

OpenVMS Hobbyist Guide

The VAX Kit

May, 1999

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Software Version: OpenVMS V7.2

May 1999

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Welcome Hobbyist

Welcome OpenVMS Hobbyist

Welcome to the OpenVMS Hobbyist Program. Compaq Computer Corporation, the U.S. Chapter DECUS, and the Dallas/Fort. Worth Compaq User Group have worked together to provide OpenVMS users the ability to inexpensively run OpenVMS at home for non-commerical uses.

In 1999, Compaq Computer Corporation expanded the program to include not only OpenVMS, but over 100 additional products, current OpenVMS releases, and Alpha Systems. Besides the U.S. Chapter DECUS, we also support about 20 DECUS Chapters as beneficiaries of the OpenVMS Hobbyist Program.

Hobbyist History

It all started at the DECUS National Event 1996, Anaheim, California. Pat Jankowiak delivered a speech to a panel of Digital Equipment Corporation Vice-Presidents at the *Digital Listens* session. Pat's proposal was applauded by many other DECUS members in attendance at the session. Digital listened, discussed it among several people within the OpenVMS organization, drafted an agreement, blessed it.

Digital offered to authorize the OpenVMS Hobbyist Program, allowing annual no-charge licenses for OpenVMS VAX V6.1 (and previous) base operating system to be distributed for non-commercial purposes. The Dallas/Fort Worth Local User Group agreed to provide support services and management for the program on behalf of the U.S. Chapter DECUS. John Wisniewski (Digital, now Compaq) and David Cathey (DECUS) worked together to put a complete program into place.

On May 18th, 1997, barely 6 months after Pat Jankowiak's proposal, the OpenVMS Hobbyist Program was announced at the DECUS National Event in Cincinnati.

At the DECUS National Event 1998, Los Angeles, California, Pat Jankowiak once again went before the *Compaq Listens* panel with another plea. The original OpenVMS Hobby

ist Program was a success, but more was needed. Given the proliferation of the Internet and the World-Wide-Web, support for TCP/IP and Motif was needed. Inexpensive Alphas where showing up on web-based auctions, and OpenVMS should be usable on those systems. Compaq listened. Several members of the OpenVMS organization attended the OpenVMS Hobbyist Session later during the event, and saw a crowded room of OpenVMS users showing their appreciation. Compaq *really* listened, and more discussions took place.

On March 1, 1999, the OpenVMS Hobbyist Program V2.0 was announced. Compaq really opened the doors and granted the OpenVMS Hobbyist Program current release OpenVMS for VAX and Alpha, plus over 100 OpenVMS layered products. Motif, Clustering, DECnet, TCP/IP, compilers, development tools, management tools, and more.

Additionally, beside theCompaq products, Graymatter Software, Raxco Software, and Process Software have agreed to offer some of the products to OpenVMS Hobbyist systems.

At the DECUS National Event 1999, Providence, Rhode Island, we don't expect that Pat Jankowiak can really ask for anything more. Instead, we expect him to offer his sincere thanks to Compaq and the OpenVMS organization for making the OpenVMS Hobbyist Program a success.

The Original Proposal

The following is a transcript of the speech delivered to a panel of Digital Vice-Presidents at the Digital Listens Panel, DECUS National Event '96, Anaheim. This speech was prepared and delivered by Pat Jankowiak, the Newsletter Editor for the Dallas/Ft. Worth Local User Group:

As a pure hobbyist, and an aficionado of Digital's products, of which I own many, and which I believe to be the best in the world, I am dismayed by the lack of hobbyist participation in VMS and with Digital's products in general. I feel that two of the main reasons for this lack of participation are:

- The flow of old Sun, h/p, and other "evil" boxes into the homes of hobbyists, along with linux or BSD, which essentially allows the enthusiast to have a moderately powerful system complete with an o/s virtually for free.
- The flow of old VAXen and pdp's to the scrapyard, and the impossible expense for software and licenses for the same, which causes even the most ardent admirer to search elsewhere for the essentials, and gives an impression of Digital as being only slightly more friendly than IBM.

The lesson of the pdp-11 should be learned; that is, these fine computers were almost never found in a hobby scenario because of the cost-prohibitive licensing issue. Since Digital had sold the pdp software suite to Mentec, it was too late to start building a hobbyist user base for DEC on the pdp.

With the Alpha explosion, we are at an excellent point of opportunity right now with regards to the ability to radically expand the visibility and ownership of Digital platforms among the hobbyist class. I can't think of many hobbyist UNIX admins that wouldn't like to use VAX VMS. Serious computer hobbyists know that VMS is far superior to UNIX.

In my living room, there is a microvax 3300 running VMS 5.0.. Got it for \$200 from Frito-Lay, where it was employed to cook corn chips. It's great! I have FORTRAN, Basic, Pascal, DECnet, and more.. (and I do have the license packs, just in case you are wondering..)

I would like to run a Free Access BBS with it, and serve news and mail, but not with 5.0. The local crackers are bored with crashing the local public access UNIX bbs and would converge on the Microvax like buzzards once it was discovered, and a couple of these guys are really knowledgeable. I could upgrade to 7.0 but then I lose most of the fun stuff, leaving me with the DCL prompt and DECNET.

I would like to see a free hobbyist license for a secure, full-featured, and recent VMS version. This would benefit Digital through increased public awareness and goodwill. Many would disuse their heathen unix boxes if VAX VMS were within reach. You can't buy this kind of goodwill. We know the score, and we want to play on your team. All you have to do is give us the chance.

- Pat Jankowiak, DECUS National Event, 1996, Anaheim

Credits

Many people have been involved in the development of the OpenVMS Hobbyist Program, and deserve some recognition for their efforts:

- Pat Jankowiak, Sony Electronics
- Nancy Strecker, Compaq, Vice-President of DECUS Relations (and sometimes rumored to be Vice-President of Hacker Relations)
- John Wisniewski, Compaq, OpenVMS Partner
- Jesse Lipcon, Compaq, Vice-President of Software Development
- Rich Marcello, Compaq, Managing Engineer - OpenVMS
- Mark Gorham, Compaq, Director Business Management - OpenVMS
- Sue Skonetski, Compaq, OpenVMS Marketing
- DECUS U.S. Chapter Board of Directors
- David Cathey, Montagar Software Concepts/OpenVMS SIG Chairman/DFWCUG Chair
- David Schmidt, Management Science Associates/OpenVMS SIG Chairman (past)
- George Nicols, Compaq, Compaq-DECUS Counterpart
- Becca Parson, University of Central Florida/DECUS SIG Advocate
- Jo Ann Catcott, Pioneer Standard Electronics/DECUS LUG Advocate (past)

License Agreement

The OpenVMS Hobbyist License Agreement

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Signature:

By the following signature, I agree to the above terms.

signature

type or print name

address line 1

address line 2

Hobbyist CD Contents

Software Provided

The VAX Kit provides the following software products:

- OpenVMS V7.2 Distribution
 - OpenVMS V7.2 Base Operating System
 - DECWindows 1.2.5 (Motif)
 - AMDS
 - DECnet Phase IV
 - DECnet OSI Phase V
 - TCP/IP V5.0
- DEC C V6.0
- Pascal V5.6
- FORTRAN V6.5
- COBOL V5.5A
- NOTES V2.5
- Netscape Navigator 3.03
- HTML Directory of interesting information...

