DECnet/SNA VMS
Distributed Host Command Facility

digital™

Installation

Order No. AA-CT52B-TE

DECnet/SNA VMS
Distributed Host Command Facility

Installation

April 1989

This guide explains how to install and load the DECnet/SNA VMS Distributed Host Command Facility (DHCF) software.

Supersession/Update Information:	This is a new manual.
Operating System and Version:	VMS 5.0 or 5.1
Software Version:	DECnet/SNA VMS Distributed Host Command Facility V1.2

digital™

Printed in U.S.A.

AA-CT52B-TE
First Edition, April 1989

The information in this document is subject to change without notice and should not be construed as a commitment by Digital Equipment Corporation. Digital Equipment Corporation assumes no responsibility for any errors that may appear in this document.

The software described in this document is furnished under a license and may only be used or copied in accordance with the terms of such license.

No responsibility is assumed for the use or reliability of software on equipment that is not supplied by Digital or its affiliated companies.

Copyright © 1989 by Digital Equipment Corporation
All Rights Reserved.
Printed in U.S.A.

The postage-prepaid Reader's Comments form on the last page of this document requests the user's critical evaluation to assist us in preparing future documentation.

The following are trademarks of Digital Equipment Corporation:

DDCMP	MicroVMS	VAXcluster
DEC	PDP	VAXstation
DECUS	Q-bus	VMS
digital™	UNIBUS	VT100
MicroVAX	VAX	VT200

IBM is a registered trademark of International Business Machines Corporation.

Contents

Preface

Manual Objectives v
Intended Audience v
Manual Structure vi
Associated Manuals vi
Acronyms vii
Graphic Conventions Used in This Guide viii

1 Preparing for Installation

Introduction 1–1
1.1 Check the Distribution Kit 1–1
1.2 Check the VMS Operating System Version 1–2
1.3 Gateway Management Software 1–2
1.4 Check the IBM System Requirements 1–2
1.5 Check VMS System Requirements 1–2
1.5.1 Required Disk Space 1–2
1.5.2 Required Memory 1–3
1.5.3 Required User Process Quotas 1–3
1.5.4 VMS System Privileges Required for DHCF Software Installation 1–3
1.5.5 VMS System Privileges Required to Start and Manage the DHCF Software 1–4
1.5.6 VMS System Tailoring 1–4
1.6 License Management Facility Support 1–4

2 Installing the DHCF Product

Introduction 2–1
2.1 Running the VMSINSTAL Procedure 2–1
2.1.1 Release Notes 2–1
2.2 Check Installation Requirements 2–2
2.3 Installing the DHCF Software 2–3
2.4 Files Created During Installation 2–11
2.5 Starting the Device Drivers and the ACP 2–13
2.6 Starting the DHCF Software After Having Used a Previous Version 2–13
2.7 Sample Installation 2–14
2.8 DECnet/SNA V1.*x* (DECSA) Gateway DHCF Configuration File 2–16
2.9 After Installing the Product on a VAXcluster 2–17
2.10 Configuring the DECnet/SNA Gateway for the DHCF Software 2–17

Tables

Table 2–1: Requirements for Installing the DHCF Software 2–2
Table 2–2: Files Deleted by the Optional Clean–Up 2–9
Table 2–3: Files Created During the Installation 2–12

Preface

The DECnet/SNA VMS Distributed Host Command Facility (DHCF) software is a Digital Equipment Corporation product that enables one or more users of an IBM host in an SNA network to access and use a VAX computer running V5.0 or V5.1 of the VMS operating system in a DECnet network. To use the DHCF software, you must install the appropriate versions of the related software and hardware that you plan to use. Refer to the Software Product Description (SPD) for this information.

Manual Objectives

This manual explains how to install and start the DHCF software on VMS systems to provide 3270–series terminal access to them. You can install the DHCF product on any VMS system, including the Gateway load host, that is a participating node in the DECnet network in which a DECnet/SNA Gateway product is present. After installing and starting the DHCF software, but before accessing a VMS system through one of Digital's DECnet/SNA Gateway products, you must configure the Gateway software as explained in Chapter 1 of *DECnet/SNA VMS Distributed Host Command Facility Management*.

Intended Audience

This manual is directed to anyone intending to oversee the installation and starting of the DHCF software product.

Manual Structure

DECnet/SNA VMS Distributed Host Command Facility Installation contains two chapters with the following contents:

Chapter 1	Describes the steps necessary to prepare for installation of the DHCF software.
Chapter 2	Explains how to install the DHCF software using the VMSINSTAL procedure, and how to start the software after installation.

