VAX DATATRIEVE
Installation Guide

July 1988

This manual describes the installation procedure for VAX DATATRIEVE.

OPERATING SYSTEM: VMS

SOFTWARE VERSION: VAX DATATRIEVE V4.2

Contents

3 Postinstallation Considerations

4 User Environment Test Packages

How to Use This Manual

This manual guides you while you install VAX DATATRIEVE software and use any of the User Environment Test Packages (UETPs).

This manual does not contain any release note information. Printed release notes for VAX DATATRIEVE are found in the *VAX DATATRIEVE Release Notes*. Release notes for VAX DATATRIEVE are also shipped with the installation kit and can be printed during the installation procedure.

Intended Audience

This manual is intended for persons responsible for installing and maintaining VAX DATATRIEVE software. To install the software, you should be familiar with VMSINSTAL, the command procedure used to install software products in the VMS environment. For information on VMSINSTAL, see the VMS documentation.

Operating System Information

Information about the versions of the operating system and related software that are compatible with this version of VAX DATATRIEVE is included in the VAX DATATRIEVE media kit, in either the Installation Guide or the Before You Install letter.

For information on the compatibility of other software products with this version of VAX DATATRIEVE, refer to the System Support Addendum (SSA) that comes with the Software Product Description (SPD). You can use the SPD/SSA to verify which versions of your operating system are compatible with this version of VAX DATATRIEVE.

Structure

This manual consists of four chapters:

Chapter 1   Explains how to plan the installation and prepare your system.

Chapter 2   Explains the installation procedure and the questions asked during installation.

Chapter 3   Identifies important postinstallation considerations.

Chapter 4   Describes the User Environment Test Packages (UETPs) and provides instructions for running them.

Related Documents

For further information on the topics covered in this manual, you can refer to:

- *VAX DATATRIEVE Release Notes*

  Includes specific information about the current DATATRIEVE release and contains material added too late for publication in the other DATATRIEVE documentation.

- *VAX DATATRIEVE Handbook*

  Describes how to create DATATRIEVE applications. The manual includes some tutorial information on describing data and creating procedures.

- *VAX DATATRIEVE Guide to Using Graphics*

  Introduces the use of DATATRIEVE graphics and contains the reference material for creating DATATRIEVE plots.

- *VAX DATATRIEVE Guide to Writing Reports*

  Explains how to use the DATATRIEVE Report Writer.

- *VAX DATATRIEVE User's Guide*

  Describes how to use DATATRIEVE interactively. The manual includes information on using DATATRIEVE to manipulate data and on using DATATRIEVE with forms, relational databases, and database management systems. It also describes how to improve performance and how to work with remote data.

- *VAX DATATRIEVE Reference Manual*

  Contains reference information for DATATRIEVE.

- *VAX DATATRIEVE Pocket Guide*

  Contains quick-reference information about using DATATRIEVE.

- *VAX DATATRIEVE Guide to Programming and Customizing*

  Explains how to use the DATATRIEVE Call Interface. The manual also describes how to create user-defined keywords and user-defined functions to customize DATATRIEVE and how to customize DATATRIEVE help and message texts.

Conventions

This section explains the conventions for the syntax and symbols used in this manual:

WORD	An uppercase word in a syntax format is a keyword. You must include it in the statement if the clause is used.
word	A lowercase word in a syntax format indicates a syntax element that you supply.
[ ]	Square brackets enclose optional clauses from which you can choose one or none.
{ }	Braces enclose clauses from which you must choose one alternative.
RET	This symbol indicates the RETURN key. Unless otherwise indicated, end all user input lines in examples by pressing the RETURN key.
TAB	This symbol indicates the TAB key.
CTRL/x	This symbol tells you to press the CTRL (control) key and hold it down while pressing a letter key. If you press CTRL/Z, the word Exit appears in reverse video; if you press CTRL/Y, the word Interrupt appears in reverse video. Examples of video output in this book do not include either word; instead, the conventions ^Z and ^Y are used.
GOLD-x	This symbol indicates that you press the GOLD key and then a specified letter key consecutively.
" "	These are double quotation marks.
' '	These are single quotation marks.
. . .	A horizontal ellipsis in syntax formats means you can repeat the previous item.
	A horizontal ellipsis in examples means that information not directly related to the example has been omitted.

	A vertical ellipsis in syntax formats means you can repeat the syntax element from the preceding line.
	A vertical ellipsis in examples means that information not directly related to the example has been omitted.
Color	Color in examples shows user input.

Since CDD Version 3.1, CDD path names include a leading underscore. For example:

```
DTR> SHOW DICTIONARY
The default directory is _CDD$TOP.DTR32.WEAGER
```

Examples of the output in DATATRIEVE manuals do not reflect this change. You do not need to enter CDD path names with the leading underscore.

References to Products

VAX DATATRIEVE is a member of the VAX Information Architecture, a group of products that work with each other and with VAX languages conforming to the VAX calling standard to provide flexible solutions for information management problems.

VAX Information Architecture documentation explaining how these products interrelate is included with the VAX CDD documentation. VAX Information Architecture documentation is also available separately. Contact your DIGITAL representative.

The VAX DATATRIEVE documentation to which this manual belongs often refers to products that are part of the VAX Information Architecture by their abbreviated names:

- VAX DATATRIEVE software is referred to as DATATRIEVE.

- VAX DBMS software is referred to as DBMS.

- VAX Rdb/ELN software is referred to as Rdb/ELN.

- VAX Rdb/VMS software is referred to as Rdb/VMS.

- VAX TDMS software is referred to as TDMS.

- VIDA software is referred to as VIDA.

This manual uses the terms relational database or relational source to refer to all three of these products:

- VAX Rdb/ELN

- VAX Rdb/VMS

- VIDA

References in this manual to the VAX Common Data Dictionary, Common Data Dictionary, or CDD refer to the DMU format dictionary. CDD/Plus supports dictionary definitions in two distinct formats:

- DMU format — Dictionary definitions that can be created and manipulated with DMU, CDDL, CDDV utilities, and other products that do not support the new features of CDD/Plus

- CDO format — Dictionary definitions that can be created and manipulated with the CDO utility, the CDD/Plus Call Interface, and other supporting products

Record definitions that you intend to access from DATATRIEVE can be created and manipulated in the DMU format dictionary using DMU, CDDL, CDDV, and other products that support DMU dictionary definitions.

Your site may have other products that support the new features of CDD/Plus. If so, you may benefit by using CDO, the CDD/Plus Call Interface, or other supporting products to create definitions in the CDO format dictionary. Some CDO dictionary definitions you create can be used by DATATRIEVE.

For more information on the DMU format dictionary, CDO format dictionaries, and CDD/Plus in general, see the *VAX CDD/Plus User's Guide.*

Preinstallation Considerations 1

This chapter includes important installation considerations that you must be
aware of before you install VAX DATATRIEVE V4.2. Read this chapter carefully
before you proceed to the Chapter entitled VAX DATATRIEVE Installation
Procedure.

1.1 System Requirements

To install VAX DATATRIEVE V4.2, you must have 11,000 blocks of storage avail-
able on the system disk. After installation, DATATRIEVE requires a maximum of
9,000 blocks of disk space if you install all optional material with DATATRIEVE.
To check the number of blocks of storage available on the system disk, use the
SHOW DEVICES command at the DCL prompt. In addition, you must have the
correct versions of the optional and required software products you will be using
with DATATRIEVE. Install those products in the order specified in the Section
entitled Order of Product Installation. You should also check that a number of
system parameters are set at an adequate level.

Note that the installation defines the logical name DTR$LIBRARY as
SYS$COMMON:[DTR]. If the installation fails, DTR$LIBRARY may be deas-
signed and have to be redefined. To reassign the logical, use either the ASSIGN
command or the DEFINE command, as follows:

```
$ ASSIGN/SYSTEM SYS$COMMON:[DTR] DTR$LIBRARY
$ DEFINE/SYSTEM DTR$LIBRARY SYS$COMMON:[DTR]
```

1.1.1 VAX Licensing Management Facility (LMF)

If you are running VMS V5.0 or later, VAX DATATRIEVE V4.2 supports the License Management Facility provided by VMS. See the *VMS License Management Utility Manual* for more information.

If you are running VMS V5.0 or later, register the information contained in the Product Authorization Key (PAK) that is shipped with DATATRIEVE V4.2 *before* you begin the installation. You can register by using either the VMS License command procedure or the LICENSE REGISTER command, as described in the *VMS License Management Utility Manual*.

DATATRIEVE asks you early in the installation procedure whether you have registered and loaded an authorization key. You can install DATATRIEVE V4.2 without the authorization key information, but you cannot run DATATRIEVE or the Installation Verification Procedure (IVP).

If you are running VMS V4.x, when you upgrade to VMS V5.0 or later, you are required to relink your DATATRIEVE images or reinstall DATATRIEVE. If you are going to relink later, answer yes to the question about keeping the DATATRIEVE library on line, which is in the Section on Answering Questions during the DATATRIEVE Installation, in Chapter 2.

1.1.2 Required Software Products

Note

This version of DATATRIEVE is a complete kit. You do *not* need any previous versions of DATATRIEVE to install it.

VAX DATATRIEVE V4.2 will install and run only on V4.7 or later of the VMS and MicroVMS operating systems. If you have a VMS version earlier than 4.7, you must install VMS V4.7 or later before you can install VAX DATATRIEVE. To check which version of VMS is currently installed on your system, use the SHOW SYSTEM command at the DCL prompt.

You must have V4.0 of VAX CDD/Plus before you can install VAX DATATRIEVE. To check which version of CDD/Plus is currently installed on the system, use the following commands:

```
$ RUN SYS$SYSTEM:DMU
DMU> SHOW VERSION
```

See the *VAX CDD/Plus Installation Guide* for more information.

1.1.3 Optional Software Products

The following optional products can be used along with VAX DATATRIEVE:

- VAX DBMS

- VAX Rdb/VMS

- VAX Rdb/ELN

- VAX TDMS

- VAX FMS

- VIDA

- VAX Language-Sensitive Editor (LSE)

Refer to the letter entitled *Before You Install VAX DATATRIEVE Version 4.2* to determine which versions of these optional software products are compatible with VAX DATATRIEVE V4.2.

If an optional product is on the system but is not the version required by DATATRIEVE, the installation procedure will not install the user environment test package (UETP) for that product. (Note that not all optional software products have a UETP.)

If you want to ready domains that reside on a remote node of a PDP-11 system, you must have V3.1 or later of the DATATRIEVE-11 software installed on the remote node that you want to access.

1.1.4 Order of Product Installation

When you are installing required and optional software products along with DATATRIEVE, you should install these products in the following order:

- Optional VAX Language-Sensitive Editor (LSE)

  If you plan to use LSE with VAX DATATRIEVE, you should install LSE before installing other required or optional software products. However, if you choose to install LSE at a later date, the DATATRIEVE installation procedure provides you with the option of performing a modified DATATRIEVE installation to provide DATATRIEVE support for LSE at that time.