Directory Listing

This is the directory of the top level of the OpenVMS Hobbyist CD.

```
Directory LDA2:[000000]
000000.DIR;1      BACKUP.SYS;1      BADBLK.SYS;1      BADLOG.SYS;1
BASIC038.DIR;1    BITMAP.SYS;1     CC060.DIR;1      CLUSTER_COMP_VAX062.DIR;1
COBOL055A.DIR;1   CONTIN.SYS;1    CORIMG.SYS;1     DCE_VAX015.DIR;1
DECAMDS_VAX072.DIR;1 DECEVENT_VAX029.DIR;1
DECNET_PHASE_IV.DIR;1 DECNET_PHASE_IV_VAX072.DIR;1
DECNET_PLUS_VAX072.DIR;1 DECW072.C;1      DECW072.D;1
DECW072.E;1        DECW072.F;1     DOCUMENTATION.DIR;1 DWMOTIF_I18N_VAX123.DIR;1
```

```
DWMOTIF_VAX125.DIR;1          FORT065.DIR;1          HELP_MESSAGE.DIR;1
HTML.DIR;1                     INDEXF.SYS;1          ISL_SCRIPT.ESS;1
NETSCAPE_GOLD301.DIR;1         NOTES025.DIR;1          KITS.DIR;1
PCSI.DIR;1                     SECURITY.SYS;1        PASCAL056.DIR;1
TCPIP_VAX050.DIR;1             VMS072.A;1            SYS0.DIR;1
VMS072.D;1                     VMS072.E;1            SYS1.DIR;1
VOLSET.SYS;1                   VMS072.F;1            VMS072.C;1
                                         Total of 46 files.
```

Most of the directories contain the installation kit and documentation for the product that the directory is named for. OpenVMS (VMS072.*) and DECWindows base support (DECW072.*) are two notable exceptions, in that they are in the Master File Directory. This is due to the requirement that the OpenVMS KITINSTAL will only look for the installation kits if they are in the top level directory of the CD.

The KITS Directory

The KITS directory is a convenient copy of all the individual product it installation directories. For each product, there will be a <PRODUCT_NAME>_KIT.DIR, which will include the required files to install that product.

The HTML Directory

The HTML directory contains a number of items of interest to OpenVMS Hobbyists. A copy of the OpenVMS Hobbyist FAQ, messages from some primary instigators of the Hobbyist Program, and the Digital Timeline which documents 40 years of Digital computing history.

Installing Your Software

Basic Requirements

In order to install the software from the OpenVMS VAX Hobbyist CD, you need a base VAX system, a hard drive, a CD drive (512 byte sectored, not all CD's will do this), 8-16MB of memory, and either a console terminal or workstation (graphics adapter, monitor, keyboard, and mouse). You may wish to get a copy of the current OpenVMS SPD for a list of supported configurations and hardware products.

For those with systems that have a SCSI interface (MicroVAX 3100's, etc), it is important to note that not all SCSI disk, CD, or tape devices will work. Not all manufacturers support all the SCSI command sequences that are required for OpenVMS to use the device. This is especially true with older SCSI devices made before the SCSI-2 standard was finalized. If at all possible, use Digital manufactured disks and CD's to install your operating system.

The VAX Console

The VAX Console is used to boot the VAX and display various attributes of your VAX system. The VAX Console command language has changed significantly from the original VAX 11/780 Console to the modern firmware-based consoles of more recent VAX systems. You may want to locate a Owners Guide for the VAX Model you own, which should provide a complete explanation of the console subsystem.

For the purposes of this sample installation, we will use a VAX 4000-VLC. This system has a similar console system found on many VAX 3000 and VAX 4000 series models, so it should provide a common example.

Use the SHOW CONFIG command to display information about the VAX model you have. In this case, the VAX shows up as a KA48-A.

```
>>> sho w config
KA48-A V1.3-343-V4.0 08-00-2B-2D-90-32 24MB
DEVNBR DEVNAM           INFO
-----
1          NVR OK
2          LCG OK
HR - 8 PLN FB - V1.2
```

```

3          DZ OK
4          CACHE OK
MEM OK
               24MB = S0/1=8MB, S2/3=8MB, S4/5=8MB
6          FPU OK
7          IT OK
8          SYS OK
9          NI OK
10         SCSI OK
           2-RZ28 3-RZ26L 4-RRD43 5-RRD43
           7-ININTR
11         AUD OK

>>>

```

5

Use the SHOW DEV command to display the devices recognized on your system. This will show all the SCSI disks/tapes and your Ethernet Hardware Address. Note that DKA400 shows a 681.57 MB disk loaded. This is the OpenVMS Hobbyist Media Kit mounted in the RRD43 drive. OpenVMS may rename disk/tape devices from the device name the VAX Console recognizes them as. In this case, the drive names will not change, as there is only one SCSI adapter on this system.

```

>>> show dev

  VMS/VMB    ADDR   DEVTYPE   NUMBYTES   RM/FX WP   DEVNAM   REV
  -----  -----  -----  -----  -----  --  -----  --
  ESA0      08-00-2B-2D-90-32
  DKA200    A/2/0   DISK      2.10GB    FX        RZ28     442D
  DKA300    A/3/0   DISK      1.05GB    FX        RZ26L    440C
  DKA400    A/4/0   RODISK    681.57MB   RM      WP     RRD43    1084
  DKA500    A/5/0   RODISK    .....    RM      WP     RRD43    1084
..HostID.. A/7    INITR

>>>