Associated Manuals

Users of this manual should have the following manuals from the DHCF software documentation set available for reference:

- *DECnet/SNA VMS Distributed Host Command Facility Management*
- *DECnet/SNA VMS Distributed Host Command Facility Use*

Users should also have the following manuals from the VMS V5.0 documentation set:

- *VMS System Manager's Manual*
- *VMS License Management Utility Manual*
- *VMS System Messages and Recovery Procedures Reference Manual: Parts I* and *II*
- *VMS Guide to DECnet–VAX Networking*
- *VMS Networking Manual*
- *VMS Network Control Program Manual*

You should also have the following manuals from the DECnet/SNA Gateway set:

- *DECnet/SNA VMS Gateway Management Guide*
- *DECnet/SNA Gateway–CT* or *–ST Installation Guide*

The following IBM publications contain information on the IBM 3270–series terminal and its use:

- *IBM 3270 Information Display System Component Description* (Order Number: GA27–2749)

- *IBM 3270 Information Display System Data Stream Programmer's Reference* (Order Number: GA23–0059)

The following IBM publications contain information on the IBM host application HCF:

- *Host Command Facility Guide and Reference* (Order Number: SC27–0455)
- *Host Command Facility General Information* (Order Number: GC27–0453)
- *Host Command Facility Version 2 Diagnosis Reference VTAM, Advanced Communications Functions for VTAM and Advanced Communications Functions for TCAM* (Order Number: LY38–3061)

Acronyms

The following acronyms appear in this manual:

ACF/VTAM	Advanced Communications Function/VTAM
DCL	Digital Command Language
DECSA Gateway	The DECnet/SNA V1.*x* Gateway product
DHCF	The DECnet/SNA VMS Distributed Host Command Facility V1.2 software product
Gateway–CT	The DECnet/SNA Gateway–CT product
Gateway–ST	The DECnet/SNA Gateway–ST product
HCF	IBM's Host Command Facility application
IDS	The IBM information display system
IVP	Installation Verification Procedure
LMF	License Management Facility
MVS	IBM's Multiple Virtual Storage operating system
PAK	Product Authorization Key
SNA	IBM's System Network Architecture
SPD	Software Product Description
VSE/SP	Virtual Storage Extended/System Package
VTAM	Virtual Telecommunications Access Method

Graphic Conventions Used in This Manual

Convention	Meaning
`Special type`	This special type in examples indicates system output or user input.
`Red type`	Red type in examples indicates user input.
UPPERCASE	Uppercase letters in command lines indicate keywords that must be entered. You can enter them in either uppercase or lowercase; you can abbreviate command keywords to the first three characters or the minimum unique abbreviation.
lowercase italics	Lowercase italics in command syntax or examples indicate variables for which either the user or the system supplies a value.
key	Indicates that you press the specified key.
CTRL/*x*	Indicates that you should hold the CONTROL key down and press the key specified by the *x*. The server displays the key combination as ^*x*.

1

Preparing for Installation

Introduction

The DECnet/SNA VMS Distributed Host Command Facility (DHCF) software enables users of IBM 3270–series terminals in an IBM SNA network to access and use a VMS operating system in a DECnet network.

The following sections explain the preparations you should make before installing the DHCF software to ensure its proper operation:

1. Check the contents of your distribution kit. (Section 1.1)
2. Check to see that you are using the current version of the VMS system (V5.0 or V5.1). (Section 1.2)
3. Check to see that DECnet/SNA Gateway Management or DECnet/SNA VMS Gateway Management for DECSA is installed on each VMS system that requires it. (Section 1.3)
4. Check IBM system requirements to ensure that you have the necessary IBM hardware and software components. (Section 1.4)
5. Check the VMS operating system requirements to ensure that you have adequate disk space, nonpaged memory, user process quotas, system privileges, and (as needed) information on VMS system tailoring. (Section 1.5)

1.1 Check the Distribution Kit

The Bill of Materials (BOM) included with your distribution kit specifies its contents and kit number. Carefully compare the items listed in the BOM with the kit's contents. If any components are missing or damaged, contact your Digital representative before continuing with the installation.

1.2 Check the VMS Operating System Version

To run the DHCF software, you must be running V5.0 or V5.1 of the VMS operating system on your VAXstation, MicroVAX, or VAX system.

1.3 Gateway Management Software

If you plan to use a DECnet/SNA Gateway–CT or –ST product, the appropriate Gateway management software must be installed on the Gateway load host. (The Gateway load host is the VMS system onto which the Gateway software has been installed for the loading of the DECnet/SNA Gateway).

To use a DECnet/SNA V1.*x* (DECSA) Gateway, the appropriate Gateway management software must be installed on each VMS system on which you plan to install the DHCF software, including the Gateway load host. See the DHCF product's SPD (software product description) for the appropriate version of Gateway management software.

1.4 Check the IBM System Requirements

Make sure the following IBM hardware and software components are available:

- The IBM 3270 Information Display System
- The ACF/VTAM communications software access method
- The HCF/MVS or HCF/VSE interactive VTAM application
- The MVS or VSE/SP operating system

Check the DHCF product's SPD for supported versions of these hardware and software components.

1.5 Check VMS System Requirements

The following sections discuss VMS operating system requirements for the DHCF software.

1.5.1 Required Disk Space

You need at least 650 blocks of free system disk space in order to install the DHCF software. DHCF requires a minimum of 450 blocks after installation.