- VAX CDD/Plus

- Optional forms products (TDMS, FMS)

- Optional database products (DBMS, Rdb/VMS, Rdb/ELN, VIDA)

Install DBMS, Rdb/VMS, Rdb/ELN, and/or VIDA before installing
DATATRIEVE to make sure the installation includes sample databases
and user environment test packages. You do not have to install these optional
database products before DATATRIEVE, however, to use the products with
DATATRIEVE.

- VAX DATATRIEVE

1.1.5 VAXcluster Considerations

The following considerations pertain to VAXclusters:

- If you installed a version of DATATRIEVE before V3.2 on a cluster, the
  installation procedure placed files in SYS$SPECIFIC:[DTR]. Before installing
  any version of DATATRIEVE since V3.1, you must delete the old files in
  SYS$SPECIFIC:[DTR] and the SYS$SPECIFIC:[DTR] directory itself.

  Follow these steps to delete the files and the directory:

  1. Log in to a privileged account on the system on which the previous version
     of DATATRIEVE was installed.

  2. Delete all of the files from the directory:

     ```
     $ DELETE SYS$SPECIFIC:[DTR]*.*;*
     ```

  3. Delete the directory itself using the following command:

     ```
     $ DELETE SYS$SPECIFIC:[000000]DTR.DIR;*
     ```

- This installation procedure lets you install VAX DATATRIEVE only on
  a system-rooted device. Whether you are installing DATATRIEVE on
  a VAXcluster or in a nonclustered environment, the installation proce-
  dure uses SYS$COMMON, not SYS$SPECIFIC, to place the files that it
  generates. The installation defines the logical name DTR$LIBRARY as
  SYS$COMMON:[DTR].

  On nonclustered systems, SYS$COMMON defaults to the normal system root.
  For more information about cluster roots, see the VMS documentation on
  VAXclusters.

1.1.6   Required Parameters

You should check the following parameters to make sure they are sufficient for
installing DATATRIEVE:

*   Open file limit (FILLM parameter)

*   Enqueue quota limit (ENQLM parameter)

*   Global pages and global sections (GBLPAGES and GBLSECTIONS
    parameters)

*   Command line interpreter symbol table (CLISYMTBL parameter)

1.1.6.1   Open File Limit (FILLM Parameter) — For the DATATRIEVE installation
procedure to run successfully, the account used to install DATATRIEVE should
have a minimum open file limit (FILLM parameter) of 30. To check the current
open file limit, use the SHOW PROCESS/QUOTAS command at the DCL prompt.
In addition, check the documentation of products layered on DATATRIEVE to see
if the open file limit should be further increased.

If the open file limit is too low, VMSINSTAL generates the following message at
the beginning of the installation:

```
%VMSINSTAL-W-LOWQUOTA, One or more account quotas may be too low.
```

The installation continues, but the Installation Verification Procedure (IVP) that
runs as part of this installation may fail.

Users running DATATRIEVE should also have an open file limit of 30. Users
running large applications that open many files may need this value increased
further through the AUTHORIZE Utility.

Users who exceed their open file limit may see a meaningless display on their
terminal when they start DATATRIEVE. Or they may receive a message without
further explanation, such as "quota exceeded" or "ACP file access failed." (In
addition, note that users who are close to or exceed their disk quota limit generate
the %SYSTEM-F-ABORT message when they try to invoke DATATRIEVE. This
error occurs because DATATRIEVE tries to open a workfile and cannot. Users
with default disks mounted *read-only* receive the same error message.)

1.1.6.2 Enqueue Quota Limit (ENQLM Parameter) — You may need to be concerned with the overall number of locks in the system and the enqueue quota limit (ENQLM parameter) assigned to individual users. To check the current enqueue quota, use the SHOW PROCESS/QUOTAS command at the DCL prompt.

An ENQLM of about 200 locks is sufficient for most activities, including running the DATATRIEVE User Environment Test Packages (UETPs). However, users running applications that access large databases may require more than 200 locks. If such users do not have more than 200 locks, they receive a quota exceeded message from the VMS system. This message does not mention the ENQLM parameter or locks. You can change the ENQLM by using the AUTHORIZE Utility.

Rdb/VMS, in particular, uses many locks and may require raising the ENQLM:

*   If the account you use to install DATATRIEVE has an ENQLM under 500, the installation cannot build the sample Rdb/VMS database. The installation continues without building the sample database. To include the sample Rdb/VMS database, you must reinstall DATATRIEVE using an account with an ENQLM of 500 or more.

*   To use the Rdb/VMS demo, you need an account with an ENQLM of 600.

*   You may receive the quota exceeded message when using DATATRIEVE with Rdb/VMS. To continue, finish unnecessary databases or selected parts of the database using the FINISH command or exit and reenter DATATRIEVE. If you still receive the quota exceeded message, have your system manager raise your account enqueue quota limit.

1.1.6.3 Global Pages and Global Sections (GBLPAGES and GBLSECTIONS Parameters) — If you plan to install various DATATRIEVE images as SHARED, you need to have sufficient global pages and global sections. The installation procedure asks you about four images: DDMFxx, DTR32xx, DTRSHRxx, and DTRMSGS. (The xx at the end of the file name refers to the optional suffix that you can specify in the installation procedure. See the section on more than one installation of this version of VAX DATATRIEVE in Chapter 2.) You do not have to install all of these images; you need to be sure you have sufficient global pages and global sections only for those you do wish to install.

The following table indicates the requirements for these two parameters for the various files that are part of VAX DATATRIEVE V4.2.

File	Global Sections	Global Pages
DDMFxx	1	10
DTR32xx	1	117
DTRSHRxx	3	634
DTRMSGS	1	82

To display the current GBLSECTIONS and GBLPAGES parameters, you can use the SHOW GBLSECTIONS and SHOW GBL PAGES commands of the SYSGEN Utility. (Note, however, that to modify these parameters, you should use the AUTOGEN Utility.)

If the global pages and global sections already on your system are not sufficient, you will need to modify the parameters before installing VAX DATATRIEVE. To modify these parameters, follow the instructions in the VMS documentation on system management that refers to MODPARAMS.DAT and AUTOGEN.

1.1.6.4 Command Line Interpreter Symbols Table (CLISYMTBL) Limits – The DATATRIEVE installation procedure creates a number of DCL symbols. To ensure that your system can accommodate the number of symbols created at installation time, set the CLISYMTBL limit to at least 250. This is especially true for running DATATRIEVE on a MicroVAX where the default CLISYMTBL value is low.

To check the current CLISYMTBL limit, use the SHOW CLISYMTBL command while in the System Generation Utility (SYSGEN). To modify this parameter, use the SYSGEN Utility as follows:

```
$ RUN SYS$SYSTEM:SYSGEN
SYSGEN> SET CLISYMTBL 250
SYSGEN> WRITE ACTIVE
SYSGEN> WRITE CURRENT
```

You will receive a message indicating that the system has been modified. You can then exit the SYSGEN Utility. For more information on the SYSGEN Utility, see the VMS documentation on system management.

If you do increase the CLISYMTBL limit to 250, you may reduce it to the normal level after the installation is completed.

1.1.6.5 CDD Considerations — Before you install DATATRIEVE, you should:

- Check the contents of the dictionary directory CDD$TOP.DTR$LIB for user definitions and subdirectories. Back these up if they exist.

- Make sure the installation procedure has all access privileges to CDD$TOP.

The next two sections more fully explain these procedures.

1.1.7 Effect of Installation Procedure on Existing DTR$LIB Directory

The directory CDD$TOP.DTR$LIB is reserved for use by DIGITAL. The installation procedure builds, or rebuilds, this directory each time you install DATATRIEVE. The directory should contain only definitions for the plots and sample domains, records, and tables that are shipped with the product. Users should not create any dictionary objects or directories that have DTR$LIB as part of their path names.

When the installation procedure rebuilds DTR$LIB, it deletes the existing DTR$LIB hierarchy. Therefore, you should check to make sure that DATATRIEVE users have not placed their own definitions either in DTR$LIB or in any part of its substructure. Extract user definitions you want to save and redefine them in another directory.

1.1.8 Required Privileges to CDD$TOP

Because the installation procedure builds or rebuilds DTR$LIB, the procedure must have all access control privileges to CDD$TOP. You can check these privileges with the following command sequence:

```
$ SET PROCESS/PRIVILEGE=NOBYPASS
$ RUN SYS$SYSTEM:DMU
DMU> SHOW PROTECTION CDD$TOP
```

The resulting privileges list should include:

CONTROL	GLOBAL_DELETE
DTR_EXTEND	HISTORY
DTR_MODIFY	LOCAL_DELETE
DTR_READ	PASS_THRU
DTR_WRITE	SEE
EXTEND	UPDATE
FORWARD	

After checking the privileges list, type EXIT and press the RETURN key to return to DCL command level.

If any of the required privileges are not available or if they are denied or banished, you must change the access control list (ACL) entry to provide all privileges for the duration of the installation. One way you can do this is to enter the following sequence of commands:

```
$ SET PROCESS/PRIVILEGES=BYPASS
$ RUN SYS$SYSTEM:DMU
DMU> SET PROTECTION/GRANT=ALL/UIC=[1,4]-
DMU> /POSITION=1 CDD$TOP
DMU> EXIT
$ SET PROCESS/PRIVILEGES=NOBYPASS
```

After the installation procedure is complete, you can remove the ACL entry with the following command sequence:

```
$ SET PROCESS/PRIVILEGES=BYPASS
$ RUN SYS$SYSTEM:DMU
DMU> DELETE/PROTECTION/POSITION=1 CDD$TOP
DMU> EXIT
$ SET PROCESS/PRIVILEGES=NOBYPASS
```

For your convenience during future installations of DATATRIEVE, you might want to create command files to store these two sequences of commands.

Note that the command procedure VMSINSTAL removes BYPASS privilege. Because of this, you cannot give yourself BYPASS privilege as a substitute for these sequences.

1.1.9 More Than One Installation of This Version of VAX DATATRIEVE

You can install *this* version of VAX DATATRIEVE a number of times to produce different sets of images and files. (Note, however, that you cannot install multiple versions of DATATRIEVE, such as both V4.1 *and* V4.2.) For example, the installation procedure could be run first to install VAX DATATRIEVE V4.2 with TDMS. Then you can install VAX DATATRIEVE V4.2 a second time to support FMS. The resulting images and file names are differentiated by a suffix added to the default names. The installation procedure prompts you to choose this suffix.