```

Booting the Hobbyist CD

Now that we are familiar with the hardware configuration, we're ready to boot the OpenVMS Hobbyist CD and start installing the operating system. In this case, we are going to load the OpenVMS operating system to DKA200: OpenVMS VAX is loaded through a special version of BACKUP, commonly referred to as StandAlone BACKUP. The base OpenVMS VAX operating system is stored as part of a VMSINSTAL kit, in the "B" saveset. To load OpenVMS, this B saveset is simply restored onto the target disk.

```

>>> boot dka400
-DKA400

%SYSBOOT-I-SYSBOOT Mapping the SYSDUMP.DMP on the System Disk
%SYSBOOT-W-SYSBOOT Can not map SYSDUMP.DMP on the System Disk
%SYSBOOT-W-SYSBOOT Can not map PAGEFILE.SYS on the System Disk

OpenVMS (TM) VAX Version X72T Major version id = 1 Minor version id = 0
PLEASE ENTER DATE AND TIME (DD-MMM-YYYY HH:MM)
PLEASE ENTER DATE AND TIME (DD-MMM-YYYY HH:MM) 19-MAY-1999 18:01
Configuring devices . .
Available device DKA200:           device type RZ28
Available device DKA300:           device type RZ26L
Available device DKA400:           device type RRD43
Available device DKA500:           device type RRD43
%BACKUP-I-IDENT, Stand-alone BACKUP T7.2; the date is 19-MAY-1999 18:02:32.42

```

```

$ BACKUP/IMAGE DKA400:VMS072.B/SAVE DKA200:
%BACKUP-I-PROCDONE, operation completed. Processing finished at 19-MAY-1999 18:09:15.74
If you do not want to perform another standalone BACKUP operation, use the console to halt
the system.

If you do want to perform another standalone BACKUP operation, ensure the standalone
application volume is online and ready.

Enter "YES" to continue:

?02 EXT HLT PC= 810B894D PSL= 04C30004

>>>

```

Now that the base operating system is loaded, we can boot it, and complete the rest of the installation. During this portion, several questions are asked about how certain software components should be configured, and if selected software components should be installed.

```

>>> boot dka200
-DKA200
%SYSBOOT-I-SYSBOOT Mapping the SYSDUMP.DMP on the System Disk
%SYSBOOT-W-SYSBOOT Can not map SYSDUMP.DMP on the System Disk
%SYSBOOT-I-SYSBOOT Mapping PAGEFILE.SYS on the System Disk
%SYSBOOT-I-SYSBOOT SAVEDUMP parameter not set to protect the PAGEFILE.SYS
OpenVMS (TM) VAX Version BI72-72T Major version id = 1 Minor version id = 0

          OpenVMS VAX V7.2 Installation Procedure

          Model: VAXstation 4000-VLC
          System device: RZ28 - _DKA200:
          Free Blocks: 4031946
          CPU type: 20-04

* Please enter the date and time (DD-MMM-YYYY HH:MM) 19-MAY-1999 18:10
*****
%SYSTEM-W-TZGTM, your local timezone has defaulted to GMT
%SYSTEM-I-SETTZ, to set your local timezone use:

$ @SYS$MANAGER:UTC$TIME_SETUP.COM
*****
On MIN or UPGRADE system startup - CLUE is not run.

%%%%%%%%%%%% OPCOM 19-MAY-1999 18:10:19.15 %%%%%%%%%%%%%%
Operator _OPA0: has been enabled, username SYSTEM

%%%%%%%%%%%% OPCOM 19-MAY-1999 18:10:19.18 %%%%%%%%%%%%%%
Operator status for operator _OPA0:
CENTRAL, PRINTER, TAPES, DISKS, DEVICES, CARDS, NETWORK, CLUSTER, SECURITY, LICENSE,
OPER1, OPER2, OPER3, OPER4, OPER5, OPER6, OPER7, OPER8, OPER9, OPER10, OPER11, OPER12

%%%%%%%%%%%% OPCOM 19-MAY-1999 18:10:19.69 %%%%%%%%%%%%%%
Logfile has been initialized by operator _OPA0: Logfile is
SYS$SYSROOT:[SYSMGR]OPERATOR.LOG;1

%%%%%%%%%%%% OPCOM 19-MAY-1999 18:10:19.72 %%%%%%%%%%%%%%
Operator status for operator SYS$SYSROOT:[SYSMGR]OPERATOR.LOG;1
CENTRAL, PRINTER, TAPES, DISKS, DEVICES, CARDS, NETWORK, CLUSTER, SECURITY, LICENSE,
OPER1, OPER2, OPER3, OPER4, OPER5, OPER6, OPER7, OPER8, OPER9, OPER10, OPER11, OPER12

%SYSTEM-I-BOOTUPGRADE, security auditing disabled

%%%%%%%%%%%% OPCOM 19-MAY-1999 18:10:22.24 %%%%%%%%%%%%%%
Message from user JOB_CONTROL %JBC-E-OPENERR, error opening
SYS$COMMON:[SYSEXEC]QMAN$MASTER.DAT;

%%%%%%%%%%%% OPCOM 19-MAY-1999 18:10:22.24 %%%%%%%%%%%%%%
Message from user JOB_CONTROL -RMS-E-FNF, file not found
%LICENSE-F-EMTLDB, license database contains no license records
%SYSTEM-I-BOOTUPGRADE, security server not started

