DECwindows DECnet SNA 3270 Terminal Emulator for OpenVMS

Installation

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This manual describes how to install the DECwindows DECnet SNA 3270 Terminal Emulator for OpenVMS software in a DECwindows Motif environment. It also explains how to read the online release notes during or after product installation.

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Operating System and Version:	OpenVMS V5.4 or later OpenVMS AXP V1.5 (with at least DECwindows Motif V1.0 VAX or V1.1 AXP)
Software Version:	DECwindows DECnet SNA 3270 Terminal Emulator for OpenVMS, V2.0

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Preface

The DECwindows™ DECnet SNA 3270 Terminal Emulator for OpenVMS™ is a software product that allows users to communicate interactively with programs running on an IBM® host computer. This communication takes place through one of Digital Equipment Corporation's interconnect systems.

Manual Objectives

This document describes how to install the Terminal Emulator (TE) product on a VAX™, or AXP™ computer running the OpenVMS operating system.

Intended Audience

This document is intended primarily for system managers or anyone responsible for installing and maintaining application software.

Keep this document with your distribution kit. You will need it to install maintenance updates or to reinstall the software.

For more information on installing the TE software on OpenVMS systems, refer to the installation/operations guide for your particular processor.

Structure

This manual describes the installation procedure step by step. The system prompts you to answer questions and to perform tasks, such as changing volumes, and waits for you to tell it to continue.

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 give the default response for a particular question, simply press Return.

Conventions

The following conventions are used in this guide:

`Special Type`	Examples show user input and system output in black monospaced type.
mouse	The term *mouse* is used to refer to any pointing device, such as a mouse, a puck, or a stylus.
MB1, MB2, MB3	For right-handed persons, MB1 indicates the left mouse button, MB2 indicates the middle mouse button, and MB3 indicates the right mouse button. (The buttons can be redefined by the user.)
Ctrl/x	A sequence such as Ctrl/x indicates that you must hold down the key labeled Ctrl while you press another key or a pointing device button.
PF1 + x	A sequence such as PF1 + x indicates that you must first press and release the key labeled PF1, then press and release another key or a pointing device button.
Return	A key name is shown enclosed to indicate that you press a key on the keyboard.
Ext + *x*	The expression Ext + *x* indicates a special combination of two keys. First press the Ext key, then press the appropriate character key.
KP	KP refers to the numeric keypad on your keyboard. For example, KP_9 means key 9 on your numeric keypad.
( )	In format descriptions, parentheses indicate that if you choose more than one option, you must enclose the choices in parentheses.
[ ]	In format descriptions, brackets indicate that whatever is enclosed is optional; you can select none, one, or all of the choices.
{ }	In format descriptions, braces surround a required choice of options; you must choose one of the options listed.
UPPERCASE TEXT	Uppercase text is used for OpenVMS commands.
italic text	Italic text represents a variable.

Acronyms

The following acronyms appear in this manual:

CICS	Customer Information Control System
LMF	License Management Facility
PAK	Product Authorization Key
SNA	IBM's Systems Network Architecture
SPD	Software Product Description
TE	DECwindows DECnet SNA 3270 Terminal Emulator for OpenVMS software

Associated Documents

The following Digital document should be available for reference:

- *DECwindows DECnet SNA 3270 Terminal Emulator Use*

You should also have the documents for your specific interconnect system.

See the following documents for more information about the IBM 3270 system:

- *IBM 3179-G/3192-G Color Graphics Display Station Description*, Order No. GA18-2589-2
- *IBM 3270 Information Display System*, Order No. GA23-0059-5
- *IBM 3270 Information Display System: Operator's Guide*, Order No. GA27-2742-6
- *IBM 3270 Information Display System Data Stream Programmer's Reference*, Order No. GA23-0059-4
- *IBM 3270 Information Display System 3274 Control Unit Description and Programmer's Guide*, Order No. GA23-0061-2
- *IBM 3270 Information Display System: 3278 Display Station Operator's Guide*, Order No. GA27-2890-4
- *Systems Network Architecture—Introduction to Sessions Between Logical Units*, Order No. GC20-1869
- *Systems Network Architecture—Sessions Betweeen Logical Units*, Order No. GC20-1868-2
- *Systems Network Architecture Concepts and Products*, Order No. GC30-3072-3
- *Systems Network Architecture Technical Overview*, Order No. GC30-3073-2

- *SAS/GRAPH Guide to Hardware Interfaces, Version 5 Edition*
- *SAS/GRAPH User's Guide, Version 5 Edition*
- *GDDM General Information, Order No. GC33-0319-0*
- *GDDM Installation and System Management, Order No. SC33-0321, 0322, 0323-3*
- *GDDM Base Programming Reference, Order No. SC33-0332-0*
- *GDDM Application Programming Guide, Order No. SC33-0337-0*

See the following document for more information about SNA problem determination:

- *SNA System Problem Determination Guide, IBM Order No. G320-6016*

1
Preparing for Installation

Before you install the DECwindows DECnet SNA 3270 Terminal Emulator for OpenVMS software, you must prepare your system, its communications components, and the remote system to ensure proper operation of the software.

This chapter describes the preparations and requirements necessary for installing the Terminal Emulator (TE) product. The actual installation is covered in Chapter 2.

Your bill of materials (BOM) specifies the number and contents of your media. Check the contents of your kit against this information. If your kit is damaged or if you find that parts are missing, contact your Digital representative before continuing the installation.

