Compaq™ RAID Software for OpenVMS

Installation Guide

Order Number: AA–QYZRC–TE

This installation guide provides installation information for the Compaq RAID Software for OpenVMS layered software product.

Software Version: Version 2.5

Compaq Computer Corporation
Houston, Texas

October 2001

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Printed in the United States of America.

This document was prepared using VAX DOCUMENT Version 2.1.

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Preface

Purpose of This Guide

This installation guide contains the installation procedure for installing the Compaq RAID Software for OpenVMS.

Intended Audience

The intended audience is the system administrator who installs the Compaq RAID software, and configures and manages the RAID arrays.

Related Documentation

The related documents shown in Table 1 may be ordered from your Compaq™ sales representative.

Table 1 Related Documents

Document Title	Order Number
Compaq RAID Software for OpenVMS Guide to Operations	AA-Q1EJx-TE
Compaq RAID Software for OpenVMS Installation Guide	AA-QYZRx-TE
OpenVMS System Manager's Manual: Essentials	AA–PV5Mx–TK
OpenVMS System Management Utilities Reference Manual: A-L BACKUP Section	AA–PV5Px–TK
OpenVMS System Management Utilities Reference Manual: M-Z MOUNT and SYSGEN Sections	AA–PV5Qx–TK
OpenVMS DCL Dictionary: A-M	AA–PV5Kx–TK
OpenVMS DCL Dictionary: N-Z	AA–PV5Lx–TK
OpenVMS I/O User's Reference Manual	AA–PV6Sx–TK
OpenVMS Operating System Version 5.0 Base Documentation Set	AA–LA33x–T3
OpenVMS System Messages	AA–PV5Wx–TK
Symptom Directed Diagnosis (SDD) Toolkit /VAXsimPLUS User Guide	AD–KN80x–TE
VMScluster Systems for OpenVMS	AA–PV5Wx–TK

Conventions Used in this Guide

The conventions shown in Table 2 are used in this guide.

Table 2 Conventions Used in This Guide

Convention	Meaning
[parameter]	In command formats, brackets indicate optional parameters. When you enter the optional parameter, do not enter the brackets.
$ SHOW TIME 18-MAY-1993 12:42:16	Command examples show the OpenVMS™ prompt character ($). The command (what you enter) is in uppercase type.
italic text	In examples and messages, italic text represents input that is unique for each system. In other areas, italic text is used to introduce a new term.
boldface text	Boldface text is used to introduce a new term that is also found in the glossary.
XXXXX	A key name enclosed in a box indicates that you should press that key on the keyboard (for example Return or Help).
data 1 . . . data *n*	In examples, a vertical ellipsis represents the omission of data that the system displays in response to a command or data that a user enters.
filespec[, . . .]	In command formats, a horizontal ellipsis indicates that the preceding item can be repeated one or more times.
OpenVMS VAX™	The OpenVMS operating system for VAX hardware.
OpenVMS Alpha™	The OpenVMS operating system for AXP hardware.
OpenVMS, VMS™	The terms OpenVMS and VMS refer to the OpenVMS operating system.
RAID0	The RAID0 icon indicates that the following information applies to only RAID0 arrays. If no icon is used, assume that the information applies to both RAID0 and RAID5 arrays.
RAID5	The RAID5 icon indicates that the following information applies to only RAID5 arrays. If no icon is used, assume that the information applies to both RAID0 and RAID5 arrays.

1
Installation

This chapter describes how to install and register the Product Authorization Key (PAK) for the Compaq RAID Software for OpenVMS. Table 1–1 provides a list of topics in this chapter.

Table 1–1 Topics in This Chapter

Subject	Section
Installation Planning	1.1
Installing Compaq RAID Software for OpenVMS	1.2
Postinstallation	1.4

After you receive Compaq RAID Software for OpenVMS in the form of a standard OpenVMS software installation kit, do the following:

1. Perform the preinstallation procedures described in Section 1.1.
2. Install the Compaq RAID Software using the VMSINSTAL utility, as described in Section 1.2.
3. Perform the postinstallation procedures listed in Section 1.4.

