DEC X.25 Client for OpenVMS Alpha Systems

Installation Guide

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Preface

This guide describes how to install DEC X.25 Client for OpenVMS Alpha Systems on Alpha processors running the OpenVMS Alpha operating system. This guide is intended for system managers who are responsible for installing DEC X.25 Client for OpenVMS Alpha Systems.

How to use this manual

If you have not yet installed DEC X.25 Client for OpenVMS Alpha Systems, then read this manual sequentially. If you have already performed the installation and need specific information on post-installation tasks, review the table of contents and go to the pages you need.

Note

This document is also available online in the text file:

```
SYS$HELP:X25CLIENT_V12_INSTALL_GDE.TXT.
```

At the end of this manual are two Reader's Comments forms. If you have any suggestions or criticisms that you think would improve this manual, please fill in one of the forms and return it to Digital.

Associated documentation

For information on the DEC X.25 Client for OpenVMS Alpha Systems online release notes, refer to Chapter 1.

For information on the POLYCENTER Software Installation Utility, refer to Chapter 3.

For general information on OpenVMS system management, refer to the OpenVMS operating system documentation set.

For help understanding OpenVMS system error messages, refer to the *OpenVMS System Messages and Recovery Procedures Reference Manual* or the online HELP /MESSAGE facility.

For information on how to license a product, refer to the *OpenVMS License Management Utility Manual*.

Product Documentation

The following manuals in the DEC X.25 Client for OpenVMS Alpha Systems documentation set may be useful to network managers.

- *DEC X.25 Client for OpenVMS Alpha Systems—Introduction*

  This manual provides general information on the product and describes the concept of packet switched networks.

- *DEC X.25 Client for OpenVMS Alpha Systems—Configuration Guide*

  This guide describes how to configure the product.

- *DEC X.25 Client for OpenVMS Alpha Systems—Management Guide*

  This manual describes how to manage and monitor an X.25 system, and details the tools provided to administer an X.25 system.

- *DEC X.25 Client for OpenVMS Alpha Systems—NCL Reference Manual*

  This manual details information on Network Control Language (NCL), which is used by the product's users to manage their networks.

- *DEC X.25 Client for OpenVMS Alpha Systems—Security Guide*

  This manual describes the X.25 Security model and the tasks required to manage X.25 Security.

- *DEC X.25 Client for OpenVMS Alpha Systems—Problem Solving Guide*

  This manual provides guidance on how to solve problems that may occur when using the product.

- *DEC X.25 Client for OpenVMS Alpha Systems—X.25 Accounting*

  This manuals describes how to use X.25 Accounting to obtain performance records and information on how X.25 is being used on your system.

Conventions

Table 1 lists the conventions used in this guide.

Table 1 Conventions

Convention	Meaning
UPPERCASE TEXT	Uppercase text indicates the name of a command, a file, a parameter, a procedure, or utility.
$ **@SYS$UPDATE:VMSINSTAL**	In interactive examples, prompts or displayed text appears in a monospace font. User input appears in a bold monospace font.
Ctrl/x	In interactive examples, 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; for example, Ctrl/C or Ctrl/Z.
[YES]	In an installation prompt, square brackets indicate that the enclosed item is a default value. Square brackets also serve as delimiters for a directory name in a file specification.

1

What You Need to Know

Product Description

DEC X.25 Client for OpenVMS Alpha Systems enables appropriately configured systems to connect to an X.25 Packet Switched Data Network (PSDN) via an X.25 relay node on the same Local Area Network (LAN), via an X.25 connector node, or directly using a synchronous communications device. Full details of the features and facilities provided by DEC X.25 Client for OpenVMS Alpha Systems are provided in the Software Product Description (47.37.00).

Throughout the rest of this guide, the product DEC X.25 Client for OpenVMS Alpha Systems is referred to as X.25.

Pre–requisite Information

Table 1–1 summarises the information that you should be aware of before installing X.25 Client. Details of these topic areas are provided in the remainder of this chapter.

Table 1–1 Information Summary

Task	Title
1	Required Hardware
2	Required Software
3	Recommended Order for Installing Software
4	Kit Location
5	Time Required to Install

Required Hardware

To install X.25 the following hardware is required:

- a CD Reader; and
- a terminal.

