DECintact

Supplemental Information and Installation Guide

July 1997

This document contains additional information on the DECintact system made necessary by the development of a version of DECintact for OpenVMS Alpha.

Revision/Update Information:	This is a new manual.
Operating System:	OpenVMS Version 6.2 and above
Software Version:	DECintact Version 3.0

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Contents

Preface v

1 Product Updates

1.1 Changes to Product Version Numbers 1–1
1.2 Changes to Product Names 1–1

2 Updated Information and Application Migration

2.1 Updated Information 2–1
2.1.1 Incorporating a User Edit Routine into the Terminal Manager 2–2
2.1.2 Unsupported Features 2–3
2.1.3 New Files 2–3
2.1.4 New Shareable Images 2–4
2.2 Migrating DECintact Applications from OpenVMS VAX to OpenVMS Alpha 2–4
2.2.1 Updating User Edit Routines 2–5
2.2.2 Translating DECforms 2–5

3 Preparing for DECintact Installation on OpenVMS Alpha

3.1 DECintact Product Information 3–1
3.1.1 DECintact Licenses 3–2
3.1.2 Accessing the Online Release Notes 3–2
3.1.3 Contents of the Distribution Kit 3–3
3.1.4 Required Operating System Components 3–3
3.2 Prerequisite Software 3–4
3.3 Checking the Setup of DECdtm Services 3–4
3.4 Optional Software 3–5
3.5 License Registration 3–6
3.6 Installation Procedure Requirements 3–7

3.6.1 User Identification Code with Installation Verification Procedure 3–7
3.6.2 Process Privileges and Quotas 3–7
3.6.3 System Parameters 3–9
3.6.4 Disk Space 3–11
3.6.4.1 Disk Space if Installation Disk is the System Disk 3–12
3.6.4.2 Disk Space if Installation Disk is Not the System Disk 3–12
3.6.5 VMSINSTAL Requirements 3–12
3.6.6 Backing up Your System Disk 3–13
3.6.7 Time Required for Installation 3–13

4 Installing the DECintact System on OpenVMS Alpha

4.1 Performing the Installation 4–1
4.2 Error Conditions 4–8

A Sample Installation

Index

Examples

A–1 Sample Installation A–1

Tables

3–1 Features Supported by DECintact Licenses 3–2
3–2 Minimum Process Quotas 3–8
3–3 Minimum System Parameter Values 3–9

Preface

This document is intended as a supplement to the existing DECintact™ documentaton set. It contains additional information on the DECintact system made necessary by the development of a version of DECintact for OpenVMS™ Alpha, including installation requirements and procedures for installing the DECintact system on OpenVMS Alpha. It also contains information on product names and version numbers that have changed since the last release of the DECintact product.

Audience

This document is intended for anyone using the existing DECintact documentation set in reference to DECintact version 3.0 for OpenVMS on VAX or Alpha.

Document Structure

This document consists of four chapters and an appendix:

- Chapter 1 lists the products whose names or version numbers have changed since the release of DECintact version 2.0
- Chapter 2 describes information changes that override information presented in the existing DECintact documentation set, and provides information on migrating applications from OpenVMS VAX™ to OpenVMS Alpha.
- Chapter 3 provides the information necessary to prepare for installing the DECintact system on OpenVMS Alpha.
- Chapter 4 provides step-by-step instructions for installing the DECintact system on OpenVMS Alpha.
- Appendix A contains a sample installation of the DECintact system on OpenVMS Alpha.

Associated Documents

This document is intended as a supplement to the existing DECintact documentation set. This existing documentation set is comprised of the following items:

- *Introduction*
- *Installation Guide*
- *Getting Started*
- *Terminal User's Guide*
- Release Notes
- *Application Design Guide*
- *Application Programming Guide*
- *Application Programming Reference Manual*
- *Designing Forms with the Terminal Forms Editor*
- *System Management Guide*
- Online Help
- Status Messages
- Sample Applications Source Files
- *System Commands Quick Reference Guide*
- *Master Index*
- *Supplemental Information and Installation Guide*

Conventions

The following conventions are used in this guide:

Convention	Description
italics	Use of italic type indicates emphasis on a word or phrase. Titles of manuals are also italicized.
Return	A key name in a box indicated that you press the key on the terminal keyboard.

Convention	Description
Ctrl/X	This symbol indicates that you press the CTRL (control) key and hold it down while pressing the specified key (indicated here by X).
WORD	Uppercase text indicates OpenVMS data types, commands, keywords, logical names and routines or services.
word	In format descriptions, a lowercase word indicates parameters and variables.
keypad	Keypad refers to the numeric keypad. If the key sequence is PF1/keypad 8, press PF1 followed by the 8 key on the numeric keypad.

1
Product Updates

This chapter lists the changes to product names and version numbers that have occurred since the publication of the current DECintact documentation set.

This chapter contains the following sections:

- Section 1.1, Changes to Product Version Numbers
- Section 1.2, Changes to Product Names

1.1 Changes to Product Version Numbers

New versions of the following products have been released since the publication of the DECintact documentation set:

This product	Is now
DECintact™ V2.0	DECintact V3.0
VMS™ V5.4	OpenVMS™ V6.2 and 7.1
DECforms™ V1.3	DECforms V2.2

1.2 Changes to Product Names

The following products are now referred to by new names:

This product	Is now referred to as
DECtrace™ for VMS	Oracle TRACE Option™ for Rdb
VAX BASIC™	DEC BASIC™
VAX C	DEC C™
VAX CCD/Repository™	Oracle CCD/Repository™

Product Updates

This product	Is now referred to as
VAX COBOL™	DEC COBOL™
VAX DBMS™	Oracle CODASYL DBMS™
VAX DEC/ Code Management System (CMS)	DEC Code Management System (CMS)
VAX DEC/ Module Management System (MMS)	DEC Module Management System (MMS)
VAX DEC/Test Manager	DEC Test Manager
VAX FORTRAN™	DEC FORTRAN™
VAX Information Monitor	OpenVMS Information Monitor
VAX Language-Sensitive Editor/Source Code Analyzer	DEC Language-Sensitive Editor/Source Code Analyzer
VAX Notes™	DEC Notes™
VAX Pascal™	DEC Pascal
VAX Performance and Coverage Analyzer	DEC Performance and Coverage Analyzer
VAX PL/I	DEC PL/I
VAX Rdb	Oracle Rdb™
VAX Record Management Services (VAX RMS™)	Record Management Services (RMS™)
VAX Symbolic Debugger	OpenVMS Debugger
VAX Volume Shadowing™	OpenVMS Volume Shadowing™
VAXcluster™	OpenVMS Cluster™
VAXset™ software tools	DECset™
VAX RALLY™	DEC RALLY™
VMS Linker	OpenVMS Linker

2

Updated Information and Application Migration

This chapter describes updated information that must be applied to the existing DECintact documentation set, as well as information on migrating DECintact applications from OpenVMS VAX to OpenVMS Alpha.

