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VAX DATATRIEVE

Installation Guide

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This manual describes the installation procedure for VAX DATATRIEVE.

Operating System and Version: VMS Version 5.3 or higher

Software Version: VAX DATATRIEVE Version 5.1

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Preface

This manual describes how to install the DATATRIEVE software and use the DATATRIEVE User Environment Test Packages (UETPs).

This manual does not contain any release note information. Printed release notes for DATATRIEVE are found in the *VAX DATATRIEVE Release Notes*. Release notes for 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 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 DATATRIEVE is included in the DATATRIEVE media kit, in either this manual or the *Before You Install VAX DATATRIEVE Version 5.1* letter.

For information on the compatibility of other software products with this version of 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 DATATRIEVE.

Structure

This manual consists of five 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.
Chapter 5	Explains how to report DATATRIEVE problems to Digital.

Related Documents

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

- *VAX DATATRIEVE Release Notes*

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

- *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 VAX DATATRIEVE Report Writer.

- *VAX DATATRIEVE Handbook*

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

- *VAX DATATRIEVE User's Guide*

  Describes how to use VAX DATATRIEVE interactively. The manual includes information on using VAX DATATRIEVE to manipulate data and on using VAX 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 Quick Reference Guide*

  Contains quick-reference information about using VAX DATATRIEVE.

- *VAX DATATRIEVE Guide to Programming and Customizing*

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

- *VAX DATATRIEVE Reference Manual*

  Contains reference information for DATATRIEVE.

Conventions

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

Convention	Meaning
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.
word	A bolded word indicates that a new term is being introduced.
[ ]	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. This convention is used in the character-cell interface to VAX DATATRIEVE.
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.

Convention	Meaning
. . .	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.
User Input	The hardcopy version of this manual has interactive examples that show user input in red letters and system responses or prompts in black letters.

References to Products

The VAX DATATRIEVE documentation to which this manual belongs often refers to products by their abbreviated names:

- VAX CDD/Plus software is referred to as CDD/Plus.
- VAX DATATRIEVE software is referred to as DATATRIEVE.
- 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 term relational database or relational source to refer to all three of these products:

- VAX Rdb/ELN
- VAX Rdb/VMS
- VIDA

1

Preinstallation Considerations

This chapter includes important installation considerations that you must be aware of before you install VAX DATATRIEVE Version 5.1. Read this chapter carefully before you proceed to Chapter 2.

To prepare your system for installing VAX DATATRIEVE, you must perform the following tasks:

- Verify that your system has enough memory and available disk space to install and use DATATRIEVE.
- Register the Product Authorization Key (PAK) that is shipped with this version of DATATRIEVE.
- Verify that your system has the correct versions of the optional and required software you will be using with DATATRIEVE.
- Check your system and the installing account to ensure that parameters and quotas are sufficient for installing and using DATATRIEVE.

This chapter tells you what actions to take to prepare your system for installing VAX DATATRIEVE.

1.1 Prerequisite Hardware

VAX DATATRIEVE runs on all VAX processors except the VAX–11/725 processor. For a complete list of processors, see the *VAX DATATRIEVE Software Product Description*.

Installing VAX DATATRIEVE requires a certain amount of free disk storage space during the installation. Once VAX DATATRIEVE is installed, less storage space is required. Table 1–1 summarizes the storage requirements:

Table 1–1 Disk Space Requirements

Kit	Blocks During Installation	Blocks After Installation
VAX DATATRIEVE Version 5.1	17,000	12,000

To determine the number of free disk blocks on the current system disk, enter the following command at the DCL prompt:

```
$ SHOW DEVICE SYS$DEVICE
```

1.2 VAX Licensing Management Facility (LMF)

This version of VAX DATATRIEVE supports the License Management Facility provided by VMS. See the *VMS License Management Utility Manual* for more information.

You should register the information contained in the Product Authorization Key (PAK) that is shipped with DATATRIEVE *before* you begin the installation. You can register by using the VMS License command procedure using the following command:

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

You can also use the LICENSE REGISTER command to register the information contained in the PAK. Both methods are described in the *VMS License Management Utility Manual*.

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

1.3 Prerequisite Software

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 Section 1.3.3.

1.3.1 Required Software Products

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

VAX DATATRIEVE Version 5.1 will install and run only on Version 5.3 or higher of the VMS operating system. If you have a VMS version lower than 5.3, you must install VMS Version 5.3 or higher 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 Version 4.2 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 command:

```
$ DICTIONARY OPERATOR
```

The CDO banner gives the version of CDD/Plus currently installed on your system. For example:

```
Welcome to CDO V1.2
The CDD/Plus V4.2 User Interface
Type HELP for help
CDO>
```

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

1.3.2 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 5.1* to determine which versions of these optional software products are compatible with DATATRIEVE Version 5.1.

