VAX TDMS
Installation Guide

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This document contains instructions for installing VAX TDMS on the VMS operating system. It also explains how to read the online release notes before or after installing the product.

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Preface

This document describes how to install VAX Terminal Data Management System (TDMS) on the VMS operating system. It is intended for system managers. This document applies to VAX TDMS Version 1.9.

Keep this document with your distribution kit. You will need it to install maintenance updates or to reinstall VAX TDMS for any other reason.

Intended Audience

This manual is intended for those who install and maintain VAX TDMS software. You should read this manual before installing VAX TDMS.

To install VAX TDMS, you must have access to a privileged account. To run the postinstallation Installation Verification Procedure (IVP), you must use a VT100- VT200- or VT300-series terminal or one that is VT100-compatible.

Operating System Information

To verify which versions of your operating system are compatible with this version of VAX TDMS, check the most recent copy of the *VAX System Software Order Table/Optional Software Cross Reference Table*. Contact your Digital representative for a copy of this document.

Structure

This manual contains four chapters and two appendixes:

Chapter 1	Describes the preparations and requirements necessary for installing VAX TDMS.
Chapter 2	Describes the VAX TDMS installation procedure.
Chapter 3	Describes the tasks to perform after installing VAX TDMS.
Chapter 4	Describes the VAX TDMS postinstallation IVP.
Appendix A	Reproduces typical installation sessions and postinstallation IVP sessions.
Appendix B	Details the files that are installed or modified.

Related Manuals

For additional information on installing VAX TDMS, refer to the VMS system documentation for these topics:

- VMSINSTAL procedure
- INSTALL Utility
- System management and operations

Conventions

This manual uses the following conventions:

Return	This symbol indicates the Return key. Unless otherwise stated, you must end all user input lines in examples by pressing the Return key.
Tab	This symbol indicates the Tab key.
Ctrl/x	Means press the Ctrl key while you press the designated key. For example: Press Ctrl/Z.
Color	Color in examples shows user input.
$	The dollar sign represents the DIGITAL Command Language (DCL) prompt. (The DCL prompt on your system may be different.)

References to Products

This manual often refers to Digital products by their abbreviated names:

- VAX TDMS software is referred to as TDMS.
- VAX Language-Sensitive Editor software is referred to as LSE.

If VAX CDD/Plus software is installed on your system, references in this manual to the ''VAX Common Data Dictionary,'' ''Common Data Dictionary,'' or ''CDD'' refer to the DMU format dictionary.

CDD/Plus supports dictionary definitions in two distinct formats:

- DMU format—dictionary definitions that you can create and manipulate with the DMU, CDDL, and CDDV utilities, and other products that do not support the new features of CDD/Plus.
- CDO format—dictionary definitions that you can create and manipulate with the CDO utility, the CDD/Plus call interface, and other supporting products.

You can create and manipulate definitions that you intend to use in your TDMS applications in the DMU format dictionary using DMU, CDDL, CDDV, and other products that do not support the new features of CDD/Plus.

Your site may have products that support the new features of CDD/Plus. If so, you may benefit by using these products to create definitions in the CDO format dictionary. These definitions can be read by both your TDMS applications and the products that support the new features of CDD/Plus.

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

Chapter 1

Preparing to Install VAX TDMS

This chapter discusses the preparations and requirements necessary for installing VAX TDMS.

Your bill of materials (BOM) and indented bills report (BIL) specify the number and contents of your media. Be sure to verify the contents of your kit with this information. If your kit is damaged or if you find that parts of it are missing, contact your Digital representative.

VAX TDMS provides online release notes. Digital strongly recommends that you read the release notes before proceeding with the installation. For information on accessing the online release notes, see Section 2.1.1.

1.1 Required Operating System Components

The VMS operating system comes with a variety of support options, or classes. Classes include such features as networking and RMS journaling. To use VAX TDMS, your system should be running a version of VMS that includes the following classes:

- VMS required saveset—BASE, CLUS, DRVR, MNGR
- System Programming—SYSP
- Network Support—NET
- Programming Support—PROG
- Utilities—UTIL

1.2 TDMS Software Components

The TDMS software is available in two types of kits: the full development kit and the run-time only kit. Each kit consists of base software and Postinstallation Installation Verification Procedure (IVP) software.

The TDMS base software consists of:

- Program interface (TSSSHR.EXE)

  The TDMS program interface is a shareable image that contains the callable routines described in the *VAX TDMS Request and Programming Manual*.

- System startup procedure (TDMSTRTUP.COM)

  The TDMS startup procedure is a command procedure that installs TDMS as a known image.

- Request Definition Utility (RDU.EXE)

  You use the Request Definition Utility (RDU) to create and manage TDMS requests and to build TDMS request library files. RDU is available only on the full development kit. The *VAX TDMS Request and Programming Manual* describes RDU in detail.

- Form Definition Utility (FDU.EXE)

  You use the Form Definition Utility (FDU) to create and manage TDMS form definitions. FDU is available only on the full development kit. The *VAX TDMS Forms Manual* describes FDU in detail.

- Command procedure that calls EDT as the standard editor (TDMSEDIT.COM)

  The TDMSTRTUP command procedure defines the FDU$EDIT and RDU$EDIT logicals as TDMSEDIT.COM. TDMSEDIT.COM calls EDT as the standard editor for use within FDU and RDU. TDMSEDIT.COM is supplied only on the full development kit.

- Installation-Time Installation Verification Procedure (TDMSIVP.COM)

  You can use the installation-time IVP during the installation to verify that FDU.EXE, RDU.EXE, and TSSSHR.EXE are correctly installed.

- DCL-level help (HELPLIB.HLB)

  DCL-level help provides information about synchronous and asynchronous calls. It contains information on running the postinstallation verification procedure, and it contains information on where to find the release notes file. For the full development kit, DCL-level help also explains invoking FDU and RDU.

- Sample applications

  The sample applications demonstrate features of TDMS. They include three samples:

  - Employee sample
  - Personnel sample
  - Department sample

  The sample applications are available only with the full development kit.

1.3 Prerequisite Hardware

To run the postinstallation IVP (Installation Verification Procedure), you must have a video terminal. See Chapter 4 for more information on the postinstallation IVP.

1.4 Prerequisite and Optional Software

This section discusses the software you must have installed on your system before installing VAX TDMS. The section also includes information about software that you can use together with VAX TDMS. Please refer to the System Software Addendum (SSA) for a complete list of compatible products and their required version numbers. The SSA is part of the Software Product Description (SPD).

To install TDMS, you must have:

- A valid VMS operating system configuration with VMS Version 5.0 or higher installed on your system.

  Refer to the VAX TDMS Software Product Description (SPD) for minimum hardware requirements and related configuration information.
- VAX Common Data Dictionary (CDD/Plus) Version 4.1 or higher installed on your system.
- The appropriate device for your distribution media.

If you want TDMS support for the VAX Language-Sensitive Editor (LSE), you must install LSE before you install TDMS. TDMS support is available only for LSE Version 2.3 or higher. See the *VAX Language-Sensitive Editor Installation Guide* for information on installing that product.

1.5 License Registration

The VMS License Management Facility is available with Version 5.0 of the VMS operating system. If you are installing VAX TDMS on a VMS Version 5.0 or higher system, you must register your software license through the VMS License Management Facility (LMF) in accordance with the license agreement signed by your site.

The license registration information you need is contained in the Product Authorization Key (PAK). The PAK is a paper certificate that contains information about your license to run a particular piece of software.

During the installation, you are asked whether you have registered the VAX TDMS license and loaded the appropriate authorization key. You must register and load your license for VAX TDMS *before* you start the installation in order to run the Installation Verification Procedure (IVP) and use the software.