This chapter contains the following sections:

- Section 2.1, Updated Information
- Section 2.2, Migrating DECintact Applications from OpenVMS VAX to OpenVMS Alpha

2.1 Updated Information

This section describes:

- Incorporating a User Edit Routine into the Terminal Manager
- Unsupported Features
- New Files
- New Shareable Images

The VMS manual names referenced in the DECintact document set have been changed with the release of new versions of OpenVMS. Please refer to the documentation set that accompanies your current version of OpenVMS.

Except where mentioned in this document, references to VAX in the existing documentation are valid for OpenVMS Alpha and OpenVMS VAX.

Some of the DECintact display screens may differ slightly from those pictured in the DECintact documentation set. Specifically, the DECintact screens have been updated to include the new version number.

Filenames that contain the DECintact version number have also been changed to be consistent with DECintact version 3.0.

2.1.1 Incorporating a User Edit Routine into the Terminal Manager

The procedure for incorporating a User Edit Routine (UER) into the Terminal Manager has been modified for DECintact on OpenVMS Alpha. For information on UERs, see the *DECintact Application Programming Guide*.

To incorporate a UER into the terminal manager, do the following:

1. Using a text editor, add the file specifications for your UERs to the end of the USEREDIT.OPT linker options file which is stored in the INTACT$COPY directory. Add each UER on a separate line after the following commented line:

   ```
   ! add linker commands for site-specific editing modules here
   ```

   For example, after you add a line for a UER module called MY_UER whose .OBJ file is stored on DISK1:[UER_DEVELOPMENT], the USEREDIT.OPT file contains the following lines:

   ```
   ! add linker commands for site-specific editing modules here
   DISK1:[UER_DEVELOPMENT]MY_UER
   SYMBOL_VECTOR = (MY_UER = PROCEDURE)
   ```

   On Alpha systems, you need to declare universal symbols for each UER by listing them in a SYMBOL_VECTOR= linker option. For more information about the SYMBOL_VECTOR option, refer to the documentation set that accompanies your current version of OpenVMS.

2. Save the modified linker options file in the directory pointed to by the logical name INTACT$VERSION. If you use the C programming language, there is no requirement to specify the C run-time library in your USEREDIT.OPT file. (On Alpha systems, the linker processes the C run-time library shareable [DECC$SHARE] by default because it resides in the default system shared image library [IMAGELIB.OLB]. For more information about how the linker processes default system libraries, refer to the documentation set that accompanies your current version of OpenVMS.)

3. Set your default directory to INTACT$COPY.

4. Relink the Terminal Manager using the following DCL command:

   ```
   $ @INTACT$VERSION:INTACT$REBUILD DSPLCL
   ```

The OpenVMS Linker produces two executable images: File DSPLCL.EXE contains a non-debuggable version of the Terminal Manager and runs during normal DECintact system startup. File DSPLCL.DBG contains a debuggable version of the Terminal Manager and runs during a debugging session. The OpenVMS Linker stores the DSPLCL.DBG and DSPLCL.EXE files in directory INTACT$COPY. The logical name INTACT$UER_LIBRARY points to the directory that contains the version of the DSPLCL.DBG file produced by the current version of DSPLCL.EXE. By default, INTACT$UER_LIBRARY points to DSPLCL.DBG in INTACT$COPY. To store the file DSPLCL.DBG in a different directory for debugging, redefine the logical name INTACT$UER_LIBRARY and reset it when debugging is complete.

5. If DSPLCL has been installed, run the INSTALL routine to remove the previously installed version. Do not reinstall the new DSPLCL version until your UER routine has been completely debugged. See the *DECintact Installation Guide* for information on using INSTALL.

2.1.2 Unsupported Features

DECintact System buffers are no longer supported on OpenVMS Alpha, and you can no longer allocate buffers in VMS nonpaged pool memory. (See the *DECintact System Management Guide*, Section 15.2.4.3) When you enter the SET_TRANSACTION_SECTION option, the following prompt will still appear on your screen:

```
Number of Buffers you wish to support in POOL [0]?
```

The default value of 0 indicates that no special physical memory is to be used. This question is only displayed to maintain compatibility with existing DCL command procedures. Irrespective of what is entered, the setting will remain at 0.

2.1.3 New Files

The following new files result from installation of DECintact V3.0. for OpenVMS Alpha:

File	License	Saveset	Location
PLV_CODE.OBJ	ALL	B	VERSION
INTACT$HFU.OPT	ALL	B	VERSION,COPY
DSPLCL.OPT	ALL	B	VERSION,COPY

2.1.4 New Shareable Images

One new shareable image is installed with DECintact V3.0 for OpenVMS Alpha, INTACT$TRSHR.EXE. This shareable image is defined in the logical name table with the /SYSTEM and /EXEC qualifiers.

2.2 Migrating DECintact Applications from OpenVMS VAX to OpenVMS Alpha

This section describes:

- Updating User Edit Routines
- Translating DECforms

The DECintact system supports applications that are written in the following OpenVMS programming languages:

- DEC BASIC for OpenVMS
- DEC C for OpenVMS
- DEC COBOL for OpenVMS
- DEC FORTRAN for OpenVMS
- DEC Pascal for OpenVMS
- PL/I for OpenVMS

DECintact routines are language-independent and use standard OpenVMS procedure calling conventions. The *DECintact Application Programming Reference Manual* describes all the DECintact routines used for writing applications.

Call a DECintact routine as an external procedure using the syntax appropriate to your programming language. Unless otherwise noted, pass all arguments to DECintact routines by reference, that is, pass the addresses of the arguments, not the values.