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 Version 3.2 or higher of the DATATRIEVE–11 software installed on the remote node that you want to access.

1.3.3 Order of Product Installation

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

- Optional LSE

  If you plan to use LSE with 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.

- Optional Rdb/VMS

  If you plan to use Rdb/VMS with VAX DATATRIEVE, you should follow the order-of-installation instructions provided with VAX CDD/Plus to insure the proper operation of CDD/Plus with Rdb/VMS.

- CDD/Plus

- Optional forms products (TDMS, FMS)

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

  Install VAX DBMS, Rdb/ELN, and 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 to use the products with DATATRIEVE.

- DATATRIEVE

1.4 VAXcluster Consideration

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

1.5 Preparing Your System and the Installing Account

This section tells you which characteristics of your system and installing account need to be checked before you install DATATRIEVE. These characteristics include process quotas, access control privileges to CDD$TOP, and system parameters. Instructions are given for checking and modifying the relevant characteristics of your system and installing account.

1.5.1 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)

1.5.1.1 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. See Section 3.4.2 for a sample AUTHORIZE session.

Users who exceed their open file limit may see a meaningless display on their screen when they start DATATRIEVE. 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.)

1.5.1.2 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. See Section 3.4.2 for a sample session of the Authorize Utility.

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

- 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.

1.5.1.3 Global Pages and Global Sections (GBLPAGES and GBLSECTIONS Parameters)

If you plan to install various DATATRIEVE images as SHARED, you need 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 Section 2.5.4 for more information.) You do not have to install all of these images; you need sufficient global pages and global sections only for those you do wish to install.

DATATRIEVE automatically installs two images as SHARED: DTRHELP and DTR$CDDTSHR. You need sufficient global pages and global sections for these images.

The following table indicates the requirements for the GBLPAGES and GBLSECTIONS parameters for the image files that are part of this version of DATATRIEVE.

File	Global Sections	Global Pages
DDMFxx	1	147
DTR32xx	1	208
DTRSHRxx	4	848
DTRMSGS	1	107
DTRHELP	1	43
DTR$CDDTSHR	4	768

To display the current GBLSECTIONS and GBLPAGES parameters, you can use the SHOW GBLSECTIONS and SHOW GBLPAGES commands of the System Generation Utility (SYSGEN).

If the global pages and global sections already on your system are not sufficient, you will need to modify the parameters before installing DATATRIEVE. To change these parameters, use the AUTOGEN command procedure. AUTOGEN automatically adjusts values for parameters that are associated with the values you reset manually. To change system parameters with AUTOGEN, edit the following file:

```
SYS$SYSTEM:MODPARAMS.DAT
```

Use an editor to access the file. To change a parameter value listed in this file, delete the current value associated with that parameter and enter the new value.

To modify incremental parameters such as GBLPAGES and GBLSECTS, use ADD_. The following example increases the global page setting by 2000:

```
ADD_GBLPAGES = 2000
```

Note that when you set the page file quota, do not use a value that exceeds the amount of page file space available on the system.

After you make all your changes, exit from the editor and execute the AUTOGEN procedure to recalculate your system parameters. Enter the following command at the DCL prompt:

```
$  @SYS$UPDATE:AUTOGEN GETDATA REBOOT
```

When you specify REBOOT, AUTOGEN performs an automatic system shutdown and then reboots the system. Any users logged on to the system are immediately disconnected during the shutdown. The automatic reboot puts the new parameter values into effect.

The AUTOGEN Utility automatically adjusts some of the SYSGEN parameters based on the consumption of resources since the last reboot. If you do not want to take advantage of this automatic adjustment, include the NOFEEDBACK qualifier on the AUTOGEN command line.

For more information about using AUTOGEN, see the VMS System Management Subkit.

1.5.1.4 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.

To check the current CLISYMTBL limit, use the SHOW CLISYMTBL command while in SYSGEN. To modify this parameter, run SYSGEN 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 SYSGEN. For more information on SYSGEN, 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.

1.5.2 CDD/Plus Considerations

Before you install DATATRIEVE, you should perform the following tasks:

- 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 explain these procedures.

1.5.2.1 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 directories that contain 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 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.