```

```
%%%%%%%%%%%%% OPCOM 19-MAY-1999 18:10:25.64 %%%%%%%%%%%%%%
Message from user SYSTEM
%LICENSE-E-NOAUTH, DEC VAX-VMS 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

%LICENSE-E-NOAUTH, DEC VAX-VMS 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 Startup processing continuing...

%SET-I-INTSET, login interactive limit = 1, current interactive value = 0
%SET-I-INTSET, login interactive limit = 0, current interactive value = 0

If this system disk is to be used in an OpenVMS Cluster with multiple
system disks, then each system disk must have a unique volume label.
Any nodes having system disks with duplicate volume labels will fail
to boot into the cluster.

You can indicate a volume label of 1 to 12 characters in length. If you
want to use the default name of OVMSVAXSYS, press RETURN in response
to the next question.

* Enter the volume label for this system disk [OVMSVAXSYS]:
* Enter name of drive holding the OpenVMS distribution media: DKA400:
* Is the OpenVMS media ready to be mounted? [N] Y
%MOUNT-I-MOUNTED, VAXVMS072 mounted on _DKA400:

Select optional software you want to install. You can install one
or more of the following OpenVMS or DECwindows components:



- OpenVMS library - 52200 blocks
- OpenVMS optional - 19000 blocks
- OpenVMS Help Message - 10400 blocks
- OpenVMS Management Station - 20000 blocks
- DECwindows base support - 4400 blocks
- DECwindows workstation support - 23800 blocks
  - 75 dots per inch video fonts - (included)
  - 100 dots per inch video fonts - 6200 blocks
- DECnet-Plus networking - 80000 blocks
- DECnet Phase IV networking - 800 blocks



Space remaining on system disk: 4031757 blocks

* Do you want to install the OpenVMS library files? (Y/N) Y
Space remaining on system disk: 3979557 blocks

* Do you want to install the OpenVMS optional files? (Y/N) Y
Space remaining on system disk: 3960557 blocks

The Help Message utility (MSGHLP) provides online explanations
and user actions for OpenVMS messages in place of the hardcopy
OpenVMS System Messages and Recovery Procedures Reference Manual,
which is now separately orderable.

The MSGHLP database file, MSGHLP$LIBRARY.MSGHLP$DATA,
consumes approximately 10400 blocks and will be
placed by default on your system disk in SYS$COMMON:[SYSHLP]
unless you specify an alternate device when prompted.

* Do you want to install the MSGHLP database? (Y/N) Y
You can install this database on your system disk in SYS$COMMON:[SYSHLP]
or on an alternate device. If you specify an alternate device, but no
directory, MSGHLP$LIBRARY.MSGHLP$DATA is placed in [HELP_MESSAGE]. When
prompted, take the default of the system disk or specify an alternate
device using this format:

      device:[directory]

* Where do you want to install the MSGHLP database?[SYS$COMMON:[SYSHLP]]
Space remaining on system disk: 3950157 blocks
The OpenVMS Management Station is a client-server application
```

that provides OpenVMS system management capabilities through a client application on a personal computer (PC) running Microsoft Windows. The server application runs on OpenVMS systems and is automatically installed as part of the OpenVMS operating system.

This option provides the files used to create the installation media for the PC client software. If you want to use the OpenVMS Management Station, you must install these optional files on at least one OpenVMS system to create the installation media, which can then be used to install the PC client on one or more PCs.

The OpenVMS Management Station client can run on Windows 3.1 (including Windows for Workgroups), Windows NT or Windows 95.

The OpenVMS Management Station optional files consume approximately 20000 blocks and will be placed on your system disk in SYS\$COMMON:[TNT.CLIENT].

* Do you want to install the optional OpenVMS Management Station files? (Y/N) Y
Space remaining on system disk: 3930157 blocks

You can select DECwindows now, or you can use the DECW\$TAILOR utility to provide or remove DECwindows support after the installation.

Some media, TK50s in particular, can be very slow when tailoring on files. You might want to select DECwindows now and tailor off unwanted files later.

NOTE: This kit does NOT contain full DECwindows.
To obtain full DECwindows, you must also install the separate layered product, DECwindows Motif for OpenVMS VAX.
V1.2-3 is the minimum version of DECwindows Motif for OpenVMS VAX that can be used with OpenVMS VAX V7.2.

The DECwindows components provided in this kit requires approximately 34400 blocks, broken down as follows:

- o DECwindows base support - 4400 blocks
- o DECwindows workstation support - 23800 blocks
 - 75 dots per inch video fonts - (included)
 - 100 dots per inch video fonts (optional) - 6200 blocks

You must select the DECwindows base support option if

- you plan to run DECwindows software, or
- you are installing this kit on
 - * a workstation or
 - * an OpenVMS Cluster that contains workstations, or
- you want to provide font files for Xterminals.

If you are installing this kit on a system that includes Xterminals and you do NOT select DECwindows base support, then you will have to use the DECW\$TAILOR utility to provide font files.

* Do you want the DECwindows base support? (Y/N) Y

Space remaining: 3925757 blocks

You must select the DECwindows workstation support option if

- you are installing this kit on
 - * a workstation or
 - * an OpenVMS Cluster that contains workstations, or
- you want to provide font files for Xterminals.

If you are installing this kit on a system that includes Xterminals and you do NOT select DECwindows workstation support, then you will have to use the DECW\$TAILOR utility to provide font files.

* Do you want to install DECwindows workstation support? (Y/N) Y

Space remaining: 3901957 blocks

DECwindows workstation support includes the 75 dots per inch video fonts. All DECwindows applications run with 75 dots per inch video fonts.

By default, most systems startup with 75 dots per inch video fonts.

Certain applications can take advantage of 100 dots per inch video fonts.

For the VAXstation 4000 series machines, 100 dots per inch video fonts are used by default. If you decide not to install 100 dots per inch video fonts, you must edit SYS\$MANAGER:DECW\$PRIVATE_SERVER_SETUP.COM to force 75 dots per inch video fonts to be the default. Otherwise, certain applications may not space text properly.

For instructions on how to configure your system with both 75 and 100 dots per inch video fonts, see the installation guide or look at the template command procedure SYS\$MANAGER:DECW\$PRIVATE_SERVER_TEMPLATE.

```
* Do you want 100 dots per inch video fonts installed? (Y/N) Y
```

```
Space remaining: 3895757 blocks
```

Beginning with OpenVMS V7.1, the DECnet-Plus kit is provided with the OpenVMS operating system kit. Compaq strongly recommends that DECnet users install DECnet-Plus. DECnet Phase IV applications are supported by DECnet-Plus.

DECnet Phase IV is also provided as an option. Support for DECnet Phase IV is available through a Prior Version Support Contract.

If you install DECnet-Plus and TCP/IP you can run DECnet applications over a TCP/IP network. Please see the OpenVMS Management Guide for information on running DECnet over TCI/IP.