1.1 Installation Planning

In this section, you will find the following information:

- Preinstallation requirements
- Time needed for installation
- PAK registration
- OpenVMS SYSGEN parameter settings for Compaq RAID Software

1.1.1 Preinstallation Requirements

Before installing the Compaq RAID Software for OpenVMS, you must:

- Be running one of the OpenVMS versions specified in the release notes.
- Have enough free blocks on the system disk during installation for temporary file storage. The number of blocks required is specified in the release notes.
- Allow enough blocks of storage for the Compaq RAID software after installation. The number of blocks required is specified in the release notes.
- Install any OpenVMS patches required for your version of OpenVMS software, as specified in the release notes.
- Install the PAK.

- Have the privilege SETPRV. Compaq recommends that the installation be performed from the SYSTEM account.

The installation verifies that there are sufficient free global sections and free global pages available. The number of free global sections and free global pages required are specified in the software release notes.

Compaq recommends that you back up the system disk prior to installation.

1.1.2 Time Needed for Installation

Approximately 10 minutes is required for the installation, including Compaq RAID startup and execution of the Installation Verification Procedure (IVP), depending on the system configuration and the load on the system at the time.

1.1.3 Registering the License Product Authorization Key

You must register your Product Authorization Key (PAK) before you install Compaq RAID Software for OpenVMS.

1.1.3.1 What Is the PAK?

The PAK is the certificate included with your distribution kit that contains the data you need to run Compaq RAID Software for OpenVMS. Compaq RAID Software for OpenVMS is a layered product that is separate from the OpenVMS operating system. You must purchase and license the Compaq RAID product separately from the OpenVMS software.

You license Compaq RAID with a Compaq RAID PAK. The PAK describes the Compaq RAID contract you have with Compaq Computer Corporation.

When you enter information from the PAK into the online license database, the OpenVMS License Management Facility (LMF) authorizes the use of Compaq RAID. You must register and activate a license for Compaq RAID on each node using the software, including satellites in a VMScluster™ system. If you do not register and activate all nodes that will use Compaq RAID, each node displays the following error message at system startup time and no further RAID operations will proceed:

```
%LICENSE-E-NOAUTH, SW_RAID5 use is not authorized on this node
-LICENSE-F-NOLICENSE, no license is active for this software product
-LICENSE-I-SYSMGR, please see your system manager
```

The Compaq RAID software does not need to run on every node on a VMScluster system, but those nodes on which it is not running will not be able to create or use the RAID arrays. Only nodes with a valid PAK installed will be able to use the RAID arrays.

1.1.3.2 How to Register the PAK

Use the OpenVMS License Management Facility (LMF) to register your PAK. Registration is done by entering the following at the DCL prompt:

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

Choose ''1'' on the menu of options and answer the questions using the data from the PAK. Be sure to enter each field exactly as it appears on the PAK. Do not enter any fields that are blank on the PAK.

Note

There are multiple valid licenses for this product. While it is necessary to have only one license active for this product, the LMF will check for the existence of any valid license.

1.1.4 Setting the SYSGEN Parameters

SYSGEN parameter settings for this product may vary from release to release. See the release notes for information on setting SYSGEN parameters.

1.2 Installing Compaq RAID Software for OpenVMS

It is necessary to install Compaq RAID Software for OpenVMS on only one node of any set of nodes which are sharing a given system disk. However, it must be started up on every licensed node you intend to run it on in the cluster. The Compaq RAID Software for OpenVMS installation procedure automatically updates the DCL command table to include the Compaq RAID commands. See Example 1–1 for a sample listing from a kit installation.