  You can use either a hardcopy or video terminal to communicate with the operating system and respond to prompts from the installation procedure.

If you intend to run X.25 over a LAN (using LLC2) or to access a PSDN directly, an appropriate synchronous interface card is required. For details of the synchronous communications devices supported, refer to the System Support Addendum. The SSA is supplied with the X.25 Software Product Description (SPD) on the Media CD.

Required Software

X.25 Client, V1.2, requires Version X6.1 of the OpenVMS Alpha operating system. Future X.25 Client releases may require higher versions of the operating system, as described in the online release notes associated with that product release.

The X.25 installation kit must be installed using the POLYCENTER Software Installation Utility. This utility is provided as part of the operating system software.

In addition to the OpenVMS Alpha operating system, X.25 Client requires the following product to be installed:

DECnet/OSI for OpenVMS Alpha Systems

Recommended Order for Installing Software

If you choose to install all the required software products at the same time, install the OpenVMS operating system and layered products in the following order:

1. OpenVMS Alpha operating system
2. DECnet/OSI for OpenVMS Alpha Systems
3. X.25 for OpenVMS Alpha Systems

During the installation of X.25, a check is made for the required DECnet and WANDD software. If the DECnet software is not present, you are prompted to install install it before proceeding. If the WANDD software is not present, the X.25 installation procedure automatically installs it. Note that X.25 **cannot** be run without the DECnet software.

Kit Location

To obtain the directory location of the X.25 kit on the CD, refer to the *OpenVMS Alpha Layered Products Compact Disc User's Guide* that accompanies the CD distribution kit, or before starting installation, complete the following steps:

1. To determine whether the CD drive is already mounted (MOUNT command), enter the following command:

   ```
   $ SHOW DEVICE device-name
   ```

2. If it is not mounted, enter the appropriate MOUNT command to mount to CD (omit the /FOREIGN qualifier).
3. To obtain the save–set name, use a DIRECTORY command specifying the directory file from the previous command:

   ```
   $ DIRECTORY DKA400:[kits]*.PCSI
   ```

Time Required to Install

The time required to install X.25 Client depends on the media type, the CPU type, and your system configuration. In general, the procedure should require less than 5 minutes.

2
Preparing for Installation

This chapter details the tasks that need to be completed or considered **before** attempting to install X.25 Client.

Table 2–1 summarises the tasks. Details about each task are provided after Table 2–1.

Table 2–1 Pre-installation Task Summary

Task	Task Description
1	Inspect the Distribution Kit
2	Log In to a Privileged Account
3	Access the Online Release Notes
4	Determine Process Account Quotas
5	Determine Disk Space
6	Perform System Maintenance Procedures
7	Back Up Your System Disk

Inspect the Distribution Kit

The software Bill of Materials (BOM) included with your distribution kit shows the components of the kit. Compare the items you received against the BOM. Report any damaged or missing components to Digital before continuing with the installation.

Log In to a Privileged Account

To install X.25 Client, you must be logged in to an account that has SETPRV or at least the following privileges:

- CMKRNL
- WORLD
- SYSPRV

The POLYCENTER Software Installation Utility turns off BYPASS privilege at the start of the installation.

Determine your account privileges as follows:

Step	Command
1	Determine the default privileges of the installing account. Log in and enter the DCL command: `$ SHOW PROCESS/PRIVILEGES` If the account lacks the SETPRV privilege, proceed to step 2.

2	Do either of the following:
	
	• Ask your system manager to use AUTHORIZE to modify the default privileges of the account to include the SETPRV privilege
	
	• Run AUTHORIZE and make the changes yourself, if your account has the SYSPRV privilege:
	
	`$ SET DEFAULT SYS$SYSTEM`
	`$ RUN AUTHORIZE`
	`UAF> MODIFY account-name/PRIVILEGES=(SETPRV)`
	`UAF> EXIT`

3	Activate the change in privileges. Log out and then log in again.

Access the Online Release Notes

X.25 Client provides online release notes. You should review the release notes because they describe new features and differences among multiple versions of X.25 Client, as well as changes in the installation procedure.