For information on moving existing DECintact Applications on OpenVMS VAX to OpenVMS Alpha, refer to the appropriate programming language Porting/Migration documentation.

2.2.1 Updating User Edit Routines

When you migrate a DECintact applications from OpenVMS VAX to OpenVMS Alpha, you must modify your USEREDIT.OPT file to incorporate your UER into the Terminal Manager. For information on incorporating UERs into the Terminal Manager, see Section 2.1.1.

2.2.2 Translating DECforms

When you use the DECforms TRANSLATE command, it is recommended that you specify the /NOMEMBER_ALIGNMENT qualifier. Specifying this qualifier causes record fields to be aligned by byte. Each record field begins on the first byte after the previous record field.

For compatibility between VAX and Alpha platforms this switch will only affect the Alpha run-time record alignments, the VAX run-time records will always be byte aligned. In this way, the produced .FORM file will be compatible between platforms.

3

Preparing for DECintact Installation on OpenVMS Alpha

This chapter discusses the preparations and requirements necessary for installing the DECintact system on OpenVMS Alpha.

- Section 3.1, DECintact Product Information
- Section 3.2, Prerequisite Software
- Section 3.3, Checking the Setup of DECdtm Services
- Section 3.4, Optional Software
- Section 3.5, License Registration
- Section 3.6, Installation Procedure Requirements

The DECintact product is a transaction processing system that provides a foundation for building simple and complex applications on one or more OpenVMS systems. Multiple copies of the DECintact system can execute at the same time, sharing physical memory. The DECintact system runs as a collection of routines and processes under the OpenVMS operating system.

3.1 DECintact Product Information

This section describes:

- DECintact Licenses
- Accessing the Online Release Notes
- Contents of the Distribution Kit
- Required Operating System Components

For more information about the DECintact product, see the DECintact documentation set, available in hardcopy form or as part of the OpenVMS Online Documentation Library on CDROM.

3.1.1 DECintact Licenses

Three licenses provide different levels of support for the DECintact system:

- DECINTACT—The *development* system allows complete DECintact functionality.
- DECINTACT-RT—The *run-time* system runs existing DECintact applications, and accesses applications running on other network nodes.
- DECINTACT-REM—The *remote-access* system accesses DECintact applications running on other network nodes, and provides DECintact front-end features.

Table 3–1 illustrates the differences in features among the three DECintact systems.

Table 3–1 Features Supported by DECintact Licenses

Function	Development	Run-Time	Remote-Access
Terminal management	Yes	Yes	Yes
User edit routines	Yes	Yes	Yes
Remote application access	Yes	Yes	Yes
Queue management	Yes	Yes	No
File management	Yes	Yes	No
File/queue recovery	Yes	Yes	No
Application execution	Yes	Yes	No
Application compiles	Yes	No	No
Forms development	Yes	No	No
Application development	Yes	No	No

3.1.2 Accessing the Online Release Notes

The DECintact system provides online release notes that you can either display or print during the installation procedure.

The prompt to display or print the release notes appears in the installation procedure, as noted in the description of step 6, (Section 4.1) only when you invoke the VMSINSTAL command procedure with the N option.

Note

For access to the release notes before you install the DECintact system, follow the installation procedure (see Section 4.1) up to step 6, in which you can choose to read or print the release notes and discontinue the installation procedure.

To read the release notes after the installation, display or print the file SYS$HELP:DECINTACT030.RELEASE_NOTES.

The DECintact help that is available through accessing DCL help also directs you to the release notes file. After installation, enter the following command:

```
$ HELP INTACT RELEASE_NOTES Return
```

3.1.3 Contents of the Distribution Kit

The DECintact software kit consists of the software media and the documentation required to install the product. The primary media is CDROM. The required software licenses must be purchased separately.

DECintact systems support the LMF features provided by OpenVMS; LMF requires registration of a Product Authorization Key (PAK).

The bill of materials specifies the contents of your kit. Check the contents of your kit against the list in the bill of materials. If your kit is damaged or if you find that parts of it are missing, call your DIGITAL representative.

For information about mounting the distribution media as well as several options to the installation procedure, see your OpenVMS documentation set.

A list of files added to your system during installation can be found in the *DECintact Installation Guide*. Any additional files specific to DECintact V3.0 for OpenVMS Alpha are listed in Section 2.1.3 and Section 2.1.4. The installation procedure defines the installation directory that you specify during the installation as group logical name INTACT$VERSION. Most DEC intact files added to your system are located in INTACT$VERSION or subdirectories of this directory. See the *DECintact System Management Guide* for information about the DECintact directory structure.

3.1.4 Required Operating System Components

The OpenVMS operating system comes with a variety of support options, or classes. Classes include such features as networking and RMS journaling. For a complete list of the required classes, see the DECintact Software Product Description (SPD).

3.2 Prerequisite Software

You must have a valid version of OpenVMS installed on your system before installing the DECintact system. To determine what version of the OpenVMS operating system is running, enter the following command:

```
$ SHOW SYSTEM Return
```

The first line of the ensuing display shows the version of the OpenVMS operating system.

VMSINSTAL checks for the correct version of OpenVMS; if you have an incorrect version, VMSINSTAL fails.

For the current supported software version, refer to the DECintact Software Product Description (SPD).

3.3 Checking the Setup of DECdtm Services

To ensure that DECdtm software is set up correctly for all nodes that use the DECintact system, perform the following actions:

1. Check that the system logical name SYS$DECDTM_INHIBIT is not defined. If this logical name is defined, remove it from SYLOGICALS.COM and reboot the system.
2. Check to see that the following System Generation Utility (SYSGEN) parameters are defined:
   - SCSNODE
   - SCSSYSTEMID

   These parameters must be defined for DECintact to support the DECdtm software. If they are not defined, edit SYS$MODPARAMS.DAT, the parameter data file used by the AUTOGEN command procedure, and use AUTOGEN to define this SYSGEN parameter. (See steps 3 and 4 in Section 3.6.3.)
3. Check that the system logical name SYS$JOURNAL is defined for a valid device and directory. See the *DECintact Installation Guide* for more information about defining SYS$JOURNAL.
4. Check to see that the system processes TP_SERVER and IPCACP are started. If these processes are not started, execute the DECDTM$STARTUP.COM procedure by entering the following command:

   ```
   $ @SYS$STARTUP:DECDTM$STARTUP.COM FULL
   ```

Running this procedure provides information explaining the problem that prevents DECdtm services from starting. When the problem is diagnosed and solved, reboot the system to restart DECdtm services.