To install Compaq RAID Software for OpenVMS, perform the following steps:

1. At the DCL prompt, enter the following:

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

2. Enter the applicable information for your system at each VMSINSTAL prompt.

If You are Upgrading a Previous Version

If you are upgrading a previous version of the Compaq RAID software, the installation procedure does not allow for automatic startup of the software. A system reboot is necessary following the installation.

The software will automatically be started during the reboot if invocation of the SYS$STARTUP:RAID$STARTUP.COM procedure has been added to the SYS$MANAGER:SYSTARTUP_V5.COM or SYS$MANAGER:SYSTARTUP_VMS.COM procedure.

If the software does not start automatically, start it by manually executing the SYS$STARTUP:RAID$STARTUP.COM procedure following the reboot.

For more information on these .COM files, see Section 1.4.3.2.

Example 1–1 Sample Installation

```
$ @SYS$UPDATE:VMSINSTAL RAID025 MKA0:

 OpenVMS AXP Software Product Installation Procedure V7.1

It is 3-FEB-1997 at 17:49.

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

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

Please mount the first volume of the set on  MKA0:.
* Are you ready? YES
%MOUNT-I-MOUNTED, RAID25 mounted on _$4$MKA0: (BULWHP)
The following products will be processed:

  RAID V2.5

 Beginning installation of RAID V2.5 at 17:50

%VMSINSTAL-I-RESTORE, Restoring product save set A ...
%VMSINSTAL-I-RELMOVED, Product's release notes have been moved to SYS$HELP.

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You are running OpenVMS ALPHA Version V7.1.

       If  you  plan to use RAID 0+1 (striping plus shadowing) arrays
       you  need to install a mandatory shadowing patch. Please refer
       to the Release Notes.

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

       Operation   of   this   software   requires   that  a  Product
       Authorization  Key  (PAK)  reflecting your software license be
       present  on  the system. Any one of the following product PAKs
       allows this software to run:

             SW-RAID5           (per-node license type)
             SW-RAID5-STG-USER  (per-disk license type)
             STRIPING           (PAK from Polycenter Disk Striping)

       This  procedure  will  display  output  from  the SHOW LICENSE
       command  to assist you in determining whether or not a PAK has
       been installed.


Active licenses on node BULWHP:

------- Product ID --------    ---- Rating ----- -- Version --
Product            Producer    Units Avail Activ Version Release    Termination
SW-RAID5           Compaq            0  0   100    0.0  14-AUG-1997 (none)

It appears that you have a SW-RAID5 PAK installed already.

        Product:      SW-RAID5
        Producer:     Compaq
        Version:
        Release Date:


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

       Compaq(TM)  RAID  Software  is currently running on this
       system.  You must reboot your system after the installation is
       completed  for  the  new  version  of  this software to become
       available.

       The  IVP  cannot be run now because a previous version of this
       software  is  currently running. You may run the IVP after the
       system is rebooted.
```

(continued on next page)