To register a license under VMS Version 5.0, first log in to the system manager's account, SYSTEM. You then have a choice of two ways to perform the registration:

- Invoke the SYS$UPDATE:VMSLICENSE.COM procedure. When it prompts you for information, respond with data from your Product Authorization Key (PAK).
- Issue the LICENSE REGISTER DCL command with the appropriate qualifiers that correspond to information on the PAK.

For complete information on using LMF, see the manual on the License Management Utility in the VMS documentation set.

1.6 VAXcluster Considerations

When TDMS is installed on a cluster, files are placed under the SYS$COMMON root. Files from previous TDMS installations exist under SYS$COMMON and SYS$SPECIFIC. The files in SYS$SPECIFIC must be deleted before you install TDMS Version 1.9. Therefore, delete the following files before you invoke the installation procedure:

```
SYS$SPECIFIC:[SYSLIB]TSSSHR.EXE;*
SYS$SPECIFIC:[SYSEXE]FDU.EXE;*
SYS$SPECIFIC:[SYSEXE]RDU.EXE;*
```

1.7 Installation Procedure Requirements

This section discusses various requirements for installing VAX TDMS.

1.7.1 Restrictions

Inform users of the system to avoid using the CDD and help while you install TDMS. You can use the REPLY command to send a message to users, for example:

```
$ REPLY/ALL "Please avoid using the CDD or help.  Installing TDMS."
```

1.7.2 Time

The full development installation procedure takes 30 to 40 minutes. The run-time only installation procedure takes 10 to 20 minutes.

Installing VAX TDMS and running the IVP on a standalone VAX 11/780 system takes 30 minutes.

1.7.3 Privileges

To install VAX TDMS, you must be logged in to an account that has SETPRV or at least the following privileges:

- CMKRNL
- CMEXEC
- OPER
- SYSLICK
- SYSPRV
- SYSNAM
- WORLD

Note that VMSINSTAL turns off BYPASS privilege at the start of the installation.

To use TDMS with the dictionary, you must also have the CDD GLOBAL_ DELETE (G) privilege for CDD$TOP. Run the Dictionary Management Utility (DMU) to examine the CDD privileges. Enter the following command at the DCL prompt:

```
$  SET DEF SYS$SYSTEM
$  RUN DMU
```

DMU responds with the DMU> prompt. At the prompt, type:

```
DMU>  SHOW PROTECTION CDD$TOP
```

DMU then displays the privileges for that node. To change the privilege for that node, enter the following command at the DMU> prompt:

```
DMU>  SET PROTECTION/EDIT CDD$TOP
```

With the cursor in the Grant column of the current access control list, type a G to obtain the GLOBAL_DELETE privilege. To return to the DMU prompt, press Ctrl/Z. Then enter the following commands:

```
DMU>  SHOW PROTECTION CDD$TOP
DMU>  EXIT
```

1.7.4 Disk Space

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

Table 1–1: Disk Space Requirements

Kit	Blocks During Installation	Blocks After Installation
VAX TDMS Version 1.9 with sample applications	12,000	5,000
VAX TDMS Version 1.9 without sample applications	12,000	2,500
VAX TDMS RTO Version 1.9	3,000	500

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

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

1.7.5 System Parameters

Installing VAX TDMS requires certain system parameter settings. Table 1–2 lists the minimum required system parameter values for the installation. Depending on the kinds of programs and applications running at your site, you might need higher values for some settings.

Table 1–2: Required System Parameter Values

System Parameter	Value
GBLPAGES[1]	*n* + 208
GBLSECTIONS[1]	*n* + 5

[1]The *n* variable refers to the system parameter values that are currently in use. To install VAX TDMS, you must raise those values by the number indicated. (See Section 1.7.5.2.)

The following sections show you how to check system parameter values, calculate values for the GBLPAGES and GBLSECTIONS system parameters, and change parameter values with the VMS AUTOGEN command procedure.

1.7.5.1 Checking System Parameter Values

To check the values of your system parameters, enter the following command at the DCL prompt to invoke the System Generation Utility:

```
$  RUN SYS$SYSTEM:SYSGEN
SYSGEN>
```

At the SYSGEN> prompt, enter the SHOW command to display the value of a system parameter. The values displayed should equal or exceed the the value of each parameter listed in Table 1–2. The following command displays the value for the GBLSECTIONS system parameter:

```
SYSGEN>  SHOW GBLSECTIONS
```

After you finish checking the parameters with the SHOW command, you can enter the EXIT command at the SYSGEN> prompt to return to DCL level.

1.7.5.2 Calculating the Values for GBLPAGES and GBLSECTIONS

To install and run VAX TDMS, you must have sufficient free global pages and global sections. You must first find out how many free global pages and sections you have on your system. Then use AUTOGEN if you need to increase the GBLPAGES and GBLSECTIONS system parameters.

The *n* shown in Table 1–2 represents the current number of unused global pages or global sections available on your system. For the installation to process successfully, you must raise these values by the amount indicated. To calculate how many unused global pages and global sections your system has, perform the following steps:

1. Run the VMS INSTALL Utility using the following DCL command:

   ```
   $  INSTALL LIST /GLOBAL /SUMMARY
   ```

   The Install Utility displays a summary of global pages and global sections used by your system, as well as the current number of unused global pages. For example:

   ```
                    Summary of Local Memory Global Sections

   258 Global Sections Used,  22580/3420 Global Pages Used/Unused
   ```

2. Determine whether the number of unused global pages (3420 in the example) is equal to or greater than 208. If the number of unused pages is less than 208, you need to increase the value for GBLPAGES.
3. Note the amount shown for Global Sections Used (258 in the example).
4. Run the System Generation Utility and use the SHOW command to determine how many global sections have been allocated. For example:

```
$  RUN SYS$SYSTEM:SYSGEN
SYSGEN>  SHOW GBLSECTIONS

Parameter Name          Current   Default   Minimum   Maximum Unit  Dynamic
--------------          -------   -------   -------   ------- ----  -------
GBLSECTIONS                 512       250        20      4095 Sections
```

5. Subtract the amount shown in the summary (258 in the example) from the amount allocated. If the difference is less than 5, you need to increase the value of the GBLSECTIONS parameter.

If you are installing VAX TDMS on a VMS Version 5.2 system, you can use the WRITE command with the F$GETSYI lexical function to find the number of free global pages and global sections. The following example shows how to get this information at your terminal (the default for SYS$OUTPUT):

```
$  WRITE SYS$OUTPUT F$GETSYI("FREE_GBLPAGES")
15848
$  WRITE SYS$OUTPUT F$GETSYI("FREE_GBLSECTS")
24
```

If the values displayed by the system are greater than the values in Table 1–2, you do not need to increase the values for these parameters. If the value of free global pages or global sections is less than the value in Table 1–2, you must increase the system parameter setting.

Section 1.7.5.3 describes the procedures for increasing these values as well as those of other system parameters. Refer to the VMS documentation on system management and operations for more information.

1.7.5.3 Changing System Parameter Values with AUTOGEN

You use the AUTOGEN command procedure to change system parameters. AUTOGEN automatically adjusts values for parameters that are associated with the ones you reset manually. To change system parameters with AUTOGEN, edit the following file:

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

If you need to change a parameter value that is already in the MODPARAMS.DAT file, use a text editor to locate the line containing that value. Delete the current value associated with that parameter and enter the new value.

To add a new value, add a line to the MODPARAMS.DAT file. Be sure to include both the name of the parameter and its value in the new line.