5. Using the Log Manager Control Program (LMCP) Utility, ensure that the DECdtm transaction log is defined for every node of the cluster where the DECintact system is used. See the *DECintact Installation Guide* for more information about defining the DECdtm transaction log.

3.4 Optional Software

After meeting the requirements for prerequisite software, you can also install any of the latest supported versions of the following software products:

- DECforms
- DECnet™
- Oracle TRACE Option for Rdb
- Oracle CODASYL DBMS
- Oracle RDB
- VAX COBOL GENERATOR™
- OpenVMS CDD/Plus
- OpenVMS Language-Sensitive Editor/Source Code Analyzer
- OpenVMS languages:

  DEC BASIC
  DEC C
  DEC FORTRAN
  DEC Pascal
  DEC COBOL
  DEC PL/I

- DECset software tools such as:

  DEC Code Management System (DEC/CMS)
  DEC Module Management System (DEC/MMS)
  DEC Test Manager
  DEC Performance and Coverage Analyzer
  OpenVMS Source Code Analyzer

There are no dependencies on the optional software for installation.

Note

Although the following software products are optional for the installation of the DECintact product, DIGITAL recommends installing them before installing the DECintact product if you want support for them by the DECintact system.

- Oracle TRACE Option for Rdb
- OpenVMS Language-Sensitive Editor/Source Code Analyzer

The DECintact installation procedure displays messages about the status of support by the DECintact system for these products depending on whether these products are installed on the node used for the DECintact installation. See the *DECintact Installation Guide* for more information about support for these products.

For currently supported software versions, refer to the DECintact Software Product Description (SPD).

3.5 License Registration

Register a DECintact system license through the OpenVMS License Management (LMF) in accordance with the license agreement signed by your site. License registration information is contained in the Product Authorization Key (PAK) that you must purchase separately. The PAK is a paper certificate that contains information about the license you have purchased to run the DECintact software.

Before installing the DECintact system, register and load the PAK. To register your PAK, log in to the SYSTEM account. Then, enter the following command:

```
$ @SYS$UPDATE:VMSLICENSE.COM Return
```

Refer to your OpenVMS documentation set for information pertaining to this command procedure and to the management features of LMF. During the installation, the system asks whether you registered the DECintact license and loaded the appropriate authorization key. When the system prompts you for information, respond with the data from your PAK.

If you plan to use the DECintact system on more than one node in a OpenVMS Cluster system, perform a license load on the other nodes after you complete this installation.

3.6 Installation Procedure Requirements

This section discusses the following topics that deal with various requirements for installing the DECintact system:

This section describes:

- User Identification Code with Installation Verification Procedure
- Process Privileges and Quotas
- System Parameters
- Disk Space
- VMSINSTAL Requirements
- Backing up Your System Disk
- Time Required for Installation

3.6.1 User Identification Code with Installation Verification Procedure

The Installation Verification Procedure (IVP) must run within a group that has an established groupwide logical name table. To run the IVP, you, the installer, must be in your default User Identification Code (UIC). If you are not currently running from your own UIC, use the SET UIC command to return to your default UIC before running VMSINSTAL.

Note that the DECintact product does not have to be installed from the SYSTEM account.

3.6.2 Process Privileges and Quotas

To install the DECintact system, you need either the SETPRV privilege or both of the following privileges:

- CMKRNL
- TMPMBX

The following privileges are also required to run the IVP:

- ALTPRI
- DETACH
- GROUP
- GRPNAM
- GRPPRV
- LOG_IO

- NETMBX
- PFNMAP
- PRMGBL
- SHARE
- SHMEM
- SYSGBL
- SYSLCK
- SYSNAM
- SYSPRV

Note that as the VMSINSTAL command procedure executes, it turns off the BYPASS privilege at the start of the installation.

Table 3–2 shows the minimum process quotas needed for installing the DECintact system.

Table 3–2 Minimum Process Quotas

Process Name	Description	Minimum Quota
PGFLQUO	Paging File	19,100
WSQUO	Working set pages	2,048
WSEXTENT	Maximum working set	2,048
PRCLM	Subprocess quota	1
MAXDETACH	Detached processes	0
ASTLM	AST quota	24
BIOLM	Buffered I/O limit	18
BYTLM	Buffered I/O byte count quota	40,000
DIOLM	Direct I/O limit	40
ENQLM	Enqueue quota	200
FILLM	Open file quota	100

To check or change process quotas, use the OpenVMS Authorize Utility. The following two examples illustrate checking and changing the quotas for the SYSTEM account.

To check the quotas you currently have, enter the following commands:

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

To change a process quota—the ASTLM value for example—enter the following commands, substituting the appropriate process name and value where this example shows ASTLM=24:

```
$ SET DEFAULT SYS$SYSTEM Return
$RUN AUTHORIZE Return
UAF> MODIFY SYSTEM/ASTLM=24 Return
UAF> EXIT Return
$
```

If you change any quotas with the OpenVMS Authorize Utility, you must log out of the system and log back in for them to take effect. The OpenVMS Authorize Utility is described in your OpenVMS documentation set.

3.6.3 System Parameters

Table 3–3 shows the minimum values for SYSGEN system parameters required for installation.

Table 3–3 Minimum System Parameter Values

Parameter	Minimum Value
GBLSECTIONS	25 unused global sections
GBLPAGES	6,000 unused global pages
WSMAX	2,048 pages

Preparing for DECintact Installation on OpenVMS Alpha

To ensure that your system had the required SYSGEN system parameter quotas for the installation, perform the following steps:

Step 1. Check the current SYSGEN system parameter values.

Check each of the following SYSGEN system parameter values by entering the command in the example following each listed parameter:

- GBLSECTIONS—Number of free global sections

```
$ WRITE SYS$OUTPUT F$GETSYI("FREE_GBLSECTS") Return
12
```

- GBLPAGES—Number of free global pages

```
$ WRITE SYS$OUTPUT F$GETSYI("FREE_GBLPAGES") Return
4636
```

- WSMAX—Size of current working set maximum

```
$ WRITE SYS$OUTPUT F$GETSYI("WSMAX") Return
4096
```

Step 2. Calculate the number of unused global sections and pages needed.