The suffix you specify will be given to the following files created during installation. The two letters xx at the end of a file name stand for the 1- to 26-character suffix you specify:

- SYS$SHARE:DTRSHRxx.EXE

- SYS$SYSTEM:DTR32xx.EXE

- SYS$SYSTEM:DDMFxx.COM

- SYS$SYSTEM:DDMFxx.EXE

- DTR$LIBRARY:DTRBLDxx.COM

- DTR$LIBRARY:DTRLIBxx.OLB

- DTR$LIBRARY:DTRFNDxx.MAR

- DTR$LIBRARY:DTRFNDxx.OBJ

- DTR$LIBRARY:DTRFUNxx.OLB

- SYS$MANAGER:DTRSTUPxx.COM

Note that the installation procedure does not append the xx suffix to all images and files. See the restrictions regarding the DTR$LIB:TERMSERVE.OLB file in the release notes for more information.

VAX DATATRIEVE Installation Procedure 2

Before you install VAX DATATRIEVE V4.2, make sure that your system meets all requirements listed in the previous chapter.

Your V4.2 installation kit consists of one magnetic tape or disk pack. This medium makes obsolete the distribution media for any earlier version of VAX DATATRIEVE. VAX DATATRIEVE is also distributed on small media for the MicroVAX computer.

The installation procedure is described in the sections that follow. Note that as the procedure progresses, the installation command procedure sends questions to your terminal that guide you through the installation process. The sections that follow explain these questions in detail.

After you answer questions from the installation procedure, installation of DATATRIEVE takes approximately 10 to 30 minutes.

2.1 Starting the Installation Procedure

Log in under a privileged account, such as the system manager's account.

Invoke the command procedure VMSINSTAL. In the command line, include the name of the device on which the distribution medium is to be mounted. Be sure to type a colon after the device name. Include the qualifier OPTIONS N if you want to print or display release notes during the installation. (See the section on questions about release notes for more information.) If you do not want to print or display release notes, do not include OPTIONS N.

The following example shows how to install V4.2 of DATATRIEVE with the OPTIONS N qualifier on device MTA0. Be sure to replace MTA0 with the name of the specific device you are using:

```
$ @SYS$UPDATE:VMSINSTAL DTR042 MTA0: OPTIONS N
```

Note that you can specify the AUTOANSWERBACK option when you invoke VMSINSTAL. This option creates the file SYS$UPDATE:DTR042.ANS, which contains the installation questions and your responses. This file can then be used in subsequent installations. (The VMS documentation on software installation contains more information about VMSINSTAL.)

The AUTOANSWERBACK option is *not* recommended for DATATRIEVE installations. Questions asked during the DATATRIEVE installation are based on the system environment. The system environment at the time of the original installation determines which questions the installation procedure will ask. When you proceed with a subsequent installation, the questions change according to changes in the system environment. Thus, if you specify AUTOANSWERBACK during the original installation, you probably will not receive the appropriate questions during the subsequent installation.

The installation procedure prompts you for input at various times. Whenever you are prompted for input, you can type a question mark (?) symbol for help.

Most installation prompts include a default response in brackets. To enter the default bracketed response, you can either explicitly enter that response or press the RETURN key.

Before the installation procedure begins, VMSINSTAL checks to see if you are logged in to the system account. If not, you receive this warning message:

```
%VMSINSTALL-W-NOTSYSTEM, You are not logged in to the system account.
```

In addition, before the installation procedure begins, VMSINSTAL checks for active processes on the system. If your DECnet network is running, you receive this warning message:

```
%VMSINSTAL-W-DECNET, Your DECnet network is up and running.
```

If there are still users on the system, you receive this warning message with a list of process names:

```
%VMSINSTAL-W-ACTIVE, The following processes are still active:

                              .
                              .
                              .
```

The list of the process names is followed by this question:

```
* Do you want to continue anyway? [NO]
```

If you want to stop the installation process to get all users off the system, enter N or press the RETURN key.

At the start of the VMSINSTAL procedure, you need to answer the following question:

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

After you have performed the necessary backup, enter Y or press the RETURN key. If you reply with N, the installation stops.

2.2   Mounting the Distribution Medium

VMSINSTAL prints the following message on the terminal:

```
Please mount the first volume of the set on MTA0:
* Are you ready?
```

Type Y after you mount the distribution medium.

The installation procedure then checks to see that several necessary conditions for the installation have been fulfilled:

- The target of the installation is SYS$COMMON on the system-rooted device.

- A compatible version of VMS or MicroVMS is installed.

- At least 11,000 blocks are available on the system disk.

- A compatible version of the Common Data Dictionary is installed on the system.

- The installation procedure has ACL access rights to CDD$TOP.

If any of these conditions has not been fulfilled, the installation procedure displays a message describing the problem. After satisfying the requirement, you can rerun the installation procedure by invoking the command procedure VMSINSTAL again.

─────────────────────────── **Note** ───────────────────────────

MicroVAX computers that do not have DECnet cannot support the DATATRIEVE remote server. On such computers, the installation procedure next displays a message noting that it cannot define a DECnet object for the remote server. If you later install DECnet, you will then need to define a DECnet object for the remote server. See the Section on defining a DECnet object in Chapter 3 for more information.

──

This ends the initial series of questions generated by VMSINSTAL. If you have successfully completed this portion of the installation, a message similar to the following is displayed on your terminal:

```
The following products will be processed:

  DTR V4.2

     Beginning installation of DTR V4.2 at 8:15

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

The installation continues with questions about release notes.

2.3   Answering Questions About Release Notes

If you specified the qualifier OPTIONS N at the beginning of the installation, the procedure offers these options regarding VAX DATATRIEVE V4.2 online release notes:

```
Release Notes Options:

 1.  Display release notes
 2.  Print release notes
 3.  Both 1 and 2

* Select option [3]:
```

Enter the number corresponding to the option you choose. If you enter option 2 or 3, the procedure prompts you for the printer queue name. It then prints the message showing the printing job has begun.

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

Job DTROXX (queue YOURSYS_DQS$PRINT, entry 1248) started on
YOURSYS_DQS$PRINT
```

The procedure now asks if you want to continue the installation.

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

If you want to continue, enter Y.

If you selected one of the print options, you must wait until the printer finishes printing the release notes before entering the N or pressing the RETURN key. If you did not select a print option and wish to exit, enter the N or press the RETURN key.

2.4 Answering Questions About the VAX Licensing Management Facility (LMF)

If you are running VMS V4.x, proceed to the Section on Answering Questions During the DATATRIEVE Installation.

If you are running VMS V5.0, VAX DATATRIEVE V4.2 supports the License Management Facility provided by VMS. The installation procedure now checks whether you have registered and loaded a Product Authorization Key (PAK) as required.

```
        Product:       DTR or DTR-USER

        Producer:      DEC

        Version:       4.2

        Release Date:  1-JUL-1988
* Does this product have an authorization key registered and loaded?
```

If you answer yes, the procedure continues. If you answer no, you receive the following message:

```
You have not registered the LMF authorization key as required.
The VAX DATATRIEVE installation will continue.  However, you
cannot run the product until you register the license authorization
key.
```

```
When the DATATRIEVE installation is completed, please register the
authorization key using the following command:
```

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

```
The IVP cannot be run until the authorization key is registered.
However, the IVP command file will be put in the same directory
as the UETPs.  Once you register the authorization key, you may
run the IVP by entering VAX DATATRIEVE and issuing the following
command:
```

```
DTR> @SYS$COMMON:[SYSTEST.DTR]DTR$IVP.DTR
```

The installation continues with a series of DATATRIEVE-specific questions.

2.5   Answering Questions During the DATATRIEVE Installation

The installation procedure asks you a number of questions concerning default
installation, forms management products, multiple DATATRIEVE installations,
and DATATRIEVE files. The following sections give examples of these questions.

2.5.1   Default Installation

The installation procedure now asks if you want to perform a default installation
of DATATRIEVE using default answers for all questions.

--- **Note** ---

While this question may simplify the installation procedure, it may not
be appropriate for your situation. For example, if your system supports
more than one installation of this version of VAX DATATRIEVE, you
should not select the default installation option. Read the summary of
the default responses that follows the question before you choose this
option.

The installation procedure prompts you with the following question:

```
*Do you want to use default answers for all questions [No]?
```

If you type Y, the DATATRIEVE installation procedure automatically does the following:

- Performs a complete installation of VAX DATATRIEVE; it will not allow a partial installation to provide VAX DATATRIEVE support for the VAX Language-Sensitive Editor (LSE).

- Checks your system for a forms management product. If DATATRIEVE does not find a forms product, the automatic installation procedure provides no forms management support.

   If there already is a forms product on the system, DATATRIEVE:

   - Supplies FMS support, if only FMS is on the system

   - Supplies TDMS support, if only TDMS is on the system

   - Supplies only TDMS support, if both FMS and TDMS are found on the system

- Does not prompt you for the unique 1- to 26- character suffix that identifies the DTR32xx.EXE image of this installation. (Note that if you have already performed an installation of this version of DATATRIEVE and did not supply a suffix during that installation, you will need a suffix to differentiate the image of that prior installation from the image currently being installed. In such a case, the default installation procedure is not appropriate.)

- Does not supply the DATATRIEVE object library in DTR$LIBRARY. (This means that you will not be able to relink this image of VAX DATATRIEVE.)

- Checks to see if the DATATRIEVE remote server has been defined by a previous installation of DATATRIEVE. The DATATRIEVE remote server is called the Distributed Data Manipulation Facility (DDMF).

   When the installation procedure checks for a previously defined DDMF:

   - If there is no remote server or if the remote server is obsolete, the DDMF files from this installation become the remote server for DATATRIEVE.

   - If there is a current remote server already on the system, the default installation procedure uses that as the remote server for this installation of DATATRIEVE.

- Checks to see if there is a current version of NEWUSER.COM available.

   When the installation procedure checks NEWUSWER.COM:

   - If NEWUSER.COM is not current, DATATRIEVE automatically replaces the NEWUSER.COM file.

- If the NEWUSER.COM is current, then DATATRIEVE does not replace the new user file.

- Checks the status of the DCL help for VAX DATATRIEVE. If DCL help is unavailable or out-of-date, DATATRIEVE automatically updates DCL help.

- Installs DTRSHR.EXE, DTRMSGS.EXE, DTR32.EXE, and DDMF.EXE (if applicable) SHARED.

- Supplies the plot definitions for the current version.

- Does not supply the optional text and message files, sample programs, and callable programming aids that can be tailored at the installed site.

- Deletes all obsolete files.

- Purges files replaced by this installation.

If you type N, the installation procedure continues with the questions about the VAX Language-Sensitive Editor (LSE).