1.5.2 Required Memory

Starting the DHCF product requires approximately 28K bytes of nonpaged memory. In addition, the DHCF software requires approximately 2K bytes of nonpaged memory for each interactive terminal session. Therefore, calculate the amount of nonpaged memory you will need for a given number of interactive terminal sessions as follows:

$28 + 2n$ = K bytes of nonpaged memory required for n sessions.

where

n specifies the number of interactive terminal sessions

The default maximum number of interactive terminal sessions, defined by a logical name definition, is 48. You can control the number of interactive terminal sessions (and hence, the amount of nonpaged memory used by DHCF interactive terminal sessions) by decreasing this value, or you can increase the value up to 128. See Chapter 2 of *DECnet/SNA VMS DHCF Management* for instructions on modifying the logical definition name for your system.

1.5.3 Required User Process Quotas

The following minimum process quota values are suggested for each interactive terminal process running the DHCF software:

- ASTLM (AST queue limit) = 24
- BIOLM (buffered I/O count limit) = 18
- BYTLM (buffered I/O byte count limit) = 8192

1.5.4 VMS System Privileges Required for DHCF Software Installation

To install the DHCF software you must be logged in to the SYSTEM account, or into an account with the following privileges:

- CMKRNL
- SYSPRV

1.5.5 VMS System Privileges Required to Start and Manage the DHCF Software

To start and manage the DHCF software you must have all of the following privileges:

- ACNT
- CMKRNL
- DETACH
- LOG_IO
- NETMBX
- SHARE
- SYSNAM
- SYSPRV
- TMPMBX

1.5.6 VMS System Tailoring

The DHCF software supports VMS tailoring for installation on systems with limited system disk space. See the section on VMS tailoring in the DHCF product's SSA (System Support Addendum) for a list of necessary VMS system classes.

1.6 License Management Facility Support

The DHCF V1.2 software product supports the License Management Facility (LMF) features provided by the VMS system. LMF is the software facility that makes it possible to support various features of the licensing architecture. LMF requires that a DHCF software Product Authorization Key (PAK) be registered and loaded before starting the DHCF product. To register and load your PAK use the DCL LICENSE command, or the VMSLICENSE.COM procedure as follows:

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

Refer to the *VMS License Management Utility Manual* for information pertaining to this command procedure and to management features of LMF.

2

Installing the DHCF Software

Introduction

This chapter explains how to install the DECnet/SNA VMS Distributed Host Command Facility (DHCF) software using VMSINSTAL. Keep this document with your distribution kit. You might need to refer to it again if you receive any maintenance updates or need to reinstall the DHCF software for any reason.

2.1 Running the VMSINSTAL Procedure

To install the DHCF software on the VMS operating system you must use the VMSINSTAL procedure. This procedure is interactive; it has the form of a dialog in which the system queries you for information and waits for a response before continuing.

This chapter provides a step-by-step description of the VMSINSTAL procedure. It contains all the information you will need to answer the system's queries. To serve as an example, a completed VMSINSTAL procedure has been included.

2.1.1 Release Notes

This document does not contain release notes. Release notes are provided online, and the prompt for displaying or printing them appears in the VMSINSTAL dialog.

To read the release notes while installing the product, specify OPTIONS N when running the VMSINSTAL procedure. After installing the product, you can read the DHCF software release notes at any time. The release notes are stored in the file named SNADHCF012.RELEASE_NOTES in the SYS$HELP directory. Be sure to read these notes carefully before starting and using the DHCF software.

2.2 Check Installation Requirements

Before running the VMSINSTAL procedure, check to see that your system meets all of the requirements necessary to install the DHCF product. These requirements are listed here in Table 2–1.

For general information on installing layered products on a VMS system, refer to the *VMS System Manager's Manual.*

Table 2–1: Requirements for Installing the DHCF Software

Requirements	Specifications
Distribution media	TK50 cartridge 9–track magnetic tape (1600 bpi)
Prerequisite operating system	VMS operating system V5.0, DECnet–VAX networking software
Required privileges	System manager level
Disk space	650 blocks needed for installation 450 blocks after installation
Approximate installation time	10 to 20 minutes, depending on the medium used
Recommended system account quotas	Digital recommends that you consult the *VMS System Manager's Manual* for the most current information on required system account quotas. ASTLM = 24 BIOLM = 18 BYTLM (I/O byte count limit) = 20480 minimum DIOLM (Direct I/O limit) = 18 ENQLM (Enqueue quota) = 200 FILLM (Open file quota) = 40
Associated documents	The *VMS System Manager's Manual* contains general installation information and information on setting recommended user account quotas.

2.3 Installing the DHCF Software

The procedure for installing the DHCF software is automated. All you are required to do is answer the questions displayed while the VMSINSTAL procedure is running.

Lines requiring a response begin with an asterisk (*). Most questions require a simple yes (Y) or no (N) answer. Some questions display default answers in brackets. For example,

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

To answer a question with the default response, simply press RET. To abort the installation procedure at any time, enter CTRL/Y. When you enter CTRL/Y, the installation procedure deletes all the files that it has created up to that point and then exits. If you wish to rerun the procedure after entering CTRL/Y, you must invoke VMSINSTAL again.