To determine the number of additional unused global sections and pages needed, perform the following calculation for GBLSECTIONS and GBLPAGES:

> Subtract the current number unused for the parameter (the value obtained for the parameter in step 1. from the required total number unused for the parameter (as specified in Table 3–3).

If the value of the difference is greater than zero, you need to change the value of the parameter.

The following examples show this calculation for these parameters:

- Additional global sections needed

  25-12=13 unused sections needed

  In this example, the difference, 13, is greater than zero and represents the number of additional unused global sections needed to install the DECintact system.

- Additional global pages needed

  6,000-4,636=1,364 unused pages needed

In this example, the difference, 1,364, is greater than zero and represents the number of additional unused global pages needed to install the DECintact system.

Step 3. Edit the system parameters.

If you must change these or any other system parameters, plan to change them before you begin the installation procedure. To modify the values for the global sections and pages parameters, edit SYS$SYSTEM:MODPARAMS.DAT, the parameter data file used by the AUTOGEN procedure. For example, to provide additional global sections and pages based on the values calculated in step 2, edit MODPARAMS.DAT and add the following lines, or change the existing lines as follows:

```
ADD_GBLSECTIONS=13
ADD_GBLPAGES=1364
```

Step 4. Activate the new parameters.

Because the global sections and global pages parameters are not dynamic, you must run AUTOGEN to recompute them. Enter the following command sequence to shut down the OpenVMS system and reboot, activating the new system parameters:

```
$ @SYS$UPDATE:AUTOGEN SAVPARAMS GENPARAMS Return
$ @SYS$UPDATE:AUTOGEN SETPARAMS REBOOT Return
```

For further information on using AUTOGEN, refer to your OpenVMS documentation set.

3.6.4 Disk Space

You can install the DECintact system on either your system disk, or another disk. Consider the following information when deciding where to create the INTACT$VERSION directory:

Building the AVERTZ sample application requires approximately 20,000 blocks to accommodate files in three subdirectories below directory INTACT$VERSION:[EXAMPLES.AVERTZ], using one subdirectory for each of the following:

- Oracle Rdb database
- AVERTZ executable files
- OpenVMS CCD/Plus dictionary

If disk quotas are set on your system, ensure that they are sufficient to accommodate DECintact disk space requirements.

To determine the number of free blocks on the disk that you designate for the installation, enter the following command:

```
$ SHOW DEVICE devicename: Return
```

3.6.4.1 Disk Space if Installation Disk is the System Disk

To install the DECintact system on your system disk, provide the following disk space:

- 85,000 blocks for peak disk-block utilization
- 75,000 blocks for net disk-block utilization

3.6.4.2 Disk Space if Installation Disk is Not the System Disk

If you are installing the DECintact system on a disk other than the system disk, you must still provide the following disk space:

- System disk
  - 65,000 blocks for peak disk-block utilization
  - 10,000 blocks for net disk-block utilization
- Installation disk
  - 75,000 blocks for peak disk-block utilization
  - 75,000 blocks for net disk-block utilization

3.6.5 VMSINSTAL Requirements

When you invoke the VMSINSTAL command procedure, it checks the following:

- Whether you have set your default device and directory to SYS$UPDATE
- Whether you are logged into a privileged account
- Whether you have adequate quotas for installation
- Whether DECnet is running
- Whether any users are logged in to the system

If VMSINSTAL detects any problems during the installation, it notifies you and asks you if you want to continue the installation. In some instances, you can enter YES to continue. To stop the installation process and correct the situation, enter NO or press Return. Then correct the problem and restart the installation.

3.6.6 Backing up Your System Disk

At the beginning of the installation, VMSINSTAL asks if you have backed up your system disk. DIGITAL recommends that you do a system disk backup before installing any software.

Use the backup procedures that are established at your site. For details on performing a system disk backup, refer to your OpenVMS documentation set.

3.6.7 Time Required for Installation

Installing the DECintact system takes approximately 10-30 minutes.

If you are unfamiliar with VMSINSTAL, the OpenVMS operating system, or the configuration of your system, allocate a minimum of two hours to read the referenced documentation and gather the required information.

4

Installing the DECintact System on OpenVMS Alpha

This chapter describes the steps to install the DECintact system on OpenVMS Alpha. It is made up of the following sections:

- Section 4.1, Performing the Installation
- Section 4.2, Error Conditions

The DECintact installation procedure consists of a series of questions and informational messages. When responding to a prompt, press the Return key after entering your response. If you need additional help during the installation, enter a question mark (?) in response to any prompt; the installation procedure displays an explanation of possible valid responses. For a sample of a DECintact installation, see Appendix A.

To abort the installation procedure, press Ctrl/Y. When you press Ctrl/Y, the installation procedure deletes all files it has created up to that point (but not their directories) and exits. To retry the installation procedure after pressing Ctrl/Y, proceed from step 2.

Enhancements to VMSINSTAL in future releases of the OpenVMS operating system might result in additional system prompts during installation. Although these installation instructions do not include these prompts in the installation procedure, the installation can proceed normally.

4.1 Performing the Installation

Step 1. Log in to a properly privileged account.

Log in to an account that has the required privileges and quotas. Be sure that all necessary privileges are enabled. Section 3.6.2 provides information about these requirements. The following example shows logging into the SYSTEM account.

```
Username: SYSTEM  Return
Password:         Return
```

Step 2. Invoke VMSINSTAL.

To start the installation, invoke the VMSINSTAL command procedure, located in the SYS$UPDATE directory, by entering a DCL command in the following format:

```
@SYS$UPDATE:VMSINSTAL saveset-name device-name OPTIONS N
```

where:

saveset-name — Is the installation name for the component to install. For the DECintact system, use the following installation name, which identifies the product name and version number:

```
DECINTACT030
```

device-name — Is the name of the device on which you plan to mount the media. For example, DKA1: is the device name for a CD ROM drive.

OPTIONS N — Is an optional parameter that indicates you want to see the prompt to display or print the release notes. If you omit the OPTIONS N parameter, VMSINSTAL does not ask you about the release notes. The release notes can contain additional information about the installation; review the release notes before proceeding with the installation. If you are restarting the installation and have already reviewed the release notes, you do not need to specify OPTIONS N. The release notes are always placed in SYS$HELP, whether or not you specify OPTIONS N.