If you plan to install DECnet Phase IV do NOT select DECnet-Plus.

```
* Do you want to install DECnet-Plus? (Y/N) N
```

```
* Do you want to install DECnet Phase IV? (Y/N) Y
```

```
Space remaining on system disk: 3894957 blocks
```

The following options will be provided:

```
OpenVMS library
OpenVMS optional
OpenVMS Help Message
OpenVMS Management Station Software -- PC files
DECwindows base support
DECwindows workstation support with:
- 75 dots per inch video fonts
- 100 dots per inch video fonts
DECnet Phase IV
```

```
Space remaining on system disk: 3894957 blocks
```

```
* Is this correct? (Y/N) Y
```

```
Restoring OpenVMS library save set ...
```

```
%BACKUP-I-STARTVERIFY, starting verification pass
```

```
Restoring OpenVMS optional save set ...
```

```
%BACKUP-I-STARTVERIFY, starting verification pass
```

```
Restoring OpenVMS Help Message save set ...
```

```
%BACKUP-I-STARTVERIFY, starting verification pass
```

```
Restoring OpenVMS Management Station Software -- PC files
```

```
%BACKUP-I-STARTVERIFY, starting verification pass
```

```
Restoring DECwindows base support save set ...
```

```
%BACKUP-I-STARTVERIFY, starting verification pass
```

```
Restoring DECwindows workstation support save set ...
```

```
%BACKUP-I-STARTVERIFY, starting verification pass
```

```
Restoring DECwindows 75 dots per inch video fonts save set ...
```

```
%BACKUP-I-STARTVERIFY, starting verification pass
```

```
Restoring DECwindows 100 dots per inch video fonts save set ...
```

```
%BACKUP-I-STARTVERIFY, starting verification pass
```

```

Now registering the OpenVMS operating system in the
POLYCENTER Software Installation product database

The following product will be registered:
DEC VAXVMS VMS V7.2                               DISK$VAXVMSV72:[VMS$COMMON. ]

The following product has been registered:
DEC VAXVMS VMS V7.2                               Transition (registration)

Installing DECnet Phase IV...

%MOUNT-I-MOUNTED, VAXVMS072 mounted on _DKA400:

The following product has been selected:

DEC VAXVMS DECNET_PHASE_IV V7.2      Layered Product

Configuration phase starting ...

You will be asked to choose options, if any, for each selected product and for any
products that may be installed to satisfy software dependency requirements.

DEC VAXVMS DECNET_PHASE_IV V7.2: DECNET_PHASE_IV

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Digital Equipment Corporation

* This product does not have any configuration options.

Support addendum to DECnet Phase IV service contract required

Do you want to continue? [YES]

Execution phase starting ...

The following product will be installed to destination:

DEC VAXVMS DECNET_PHASE_IV V7.2      DISK$VAXVMSV72:[VMS$COMMON. ]

Portion done: 0%...10%...30%...40%...50%...60%...70%...80%...100%

The following product has been installed:

DEC VAXVMS DECNET_PHASE_IV V7.2      Layered Product

You can now remove the distribution kit from DKA400:.

In an OpenVMS Cluster, you can run multiple systems sharing all files
except PAGEFILE.SYS, SWAPFILE.SYS, SYSDUMP.DMP, and VAXVMSSYS.PAR.

Cluster configuration cannot be done at this time because no network
is present. In order to configure a cluster you must FIRST do one
or both of the following:



- o Install DECnet-Plus (or DECnet Phase IV), or
- o Execute SYS$STARTUP:LAN$STARTUP.COM by removing the
comment delimiter ("!") from the line



$! @SYS$STARTUP:LAN$STARTUP

in SYS$MANAGER:SYSTARTUP_VMS.COM.

Then configure the cluster by executing the following command:

@ @SYS$MANAGER:CLUSTER_CONFIG

See the OpenVMS System Manager's Manual: Essentials for more information.

* Do you want DECwindows Motif as the default windowing system? (Y/N) Y

Now we will ask you for new passwords for the following accounts:

SYSTEM, SYSTEST, FIELD

Passwords must be a minimum of 8 characters in length. All passwords
will be checked and verified. Any passwords that can be guessed easily
will not be accepted.

* Enter password for SYSTEM:

* Re-enter for verification:

```

```

%UAF-I-MDFYMSG, user record(s) updated %VMS-I-PWD_OKAY, account password for SYSTEM verified
* Enter password for SYSTEST:
* Re-enter for verification:
%UAF-I-MDFYMSG, user record(s) updated %VMS-I-PWD_OKAY, account password for SYSTEST verified

The SYSTEST_CLIG account will be disabled. You must re-enable it before running UETP but do not assign a password.

%UAF-I-PWDLESSMIN, new password is shorter than minimum password length %UAF-I-MDFYMSG, user record(s) updated

* Enter password for FIELD:
* Re-enter for verification:
%UAF-I-MDFYMSG, user record(s) updated

%VMS-I-PWD_OKAY, account password for FIELD verified

Creating RIGHTS database file, SYS$SYSTEM:RIGHTSLIST.DAT
Ignore any "-SYSTEM-F-DUPIDENT, duplicate identifier" errors.

%UAF-I-RDBCREMSG, rights database created
%UAF-I-RDBADDMMSGU, identifier DEFAULT value [000200,000200] added to rights database
%UAF-I-RDBADDMMSGU, identifier FIELD value [000001,000010] added to rights database
%UAF-I-RDBADDMMSGU, identifier SYSTEM value [000001,000004] added to rights database
%UAF-I-RDBADDMMSGU, identifier SYSTEST value [000001,000007] added to rights database
%UAF-E-RDBADDERRU, unable to add SYSTEST_CLIG value [000001,000007] to rights database
-SYSTEM-F-DUPIDENT, duplicate identifier %UAF-I-NOMODS, no modifications made to system authorization file
%UAF-I-RDBDONEMSG, rights database modified

Creating MODPARAMS.DAT database file, SYS$SYSTEM:MODPARAMS.DAT

```

At this point, the SCSNODE and SCSSYSTEMID are asked for. Since these values are required to match any DECnet Phase IV address that may be used for the system, you should set them correctly at this point. The SCSSYSTEMID is an encoded DECnet address.

SCSSYSTEMID = area * 1024 + node

For a DECnet address of 1.1, the SCSSYSTEMID is $1 * 1024 + 1 = 1025$

```

* Please enter the SCSNODE name: HOBBY
* Please enter the SCSSYSTEMID: 1025

After the installation finishes, you might want to do one or more of the following tasks:

o DECOMPRESS THE SYSTEM LIBRARIES - To save space, many of the system libraries are shipped in a data-compressed format. If you have enough disk space, you can decompress the libraries for faster access. To data expand the libraries, type:

$ @SYS$UPDATE:LIBDECOMP.COM

If you do not decompress these libraries, you will experience slower response to the HELP and LINK commands.

o BUILD A STANDALONE BACKUP KIT - You can build a standalone backup kit using the procedure described in the "Backup Procedures" chapter of the upgrade and installation supplement provided for your VAX computer.

o TAILOR THE SYSTEM DISK - You might want to review the files provided or not provided during this installation. If you find there are files you want to remove from the system disk (TAILOR OFF) or files you want to add (TAILOR ON), use the following utilities to perform the desired tailoring.