The basic VMSINSTAL procedure is shown here with an explanation of the questions you are asked.

Note

The format and content of your system's output might differ slightly from that shown in the examples in this chapter.

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

Before you begin installing the distribution kit, you should definitely do the following:

- Make sure you have backed up the system disk.
- Make sure you have at least 650 free blocks on the system disk.

Depending on the configuration of your system, you may want to take additional steps before beginning to install the DHCF software. Refer to the *VMS System Manager's Manual* for a list of all the steps you can take preparatory to installing any of Digital's layered products.

Step 2: Invoke VMSINSTAL.

Enter the following command at a VMS system terminal:

@SYS$UPDATE:VMSINSTAL SNADHCF012 *ddcu*: [OPTIONS N]

where

SNADHCF012	is the distribution kit name for Version 1.2 of the DHCF software.
ddcu	Represents the name of the device on which the DHCF software installation kit media is mounted, where: *dd* is the device code *c* is the controller ID *u* is the unit number
OPTIONS N	allows you to display or print on-line release notes.

If you do not include any parameters, VMSINSTAL prompts you for the device name, product, and options. If you do not specify OPTIONS N, VMSINSTAL does not display the release notes queries. Instead, VMSINSTAL simply prompts you for available options.

Step 3: Check your backup copy.

```
        VAX/VMS Software Product Installation Procedure V5.0

It is 25-MAR-1989 at 08:32.
Enter a question mark (?) at any time for help.

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

Before you proceed with an installation that will write to your system disk, make sure you have a good backup copy. If you have not backed up your system disk, answer NO to the query and VMSINSTAL will stop to allow you to do so. When you are ready, restart VMSINSTAL by entering the command in step 2. If you are satisfied that you have a good copy of your system disk, press RET to take the default answer YES.

Step 4: Begin installing the product.

If you did not specify a device when you invoked VMSINSTAL, you will be prompted for it now.

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

Specify the device (*ddcu*, as described in step 2) where you have mounted the first volume. If did not specify a product name earlier, VMSINSTAL prompts you for one now:

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

Enter the name of the product, SNADHCF012. If you did not specify OPTIONS N, a product name, and/or a device name in the command that initiated this installation (see step 2), VMSINSTAL will now prompt you for options. Either you would enter N to be queried later about printing or displaying release notes or you would press RET to bypass them. At this point the system displays:

```
Please mount the first volume of the set on ddcu:.

* Are you ready? YES RET
%MOUNT-I-MOUNTED, SNADHC mounted on _ddcu:
The following products will be processed:

  SNADHCF V1.2

    Beginning installation of SNADHCF V1.2 at 8:33

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

Step 5: Choose a release notes option.

If you have specified OPTIONS N, the installation procedure prompts you for the release notes option you desire.

```
 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 select option 1, VMSINSTAL displays the release notes immediately on your terminal. You can terminate the display at any time by entering CTRL/C. If you select option 2 or 3, VMSINSTAL prompts you for a print queue name as follows:

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

Enter a queue name or simply press RET to indicate the default output print device, SYS$PRINT.

No matter which release notes option you select, VMSINSTAL displays the following:

```
* Do you want to continue the installation?
```

Type YES and press RET to continue the installation. If you type NO and press RET, VMSINSTAL discontinues the installation. Whether you continue the installation or not, VMSINSTAL moves the release notes to the SYS$HELP directory unless you selected option 5.

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

Step 6: Purge previous versions of the files just installed.

The procedure asks whether you would like to purge any prior versions of the distribution files it just copied into your VMS system.

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

Press RET if you want to purge the files that are being replaced by this installation. Digital recommends that you purge these files unless you have some specific reason for retaining them. Answer NO to this question and press RET to retain your previous version of the DHCF software.

Step 7: Optionally install the DECSA Gateway's configuration file.

The DHCF software distribution kit contains a configuration file template (SNADHCF.CFG) for use with DECSA Gateways. If you plan to use a DECSA Gateway when running the DHCF software, and this is the Gateway load host, or if you require the configuration file template to copy to the load host, answer YES to this question. Answer NO or press RET if you plan to use a Gateway–CT or –ST when running the product.

```
* Do you wish to install the DECnet/SNA Gateway V1.x (DECSA) DHCF
  configuration file (SNADHCF.CFG) [NO]?
```

If you answer YES to this question, and the Gateway management software required for a DECSA Gateway has not been installed on your system, the following message appears

```
The DECnet/SNA VMS Gateway management software for the
DECnet/SNA Gateway V1.x (DECSA) product has not been
installed on your system.  This software is required for
successful installation of the DECnet/SNA VMS DHCF software.
Install the Gateway management software, and afterwards
install the DHCF product.
```

and the installation terminates. If your installation of the DHCF product terminates at this point, install the appropriate Gateway management software on your system. Then, install the DHCF product on your system. If using a DECSA Gateway, keep in mind that the DECSA configuration file template must exist on the VMS system that will serve as your network's Gateway load host. See Section 2.8 for more information on copying the template.

Step 8: Enter LMF (License Management Facility) information.

The procedure displays LMF information on the DHCF product, then asks whether you have a DHCF software PAK (Product Authorization Key) registered and loaded.