Note that there are several other options you can select when you invoke VMSINSTAL:

- Auto_answer option (A)—Initially creates a file that contains your answers to VMSINSTAL questions and prompts. You can then use the option (and the answer file) to save time during a reinstallation (typically after upgrading your system).
- Get save-set option (G)—Lets you store product save sets temporarily on a magnetic tape or in a disk directory.
- File log option (L)—Logs all activity to the terminal during installation.
- Alternate root option (R)—Lets you install the product to a system root other than that of the running system.

See your OpenVMS documentation set for detailed information on these options. If you specify more than one option, separate the options with commas (OPTIONS A,N).

The following example invokes VMSINSTAL to install Version 3.0 of the DECintact system from CD ROM drive DKA1: and shows the system response. This example uses the OPTIONS N release note parameter.

```
$ @SYS$UPDATE:VMSINSTAL DECINTACT030 DKA1: OPTIONS N

OpenVMS AXP Software Product Installation Procedure V6.2-1H3

It is 23-JUL-1997 at 10:43.
Enter a question mark (?) at any time for help.
```

After invoking VMSINSTAL, you receive several prompts and messages that explain and direct the installation. If you do not supply either the product name or device name, VMSINSTAL prompts you for this information later in the installation procedure. If VMSINSTAL prompts you for a device name after you have already provided one, you are probably naming a device that is not available on the system. VMSINSTAL continues to prompt you for a device until you name a valid one.

VMSINSTAL does not prompt you for any options, so be sure to include OPTIONS N on the VMSINSTAL command line to access the release notes during the installation.

Step 3. Check any warning messages that ask you if you want to continue.

If you do not complete the installation procedure described in previous sections of this manual, the procedure displays warnings about existing problems and issues a prompt asking you if you want to continue.

Correct any problems before continuing the installation procedure. If you continue without correcting the problem, DIGITAL may not support the resulting installation. The following example shows a warning message:

```
%VMSINSTAL-W-DECNET, Your DECnet network is up and running.
Do you want to continue anyway [NO]?
```

If you answer NO, VMSINSTAL returns you to DCL command level. After you shut down the network, you must return to step 2. to run VMSINSTAL again. If you answer YES, the installation continues normally.

Step 4. VMSINSTAL checks that you have backed up your system disk.

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

If you have not backed up your system disk, do not continue with the installation. If you need to back up the system disk, answer NO. VMSINSTAL exits and returns you to the DCL prompt. Back up your system disk, and then start the installation procedure at step 2.

If you have already backed up the system disk, answer YES.

See the appropriate OpenVMS software installation guide. For general information on backups, see your OpenVMS documentation set.

Step 5. Select a release notes option.

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

```
    Additional Release Notes Options:

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

* Select option [2]: 2 Return
```

If you select option 1, VMSINSTAL displays the release notes immediately on your screen. If you select option 2 or option 3, VMSINSTAL prompts you for a queue name.

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

You can enter a queue name or press Return to indicate the default output print device, SYS$PRINT. VMSINSTAL responds with an informational message indicating the queue used, which is SI$8700 in the following example:

```
Job INTACT030 (queue SI$8700, entry 1794) started on SYS$PRINT
```

Next, or if you select option 4, VMSINSTAL displays a prompt asking you if you want to continue the installation:

```
* Do you want to continue the installation [NO]?: YES Return

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

 DECintact V3.0 System Installation
```

If you answer NO, VMSINSTAL terminates the installation.

Note

The name of the release notes file installed by VMSINSTAL consists of the current product name and version number. It is good practice to keep release notes for previous versions of the DECintact system.

Step 6. Decide whether to purge files.

New generations of the files SYS$LIBRARY:DCLTABLES.EXE and SYS$HELP:HELPLIB.HLB are created during installation of the DECintact system. VMSINSTAL asks you whether you want to purge the old files:

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

To purge the old copies of these two files after installation, answer YES in response to the preceding question. If you do not want to purge the old generations of these files, answer NO.

Step 7. Select the device and directory.

VMSINSTAL explains how to perform this step and prompts for the destination device and directory name where all DECintact V3.0 files are to reside. Supply the destination device and directory name.

Note

You must provide a new directory name, that is, the name of a directory that does not currently exist.

```
In response to the next question, please enter destination device and
directory specification for DECintact files. The directory name must
be a new directory name, that is, the name of a directory that does not
exist. This directory will be the INTACT$VERSION directory once the
installation is complete. The INTACT$COPY directory will be a
subdirectory below this.
The default device and directory are: SYS$SYSDEVICE:[DECINTACT030]

* Installation device and directory [SYS$SYSDEVICE:[DECINTACT030]]:
```

Step 8. Select and verify the software license.

The installation procedure displays license information about the DECintact product and asks the following two questions to verify that a DECintact license has been installed before the product is installed. For each question, supply an appropriate answer.

```
Please answer the next question by selecting the number which
represents the currently loaded DECintact license.

    (1) DECINTACT
    (2) DECINTACT-RT
    (3) DECINTACT-REM

* Which license have you registered and loaded [1]: 1
```

```
    Product: DECINTACT
    Producer: DEC
    Version: 3.0
    Release Date:23-JULY-1997
* Does this product have an authorization key registered and loaded? YES
```

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

Step 9. Read the informational messages.

If LSE is not installed or if a license for LSE is not loaded, the procedure displays the following message and instructions:

```
   ************************************************************

   The OpenVMS Language-Sensitive Editor is not installed on your
   system. To have the OpenVMS Language-Sensitive Editor support,
   you must:

    1.  Load the OpenVMS Language-Sensitive Editor License
    2.  Install the OpenVMS Language-Sensitive Editor
    3.  @Intact$vesion:Intact$update_lse.com

   ************************************************************
```

If an unsupported version of LSE is installed, the procedure displays the following message and instructions:

```
   ************************************************************

   OpenVMS LSE nn.nn is installed on your system. To use the
   OpenVMS Language-Sensitive Editor template for DECintact system
   calls, you must:

    1.  Install DEC LSE 3.0 or higher.
    2.  @Intact$version:Intact$update_lse.com

   ************************************************************
```

where

nn.nn Is the version number of LSE installed on your system.