You can also modify incremental parameters in the MODPARAMS.DAT file. The following example increases the global page setting by 2000:

```
ADD_GBLPAGES = 2000
```

NOTE

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.

When you reboot a system under VMS Version 5.0, 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 documentation in the VMS System Management Subkit.

1.7.6 Process Account Quotas

The account you use to install VAX TDMS must have sufficient quotas to enable you to perform the installation. Table 1–3 summarizes the minimum process quotas required for the installation account.

Table 1–3: Process Quotas for the Installing Account

Account Quota	Value
ASTLM	24
BIOLM	18
BYTLM	18,000
DIOLM	18
ENQLM	100
FILLM	20

User account quotas are stored in the file SYSUAF.DAT. You use the VMS Authorize Utility to verify and change user account quotas. First set your directory to SYS$SYSTEM and then run AUTHORIZE:

```
$  SET DEFAULT SYS$SYSTEM
$  RUN AUTHORIZE
UAF>
```

At the Authorize Utility prompt (UAF>), use the SHOW command with an account name to check a particular account. For example:

```
UAF>  SHOW SMITH
```

To change a quota, use the MODIFY command at the UAF> prompt. MODIFY has the following format:

MODIFY account-name /quota-name=nnnn

The following example changes the FILLM quota for the SMITH account and then exits from the Authorize Utility:

```
UAF>  MODIFY SMITH /FILLM=50
UAF>  EXIT
```

After you exit from the utility, the VMS system displays messages indicating whether or not changes were made. Once the changes have been made, you must log out and log in again for the new quotas to take effect.

For more information on modifying account quotas, see the description of the Authorize Utility in the documentation included in the VMS System Management Subkit.

1.7.7 VMSINSTAL Requirements

When you invoke VMSINSTAL, it checks the following:

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

The VMSINSTAL procedure requires that the installation account have a minimum of the following quotas:

ASTLM = 24
BIOLM = 18
BYTLM = 18,000
DIOLM = 18
ENQLM = 30
FILLM = 20

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

1.7.8 Backing Up Your System Disk

At the beginning of the installation, VMSINSTAL asks whether you have backed up your system disk. Digital recommends that you do a system disk backup before installing any software on top of the operating system.

Use the backup procedures that have been established at your site. For details on performing a system disk backup, see the information on the Backup Utility in the documentation included in the VMS System Management Subkit.

Chapter 2

Installing VAX TDMS

This chapter describes how to install VAX TDMS. Section 2.2 contains a step-by-step description of the installation procedure.

2.1 General Information

This section includes information about accessing release notes, determining files and logical names added to your system, running the Installation Verification Procedure (IVP), and aborting the installation.

2.1.1 Accessing the Online Release Notes

VAX TDMS Version 1.9 provides online release notes only. You should review the release notes in case they contain any information about changes in the installation procedure.

You must specify OPTIONS N when you invoke VMSINSTAL if you want the installation procedure to give you an opportunity to display or print the online release notes. This question comes near the beginning of the installation. (If you have already reviewed the release notes, you do not need to specify OPTIONS N.)

Once VAX TDMS has been installed, the release notes are located in the following file:

```
SYS$HELP:TDMS019.RELEASE_NOTES
```

Online help also directs you to the release notes file. After the installation, you can enter the following command to review the release notes through the help system:

```
$ HELP TDMS RELEASE_NOTES
```

NOTE

With this release of VAX TDMS, hardcopy release notes are no longer provided.

2.1.2 Determining the Files and Logical Names Added to the System

The files added, replaced, and/or modified on your system when VAX TDMS is installed are listed in Appendix B.

Table 2–1 lists the logical names VAX TDMS adds to the system when it is installed:

Table 2–1: VAX TDMS Logical Names

Logical Name	File Specification
TDMS$EDIT	SYS$COMMON:[SYSEXE]TDMSEDIT
TDMS$EXAMPLES	SYS$COMMON:[SYSHELP.EXAMPLES.TDMS]
RDU$EDIT	SYS$COMMON:[SYSEXE]TDMSEDIT[1]
FDU$EDIT	SYS$COMMON:[SYSEXE]TDMSEDIT[1]

[1]RDU$EDIT and FDU$EDIT are logical names for TDMS$EDIT.

2.1.3 Running the Installation Verification Procedure (IVP)

The Installation Verification Procedure (IVP) for VAX TDMS verifies the installation. During the installation, you are asked whether you want to run the IVP as part of the installation. If you respond YES, VMSINSTAL runs the IVP. It is recommended that you run the IVP to be sure that VAX TDMS is installed correctly.

After VAX TDMS is installed, you can run the postinstallation IVP to verify that the software is working properly. You might also want to run the IVP after a system failure to be sure that users can access VAX TDMS.

Chapter 4 explains the postinstallation IVP. You can also find the same on-line instructions in the file SYS$COMMON:[SYSTEST.TDMS]TDMSIVP.TXT.

2.1.4 Aborting the Installation

To abort the installation procedure at any time, press Ctrl/Y. When you press Ctrl/Y, the installation procedure deletes all files it has created up to that point and exits. You can then start the installation again.

2.2 The Installation Procedure

The VAX TDMS installation procedure consists of a series of questions and informational messages. The following sections explain how to invoke VMSINSTAL and answer the installation procedure questions.

2.2.1 Invoking VMSINSTAL

To start the installation, invoke the VMSINSTAL command procedure from a privileged account, such as the SYSTEM account. VMSINSTAL is in the SYS$UPDATE directory. Use the following command to set default to the SYS$UPDATE directory:

```
$  SET DEFAULT SYS$UPDATE
```

Next, invoke VMSINSTAL using the following syntax:

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

saveset-name
The installation name for the component. For VAX TDMS, use the following installation name:

```
TDMSDEV019
```

device-name
The name of the device on which you plan to mount the media. For example, MTA0: is the device name for a tape drive. It is not necessary to use the console drive for this installation. However, if you do use the console drive, you should replace any media you removed once the installation is complete.

OPTIONS N
An optional parameter that indicates you want to be prompted to display or print the release notes. If you do not include the OPTIONS N parameter, VMSINSTAL does not prompt you to display or print the release notes.

There are several other options you can select when you invoke VMSINSTAL:

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

For detailed information on these options, see the documentation in the VMS System Management Subkit. If you specify more than one option, separate the options with commas (OPTIONS A,N).

The following example shows the command to invoke VMSINSTAL to install the full development VAX TDMS kit from tape drive MTA0: and the system response. This example uses the OPTIONS N parameter for printing or displaying release notes.

```
$  @SYS$UPDATE:VMSINSTAL TDMSDEV019 MTA0: OPTIONS N

      VAX/VMS Software Product Installation Procedure V5.0


It is DD-MMM-YYYY at 11:20.
Enter a question mark (?) at any time for help.
```

If you are installing the run-time only kit, type:

```
$  @SYS$UPDATE:VMSINSTAL TDMSRTO019 MTA0: OPTIONS N
```

If you are installing TDMS on a system disk other than the currently running system disk, type:

```
$  @SYS$UPDATE:VMSINSTAL TDMSDEV019 MTAx: OPTIONS R DBA1:[SYS0.]
```

If you do not supply the product name or the device name, VMSINSTAL prompts you for this information later on in the installation procedure. VMSINSTAL does not prompt you for any options, so be sure to include OPTIONS N on the VMSINSTAL command line to access the release notes during the installation.

2.2.2 Installation Questions

This section discusses the questions that appear during the installation. Appendix A contains a sample installation procedure showing how the questions can be answered.

