Digital SNA 3270 Data Stream Programming Interface for OpenVMS

Installation

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This document describes how to install the Digital SNA 3270 Data Stream Programming Interface. The document also explains how to configure the IBM software to communicate with the interface.

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Operating System and Version: OpenVMS VAX Versions 6.1, 6.2, or 7.0
OpenVMS Alpha Versions 6.1, 6.2, or 7.0

Software Version: Digital SNA 3270 Data Stream Programming Interface for OpenVMS, Version 1.5

May 1996

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Preface

The Digital SNA 3270 Data Stream Programming Interface (3270 DS Interface) enables OpenVMS users to communicate with programs running on an IBM host. The interface allows you to develop applications on an OpenVMS system that require support for an IBM SNA logical unit (LU) type 2 session. Access to the IBM SNA network is through one of the following transport products:

- DECnet SNA Gateway-ST
- DECnet SNA Gateway-CT
- Digital SNA Domain Gateway
- Digital SNA Peer Server
- OpenVMS SNA (OpenVMS VAX Version 6.1 and Version 6.2 only)

Manual Objectives

The *Digital SNA Data Stream Programming Interface Installation* manual provides the information needed to install and verify the 3270 DS Interface software.

Intended Audience

This manual is designed for system managers responsible for installing the 3270 DS Interface and configuring the IBM software to communicate with the 3270 DS Interface. Readers of this manual must have a working knowledge of the Digital and IBM systems that they will be using.

Associated Documents

The following is a list of documents related to the 3270 Data Stream Programming Interface:

- *Digital SNA 3270 Data Stream Programming Interface for OpenVMS Installation*

- *Digital SNA 3270 Data Stream Programming Interface for OpenVMS Problem Solving*
- *Digital SNA 3270 Data Stream Programming Interface for OpenVMS Programming*

You should have the following Digital documents available for reference when you use the Application Programming Interface:

- *Digital SNA Domain Gateway Installation*
- *Digital SNA Domain Gateway Management*
- *Digital SNA Domain Gateway Guide to IBM Resource Definition*
- *DECnet SNA Gateway Problem Determination Guide*
- *DECnet SNA Gateway-CT Installation*
- *DECnet SNA Gateway-CT Problem Solving (OpenVMS & ULTRIX)*
- *DECnet SNA Gateway-CT Management (OpenVMS)*
- *DECnet SNA Gateway-CT Guide to IBM Parameters*
- *DECnet SNA Gateway-ST Installation*
- *DECnet SNA Gateway-ST Problem Solving (OpenVMS)*
- *DECnet SNA Gateway-ST Guide to IBM Parameters*
- *DECnet SNA Gateway Management for OpenVMS*
- *Digital Peer Server Installation and Configuration*
- *Digital Peer Server Management*
- *Digital Peer Server Network Control Language Reference*
- *Digital Peer Server Guide to IBM Resource Definition*
- *OpenVMS SNA Installation*
- *OpenVMS SNA Problem Solving*
- *OpenVMS SNA Guide to IBM Parameters*
- *OpenVMS SNA Management*
- *OpenVMS SNA Problem Determination Guide*

See the following documents for more information about the IBM 3270 Information Display System:

- *ACF for VTAM Version 2, Messages and Codes* (IBM Order No. SC27-0614)

- *IBM 3270 Information Display System and 3274 Control Unit Description and Programmer's Guide* (IBM Order No. GA23-0061)
- *IBM 3287 Printer Models 1 and 2 Component Description* (IBM Order No. GA27-3153)
- *MVS/TSO/VTAM Data Set Print Program Description/Operations Manual* (IBM Order No. SB21-2070)
- *IBM 3270 Information Display System*, Order No. GA23-0060
- *IBM 3270 Information Display System Data Stream Programmer's Reference*, Order No. GA23-0059
- *Systems Network Architecture—Introduction to Sessions Between Logical Units*, Order No. GC20-1869
- *Systems Network Architecture—Sessions Between Logical Units*, Order No. GC20-1868
- *IBM 3270 Information Display System: Operator's Guide*, Order No. GA27-2742

Graphic Conventions

This manual uses the following conventions:

Convention	Meaning
CAPITAL LETTERS	Represent constant values, or symbols. Code these exactly as they are specified.
lowercase italics	Represent variables for which you must supply a value.
[ ]	Square brackets enclose parameters or symbols that are either optional or conditional. Specify the parameter and value if you want the condition to apply. Do not type the brackets in the line of code. The following rules generally apply to parameters: • You may code or omit an optional parameter. Omitting an optional parameter may impact a related parameter or may cause a default value to be specified. • You may code or omit a conditional parameter. Your choice is determined by how other parameters are coded.