1.1 Required Operating System Components

The TE requires the following OpenVMS Versions to install:

For a VAX system—OpenVMS VAX Version 5.4 or later

For an AXP system—OpenVMS AXP Version 1.5 or later

1.2 Prerequisite Software Requirements

Version 2.0 of the TE requires OpenVMS VAX Version 5.4 or later, or OpenVMS AXP Version 1.5 or later (with DECwindows OSF/Motif Version 1.0 or later), including the corresponding version of DECnet. The TE software also requires one of the following system configurations for proper operation.

- The DECnet SNA Gateway-ST, Gateway-CT, or DEC SNA Domain Gateway-CT, must be part of your DECnet network

  or

- the VMS/SNA (on OpenVMS VAX systems only) software must be installed on the node on which you are planning to install the TE software.

For more information on these products, see the following documentation:

- *DECnet SNA Gateway-CT and Gateway-ST Management*
- *DECnet SNA Gateway-ST Installation*
- *DECnet SNA Gateway-CT Installation*
- *DEC SNA Domain Gateway-CT Installation*
- *VMS/SNA Installation*

Note

You must install DECwindows Motif window manager software (at lease DECwindows OSF/Motif V1.0 VAX or V1.1 AXP) before you run the TE software.

1.2.1 Accessing Online Release Notes

The TE provides online release notes which you should read before installing the product. The release notes contain the latest product enhancements and may include changes to the installation procedure. If you executed the VMSINSTAL command procedure with the OPTIONS N parameter, you are asked if you want to display or print release notes during the installation procedure.

After you have installed the product, you can read the release notes by using the TYPE command or by printing SYS$HELP:SNADWTE020.RELEASE_NOTES.

1.3 OpenVMS License Management Facility

The license registration information is contained in the Product Authorization Key (PAK) shipped with the TE software. The PAK is a paper certificate that contains information about the license that enables you to run a particular piece of software. Digital Equipment Corporation recommends that you register your TE license before you perform the installation. Once you perform the license registration and have loaded an authorization key, you will be able to run the TE software.

To register a license, begin by logging in to the system manager's account, SYSTEM. You then have a choice of two ways to perform the registration:

- Execute the SYS$UPDATE:VMSLICENSE.COM command procedure. When it prompts you for information, respond with the information that is on your Product Authorization Key (PAK) form.
- 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 OpenVMS documentation set.

1.4 Installation Procedure Requirements

The following sections detail the various requirements for installing TE software.

The installation should take 5 to 10 minutes, depending on the type of media and your system configuration. Before installing the software, you must have the following privileges:

- SETPRV privilege, or CMKRNL, WORLD, and SYSPRV privileges. Note that VMSINSTAL disables BYPASS privilege at the start of the installation.

For VAX systems, you must have the following resources:

- For client systems: a minimum of 5148 blocks of free disk space during installation, and 1749 free blocks after installation.
- For server systems: a minimum of 5148 blocks of free disk space during installation, and 147 free blocks after installation.
- A minimum of 3 free global sections at installation.
- A minimum of 767 free global pages.

For AXP systems, you must have the following resources:

- A minimum of 5148 blocks of free disk space for installation.
- A minimum of 2664 blocks of free disk space for server systems, or 183 for client systems, after installation.
- A minimum of 1473 global pagelets.
- A minimum of 2 free global sections at installation.

1.4.1 Checking Parameter Values on Your System

You must have enough global pages and global sections free on your system to install and run the product. This may mean increasing the values for global pages (GBLPAGES) and global sections (GBLSECTIONS) on your system. Begin by referring to Section 1.4 to find the minimum values for GBLPAGES and GBLSECTIONS required to run the TE product on your system. Next, find out how many global pages and global sections are available on your system. To do this, proceed as follows:

1. First, run the OpenVMS Install Utility (INSTALL) as shown.

   ```
   $ 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. Here is a sample display:

   ```
                   Summary of Local Memory Global Sections

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

2. Use this summary information and the information given in Section 1.4 to determine whether it is necessary to increase the value of the GBLPAGES parameter. In the sample summary shown here, the difference between the number of pages used (22,580) and unused (3,420) greatly exceeds the number needed to run the TE product (a minimum of 650, according to Section 1.4). Thus, in this case, you would not need to adjust the value of GBLPAGES.
3. Now run the SYSGEN utility to determine the number of global sections that have been allocated. Note that the sample summary shows that 258 global sections are already in use by the system.

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

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

The display shows that 512 global sections exist on the system, of which 258 are in use. Subtracting 258 from 512 reveals that the number of global sections available (254) exceeds the number required by the TE product (a minimum of 3 for VAX, and 2 for AXP, according to Section 1.4). In this case, you would not need to adjust the value of GBLSECTIONS.

1.4.2 Increasing Your System Parameter Values

You can use the AUTOGEN command procedure to increase system parameters values. This procedure automatically adjusts values for parameters associated with those you reset manually. To change system parameters with AUTOGEN, edit this file:

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

For example, to set a minimum value for the GBLSECTIONS system parameter, add this line to the file:

```
MIN_GBLSECTIONS = 1024
```

Or for incremental SYSGEN parameters:

```
ADD_GBLPAGES = 2000
```

After updating this file, run the AUTOGEN procedure to recalculate your system parameters. Do this by entering this command at the DCL prompt:

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

AUTOGEN performs an automatic system shutdown and reboots when it has finished. Rebooting your system makes the new parameter values active. Also, on OpenVMS Version 5.4 systems you may wish to add the [NO]FEEDBACK parameter to the AUTOGEN command line. For more information about using AUTOGEN, see the instructions on modifying system parameters in the OpenVMS documentation on System Management and Operations.