Each question in the installation is marked with an asterisk (*) at the beginning of the line. Some questions show the default response in brackets, for example [YES]. If you want to use the default response, press only the Return key.

1. **Confirm DECnet status.**

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

   VMSINSTAL notifies you if DECnet is running and displays a list of all active processes. It then asks whether you want to continue the installation. You should install VAX TDMS on a standalone system or cluster with DECnet shut down. NO is the default response to the question.

   If you are installing on VMS Version 5.2 or higher, VMSINSTAL does not check the DECnet status. You can install VAX TDMS while DECnet is up and running.

2. **Confirm system backup.**

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

   VMSINSTAL asks whether you are satisfied with your system backup. You should always back up your system disk before performing an installation. If you are satisfied with the backup of your system disk, press Return. Otherwise, enter NO to discontinue the installation. After you back up your system disk, you can restart the installation.

3. **Mount the media.**

```
Please mount the first volume of the set on MTA0:.
* Are you ready?  YES
%MOUNT-I-MOUNTED, VAX TDMS MOUNTED ON _$$MTA0:  (NODE 1)
The following products will be processed:
  VAX TDMS V1.9

    Beginning installation of VAX TDMS V1.9 at 20:01

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

You should now mount the first distribution volume on the device you specified when you invoked VMSINSTAL. The device name is shown in the prompt. VMSINSTAL then asks you whether you are ready to continue with the installation.

If you respond YES to indicate that you are ready, VMSINSTAL displays a message that the media containing VAX TDMS has been mounted on the specified device and that the installation has begun.

If you entered the wrong device name when you invoked VMSINSTAL and need to restart the installation, enter NO in response to the ''Are you ready?'' question. To abort the installation for other reasons, press Ctrl/Y.

4. **Mount additional media volumes.**

```
%BACKUP-I-READYREAD, mount volume 2 on _$$MTA0: for reading

Enter "YES" when ready:
```

If your installation kit contains more than one volume, VMSINSTAL prompts you to insert the additional volumes and then asks you to indicate that you are ready for the installation to proceed.

5. **Select a release notes option.**

```
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]:
```

If you specified OPTIONS N when you started the installation, VMSINSTAL asks a question about release notes. You have five options for handling the release notes under VMS Versions 5.0 and 5.1. There are only four options under VMS Version 5.2 or higher.

For VMS Versions 5.0 and 5.1, you see the following display:

```
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]:
```

For VMS Version 5.2 or higher, you see the following display:

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

Additional Release Notes Options:

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

* Select option [2]:
```

If you select option 1, VMSINSTAL displays the release notes immediately on the console terminal. You can terminate the display at any time by pressing Ctrl/C.

If you select option 2, VMSINSTAL prompts you for the name of the print queue:

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

You can press RETURN to send the file to the default output print device or you can enter another queue name.

If you select option 3, VMSINSTAL displays the release notes immediately on the console terminal and then prompts you for a queue name for the printed version.

Option 4 under VMS Versions 5.0 and 5.1 causes the installation to copy the release notes to the system help directory. [Even if you do not select the VMS Version 5.0 or 5.1 option 4, the release notes for VAX TDMS are copied to the system help directory.] Under VMS Version 5.2 or higher, release notes are always copied to the system help directory.

Select option 4 (VMS Version 5.2 or higher) or option 5 (VMS Version 5.0 or 5.1) if you reviewed the release notes and are restarting the installation.

Next, VMSINSTAL displays the following question:

```
* Do you want to continue the installation [N]?:  YES
%VMSINSTAL-I-RELMOVED, The product's release notes have been
                                    successfully moved to SYS$HELP.
```

To continue the installation, enter YES. Otherwise, press RETURN. In either case, the release notes are copied to a file in the SYS$HELP directory:

```
SYS$HELP:TDMS019.RELEASE_NOTES
```

NOTE

The name of the release notes file installed by VMSINSTAL consists of the current product name and version number. Do not delete release notes for previous versions of VAX TDMS.

After the installation, you can enter the following command to review the release notes through the VMS online help system:

```
$  HELP TDMS RELEASE_NOTES
```

6. **Check for LSE.**

   If you are installing the full development kit, the procedure checks whether LSE is on the system where you are installing TDMS. If LSE is on the system, the TDMS support for LSE is added. If LSE is not installed, the procedure displays a message that indicates LSE is not installed and asks whether you want to continue. If you want TDMS support for LSE, you must install LSE before you install TDMS.

7. **Install sample applications.**

   ```
   *  Do you want to install the TDMS sample applications [NO]?
   ```

   If you are installing the full development kit, the procedure then asks whether you want to install the sample applications.

   If you choose not to install the sample applications at this time, they will not be available to you after the installation.

8. **Choose the Installation Verification Procedure (IVP) option.**

   ```
   * Do you want to run the IVP after the installation [YES]?
   ```

   The installation procedure now asks whether you want to run the Installation Verification Procedure. The IVP for VAX TDMS checks to be sure that the installation is successful. It is recommended that you run the IVP.

   After TDMS is installed, you can run the IVP independently to verify that the software is available on your system. You might need to run the IVP after a system failure to make sure that users can access TDMS.

   See Chapter 4 for information on the postinstallation procedure, which runs a TDMS test application.

9. **Purge files.**

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

You have the option to purge files from previous versions of VAX TDMS that are superseded by this installation. Purging is recommended; however, if you need to keep files from the previous version, enter NO in response to the question.

10. **Respond to VAX TDMS license registration queries.**

```
Product:       VAX TDMS
Producer:      DEC
Version:       1.9
Release Date:  DD-MMM-YYYY

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

The installation procedure displays license information about your product and then asks whether you have registered and loaded your Product Authorization Key (PAK) for VAX TDMS.

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

2.2.3 Informational Messages

At this point, the installation procedure displays a number of informational messages that report on the progress of the installation. There are no further questions. If the installation procedure has been successful up to this point, VMSINSTAL moves the new or modified files to their target directories, updates help files, and updates DCL tables, if necessary. If you asked for files to be purged, that work is done now. The following message is displayed to indicate that the installation is nearly complete:

```
%VMSINSTAL-I-MOVEFILES, files will now be moved to their target directories...
```

2.2.4 Running the Installation Verification Procedure (IVP)

If you chose to run the IVP, VMSINSTAL runs it now. When the IVP runs successfully, you see the following display:

```
Executing IVP procedure for: VAX TDMS V1.9-0

Testing FDU....
    Test completed successfully.

Testing RDU....
    Test completed successfully.

Testing TSSSHR....
    Test completed successfully.

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

    VAX TDMS V1.9-0

    Development

    IVP COMPLETED SUCCESSFULLY

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

IVP completed for: VAX TDMS V1.9-0
```

2.2.5 Completing the Installation Procedure

The following messages indicate that the entire installation procedure is complete:

```
   Installation of TDMSDEV 1.9 completed at 11:39

   VMSINSTAL procedure done at 11:39
```

You can now log out of the privileged account:

```
$  LOGOUT
SYSTEM     logged out at DD-MMM-YYYY 11:41:03.45
```

VMSINSTAL deletes or changes entries in the process symbol tables during the installation. Therefore, if you are going to continue using the system manager's account and you want to restore these symbols, you should log out and log in again.

2.3 Error Recovery

If errors occur during the installation itself or when the IVP is running, VMSINSTAL displays failure messages. If the installation fails, you see the following message:

```
%VMSINSTAL-E-INSFAIL, The installation of VAX TDMS V1.9 has failed.
```

If the IVP fails, you see these messages:

```
The VAX TDMS V1.9 Installation Verification Procedure failed.