Convention	Meaning
( )	Parentheses delimit the argument list. The arguments must be typed in the line of code in the order indicated. Parentheses must be typed where they appear in a line of code.
`Special type`	Examples of system output and user input are printed in this special type.
Numbers	Numbers are decimal unless otherwise noted.
RET	Unless otherwise specified, every command line is terminated by pressing the RETURN key.
CTRL/*x*	Control characters are shown as CTRL/*x*, where *x* is an alphabetic character. The CTRL key and the appropriate key should be pressed simultaneously.

1
Preparing for Installation

This chapter describes what you need to do before you install the *Digital SNA 3270 Data Stream Interface* (3270 DS Interface).

This installation involves writing to your system disk. Digital Equipment Corporation recommends that you make a backup copy of your system disk before you begin.

1.1 Checking the Distribution Kit

Your bill of materials (BOM) specifies the number and contents of your media. Check the contents of your kit against the list in the BOM. If your kit is damaged or if you think that parts are missing, call your Digital representative.

1.2 Prerequisite Software

Version 1.5 of the 3270 DS Interface requires the following software:

- OpenVMS VAX Versions 6.1, 6.2, or 7.0
  OpenVMS Alpha Versions 6.1, 6.2, or 7.0.
- Either the DECnet SNA Gateway-ST, the DECnet SNA Gateway-CT, the Digital SNA Domain Gateway, the Digital SNA Peer Server, or OpenVMS SNA

The 3270 DS Interface also requires Gateway Management installed on the OpenVMS load host. The individual transport products require the following versions of the Gateway Management product:

- DECnet SNA Gateway-ST requires Gateway Management Version 2.0 or later
- DECnet SNA Gateway-CT requires Gateway Management Version 2.0 or later
- Digital SNA Domain Gateway-CT requires Domain Gateway Management software Version 1.1 or later
- Digital SNA Peer Server Version 1.3 or later
- OpenVMS SNA

1.3 OpenVMS System Requirements

This section discusses the OpenVMS requirements as well as checking, calculating, and changing parameter values for the 3270 DS Interface.

1.3.1 Installation Requirements

Before you install the 3270 DS interface software, verify that the following installation requirements have been met:

Table 1–1 Installation Requirements

Requirements	OpenVMS VAX	OpenVMS Alpha
Software	OpenVMS VAX Versions 6.1, 6.2, or 7.0, OpenVMS Alpha Versions 6.1, 6.2, or 7.0, DECnet SNA Gateway-ST, or DECnet SNA Gateway-CT, or Digital SNA Domain Gateway, or Digital SNA Peer Server, or OpenVMS SNA, and related management software listed in Section 1.2	
Privileges	System Manager Level	
Disk Space	13,826 blocks minimum during installation 6228 blocks minimum after installation	13,409 blocks minimum during installation 5833 blocks minimum after installation

(continued on next page)

Table 1–1 (Cont.) Installation Requirements

Requirements	OpenVMS VAX	OpenVMS Alpha
Global Sections	2	3
Global Pages	64	974
Approximate Installation Time	5 to 30 minutes, depending on your system processor	

For background information on installing optional products on an OpenVMS system, refer to the *Guide to OpenVMS Software Installation*.

Make sure that you have registered and loaded the Product Authorization Key (PAK) before you begin the installation. Refer to the *OpenVMS License Management Utility Reference Manual* for this information.

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

1.3.2 OpenVMS License Management Facility Requirements

Before you install this product, you should register your Product Authorization Key (PAK) with the License Management Facility (LMF). The PAK, which contains information about the license, is a paper certificate shipped with the product.

During the installation, you are asked if you have registered the 3270 DS Interface license and loaded the appropriate PAK. If you have not already done so, you can complete the installation. However, the 3270 DS Interface and IVP will not run if you have not registered the license or loaded the PAK. Once you perform the license registration and have loaded the PAK, you will be able to run the 3270 DS Interface and IVP.

To register and load the license, log in to the system manager's account, and type the following:

```
$ @SYS$UPDATE:VMSLICENSE.COM
```

When you are prompted for information, enter the data from your PAK. For more information on LMF, refer to the *OpenVMS License Management Utility Manual* in the OpenVMS documentation set.