Example 1–1 (Cont.) Sample Installation

```
      To run the IVP later, simply enter the command

  @SYS$TEST:RAID$IVP

      at the DCL prompt.

      To make RAID commands available on other nodes in this
      cluster, their DCL tables must be updated. If you have more
      than one system disk, install this product on each one. All
      nodes which boot from the system disk on which this software
      is being installed must either be rebooted, or the INSTALL
      utility must be used to replace their DCL command tables with
      the updated version created by this installation.

      This procedure can use SYSMAN to automatically replace the DCL
      tables for you on all the other nodes using this same system
      disk. This would be done at the end of the installation
      process.

* Do you want DCL tables replaced on all nodes using this system disk [YES]? NO

      To make RAID commands available on the other nodes in this
      cluster, you must either reboot them, or use the INSTALL
      utility to replace their DCL command tables with the updated
      version created by this installation, by issuing the command

  INSTALL REPLACE SYS$SHARE:DCLTABLES

      at the DCL prompt. After you do this on a given node, log out,
      and log back in, the RAID DCL commands will be available for
      your use.

    To complete the installation of this product, you should reboot
    the system.  If it is not convenient to reboot at this time, then
    enter NO to the following question.

    If you enter NO, the installation procedure will continue.

* Will you allow a system shutdown after this product is installed [YES]? NO

      No further questions will be asked. The installation should
      take less than 10 minutes to complete.

      This software is proprietary to and embodies the confidential
      technology of Compaq Computer Corporation. Possession, use,
      or copying of this software and media is authorized only
      pursuant to a valid written license from Compaq or an
      authorized sublicensor.

      Restricted Rights: Use, duplication, or disclosure by the U.S.
      Government is subject to restrictions as set forth in
      subparagraph (c)(1)(ii) of DFARS 252.227-7013, or in FAR
      52.227-19, or in FAR 52.227-14 Alt. III, as applicable.

%VMSINSTAL-I-RESTORE, Restoring product save set B ...
Save sets C,D,E,F and H are not required for OpenVMS Alpha V7.1
%VMSINSTAL-I-RESTORE, Restoring product save set G ...

      Two files have been provided to aid you in starting the
      Compaq(TM) RAID Software.

      The file SYS$STARTUP:RAID$STARTUP.COM contains specific
      commands needed to start the Compaq(TM) RAID Software.
      This file should not be modified. To start the software
      automatically at system startup time, add the line
```

(continued on next page)

Example 1–1 (Cont.) Sample Installation

```
  $ @SYS$STARTUP:RAID$STARTUP

       to the system startup command procedure:

  SYS$MANAGER:SYSTARTUP_VMS.COM

       The  second  file,  SYS$MANAGER:RAID$SYSTARTUP.TEMPLATE,  is a
       sample  file which you can use as a guide for binding the RAID
       arrays  on your system. It is recommended that you make a copy
       of this file, calling it SYS$COMMON:[SYSMGR]RAID$SYSTARTUP.COM,
       and then edit this file, making the changes necessary for your
       system.  The  command  procedure  SYS$STARTUP:RAID$STARTUP.COM
       will  then  automatically  invoke your site-specific procedure
       during system startup.

%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...
 Installation of RAID V2.5 completed at 17:55

    Adding history entry in VMI$ROOT:[SYSUPD]VMSINSTAL.HISTORY

    Creating installation data file: VMI$ROOT:[SYSUPD]RAID025.VMI_DATA

 VMSINSTAL procedure done at 17:55
```

1.3 Error Messages During Installation

If you encounter error messages during installation of this product, see Chapter 2 for causes and suggested remedial actions.

1.4 Postinstallation

After you install Compaq RAID Software for OpenVMS on your system, you may want to make some adjustments. The following sections provide information for verifying the installation of Compaq RAID and modifying your files to allow automatic startup of Compaq RAID on your system.

1.4.1 Enabling the DCL Commands on all Nodes

Before you start the Compaq RAID software on other licensed nodes in your cluster, you should do one of the following to ensure that the Compaq RAID commands are enabled on the other nodes, if you did not choose to allow this to be done automatically during the installation:

- Reboot the other nodes.
- If the DCLTABLES.EXE file was not already installed during the installation, reinstall it on the other nodes by entering the following:

```
$ INSTALL REPLACE SYS$SHARE:DCLTABLES.EXE
```

1.4.2 Files Added to Your System after Installation

A number of files are involved in the installation of the Compaq RAID software. Some of these files are used in the installation procedure and then deleted; others are stored permanently in various directories of the system.