```
Product:          SNA-DHCF
Producer:         DEC
Version:          1.2
Release Date:     24-MAR-1989

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

The DHCF product cannot be run until its PAK is registered and loaded. Answer YES to this question if you have already registered and loaded the PAK. If you answer NO to this question, the system displays the following information:

```
DECnet/SNA VMS DHCF V1.2 requires you to register your
Product Authorization Key (PAK), which you should have
received with your kit.

 Please register your PAK with

          $ @SYS$UPDATE:VMSLICENSE

 after the installation completes.

The product will not run without a registered and loaded
PAK.
```

Step 9: Optionally delete files left over from a previous installation of the product.

If you have installed a previous version of the DHCF software on your system, you may want to delete files that will no longer be referenced to make available more of your system's disk space. If you do not delete the old version's files, many of them will remain on your system after you have installed Version 1.2 of the DHCF product.

```
    This release of DECnet/SNA VMS DHCF changes several
    product file names.  If an earlier release of the DHCF
    software has been previously installed, the old files
    will no longer be used.

*  Do you wish to delete DECnet/SNA VMS DHCF files that are no
   longer used [NO]?
```

If you answer NO to this question or press RET, the old files are not deleted. If you answer YES, the system deletes the old files and displays the following message:

```
%SNADHCF-S-FILCLEAN, DECnet/SNA VMS DHCF old file clean up is complete
```

VMSINSTAL next displays the following message:

```
%SNADHCF-I-INSCONT, Installation continuing...
```

A noticeable pause may occur at this point while the procedure performs new file placement.

See Table 2–2 for a list of the names, descriptions, and locations of the old files deleted by the old file clean–up.

Table 2–2: Files Deleted by the Optional Clean–Up

File Name	Location	Description
NQDRIVER.EXE	SYS$SYSTEM	One of the two DHCF software device drivers
RQDRIVER.EXE	SYS$SYSTEM	One of the two DHCF software device drivers
DHCFACP.EXE	SYS$SYSTEM	The ancillary control process for the DHCF software
DHCFICP.EXE	SYS$SYSTEM	Installation test program
DHCFMGR.EXE	SYS$SYSTEM	Utility for managing system–wide AID key definitions
DHCFLOAD.COM	SYS$MANAGER	Command procedure used to start the DHCF software
DHCFKEYS.COM	SYS$MANAGER	A template for the command procedure used to tailor the 3270 terminal key functions
DHCFTXT.TLB	SYS$LIBRARY	Text library used by DHCFMGR.EXE
DHCFMSG.EXE	SYS$MESSAGE	Common message facility
DHCFMGNLI.HLB	SYS$HELP	The help library for DHCFMGR.EXE
DHCF.REF	SYS$COMMON:[SNACSV]	The Gateway–resident portion of the DHCF software, if present
DHCF.CFG	SYS$COMMON:[SNACSV]	Template for the DHCF configuration file, if present

Step 10: Optionally run the Installation Verification Procedure (IVP).

The IVP checks to see that the product has been installed correctly. Digital recommends that you run the IVP as part of the installation. However, you can test the DHCF installation at any time. Following installation, a copy of SNADHCF$IVP.COM resides in SYS$TEST.

```
    This kit contains an Installation Verification Procedure (IVP)
    to verify the installation of DECnet/SNA VMS DHCF V1.2.  You
    can run the IVP as part of the installation procedure by
    answering "YES" at the IVP prompt, or you can run it at any
    time after installation as follows:

                    $ @SYS$TEST:SNADHCF$IVP

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

If you answer NO to this question, the IVP is not run as part of the VMSINSTAL procedure.

Step 11: Start the DHCF product.

VMSINSTAL now displays a short paragraph of text explaining how to start the DHCF product:

```
    To start the DECnet/SNA VMS DHCF V1.2 product, either
    enter the command

            @SYS$STARTUP:SNADHCF$STARTUP

    or include this command in your site-specific startup file to
    automate startup of the DHCF product after DECnet-VAX has been
    started.