%VMSINSTAL-E-IVPFAIL, The IVP for VAX TDMS V1.9 has failed.
```

Errors can occur during the installation if any of the following conditions exist:

- The operating system version is incorrect.
- A prerequisite software version is incorrect.
- Quotas necessary for successful installation are insufficient.
- System parameter values for successful installation are insufficient.
- The VMS help library is currently in use.
- The TDMS or CDD/Plus license has not been registered and loaded.

For descriptions of the error messages generated by these conditions, see the VMS documentation on system messages, recovery procedures, and VMS software installation. If you are notified that any of these conditions exist, you should take the appropriate action as described in the message. (You might need to change a system parameter or increase an authorized quota value.) For information on installation requirements, see Chapter 1.

Chapter 3

After Installing VAX TDMS

After installing VAX TDMS, you need to perform the following tasks:

- Edit the system startup and shutdown files.
- Set user account quotas.
- Make VAX TDMS available on each licensed node in your VAXcluster (if you are installing VAX TDMS on a VAXcluster).
- Create the CDD tree (full development option).
- Remove nonessential files.

This chapter explains how to perform these tasks.

3.1 Editing the System Files

You must edit the system startup file to provide for automatic startup of VAX TDMS when your system is rebooted.

Add the command line that starts VAX TDMS to the system startup file, SYS$MANAGER:SYSTARTUP_V5.COM. VAX TDMS cannot start until after the network has started. You must position this new command line *after* the line that invokes the network startup command procedure. The following example shows the network startup command line followed by the startup command line for VAX TDMS:

```
$  @SYS$MANAGER:STARTNET.COM
      .
      .
      .
$  @SYS$MANAGER:TDMSSTRTUP.COM
```

3.2 User Account Requirements

To use VAX TDMS, user accounts on your system must have at least the TMPMBX and NETMBX privileges. Use the VMS Authorize Utility to determine whether users have the privileges they require.

The user accounts must also have sufficient quotas to be able to use VAX TDMS. Table 3–1 summarizes the minimum required user account quotas.

Table 3–1: User Account Quotas for Using VAX TDMS

Account Quota	Value
ASTLM	24
BIOLM	18
BYTLM	18,000
DIOLM	18
ENQLM	100
FILLM	20

User account privileges and quotas are stored in the file SYSUAF.DAT. You use the VMS Authorize Utility to verify and change user account privileges and quotas. To use the Authorize Utility, set your directory to SYS$SYSTEM and use the DCL RUN command as follows:

```
$  SET DEFAULT SYS$SYSTEM
$  RUN AUTHORIZE
UAF>
```

At the Authorize Utility prompt (UAF>), enter the SHOW command with an account name to check that particular account. For example:

```
UAF>  SHOW SMITH
```

To change a quota, use the MODIFY command at the UAF> prompt. MODIFY has the following format:

```
MODIFY account-name /quota-name=nnnn
```

The following example adds the NETMBX privilege, changes the FILLM quota for the SMITH account and then exits from the utility:

```
UAF>  MODIFY SMITH /PRIVILEGES=NETMBX /FILLM=50
UAF>  EXIT
```

After you exit from the utility, the VMS system displays messages indicating whether changes were made. Once you have finished making the changes, the users must log out and log in again for the new quotas to take effect.

For more information on modifying account quotas, see the description of the Authorize Utility in the VMS documentation set.

3.3 VAXcluster Considerations

After you install VAX TDMS on a VAXcluster, you must do the following tasks on each licensed node in the VAXcluster:

- Register the license for VAX TDMS
- Execute the VAX TDMS startup command procedure
- Install DCLTABLES.EXE
- Run the IVP and the postinstallation IVP

To execute the startup command procedure, log in to a node in the VAXcluster and enter the following command:

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

To install DCLTABLES.EXE, enter the following commands:

```
$  INSTALL :== $SYS$SYSTEM:INSTALL/COMMAND_MODE
$  INSTALL REPLACE SYS$SHARE:DCLTABLES.EXE/OPEN/SHARE/HEADER
```

For information on registering the VAX TDMS license on a node, see Section 1.5. For information on running the IVPs, see Section 2.1.3 and Chapter 4

3.4 Creating the CDD/Plus Tree for the Sample Applications

The sample applications are an optional part of the full development kit. If you chose to install the sample applications, TDMS links them to produce executable images that you can later run. However, the installation procedure does not create the CDD/Plus tree containing the sample records, forms, requests, and request library definitions.

To create the CDD/Plus tree containing the sample records, forms, requests, and request library definitions, type the following:

```
$  SET DEFAULT TDMS$EXAMPLES
$  @TDMSBLDSAMPLE
```

This command procedure creates the CDD/Plus tree in the CDD$TOP.TDMS$SAMPLES directory. It also builds the sample request library files.

See the *VAX TDMS Forms Manual* for information on running the sample applications.

3.5 Removing Nonessential Files

If you have limited disk space, you can remove some files that are installed on your system as part of the TDMS installation procedure:

- Sample application files (full development option)

  The files associated with the sample applications exist in TDMS$EXAMPLES. If you installed these files and now want to remove them, (approximately 2600 blocks), type:

  ```
  $  DELETE/LOG TDMS$EXAMPLES:*.*;*
  ```

- Postinstallation IVP files (both options)

  To delete the TDMS postinstallation IVP files (approximately 222 blocks in the full development option and 151 in the run-time only option), type:

  ```
  $  DELETE/LOG SYS$COMMON:[SYSTEST]TDMS*.COM;*
  $  DELETE/LOG SYS$COMMON:[SYSTEST.TDMS]*.*;*
  ```

NOTE

The postinstallation IVP files remain on the system so that you can run the postinstallation IVP at any time after installing TDMS. Do not delete these files if you plan to run the postinstallation IVP.

If you ran the installation-time IVP as part of the installation, all installation-time IVP files created during the installation procedure are automatically deleted after the IVP is completed.

3.6 Determining and Reporting Problems

If you encounter a problem while using VAX TDMS, report it to Digital. Depending on the nature of the problem and the type of support you have, you can take one of the following actions:

- Call Digital if your software contract or warranty agreement entitles you to telephone support.
- Submit a Software Performance Report (SPR).
- Fill out and submit a Reader's Comments form if the problem has to do with the VAX TDMS documentation. There are Reader's Comments forms at the back of each manual. Use the form from the manual in which you found the error. Include the section and page number.

Review the Software Product Description (SPD) and Warranty Addendum for an explanation of warranty. If you encounter a problem during the warranty period, report the problem as indicated above or follow alternate instructions provided by Digital for reporting SPD nonconformance problems.

See the release notes for VAX TDMS for information on how to submit an SPR.

Chapter 4

Postinstallation Verification Procedure

This chapter describes the postinstallation IVP. This IVP checks that the full development and run-time only installation procedures correctly installed TDMS. This IVP also runs a TDMS test application. In addition, the full development kit postinstallation IVP makes sure the software works with the VAX Common Data Dictionary (CDD) and builds a TDMS application. The IVP for both kits is based on the Employee sample application.

NOTE

The postinstallation IVP must be installed on the currently running system disk to operate correctly. If you installed TDMS on a system disk that you are not currently using, you must boot your system from that disk before you run the postinstallation IVP.

If errors occur during the postinstallation IVP, run the postinstallation IVP again. If the problem still occurs, submit a Software Performance Report (if you are eligible to do so).

The postinstallation IVP is divided into two phases. During the first phase of the postinstallation IVP, the following occurs:

- If the full development kit is being installed, the postinstallation IVP verifies the installation of the TDMS utilities and invokes a command procedure that:
  - Inserts the IVP forms, record definitions, requests, and request library in the CDD
  - Builds the IVP request library file (.RLB)
  - Links the IVP program

- If the run-time only kit is being installed, the postinstallation IVP links the IVP program.

The second phase of the postinstallation IVP runs a program that uses TDMS calls with a request library file and verifies the operation of the program. This program is the same for the full development and run-time only kits.

4.1 Phase 1 of the Postinstallation IVP

To run Phase 1 of the postinstallation IVP, follow these steps:

1. Log in to a privileged account, such as the SYSTEM account.
2. Set your default directory to the system test directory, as follows:

   ```
   $  SET DEFAULT SYS$COMMON:[SYSTEST]
   ```

3. Invoke the command procedure for the kit you are installing.
   - If you are installing the full development kit, type:

     ```
     $  @TDMSBLDIVP
     ```

     The TDMSBLDIVP.COM command procedure checks that TDMS works with the VMS operating systems and the CDD. It also creates the forms, records, requests, and request libraries needed for the IVP. It builds the IVP request library file and links the IVP program against the TDMS program interface.
   - If you are installing the run-time only kit, type:

     ```
     $  @TDMSRTOIVP
     ```

     The TDMSRTOIVP.COM command procedure links the IVP program against the TDMS program interface.
4. Answer the following question:

   ```
   Have you invoked the VAX TDMS system startup procedure [Y/N]?
   ```

   The TDMS system startup procedure installs TDMS as a known image. The TDMS installation procedure invokes the TDMS system startup procedure, TDMSTRTUP.COM, during the installation. Therefore, you would normally answer YES to this question. However, some situations may cause your system to be running without knowing that TDMS is installed. For example, if you chose not to modify your system startup command file to invoke the TDMS system startup procedure, the TDMS procedure is not performed when you boot your system. Therefore, if you boot your system, TDMS is no longer installed as a known image.

In this case, you would answer NO to this question. The IVP command procedure would then invoke the TDMS system startup procedure.

See Appendix A for sample Phase 1 postinstallation IVP sessions.

4.2 Phase 2 of the Postinstallation IVP

The procedure you follow for Phase 2 of the TDMS postinstallation IVP is the same for the full development and run-time only kits. During Phase 2, you run the postinstallation IVP program that calls TDMS to display forms and accept input. You must perform Phase 1 of the IVP before you run Phase 2.

Because TDMS applications run only on video terminals, you must run Phase 2 of the postinstallation IVP program on a VT100-, VT200-, or VT300-series terminal. You may also use terminals that are VT100-compatible. See the VAX TDMS Software Product Description for a complete list of the supported terminals.

During Phase 2 of the postinstallation IVP, you are asked to input data to forms. To allow you to input this data, the postinstallation IVP has defined function keys that allow you to move around forms, signal that input is complete, and get help. Table 4–1 shows what keys are defined for the postinstallation IVP application.

Table 4–1: IVP Function Keys

Key Name	Function
Tab	Moves the cursor to the next field.
Enter or Return	Completes processing for the current form.
Help (PF2 and F15)	Pressed once, displays a line of help information at the bottom of the screen. Pressed twice, provides additional information.
Backspace (F12)	Moves the cursor back to the previous field.
Linefeed (F13)	Deletes the contents of the current field.

NOTE

If the test does not run exactly as detailed here (for example, if the cursor does not tab correctly or the wrong form is displayed), run the postinstallation IVP again. If the problem still occurs, submit an SPR explaining which step failed and what message the postinstallation IVP displayed at the time.

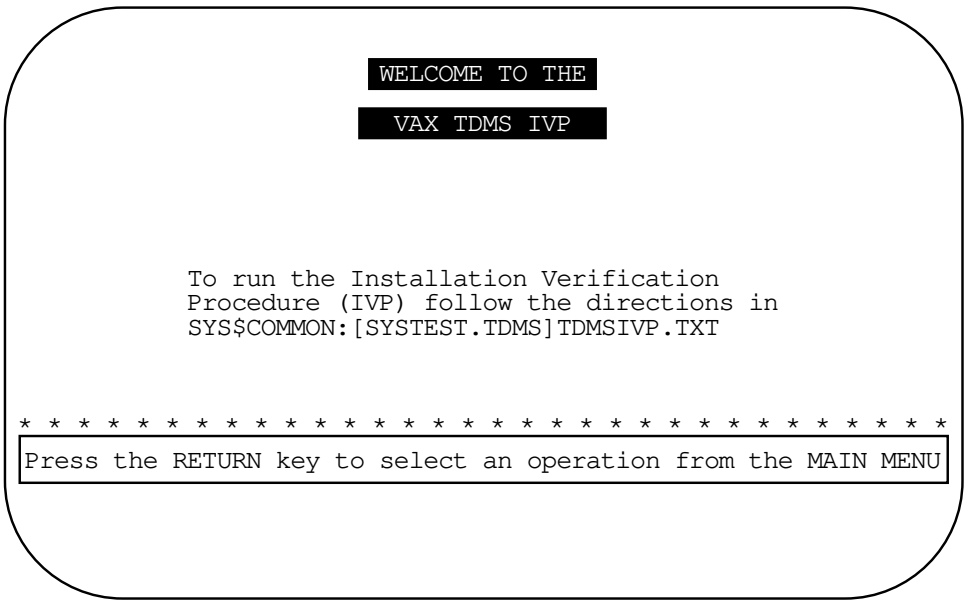
The following list describes how the postinstallation IVP program proceeds and what you should type to complete the test. Each numbered item names the form displayed at each step. To start the postinstallation IVP program, type:

```
$  SET TERMINAL/INQUIRE
$  SET DEFAULT SYS$COMMON:[SYSTEST.TDMS]
$  RUN TDMSIVP
```

1. IVP Initial form

   The IVP begins with an Initial form that introduces you to the TDMS IVP. The Initial form appears as shown in Figure 4–1.

Figure 4–1: IVP Initial Form



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The Initial form refers you to a file for information about running the postinstallation IVP. The file is:

SYS$COMMON:[SYSTEST.TDMS]TDMSIVP.TXT

The same information is contained in this chapter. You do not need to access that file as long as you are using this book.

Press the Return key to move to the Main Menu form.

2. Main Menu form

   The Main Menu form appears as shown in Figure 4–2.

Figure 4–2: Main Menu Form

```
                EMPLOYEE BASIC INFORMATION
                        MAIN MENU

      Select one of the following:


         1- ADD a new employee record
         2- DISPLAY an existing employee record
         3- CHANGE (update) an existing employee record
         4- DELETE an existing employee record
         5- EXIT application and return to DCL

            Enter your selection here: 1

        Enter an employee number here:

                      PRESS PF2 for HELP
```

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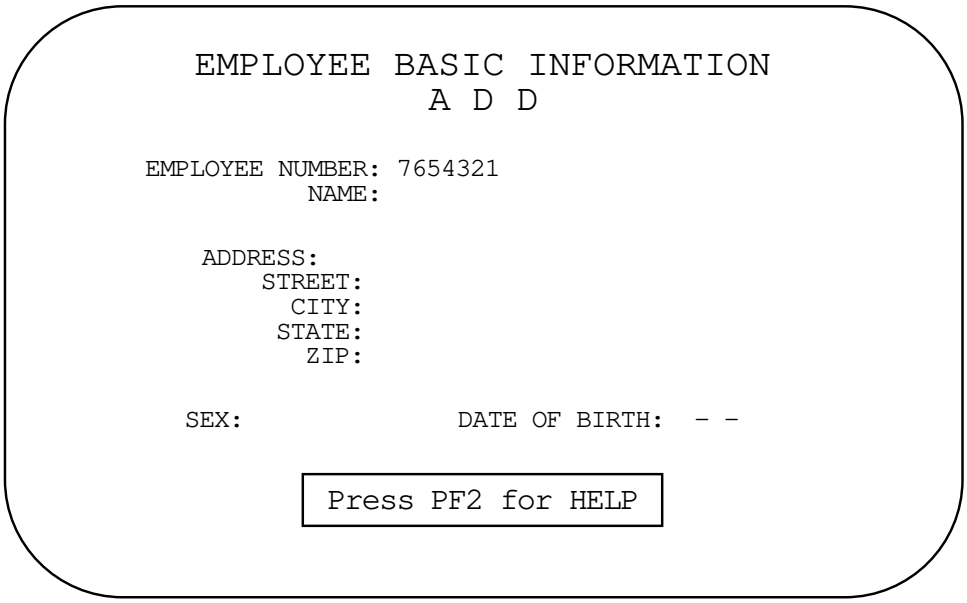
In this step of the procedure, the IVP tests the Add function. The cursor is at the selection number field. Press 1. The cursor moves to the employee number field. Type 7654321 and press the Return key.

The Add Employee form is displayed.

3. Add Employee form

   The Add Employee form appears as shown in Figure 4–3.

Figure 4–3: Add Employee Form



ZK–7093–GE

This step tests the Add function's ability to accept data. Enter the following information. (Items not followed by TAB indicate an automatic tab to the next field.)

```
        Joseph  TAB
             S
         Smith  TAB
11 Main Street  TAB
     Merrimack  TAB
            NH
         03054
             M
       27DEC64  Return
```

When you press the Return key, the Main Menu form is displayed.

4. Main Menu form

   This step tests the Display function. The cursor is at the selection number field. Type 2. The cursor moves to the employee number field. Type 7654321 and press the Return key. The Display Employee form appears.

5. Display Employee form

   This step displays the information you just entered. After reviewing the information, press the Return key. The Main Menu form is displayed.

6. Main Menu form

   This step tests the Change function. The cursor is at the selection number field. Press 3. The cursor moves to the employee number field. Type 7654321 and press the Return key. The Change Employee form is displayed.

7. Change Employee form

   This step tests the Change function's ability to accept new information and replace old information. Enter the following:

```
        TAB (Cursor moves to next field.)
        TAB (Cursor moves to next field.)
Stevens TAB
35 West Avenue Return
```

   When you press the Return key, the Main Menu form is displayed.

8. Main Menu form

   This step tests the Display function. The cursor is at the selection number field. Press 2. The cursor moves to the employee number field. Type 7654321 and press the Return key. The Display Employee form is displayed.

9. Display Employee form

   This step displays the new information you entered. After reviewing the information, press the Return key. The Main Menu form is displayed.

10. Main Menu form

    This step tests the Delete function. The cursor is at the selection number field. Press 4. The cursor moves to the employee number field. Type 7654321 and press the Return key. The Delete Employee form is displayed.

11. Delete Employee form

    This step tests the Delete function. Type Y and press the Return key. The Main Menu form is displayed.

12. Main Menu form

    This step checks that the Delete function worked properly. The cursor is at the selection number field. Press 2. The cursor moves to the employee number field. Type 7654321 and press the Return key. The Main Menu form is displayed along with the following error message:

    ```
    NO RECORD EXISTS WITH THAT NUMBER CHECK NUMBER AND TRY AGAIN
    ```

13. Main Menu form

    This step ends the test. The cursor is at the selection number field. Press 5. The cursor moves to the employee number field. Press the Return key. The DCL level prompt is displayed.

When you are finished with the IVP, you can log out.

Appendix A

Sample Installation Sessions

This appendix gives samples of the following sessions:

- Full development installation
- Full development postinstallation IVP, Phase 1
- Run-time only installation
- Run-time only postinstallation IVP, Phase 1

See Chapter 4 for information on running Phase 2 of the postinstallation IVP.

Example A–1: Full Development Sample Installation

```
$ SET DEF SYS$UPDATE
$ @VMSINSTAL

        VAX/VMS Software Product Installation Procedure V5.2


It is 13-NOV-1989 at 14:06.

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

* Are you satisfied with the backup of your system disk [YES]? YES
* Where will the distribution volumes be mounted: MUA0:

Enter the products to be processed from the first distribution volume set.

* Products: TDMSDEV019
* Enter installation options you wish to use (none): N

The following products will be processed:

  TDMSDEV V1.9

        Beginning installation of TDMSDEV V1.9 at 14:06
```

(continued on next page)

Example A–1 (Cont.): Full Development Sample Installation

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

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

Additional Release Notes Options:

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

* Select option [2]: 2
* Queue name [SYS$PRINT]: Return

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

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

        This installation procedure requires the following
    privileges:  CMEXEC, CMKRNL, OPER, SYSLCK, SYSPRV, SYSNAM,
    and  WORLD.  The  procedure  also requires the GLOBAL_DELETE
    (G) CDD privilege on the CDD$TOP node.

        There must be approximately 12000 free blocks on the disk
    where this kit is being installed.  The procedure requires
    that you have installed VAX CDD/Plus V4.1 or later. Your system
    must have VAX VMS V5.0 or later. You must also have an
    ENQLM of at least 100 locks.

    This installation requires 5 GBLSECTIONS and 208 GBLPAGES
    available (SYSGEN parameters) for TSSSHR.EXE. You do not
    need these extra GBLSECTIONS and GBLPAGES if TSSSHR.EXE has
    been installed previously.

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


        Product:      TDMS
        Producer:     DEC
        Version:      1.9
        Release Date: 01-JUL-1989

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

* Do you want to install the TDMS sample applications [NO]? YES

* Do you want to run the IVP after the installation [YES]? YES

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

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

    There are no more questions.  The installation takes
        approximately .5 hour on a stand-alone VAX 11/780.

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
```

(continued on next page)

Example A–1 (Cont.): Full Development Sample Installation

```
    Beginning installation of VAX TDMS V1.9-0 development option.

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

    Beginning installation of VAX TDMS V1.9-0 base software.

    Building TSSSHR.EXE

    Building RDU.EXE

    Building FDU.EXE

    Building help libraries

    Installation of VAX TDMS V1.9-0
        base software successfully completed.

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

    Beginning installation of
        VAX TDMS V1.9-0 sample applications.

    Installation of VAX TDMS V1.9-0
        sample applications successfully completed.

%VMSINSTAL-I-SYSDIR, This product creates system disk directory  VMI$ROOT:[SYSHLP.EXAMPLES.TDMS].

%VMSINSTAL-I-SYSDIR, This product creates system disk directory  VMI$ROOT:[SYSTEST.TDMS].

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

    The TDMS postinstallation IVP (Installation Verification
    Procedure) has been provided and can be run after the
    installation is complete.  Information on how to run the
    postinstallation IVP can be found in:

              SYS$COMMON:[SYSTEST.TDMS]TDMSIVP.TXT

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

                       REMINDER

    Be sure to add a  line  to  your  site-specific
    system startup command procedure  (SYS$MANAGER:
    SYSTARTUP.COM) to   invoke  the  VAX TDMS system
    startup file (SYS$COMMON:[SYSMGR]TDMSTRTUP.COM).

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

    VAX TDMS V1.9-0 installation procedure
        successfully completed.

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

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

Executing IVP for: VAX TDMS V1.9-0

Testing FDU....
    Test completed successfully.

Testing RDU....
    Test completed successfully.
```

(continued on next page)