The following permanent files are added to the specified directories following installation and startup of the Compaq RAID software:

- SYS$HELP:RAID025.RELEASE_NOTES
- SYS$SYSTEM:RAID$ERF.EXE

- SYS$LOADABLE_IMAGES:RAID$DPDRIVER.EXE
- SYS$SYSTEM:RAID$SERVER_MAIN.EXE
- SYS$SYSTEM:RAID$CLI_MAIN.EXE
- SYS$STARTUP:RAID$STARTUP.COM
- SYS$STARTUP:RAID$SERVER_MAIN.COM
- SYS$MANAGER:RAID$SYSTARTUP.TEMPLATE
- SYS$MANAGER:RAID$SERVER_MAIN.LOG
- SYS$MANAGER:RAID$DIAGNOSTICS_*nodename*.LOG
- SYS$MESSAGE:RAID$MSG.EXE
- SYS$TEST:RAID$IVP.COM
- SYS$HELP:RAID_INST_GUIDE.PS
- SYS$EXAMPLES:RAID$CONFIG.COM
- SYS$EXAMPLES:RAID$DISPLAY.COM
- SYS$MANAGER:RAID$DEINSTALL.COM

1.4.3 System File Modifications after Installation

1.4.3.1 Starting the Software

The Compaq RAID software may be started either manually or automatically.

To automatically start Compaq RAID software after a system startup, include the SYS$STARTUP:RAID$STARTUP.COM in your system startup command procedure:

- SYS$MANAGER:SYSTARTUP_V5.COM for OpenVMS VAX software Versions 5.5 through 5.5–2
- SYS$MANAGER:SYSTARTUP_VMS.COM for OpenVMS VAX software Version 6.0 and later, and OpenVMS Alpha software Version 1.5 and later

To manually start Compaq RAID software, enter the following command line:

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

1.4.3.2 The RAID$STARTUP.COM and RAID$SYSTARTUP.COM Files

You must invoke the RAID$STARTUP.COM file on all the other licensed nodes in the cluster on which you wish to use Compaq RAID Software for OpenVMS.

The RAID$STARTUP.COM File

Compaq RAID Software for OpenVMS provides a RAID$STARTUP.COM file for you when you install the product. This file performs the following:

1. Installs the Compaq RAID DCL command line interface and message images with the appropriate privileges.
2. Loads the driver.
3. Starts the server process (which causes RAID arrays in the cluster to become available to this node).
4. Invokes RAID$SYSTARTUP.COM.

The RAID$SYSTARTUP.COM File

The RAID$SYSTARTUP.COM file is designed to help you manage your RAID arrays. A template file, SYS$MANAGER:RAID$SYSTARTUP.TEMPLATE, is provided by the Compaq RAID installation. Create a RAID$SYSTARTUP.COM file based on the template provided.

Note

Compaq does not recommended that you modify the actual template file because you may need it again in the future.

When entering BIND commands in the RAID$SYSTARTUP.COM file, specify all the disk drives that will be members of the RAID array. You may also want to include the list of spares in any spareset associated with the RAID array so that when a spareset is associated with a RAID array, the array's membership can change automatically without action by the user. Including the names of all current and possible future members in the BIND command helps ensure successful binds in the future when the membership of the RAID array has changed due to members being removed.

A BIND command search algorithm allows binds with incomplete or inaccurate BIND commands. Only disks that are valid members of the RAID array will be bound, so there is no drawback to including potential future members in the list. The BIND command requires at least one valid member to succeed. Thus, Compaq recommends that you periodically update the RAID$SYSTARTUP.COM file if you are keeping your BIND commands in this file.

Similarly, when entering spareset BIND commands, list all current and potential future spares.

CAUTION

Because the RAID INITIALIZE command deletes all data on a disk, do not put RAID INITIALIZE commands in the RAID$SYSTARTUP.COM file.

1.4.3.3 The RAID SYS$MANAGER:SYSHUTDWN.COM File

The RAID SHUTDOWN command informs the Compaq RAID Software for OpenVMS that the system is about to shut down. This command operates only on the issuing node and will unbind all arrays on the issuing node provided the RAID virtual devices are dismounted.

Compaq recommends that the RAID SHUTDOWN command be inserted into the system shutdown file (SYS$MANAGER:SYSHUTDWN.COM) to ensure that underlying RAID members are dismounted correctly. To ensure that the RAID SHUTDOWN command completes successfully on a node, all RAID virtual devices must be dismounted.