```

```

OpenVMS tailoring:      $ RUN SYS$UPDATE:VMSTAILOR
DECwindows tailoring:  $ RUN SYS$UPDATE:DECW$TAILOR

NOTE: The tailor procedure cannot be used to TAILOR ON or TAILOR OFF
      files located on an alternate disk.

=====
Continuing with OpenVMS VAX V7.2 Installation Procedure.

Configuring all devices on the system ...

If you have Product Authorization Keys (PAKs) to register, you can
register them now.

```

At this point, you may want to register the licenses you want to include. You don't have to register any at this point, since OpenVMS will allow the SYSTEM account to log into the console of an unlicensed system.

```

* Do you want to register any Product Authorization Keys? (Y/N): Y
VMS License Management Utility Options:

```

1. REGISTER a Product Authorization Key
2. AMEND an existing Product Authorization Key
3. CANCEL an existing Product Authorization Key
4. LIST the Product Authorization Keys
5. MODIFY an existing Product Authorization Key
6. DISABLE an existing Product Authorization Key
7. DELETE an existing Product Authorization Key
8. COPY an existing Product Authorization Key
9. MOVE an existing Product Authorization Key
10. ENABLE an existing Product Authorization Key
11. SHOW the licenses loaded on this node
12. SHOW the unit requirements for this node

99. EXIT this procedure

Type '?' at any prompt for a description of the information requested. Press Ctrl/Z at any prompt to return to this menu.

Enter one of the above choices [1]:1

Do you have your Product Authorization Key? [YES]:

Use the REGISTER option to add a new license to a license database. A Product Authorization Key (PAK) provides the product name and information you need to register the license. You must enter all the information provided by your PAK exactly as it appears.

Type '?' at any prompt for a description of the information requested. Press Ctrl/Z at any prompt to return to the main menu.

```

Issuer [DEC]:DECUS
Authorization Number []:USE-YOUR-OWN-PAK
Product Name []:VAX-VMS
Producer [DEC]:
Number of Units []:0
Version []:
Product Release Date []:
Key Termination Date []:18-MAY-2000
Availability Table Code []:
Activity Table Code []:A
Key Options []:NO_SHARE

```

This Product Authorization Key (PAK) has been provided with the NO_SHARE option. If it is to be used by a node in a cluster, this PAK must be restricted to a specific node.

If this PAK is to be used by a standalone system, answer NO to the following question.

Is this PAK restricted to a cluster member node? [YES]:

Note: For the majority of systems, the SCS node name is the same as the DECnet node name.

Node this PAK is restricted to (SCS Node name) []:HOBBY

```
Product Token []:
  Hardware-ID []:YOURHARDWAREID
  Checksum []:1-YOUR-PAKS-CHEK-SUMM
```

Here is a list of the license information just entered:

```
Issuer: DECUS
Authorization: USE-YOUR-OWN-PAK
Product Name: VAX-VMS
Producer: DEC
Units: 0
Release Date:
Version:
Termination Date: 18-MAY-2000
Availability:
Activity: A
Options: NO_SHARE
Token:
Hardware ID: YOURHARDWAREID
Checksum: 1-YOUR-PAKS-CHEK-SUMM
```

This authorization key is restricted to: HOBBY

Is that correct? [YES]:

Registering VAX-VMS license in SYS\$COMMON:[SYSEXE]LMF\$LICENSE.LDB...
%LICENSE-I-MODIFIED, VAX-VMS DECUS-USA-243848-29675 has been modified

Do you want to LOAD this license on this system? [YES]:

%LICENSE-I-LOADED, DEC VAX-VMS was successfully loaded with 0 units

Press RETURN to return to the main menu

VMS License Management Utility Options:

1. REGISTER a Product Authorization Key
 2. AMEND an existing Product Authorization Key
 3. CANCEL an existing Product Authorization Key
 4. LIST the Product Authorization Keys
 5. MODIFY an existing Product Authorization Key
 6. DISABLE an existing Product Authorization Key
 7. DELETE an existing Product Authorization Key
 8. COPY an existing Product Authorization Key
 9. MOVE an existing Product Authorization Key
 10. ENABLE an existing Product Authorization Key
 11. SHOW the licenses loaded on this node
 12. SHOW the unit requirements for this node
99. EXIT this procedure

Type '?' at any prompt for a description of the information requested. Press Ctrl/Z at any prompt to return to this menu.

Enter one of the above choices [1]:99

After the system has rebooted you should register any additional Product Authorization Keys (PAKs) you have, or receive in the future, by executing the following procedure:

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

See the OpenVMS License Management Utility Manual for any additional information you need.

%UTC-I-UPDTIME, updating Time Zone information in SYS\$COMMON:[SYSEXE]

Configuring the Local Time Zone

TIME ZONE SPECIFICATION -- Main Time Zone Menu

1) Australia 11) GMT 21) Mexico 31) Turkey
2) Brazil 12) Greenwich 22) NZ 32) UCT
3) CET 13) Hong Kong 23) NZ-CHAT 33) US
4) Canada 14) Iceland 24) Navajo 34) UTC
5) Chile 15) Iran 25) PRC 35) Universal
6) Cuba 16) Israel 26) Poland 36) W-SU
7) EET 17) Jamaica 27) ROC 37) WET
8) Egypt 18) Japan 28) ROK 38) Zulu
9) Factory 19) Libya 29) Singapore
10) GB-Eire 20) MET 30) SystemV

0) None of the above

Select the number above that best describes your location: 33

You selected US as your time zone.

Is this correct? (Yes/No) [YES]:

US Time Zone Menu

1) Alaska 4) Central 7) Hawaii 10) Mountain
2) Aleutian 5) East-Indiana 8) Indiana-Starke 11) Pacific
3) Arizona 6) Eastern 9) Michigan 12) Samoa

0) None of the above

Select the number above that best describes your location: 4

You selected US/Central as your time zone.

Is this correct? (Yes/No) [YES]:

Default Time Differential Factor for standard time is -6:00.

Default Time Differential Factor for daylight saving time is -5:00.

The Time Differential Factor (TDF) is the difference between your system time and Coordinated Universal Time (UTC). UTC is similar in most respects to Greenwich Mean Time (GMT).

The TDF is expressed as hours and minutes, and should be entered in the hh:mm format. TDFs for the Americas will be negative (-3:00, -4:00, etc.); TDFs for Europe, Africa, Asia and Australia will be positive (1:00, 2:00, etc.).