1.5.2.2 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 the following:

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
```

If you are using an account other than [1,4] for the installation, replace [1,4] with the UIC of that account.

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 containing these two sequences of commands.

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

1.5.3 Effect of Installation Procedure on the Logical DTR$LIBRARY

The installation defines the logical DTR$LIBRARY as SYS$COMMON:[DTR]. If the installation fails, DTR$LIBRARY may be left deassigned, and you must redefine it. To redefine 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]
```

1.5.4 More than One Installation of this Version of DATATRIEVE

You can install *this* version of 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 Version 5.0 *and* Version 5.1. For example, the installation procedure could be run first to install DATATRIEVE Version 5.1 with TDMS. You can install DATATRIEVE Version 5.1 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$LIBRARY:DTRFUNxx.OLB
- SYS$STARTUP:DTRSTUPxx.COM
- VUE$LIBRARY:VUE$DTRxx.COM

Note that the installation procedure does not append the xx suffix to all images and files.

2

VAX DATATRIEVE Installation Procedure

Before you install DATATRIEVE Version 5.1, make sure that your system meets all requirements listed in the previous chapter.

Your Version 5.1 installation kit consists of one magnetic tape or disk pack. This medium makes obsolete the distribution media for any lower version of DATATRIEVE.

VAX DATATRIEVE is also available on the Consolidated Distribution CDROM. If you are installing DATATRIEVE from the CDROM, follow the directions in the booklet *VMS Consolidated Distribution for Software Products* that is packaged with the CDROM kit.

The installation procedure is described in the sections that follow. Note that as the procedure progresses, the installation command procedure sends questions to your screen to 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 Section 2.3 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 DATATRIEVE Version 5.1 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 DTR051 MTA0: OPTIONS N
```

Note that you can specify the AUTOANSWERBACK option when you invoke VMSINSTAL. This option creates the file SYS$UPDATE:DTR051.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 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 displays the following message:

```
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 if the following necessary conditions for the installation have been fulfilled:

- The target of the installation is SYS$COMMON on the system-rooted device.
- A compatible version of VMS is installed.
- At least 17,000 blocks are available on the system disk.
- A compatible version of CDD/Plus is installed on the system.
- The installation procedure has ACL access rights to CDD$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 *Systems that do not have DECnet cannot support the DATATRIEVE remote server. On such systems, 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 Section 3.4 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:

```
The following products will be processed:
  DTR V5.1
     Beginning installation of DTR V5.1 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 DATATRIEVE Version 5.1 online release notes:

```
Release Notes Options:

1.  Display release notes
2.  Print release notes
3.  Both 1 and 2
4.  Copy release notes to SYS$HELP
5.  Do not display, print or copy release notes

* Select option [2]:
```

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 a message showing that the job has been queued for printing.

```
*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 release notes finish printing before you enter the N or press the RETURN key. If you did not select a print option and wish to exit, enter N or press the RETURN key.

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

DATATRIEVE Version 5.1 supports the License Management Facility provided by VMS. The installation procedure asks whether you have registered and loaded a Product Authorization Key (PAK) as required.

```
        Product:       DTR or DTR-USER
        Producer:      DEC
        Version:       5.1
        Release Date:  01-OCT-1990

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

If you answer Y or YES, the procedure continues. If you answer N or NO, you receive the following message:

```
You have not registered the LMF authorization key as required.
The 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 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 Installing DATATRIEVE with the Default Answers

The installation procedure now asks if you want to install 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 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 DATATRIEVE; it will not allow a partial installation to provide DATATRIEVE support for 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 a forms product already exists 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 installed 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 prompt you for the default image to be used with the DATATRIEVE DCL command and DCL help. The default image will be DTR32.
- Does not supply the DATATRIEVE object library in DTR$LIBRARY. (This means that you will not be able to relink this image of DATATRIEVE.)
- Checks 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 if there is a current version of NEWUSER.COM available.

  When the installation procedure checks NEWUSER.COM:

  - If NEWUSER.COM is not current, DATATRIEVE automatically replaces the NEWUSER.COM file.
  - If the NEWUSER.COM is current, DATATRIEVE does not replace the new user file.
- Checks the status of the DCL help for 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) as SHARED.
- Installs DTRHELP and DTR$CDDTSHR as 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 LSE.

2.5.2 Installing with Support for VAX Language-Sensitive Editor (LSE)

To use 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, the installation continues; however, you will not be able to use LSE with DATATRIEVE. If you enter the default value by entering N, NO, or by pressing the RETURN key, the installation aborts, 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 DATATRIEVE (including LSE support), select option 1. If you want only to provide DATATRIEVE support for LSE (without installing a new version of DATATRIEVE), select option 2. If you select option 2, this installation will terminate after DATATRIEVE support for LSE is provided.