Example A–1 (Cont.): Full Development Sample Installation

```
Testing TSSSHR....
    Test completed successfully.

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

    VAX TDMS V1.9-0

    Development

    IVP COMPLETED SUCCESSFULLY

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

IVP completed for: VAX TDMS V1.9-0

Installation of TDMSDEV V1.9 completed at 14:13

VMSINSTAL procedure done at 14:13
```

Example A–2: Full Development Sample Postinstallation IVP, Phase 1

```
$  SET DEFAULT SYS$COMMON:[SYSTEST]
$  @TDMSBLDIVP

Beginning VAX TDMS V1.9-0 IVP Phase 1.

In  order to  run  the  VAX  TDMS   Installation   Verification  Procedure,
the  VAX  TDMS  system  startup procedure must have been run  successfully.
This  is  normally done at system boot time, but may not have been done yet
if you have just installed VAX TDMS.

If you have not invoked SYS$COMMON:[SYSMGR]TDMSTRTUP.COM yet, this procedure
will do it for you.

Have you invoked the VAX TDMS system startup procedure [Y/N]? yes

Creating temporary IVP CDD node.

Inserting IVP forms into CDD.

Inserting IVP record definitions into CDD.

Inserting IVP requests into CDD.

Building IVP request library.

Deleting temporary IVP CDD node.

Linking IVP program.
```

(continued on next page)

Example A–2 (Cont.): Full Development Sample Postinstallation IVP, Phase 1

```
                          NOTE

        Do not forget to complete the IVP  by
        manually running the TDMSIVP  program.
        See SYS$COMMON:[SYSTEST.TDMS]TDMSIVP.TXT
        for details.

VAX TDMS V1.9-0 IVP Phase 1 successfully completed.
$
```

Example A–3: Run-Time Only Sample Installation

```
$ SET DEF SYS$UPDATE
$ @VMSINSTAL

        VAX/VMS Software Product Installation Procedure V5.2


It is 16-NOV-1989 at 12:22.

Enter a question mark (?) at any time for help.
* Are you satisfied with the backup of your system disk [YES]? Y
* Where will the distribution volumes be mounted: MUA0:

Enter the products to be processed from the first distribution volume set.
* Products: TDMSRTO019
* Enter installation options you wish to use (none): N
The following products will be processed:
  TDMSRTO V1.9

        Beginning installation of TDMSRTO V1.9 at 12:23

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

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

Additional Release Notes Options:

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

* Select option [2]: 2
* Queue name [SYS$PRINT]: Return

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

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

(continued on next page)

Example A–3 (Cont.): Run-Time Only Sample Installation

```
    This installation procedure requires the following
    privileges:  CMEXEC, CMKRNL, OPER, SYSLCK, SYSPRV, SYSNAM,
    and  WORLD. There must be approximately 3000 free blocks on
    the disk where this kit is being installed. Your system must
    have VAX VMS V5.0 or later.

    This installation requires 5 GBLSECTIONS and 208 GBLPAGES
    available (SYSGEN parameters) for TSSSHR.EXE. You do not
    need these extra GBLSECTIONS and GBLPAGES if TSSSHR.EXE has
    been installed previously.

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


        Product:      TDMS-RT
        Producer:     DEC
        Version:      1.9
        Release Date: 01-JUL-1989

* Does this product have an authorization key registered and loaded? YES
* Do you want to run the IVP after the installation [YES]? YES
* Do you want to purge files replaced by this installation [YES]? YES
%VMSINSTAL-I-RESTORE, Restoring product save set B ...

    There are no more questions.  The installation takes
    approximately 10 minutes on a stand-alone VAX 11/780.

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

    Beginning installation of VAX TDMS V1.9-0 RTO option

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

    Beginning installation of VAX TDMS V1.9-0 RTO base software.

    Building TSSSHR.EXE

    Installation of VAX TDMS V1.9-0 RTO base software
        successfully completed.

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

    The TDMS postinstallation IVP (Installation Verification
    Procedure) has been provided and can be run after the
    installation is complete.  Information on how to run the
    postinstallation IVP can be found in:

              SYS$COMMON:[SYSTEST.TDMS]TDMSIVP.TXT

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

                      REMINDER

    Be sure to add a  line  to  your  site-specific
    system startup command procedure  (SYS$MANAGER:
    SYSTARTUP.COM) to   invoke  the  VAX TDMS system
    startup file (SYS$COMMON:[SYSMGR]TDMSTRTUP.COM).

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

    VAX TDMS V1.9-0 RTO installation procedure
        successfully completed.
```

(continued on next page)

Example A–3 (Cont.): Run-Time Only Sample Installation

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

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

Executing IVP for: VAX TDMS V1.9-0

Testing TSSSHR...
    Test completed successfully.

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

    VAX TDMS V1.9-0

    Run Time Only

    IVP COMPLETED SUCCESSFULLY

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

IVP completed for: VAX TDMS V1.9-0

        Installation of TDMSRTO V1.9 completed at 12:29
```

Example A–4: Run-Time Only Sample Postinstallation IVP, Phase 1

```
$  SET DEFAULT SYS$COMMON:[SYSTEST]
$  @TDMSRTOIVP

Beginning VAX TDMS V1.9-0 RTO IVP Phase 1.


In  order to  run  the  VAX  TDMS   Installation   Verification  Procedure,
the  VAX  TDMS  system  startup procedure must have been run  successfully.
This  is  normally done at system boot time, but may not have been done yet
if you have just installed VAX TDMS.

If you have not invoked SYS$COMMON:[SYSMGR]TDMSTRTUP.COM yet, this procedure
will do it for you.

Have you invoked the VAX TDMS system startup procedure [Y/N]? yes

Linking IVP program.
```

(continued on next page)

Example A–4 (Cont.): Run-Time Only Sample Postinstallation IVP, Phase 1

```
                          NOTE

        Do not forget to complete the IVP  by
        manually running the TDMSIVP  program.
        See SYS$COMMON:[SYSTEST.TDMS]TDMSIVP.TXT
        for details.


VAX TDMS V1.9-0 RTO IVP Phase 1 successfully completed.
$
```

Appendix B

Files Installed on Your System

During installation, several files are copied to your system. The installation procedure generates a file that contains the specifications for the copied files. The specification of that file is as follows:

SYS$COMMON:[SYSEXE]TDMS019_FILES.DAT

The files that are added to the system or modified but are not listed in that file are listed in the sections that follow.

B.1 Release Notes File

The release notes file for TDMS has the following specification:

SYS$HELP:TDMS019.RELEASE_NOTES

B.2 Updated System Files

The TDMS installation updates the following VMS system files for the full development and run-time only kits:

- SYS$LIBRARY:IMAGELIB.OLB

  IMAGELIB.OLB is the system-wide shareable image symbol table library that the VAX Linker uses to resolve external references to symbols defined in shareable images. The TDMS program interface shareable image (SYS$LIBRARY:TSSSHR.EXE) is inserted into this library. When you link programs that use TDMS calls, the Linker automatically resolves the TDMS symbols you use.

- SYS$HELP:HELPLIB.HLB

  A new help topic, TDMS, is inserted in the system-wide default help library. Type HELP TDMS to read this new help message.

B.3 Postinstallation IVP Files

Certain files are added to your system by Phase 1 of the postinstallation Installation Verification Procedure (IVP). The files are located in the following directory:

SYS$COMMON:[SYSTEST.TDMS]

The following files are available with the full development kit:

TDMSIVP.RLB—IVP request library file
TDMSIVP.EXE—IVP program
TDMSIVP.DAT—IVP data file

The following files are available with the run-time only kit:

TDMSIVP.EXE—IVP program
TDMSIVP.DAT—IVP data file