VMSINSTAL then displays the following informational messages. Note that system disk directory messages are displayed only if you are installing the DECintact system on the system disk.

```
   All interactive input for the installation of DECintact V3.0 is now
   complete. It will take approximately 10 to 30 minutes to complete the
   installation depending on your system and kit media.

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

   LSE environment successfully updated.

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

Step 10. Check installation verification messages.

The Installation Verification Procedure (IVP) runs automatically. Check that your system responses are the same. If not, identify the problem as described in Section 4.2.

```
%INTACT%IVP-I-BEGIN, starting DECintact installation verification
procedure
%INTACT-I-FUNC, executing Function LOGICAL_NAMES_ONLY.
%INTACT-I-END, LOGICAL_NAMES_ONLY completed.
%INTACT%IVP-I-INSFAC, Inserting facility definition into Oracle TRACE
Admin DB.
%INTACT%IVP-S-EPCINS, Facility insert successful.
%INTACT%IVP-I-INSFILE, Inserting facility definition file into Oracle
TRACE facility library
%INTACT%IVP-S-LIBINS, Library insert successful.
%INTACT%IVP-I-END, successfully completed DECintact installation
verification procedure
```

Step 11. The installation procedure ends.

The following messages indicate that the installation procedure is complete:

```
    Installation of DECINTACT V3.0 completed at 10:55

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

    Creating installation data file: VMI$ROOT:[SYSUPD DECINTACT030.VMI_DATA

    VMSINSTAL procedure done at 10:55
```

Step 12. Log out.

You can now log out of the privileged account.

```
$ LOGOUT Return
SYSTEM       logged out at 23-JULY-1997 10:55:20.91
```

Note that VMSINSTAL deletes or changes entries in the process tables during the installation. Therefore, if you try to invoke the installation from the system manager's account and you want to continue to use that account and restore those symbols, log out and log in again.

4.2 Error Conditions

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

```
%VMSINSTAL-F-UNEXPECTED, Installation terminated due to unexpected
event.
```

One or more of the following conditions can cause an error during the installation:

- Insufficient disk space to complete installation
- Insufficient AST quota
- Insufficient buffered I/O byte count
- Insufficient subprocess quota
- Insufficient open file quota
- Insufficient process paging file quota
- Insufficient process working set quota
- Insufficient maximum working set
- Incorrect version of OpenVMS

For descriptions of the error messages generated by these conditions, see your OpenVMS documentation set.

If you are notified that any of these conditions exist, take the appropriate action, as described in the message. You may need to change a system parameter (with SYSGEN) or increase an authorized quota value (with AUTHORIZE). If the installation fails, restart the installation procedure from step 2.

For a list of the more common messages specific to the DECintact system issued by VMSINSTAL, refer to the *DECintact Installation Guide*.

If the Installation Verification Procedure fails, you receive messages explaining the failure. These IVP messages are also listed in the *DECintact Installation Guide*.

A
Sample Installation

This appendix contains a sample installation for the DECintact system on OpenVMS Alpha. Please note that this is a sample. The installation procedure may be modified slightly in maintenance updates of this product.

Example A–1 is the dialog from a DECintact development license installation.

Example A–1 Sample Installation

```
Username: SYSTEM
Password:

                Welcome to AXP/VMS V6.2

    Last interactive login on Wednesday,  23-JUL-1997 10:01:18.21
    Last non-interactive login on Tuesday,  22-JUL-1997 19:27:09.87

$ @SYS$UPDATE:VMSINSTAL DECINTACT030 DKA1: OPTIONS N

OpenVMS AXP Software Product Installation Procedure V6.2-1H3

It is 23-JUL-1997 at 10:43.

Enter a question mark (?) at any time for help.
* Are you satisfied with the backup of your system disk [YES]? YES

The following products will be processed:

  DECINTACT V3.0

    Beginning installation of DECINTACT V3.0 at 10:43

%VMSINSTAL-I-RESTORE, Restoring product save set A ...

Release notes included with this kit are always copied to SYS$HELP.

         Additional Release Notes Options:
```

(continued on next page)

Sample Installation

Example A–1 (Cont.) Sample Installation

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

   * Select option [2]: 2

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

   Job INTACT030 (queue OLTP$LN11, entry 929) started on OLTP$LN11

   * Do you want to continue the installation [NO]? YES

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

 DECintact V3.0 System Installation

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

    In response to the next question, please enter destination device
    and directory specification for DECintact files. The directory name
    must be a new directory name; that is, the name of a directory that
    does not exist.

    This directory will be the INTACT$VERSION directory once the
    installation is complete. The INTACT$COPY directory will be a
    subdirectory below this.

    The default device and directory are:SYS$SYSDEVICE:[DECINTACT030]

* Installation device and directory [SYS$SYSDEVICE:[DECINTACT030]]:

    Please answer the next question by selecting the number which
    represents the currently loaded DECintact license.

 1.  DECINTACT
 2.  DECINTACT-RT
 3.  DECINTACT-REM


* Which license do you have registered and loaded [1]: 1

        Product:      DECINTACT
        Producer:     DEC
        Version:      3.0
        Release Date: 23-JULY-1997

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

    All interactive input for the installation of DECintact V3.0 is
    now complete. It will take approximately 10 to 30 minutes to complete
    the installation, depending on your system and kit media.
```

(continued on next page)

Example A–1 (Cont.) Sample Installation

```
  Copyright Digital Equipment Corporation 1994, 1997. All rights reserved.

  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.

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

%VMSINSTAL-I-RESTORE, Restoring product save set B ...

    LSE environment successfully updated.

%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target
directories...
%INTACT$IVP-I-BEGIN, starting DECintact installation verification
procedure
%INTACT-I-FUNC, executing Function LOGICAL_NAMES_ONLY.
%INTACT-I-END, LOGICAL_NAMES_ONLY completed.

%INTACT$IVP-W-VERSREQ, DECintact requires Oracle TRACE version 1.1 or
higher.  Facility not inserted.
%INTACT$IVP-I-VERS, Installed Oracle TRACE Version is V2.2.
%INTACT$IVP-I-INSFILE, Inserting facility definition file into Oracle
TRACE trace facility library.
%INTACT$IVP-S-LIBINS, Library insert successful.
%INTACT$IVP-I-END, successfully completed DECintact installation
verification procedure
    Installation of DECINTACT V3.0 completed at 10:55
    Adding history entry in VMI$ROOT:[SYSUPD]VMSINSTAL.HISTORY
    Creating installation data file: VMI$ROOT:[SYSUPD DECINTACT030.VMI_DATA
    VMSINSTAL procedure done at 10:55

$ LOGOUT
   SYSTEM       logged out at 23-JULY-1997 10:55:20.91
```