The RAID SHUTDOWN command performs the equivalent actions of the RAID UNBIND command on all RAID arrays, except that the UNBIND operation only affects the node which issued the RAID SHUTDOWN command. RAID arrays as seen by other nodes in the cluster will not change. The RAID SHUTDOWN command will also stop the RAID$SERVER process.

1.4.3.4 Restarting the RAID$SERVER Process

Prior to Version 2.3 of Compaq RAID Software for OpenVMS, the RAID$SERVER process cannot be restarted without rebooting. If the RAID$SERVER process was stopped by a privileged user, you must reboot the system to restart the server.

Starting with Version 2.3 and later, the RAID$SERVER process can be restarted by supplying the "SERVER" parameter to the RAID$STARTUP.COM file:

```
$ @SYS$STARTUP:RAID$STARTUP.COM SERVER
```

Entering this command from the SYSTEM account causes the RAID software to restart the RAID$SERVER process. The server process polls other nodes in the VMScluster and binds all RAID arrays known cluster wide.

Note

RAID arrays and sparesets that were known only to the RAID$SERVER that has been restarted are not automatically rebound. These arrays must be rebound manually.

Restarting the RAID$SERVER process is intended to assist operations staff restart local RAID operations when the local RAID$SERVER process has been stopped manually by mistake or has crashed due to a software inconsistency. If there are VMScluster conditions that will prevent the restarted process from completing its recovery (e.g., RAID array disks are in mount verification), restarting the RAID$SERVER process may not result in complete local recovery of RAID arrays known cluster-wide.

1.4.4 Verifying the Installation

The following table describes what occurs with the Installation Verification Process (IVP) when you choose to execute the IVP during installation:

If...	The IVP..
You choose to start the Compaq RAID software,	verifies that all Compaq RAID files are in the proper directories. executes a RAID SHOW command to verify that the RAID driver, server, and CLI are executing properly.
You choose not to start the Compaq RAID software,	verifies only that the Compaq RAID files are in the proper directories.

Upgrading a Previous Version of Compaq RAID

If you are upgrading a previous version of the Compaq RAID software, the IVP will not run during installation.

IVP Manual Execution

You can run the IVP manually by performing the following steps:

1. Log into the SYSTEM account
2. Execute the following command procedure:

```
$ @SYS$TEST:RAID$IVP.COM
```

1.4.5 Process Level Images

There are two process level images that are run with Compaq RAID software. The privileges the images have are shown in Table 1–2.

Table 1–2 Two Process Level Images

Process Images	Privileges
CLI	VOLPRO, SYSPRV, PHY_IO, DIAGNOSE, PRMMBX, CMKRNL, SYSLCK, SYSNAM, SHARE, TMPMBX
SERVER	VOLPRO, SYSPRV, PHY_IO, DIAGNOSE, SYSNAM, SYSLCK, NETMBX, TMPMBX, PRMMBX, SHARE, CMKRNL, READALL

1.4.6 Reporting Product Problems

If an error occurs while Compaq RAID Software for OpenVMS is being used and you believe that a problem with this product is causing the error, do one of the following:

- If you have a Compaq service agreement, call Compaq Multivendor Customer Services.
- If you have a Self-Maintenance Software Agreement, submit a Software Performance Report (SPR).
- If the product is under warranty and you do not have a Compaq service agreement, submit an SPR.

If you find an error in the Compaq RAID software documentation, fill out and submit the Reader's Comments form at the back of the document in which you found the error. Please indicate on the form the section and page number of the error.

1.5 Deinstalling Compaq RAID Software

Included with the Compaq RAID software is a command procedure to assist in removing the software files from a system disk. This may be used, for example, to remove the software after using it for a trial period with a loan-of-products PAK. This can also be useful in cases where the software license is being transferred and the RAID software moved from one system to another, or from one system disk to another.