1.4.3 Backing Up Your System Disk

At the beginning of the installation, VMSINSTAL asks if you have backed up your system disk. Digital recommends that you do a system disk backup before installing any software 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 section on the Backup Utility in the OpenVMS documentation set.

1.4.4 License Management Utility Requirements

In order to run the Installation Verification Procedure, you need to register and load your license for the TE before you start the installation.

Refer to the OpenVMS documentation on the License Management Utility for information about registering your license.

2
Installing the Product

This chapter describes how to install the DECwindows DECnet SNA 3270 Terminal Emulator for OpenVMS (TE) software using the VMSINSTAL procedure. Throughout this procedure, default values appear in brackets. To abort the procedure at any time, press Ctrl/Y. This action causes the installation procedure to delete all files it has created up to that point and to return to DCL.

Each question in the VMSINSTAL procedure is marked with an asterisk (*). Some questions show the default response in brackets, for example [YES]. To choose the default response for any question, simply press Return.

2.1 Check Requirements Before Beginning Installation

You may have problems installing the product if you have not met one of the following requirements. Before beginning the installation, be sure that you have:

- the correct operating system version
- the correct prerequisite software version
- sufficient process quotas
- sufficient system parameter values

In addition, check to see that:

- the OpenVMS help library is available for use
- the product is properly licensed

2.2 Run the VMSINSTAL Procedure

The TE installation process takes from 5 to 10 minutes to complete. It consists of a series of questions and informational messages. If desired, you can produce a copy of the installation procedure by using this command:

```
$ SET HOST 0/LOG=file-name
```

where *file-name* is the name of the file in which you wish to store the installation procedure log information. (If you do not specify a file name, the system creates a file called SETHOST.LOG.) After completing the installation, you can log off from the current session and print the file that contains the log of the installation procedure.

Begin the installation

To start the installation, execute the VMSINSTAL command procedure from a privileged account, such as the SYSTEM account. Use the following command to start VMSINSTAL:

```
$ @SYS$UPDATE:VMSINSTAL SNADWTE020 device-name OPTIONS N
```

where

SNADWTE020	identifies the TE software.
device-name	is the name of the device on which you will mount the media.
OPTIONS N	is an optional parameter that indicates you want to be prompted to display or print the release notes.

The following example displays the command to invoke VMSINSTAL to install the product from tape drive MKA500. This example uses the OPTIONS N parameter for printing or displaying release notes.

```
$ @SYS$UPDATE:VMSINSTAL SNADWTE020 MKA500: OPTIONS N

      VAX/VMS Software Product Installation Procedure V5.4

It is 14-APR-1992 at 14:50.

Enter a question mark (?) at any time for help.
%VMSINSTAL-W-NOTSYSTEM, You are not logged in
to the SYSTEM account.
%VMSINSTAL-W-ACTIVE, The following processes are still active:
        Will Scarlet
        DESMOND
        _FTA10:
* Do you want to continue anyway [NO]?
```

If you do not supply either the product name or the device name, VMSINSTAL prompts you for this information later in the installation procedure. VMSINSTAL also prompts you for any options you want to use with the installation.

Back up your system disk

VMSINSTAL now asks if you have made a backup copy of your system disk. You should always back up your system disk before performing an installation.

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

If not satisfied with the backup of your system disk, enter NO to discontinue the installation. You can restart the installation after you back up your system disk.

Mount the media

Now mount the first distribution volume. These three prompts appear if you did not specify a device when invoking VMSINSTAL:

```
* Where will the distribution volumes be mounted?:

Enter the products to be processed from the first distribution
volume set.
* Products:
* Enter the installation options you wish to use (none):
```

The procedure continues:

```
The following products will be processed:

  SNADWTE V2.0

        Beginning installation of SNADWTE V2.0 at 14:52

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

Choose a release notes option

If you specified OPTIONS N when invoking VMSINSTAL, the procedure specifies four options for reviewing the release notes:

```
Release Notes Options:

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

* Select option [2]:
```

Selecting option 1 displays the release notes on your terminal. You can terminate the display at any time by pressing Ctrl/C.

Option 2 prompts you for the name of the print queue to which you want to send the file:

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

Either type a queue name or press Return to send the file to SYS$PRINT.

Option 3 displays the release notes on the terminal and prompts you for a queue name for the printed version.

Option 4 allows you to continue the installation without displaying or printing the release notes.

The procedure now prompts you to continue the installation. Enter YES to continue, or NO to terminate the installation.

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

The release notes are located in SYS$HELP.

Choose components to install

The TE installation kit contains two components: TE software and workstation fonts. At this point, you have to decide whether to install one or both of them.

```
        DECwindows DECnet SNA 3270 Terminal Emulator for OpenVMS, V2.0
                        Installation Procedure

This DECwindows DECnet SNA 3270 TE installation includes both
3270 TE software and workstation font files. You can choose to
install one or both of these on this OpenVMS node.  Note that the
video font files are required on all workstations where the 3270
TE is to be displayed.

* Do you want to install the entire kit [YES]?
```

Answer YES to install the entire kit. If you answer NO, the procedure asks these two questions:

```
* Do you want to install the 3270 TE software [NO]?

* Do you want to install the workstation fonts [NO]?
```

Answer YES or NO to these questions (the default answer for each is NO), as your needs dictate. If you answer NO to all three of these questions, the procedure asks:

```
* Terminate the installation [YES]?
```

Answering NO to this question will give you the opportunity to respond again to each of the preceding three questions.

Register your product license

The procedure now displays license information specific to the product and asks if you have registered and loaded your product authorization key.