Is Daylight Savings time in effect? (Yes/No): y

Enter the Time Differential Factor [-5:00]:

NEW SYSTEM TIME DIFFERENTIAL FACTOR = -5:00.

Is this correct? [Y]:

Running AUTOGEN to compute the new SYSTEM parameters ...

%AUTOGEND-BEGIN, GETDATA phase is beginning.

%AUTOGEND-NEWFILE, Previous contents of SYS\$SYSTEM:CLU\$PARAMS.DAT have been copied to SYS\$SYSTEM:CLUS\$PARAMS.OLD. You may wish to purge SYS\$SYSTEM:CLUS\$PARAMS.OLD.

%AUTOGEND-NEWFILE, A new version of SYS\$SYSTEM:PARAMS.DAT has been created.

You may wish to purge this file.

%AUTOGEND-END, GETDATA phase has successfully completed.

%AUTOGEND-BEGIN, GENPARAMS phase is beginning.

%AUTOGEND-NEWFILE, A new version of SYS\$MANAGER:VMSIMAGES.DAT has been created.
You may wish to purge this file.

%AUTOGEND-NEWFILE, A new version of SYS\$SYSTEM:SETPARAMS.DAT has been created.

You may wish to purge this file.

%AUTOGEND-END, GENPARAMS phase has successfully completed.

%AUTOGEND-BEGIN, GENFILES phase is beginning.

%SYSGEN-I-EXTENDED, SYS\$SYSROOT:[SYSEX]PAGEFILE.SYS;1 extended

%SYSGEN-I-EXTENDED, SYS\$SYSROOT:[SYSEX]SWAPFILE.SYS;1 extended

%SYSGEN-I-CREATED, SYS\$SPECIFIC:[SYSEX]SYSDUMP.DMP;1 created

%SYSGEN-I-CREATED, DKA200:[SYS0.SYSEX]ERRORLOG.DMP;1 created

%AUTOGEND-REPORT, AUTOGEN has produced some informational messages which

have been stored in the file SYS\$SYSTEM:AGEN\$PARAMS.REPORT. You may wish to review the information in that file.

```
%AUTOGEN-I-END, GENFILES phase has successfully completed.  
%AUTOGEN-I-BEGIN, SETPARAMS phase is beginning.  
%AUTOGEN-I-END, SETPARAMS phase has successfully completed.  
%AUTOGEN-I-BEGIN, REBOOT phase is beginning.
```

The system is shutting down to allow the system to boot with the generated site-specific parameters and installed images.

The system will automatically reboot after the shutdown and the installation will be complete.

SHUTDOWN -- Perform an Orderly System Shutdown

```
%SHUTDOWN-I-BOOTCHECK, performing reboot consistency check...  
%SHUTDOWN-I-CHECKOK, basic reboot consistency check completed  
%SHUTDOWN-I-OPERATOR, this terminal is now an operator's console  
%OPCOM-W-NOOPCOM, the request was not sent, the OPCOM process is not running  
%SHUTDOWN-I-DISLOGINS, interactive logins will now be disabled  
%SET-I-INTSET, login interactive limit = 0, current interactive value = 0  
%SHUTDOWN-I-STOPQUEUES, the queues on this node will now be stopped  
%JBC-E-OPENERR, error opening SYS$COMMON:[SYSEXE]QMAN$MASTER.DAT;  
-RMS-E-FNF, file not found  
SHUTDOWN message from user SYSTEM at Batch 18:47:08 The system will shut down in 0 minutes; back up SOON. Please log off. Reboot system with AUTOGENERATED parameters  
%SHUTDOWN-I-STOPUSER, all user processes will now be stopped  
%SHUTDOWN-I-REMOVE, all installed images will now be removed  
%SHUTDOWN-I-DISMOUNT, all volumes will now be dismounted  
%OPCOM-W-NOOPCOM, the request was not sent, the OPCOM process is not running  
%OPCOM-W-NOOPCOM, the request was not sent, the OPCOM process is not running
```

83 BOOT SYS :[c

-DKA200

```
%SYSBOOT-I-SYSBOOT Mapping the SYSDUMP.DMP on the System Disk  
%SYSBOOT-I-SYSBOOT SYSDUMP.DMP on System Disk successfully mapped  
%SYSBOOT-I-SYSBOOT Mapping PAGEFILE.SYS on the System Disk  
%SYSBOOT-I-SYSBOOT SAVEDUMP parameter not set to protect the PAGEFILE.SYS  
OpenVMS (TM) VAX Version V7.2 Major version id = 1 Minor version id = 0
```

OpenVMS VAX V7.2

You have SUCCESSFULLY installed the OpenVMS VAX Operating System.