1.3.3 OpenVMS Tailor Requirements

The required classes of software are: OpenVMS Required Save Set, Network Support, Programming Support, and Utilities. Be certain these classes are installed on your system before installing the product. Refer to the OpenVMS Tailor documentation in the OpenVMS documentation set for more information.

1.3.4 Checking System Parameter Values

To check the values of your system parameters, enter the following command at the DCL prompt to invoke the SYSGEN utility:

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

At the SYSGEN> prompt, enter the SHOW command to display the value of each system parameter. The values displayed should equal or exceed the value of each parameter listed in Table 1–1. 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 the DCL level.

1.3.5 Calculating the Value for GBLSECTIONS

The value for GBLSECTIONS in Table 1–1 indicates that you must have at least three unused sections available on your system for the installation to process successfully. To calculate how many unused global sections your system has, perform the following steps:

1. Run the OpenVMS Install Utility (INSTALL) 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. Note the amount shown for "Global Section Used" (258 in the example).
3. Run the SYSGEN utility. Use the SHOW command to determine the number of global sections allocated:

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

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

4. Subtract the number shown in the summary (258 in the example) from the amount allocated. If the difference is less than the number required in Table 1–1, increase the value of the GBLSECTIONS parameter.

Section Section 1.3.6 describes the procedure for increasing these values as well as those of other system parameters. Refer to the OpenVMS documentation on system management and operations for more information.

1.3.6 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, you must edit the following file:

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

For example, to change the setting for the GBLSECTIONS system parameter, add this line to the file:

```
GBLSECTIONS = 1024
```

Now, run the AUTOGEN procedure to recalculate your system parameters. Enter the following 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 6.1 and later, you can 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 VMSINSTAL Requirements

The procedure for installing files using VMSINSTAL on an OpenVMS system is automated. You just answer questions displayed while the procedure (VMSINSTAL) runs.

Each question i the installation is marked with an asterisk (*) at the beginning of the line. Some questions show the default response in brackets; for example:

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

To answer a question with the default, press RET.

To install the distributions kit on your OpenVMS host:

- Log into the system manager's account.
- Make sure that all users are logged out and all batch jobs are complete.
- Make sure you have backed up the system disk.
- Make sure you have more than 13,826 free blocks for OpenVMS VAX, and 13,409 for OpenVMS Alpha, on the system disk.
- Make sure you have 64 free global pages for OpenVMS VAX, and 974 for OpenVMS Alpha. (If there are not enough global pages, the start-up procedure, invoked immediately before the Installation Verification Procedure (IVP) will fail. See Table 1–1 for more information.)

1.4.1 Using VMSINSTAL

VMSINSTAL is a command procedure that installs OpenVMS layered software products. The VMSINSTAL command line has the following format:

```
$ @SYS$UPDATE:VMSINSTAL SNA3270nnn ddcu: [OPTIONS N]
```

where:

nnn

represents the major version number and the current maintenance update in that version. The first and second digits represent the major version number, and the third digit represents the current maintenance update version number. For the version number of your kit. refer to the label on the distribution kit or the BOM. If you do not supply the product name and version number, VMSINSTAL prompts you for them.

ddcu

represents a device name for the 3270 DS Interface installation media, where *dd* is the device code, *c* is the controller id, and *u* is the unit number. It is not necessary to use the console drive. If you do not supply the device name, VMSINSTAL prompts you for it. MTA0, is the device name used in examples in this document.

OPTIONS N

is an optional parameter you should provide if 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.

When you install a product using VMSINSTAL, you have two installation options. Either you can enter the VMSINSTAL command line specifying the product name, version number, device name, and release notes option, or you can enter the following command:

```
$ @SYS$UPDATE:VMSINSTAL
```

If you enter the preceding command, VMSINSTAL prompts you for the product name, version number, and device name during the installation. If you use this command, you do not have the option of displaying or printing the release notes.

1.5 On-Line Release Notes

The 3270 DS Interface installation kit provides on-line release notes. A prompt to display or print the release notes appears during the installation procedure if you invoke VMSINSTAL wit the OPTIONS N parameter. Later, you can read the release notes by typing or printing the file SYS$HELP:SNA3270*nnn*.RELEASE_NOTES (for example, SYS$HELP:SNA3270015.RELEASE_NOTES).

nnn represents the major version number and all maintenance updates in that version. The first and second digits represent the major version number, and the third digit represents the maintenance update version number.

2

Installing the 3270 DS Interface

This chapter describes how to install the Digital SNA 3270 Data Stream Programming Interface (3270 DS Interface) for OpenVMS. It contains a step-by-step description of the installation considerations. The final section contains an actual system log of an installation using PAK information and VMSINSTAL.