```
Product:          DW-SNA-3270-TE-VMS
Producer:         DEC
Version:          2.0
Release Date:     14-APR-1992

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

Unless an authorization key has been registered and loaded, you will not be able to use the product. If this is the case, you must answer NO to this question; otherwise, answer YES.

Want to run the IVP?

The next question asks whether you want to run the IVP during the installation. The banner that follows informs you that you must designate a node for the TE's display. *Be sure that this node has proper security.* Otherwise the TE will not be able to display on it and the IVP will fail.

Note that the procedure also gives you the option to purge the files installed with an earlier version of the product.

```
* Do you want to run the IVP as part of the installation [Yes]?

      ************************************************
      * Running the IVP causes the TE to display on a   *
      * node you designate.  This node must be running  *
      * DECwindows and its security must be set up to   *
      * allow the TE to display on it.                  *
      ************************************************

* What transport do you wish to use to display the TE?:
    Enter D for DECnet or T for TCP/IP [D]:
    What is the node to use as a display for the TE: abbess

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

    All questions have been asked, installation continuing ...
```

Scan informational messages

The procedure now displays messages pertaining to the progress of the installation. If the installation procedure has been successful so far, the procedure moves the new or modified files to their target directories, and updates help files and DCL tables.

```
23 fonts loaded
Creating sys$common:[sysfont.decw.user_75dpi]DECW$FONT_DIRECTORY.DAT
11 fonts loaded
Creating sys$common:[sysfont.decw.user_100dpi]DECW$FONT_DIRECTORY.DAT
```

The next messages pertain to the product font files, and to the need to modify your system startup procedure so that it installs the TE with each reboot. For information on copying font files to other servers after they are installed, see Section 3.1.

Note

The workstation fonts *must be installed* on any workstation or server on which you intend to run the product.

```
Product font files have been moved to the
DECwindows font directories.

You have installed the TE product as a shareable image.  To
install the image each time the system reboots, add this line to
your system startup procedure:

         $ @SYS$STARTUP:SNADWTE$STARTUP

If you are installing the product on a cluster, be sure to add
this command to the system startup procedure on each cluster node.
```

The installation procedure next displays the following messages:

```
The IVP for this product, SNADWTE$IVP.COM, can be found in
the SYS$TEST directory.
%VMSINSTAL-I-MOVEFILES, files will now be moved to their target
directories...
```

Running the IVP during the installation

If you chose to run the IVP as part of the installation procedure, VMSINSTAL runs it now. Running the IVP starts the TE product and displays it on the node you designated earlier in this procedure. The next group of messages pertain to the IVP. When the IVP is successful, you will see the dialog box shown in Figure 2–1.

```
      Starting DECwindows DECnet SNA 3270 TE for OpenVMS, V2.0 IVP

Starting the DECwindows DECnet SNA 3270 TE, V2.0
After the dialog box appears, click on the exit button to quit.
```

Clicking on the Exit button in the dialog box quits the TE session started by the IVP. A success message follows, together with a reminder to shut down your current session and bring up a new session to access the product's fonts.

```
     DECwindows DECnet SNA 3270 TE for OpenVMS, V2.0 IVP completed successfully


              ************************************************
              *  You must end the current session and start a    *
              *  new session to access the product's fonts.  To  *
              *  do this, choose End Session from the Session    *
              *  pulldown menu of your Session Manager window.   *
              *  Then log in and invoke the TE.                  *
              ************************************************

      Installation of SNADWTE V2.0 completed at 14:55
```

Note that the procedure asks you if there are any more products you want to install. If not, type EXIT and press Return.

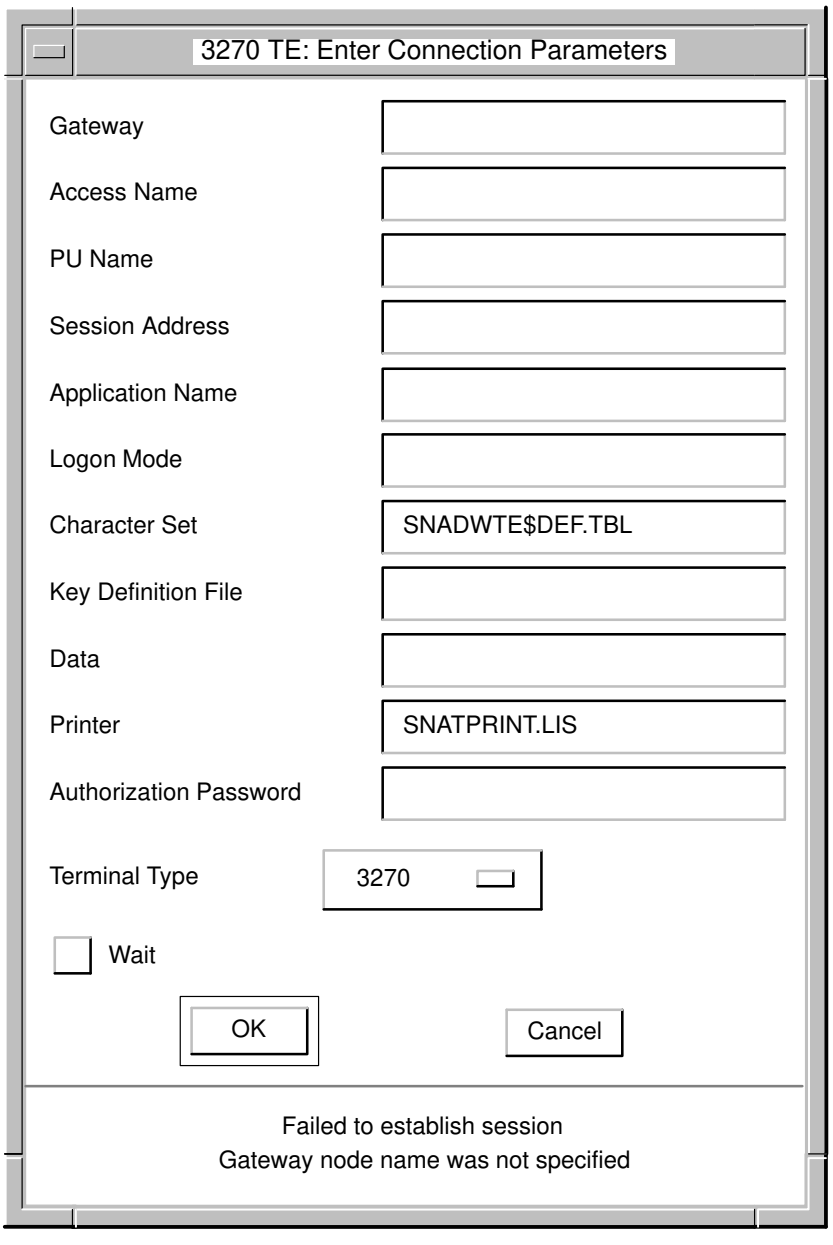
```
Enter the products to be processed from the next distribution
volume set.
* Products: EXIT

   VMSINSTAL procedure done at 14:55
```