To access the release notes, issue the command:

```
$ PRODUCT EXTRACT RELEASE_NOTES X25CLIENT /SOURCE=DKA400:[kits]
        /FILE=filename
```

Note that in the above example, the directory in which the installation kit is located is referred to as DKA400:[kits]. You should substitute this directory name with the actual directory location of the X.25 Client kit. Details on how to determine the directory location of the X.25 Client kit are provided in **Kit Location**.

The product selected is displayed and you are prompted whether to continue with the extraction.

To extract the release notes, enter "Yes" and press Return. The release notes are written to the specified file, which can then be displayed or printed.

To cancel the extraction, enter "No" and press Return.

Note

After X.25 Client has been installed, the release notes file is located in:

```
SYS$HELP:X25CLIENT_V11_RELEASE_NOTES.TXT
```

Determine Process Account Quotas

The POLYCENTER Software Installation Utility requires that the installation account has as a minimum the quotas shown in Table 2–2.

Note that the values in Table 2–2 may change in future releases of the OpenVMS Alpha operating system.

Table 2–2 Process Quotas for the Installing Account

ASTLM	24
BIOLM	18
BYTLM	32768
DIOLM	18
ENQLM	200
FILLM	100

Use the OpenVMS Authorize Utility to verify and change process quotas for the installation account in the user authorization file (SYSUAF.DAT). (Some sites may restrict the use of the OpenVMS Authorize Utility to certain accounts or people.)

For example, to verify and then change the BYTLM quota for the *account-name* installation account, enter the following command sequence:

To...	Enter...
Invoke the Authorize Utility	$ **SET DEFAULT SYS$SYSTEM** $ **RUN AUTHORIZE**
Show the account quotas	UAF> **SHOW *account-name***
Modify the BYTLM quota	UAF> **MODIFY *account-name* /BYTLM = 32768**
Exit the Authorize Utility	UAF> **EXIT**
Log out	$ **LOGOUT**

After the quotas for the installation account have been changed, log out of the installation account and log in again for the new quotas to take effect. You can then proceed with the installation.

User account quotas are stored in the file SYSUAF.DAT. For more information on modifying account quotas, see the description of the Authorize Utility in the OpenVMS System Management documentation subkit.

Determine Disk Space

To install the EFT version of X.25 Client (including all the optional software components) your system requires approximately 12000 blocks of free disk storage space. This figure includes space to store the .TXT versions of the Release Notes and this Installation Guide in SYS$HELP.

If you do not want to install all the optional components, you should calculate the required disk space by refering to Table 2–3. Note that the disk space requirement for a specific component should be **added to** the disk space required for X.25 Client.

Table 2–3 Disk Space Requirements

Software Component	Approx. Required Disk Space (blocks)
X.25 Client	10330
X.29 Support	500
X.25 Mail	150
X.25 Accounting	100
Trace	570
Programming Examples	350

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

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

If necessary, create enough free disk space to accommodate the installation of X.25 Client.

Chapter 3 describes options the POLYCENTER Software Installation Utility provides if there is insufficient disk space to complete the X.25 Client installation.

Perform System Maintenance Procedures

This section explains how to use the System Generation Utility (SYSGEN) and the AUTOGEN Utility to prepare your system for an installation of X.25 Client. AUTOGEN uses system configuration data to automatically set system parameters.

X.25 Client requires the system parameter MAXBUF to have a minimum value of 2048.

Determine system parameter values

To determine the values of the system parameters:

Step	Action

1	Invoke the System Generation Utility (SYSGEN):
	
	`$ RUN SYS$SYSTEM:SYSGEN`
	`SYSGEN>`

Step	Action
2	At the SYSGEN> prompt, enter the SHOW command to display the value of a specific system parameter. The following example displays the value for the MAXBUF system parameter: `SYSGEN> SHOW MAXBUF`
3	After displaying the parameters with the SHOW command, enter the EXIT command at the SYSGEN> prompt to return to DCL level.

Calculate values for global pagelets and global sections

To install and run X.25 Client, you must have sufficient free global pagelets† and global sections. X.25 Client requires **at least**:

64 global pagelets
1 global section

You must first find out how many free global pagelets and sections are on your system, and then use AUTOGEN if you need to increase the global pagelets and global sections system parameters.