2.1 Installation Procedure

The installation consists of a series or questions and informational messages; the process takes from 5 to 30 minutes to complete.

Note

You can install the 3270 DS Interface software from two locations: the Consolidated Software Distribution CD-ROM or a remote node in your local area network using the Remote Installation Service (RIS). The VMSINSTAL procedure presented in this chapter assumes the 3270 DS Interface software is being installed from your local area network.

To install the 3270 DS Interface software from the Consolidated Software Distribution CD-ROM, see the master index table in the document *Consolidated Software Distribution Disk User's Guide* for the directory containing the 3270 DS Interface files.

2.1.1 Running VMSINSTAL

This section shows the script you see when you use VMSINSTAL to install the 3270 DS Interface software. In addition, this section contains explanatory text for each prompt.

When you run VMSINSTAL, you may accept the default values by pressing the RET key. Unless it is otherwise stated, end every command line by pressing RET.

To terminate the procedure at any time during the installation, press Ctrl/Y. When you press Ctrl/Y, the installation procedure deletes all files it has created up to that point and exits. To restart the installation procedure after pressing Ctrl/Y, invoke VMSINSTAL again.

Enhancements to VMSINSTAL in future releases of the OpenVMS operating system might result in additional prompts appearing during the course of the installation. Although such prompts might not be documented in this installation manual, the installation should proceed normally.

Step 1: Log in to the system manager's account.

```
Username: SYSTEM RET
Password: RET
```

Step 2: Invoke VMSINSTAL

```
$ @SYS$UPDATE:VMSINSTAL SNA3270nnn ddcn: OPTIONS N RET
```

Replace *nnn* with the product name with the version number of the software, for example, SNA3270015.

Replace *ddcn* with the name of the device on which you plan to mount the media, where *dd* is the device name, *c* is the controller ID, and *n* is the unit number.

```
             OpenVMS Software Product Installation Procedure V6.1

It is dd-mmm-yyyy at hh:mm.
Enter a question mark (?) at any time for help.

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

Step 3: Product Installation Begins

VMSINSTAL displays a message that the media containing the 3270 DS Interface software has been mounted on the specified device and that the installation has begun.

```
Please mount the first volume of the set on MTA0:.
* Are you ready [YES? RET
%MOUNT-I-MOUNTED, SNA3270 mounted on MTA0:

The following products will be processed:

  SNA3270 Vn.n

       Beginning installation of SNA3270 Vn.n at hh.mm

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

n.n is automatically replaced with the version number of the 3270 DS Interface, for example, V1.5.

Step 4: Select a release notes option

The following prompts appear only if you specified OPTIONS N in step 2.

```
  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 [3]: RET
```

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

If you select option 2, VMSINSTAL prompts you for a queue name.

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

Either type a queue name, or press RET to send the file to the default output print device.

If you select option 3, VMSINSTAL prompts you for a queue name and displays the release notes.

After the release notes are displayed or printed, the following prompt and message appear:

```
* Do you want to continue the installation? Y RET
%VMSINSTAL-I-RELMOVED, Product's release notes have been
moved to SYS$HELP.
```

To continue the installation, type Y and press RET. If you type N and press RET, or just press RET, VMSINSTAL stops the installation.

Step 5: Register the product with the License Management Facility

You must use the OpenVMS License Management Facility (LMF) to register the product. The following text appears:

```
     Product:       SNA-3270-DSPI
     Producer:      DEC
     Version        Vn.n
     Release Date:  dd-mmm-yyyy

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

Check to see if this is the same information contained in your Product Authorization Key (PAK). Type Y or N in response to the question.

If you do not register and load the authorization key, the product will not run. For more information on LMF, refer to the *OpenVMS License Management Utility Reference Manual*.

Step 6: Select installation options

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

The installation verification procedure (IVP) checks whether the installation procedure was successful. Press RET to run the IVP after installation. If you do not want to run the IVP, enter N in response to the prompt.

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

The system disk might contain previous versions of the distribution files. The files are replaced during installation with new files, but the old files are not automatically purged. Purging is recommended. In response to the purging prompt, press RET to purge the files, or N to keep them.

Note

Digital Equipment Corporation recommends that you do not delete previous versions of on-line release notes after receiving a new release of the product.

Step 7: Read informational message

The installation procedure now displays the following informational message:

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

  The IVP for this product, SNA3270$IVP.COM can be found in
  the SYS$TEST directory.

  To install the 3270 Data Stream images as shareable each
  time the system reboots, you must add the following line
  to your system startup procedure:

      $ @SYS$STARTUP:SNA3270$STARTUP

  On-line release notes for this product can be found in the file,
      SYS$HELP:SNA3270nnn.RELEASE_NOTES

%VMSINSTALL-I-MOVEFILES, Files will now be moved to their target directories
```