The installation of the TE is now complete, and you can log out of the privileged account:

```
$ LOGOUT
SYSTEM     logged out at 14-APR-1992 14:55
```

Figure 2–1 Dialog Box Produced by Running the IVP



If the IVP fails

If the IVP fails, the procedure displays these messages:

```
SNADWTE V2.0 Installation Verification Procedure failed.

%VMSINSTAL-E-INSFAIL, The installation of SNADWTE V2.0 has failed.
```

In case of failure, refer to Section 2.1 for a list of conditions that may prevent the IVP from completing successfully.

Note

VMSINSTAL deletes or changes entries in the process symbol table 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 then log in again.

2.2.1 Read the Product's Release Notes

After the installation, you can enter the following command to review the release notes (file) through the help facility:

```
$ HELP SNA_DWTE RELEASE_NOTES
```

2.2.2 Running the IVP After Installation

Digital recommends that you run the IVP during installation, but you may also want to run the procedure after a system failure to determine whether the product has been affected. You may also want to run the IVP to verify that the specific font files necessary to run the product reside on a server node. You can run the IVP after installation by issuing this command from any account:

```
$ @sys$test:snadwte$ivp
```

2.2.3 Files Added to your System

Installing the product adds a number of new files to your system. Appendix B lists these files and their locations.

3
After Installation

After installing the TE, you may need to perform some or all of the following tasks:

- Copy font files to servers
- Copy TE fonts to Digital X Terminals
- Load alternate keyboard maps and function definitions
- Edit the system startup file
- Run the Installation Verification Procedure (IVP)
- Reboot the system
- Set user account quotas
- Install the TE for use on a VAXcluster

3.1 Copying Font Files to Servers

In all DECwindows applications, the client is the node that contains the executable image; the server is the node (workstation) that displays the executable image. In many cases, the client and server are the same node.

The TE distribution kit contains the font files (see Table 3–1) that enable the product to be displayed on OpenVMS and ULTRIX™ servers.

Table 3–1 Font Files for OpenVMS and ULTRIX Servers

OpenVMS VAX Fonts	ULTRIX and OpenVMS AXP Fonts
TERM821_BOLD_16WS.DECW$FONT	TERM821_BOLD_16WS.PCF
TERM821_BOLD_21WS.DECW$FONT	TERM821_BOLD_21WS.PCF
TERM821_NORMAL_16WS.DECW$FONT	TERM821_NORMAL_16WS.PCF
TERM821_NORMAL_21WS.DECW$FONT	TERM821_NORMAL_21WS.PCF

3.1.1 Using the Font Copy Utility

The Font Copy Utility makes it easy to copy necessary font files to X terminals you want to function as servers for the TE. To use this utility you must first install the necessary font files on the TE client node. Once you have done this, start the utility by entering this command from a session on the TE client:

```
$ @SYS$COMMON:[SNADWTE$FONTS]SNADWTE$COPY_FONTS
```

The remainder of this section consists of a sample run of the utility, showing the prompts and messages you will see when copying font files to each of server the TE supports.