The system is now executing the STARTUP procedure. Please wait for the completion of STARTUP before logging in to the system.

```
%STDRV-I-STARTUP, OpenVMS startup begun at 19-MAY-1999 19:00:38.34  
The OpenVMS VAX system is now executing the system startup procedure.  
%RUN-S-PROC_ID, identification of created process is 00000084  
%DCL-S-SPAWNED, process SYSTEM_1 spawned  
%%%%%%%%% OPCOM 19-MAY-1999 19:01:12.93 %%%%%%%  
Operator _HOBBY$OPA0: has been enabled, username SYSTEM  
%%%%%%%%% OPCOM 19-MAY-1999 19:01:12.95 %%%%%%%  
Operator status for operator _HOBBY$OPA0:  
CENTRAL, PRINTER, TAPES, DISKS, DEVICES, CARDS, NETWORK, CLUSTER, SECURITY, LICENSE,  
OPER1, OPER2, OPER3, OPER4, OPER5, OPER6, OPER7, OPER8, OPER9, OPER10, OPER11, OPER12  
%%%%%%%%% OPCOM 19-MAY-1999 19:01:13.07 %%%%%%%  
Logfile has been initialized by operator _HOBBY$OPA0:  
LogFile is HOBBY::SYS$SYSROOT:[SYSMGR]OPERATOR.LOG;1  
%%%%%%%%% OPCOM 19-MAY-1999 19:01:13.07 %%%%%%%  
Operator status for operator HOBBY::SYS$SYSROOT:[SYSMGR]OPERATOR.LOG;1  
CENTRAL, PRINTER, TAPES, DISKS, DEVICES, CARDS, NETWORK, CLUSTER, SECURITY, LICENSE,  
OPER1, OPER2, OPER3, OPER4, OPER5, OPER6, OPER7, OPER8, OPER9, OPER10, OPER11, OPER12  
%SET-I-NEWAUDSRV, identification of new audit server process is 0000008A
```

```

%%%%%%%%%%%%% OPCOM 19-MAY-1999 19:01:13.96 %%%%%%%%
Message from user AUDIT$SERVER on HOBBY
%AUDSRV-I-NEWSERVERDB, new audit server database created

%%%%%%%%%%%%% OPCOM 19-MAY-1999 19:01:14.25 %%%%%%%%
Message from user AUDIT$SERVER on HOBBY
%AUDSRV-I-REMENABLED, resource monitoring enabled for journal SECURITY

%%%%%%%%%%%%% OPCOM 19-MAY-1999 19:01:14.65 %%%%%%%%
Message from user AUDIT$SERVER on HOBBY
%AUDSRV-I-NEWOBJECTDB, new object database created

%%%%%%%%%%%%% OPCOM 19-MAY-1999 19:01:15.15 %%%%%%%%
Message from user JOB_CONTROL on HOBBY
%JBC-E-OPENERR, error opening SYS$COMMON:[SYSEXE]QMAN$MASTER.DAT;

%%%%%%%%%%%%% OPCOM 19-MAY-1999 19:01:15.19 %%%%%%%%
Message from user JOB_CONTROL on HOBBY
-RMS-E-FNF, file not found

%%%%%%%%%%%%% OPCOM 19-MAY-1999 19:01:17.16 %%%%%%%%
Message from user SYSTEM on HOBBY
%SEC_SRV-E-NOPROXYDB, cannot find proxy database file NET$PROXY.DAT
%RMS-E-FNF, file not found

%%%%%%%%%%%%% OPCOM 19-MAY-1999 19:01:17.23 %%%%%%%%
Message from user SYSTEM on HOBBY
%SEC_SRV-E-NOPROXYDB, cannot find proxy database file NET$PROXY.DAT
%RMS-E-FNF, file not found

%%%%%%%%%%%%% OPCOM 19-MAY-1999 19:01:17.24 %%%%%%%%
Message from user SYSTEM on HOBBY
%SEC_SRV-I-SERVERSTARTINGU, security server starting up

%%%%%%%%%%%%% OPCOM 19-MAY-1999 19:01:17.60 %%%%%%%%
Message from user SYSTEM on HOBBY
%SEC_SRV-I-CIASTARTINGUP, breakin detection and evasion processing now starting up

%%%%%%%%%%%%% OPCOM 19-MAY-1999 19:01:20.03 %%%%%%%%
Message from user SYSTEM on HOBBY
Warning: DECdtm log file not found (SYS$JOURNAL:SYSTEM$HOBBY.LM$JOURNAL)
%RMS-E-FNF, file not found

TP server process waiting

%%%%%%%%%%%%% OPCOM 19-MAY-1999 19:01:21.35 %%%%%%%%
Message from user AUDIT$SERVER on HOBBY
Security alarm (SECURITY) and security audit (SECURITY) on HOBBY, system id: 1025
Auditable event: Audit server starting up
Event time: 19-MAY-1999 19:01:21.10
PID: 00000083
Username: SYSTEM

The OpenVMS VAX system is now executing the site-specific startup commands.

%%%%%%%%%%%%% OPCOM 19-MAY-1999 19:01:23.25 %%%%%%%%
Message from user AUDIT$SERVER on HOBBY

Security alarm (SECURITY) and security audit (SECURITY) on HOBBY, system id: 1025
Auditable event: Identifier added
Event time: 19-MAY-1999 19:01:23.20
PID: 00000083
Process name: STARTUP
Username: SYSTEM
Process owner: [SYSTEM]
Image name: HOBBY$DKA200:[SYS0.SYSCOMMON.][SYSEXE]AUTHORIZE.EXE
Identifier name: SYS$NODE_HOBBY
Identifier value: %X80010000
Attributes: none

%UAF-I-RDBADMSG, identifier SYS$NODE_HOBBY value %X80010000 added to rights database
%SET-I-INTSET, login interactive limit = 64, current interactive value = 0

SYSTEM job terminated at 19-MAY-1999 19:01:25.30

```

Accounting information:

Buffered I/O count:	1516	Peak working set size:	1694
Direct I/O count:	607	Peak page file size:	4815
Page faults:	5034	Mounted volumes:	0
Charged CPU time:	0 00:00:26.97	Elapsed time:	0 00:00:54.06

Now that the system is booted, it is now ready for you to log in to the SYSTEM account with the password you provided earlier:

```
Welcome to OpenVMS (TM) VAX Operating System, Version V7.2
```

```
Username: system
```

```
Password:
```

```
Welcome to OpenVMS (TM) VAX Operating System, Version V7.2
```

```
$
```

Congratulations, you have successfully installed OpenVMS VAX on your system. All that remains is to install any additional software products you want to add, and register additional licenses.

Layered Product Installation

Installing Layered Products

There are two main methods for installation of Layered Products from the CD:

- VMSINSTALL
 - The VMSINSTAL kit is a series of files of <PRODUCT_NAME>.A, .B, .C, ... which comprise a series of BACKUP savesets which contain software and installation scripts.
- PRODUCT INSTALL (also known as PCSI)
 - The PRODUCT INSTALL kits are a specially packaged file with product software, scripts, etc which define the hardware architecture, operating system and have a file type of .PCSI.

Some installations may fail if there is not enough system resources to run the product. Often this is global sections (GBLSECTIONS) and global pages (GBLPAGES). If so, you will need to AUTOGEN your system. See the product installation notes for most details.

Installing Using VMSINSTAL

To install using VMSINSTAL, use the command procedure provided in the SYSSUPDATE directory of your OpenVMS system. The installation procedure can be provided the name of the product and the location of the kit, or it will prompt for them if not provided.

For example, to install NOTES V2.5, the following command would be used (substitute the device name for the device which you have the Hobbyist Kit installed):

- \$ @sys\$update:vmsinstal notes025 dka400:[kits.notes025]

Installing Using PRODUCT INSTALL

To install using PRODUCT INSTALL, use the DCL command and specify the product and source directory of the kit.

For example, to install DECWindows/Motif, the following command would be used (substitute the device name for the device which you have the Hobbyist Kit installed):

- PRODUCT INSTALL DWMOTIF /source=DKA400:[KITS.DWMOTIF_VAX125_KIT]