Step 8: The IVP is run

The installation procedure calls the IVP to verify that the 3270 DS Interface software was successfully installed. The system displays the following messages:

```
** Digital SNA 3270 Data Stream Interface for OpenVMS Vn.n Installation Test **

... Testing 3270 Data Stream

** Digital SNA 3270 Data Stream Interface for OpenVMS Vn.n Installation Test Successful **
```

Step 9: End the Installation Procedure

```
Installation of SNA3270 Vn.n completed at hh:mm
```

If you typed Y in response to the prompt that request a file purge, previous versions of the files are now purged.

When installation is complete, the executable files are moved to their target directory.

Note

The release notes file installed by VMSINSTAL has a different name in each maintenance release.

```
    VMSINSTAL procedure done at hh:mm

$ LOGOUT [RET]
SYSTEM logged out dd-mmm-yyyy hh:mm
```

When the installation procedure is complete, you can continue to install more products or end the installation procedure. To end the procedure, press [Ctrl/Z] or the [RET] key.

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

2.2 Postinstallation Considerations

The installation procedure for 3270 DS Interface installs a SNA3270SH.EXE and SNA3270MG.EXE files as shareable images. Section Section 2.2.1 lists the files added to the system.

The 3270 DS Interface Help file can be added to an EDT Help file. Section Section 2.2.2 shows the command procedure for adding 3270 DS Interface Help.

Verification of the installation can be done either during installation through the VMSINSTAL utility or at any other time by running SYS$TEST:SNA3270$IVP. This command procedure verifies that the 3270 DS Interface has been installed correctly on your system. Section Section 2.2.3 shows the command procedure for running the IVP.

Using the SYS$STARTUP:SNA$STARTUP.COM command file you can install the 3270 DS Interface as a shareable image. Section Section 2.2.4 shows the procedure for doing this.

You can install the 3270 DS Interface on a cluster using the command procedure SNA3270$STARTUP.COM. Section Section 2.2.5 shows the procedure for doing this.

2.2.1 Files Created During Installation

During installation VMSINSTAL creates the files in the locations shown in Table 2–1.

Table 2–1 Files Created During Installation

SNA3270SH.EXE	SYS$SHARE
SNA3270MG.EXE	SYS$MESSAGE
SNA3270DF.BAS	SYS$LIBRARY
SNA3270DF.FOR	SYS$LIBRARY
SNA3270DF.H	SYS$LIBRARY
SNA3270DF.LIB	SYS$LIBRARY
SNA3270DF.MAR	SYS$LIBRARY
SNA3270DF.PAS	SYS$LIBRARY
SNA3270DF.PEN	SYS$LIBRARY
SNA3270DF.PLI	SYS$LIBRARY
SNA3270DF.R32	SYS$LIBRARY
SNA3270$STARTUP.COM	SYS$STARTUP
SNA3270$IVP.COM	SYS$TEST
SNA3270015.RELEASE_NOTES	SYS$HELP
SNA3270SH.IIF	SYS$LIBRARY (OpenVMS Alpha only)

You can find help information for the 3270 DS Interface in the system help facility under the topic SNA_3270DS.

2.2.2 Adding the SNA_3270DS Help File to an EDT Help File

The 3270 DS Interface help information that is added to the HELPLIB file during installation can also be inserted into an EDT HELP file for programmers who use EDT to develop DECnet SNA applications. The following commands are used to perform this task:

Note

You must have system manager privileges to execute the following commands.

```
$ LIBRARY/HELP/EXTRACT=SNA_3270DS/OUTPUT=SNA3270DS SYS$HELP:HELPLIB
$ LIBRARY/HELP/INSERT SYS$HELP:EDTHELP SNA3270DS
$ DELETE SNA3270DS.HLP;*
```

2.2.3 Verifying the Installation of the 3270 DS Interface Software

The IVP runs automatically at the end of the installation if you have chosen that option. You can also run the IVP after the installation to verify that the 3270 DS Interface is installed and working properly. To run the IVP after installation, enter the following command from your terminal:

```
$ @SYS$TEST:SNA3270$IVP
```

If the following text appears, the software is successfully installed:

```
** Digital SNA 3270 Data Stream Interface for OpenVMS V1.5 Installation Test **
... Testing 3270 Data Stream
** Digital SNA 3270 Data Stream Interface for OpenVMS V1.5 Test Successful **
```

Note

The IVP does not verify that the 3270 DS Interface cab connect to an IBM system.