2.5.3 Installing with Support for Forms Products

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

- TDMS (Terminal Data Management System)
- FMS (Forms Management System)

A series of questions determines which product DATATRIEVE will support for the image currently being installed.

The installation procedure checks which forms management products are on the system. If no forms products are found (or only lower versions of TDMS or FMS not supported by DATATRIEVE are found), the installation procedure displays 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 Section 2.5.4 for more information.)

If you type N, the installation aborts, 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 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 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 being installed will support TDMS. Then the installation procedure moves on to a series of questions on suffixes and more than one installation of this version of 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 aborts.

2.5.4 Specifying Suffixes for More than One Installation of This Version of VAX DATATRIEVE

The installation procedure asks whether you intend to complete more than one installation of this version of DATATRIEVE on your system, as follows:

```
    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 Section 2.5.5 for more information.) At a later date, you can decide to install DATATRIEVE using file names other than the defaults by typing Y in response to the previous question.

If you type Y, the installation procedure displays messages requesting that you specify a suffix for the image you are installing and the default image for the DCL command DATATRIEVE.

The following message and question about the suffix are displayed:

```
    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 Section 1.5.4 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 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, those earlier images will be deleted. See Section 2.5.10 for more information.

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.

You can invoke DATATRIEVE with either the RUN command or the DCL command DATATRIEVE. The installation procedure allows you to choose which DTR32 image will be executed by default by the DATATRIEVE command. The following message and question are displayed:

```
    The DATATRIEVE DCL command allows you to choose which DTR32 image
    to execute by means of the /VARIANT qualifier.  You may now choose
    an image to be executed by default, when the /VARIANT qualifer
    is not specified on the DATATRIEVE command.  This default image
    will be the image referenced by DCL HELP.

DTR32, DTR32xx

* Which of the above images should be the default [DTR32xx]:
```

The installation procedure checks which DATATRIEVE images are on the system. All existing image names, plus the name of the image you are currently installing, are listed. The current image name is provided as the default response to the question.

Only one DATATRIEVE image can be chosen as the default for the DCL command DATATRIEVE. You must use the /VARIANT qualifier to invoke any other DATATRIEVE image using the DCL command DATATRIEVE.

For example, on the first run through the installation procedure, you could respond to both the question about the suffix and the question about the DCL default by pressing the RETURN key. The result is that the image name is DTR32 and that image is the default when you invoke DATATRIEVE using the DCL command DATATRIEVE as follows:

```
$  DATATRIEVE
```

During the second or subsequent installation of this version of DATATRIEVE, you might choose TDMS as the suffix. You might then choose DTR32 as the default image name with the DCL command DATATRIEVE. You can use the DCL command DATATRIEVE to invoke the DTR32TDMS image as follows:

```
$  DATATRIEVE/VARIANT=TDMS
```

If, however, you choose DTR32TDMS as the default with the DATATRIEVE DCL command, you must use the VARIANT qualifier to invoke the DTR32 image as follows:

```
$  DATATRIEVE/VARIANT
```

2.5.5 Deleting the DATATRIEVE Object Library

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

```
* 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 may have to relink DATATRIEVE if you:

- Add a user-defined function.
- Customize the text file DTRTEXT.MAR.
- Install or patch a new version of CDD/Plus. (Check the CDD/Plus documentation to see if relinking is necessary.)
- 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 following command to relink DATATRIEVE:

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

2.5.6 Defining the DATATRIEVE Remote Server

The installation procedure checks 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 DATATRIEVE installed on the same system, there can be only one remote server for each system.

Note *You do not receive the question discussed in this section if you are installing DATATRIEVE on a VMS system without DECnet. If you later install DECnet, you then need to define a DECnet object for the remote server. See Section 3.4 for more information on defining a DECnet object.*

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 Section 2.5.7 for more information.

However, if an up-to-date remote server has already been defined (by a previous installation of this 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 installation 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 Creating a DCL Command 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 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 automatically installs the NEWUSER.COM file on your system. This might occur if you are installing 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:

- If you have not installed DATATRIEVE since Version 4.2, you must type Y 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 Version 5.0 are not compatible with Version 5.1.
  - You will not be prompted with the two remaining questions in this section.
- If you have already installed DATATRIEVE Version 5.0 or higher, 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 (Version 5.0 or higher) 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 file is replaced. In addition:

- The DTR32xx.EXE image from this installation of Version 5.1 is used for NEWUSER.COM.
- The installation procedure continues with the two remaining questions in this section that deal with CDD/Plus 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/Plus DMU format directories for new user files. These questions allow you to determine the way new user directories are established and the name of the parent CDD/Plus directory for new user files.

The installation procedure prompts you with the following question:

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

Answer Y or press the RETURN key if you want to create CDD/Plus directories. A new user of DATATRIEVE can then invoke the file DTR$LIBRARY:NEWUSER.COM after the installation. NEWUSER creates a CDD/Plus directory for the new user if one does not already exist. The directory is created in the DMU format dictionary, since the contents must be stored in DMU format. The directory is comprised of the parent directory specified in the next question and the new user's VMS user name. For example, if the parent directory is CDD$TOP.DTR$USERS and user SMITH invokes NEWUSER, SMITH gets the following:

- A logical CDD$DEFAULT directory, CDD$TOP.DTR$USERS.SMITH
- Several CDD/Plus DMU format entries, such as YACHTS and FAMILIES, in the CDD$DEFAULT directory
- A number of data files, such as YACHT.DAT and FAMILY.DAT, in user SMITH's default VMS directory

If you answer N to this question, NEWUSER does not create a CDD/Plus 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.

Note *If you answer N to this question, ensure that users who want the new user files define the logical name CDD$DEFAULT to point to a DMU format dictionary directory with a path name beginning with CDD$TOP.*

If you indicate that you want NEWUSER to create CDD/Plus directories for new users, you are asked to name the parent CDD/Plus directory. The following question is displayed:

```
* 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/Plus 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 Installing 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$STARTUP: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 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 system that does not have DECnet. If you later install DECnet, see Section 3.4 for instructions on running the DDMFxx.EXE image as SHARED.*

2.5.9 Installing Plot Definitions and Optional Material

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

Note *If this is your first installation of DATATRIEVE since Version 3.4, you must answer Y to the following question. The plot definitions were modified with Version 4.0. Plot definitions provided with DATATRIEVE installations prior to Version 4.0 are not compatible with DATATRIEVE Version 5.1.*

The following question is displayed:

```
* 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 a CDD/Plus DMU dictionary, in CDD$TOP.DTR$LIB.PLOTS. They replace the plot definitions of lower versions.

The next question pertains to components of 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 the DATATRIEVE documentation.

The following message and question are displayed:

```
    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 question, the installation procedure continues with a question about deleting obsolete files from previous installations of DATATRIEVE.

2.5.10 Deleting Obsolete Files

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

The following message is displayed:

```
    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 to delete obsolete files. 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$LIBRARY:DTRnnn.DAT. (For example, for Version 5.1 of DATATRIEVE, the file DTR$LIBRARY:DTR051.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. After you respond to this question, the installation procedure asks the following:

```
* 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.

2.6 Finishing the Installation

If you did not request the default installation, the following message is 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, and if this is your first installation of VAX DATATRIEVE since Version 4.1, the installation procedure may display 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 Section 3.5 for more information on maintaining user-defined functions.

During installation, you should receive the following message:

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

The site-dependent startup file, SYS$MANAGER:SYSTARTUP_V5.COM,
should have the following line added:

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

Be sure to update 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, VAX 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 VAX DBMS.

The installation displays a message showing how to invoke each UETP 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$common:[systest.dtr]dbms        ! The VAX DBMS test
DTR> @sys$common:[systest.dtr]rdb         ! The Rdb/VMS test
DTR> @sys$common:[systest.dtr]forms       ! The Forms test

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

The file type for the UETP files in the directory SYS$COMMON:[SYSTEST.DTR] is .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  V5.1

Running the general IVP test...
    Test completed successfully

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

    VAX DATATRIEVE V5.1

    IVP COMPLETED SUCCESSFULLY

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

IVP completed for:  VAX DATATRIEVE V5.1
```

Note *The PAK must be registered before either the IVP or any of the UETPs can be run. If you answered no to the following question, the IVP will not be run at this time:*

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

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 procedure displays the following message as the procedure builds the database:

```
Restoring VAX DATATRIEVE demonstration RDB/VMS database

Exported by Rdb/VMS V3.0A-0 Export/Import utility
A component of Rdb/VMS V3.0A-0
Previous name was dtr$library:personnel.rdb
It was logically exported on 27-FEB-1989 09:48:09.74
Database NUMBER OF USERS is 50
Database NUMBER OF VAXCLUSTER NODES is 16
Database NUMBER OF DBR BUFFERS is 20
Database SNAPSHOT is ENABLED
Database SNAPSHOT is IMMEDIATE
Database BUFFER SIZE is 6 blocks
Database NUMBER OF BUFFERS is 20
IMPORTing relation COLLEGES
IMPORTing relation DEGREES
IMPORTing relation DEPARTMENTS
IMPORTing relation EMPLOYEES
IMPORTing relation JOBS
IMPORTing relation JOB_HISTORY
IMPORTing relation SALARY_HISTORY
IMPORTing relation WORK_STATUS
        Installation of DTR V5.1 completed at 17:24
```

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.

3

Postinstallation Considerations

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

3.1 Updating SYS$MANAGER:SYSTARTUP_V5.COM

During installation, a file called DTRSTUPxx.COM was added to SYS$STARTUP. Note that xx represents the 1- to 26-character suffix you specify during installation. After installation, you must update the site-dependent startup file SYS$MANAGER:SYSTARTUP_V5.COM by adding the following line:

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

3.2 VAXcluster Considerations

If you are installing DATATRIEVE on a VAXcluster, 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 repeat the following steps on each of the other nodes in the VAXcluster where DATATRIEVE will be used:

1. Issue the LICENSE LOAD command to activate the VMS license.
2. Execute the DATATRIEVE startup command file as follows:

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

3. Install the new version of DCLTABLES.EXE that has been updated to include the DCL command DATATRIEVE. Install the file as follows:

   ```
   $  INSTALL
   INSTAL>  REPLACE SYS$SHARE:DCLTABLES
   ```

The second step is not necessary if you plan to reboot the entire VAXcluster after the installation is complete.

3.3 Updating Process Command Tables

The DATATRIEVE Version 5.1 installation creates a new version of DCLTABLES.EXE including the DCL command DATATRIEVE. To use the DCL command DATATRIEVE, users must log out of their processes and log back in to update their process command tables.

3.4 DECnet Considerations

This section describes what you need to do to run the DATATRIEVE remote server if DECnet is installed after DATATRIEVE on a VMS system. It also describes how to create a default DECnet account for remote users of DATATRIEVE on your system.

3.4.1 Defining a DECnet Object

DECnet is normally installed on a VMS system. Unless you install DATATRIEVE on a VMS system without DECnet, the installation procedure automatically defines a DECnet object for the DATATRIEVE remote server.

However, if you install DATATRIEVE on a VMS 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 installed on your system after DATATRIEVE is installed.

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$STARTUP:DTRSTUPxx.COM. This 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
```

3.4.2 Creating a Default DECnet Account for Distributed Access

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 DTR$DECNET, for this DECnet object. Remote users can then omit the user name and password from the node specification when accessing domains on your node.

Note *This section applies to systems on which DECnet was installed before DATATRIEVE. If DATATRIEVE is installed on a VMS 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 Section 3.4.1) before you can create a default DECnet account.*