Note

This sample shows the text you may see if copying fonts to each supported type of server. You may copy fonts to only one or two of the supported servers; hence, the text you see when running the utility may differ from that shown here.

```
        DECwindows DECnet SNA 3270 TE for OpenVMS, V2.0
                   Font Copy Utility

************************************************************
*                                                          *
*  This utility automates copying of appropriate font      *
*  files from your OpenVMS client node to OpenVMS, ULTRIX, *
*  MS-DOS or Apple Macintosh systems that will function as *
*  servers for the TE software.                            *
*                                                          *
*            Answer the questions that follow.             *
*             Press Return after each answer.              *
*                                                          *
************************************************************

What type of system do you wish to provide with font files?

 1.  OpenVMS VAX
 2.  OpenVMS AXP
 3.  ULTRIX
 4.  MS-DOS
 5.  Apple Macintosh
 6.  Exit font copy utility

Enter your choice and press Return: 1

   Enter the node name of your OpenVMS VAX system:
   Enter the system password:
```

```
        DECwindows 3270 TE server font files for OpenVMS VAX have
        been successfully copied.  Before you can use these
        fonts, you must rebuild the font directory files.
        Do this by entering this command:

                @SYS$UPDATE:DECW$MKFONTDIR

        You must also end your current DECwindows session and
        start a new one to use these fonts.

What type of system do you wish to provide with font files?

 1.  OpenVMS VAX
 2.  OpenVMS AXP
 3.  ULTRIX
 4.  MS-DOS
 5.  Apple Macintosh
 6.  Exit font copy utility

Enter your choice and press Return: 2

   Enter the node name of your OpenVMS AXP system:
   Enter the system password:

        DECwindows 3270 TE server font files for OpenVMS AXP have
        been successfully copied.  Before you can use these
        fonts, you must rebuild the font directory files.
        Do this by entering this command:

                @SYS$UPDATE:DECW$MKFONTDIR

        You must also end your current DECwindows session and
        start a new one to use these fonts.

What type of system do you wish to provide with font files?

 1.  OpenVMS VAX
 2.  OpenVMS AXP
 3.  ULTRIX
 4.  MS-DOS
 5.  Apple Macintosh
 6.  Exit font copy utility

Enter your choice and press Return: 3

   Enter the node name of your ULTRIX system: ultrix
   Enter the root password:

        DECwindows 3270 TE server font files for ULTRIX have
        been successfully copied.  Before you can use these
        fonts, you must recreate and reread the font database.
        Do this by entering these commands:

              % dxmkfontdir [directory-names]
              % xset fp rehash
```

```
What type of system do you wish to provide with font files?

 1.  OpenVMS VAX
 2.  OpenVMS AXP
 3.  ULTRIX
 4.  MS-DOS
 5.  Apple Macintosh
 6.  Exit font copy utility

Enter your choice and press Return: 4

   Enter the node name of your MS-DOS system: dos
   Enter the directory specification for the TE fonts: c:\myfonts

        DECwindows 3270 TE server font source files for
        PC DECwindows have been successfully copied.  You must
        compile these fonts before you can use them.  Refer to
        your PC DECwindows documentation to see how to compile fonts.

What type of system do you wish to provide with font files?

 1.  OpenVMS VAX
 2.  OpenVMS AXP
 3.  ULTRIX
 4.  MS-DOS
 5.  Apple Macintosh
 6.  Exit font copy utility

Enter your choice and press Return: 5

   Enter the node name of your Apple Macintosh system: mac
   Enter the directory specification for the TE fonts: mac:[fontdir]
   Enter a registered username if there is one:

        DECwindows 3270 TE server font source files for MacX
        have been successfully copied.  You must compile these
        fonts before you can use them.  Refer to your MacX
        documentation to see how to compile the fonts.

What type of system do you wish to provide with font files?

 1.  OpenVMS VAX
 2.  OpenVMS AXP
 3.  ULTRIX
 4.  MS-DOS
 5.  Apple Macintosh
 6.  Exit font copy utility

Enter your choice and press Return: 6
$
```

3.2 Copying TE Fonts to Digital X Terminals

If you are using a VT1000™, VT1200™, VT1300™ or VXT2000™ terminal to display the TE, you have to prepare the OpenVMS host to support your terminal. You must export TE fonts from the OpenVMS host and load them to the terminal. For detailed information on preparing your host system, see the documentation accompanying your X terminal. The TE fonts are located in:

```
SYS$COMMON:[SNADWTE$FONTS]*.DECW$FONTS
```

3.3 Loading Alternate Keyboard Maps and Function Definitions

By default, the TE function definitions and keyboard layout map to an LK201-style keyboard. However, the TE also supports keyboard function definitions and layouts for the IBM Enhanced PC and Macintosh keyboards. If you are using the TE on either a PC or Macintosh X Server, you should install your server's function definitions and keyboard map. Refer to Chapter 2 of *DECwindows DECnet SNA 3270 Terminal Emulator for OpenVMS Use* for instructions on how to do this.

3.4 Editing System Files

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

Add the command line that starts the TE to the system startup file, SYS$MANAGER:SYSTARTUP_V5.COM.

```
$ @SYS$STARTUP:SNADWTE$STARTUP
```

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 the TE:

```
$ @SYS$MANAGER:STARTNET.COM
      .
      .
      .
$ @SYS$STARTUP:SNADWTE$STARTUP
```

3.5 Rebooting the System

You can reboot your system after you have installed the TE, edited the system startup file, and reset the system parameters (if necessary). A system reboot verifies that the product is ready for use, ensures that the edits to the system startup command file are correct, and establishes any new parameter settings. Note, however, that rebooting is optional.

3.6 Setting User Account Privileges

To use the TE, user accounts on your system must have certain privileges and quotas. Each account must have at least TMPMBX and NETMBX privileges. Use the OpenVMS Authorize Utility to determine whether users have the privileges they require.

3.7 Installing the TE on a VMScluster System

If you want to run the TE software on multiple nodes of a VMScluster system, first verify that you have the appropriate software license. Then add this command to the startup file of each node on the cluster:

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

After installing the software, issue this command for each cluster node:

```
$ LICENSE LOAD DW-SNA-3270-TE-VMS
$ @SYS$STARTUP:SNADWTE$STARTUP.COM
```

3.8 Copying Translation Tables

To copy translation tables from an OpenVMS load host to an OpenVMS TE client, use the this command:

```
$ COPY GWNODE::SYS$LIBRARY:SNADWTE$DEF.EXE SYS$LIBRARY:SNADWTE$DEF.TBL
```

This command copies translation tables to the default file SYS$LIBRARY:SNADWTE$DEF.TBL.