    If DHCF has been installed and started on this system prior
    to this installation, you will need to reboot your system once
    installation of the new version is complete.  You must also
    reboot any other VAX systems using DHCF in the same VAXcluster.
```

Step 12: End the installation procedure.

The VMSINSTAL procedure ends by displaying the system messages that follow. The two messages that follow the "moving files" message pertain to the Installation Verification Procedure. They appear only if you elected to run the IVP when prompted (step 10), and if the IVP is successful:

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

%SNADHCF-I-IVPSTART, Starting DECnet/SNA VMS DHCF V1.2 IVP
```

```
%SNADHCF-S-IVPEND, DECnet/SNA VMS DHCF V1.2 IVP successful
```

If the IVP fails to verify that all necessary files have been installed, you receive a message specifying the file name of the first missing file and indicating that the IVP has failed.

```
%SNADHCF-E-FILNOTFND, file-name does not exist
-SNADHCF-F-IVPFAIL, DECnet/SNA VMS DHCF V1.2 failed
```

If the IVP fails, reinstall the DHCF product and run the IVP again. If the IVP fails repeatedly, contact your Digital software support representative. Whether the IVP completes successfully or not, the VMSINSTAL procedure ends with the following two messages. (In this example, we have supplied the time 08:48.)

```
    Installation of SNADHCF V1.2 completed at 08:48

    VMSINSTAL procedure done at 08:48
```

VMSINSTAL returns you to the DCL prompt if you specified the product name when invoking VMSINSTAL. If you did not specify the product name when you invoked VMSINSTAL, the procedure prompts you for one now.

```
* Products:
```

If you have another product to install using VMSINSTAL, specify its product name at this prompt. Otherwise, enter CTRL/Z or simply type EXIT and press RET to exit the installation procedure.

2.4 Files Created During Installation

Installing the DHCF software places the files listed in Table 2–3 on your system.

Table 2–3: Files Created During the Installation

File Name	Location	Description
NQDRIVER.EXE	SYS$LOADABLE_IMAGES	One of the two DHCF device drivers
RQDRIVER.EXE	SYS$LOADABLE_IMAGES	One of the two DHCF device drivers
DHCFKEY.EXE	SYS$SYSTEM	The key definition utility that handles the DCL commands used to manage AID key definitions
SNADHCF$ACP.EXE	SYS$SYSTEM	The Ancillary Control Process for the DHCF software
SNADHCF$ICP.EXE	SYS$SYSTEM	The installation test program
SNADHCF$MANAGER.EXE	SYS$SYSTEM	Utility for managing system-wide AID key definitions
SNADHCF$KEYS.COM	SYS$MANAGER	A template for the command procedure used to tailor the 3270 terminal key functions
SNADHCF$STARTUP.COM	SYS$STARTUP	Command procedure used to start the DHCF software
SNADHCF$MGRNLI.HLB	SYS$HELP	The help library for SNADHCF$MANAGER.EXE
SNADHCF012.RELEASE_NOTES	SYS$HELP	DHCF software release notes
SNATRAPRE.MAR	SYS$LIBRARY	Prefix file for generating an EBCDIC/DMCS translation table
SNATRATBL.MAR	SYS$LIBRARY	Translation table template
SNADHCF$TXT.TLB	SYS$LIBRARY	Text library used by SNADHCF$MANAGER.EXE
SNADHCF$MSG.EXE	SYS$MESSAGE	Common message facility
SNADHCF$IVP.COM	SYS$TEST	The Installation Verification Procedure
SNADHCF.CFG	SYS$COMMON:[SNACSV]	Template for the DHCF Gateway configuration file

2.5 Starting the Device Drivers and the ACP

Your users will not be able to log in to the VMS system through the Gateway until you start the DHCF software, and the Gateway is properly installed, loaded, and configured for the product. If you have installed a previous version of the DHCF software on your system, read Section 2.6 before attempting to start the DHCF product.

Installing the DHCF software creates a command procedure called SNADHCF$STARTUP.COM in SYS$STARTUP. When invoked, this command procedure loads the DHCF software's two device drivers RQDRIVER.EXE and NQDRIVER.EXE and starts its ACP (SNADHCF$ACP.EXE). The procedure also installs an image file (DHCFKEY.EXE) and a message file (SNADHCF$MSG.EXE), and defines the maximum number of sessions.

You can automate execution of SNADHCF$STARTUP.COM by inserting a call to it in your site-specific startup command procedure. If you choose to do this, be sure to insert the call to SNADHCF$STARTUP.COM after DECnet-VAX is started on your system. This action will then start the DHCF software each time you boot your system.

2.6 Starting the DHCF Software After Having Used a Previous Version

If you have installed and started a previous version of the DHCF software on your system, you need to reboot to begin using the new version. To find out if a previous version of the product has been started on the system, enter the following command:

```
$ SHOW DEVICE RQ
```

If the system responds with the following message, the DHCF software is not present:

```
%SYSTEM-W-NOSUCHDEV, no such device available
```

In this case, there is no need to reboot, and you can execute SNADHCF$STARTUP.COM directly. In all other cases, you must reboot the system before starting the newly-installed DHCF product.