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 DTR$DECNET. Specify the same file limits and quotas as you would for any other DATATRIEVE user.
2. Invoke NCP to associate DDMF (known object 30) with the default DECnet account DTR$DECNET. 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. Also note that the UIC used in the sample session is used to illustrate the command; you should use a UIC that is appropriate for your system.

```
$  auth == "$authorize"
$  ncp == "$ncp"
$  set default sys$system
$  auth
UAF> ADD DTR$DECNET/OWNER="VAX DATATRIEVE"
user record successfully added
UAF> MODIFY DTR$DECNET/PASSWORD=CHOOSE_ANY_PASSWORD
user record(s) updated
UAF> MODIFY DTR$DECNET/DEVICE=SYS$SYSDEVICE/DIRECTORY=[DTR$DECNET]
user record(s) updated
UAF> MODIFY DTR$DECNET/UIC=[376,376]
user record(s) updated
UAF> MODIFY DTR$DECNET/FILLM=30/ENQLM=200  ! 500 for Rdb/VMS users
user record(s) updated
UAF> MODIFY DTR$DECNET/WSDEFAULT=350/WSQUOTA=350
user record(s) updated
UAF> MODIFY DTR$DECNET/PRCLM=0
user record(s) updated
UAF> MODIFY DTR$DECNET/FLAGS=(DISCTLY, DEFCLI, LOCKPWD, CAPTIVE)
user record(s) updated
UAF> MODIFY DTR$DECNET/NOBATCH
user record(s) updated
UAF> SHOW DTR$DECNET

Username: DTR$DECNET              Owner:  VAX DATATRIEVE
Account:                          UIC:    [376,376] ([376,376])
CLI:      DCL                     Tables: DCLTABLES
Default:  SYS$SYSDEVICE:[DTR$DECNET]
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:           0  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$SYSDEVICE:[DTR$DECNET]
$  ncp
NCP> LIST OBJECT DDMF
```

```
Object Permanent Summary as of  01-OCT-1990 15:31:09

Object = DDMF

Number                    = 30
File id                   = DDMF.COM

NCP> DEFINE OBJECT DDMF USER DTR$DECNET PASSWORD CHOOSE_ANY_PASSWORD
NCP> LIST OBJECT DDMF

Object Permanent Summary as of  01-OCT-1990 15:31:09

Object = DDMF

Number                    = 30
File id                   = DDMF.COM
User id                   = DTR$DECNET
Password                  = CHOOSE_ANY_PASSWORD

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

For more information on NCP and DECnet, see the *Guide to DECnet–VAX Networking* and the *VMS Networking Manual*.

As always, when working in a remote, or networking environment, follow the security guidelines described in the *Guide to VMS System Security*.

3.5 Maintaining User-Defined Functions

If this is your first installation of VAX DATATRIEVE since Version 4.1, and if your site maintains site-specific or user-defined functions, then you should complete the following steps to reenable user-defined functions.

After an initial installation of DATATRIEVE Version 4.2 or higher, DATATRIEVE will always use the DTRFNDxx.MAR and DTRFUNxx.OLB files that are on the system. You will no longer have to re-create and relink DATATRIEVE as described in this section.

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 (.OBJ files) for the routines 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.*

3.6 Deleting Unused Files for DATATRIEVE DECwindows Support

If the DATATRIEVE DECwindows interface is not required at your site, you can delete the following files after the DATATRIEVE installation has successfully completed:

- SYS$SYSROOT:[SYSEXE]DTRHELP.EXE
- SYS$SYSROOT:[SYSLIB]DTR$CDDTSHR.EXE
- SYS$SYSROOT:[SYSHLP]DTRDECW$HELP.HLB
- SYS$SYSROOT:[SYSLIB]VAX_DATATRIEVE.UID
- SYS$SYSROOT:[DTR]REMOTE_DECTERM.COM

If you delete any of the DATATRIEVE DECwindows files, ensure that you delete all of the listed files.

After the DATATRIEVE DECwindows interface files are deleted, remove all references to these files from each of your SYS$STARTUP:DTRSTUPxx.COM files.

4

User Environment Test Packages

Five User Environment Test Packages (UETPs), which show examples and test product interfaces, are provided with DATATRIEVE. You can run the UETPs after you install DATATRIEVE. The following UETPs are provided with DATATRIEVE:

- DATATRIEVE
- DATATRIEVE graphics capability
- DATATRIEVE and VAX DBMS interface
- DATATRIEVE and Rdb/VMS interface
- DATATRIEVE and FMS or TDMS interface

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

Note *You must run the DATATRIEVE UETP before running any other UETP. The DATATRIEVE UETP creates data definitions used by the other UETPs.*

4.1 Invoking DATATRIEVE

To run the UETPs, you must first invoke DATATRIEVE in one of the following ways:

- Use the DCL command RUN as follows:

  ```
  $ RUN SYS$SYSTEM:DTR32xx.EXE
  ```

  The xx represents the 1- to 26-character optional suffix added to an image of DATATRIEVE at installation.

- Use a symbol you have defined to represent the RUN command. For example:

  ```
  $ DTR32
  ```

- Use the DCL command DATATRIEVE, as follows:

  ```
  $ DATATRIEVE
  ```

  The DCL command DATATRIEVE is useful if you are working in a DECwindows environment. You should not run the UETPs using the DATATRIEVE DECwindows interface, as you may get unexpected results. By using the DATATRIEVE command to invoke DATATRIEVE, you can specify the /INTERFACE=CHARACTER_CELL qualifier to invoke DATATRIEVE without the DECwindows interface.

  If you have installed more than one DATATRIEVE image, you can specify the /VARIANT=image-suffix qualifier to run the image of DATATRIEVE you want to test.

  To invoke DATATRIEVE using these qualifiers, enter the following command:

  ```
  $ DATATRIEVE /INTERFACE=CHARACTER_CELL/VARIANT=xx
  ```

  The characters xx represent the 1- to 26-character suffix added at installation to identify a particular image of DATATRIEVE Version 5.1.

At the DTR> prompt, enter the command to execute the UETP you want to run. The UETPs and the commands to invoke them are described in the following sections.

4.2 VAX DATATRIEVE UETP

To run the DATATRIEVE UETP, invoke DATATRIEVE as described in Section 4.1 and type the following command:

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

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

You respond 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, a report is displayed on the screen. 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
!
! 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
```

(continued on next page)

```
                                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
```

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.
!
```

4.3 VAX DATATRIEVE Graphics UETP

You must run the DATATRIEVE graphics UETP on a VT125, VT240, VT330, or VT340 terminal, or a workstation. To run the UETP, invoke DATATRIEVE as described in Section 4.1 and type the following command:

```
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
```

4.4 VAX DATATRIEVE and VAX DBMS UETP

To run the DATATRIEVE and VAX DBMS UETP, invoke DATATRIEVE as described in Section 4.1 and type the following command:

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

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

You respond 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
```

(continued on next page)

```
Part                                          Unit      Unit
Number  ------Part Description------ St    Price     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 DATATRIEVE and VAX DBMS UETP runs successfully, you see the following message:

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

4.5 VAX DATATRIEVE and VAX Rdb/VMS UETP

To run the DATATRIEVE and Rdb/VMS UETP, invoke DATATRIEVE as described in Section 4.1 and type the following command:

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

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

You respond to prompts during the DATATRIEVE and 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
```

(continued on next page)

```
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
!
```

(continued on next page)

```
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
```

(continued on next page)

```
!
! 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 DATATRIEVE and 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>
```

4.6 VAX DATATRIEVE and Forms UETP

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

If 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 invoke DATATRIEVE as described in Section 4.1 and type the following command:

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

When 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.

The following is a summary of the DATATRIEVE and forms UETP:

1. The UETP sends instructions to your screen 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 screen 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 screen 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 screen 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 screen 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 screen:

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

5

Maintaining VAX DATATRIEVE

This chapter explains the procedures to follow if problems arise after you install DATATRIEVE. The sections that follow explain how to write a session log to a file and how to report a problem to the Customer Support Center.

5.1 Writing a Session Log to a File

Often a session log file contains information vital to tracking down the cause of an error. Sometimes this information can help you determine the cause of an error and correct it or work around it. Session logs are also a useful tool for the Customer Support Center (CSC), and should be used if you call the CSC, submit an SPR to Digital, or both.

If you run DATATRIEVE from a character cell interface, you can use the OPEN command to create a log file of your DATATRIEVE session in your VMS directory. After you execute a command file, you can close this file with a close command and exit DATATRIEVE to print it. A session log is useful to troubleshoot a long command file or one that produces much output when your screen often does not accommodate all the lines you need to see at one time. In the following example, PROBLEMS.LOG is the log file name, but you can choose any valid VMS file specification you want:

```
DTR>  OPEN PROBLEMS.LOG
DTR>  SET VERIFY
DTR>  @MYFILE
    .     .     .
    .     .     .
    .     .     .
DTR>  CLOSE        ! Do not enter the file name following CLOSE.
DTR>  SET NO VERIFY
DTR>  EXIT
$  PRINT/QUEUE=SYS$PRINT PROBLEMS.LOG
```

If you run DATATRIEVE from a DECwindows interface, you can create a log file of your DATATRIEVE session by selecting the Open Log... and Close Log items of the File Menu in the main application window. See the User's Guide for more information on using DECwindows.

During your log session, if you make calls to other products or if you use a function like the FN$DCL function to request information from another product, that information is not written to the file specified by the OPEN command. A print-out of your log session displays your DATATRIEVE commands but does not include the output generated by the other product.

5.2 Reporting Problems to Digital

Make sure you know your access number before you call the Customer Support Center (CSC), and use the access number to identify yourself when you call. Treat the access number and the telephone numbers of the CSC confidentially. You should designate CSC contact people in your organization, and only these people should know the CSC access numbers.

The contact people you designate can speak directly with a CSC team specialist. The CSC will call the contact people directly to deliver a solution, request more information, or confirm a solution previously delivered.

The CSC will be able to respond faster and more accurately if you have complete information available when you call. Preparing a statement of the problem and thinking through the sequence of events that led to its occurrence can eliminate the need for calls from the CSC to gather more information. The specialist can focus immediately on isolating and analyzing the problem, rather than on defining it.

The following list of questions helps you collect supporting information that is often overlooked, but is essential to understanding a problem in its context. Try to write down an answer to each question and have the list of answers ready when you call the CSC.

1. What version of DATATRIEVE are you running?
2. What versions of the VMS operating system, CDD/Plus, other prerequisite software, and any optional software are you running? Are these the most current versions available?
3. Are you using CDO or DMU format objects, or both?
4. Does this problem occur in the DECwindows interface or in the character cell interface, or both?
5. In what environment or under what conditions does the problem occur: interactive, network, callable, loaded, or single-user system?

6 Have any changes occurred with the DATATRIEVE software or its usage that might correlate with the incidence of the problem such as:

- Installing new prerequisite or optional software?
- Upgrading existing software?

7 Have any changes occurred with your application, such as data, system parameters, or changes in the procedures?

8 Can you reproduce the problem with a short example? This will help the CSC team specialist in reproducing the problem.