Step	Action

1	Use the WRITE command with the F$GETSYI lexical function to find the number of free global pagelets and global sections. The following example shows how to get this information at your terminal (the default for SYS$OUTPUT):
	`$ WRITE SYS$OUTPUT F$GETSYI("CONTIG_GBLPAGES")`
	`15848`
	`$ WRITE SYS$OUTPUT F$GETSYI("FREE_GBLSECTS")`
	`24`

2	Compare the values displayed with those required for X.25. • If the values displayed by the system are greater than the values required for X.25 Client, you do not need to increase the system parameter settings. • If one of the values is less than the value required for X.25 Client, you must increase the system parameter setting using AUTOGEN. Proceed to the next section.

Change system parameter values with AUTOGEN

Use the AUTOGEN command procedure to change system parameters. AUTOGEN automatically adjusts values for parameters that are associated with the values you reset manually.

Step	Action
1	Edit the following file: `SYS$SYSTEM:MODPARAMS.DAT`
2	To change a parameter value, delete the current value associated with that parameter and enter the new value.

† On OpenVMS Alpha architectures, the term "pagelet" denotes a 512-byte quantity of memory equivalent to a memory page on VAX systems.

Step	Action
3	To add a new parameter, add a line to the file that includes both the name of the parameter and its value. For example: **WSMAX = 8096**
4	To modify incremental parameters such as free global pagelets and global sections, use the ADD_ prefix. The following example increases the global page setting by 2000: **ADD_GBLPAGES = 2000** Note that when you set the page file quota, do not use a value that exceeds the amount of page file space available on the system. After you make all your changes, exit from the editor.
5	Execute the AUTOGEN procedure to recalculate your system parameters. The following command recalculates your system parameters and reboots the system: $ **@SYS$UPDATE:AUTOGEN GETDATA REBOOT** When you specify REBOOT, AUTOGEN performs an automatic system shutdown and then reboots the system. Any users logged on to the system are immediately disconnected during the shutdown. The automatic reboot puts the new parameter values into effect.

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

For more information about using AUTOGEN, refer to the system management documentation for your operating system.

Set dynamic system parameter values

Use the System Generation Utility (SYSGEN) to set dynamic parameters. Dynamic parameters changed with the SYSGEN command WRITE ACTIVE become active immediately without any need to reboot your system. In fact, rebooting returns dynamic system parameter values to their previous settings.

Once you change dynamic parameter values, you should complete the installation before rebooting the system. After you finish with the installation, you can reset the dynamic parameters to their previous values or let them be reset automatically when you next reboot your system.

If the dynamic parameter value of MAXBUF on your system is less than 2048, use the following series of commands to change the value:

```
$ RUN SYS$SYSTEM:SYSGEN
SYSGEN> USE ACTIVE
SYSGEN> SET MAXBUF 2048
SYSGEN> WRITE ACTIVE
SYSGEN> EXIT
```

Back Up Your System Disk

Digital recommends that you back up your system disk before installing any software. Use the backup procedures that are established at your site. For details on performing a system backup, refer to the OpenVMS system management documentation.

3
Installing X.25 Client

To install X.25 Client a number of simple tasks need to be performed. Table 3–1 summarizes the tasks to be completed.

Table 3–1 Installation Task Summary

Task	Task Description
1	Register the X.25 Software License
2	Starting the Installation of X.25 Client
3	Using DCL Help
4	Using Motif Help
5	Installation Defaults
6	Creating and Using a Product Configuration File
7	Verifying Pre-installation Tasks
8	Stopping and Restarting the Installation
9	Responding to Installation Questions
10	Resolving Conflicts
11	Installation Progress
12	Recovering from Errors

In addition, this chapter provides details on how to display a list of the files installed on your system during the installation of X.25 Client. Refer to **Files Installed on Your System**.

Appendix A provides an annotated example of the prompt and response sequence during a typical installation of X.25 Client.

Register the X.25 Client Software License

Before you run X.25 Client on a newly licensed node, you must first register a License Product Authorization Key (License PAK) using the License Management Facility (LMF). The License PAK may be shipped along with the kit if you ordered the license and media together; otherwise it is shipped separately to a location based on your license order. If you are installing X.25 Client as an update on a node already licensed for this software, you have already completed the License PAK registration requirements.