Index

A

Aborting DECintact installation, 4–1
Applicatons, migrating to OpenVMS Alpha, 2–4
Authorize utility, 3–8
AUTOGEN command procedure, 3–4

B

Backing up the system disk
  before installation, 3–13
  during installation, 4–3

C

Calling DECintact routines, 2–4
Changes to product names and version numbers, 1–1
C run-time library, 2–2

D

DEC BASIC, 3–5
DEC C, 3–5
DEC COBOL, 3–5
DEC Code Management System (DEC/CMS), 3–5
DECdtm, checking setup, 3–4
DECforms, 3–5
  TRANSLATE command, 2–5
DEC FORTRAN, 3–5
DECintact licenses
  registration, 3–6
  selecting, 4–5
DECintact licenses (cont'd)
  types, 3–2
  verifying, 4–5
DECintact system
  aborting installation, 4–1
  calling routines, 2–4
  license features, 3–2
  licenses
    See DECintact licenses
  supported programming languages, 2–4
DEC Language Sensitive Editor
  See LSE
DEC Module Management System (DEC/MMS), 3–5
DECnet
  running during installation, 4–3
  support for, 3–5
DEC Pascal, 3–5
DEC Performance and Coverage Analyzer, 3–5
DEC PL/I, 3–5
DECset, 3–5
DEC Test Manager, 3–5
Development system license, 3–2
Directories
  creating for installation, 4–5
  location of DECintact system files, 3–3
Disk space, required for installation, 3–11
Displaying
  OpenVMS version numbers, 3–4
  release notes
    during installation, 4–4
    methods for displaying, 3–2
    OPTIONS N, 4–2

Distribution kit, contents, 3–3
DSPLCL, Terminal Manager executables, 2–2

E

Error conditions, 4–8

F

Fields, alignment in DECforms, 2–5
Files, installed with DECintact for OpenVMS Alpha, 2–3

G

GBLPAGES, 3–9
GBLSECTIONS, 3–9

H

Help, accessing during installation, 4–1

I

Images
  new images for DECintact for OpenVMS Alpha, 2–3
  produced by OpenVMS Linker, 2–2
Installation
  aborting, 4–1
  failures, 4–8
  performing, 4–1
  preparations, 3–1
  prerequisite privlidges, 3–7
  prerequisite quotas, 3–8
  procedures, 4–1
  requirements, 3–7
  sample, A–1
  selecting a device and directory, 4–5
  time required, 3–13
  verification messages, 4–6
  versions of DSPLCL, 2–3
Installation Verification Procedure
  See IVP
IPCACP, 3–4
IVP
  messages during installation, 4–6
  requirements, 3–7

L

License Management Facility
  See LMF
Licenses
  See DECintact licenses
Linker options file, 2–2
LMF, 3–3
Log Manager Control Program (LMCP), 3–5
LSE
  detected during installation, 4–6
  installing before DECintact, 3–6
  support for, 3–5

M

Messages
  after interactive input, 4–7
  checking IVP messages, 4–6
  installation failure, 4–8
  regarding LSE, 4–6
  warning, 4–3
Migrating applications, 2–4
  translating DECforms, 2–5
  updating UERs, 2–4

N

NOMEMBER_ALIGNMENT qualifier, 2–5

O

OpenVMS, 3–3
  supported languages, 3–5
OpenVMS CDD/Plus, 3–5
OpenVMS License Management (LMF), 3–6
OpenVMS Linker, 2–2
OpenVMS Source Code Analyzer, 3–5

Operating system, prerequisite, 3–3
OPTIONS N parameter, 4–2
Oracle CODASYL DBMS, 3–5
Oracle RDB, 3–5
Oracle TRACE Option for Rdb
installing before DECintact, 3–6
support for, 3–5

P

Parameters, settings required for installation, 3–9
Prerequisites
disk space, 3–11
for installing DECintact, 3–3
for running VMSINSTAL, 3–12
general, 3–7
parameter settings, 3–9
privlidges, 3–7
process quotas, 3–8
software, 3–4
Privlidges, needed for installation, 3–7
Product Authorization Key (PAK)
registering, 3–6
required to run DECintact, 3–3
verified during installation, 4–5
Product names, updated, 1–1
Product version numbers, updated, 1–1
Purging files during installation, 4–4

Q

Quotas
checking and changing, 3–8
needed for installation, 3–8

R

Release notes
accessing, 3–2
dispaying with OPTIONS N, 4–2
displaying during installation, 4–4
Remote-access system license, 3–2
Routines, calling, 2–4
Run-time system license, 3–2

S

SCSNODE, 3–4
SCSSYSTEMID, 3–4
SET_TRANSACTION_SECTION, 2–3
Software
prerequisite, 3–4
supported, 3–5
SYLOGICALS.COM, 3–4
SYMBOL_VECTOR option, 2–2
SYS$DECDTM_INHIBIT, 3–4
SYS$JOURNAL, 3–4
SYSGEN, 3–4
SYSGEN parameters, 3–9
System buffers, unsupported, 2–3
System manager's account, 4–1

T

Terminal Manager, incorporating UERs into, 2–2
TP_SERVER, 3–4
TRANSLATE, 2–5

U

UERs, incorporating into the Terminal Manager, 2–2
Unsupported features, 2–3
Updated product names and version numbers, 1–1
USEREDIT.OPT, 2–2
User Edit Routines
See UERs
User Identification Code (UIC), 3–7

V

VAX COBOL GENERATOR, 3–5
Version numbers
changed on screen, 2–1
included in file names, 2–1

Version numbers (cont'd)
updated, 1–1
VMSINSTAL
invoking for installation, 4–2
messages after interactive input, 4–7
messages during installation, 4–3
prerequisites for running, 3–12

W

WSMAX, 3–9