To copy translation tables from an ULTRIX load host to an OpenVMS TE client, begin by generating the translation table on the load host by issuing this command:

```
# snatratbl snadwte_def.tbl
```

Next, use this command to copy the translation table from the ULTRIX load host:

```
$ COPY ULTRIX_load_host::"directory/snadwte_def.tbl" SYS$LIBRARY:SNADWTE$DEF.TBL
```

3.9 Determining and Reporting Problems

If an error occurs while the TE is being used and you believe it is a TE error, you should take one of the following actions:

- If you have a BASIC or DECsupport Software Agreement, call your Customer Support Center. (With these services, you receive telephone support that provides high-level advisory and remedial assistance.)
- If you have a Self-Maintenance Software Agreement, you can submit a Software Performance Report (SPR).
- If you purchased the TE within the past 90 days and you think the problem is caused by a software error, you can submit a Software Performance Report (SPR).

If you find an error in the TE documentation, you should complete and submit the Reader's Comments form at the back of the document in which the error was found. Include the section and page number of the error.

A
Sample Installation

This appendix contains a sample installation of the DECwindows DECnet SNA 3270 Terminal Emulator for OpenVMS (TE). This sample was run on a system that had no previous version of the TE installed.

You should assume that in the sample installation, DECnet™ has been shut down, no users are logged on to the system, and that OPTIONS N is specified to print the release notes. The Installation Verification Procedure (IVP) runs at the end of the installation.

```
$ @VMSINSTAL

        VAX/VMS Software Product Installation Procedure V5.4-3

It is 14-APR-1992 at 14:25.

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

%VMSINSTAL-W-NOTSYSTEM, You are not logged in to the
SYSTEM account.
%VMSINSTAL-W-ACTIVE, The following processes are still active:
        DECW$TE_005F
        Little John
        Friar Tuck
        Will Scarlet
        DESMOND
        _FTA10:
* Do you want to continue anyway [NO]? y
* Are you satisfied with the backup of your system disk [YES]?
* Where will the distribution volumes be mounted: sna3$:[sna.vmsins.bin]

Enter the products to be processed from the first distribution
volume set.
* Products: snadwte020
* Enter installation options you wish to use (none): n

The following products will be processed:

  SNADWTE V2.0

        Beginning installation of SNADWTE V2.0 at 14:26
```

```
%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]: 4
* Do you want to continue the installation [NO]? y
%VMSINSTAL-I-RELMOVED, Product's release notes have been
moved to SYS$HELP.

    DECwindows DECnet SNA 3270 Terminal Emulator for OpenVMS, V2.0
                    Installation Procedure


    This DECwindows DECnet SNA 3270 TE installation includes both
    3270 TE software and workstation font files.  You can choose to
    install one or both of these on this OpenVMS node.  Note that the
    video font files are required on all workstations where the 3270
    TE is to be displayed.

* Do you want to install the entire kit [YES]?

        Product:      DW-SNA-3270-TE-VMS
        Producer:     DEC
        Version:      2.0
        Release Date: 16-APR-1992


* Does this product have an authorization key registered and loaded? y
* Do you want to run the IVP after installation [YES]?

        ************************************************
        * Running the IVP causes the TE to display on a   *
        * node you designate.  This node must be running  *
        * DECwindows and its security must be set-up to   *
        * allow for the TE's display                      *
        ************************************************

* What transport do you wish to use to display the TE?:
    Enter D for DECnet or T for TCP/IP [D]: d
    What is the node to use as a display for the TE: abbess

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

        All questions have been asked, installation continuing ...

24 fonts loaded
Creating sys$common:[sysfont.decw.user_75dpi]DECW$FONT_DIRECTORY.DAT
12 fonts loaded
Creating sys$common:[sysfont.decw.user_100dpi]DECW$FONT_DIRECTORY.DAT
```

```
   Product font files have been moved to the DECwindows
font directories.

    You have installed the TE product as a shareable image.  To
    install the image each time the system reboots, add this line
    to your system startup procedure:

        $ @SYS$STARTUP:SNADWTE$STARTUP

    If you are installing the product on a cluster, be sure to add
    this command to the system startup procedure on all nodes.

Product font files have been moved to the SYS$COMMON:[SNADWTE$FONTS]
directory.  You may use the SNADWTE$COPY_FONTS.COM command file
to copy these files to desired servers.

    The IVP for this product, SNADWTE$IVP.COM, can be found in
    the SYS$TEST directory.

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

        Starting DECwindows DECnet SNA 3270 TE for OpenVMS, V2.0 IVP

Starting the DECwindows DECnet SNA 3270 TE, V2.0
After the dialog box appears, click on the exit button to quit.

    DECwindows DECnet SNA 3270 TE for OpenVMS, V2.0 IVP completed successfully
    ************************************************
    *  You must end the current session and start a    *
    *  new session to access the product's fonts.  To  *
    *  do this, choose End Session from the Session    *
    *  pulldown menu of your Session Manager window.   *
    *  Then log in and invoke the TE.                  *
    ************************************************

     Installation of SNADWTE V2.0 completed at 14:30

Enter the products to be processed from the next distribution
volume set.
* Products: Exit

        VMSINSTAL procedure done at 14:30

$
```

B

Files Installed on Your System

The TE installation procedure installs a number of files on your system. These files can be divided into two groups: client files (see Table B–1) and server files (see Table B–2).