2.5.2 VAX Language-Sensitive Editor (LSE)

To use VAX Language-Sensitive Editor (LSE) with DATATRIEVE, LSE must already be installed on your system. If LSE is *not* already installed on your system, you see the following message on your screen.

```
****************************************************************
The VAX Language-Sensitive Editor is not installed on your
system.  To have the VAX Language-Sensitive Editor support,
you must:
    1.  Install the VAX Language-Sensitive Editor
    2.  Install or reinstall this product
****************************************************************
* Do you want to continue the installation [No]?
```

If you enter Y or YES, then installation continues; however, you will not be able to use LSE with DATATRIEVE. If you enter the default value by entering N, NO, or pressing the RETURN key, then the installation is aborted, giving you the opportunity to install LSE on your system. Once LSE is installed, you can begin the DATATRIEVE installation procedure from the beginning. If LSE is already installed on your system, you will be prompted with the following:

```
     LSE is installed on your system.

     You now have the following options:

          1.  Do a complete VAX DATATRIEVE installation including
              VAX DATATRIEVE support for LSE.

          2.  Do only VAX DATATRIEVE support for LSE without
              installing VAX DATATRIEVE.

*   Select option [1]:
```

If you want to install a new version of VAX DATATRIEVE (including LSE sup-
port), then select option 1. If you want only to provide VAX DATATRIEVE
support for LSE (without installing a new version of VAX DATATRIEVE), then
select option 2. If you select option 2, this installation will terminate after VAX
DATATRIEVE support for LSE is provided.

2.5.3 Forms Products

Each installation of VAX DATATRIEVE on a system can support only one of two
forms management products. These products are:

• VAX TDMS (Terminal Data Management System)

• VAX FMS (Forms Management System)

There is a series of questions that determines which product DATATRIEVE will
support for the image currently being installed.

The installation procedure checks to see which forms management products
are on the system. If no forms products are found (or only earlier versions of
TDMS or FMS not supported by DATATRIEVE are found), the terminal sends the
following message:

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

     No Forms Management product has been found on this
     system. If desired, the installation may be aborted
     at this point to install a Forms Management product.
     If the installation continues, VAX DATATRIEVE will
     be built without Forms Management support.

     ****************************************************************

*  Do you wish to continue with the installation [YES]?
```

If you type Y or press the RETURN key, the installation continues with the series
of questions about more than one installation of this version of DATATRIEVE.
(See the section on questions about suffixes and more than one installation of this
version of VAX DATATRIEVE.)

If you type N, the installation is aborted, giving you an opportunity to install a forms product on your system.

If one or more forms products are found, you receive a listing of the products on your system, followed by a message and question similar to the following:

```
    VAX DATATRIEVE can be built to support any one
    of these products, or, if desired, VAX DATATRIEVE
    can be built without support of any of these Forms
    Management products.
* Do you want DATATRIEVE to support one of these products [YES]?
```

If you do not want forms support, enter N. The installation procedure resumes with questions on suffixes and more than one installation of this version of VAX DATATRIEVE.

If you do want forms support, enter Y or press the RETURN key. Then, for each forms product on the system, you are asked if you want DATATRIEVE to support this forms product. Remember each installation of VAX DATATRIEVE can support only one forms product. After you enter Y to specify support for one forms product, you do not receive questions about the other forms products.

For example, if you have both TDMS and FMS on the system, you receive the following question first:

```
* Do you wish to have TDMS Forms Management support [YES]?
```

If you type Y or press the RETURN key, the DATATRIEVE image now being installed will support VAX TDMS. Then the installation procedure moves on to a series of questions on suffixes and more than one installation of this version of VAX DATATRIEVE.

If you type N, you receive a question about support for FMS.

If you type N after each question in the series, you receive the following message:

```
    There are no other Forms Management products on this
    system. If desired, the installation may be aborted
    at this point to install a Forms Management product.
    If the installation continues, the questions pertaining
    to the selection of a Forms Management product will
    be asked again.
* Do you wish to continue with the installation [YES]?
```

If you type Y or press the RETURN key, you have another opportunity to answer questions about forms. If you type N, the installation procedure is aborted.

2.5.4   Suffixes and More Than One Installation of This Version of VAX DATATRIEVE

The installation procedure now sends a message asking whether you intend to complete more than one installation of this version of VAX DATATRIEVE on your system.

```
It is possible to do more than one installation of this
version of VAX DATATRIEVE.  More than one installation of a
single version may be desirable for a number of reasons
including:
     o  Use of multiple forms management products

     o  Use of multiple foreign language translations of VAX
        DATATRIEVE (such as French or German)
* Do you plan to install this version more than once [NO]?
```

If you type N, or press the RETURN key, the installation procedure continues with questions about retaining DATATRIEVE files. (See the section on questions about the DATATRIEVE object library.) At a later date, you can still decide to install VAX DATATRIEVE using file names other than the defaults by answering YES to the previous question. If you type Y, the following message and question about the suffix appear on your terminal:

```
To differentiate the files and images produced by this
installation from those produced by some other
VAX DATATRIEVE installation, it is necessary to append a
suffix to some of the file and image names. For each
installation of this version of VAX DATATRIEVE, this suffix
should be unique. This suffix can be 1 to 26 characters.

* What is the suffix you intend to use for this installation [none]?
```

Only one set of DATATRIEVE images and files can use the default file names that have no suffix. (See the section on more than one installation of this version of VAX DATATRIEVE in Chapter 1 for a list of these images and files.) If you install this version of DATATRIEVE a second or subsequent time, you should identify the subsequent image and file names by a unique suffix. This step allows you to later identify which version of DATATRIEVE you want to run.

For example, on the first run through the installation procedure, you could respond to the question about the suffix by pressing the RETURN key. The result is that each of the DATATRIEVE file names includes no suffix. To run the image produced by this procedure, type:

```
$ RUN SYS$SYSTEM:DTR32
```

During the second or subsequent installation of this version of VAX DATATRIEVE, for example, you might use TDMS as the forms product supported by this image. You could uniquely identify the files and images by responding with TDMS for the suffix. To run the image produced by this procedure, type the following line:

```
$ RUN SYS$SYSTEM:DTR32TDMS
```

If you specify the same suffix for a later installation, the later image supersedes the previous image installed with the same suffix. If you choose to purge files during the installation (see the section on questions about deleting obsolete files), those earlier images will be deleted.

For the remainder of this manual, the two letters xx at the end of a file name stand for the 1- to 26-character suffix you specify.

2.5.5 DATATRIEVE Object Library

The installation procedure asks whether you want to keep the VAX DATATRIEVE object library on disk in DTR$LIBRARY. The following question is displayed on the terminal:

```
* Do you wish to leave the DATATRIEVE library on line [NO]?
```

If you do not want to keep the DATATRIEVE library on line, type N or press the RETURN key. Type Y if you want to keep the library files.

You should keep the library on line if you anticipate having to relink this image of DATATRIEVE. If you do not keep the library files on line and later need to relink DATATRIEVE, you must reinstall this kit.

You have to relink DATATRIEVE if you:

- Upgrade to VAX/VMS V5.0
- Add a user-defined function
- Customize the text file DTRTEXT.MAR
- Install or patch a new version of the CDD
- Install a new version of the VAX Run-Time Library
- Install a new version of FMS

If you keep the library on line, you may enter the folowing command at a later time if you need to relink DATATRIEVE:

```
$ @DTR$LIBRARY:DTRBLDxx
```

2.5.6 DATATRIEVE Remote Server

─────────────────────── **Note** ───────────────────────

You do not receive the question discussed in this section if you are installing DATATRIEVE on a MicroVAX without DECnet. If you later install DECnet, you then need to define a DECnet object for the remote server. See the Section on defining a DECnet object (MicroVAX only) in Chapter 3 for more information.

───

The installation procedure checks to see if the DATATRIEVE remote server has been defined by previous installations of DATATRIEVE. The remote server for DATATRIEVE is called the Distributed Data Manipulation Facility (DDMF). Although there can be several shareable images of VAX DATATRIEVE installed on the same system, there can be only one remote server for each system.

If no remote server has been defined previously or if a previously defined remote server is obsolete, the DDMF files from this installation become the remote server for DATATRIEVE on the system. You do not receive a question about the remote server, and the installation procedure continues with questions about the file for new users. (See the Section entitled Questions about the File for New Users for more information.)

However, if an up-to-date remote server has already been defined (by a previous installation of this VAX DATATRIEVE release, for example) the installation procedure asks if the remote server established by the current installation should be the remote server for the system. The DECnet object number for DDMF is defined as 30 by the installation procedure. You receive the following question:

```
* Do you want DDMFxx.EXE to be used for distributed access [NO]?
```

Type Y if you want the remote server (DDMF) established by the current in-stallation to be the remote server for your system. You might want to type Y if this image will contain options that users on remote systems need to access frequently, for example, user-defined functions that PDP-11 users need to access. In such cases, it is more efficient to make the remote server file for this image the remote server for your system.

Type N or press the RETURN key if these considerations do not apply to this installation of DATATRIEVE.

2.5.7 File for New Users

The installation procedure continues with questions about the new user file. The new user file, NEWUSER.COM, helps new users get started with DATATRIEVE. It provides the necessary files to perform the examples in the DATATRIEVE documentation set. The NEWUSER.COM file is installed in DTR$LIBRARY. Users can invoke the NEWUSER command file by entering:

```
$ @DTR$LIBRARY:NEWUSER
```

There are three questions associated with the NEWUSER.COM file; however, you may not be asked all three. To determine which questions you will be asked, the installation procedure checks to see if your system has a current NEWUSER.COM in DTR$LIBRARY.

If the installation procedure does not find a NEWUSER.COM file, you will not be asked the first question. The procedure will automatically install the NEWUSER.COM file on your system. This might occur if you are installing VAX DATATRIEVE for the first time. The installation procedure continues with the two remaining questions in this section that allow you to specify information about parent directories for users of NEWUSER.COM.

If the installation procedure finds a NEWUSER.COM file from a previous installation of DATATRIEVE, you receive the following question:

```
* Do you want to replace the NEWUSER file [NO]?
```

Your answer to this question is determined by one of the following situations:

1. If you have not installed VAX DATATRIEVE since V3.4, you must type Y to be able to use the NEWUSER.COM file. If you type N, the NEWUSER.COM file is not replaced; therefore:

   • You will not be able to use the NEWUSER.COM file because new user files before V4.0 are not compatible with V4.2.

   • You will not be prompted with the two remaining questions in this section.

2. If you have already installed DATATRIEVE V4.0 or later, you can answer either N or Y. If you type N, the NEWUSER.COM is not replaced; however:

- A DTR32xx.EXE image from a previous installation of DATATRIEVE (V4.0 or later) may be used for NEWUSER.COM

- The installation procedure will not prompt you for the two remaining questions in this section

If you answer Y in either of these two situations, the NEWUSER.COM is replaced. In addition:

- The DTR32xx.EXE image from this installation of V4.2 is used for NEWUSER.COM

- The installation procedure continues with the two remaining questions in this section that deal with CDD directories

If you have chosen to replace NEWUSER.COM or if NEWUSER.COM is automatically installed, the installation procedure asks the following two questions concerning the CDD directories. These questions allow you to determine the way new user directories are established and the name of the parent CDD directory for new user files.

The installation procedure prompts you with the following question:

```
* Do you want NEWUSER to create CDD directories for new users [YES]?
```

Answer Y or press the RETURN key if you want this done. A new user of DATATRIEVE can then invoke the file DTR$LIBRARY:NEWUSER.COM after the installation. NEWUSER creates a CDD directory for the new user if one does not already exist. The directory is comprised of the parent directory specified in the next question and the new user's VMS user name. For example, if the parent directory is CDD$TOP.DTR$USERS and user SMITH invokes NEWUSER, SMITH gets:

- A logical CDD$DEFAULT directory defined as CDD$TOP.DTR$USERS.SMITH

- Several CDD entries, such as YACHTS and FAMILIES, in the CDD$DEFAULT directory

- A number of data files, such as YACHT.DAT and FAMILY.DAT, in the default VMS directory

If you answer N to this question, NEWUSER does not create a CDD directory for the new user. NEWUSER loads the sample domain and record definitions in the node defined by the logical name CDD$DEFAULT. If the new user has not defined this logical name, NEWUSER issues an error message and terminates the procedure.

If you indicate that you want NEWUSER to create CDD directories for new users, you are asked to name the parent CDD directory. The following question appears on your terminal:

```
* What would you like the parent dictionary directory
  to be [CDD$TOP.DTR$USERS]?
```

If you want the parent directory to be CDD$TOP.DTR$USERS, press the RETURN key. Otherwise, enter some other full CDD directory path name. If your path name does not begin with CDD$TOP, you receive an informational message and are prompted again for the full path name.

2.5.8   DCL Help

After the NEWUSER questions, you may be asked a question about getting DCL help for VAX DATATRIEVE. Users on your system can obtain information about VAX DATATRIEVE by entering HELP DATATRIEVE at the DCL prompt. The help text explains how to invoke DATATRIEVE. Because it is possible to perform one or more installations of this version of VAX DATATRIEVE on the same system, you need to indicate which image should be referred to in the DCL help text.

To determine whether or not you receive this question, the installation procedure checks to see:

1. If there is DCL help for VAX DATATRIEVE

2. If the version number of the DCL help indicates that changes have been made to the DCL help since the previous installation of DATATRIEVE

3. If the DATATRIEVE image referred to in DCL help is the same as the DTR32xx.EXE image specified earlier in this installation

You will not be asked the DCL help question if:

*   No help exists. DCL help is automatically provided for the current installation.

*   DCL help is available but the help information has been modified. In this case, the existing help is automatically replaced by the DCL help provided for the current installation.

- The available version of DCL help is identical to that provided by the current installation and the DTR32xx.EXE image referred to in DCL help is identical to the image specified earlier in this installation. In this case, DCL help does not need to be updated.

You will be asked this question if the DCL help text has not changed, but the DTR32xx.EXE image specified earlier in this installation is different from the one referred to in the existing DCL help. Typically, this would occur on a second or subsequent installation of this version of VAX DATATRIEVE. In such a case, the DTR32xx.EXE image would have a different 1- to 26-character suffix.

After making this determination, the installation procedure may prompt you with the following question:

```
* Do you want DTR32xx.EXE to be referenced by DCL HELP [NO]?
```

If you type Y, the DCL help text instructs users to enter the file name DTR32xx.EXE to invoke DATATRIEVE. Otherwise, the help text does not change.

2.5.9 Shared Images

DATATRIEVE runs most efficiently when all its executable images are installed as shareable images. The installation procedure lets you choose not to do so, however. The installation procedure prompts you with the following question. Note that the file SYS$MANAGER:DTRSTUPxx.COM is built according to your responses.

```
* Do you want DTRSHRxx.EXE and DTRMSGS.EXE to be installed SHARED [YES]?
```

For best performance, the images DTRSHRxx.EXE and DTRMSGS.EXE should be installed as SHARED. Type Y or press the RETURN key if you want these images to be installed as SHARED. The second question about shareable images refers to DTR32xx.EXE. For best performance, this should also be installed as SHARED.

```
* Do you want DTR32xx.EXE to be installed SHARED [YES]?
```

Type Y or press the RETURN key if you want this image to be installed SHARED.

For best performance in environments where you anticipate extensive use of the distributed features of VAX DATATRIEVE, the image DDMFxx.EXE should also be installed as SHARED. If the DDMF from this installation is to be the remote server, you receive the following question:

```
* Do you want DDMFxx.EXE to be installed SHARED [YES]?
```

Type Y or press the RETURN key if you want this image to be installed as SHARED.

——————————————— **Note** ———————————————

You do not receive the question about DDMFxx.EXE if you are installing DATATRIEVE on a MicroVAX that does not have DECnet. If you later install DECnet, see the Section entitled Defining a DECnet Object (MicroVAX only) in Chapter 3 for instructions for running the DDMFxx.EXE image as SHARED.

——

2.5.10 Plots and Optional Material

The installation procedure continues with a question about plot definitions for VAX DATATRIEVE graphics. VAX DATATRIEVE contains graphics features you can use with a VT125, VT240, VT330, or VT340 terminal. In order to use these features, you must request plot definitions during installation.

——————————————— **Note** ———————————————

If this is your first installation of VAX DATATRIEVE since V3.4, you must answer Y to the following question. The plot definitions were modified with V4.0. Plot definitions provided with DATATRIEVE installations prior to V4.0 are not compatible with VAX DATATRIEVE V4.2.

——

The terminal displays the following question:

```
* Do you wish to have the plot definitions [YES]?
```

Type Y or press the RETURN key if you want the installation procedure to include plot definitions. The plot definitions are installed in the Common Data Dictionary, in CDD$TOP.DTR$LIB.PLOTS. They replace the plot definitions of earlier versions. The next question pertains to components of VAX DATATRIEVE that can be tailored at the installation site. This material includes the DATATRIEVE text and message files, as well as sample programs and callable DATATRIEVE programming aids that are the basis for many examples in DATATRIEVE documentation.

The terminal displays the following message and question:

```
Some optional material is available with this kit including the components
of VAX DATATRIEVE that can be tailored at the installed site.
* Do you want the optional material [NO]?
```

Type Y if you want this material. The installation procedure loads these files in DTR$LIBRARY. If you do not want this material, type N or press the RETURN key.

After you respond to this query, the installation procedure continues with a question about deleting obsolete files from previous installations of VAX DATATRIEVE.

2.5.11   Obsolete Files

If you have any prior releases of VAX DATATRIEVE installed on your system, some files you are currently using have been made obsolete with V4.2.

Your terminal displays the following message:

```
This version of VAX DATATRIEVE makes obsolete some files
from previous versions of VAX DATATRIEVE.
* Do you want ALL the obsolete files deleted [YES]?
```

Answer Y or press the RETURN key if you want this done. If you answer N, all obsolete files are retained in the system directories where they reside. All files created and deleted by this installation procedure are listed in the file DTR$LIBRARY:DTRnnn.DAT. (For example, for V4.2 of DATATRIEVE, the file DTR$LIBRARY:DTR042.DAT contains the listing for this installation.)

Following installation, you can edit a copy of DTRnnn.DAT to create a command file that deletes any of the listed files that you do not wish to keep. (Note that a similar file exists in SYS$COMMON. Use the file specification SYS$COMMON:[SYSMGR.VAXINFO$PRODUCTS]DTRnnn_xx_FILES.DAT to access the file. Note that nnn identifies a version number, such as 042, and xx identifies the 1- to 26-character suffix you specify during installation.) After you respond to this query, the installation procedure asks about purging the installation files:

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

If you wish, you can have all files that were created by this installation procedure purged in the various directories where they were created. No files are purged except those created in this installation. Type Y or press the RETURN key to purge the files.

2.5.12 Finishing the Installation

After you have responded to the question about purging files, the terminal displays the message that follows. Note, however, that if you have selected the default installation option, the line about all questions being asked will not be displayed.

```
All questions regarding the installation have now been asked.

The installation of VAX DATATRIEVE will now continue for
10 minutes to 30 minutes.
```

If this release of DATATRIEVE includes changes to the sample functions, the installation procedure displays the following message:

```
An existing DTRFNDxx.MAR has been found
on the system, but its version does not
match the current level for this installation.
The existing DTRFNDxx.MAR and DTRFUNxx.OLB
have been respectively renamed to
DTR$LIBRARY:DTRFNDxx.OLD and
DTR$LIBRARY:DTRFUNxx.OLD.
```

See the section on maintaining user-defined functions found in Chapter 3 for more information. See the *VAX DATATRIEVE Release Notes*, V4.2 for information on changes to the operation of the function library.

During installation, you should receive the following message on your terminal:

```
During the installation, a file called
DTRSTUPxx.COM has been added to SYS$MANAGER:

The site-dependent startup file, SYS$MANAGER:SYSTARTUP.COM
(if you are running under VMS V4.x) or SYS$MANAGER:SYSTARTUP_V5.COM
(if you are running under VMS V5.0) should have the following line added:

    $ @SYS$MANAGER:DTRSTUPxx.COM
```

Be sure to update SYS$MANAGER:SYSTARTUP.COM or SYS$MANAGER:SYSTARTUP_V5.COM after installation.

The installation procedure next displays information about User Environment Test Packages (UETPs). The installation provides up to five UETPs, depending on the optional products already on the system (TDMS, FMS, DBMS, Rdb/VMS, and so on) and your responses to the questions about forms products and plots. Besides a general test of DATATRIEVE, there are also UETPs for plots, forms, Rdb/VMS, and DBMS.

The installation displays a message showing how to invoke each of the UETPs it provides:

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

VAX DATATRIEVE User Environment Test Packages (UETPs)
have been provided and can be run after the installation is
complete.  They are invoked from VAX DATATRIEVE as follows:

DTR> @sys$common:[systest.dtr]dtr        ! The general test
DTR> @sys$common:[systest.dtr]plots      ! The plots test
DTR> @sys$common:[systest.dtr]dbms       ! The DBMS test
DTR> @sys$common:[systest.dtr]rdb        ! The Rdb/VMS test
DTR> @sys$common:[systest.dtr]forms      ! The Forms test

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

The file type for these files is .DTR in the directory SYS$COMMON:[SYSTEST.DTR].

Chapter 4 discusses the test packages.

The installation procedure now runs the general IVP test and displays the following message:

```
Executing IVP for:  VAX DATATRIEVE  V4.2

Running the general IVP test...
    Test completed successfully

    ***********************************

    VAX DATATRIEVE V4.2

    IVP COMPLETED SUCCESSFULLY

    ***********************************

IVP completed for:  VAX DATATRIEVE V4.2
```

If the account you are using to install DATATRIEVE has an ENQLM quota under 500, the installation procedure displays the following information:

```
Your ENQLM quota is less than 500; this will be too low for the sample
Rdb/VMS database to be restored.  Reinstall VAX DATATRIEVE to build
that database after increasing your ENQLM.
```

If your system has Rdb/VMS and has an ENQLM over 500, the installation procedure now builds the sample Rdb/VMS database. The terminal displays the following message as the procedure builds the database:

```
Restoring VAX DATATRIEVE demonstration RDB/VMS database

Backed up by Rdb/VMS V2.1 Backup/Restore utility
A component of Rdb/VMS V2.1
Previous name was DTR$LIBRARY:PERSONNEL.RDB
It was logically backed up on 22-MAY-1988 22:39
Restoring relation COLLEGES
Restoring relation DEGREES
Restoring relation DEPARTMENTS
Restoring relation EMPLOYEES
Restoring relation JOBS
Restoring relation JOB_HISTORY
Restoring relation SALARY_HISTORY
Restoring relation WORK_STATUS
```

Note

You might receive one or more DECnet error messages during this part of the installation procedure. You can ignore these messages.

When the installation procedure is finished, control returns to the command procedure VMSINSTAL.

Postinstallation Considerations **3**

This chapter discusses some important postinstallation considerations concerning DECnet, relational databases, DBMS databases, and user-defined functions.

3.1   Updating SYS$MANAGER:SYSTARTUP.COM and SYS$MANAGER:SYSTARTUP_V5.COM

During installation, a file called DTRSTUPxx.COM was added to SYS$MANAGER. (Note that xx represents the 1- to 26-character suffix you specify during installation.) After installation, you must update the site-dependent startup file SYS$MANAGER:SYSTARTUP.COM (if you are running VMS V4.x) or SYS$MANAGER:STARTUP_V5.COM (if you are running VMS V5.0) by adding the following line:

```
$ @SYS$MANAGER:DTRSTUPxx.COM
```

3.2 Postinstallation VAXcluster Considerations

If you are installing DATATRIEVE on a cluster, the shareable image created
by this installation of DATATRIEVE is available only from the node where the
installation is done. Therefore, after the installation is complete, you should log
in to each of the other nodes in the cluster where DATATRIEVE will be used and
execute the DATATRIEVE startup command file on each node. To do this, use the
following command:

```
$ @SYS$MANAGER:DTRSTUPxx.COM
```

Note, however, that this is not necessary if you plan to reboot the entire cluster
after the installation is complete.

3.3 DECnet Considerations

The following sections describe:

*   What you need to do to run the DATATRIEVE remote server if DECnet is
    installed after DATATRIEVE on a MicroVAX

*   How to create a default DECnet account for remote users of DATATRIEVE on
    your system

3.3.1 Defining a DECnet Object (MicroVAX Only)

Unless you install DATATRIEVE on a MicroVAX system without DECnet, the in-
stallation procedure automatically defines a DECnet object for the DATATRIEVE
remote server.

However, if you install DATATRIEVE on a MicroVAX system that does not have
DECnet, the installation procedure cannot use the DECnet Network Control
Program (NCP) utility to define a DECnet object.

This section describes how to use NCP to define a DECnet object for the remote
server if DECnet is later installed on the MicroVAX system.

The remote server for DATATRIEVE is called the Distributed Data Manipulation
Facility (DDMF). The installation procedure creates two files, DDMFxx.EXE and
DDMFxx.COM, in SYS$SYSTEM. To define a DECnet object for DDMFxx.EXE
and assign it an object number of 30, type the following commands:

```
$ NCP == "$NCP"
$ NCP DEFINE OBJECT DDMF NUMBER 30
$ NCP SET OBJECT DDMF NUMBER 30
$ NCP DEFINE OBJECT DDMF FILE DDMFxx.COM
$ NCP SET OBJECT DDMF FILE DDMFxx.COM
```

For best performance in environments where you anticipate extensive use of the distributed features of DATATRIEVE, you should run the remote server as SHARED. To run the image DDMFxx.EXE as a SHARED image, edit the file SYS$MANAGER:DTRSTUPxx.COM. That file begins with the following lines:

```
$!+
$!    VAX DATATRIEVE Start-up File
$!-
```

Check the file for the following line and add it, if it is not already there:

```
$ DTR$INSTALL := $SYS$SYSTEM:INSTALL/COMMAND_MODE
```

You will see a dollar sign and the word *exit* at the end of the file. Enter the following text on the line above $ exit:

```
ADD/OPEN/SHARED SYS$SYSTEM:DDMFxx.EXE
```

3.3.2 Creating a Default DECnet Account for Distributed Access

─────────────────────────────── **Note** ───────────────────────────────

This section applies to systems on which DECnet was installed before DATATRIEVE. If DATATRIEVE is installed on a MicroVAX system that does not have DECnet, you cannot define a default DECnet account. If DECnet is later installed, you must define a DECnet object (see the Section entitled Defining a DECnet Object) before you can create a default DECnet account.

──

The installation procedure defines a DECnet object called DDMF and assigns it the number 30. After the installation, you may want to create a default DECnet account, such as DECNET_DTR, for this DECnet object. Remote users can then omit the user name and password from the node specification when accessing domains on your node.

If you wish to set up such a default DECnet account for distributed access, follow
these steps:

1. Add an entry to the user authorization file (UAF) on your system for
    DECNET_DTR. Specify the same file limits and quotas as you would for any
    other DATATRIEVE user.

2. Invoke NCP to associate DDMF (known object 30) with the default DECnet
    account DECNET_DTR. Use the DEFINE OBJECT command in NCP to
    modify the object parameters for DDMF in the permanent database on your
    system.

You can use the following sample session as a model for your own system. Note
that for security reasons, you should use a different password than the one
provided.

```
$ auth == "$authorize"
$ ncp == "$ncp"
$ set default sys$system
$ auth
UAF>ADD DECNET_DTR/OWNER="VAX
DATATRIEVE"/PASSWORD=choose_your_password
user record successfully added
UAF>MODIFY DECNET_DTR/DEVICE=SYS$SYSDEVICE/DIRECTORY=[DECNET_DTR]
user record(s) updated
UAF>MODIFY DECNET_DTR/UIC=[376,376]
user record(s) updated
UAF>MODIFY DECNET_DTR/FILLM=30/ENQLM=200 !or 500 for Rdb/VMS users
user record(s) updated
UAF>MODIFY DECNET_DTR/WSDEFAULT=350/WSQUOTA=350
user record(s) updated
UAF>MODIFY DECNET_DTR/FLAGS=(DISCTLY, DEFCLI, LOCKPWD, CAPTIVE)
UAF>SHOW DECNET_DTR


Username: DECNET_DTR                Owner:  VAX DATATRIEVE
Account:                            UIC:    [376,376] ([376,376])
CLI:      DCL                       Tables: DCLTABLES
Default:  SYS$SYSDEVICE:[DECNET_DTR]
LGICMD:   LOGIN
Login Flags: Disctly Defcli Lockpwd Captive
Primary days:   Mon Tue Wed Thu Fri
Secondary days:                 Sat Sun
No access restrictions
Expiration:             (none)   Pwdminimum:  6   Login Fails:  0
Pwdlifetime:        180 00:00    Pwdchange:       (pre-expired)
Last Login: (none) (interactive),       (none) (non-interactive)
Maxjobs:            0  Fillm:       30  Bytlm:        4096
Maxacctjobs:        0  Shrfillm:     0  Pbytlm:          0
Maxdetach:          0  BIOlm:       18  JTquota:      1024
Prclm:              2  DIOlm:       18  WSdef:         350
Prio:               4  ASTlm:       24  WSquo:         350
Queprio:            0  TQElm:       10  WSextent:     1000
CPU:          (none)  Enqlm:      500  Pgflquo:     10000
Authorized Privileges:
  TMPMBX NETMBX
```

```
Default Privileges:
  TMPMBX NETMBX


UAF>EXIT
SYSUAF.DAT modified
$ CREATE/DIR/OWN = [376,376] SYS$SYSDEVICE:[DECNET_DTR]
$ ncp
NCP>LIST OBJECT DDMF


Object Permanent Summary as of  31-JUN-1988 15:31:09

Object = DDMF

Number                 = 30
File id                = DDMF.COM


NCP>DEFINE OBJECT DDMF USER DECNET_DTR PASSWORD YACHTS
NCP>LIST OBJECT DDMF


Object Permanent Summary as of  31-JUN-1988 15:31:09

Object = DDMF

Number                 = 30
File id                = DDMF.COM
User id                = DECNET_DTR
Password               = YACHTS


NCP>SET KNOWN OBJECTS ALL
NCP>EXIT
$
```

For more information on NCP and DECnet, see the VMS documentation on
networking.

3.4   Maintaining User-Defined Functions

If you are installing V4.2 for the first time and if your site maintains site-
specific or user-defined functions, then you should complete the following steps to
reenable user-defined functions.

If this is a second or subsequent installation of V4.2, DATATRIEVE will always
use the DTRFNDxx.MAR and DTRFUNxx.OLB files that are on the system.
After an initial installation of V4.2, you will no longer have to recreate and relink
DATATRIEVE as described in this section. (See the *VAX DATATRIEVE Release
Notes* for more information on improvements to the DATATRIEVE function
library.)

1. Transfer the user-defined function definitions from DTRFNDxx.OLD (renamed
    during installation) to DTRFNDxx.MAR. To do this, edit DTRFNDxx.MAR

and add the appropriate definitions. (Merely renaming the old file does not enable user-defined functions in the file. They must be transferred to DTRFNDxx.MAR.)

2. Assemble DTRFNDxx.MAR with the MACRO command:

```
$ MACRO DTR$LIBRARY:DTRFNDxx.MAR
```

This command creates the object file DTRFNDxx.OBJ.

3. Replace the object module in the function library with the newly created object file:

```
$ LIBRARY/REPLACE DTR$LIBRARY:DTRFUNxx DTRFNDxx
```

4. Skip to the next step if the user-defined functions for your site consist only of calls to Run-Time Library routines. However, if your site has user-defined functions that call their own routines, there is an additional step before relinking DATATRIEVE. The object files for those functions routines must be inserted into the new version of the function library. There are two ways to do this:

- If the object files for the routines (.OBJ files) are still available, insert them directly into the function library:

```
$ LIBRARY/INSERT -
_$    DTR$LIBRARY:DTRFUNxx.OLB filename.OBJ
```

- If the object files for the routines are not available, extract the modules from the old function library before inserting them into the new:

```
$ LIBRARY/EXTRACT=module-name/OUTPUT=filename.OBJ -
_$    DTR$LIBRARY:DTRFUNxx.OLD
$ LIBRARY/INSERT -
_$    DTR$LIBRARY:DTRFUNxx.OLB filename.OBJ
```

5. Relink DATATRIEVE:

