). Enter the following command:

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

   If your system disk has more than 5000 free blocks, go to step 2.

   If your system disk has less than 5000 free blocks, create some free space by doing the following:

   a. Log into an account that has sufficient privileges to create space on the system disk. DIGITAL recommends that you use an account other than the SYSTEM account, because the SYSTEM account has all privileges and is intended only for installing software, booting, and diagnosing system problems.

   b. Delete or purge all unwanted files from the system disk.

   c. If there still is not enough free space, copy 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

   - All files in SYS$EXAMPLES and SYS$TEST

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, see the installation and operations guide for your VAX computer.

CAUTION: If you do not back up the system disk, a system failure at a critical point in the update procedure might ruin the contents of the disk.

3 Make sure that the SYSTEM account has sufficient quotas and limits using the following procedure:

   a. Log into the SYSTEM account.

   b. Enter the following commands:

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

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

Open file quota (Fillm)	40
Buffered I/O limit (BIOlm)	18
Direct I/O limit (DIOlm)	18
AST limit (ASTlm)	24
Enqueue quota (Enqlm)	200
Buffered byte quota count (Bytlm)	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.

4 The update procedure requires at least 10 unused global sections and
   50 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 pages by entering the following
   command:

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

   b. Display the number of *unused* global sections by entering the
   following command:

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

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

   ```
   ADD_GBLSECTIONS = 10
   ```

   d. If the number of unused global pages is less than 50, add the
   following line to SYS$SYSTEM:MODPARAMS.DAT:

   ```
   ADD_GBLPAGES = 50
   ```

   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.

5   After the system reboots, log into 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.

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

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

6   If your system is running DECnet–VAX software, shut it down. If you are not sure whether your system includes DECnet–VAX software, enter the following command:

```
$ SHOW NETWORK
```

If the system displays the following message, skip to the next step:

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

If your system includes DECnet–VAX software, shut it down by entering the following commands:

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

1.2   How to Proceed

- To update a standalone system, go to Section 1.6.
- To update a VAXcluster environment (either CI-only, mixed-interconnect, or local area), use the procedure in Section 1.3, unless you have one of the following configurations:

     —   A mixed-version VAXcluster environment (for example, one that combines Version 4.7 and Version A5.0-1 systems). If you have this type of configuration, follow the instructions in Section 1.4.

     —   A local area VAXcluster environment with one boot server and two system disks. If you have this type of configuration, follow the instructions in Section 1.5.

1.3   Updating VAXcluster Environments

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

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.

1   Make sure that you have prepared your system for the update, as described in Section 1.1.

2   Log into the SYSTEM account on a node that uses the system disk that you are updating.

3   Apply the update using the instructions in Section 1.6.

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

5   Follow the steps in Section 1.7.

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.

For example, Versions A5.0-1 and 4.7 of the VMS operating system can coexist in a VAXcluster environment. The Version 5.0-2 rolling update produces an A5.0-2 system that can also coexist in a VAXcluster with a Version 4.7 system. During the Version 5.0-2 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 instructions in Section 1.3.

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

If your mixed-version VAXcluster environment contains only Version 5.0 (-n) systems, read Section 1.4.2.

1.4.1   Mixed-Version VAXcluster Environments With V4.7 Systems

This section describes the restrictions that apply to mixed-version VAXcluster environments that combine Version 4.7 systems with A5.0 or A5.0-n 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 V4.7 systems. Each horizontal row of the table represents a valid combination of VMS versions in a VAXcluster environment.

Table 1–1   Support for Mixed-Version VAXclusters With V4.7 Systems

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

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

Versions A5.0 (-n) and 4.7 should be intermixed in VAXcluster environments only to update the various systems in the cluster incrementally and 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 (-n) system boots in a VAXcluster environment that includes a Version 4.7 system, the console displays the following informational message:

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

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

Note: Because a mixed-version VAXcluster environment supports only two consecutive A5.0 or later VMS versions, there are special considerations for upgrading and 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:

- Shut the Version 4.7 system down, and reboot it from a root on the A5.0-2 system disk.

- Bring all Version 4.7 systems to Version A5.0-1 *before* you update any systems to Version A5.0-2

- Take the Version 4.7 system out of the cluster, upgrade and update it to the current version, and boot it back into the cluster.

To perform a rolling update, go to Section 1.4.3.

1.4.2 Mixed-Version VAXcluster Environments With V5.0 (-n) Only Systems

This section describes the restrictions that apply to mixed-version VAXcluster environments that contain only Version 5.0 (-n) 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 (-n) only 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 Only V5.0 (-n) Systems

V5.0	V5.0-1	V5.0-2
*	*	
	*	*

Note that V5.0 (-n) systems in the cluster cannot run more that two consecutive VMS versions. For example, Table 1–2 shows that while Versions 5.0-1 and 5.0-2 are supported in the same cluster, Versions 5.0, 5.0-1, and 5.0-2 are not. Similarly, V5.0 and V5.0-2 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, as described in Section 1.1.