2.7 Sample Installation

The following sample installation procedure begins with a command that instructs VMSINSTAL to load the DHCF software. Note that your installation may differ slightly from this one depending on the version of the VMS system or load device you use, and the specifics of your environment.

```
$ @SYS$UPDATE:VMSINSTAL SNADHCF012 MTA0: OPTIONS N RET

VAX/VMS Software Product Installation Procedure V5.0

It is 25-MAR-1989 at 09:38.
Enter a question mark (?) at any time for help.
* Are you satisfied with the backup of your system disk [YES]? RET

%MOUNT-I-MOUNTED, SNADHC mounted on MTA0:
The following products will be processed:

  SNADHCF V1.2

       Beginning installation of SNADHCF V1.2 at 09:39

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

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]: 4 RET
* Do you want to continue the installation? YES RET
%VMSINSTAL-I-RELMOVED, The product's release notes have been successfully
moved to SYS$HELP.
* Do you want to purge files replaced by this installation [YES]? RET

* Do you wish to install the DECnet/SNA Gateway V1.x (DECSA) DHCF
  configuration file (SNADHCF.CFG) [NO]? RET

       Product:          SNA-DHCF
       Producer:         DEC
       Version:          1.2
       Release Date:     24-MAR-1989

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

```
    This release of DECnet/SNA VMS DHCF changes several
    product file names.  If an earlier release of the DHCF
    software has been previously installed, the old files
    will no longer be used.

* Do you wish to delete DECnet/SNA VMS DHCF files that are no
  longer used [NO]? YES RET

%SNADHCF-S-FILCLEAN, DECnet/SNA VMS DHCF old file clean up is complete
%SNADHCF-I-INSCONT, Installation continuing...

    This kit contains an Installation Verification Procedure (IVP)
    to verify the installation of DECnet/SNA VMS DHCF V1.2.  You
    can run the IVP as part of the installation procedure by
    answering "YES" at the IVP prompt, or you can run it at any
    time after installation as follows:

                    $ @SYS$TEST:SNADHCF$IVP

* Do you want to run the IVP as part of the installation [YES]? RET

    To start the DECnet/SNA VMS DHCF V1.2 product, either
    enter the command

              @SYS$STARTUP:SNADHCF$STARTUP

    or include this command in your site-specific startup file to
    automate startup of the DHCF product after DECnet-VAX has been
    started.

    If DHCF has been installed and started on this system prior
    to this installation, you will need to reboot your system once
    installation of the new version is complete.  You must also
    reboot any other VAX systems using DHCF in the same VAXcluster.

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

%SNADHCF-I-IVPSTART, Starting DECnet/SNA VMS DHCF V1.2 IVP
%SNADHCF-S-IVPEND, DECnet/SNA VMS DHCF V1.2 IVP successful