Table B–1 Client Files

File	Location	Description
SNADWTE020.RELEASE_NOTES	SYS$HELP	release notes
SNADWTE$MAIN.EXE	SYS$SYSTEM	executable image
SNADWTE$MSG.EXE	SYS$MESSAGE	message file
SNADWTE$STARTUP.COM	SYS$STARTUP	command procedure to execute at system startup
SNADWTE$IVP.COM	SYS$TEST	installation verification procedure
SNADWTE$HELP.HLB	SYS$HELP	TE Help library
SNADWTE$UID.UID	DECW$SYSTEM_DEFAULTS	user interface description
SNADWTE_DEFAULTS.DAT	DECW$SYSTEM_DEFAULTS	user interface defaults
SNADWTE_KBD_LAYOUT.DAT	SYS$LIBRARY	Default LK201-style keyboard layout file

(continued on next page)

Table B–1 (Cont.) Client Files

File	Location	Description
SNADWTE_LK_LAYOUT.DAT	SYS$LIBRARY	Default LK201-style keyboard layout file
SNADWTE_ENHPC_LAYOUT.DAT	SYS$LIBRARY	PC X Server default keyboard layout file
SNADWTE_MAC_LAYOUT.DAT	SYS$LIBRARY	Macintosh X Server default keyboard layout file
SNADWTE_MAC_KEY.BIN	SYS$LIBRARY	Default Macintosh X Server function key definitions
SNADWTE_ENHPC_LAYOUT.BIN	SYS$LIBRARY	Default PC X Server function key definitions
TERM821_BOLD_16WS.DECW$FONT TERM821_BOLD_21WS.DECW$FONT TERM821_NORMAL_16WS.DECW$FONT TERM821_NORMAL_21WS.DECW$FONT	SYS$COMMON: [SNADWTE$FONTS]	OpenVMS VAX System-specific Fonts
TERM821_BOLD_16WS.PCF TERM821_BOLD_21WS.PCF TERM821_NORMAL_16WS.PCF TERM821_NORMAL_21WS.PCF	SYS$COMMON: [SNADWTE$FONTS]	ULTRIX and OpenVMS AXP Fonts
SNADWTE$COPY_FONTS.COM	SYS$COMMON: [SNADWTE$FONTS]	Command procedure for copying font files to display servers
SNADWTE$PROFILE.VUE$DAT	VUE$LIBRARY	VUE profile file

(continued on next page)

Table B–1 (Cont.) Client Files

File	Location	Description
SNADWTE$DEF.MAR SNADWTE$FRENCH.MAR	SYS$EXAMPLES	Sample translation template files

Table B–2 Server Files

File	Location	Description
SNADWTE020.RELEASE_NOTES	SYS$HELP	release notes
SNADWTE$IVP.COM	SYS$TEST	installation verification procedure
SNADWTE$PROFILE.VUE$DAT	VUE$LIBRARY	VUE profile file
TERM821_BOLD_16WS.DECW$FONT TERM821_BOLD_21WS.DECW$FONT TERM821_NORMAL_16WS.DECW$FONT TERM821_NORMAL_21WS.DECW$FONT	SYS$COMMON: [SYSFONT.DECW.USER_75DPI] and [SYSFONT.DECW.USER_ 100DPI]	3270 TE specific font files (OpenVMS VAX servers only)
TERM821_BOLD_16WS.PCF TERM821_BOLD_21WS.PCF TERM821_NORMAL_16WS.PCF TERM821_NORMAL_21WS.PCF	SYS$COMMON: [SYSFONT.DECW.USER_75DPI] and [SYSFONT.DECW.USER_ 100DPI]	3270 TE specifies font files (OpenVMS AXP servers only)

C

SAMPLE LOGMODE Table Entries

IBM host applications must realize that the TE can handle extended data stream and query (used to identify the graphic capabilities of the TE); therefore, you should define appropriate entries in the LOGMODE table.

The following sample entries define the 3192-G and 3279-S3G in the LOGMODE table:

```
S3192G   MODEENT LOGMODE=S3192G,                          X
                      FMPROF=X'03',                      X
                      TSPROF=X'03',                      X
                      PRIPROT=X'B1',                     X
                      SECPROT=X'90',                     X
                      RUSIZES=X'8587',                   X
                      PSNDPAC=X'04',                     X
                      SRCVPAC=X'04',                     X
                      SSNDPAC=X'04',                     D
                      COMPROT=X'3080',                   X
                      PSERVIC=X'028000000000185020507F00'

XT3279M3 MODEENT LOGMODE=XT3279M3,                       X
                      FMPROF=X'03',                      X
                      TSPROF=X'03',                      X
                      PRIPROT=X'B1',                     X
                      SECPROT=X'B0',                     X
                      RUSIZES=X'8787',                   X
                      PSNDPAC=X'04',                     X
                      SRCVPAC=X'                         X
                      SSNDPAC=X'04',                     D
                      COMPROT=X'3080',                   X
                      PSERVIC=X'028000000000185020507F00'
```

For use with CICS-based applications, the following table illustrates how to define the TCT (Terminal Control Table) system:

```
LULABEL  DFHTCT TYPE=TERMINAL,                                        X
                TRMIDNT=LUNAME, TERMINAL ID   : LUNAME                X
                TRMTYPE=3270,   TERMINAL TYPE : 3270                  X
                ACCMETH=VTAM,   ACCESS METHOD : VTAM                  X
                ALTSCRN=(32,80),                                      X
                DEFSCRN=(24,80),                                      X
                FEATURE=(COLOR,EXTDS,HILIGHT,PS,UCTRAN),              X
                GMMSG=YES,                                            X
                PGESIZE=(24,80),                                      X
                RELREQ=(YES,YES),                                     X
                TCTUAL=64,                                            X
                TIOAL=128,                                            X
                TRMMODL=2,                                            X
                TRMSTAT=TRANSCEIVE,                                   X
                BRACKET=YES                                           X
                NETNAME=LUNAME
```

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