2 Log into the SYSTEM account on a node that uses the system disk that you are updating.

3 Apply the update as described in Section 1.6. Note that while you update the system, users can remain logged into any systems in the VAXcluster environment that are not being updated.

4 If you are updating several system disks, repeat steps 1 through 3 for each system disk that you are updating.

5 Follow the steps in Section 1.7.

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
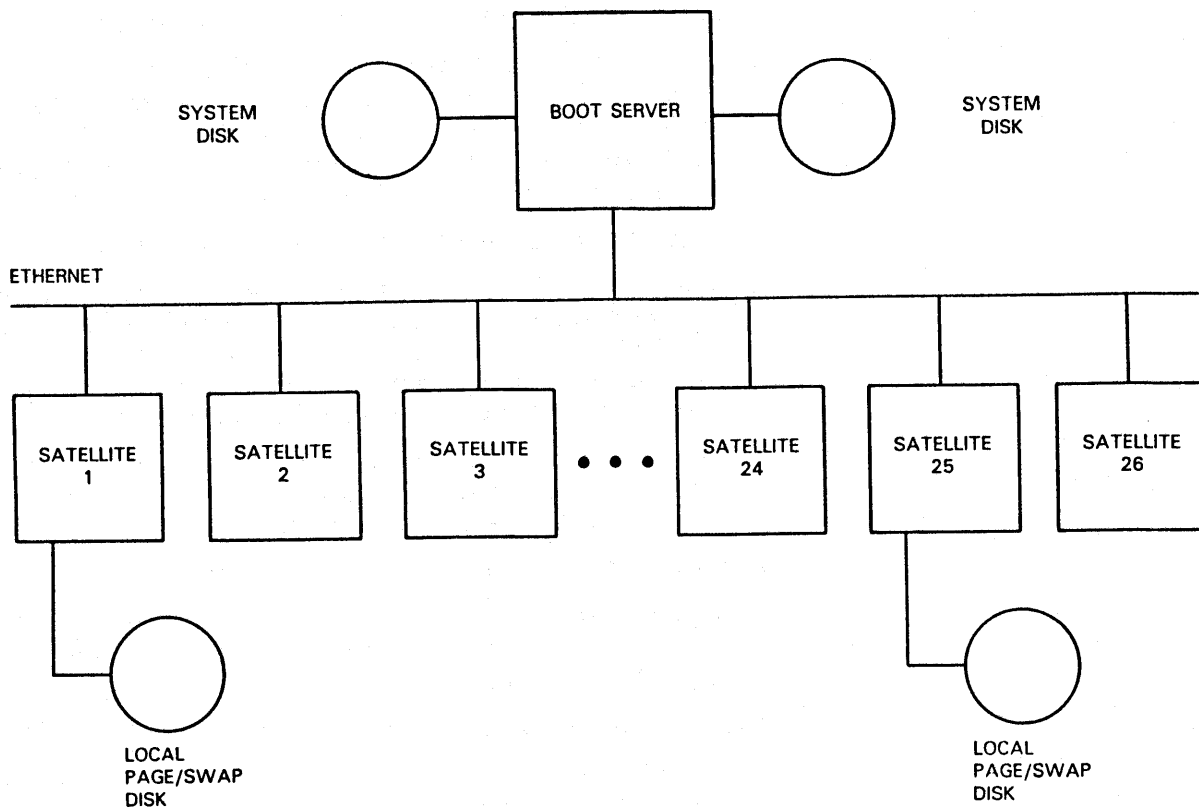
ZK-6165-HC

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

1   Log into the SYSTEM account on the boot server.

2   Follow the steps in Section 1.1 to prepare your system for the update.

3   Apply the update to the first system disk, as described in Section 1.6.

4   To update the second disk, follow these steps:

   a.   Log into the SYSTEM account on a satellite node that runs off the second system disk.

   b.   Apply the update as described in Section 1.6.

5   Follow the steps in Section 1.7.

1.6 Applying the Update

To apply a VMS maintenance update, perform the steps in this section.

1 To start the VMSINSTAL command procedure, you must specify a product name on the command line. The product names for VMS maintenance updates are specified as VMSU1050 for Version 5.0-1, VMSU2050 for Version 5.0-2, and so on. For example, to update to Version 5.0-2, enter the following command:

```
$ @SYS$UPDATE:VMSINSTAL VMSU2050 source-drive: OPTIONS N
```

Where *source-drive:* 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 installation and operations guide for your VAX computer.