Before running the procedure, you must remove the invocation of RAID$STARTUP.COM from your SYSTARTUP_VMS.COM or SYSTARTUP_V5.COM startup command procedure and then reboot the system so the RAID software is not running at the time the product files are removed.

Invoke the deinstallation command procedure with the following command:

```
$! Delete the RAID software (all pieces of the current version)
$ @SYS$MANAGER:RAID$DEINSTALL
```

If the Compaq RAID software needs to be removed from more than one system disk, this procedure must be invoked once for each system disk, by executing the procedure on one system booted from each of the system disks from which the software is to be removed. The procedure need be run only on one system per system disk, because it removes RAID files from all of the system roots on that system disk at once.

This command procedure offers additional options to assist field-test sites and those who ran earlier versions of this software. The procedure can also remove old, obsolete files from previous versions of the RAID software, including field-test versions. To remove these obsolete files, include the parameter "OLD" as the P1 parameter to the command procedure:

```
$! Delete the RAID software (current version and any obsolete
$! leftover files)
$ @SYS$MANAGER:RAID$DEINSTALL OLD
```

To clean up obsolete files, but leave the current version of the software as is, the procedure may be invoked with the "ONLY_OLD" parameter:

```
$! Delete any obsolete leftover files, but leave the current
$! version alone
$ @SYS$MANAGER:RAID$DEINSTALL ONLY_OLD
```

The following table summarizes the options for the deinstallation procedure:

P1 parameter	Action
{none}	Delete files, DCL commands, and help module associated with the current version of the software
OLD	Delete files, DCL commands, and help modules associated with the current version and all previous SSB and field-test versions of the software
ONLY_OLD	Only delete obsolete stuff from previous versions, leaving the current version of the software untouched (useful for cleaning up field-test systems)

Example 1–2 shows a sample deinstallation output file.