```
$ @DTR$LIBRARY:DTRBLDxx
```

---------------------------------- **Note** ----------------------------------

If your site maintains no user-defined functions, you may choose to
delete the .OLD files.

_____

User Environment Test Packages 4

Five User Environment Test Packages (UETPs), which show examples and test product interfaces, come with VAX DATATRIEVE:

*   VAX DATATRIEVE

*   VAX DATATRIEVE graphics capability

*   VAX DATATRIEVE and VAX DBMS interface

*   VAX DATATRIEVE and VAX Rdb/VMS interface

*   VAX DATATRIEVE and forms interface

Appendix B of the *VAX DATATRIEVE User's Guide* includes the data definitions and procedures used in the User Environment Test Packages.

─────────────────────── **Note** ───────────────────────

You must run the DATATRIEVE UETP before running any of the other UETPs; the DATATRIEVE UETP creates data definitions used by the other UETPs.

──

4.1 VAX DATATRIEVE UETP

You can run the VAX DATATRIEVE UETP after you have installed VAX
DATATRIEVE. To run the UETP, type the following commands, using the suffix
you specified in the installation procedure in place of xx:

```
$ RUN SYS$SYSTEM:DTR32xx

DTR> @SYS$COMMON:[SYSTEST.DTR]DTR
```

The DATATRIEVE UETP is approximately 20 pages long, so the entire UETP is
not repeated here.

You have to enter responses to prompts during the DATATRIEVE UETP. The
parts of the UETP that require a response are included here along with suggested
responses. The responses you enter are printed in colored ink.

-------------------------------- **Note** --------------------------------

> The DATATRIEVE UETP suggests at one point that you use LP: to
> print a report directly to a line printer. The LP: option may not work
> unless LP is defined as the system printer.

```
!
! TEST STORE
!
! PLEASE SUPPLY THE FOLLOWING VALUES:
!     MANUFACTURER:  HINKLEY
!     MODEL:    BERMUDA 40
!     RIG:    YAWL
!   * LENGTH-OVER-ALL:    140
!     LENGTH-OVER-ALL:    40
!     DISPLACEMENT:  20000
!     BEAM:   12
!   * PRICE:    82000 AND XX/100
!     PRICE:    $82,000
!     CONFIRM:   N
!
! Values marked with "*" will generate an error and be reprompted
!
```

```
STORE YACHTS :VERIFY
Enter MANUFACTURER: HINKLEY
Enter MODEL: BERMUDA 40
Enter RIG: YAWL
Enter LENGTH_OVER_ALL: 140
Validation error for field LENGTH_OVER_ALL.
Re-enter LENGTH-OVER-ALL: 40
Enter DISPLACEMENT: 20000
Enter BEAM: 12
Enter PRICE: 82000 AND XX/100
Non-digit in string "82000 AND XX/100", ignoring character(s).
Re-enter PRICE: $82,000
                             LENGTH
                             OVER
MANUFACTURER    MODEL     RIG    ALL    WEIGHT BEAM  PRICE

 HINKLEY     BERMUDA 40 YAWL    40    20,000  12  $82,000
DISPLAY: IF RECORD IS OK, CONFIRM WITH Y
Enter CONFIRM: N

!
! Invoke report (suggest  TT:  as output file)
!
:LOA-REPORT
Enter FILE: TT
```

At this point, you see a report on the terminal. When the report finishes, the UETP continues:

```
!
! Invoke report (suggest  LP:  as output file)
!
:LOA-REPORT
Enter FILE: LP:
```

At this point, the procedure sends a report to the line printer and the UETP continues:

```
READY YACHTS MODIFY
!
! RESPOND WITH 47 (or any two digit value)
!
MODIFY BEAM
Enter BEAM: 47
PRINT TYPE,BEAM

MANUFACTURER    MODEL     BEAM

METALMAST    GALAXY       47
```

(continued on next page)

```
!
! RESPOND WITH 48 (or any two digit value)
!
MODIFY ALL BEAM
Enter BEAM: 48
!
PRINT ALL BEAM

BEAM

 48
 48
 48
 48
 48

!
! Respond each time with 0 (please)
!
FOR CURRENT PRINT TYPE THEN MODIFY BEAM

MANUFACTURER    MODEL

 METALMAST    GALAXY
Enter BEAM: 0
 O'DAY        32
Enter BEAM: 0
 RYDER        S. CROSS
Enter BEAM: 0
 TA CHIAO     FANTASIA
Enter BEAM: 0
 WRIGHT       SEAWIND II
Enter BEAM: 0
!
SET ABORT
READY YACHTS READ
PRINT ALL

                                LENGTH
                                OVER
MANUFACTURER    MODEL      RIG  ALL   DISPLACEMENT BEAM  PRICE

 METALMAST    GALAXY      SLOOP 32        9,500    00
 O'DAY        32          SLOOP 32       11,000    00   $29,500
 RYDER        S. CROSS    SLOOP 31       13,600    00   $32,500
 TA CHIAO     FANTASIA    SLOOP 35       23,200    00
 WRIGHT       SEAWIND II  SLOOP 32       14,900    00   $34,480
```

You can tell that the installation is successful if you receive the following message at the end of the UETP:

```
!
! The VAX DATATRIEVE User Environment Test
! Package has completed successfully.
!
```

4.2 VAX DATATRIEVE Graphics UETP

To run the VAX DATATRIEVE graphics UETP, you must use a VT125, VT240, VT330, or VT340 terminal. Type the following commands, using the suffix you specified in the installation procedure in place of xx:

```
$ RUN SYS$SYSTEM:DTR32xx

DTR> @SYS$COMMON:[SYSTEST.DTR]PLOTS
```

The DATATRIEVE graphics UETP does not require any input from you. There are pauses between plots. The DATATRIEVE graphics UETP displays the results of using the following plot statements:

- PLOT WOMBAT — A picture of a wombat

- PLOT DATE_Y — A scattergraph with dates along the horizontal axis

- PLOT SHADE — The previous scattergraph with shading

- PLOT DATE_Y — A scattergraph with dates along the horizontal axis

- PLOT CONNECT — The previous scattergraph with the points connected

- PLOT DATE_LOGY — A scattergraph with dates along the horizontal axis and a logarithmic scale for the vertical axis

- PLOT LR — The previous scattergraph with a linear regression line

- PLOT STACKED_BAR — A bar chart with stacked bars and a legend

- PLOT MULTI_BAR — A bar chart with multiple bars and a legend

- PLOT X_Y — A scattergraph

- PLOT TITLE — The previous scattergraph with a title

- PLOT LIMITS_Y — The previous X_Y scattergraph with maximum and minimum limits imposed on the Y axis

- PLOT LIMITS_X — The previous X_Y scattergraph with maximum and minimum limits imposed on the X axis

- PLOT REFERENCE_Y — The previous X_Y scattergraph with a solid reference line on the Y axis

- PLOT REFERENCE_X — The previous X_Y scattergraph with a solid reference line on the X axis

- PLOT LR — The previous scattergraph with a linear regression line

- PLOT X_LOGY — A scattergraph with a logarithmic scale for the vertical axis

- PLOT HISTO — A histogram

- PLOT PIE — A pie chart (with default title heading)

- PLOT TITLE (pie) — The previous pie chart with a multiline title

- PLOT BAR — A bar chart using builder and price

- PLOT SORT_BAR — The previous bar chart with the bars sorted by descending height

- PLOT BAR — A bar chart using type and price

When the DATATRIEVE graphics UETP finishes, you see this message:

```
!
! End of User Environment Test Package for Datatrieve graphics
!
EXIT
```

4.3 VAX DATATRIEVE and VAX DBMS UETP

To run the VAX DATATRIEVE and VAX DBMS UETP after installing VAX DATATRIEVE, type the following commands, using the suffix you specified in the installation procedure in place of xx:

```
$ RUN SYS$SYSTEM:DTR32xx

DTR> @SYS$COMMON:[SYSTEST.DTR]DBMS
```

The DATATRIEVE and VAX DBMS UETP is long, so the entire UETP is not repeated here.

You have to enter responses to prompts during the DATATRIEVE and VAX DBMS UETP. The parts of the UETP that require answers are included here with the suggested responses printed in colored ink.

```
SELECT
PRINT
Part                                    Unit    Unit
Number   ------Part Description------ St Price   Cost  Sp

TI-6789-01    RK HOUSING            G    $300    $190  FS
```

```
!
! Respond with 123 (or any three digit value)
!
MODIFY PART_PRICE
Enter PART_PRICE: 123
PRINT PART_ID, PART_PRICE

  Part          Unit
  Number        Price

TI-6789-01        $123


!
! Respond with 321 (or any three digit value)
!
MODIFY ALL PART_PRICE
Enter PART_PRICE: 321
PRINT ALL PART_PRICE

      Unit
      Price

      $321
      $321
      $321
      $321
      $321


!
! Respond each time with 0 (Please)
!
FOR CURRENT
  PRINT PART_ID THEN MODIFY PART_PRICE

  Part
  Number

TI-6789-01
Enter PART_PRICE: 0
BR-8901-23
Enter PART_PRICE: 0
TE-2345-67
Enter PART_PRICE: 0
TE-2178-90
Enter PART_PRICE: 0
TI-1334-56
Enter PART_PRICE: 0
PRINT ALL
```

Part Number	------Part Description------	St	Unit Price	Unit Cost	Sp
TI-6789-01	RK HOUSING	G	$0	$190	FS
BR-8901-23	LA36	G	$0	$750	FS
TE-2345-67	RP05	G	$0	$1,900	FS
TE-2178-90	RK06	G	$0	$1,100	FS
TI-1334-56	RP HOUSING	G	$0	$300	FS

If the VAX DATATRIEVE and VAX DBMS UETP runs successfully, you see the following message:

```
!
! End of DATATRIEVE/DBMS User Environment Test Package
!
```

4.4   VAX DATATRIEVE and VAX Rdb/VMS UETP

To run the VAX DATATRIEVE and VAX Rdb/VMS UETP after installing VAX
DATATRIEVE, type the following commands, using the suffix you specified in the
installation procedure in place of xx:

```
$ RUN SYS$SYSTEM:DTR32xx

DTR> @SYS$COMMON:[SYSTEST.DTR]Rdb
```

The VAX DATATRIEVE and VAX Rdb/VMS UETP is 12 pages long, so the entire
UETP is not repeated here.

You have to enter responses to prompts during the VAX DATATRIEVE and VAX
Rdb/VMS UETP. The parts of the UETP that require answers are included here
with the suggested responses printed in colored ink.