    Installation of SNADHCF V1.2 completed at 08:48

     VMSINSTAL procedure done at 09:51

$
```

2.8 DECnet/SNA V1.*x* (DECSA) Gateway DHCF Configuration File

This section pertains to DECnet/SNA Gateways based on the DECSA hardware (DECnet/SNA Gateway V1.*x*) only, and should be read in conjunction with step 7. If you are using a DECSA Gateway, the DHCF configuration file must exist on the VMS system that will act as your network's Gateway load host. A DHCF configuration file template is included in the installation kit for optional installation. In deciding whether or not to install the configuration file template when prompted, there are three distinct cases you should keep in mind. Each case pertains to which VMS system on your network will act as the Gateway load host, and each is described here. Keep in mind, also, that the VMS system that acts as your network's load host must be running the appropriate Gateway management software.

Case one exists when you are installing the DHCF product on a VMS system that will act as a Gateway load host for your network. The VMSINSTAL procedure (see step 7) allows you to install the DECSA Gateway DHCF configuration file template (SNADHCF.CFG) into your system's SYS$COMMON:[SNACSV] directory during installation. If you answer YES when prompted to install SNADHCF.CFG to SYS$COMMON:[SNACSV], and your system is a Gateway load host, the installation of the DHCF configuration file template is complete.

A second case exists when a VMS system other than the one on which you are installing the DHCF product will act as the Gateway load host for your network, and the load host is (or will be) configured with the DHCF configuration file. Let's say, for example, that you are installing the DHCF software on one VMS system (system RAMP) and that another VMS system (system STAMP) in the network will act as the Gateway load host. In this case, there is no need to install the configuration file template while installing the DHCF product on RAMP. When prompted to install SNADHCF.CFG, answer NO.

One more case exists. Let's say you are installing the DHCF software on a number of VMS systems, none of which will act as a Gateway load host. Further, you do not intend to install the DHCF product on the VMS system that will act as the Gateway load host, so as not to provide 3270–series terminal access to the load host. In this case, install the DHCF configuration file template on some other VMS system during installation, then copy the template to the SYS$COMMON:[SNACSV] directory of the VMS system that will act as a Gateway load host.

After you have copied the DHCF configuration file template, you need to rename and configure it for your system as explained in Chapter 1 of *DECnet/SNA VMS DHCF Management*.

Note

If your Gateway load host is currently configured for the DHCF product, there is no need to install the template and recreate the DHCF configuration file at this time.

2.9 After Installing the Product on a VAXcluster

After installing the DHCF software, but before you attempt to start the product (see step 11), you must perform a LICENSE LOAD on each accessing VMS system node in the VAXcluster from which the software is to be run. In a VAXcluster environment, it is not necessary to install the DHCF product on each participating node, but it is necessary to perform a LICENSE LOAD on each VMS accessing node. Refer to the *VMS License Management Utility Manual* for instructions on performing a LICENSE LOAD.

2.10 Configuring the DECnet/SNA Gateway for the DHCF Software

You must configure the DHCF software component of the DECnet/SNA Gateway and configure and start the DHCF software before attempting to access a VMS system from a 3270-series terminal through the Gateway. Instructions on configuring the Gateway for the DHCF software are given in Chapter 1 of *DECnet/SNA VMS DHCF Management*.

Index

A

ACP, loading, 2–13

B

Bill of materials, checking, 1–1
Blocks, required for installation, 1–2

C

Command procedures
  SYS$STARTUP:SNADHCF$STARTUP, 2–10
  SYS$TEST:SNADHCF$IVP.COM, 2–10, 2–15
  SYS$UPDATE:VMSINSTAL, 2–1
  SYS$UPDATE:VMSLICENSE.COM, 1–4

D

DECSA Gateway, configuration file template, 2–16
Device drivers, loading, 2–13
DHCF software
  configuring for the DECnet/SNA Gateway, 2–17
  distribution kit name for, 2–4
  entering LMF information for, 2–7
  files created during installation of, 2–12
  installing, 2–3
    in a VAXcluster environment, 2–17

starting, after using a previous version, 2–13
requirements for installing, 2–2
sample installation of, 2–14
Disk space required for installation, 2–2
Distribution kit, checking, 1–1
Distribution media, 2–2

G

Gateway configuration file, installing, 2–7
Gateway management software, for DECSA Gateways, 2–7

I

IBM system requirements, checking, 1–2
Installation Verification Procedure, 2–10

L

LICENSE LOAD, performing, 2–17
License Management Facility, 1–4
entering information for, 2–7

M

Memory
nonpaged, 1–3
required, 1–3

O

Old file clean up, 2–8, 2–15
files deleted by, 2–9

P

Prerequisite operating system, 2–2
Privileges

required to install the product, 1–3
required to load the product, 1–4
Product Authorization Key, registering and loading, 1–4

R

Release notes, 2–1
displaying, 2–6
printing, 2–4, 2–5
Requirements
disk space, 1–2
memory, 1–3
privileges, 2–2
time, 2–2
user process quotas, 1–3
VMS system, 1–3

S

Sessions, default number of, 1–3

U

User account quotas, recommended, 2–2
User process quotas, required, 1–3

V

VMS system
classes, 1–4
current version, 1–1
privileges, 1–4
requirements, checking, 1–2

HOW TO ORDER ADDITIONAL DOCUMENTATION

DIRECT TELEPHONE ORDERS

In Continental USA
call 800-DIGITAL

In Canada
call 800-267-6215

In New Hampshire
Alaska or Hawaii
call 603-884-6660

In Puerto Rico
call 809-754-7575 x2012

ELECTRONIC ORDERS (U.S. ONLY)

Dial 800-DEC-DEMO with any VT100 or VT200
compatible terminal and a 1200 baud modem.
If you need assistance, call 1-800-DIGITAL.

DIRECT MAIL ORDERS (U.S. AND PUERTO RICO*)

DIGITAL EQUIPMENT CORPORATION
P.O. Box CS2008
Nashua, New Hampshire 03061

DIRECT MAIL ORDERS (Canada)

DIGITAL EQUIPMENT OF CANADA LTD.
940 Belfast Road
Ottawa, Ontario, Canada K1G 4C2
Attn: A&SG Business Manager

INTERNATIONAL

DIGITAL
EQUIPMENT CORPORATION
A&SG Business Manager
c/o Digital's local subsidiary
or approved distributor

Internal orders should be placed through the Software Distribution Center (SDC)
Digital Equipment Corporation, Westminster, Massachusetts 01473

*Any prepaid order from Puerto Rico must be placed
with the Local Digital Subsidiary:
809-754-7575 x2012

READER'S COMMENTS

What do you think of this manual? Your comments and suggestions will help us to improve the quality and usefulness of our publications.

Please rate this manual:

	Poor				Excellent
Accuracy	1	2	3	4	5
Readability	1	2	3	4	5
Examples	1	2	3	4	5
Organization	1	2	3	4	5
Completeness	1	2	3	4	5

Did you find errors in this manual? If so, please specify the error(s) and page number(s).

_____

_____

_____

_____

General comments:

_____

_____

_____

_____

Suggestions for improvement:

_____

_____

_____

_____

Name _____ Date _____

Title _____ Department _____

Company_____ Street _____

City_____ State/Country_____ Zip Code _____

DO NOT CUT – FOLD HERE AND TAPE

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

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

POSTAGE WILL BE PAID BY ADDRESSEE

digital™

Networks and Communications Publications
550 King Street
Littleton, MA 01460–1289

DO NOT CUT – FOLD HERE

Printed on: Wed Mar 29 14:39:06 1989

Last saved on: Wed 29-Mar-1989 14:25

Document: DHCFV12_IG

For: C_HART

pl2ps 3.2.0 Copyright 1987 Interleaf, Inc.