Example 1–2 Sample Deinstallation

```
$ @SYS$MANAGER:RAID$DEINSTALL
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Compaq RAID Software Deinstallation Procedure

   With parameter P1 set to "", this procedure will delete only product
   files from the current version, and not delete any obsolete files
   which might remain from from early field-test versions...

Is this what you wanted to do?: YES
Searching for invocation of RAID$STARTUP.COM from SYSTARTUP_V*.COM...
%SEARCH-I-NOMATCHES, no strings matched
Checking for RAID server...
  -- Server not running

Checking for RAID driver...
  -- Driver not loaded

Deleting RAID command from DCL tables...
  -- RAID command deleted

Deleting RAID help module from help library...
%LIBRAR-S-DELETED, module RAID deleted from SYS$COMMON:[SYSHLP]HELPLIB.HLB;10
  -- RAID help module deleted

Deleting remainder of product files...

DELETE SYS$COMMON:[SYS$STARTUP]RAID$STARTUP.COM;1 ? [N]: Y
%DELETE-I-FILDEL, SYS$COMMON:[SYS$STARTUP]RAID$STARTUP.COM;1 deleted (12 blocks)
DELETE SYS$COMMON:[SYSTEST]RAID$IVP.COM;1 ? [N]: Y
%DELETE-I-FILDEL, SYS$COMMON:[SYSTEST]RAID$IVP.COM;1 deleted (12 blocks)
DELETE SYS$COMMON:[SYS$STARTUP]RAID$SERVER_MAIN.COM;1 ? [N]: Y
%DELETE-I-FILDEL, SYS$COMMON:[SYS$STARTUP]RAID$SERVER_MAIN.COM;1 deleted (12 blocks)
DELETE SYS$COMMON:[SYSMGR]RAID$SYSTARTUP.TEMPLATE;1 ? [N]: Y
%DELETE-I-FILDEL, SYS$COMMON:[SYSMGR]RAID$SYSTARTUP.TEMPLATE;1 deleted (36 blocks)
DELETE SYS$COMMON:[SYSHLP.EXAMPLES]RAID$CONFIG.COM;1 ? [N]: Y
%DELETE-I-FILDEL, SYS$COMMON:[SYSHLP.EXAMPLES]RAID$CONFIG.COM;1 deleted (36 blocks)
DELETE SYS$COMMON:[SYSHLP.EXAMPLES]RAID$DISPLAY.COM;1 ? [N]: Y
%DELETE-I-FILDEL, SYS$COMMON:[SYSHLP.EXAMPLES]RAID$DISPLAY.COM;1 deleted (72 blocks)
DELETE SYS$COMMON:[SYSHLP]RAID_INST_GUIDE.PS;1 ? [N]: Y
%DELETE-I-FILDEL, SYS$COMMON:[SYSHLP]RAID_INST_GUIDE.PS;1 deleted (252 blocks)
DELETE SYS$COMMON:[SYS$LDR]RAID$DPDRIVER.EXE;1 ? [N]: Y
%DELETE-I-FILDEL, SYS$COMMON:[SYS$LDR]RAID$DPDRIVER.EXE;1 deleted (444 blocks)
DELETE SYS$COMMON:[SYSEXE]RAID$CLI_MAIN.EXE;1 ? [N]: Y
%DELETE-I-FILDEL, SYS$COMMON:[SYSEXE]RAID$CLI_MAIN.EXE;1 deleted (732 blocks)
DELETE SYS$COMMON:[SYSEXE]RAID$SERVER_MAIN.EXE;1 ? [N]: Y
%DELETE-I-FILDEL, SYS$COMMON:[SYSEXE]RAID$SERVER_MAIN.EXE;1 deleted (1152 blocks)
DELETE SYS$COMMON:[SYSEXE]RAID$ERF.EXE;1 ? [N]: Y
%DELETE-I-FILDEL, SYS$COMMON:[SYSEXE]RAID$ERF.EXE;1 deleted (60 blocks)
DELETE SYS$COMMON:[SYSMSG]RAID$MSG.EXE;1 ? [N]: Y
%DELETE-I-FILDEL, SYS$COMMON:[SYSMSG]RAID$MSG.EXE;1 deleted (84 blocks)

    Deinstallation of Compaq(TM) RAID Software completed successfully.

$
```

2
Installation Error Messages

2.1 Error Messages Received During Installation

This appendix describes the error messages that can be encountered while performing the installation procedure and the Installation Verification Process (IVP).

2.2 Messages from the KITINSTAL

The following error messages are generated by the KITINSTAL program.

%VMSINSTAL-E-VERSION
This kit requires OpenVMS VAX V5.5 or a subsequent version

Error: A version of OpenVMS VAX prior to Version 5.5 is running on the system.

User Action: Upgrade to OpenVMS VAX Version 5.5 or later.

%VMSINSTAL-E-NOSPACE
This software requires a minimum of *xxxx* free blocks for installation

Error: There is insufficient free disk space on your system to install this product.

User Action: Purge or delete any unnecessary files on the system disk and restart the software installation.

%VMSINSTAL-E-QUOTA_LOW
Quota *xxx* too low: now *yyy*; needs to be at least *zzz*

Error: A quota for the username under that the installation is being done is too low.

User Action: Use the AUTHORIZE utility to raise the indicated quota to at least the indicated value. Log out and log back in for the new quota to take effect and then restart the software installation.

2.3 Messages from the IVP

The following error messages are generated by the IVP program.

%VMSINSTAL-E-IVP_MISSING
file *xxxx* not found

Error: IVP has determined that a file which is part of the RAID software is missing from the system disk.

User Action: Reinstall the software. If this does not solve the problem, contact Compaq Multivendor Customer Services for assistance.

%VMSINSTAL-E-IVP_MISSING
module *xxxx* in library *yyyyy* not found

Error: The IVP has determined that a file that is part of the RAID software is missing from the system disk.

User Action: Reinstall the software. If this does not solve the problem, contact Compaq Multivendor Customer Services for assistance.

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