```
!
! Test Store
!
! Please supply the following values:
!
! WAGE_CLASS :     4
! JOB_TITLE:       ANYTHING
! MINIMUM_SALARY:  12000
! MAXIMUM_SALARY:  123000
!
STORE JOBS USING
  BEGIN
  JOB_CODE = "XXXX"
  WAGE_CLASS = *.WAGE_CLASS
  JOB_TITLE = *.JOB_TITLE
  MINIMUM_SALARY = *.MINIMUM_SALARY
  MAXIMUM_SALARY = *.MAXIMUM_SALARY
  END
Enter WAGE_CLASS: 4
Enter JOB_TITLE: ANYTHING
Enter MINIMUM_SALARY: 12000
Enter MAXIMUM_SALARY: 123000
!
```

```
STORE JOBS USING
 BEGIN
 JOB_CODE = "YYYY"
 WAGE_CLASS = 2
 JOB_TITLE = "FILE CLERK"
 MINIMUM_SALARY = 8000
 MAXIMUM_SALARY = 20000
 END
!
PRINT JOBS WITH JOB_CODE = "XXXX", "YYYY"

JOB  WAGE          JOB             MINIMUM     MAXIMUM
CODE CLASS         TITLE           SALARY      SALARY


XXXX   4   ANYTHING              $12,000.00 $123,000.00
YYYY   2   FILE CLERK             $8000.00  $20,000.00
!
! Test Erase
!
FOR JOBS WITH JOB_CODE = "XXXX"  ERASE
PRINT JOBS WITH JOB_CODE = "XXXX"
!
FIND JOBS WITH JOB_CODE = "YYYY"
[1 record found]
PRINT ALL

JOB  WAGE          JOB             MINIMUM     MAXIMUM
CODE CLASS         TITLE           SALARY      SALARY


YYYY   2   FILE CLERK             $8,000.00  $20,000.00

SELECT LAST
ERASE
PRINT JOBS WITH JOB_CODE = "YYYY"
!
! Test Update
!
FIND EMPLOYEES WITH EMPLOYEE_ID = "00168"
[1 record found]
SELECT
!

PRINT EMPLOYEE_ID, LAST_NAME, STREET, TOWN, STATE

EMPLOYEE    LAST
   ID       NAME            STREET          TOWN        STATE

 00168    Nash      87 West Rd.         Meadows        NH
!
! Change this employee's address
!
! Please supply the following value:
!
! STREET:  8 FLINT POND
!
MODIFY STREET
Enter STREET: 8 FLINT POND
```

```
PRINT EMPLOYEE_ID, LAST_NAME, STREET, TOWN, STATE

EMPLOYEE      LAST
   ID         NAME              STREET           TOWN        STATE

 00168     Nash       8 FLINT POND     Meadows      NH

!
! Don't really want to do this; rollback this change
!
ROLLBACK
ROLLBACK executed; collection CURRENT automatically released.

!
PRINT EMPLOYEE_ID, LAST_NAME, STREET, TOWN, STATE OF EMPLOYEES WITH
  EMPLOYEE_ID = "00168"

EMPLOYEE      LAST
   ID         NAME              STREET           TOWN        STATE

 00168     Nash        87 West Rd.        Meadows         NH
!
FIND ALL EMPLOYEES WITH STATE = "MA"
[8 records found]
PRINT ALL STATE

STATE

 MA
 MA
 MA
 MA
 MA
 MA
 MA
 MA


!
! Respond with VT (or another two-character state abbreviation)
!
MODIFY ALL STATE
Enter STATE: VT
PRINT ALL STATE

STATE

 VT
 VT
 VT
 VT
 VT
 VT
 VT
 VT


!
! Move them back to MA
!
FOR CURRENT
  MODIFY USING STATE = "MA"
```

```
PRINT ALL STATE

STATE

 MA
 MA
 MA
 MA
 MA
 MA
 MA
 MA
```

If the VAX DATATRIEVE and VAX Rdb/VMS UETP runs successfully, you see the
following message:

```
!
! End of DATATRIEVE/Rdb User Environment Test Package
!


ROLLBACK
ROLLBACK executed; collection CURRENT automatically released.
FINISH ALL
DTR>
```

4.5   VAX DATATRIEVE and Forms UETP

You need a VT52-, VT100-, VT200-, or VT300-family terminal to run the VAX
DATATRIEVE and forms UETP.

If VAX DATATRIEVE was installed with support for TDMS or FMS, you can run
the forms UETP to test the forms interface.

To run the forms UETP, set your VMS default to a directory that contains
YACHT.DAT and OWNER.DAT. Be sure that you have WRITE access (W) to
these files. You can copy YACHT.DAT and OWNER.DAT from the directory
DTR$LIBRARY if you do not have them in your directory. Then type the follow-
ing commands, entering the suffix you specified in the installation procedure in
place of xx:

```
$ RUN SYS$SYSTEM:DTR32xx

DTR> @SYS$COMMON:[SYSTEST.DTR]FORMS
```

When VAX DATATRIEVE uses a form to print records, the screen clears before
the first record is printed. The DATATRIEVE and forms UETP asks you to enter
a character and press RETURN before each statement, causing the forms product
to erase the screen.

Here is a summary of the DATATRIEVE and forms UETP:

1. The UETP sends instructions to your terminal and waits for you to enter a character and press RETURN. After you respond, the UETP defines three domains that use the forms product: YACHTS, SAILBOATS, and FAMILIES. The definitions use forms libraries that are located in DTR$LIBRARY.

2. The UETP readies YACHTS and prints a few records without using the forms product. Then the UETP sends more instructions to your terminal and waits for you to enter a character and press RETURN. After you respond, the UETP prints a record using the forms product. Press RETURN after the forms product displays the record.

3. The UETP sends instructions to your terminal and waits for you to enter a character and press RETURN. After you respond, the UETP prints several records using the forms product. Press RETURN after the forms product displays each record.

4. The UETP tests the STORE statement. The UETP sends instructions to your terminal and waits for you to enter a character and press RETURN. After you respond, the forms product puts a form on the screen for you to fill in. To move the cursor from one field to another, use the TAB and BACK SPACE keys. The TAB key moves the cursor to the next field; the BACK SPACE key moves the cursor back to the previous field. Help is also available for some fields if you have trouble entering an acceptable value. Position the cursor on that field and press the HELP key. After you fill in the form, press RETURN.

5. The UETP tests the MODIFY statement controlling the DISPLAY_FORM statement. The UETP sends instructions to your terminal and waits for you to enter a character and press RETURN. After you respond, the forms product displays the first record for you to modify. Use the TAB and BACK SPACE keys to move from one field to another. Modify only the BEAM field in each record. Any other modifications are not written to the data file. After you modify each record, press RETURN.

6. The UETP tests the PRINT statement again, using the SAILBOATS view domain. The UETP waits for you to enter a character and press RETURN before each PRINT statement. After the forms product displays the SAILBOAT records, the UETP sends the following message to your terminal:

```
!
! End of DATATRIEVE/Forms User Environment Test Package
!
```

How to Order Additional Documentation

Technical Support

If you need help deciding which documentation best meets your needs, call 800-343-4040 before placing your electronic, telephone, or direct mail order.

Electronic Orders

To place an order at the Electronic Store, dial 800-DEC-DEMO (800-332-3366) using a 1200- or 2400-baud modem. If you need assistance using the Electronic Store, call 800-DIGITAL (800-344-4825).

Telephone and Direct Mail Orders

Your Location	Call	Contact
Continental USA, Alaska, or Hawaii	800-DIGITAL	Digital Equipment Corporation P.O. Box CS2008 Nashua, New Hampshire 03061
Puerto Rico	809-754-7575	Local DIGITAL subsidiary
Canada	800-267-6215	Digital Equipment of Canada Attn: DECdirect Operations KAO2/2 P.O. Box 13000 100 Herzberg Road Kanata, Ontario, Canada K2K 2A6
International	—————	Local DIGITAL subsidiary or approved distributor
Internal[1]	—————	SDC Order Processing - WMO/E15 or Software Distribution Center Digital Equipment Corporation Westminster, Massachusetts 01473

[1] For internal orders, you must submit an Internal Software Order Form (EN-01740-07).

Reader's Comments

Please use this postage-paid form to comment on this manual. If you require a written reply to a software problem and are eligible to receive one under Software Performance Report (SPR) service, submit your comments on an SPR form.

Thank you for your assistance.

I rate this manual's:	Excellent	Good	Fair	Poor
Accuracy (software works as manual says)	☐	☐	☐	☐
Completeness (enough information)	☐	☐	☐	☐
Clarity (easy to understand)	☐	☐	☐	☐
Organization (structure of subject matter)	☐	☐	☐	☐
Figures (useful)	☐	☐	☐	☐
Examples (useful)	☐	☐	☐	☐
Index (ability to find topic)	☐	☐	☐	☐
Page layout (easy to find information)	☐	☐	☐	☐

I would like to see more/less _____

What I like best about this manual is _____

What I like least about this manual is _____

I found the following errors in this manual:
Page   Description

_____   _____

_____   _____

_____   _____

Additional comments or suggestions to improve this manual:

_____

_____

_____

I am using **Version** _____ of the software this manual describes.

Name/Title _____ Dept. _____

Company _____ Date _____

Mailing Address _____

_____ Phone _____

digital™

No Postage
Necessary
if Mailed
in the
United States

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 33 MAYNARD MASS.

POSTAGE WILL BE PAID BY ADDRESSEE

DIGITAL EQUIPMENT CORPORATION
Corporate User Publications—Spit Brook
ZK01–3/J35
110 SPIT BROOK ROAD
NASHUA, NH 03062-9987

Reader's Comments

Please use this postage-paid form to comment on this manual. If you require a written reply to a software problem and are eligible to receive one under Software Performance Report (SPR) service, submit your comments on an SPR form.

Thank you for your assistance.

I rate this manual's:	Excellent	Good	Fair	Poor
Accuracy (software works as manual says)	☐	☐	☐	☐
Completeness (enough information)	☐	☐	☐	☐
Clarity (easy to understand)	☐	☐	☐	☐
Organization (structure of subject matter)	☐	☐	☐	☐
Figures (useful)	☐	☐	☐	☐
Examples (useful)	☐	☐	☐	☐
Index (ability to find topic)	☐	☐	☐	☐
Page layout (easy to find information)	☐	☐	☐	☐

I would like to see more/less _____

What I like best about this manual is _____

What I like least about this manual is _____

I found the following errors in this manual:
Page   Description

_____   _____

_____   _____

_____   _____

Additional comments or suggestions to improve this manual:

_____

_____

_____

I am using **Version** _____ of the software this manual describes.

Name/Title _____   Dept. _____

Company _____   Date _____

Mailing Address _____

_____   Phone _____

d i g i t a l™

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 33 MAYNARD MASS.

POSTAGE WILL BE PAID BY ADDRESSEE

DIGITAL EQUIPMENT CORPORATION
Corporate User Publications—Spit Brook
ZK01–3/J35
110 SPIT BROOK ROAD
NASHUA, NH 03062-9987