For example, if your distribution media is on a TU80 magnetic tape drive on controller A with unit number 0 and you are updating to Version 5.0-2, enter the following command:

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

If you are updating to Version 5.0-1 from a TA80 magnetic tape drive connected to an HSC named VICE on controller A with unit number 0, enter the following command:

```
$ @SYS$UPDATE:VMSINSTAL VMSU1050 VICE$MUAO: OPTIONS N
```

If the VMSINSTAL command fails, determine whether 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, 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.

When the command succeeds, VMSINSTAL displays a message similar to the following:

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

```
It is (date) at (time).
Enter a question mark (?) at any time for help.
```

2 As the update procedure begins, VMSINSTAL displays the following prompt:

```
* 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 level to permit you to perform the backup.

b. Back up and restore your system disk (see step 2 of Section 1.1.)

c. When the backup is completed, restart the update procedure at step 1.

3 VMSINSTAL displays the following prompt:

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

```
* Are you ready?
```

Insert the distribution media in the appropriate drive and put the drive on line. If your distribution kit consists of several pieces of media, insert the first piece of the set in the drive.

4 Type Y (for YES) and press RETURN.

VMSINSTAL then displays the following messages and prompt:

```
%MOUNT-I-MOUNTED, VMSU2 mounted on _ddcu:
The following products will be processed:

   VMSU2 V5.0

      Beginning installation of VMSU2 V5.0 at (time)

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

5 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 _ddcu: for reading
Enter "YES" when ready:
```

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

6 The procedure displays the following message:

```
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, depending on whether you want the release notes displayed, printed, or copied.

Note: By default, the update procedure copies the release notes to SYS$HELP (unless you specify option 5). 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 Y (for YES) and press RETURN. If you only want a copy of the release notes, type N (for NO) to abort the update procedure.

7   VMSINSTAL begins to apply the update to the system disk and displays some messages. For example, if you are updating to Version 5.0-2, the system 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, press RETURN. If you do not want to purge these files, type NO and press RETURN.

8   The procedure displays the following messages:

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

```
    A description of these changes is in SYS$UPDATE:VMSUnO50.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.

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 nn should be
    reviewed
```

9   VMSINSTAL creates a journal file (with a JNL file type) for each image that is patched during the update process. (See Section 1.8 for additional information on the JNL files produced by the update.)

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

```
Installation of VMSUn V5.0 completed at (time)
```

10 If your system uses console media, the procedure displays the following message:

```
* Do you want to mount the console volume on ddcu:. [NO]?
```

Remove the the distribution media from the drive, and insert the console volume. Type Y (for yes) and press RETURN.

11 The procedure displays the following message:

```
VMSINSTAL procedure done at (time)
```

1.7 Tasks to Perform After the Update

After you apply a maintenance update to your system, DIGITAL recommends that you perform the following tasks:

1 If you modified the values of GBLSECTIONS and GBLPAGES in step 4 of Section 1.1, you might want to restore the old values at this time. To restore the old values of these parameters, do the following:

   a. Log into the SYSTEM account.

   b. Edit SYS$SYSTEM:MODPARAMS.DAT and delete the ADD_ GBLSECTIONS and ADD_GBLPAGES lines.

   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 Reboot the updated system disk(s). If you have a VAXcluster environment, reboot the nodes that use the newly updated system disk(s). When each node reboots, it will be running Version 5.0-n of the VMS operating system.

3 After the update you will notice that the space used on the system disk increased by as much as 4500 blocks (net disk block utilization). Using the following procedure, you can recover all but approximately 50 blocks of this space:

Note: **Do not use this procedure until you have rebooted the updated system disk and any nodes that use the updated system disk (refer to step 2).**

   a. Display the free block count by entering the following command:

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

   b. To purge files which the update procedure could not, DIGITAL provides the command procedure VMSUn050-PURGE.COM. For example, to purge files produced by a Version 5.0-2 update, enter the following command and press RETURN:

```
$ @SYS$UPDATE:VMSU2050-PURGE
```

   You can also use the Verify Utility to determine if the update procedure purged files incompletely. For more information, see the *VMS Analyze/Disk_Structure Utility Manual*.

1.8 Printing Patches Applied by the Update Kit

Unless you specified that the release notes not be copied to the system disk, VMSINSTAL copies the release notes to the file SYS$HELP:VMSUn050.TXT. You can print this file on a line printer, or display it at a terminal.

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

```
$ PRINT SYS$SYSTEM:*.JNL,SYS$LIBRARY:*.JNL,SYS$LOADABLE_IMAGES:*.JNL
```

2 Applying the Mandatory Update

Note: This mandatory update is not the same as the mandatory update which you apply during a Version 5.0 installation or upgrade. You must apply both mandatory updates to a Version 5.0 system.

This chapter describes how to apply the mandatory update. The mandatory update contains important fixes to Version 4.7 of the MicroVMS operating system and Versions 4.7, 4.7A, 5.0, and 5.0-n of the VMS operating system. You should apply the mandatory update to any system that is running MicroVMS Version 4.7 or VMS Versions 4.7, 4.7A, 5.0, and 5.0-n.