If the software was not installed properly, error messages are displayed. Correct the problems indicated by the messages and rerun the 3270 DS Interface installation procedure. If you receive IP errors, you have a damaged kit; contact your Digital representative.

Note

For information about configuring your IBM SNA software for LU type 2 communications, refer to the Guide to IBM Parameters for your particular transport product.

If you have not registered the 3270 DS Interface with LMF, the following text appears:

```
** Digital SNA 3270 Data Stream Interface for OpenVMS V1.5 Installation Test **

%LICENSE-F-NOAUTH, Digital SNA-3270-DSPI use is not authorized on this node
-LICENSE-F-NOLICENSE, no license is active for this software product
-LICENSE-I-SYSMGR, please see your system manager
%Failed to test program with shareable image

** Digital SNA 3270 Data Stream Interface for OpenVMS V1.5 Test FAILED **
```

Stop the installation and register the 3270 DS Interface with LMF as described in Step 5.

2.2.4 Installing the 3270 DS Programming Interface as a Shareable Image

The file, SYS$STARTUP:SNA3270$STARTUP.COM, contains the start-up command procedure for the 3270 DS Programming Interface. To install the 3270 DS Programming Interface as a shareable image, enter the following command procedure:

```
$ @SYS$STARTUP:SNA3270$STARTUP.COM
```

To automatically install the 3270 DS Programming Interface as a shareable image when you boot the system, include this command in your system start-up procedure.

2.2.5 Using the 3270 DS Interface Software in a Cluster

After you have installed the 3270 DS Interface software on one node of a cluster, you can install it on the other nodes of the cluster by executing the SNA3270$STARTUP.COM procedure on each node as follows:

```
$ @SYS$STARTUP:SNA3270$STARTUP.COM
```

You must activate a 3270 DS Interface license for each node in the cluster that will execute and run the interface software. You can activate the license in one of the following ways:

- Log into each cluster node, and enter the LICENSE LOAD command.
- Invoke the VMS SYSMAN Utility to execute the LICENSE LOAD command on the desired cluster nodes. See the *VMS SYSMAN Utility Manual* for details on defining your management environment and executing commands on other nodes.

For more information on the LICENSE LOAD command, refer to the *VMS License Management Utility Manual*.

2.3 Sample Installation

This section contains a sample installation of the 3270 DS Interface software. The installation procedure might be modified slightly in maintenance updates of this product.

Unless otherwise stated, every command line ends with a Return

```
$ @sys$update:vmsinstal sna3270015 MTA0: OPTIONS N

      OpenVMS Software Product Installation Procedure V6.1

It is dd-mmm-yyyy at hh:mm.
Enter a question mark (?) at any time for help.

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

Please mount the first volume of the set on MTA0:
* Are you ready [YES]?

The following products will be processed:
  SNA3270 V1.5

       Beginning installation of SNA3270 V1.5 at hh:mm

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

    Release Notes Option:

        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]:
* Queue name [SYS$PRINT]:
Job SNA3270015 (queue SYS$PRINT, entry 317) started on LPA0
* Do you want to continue the installation? Y
%VMSINSTAL-I-REMOVED , Product's release notes have been
moved to SYS$HELP

        Product:      SNA-3270-DSPI
        Producer:     DEC
        Version:      V1.5
        Release Date: dd-mmm-yyyy

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

    All questions have been asked, installation continuing ...

    The IVP for this product, SNA3270$IVP.COM, can be found in
    the SYS$TEST directory.
```

```
    To install the 3270 Data Stream images as shareable each
    time the system reboots, you must add the following line
    to your system start procedure:

        $ @SYS$STARTUP:SNA3270$STARTUP

    On-line release notes for this product can be found in the file,
        SYS$HELP:SNA3270015.RELEASE_NOTES

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

**** Digital SNA 3270 Data Stream Interface for OpenVMS, V1.5 Installation Test ****

...  Testing 3270 Data Stream

**** Digital SNA 3270 Data Stream Interface for OpenVMS, V1.5 Test Successful ****

        Installation of SNA3270 V1.5 completed at hh:mm

 VMSINSTAL procedure done at hh:mm
```