Note: If you apply the VMS mandatory update to a Version 4.7 or 4.7A system, you must reapply the mandatory update when you upgrade to Version 5.0 of the VMS operating system. However, you do not need to reapply the mandatory update between "-n" releases of the VMS operating system.

Use the following procedure to apply the mandatory update:

1 Make sure the system disk has enough free space. The mandatory update requires 1000 free blocks on the system disk. Enter the following command:

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

If the system disk does not have 1000 free blocks, see step 1 of Chapter 1.

2 Log into 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
```

3 If your system is running DECnet-VAX software, shut it down. If you are not sure whether your system includes DECnet-VAX software, enter the following command:

```
$ SHOW NETWORK
```

If the system displays the following message, skip to the next step:

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

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

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

4 Put the media labeled *VMS V4/V5 BIN MANDATORY UPDATE* in the appropriate drive and put the drive online.

5 Enter the following command to start VMSINSTAL:

```
$ @SYS$UPDATE:VMSINSTAL
```

6 VMSINSTAL displays a message. For example if you are applying the mandatory update to a Version 4.7 system, VMSINSTAL displays the following message:

```
VAX/VMS Software Product Installation Procedure V4.7
```

```
It is (date) at (time).
Enter a question mark (?) at any time for help.
```

7 As the update procedure begins, VMSINSTAL displays the following prompt:

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

Press RETURN for YES.

8 VMSINSTAL asks where the distribution volume will be mounted. Enter the name of the drive that will hold the distribution media. For example if you are applying the mandatory update from a TK50 drive named MUA0, you would enter the following command:

```
* Where will the distribution volumes be mounted: MUA0:
```

9 VMSINSTAL asks what product you are installing. If you are installing the mandatory update on a Version 4.7 or 4.7A system, enter *V47SECUPD030*. If you are installing the mandatory update on a Version 5.0 (-n) system, enter *V50SECUPD030*. Make sure you enter zeros not the letter O in the product name. For example to apply the mandatory update to a Version 4.7 system, enter the following product name:

```
Enter the products to be processed from the first distribution volume set:
* Products: V47SECUPD030
```

10 VMSINSTAL displays the following prompt:

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

```
* Are you ready?
```

Type Y for YES.

11 VMSINSTAL then displays some messages and a prompt. For example, if you are applying the update to a Version 4.7 system, VMSINSTAL displays the following:

Note: The volume labels for the mandatory update media are V47SECUPD01 for disks, and V47SEC for tape. "V47" appears in the volume label even if you are applying the mandatory update to a Version 5.0 (-n) system.

```
%MOUNT-I-MOUNTED, V47SEC mounted on _ddcu:
The following products will be processed:

   V47SECUPD V3.0

         Beginning installation of V47SECUPD V3.0 at

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

Mandatory security update kit


   1)  Apply all fixes to the system
   2)  Create a file with the descriptions of all fixes
   3)  Both of the above

* What would you like to do [3]:
```

Choose an option from the menu.

12 If you choose option 1 or 3 from the menu, VMSINSTAL displays messages similar to the following:

```
%V47SECUPD-I-FIXDESC, The fixes are described in SYS$UPDATE:V47SECUPD030.TXT
* Do you want to purge files replaced by this installation [YES]?
```

Press RETURN for YES.

13 VMSINSTAL applies the mandatory update, displays several informational messages, and shuts the system down. For example, if you apply the mandatory update to a Version 4.7 system, you receive the following messages:

```
%MOUNT-I-MOUNTED, V47SEC mounted on _ddcu:

   1) INSTALL (new image)
   2) MOUNTSHR (new image)
   3) SECURESHR (patch image)
%PATCH-I-NOLCL, image does not contain local symbols
%PATCH-I-WRTFIL, updating image file VMI$ROOT:[SYSUPD.V47SECUPD030]SECURESHR.EXE;1
   4) SYS (patch image)
%PATCH-I-NOLCL, image does not contain local symbols
%PATCH-I-NOGBL, some or all global symbols not accessible
%PATCH-I-WRTFIL, updating image file VMI$ROOT:[SYSUPD.V47SECUPD030]SYS.EXE;1

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

 Installation of V47SECUPD V3.0 completed at 15:26

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

 SHUTDOWN -- Perform an Orderly System Shutdown

%SHUTDOWN-I-BOOTCHECK, Performing reboot consistency check...
%SHUTDOWN-I-CHECKOK, Basic reboot consistency check completed
                    .
                    .
                    .
```

14 After the system shuts down, it may reboot automatically. If your system does not reboot automatically, reboot it manually. If the system that you applied the mandatory update to is part of a VAXcluster environment, reboot the satellite nodes.