For information on using LMF, refer to the *OpenVMS License Management Utility Manual*.

If you are installing pre-requisite or optional software along with X.25 Client, review the PAK status and install the PAKs for any pre-requisite or optional software before you install X.25 Client.

You must register and load your license for X.25 Client to use the software.

Full details of the licensing requirements are provided in the Software Product Description (SPD) on the media CD.

Starting the Installation of X.25 Client

X.25 Client can be installed using the DCL or Motif interface. Details of using each of these interfaces to install X.25 Client are provided in the following sections.

For a description of all the features you can request when starting an installation, such as purging files, and using a product configuration file, refer to DCL help for the PRODUCT INSTALL command or Motif help.

Full details of using the POLYCENTER Software Installation Utility to install and manage software products on your system are provided in the *POLYCENTER Software Installation Utility User's Guide*.

Using the DCL Interface

To install X.25 Client using the DCL interface, enter the following command:

```
$ PRODUCT INSTALL X25CLIENT /SOURCE=DKA400:[kits] /DEST=SYS$SYSROOT
```

If the /SOURCE qualifier is not used, an attempt is made to read the installation kit from PCSI$SOURCE:[KITS].

Note that in the above example, the directory on the CD in which the installation kit is located is referred to as DKA400:[kits]. You should substitute this directory name with the actual directory location of the X.25 Client kit. Details on how to determine the directory location of the X.25 Client kit are provided in **Kit Location**.

Using the Motif Interface

To invoke the Motif interface, enter the following commands at the DCL prompt ($):

```
$ SET DISPLAY /CREATE /NODE="<name>" /TRANSPORT=<transport-name>
$ PRODUCT
```

You can now select to install X.25 Client.

Using DCL Help

The following DCL help option is are available.

Option	Action
1	Type the DCL command HELP PRODUCT, followed by the name of a POLYCENTER Software Installation Utility command (for example, HELP PRODUCT INSTALL).

DCL command summary

DCL help for the following PRODUCT commands describes all the tasks you can perform from the DCL interface.

PRODUCT Command	Qualifiers
CONFIGURE Creates a product configuration file (PCF) for one or more products in reference format. Optionally, uses the values in an existing PCF to create the new PCF.	*/CONFIGURATION* */HELP* */LOG* */OUTPUT*
COPY Manipulates a product distribution. You can use copy to create a sequential copy from a reference copy, a reference copy from a sequential copy, or to create a copy without changing the format.	*/DESTINATION* */FORMAT* */HELP* */LOG* */OUTPUT* */OWNER_UIC* */SOURCE*
EXTRACT RELEASE_NOTES Accesses the release notes for the selected product or group of products.	*/DISPLAY* */LOG* */OUTPUT* */SOURCE*
FIND Looks at the distribution media and reports on what it finds there.	*/LOG* */OUTPUT* */SOURCE*
INSTALL Installs one or more software products on your system.	*/CONFIGURATION* */DESTINATION* */HELP* */LOG* */OUTPUT* */PURGE* */REMARK* */SOURCE* */TEST* */WORK*
RECONFIGURE Changes the active configuration choices for a product.	*/CONFIGURATION* */HELP* */LOG* */OUTPUT* */REMARK* */SOURCE*
REGISTER PROCESSOR Adds a processor in a computing facility. Used primarily within a DCL command procedure during system startup.	*/BASE_SYSTEM* */BOOTSTRAP* */DESTINATION* */GLOBAL* */HELP* */LOG* */OPERATING* */OUTPUT* */REMARK*
REGISTER PRODUCT Registers a product in the product database.	*/DESTINATION* */HELP* */LOG* */OUTPUT* */REMARK* */SOURCE*
REGISTER VOLUME For a volume containing installed products, records a change in volume label in the product database.	*/HELP* */LOG* */OUTPUT*

PRODUCT Command	Qualifiers
REMOVE Removes a software product from your system and the product database.	*/HELP* */LOG* */OUTPUT* */REMARK* */WORK*
SHOW FILE Displays information about files created during a software product installation.	*/BRIEF* */DEVICE* */DIRECTORY* */FULL* */PRODUCT*
SHOW HISTORY Displays a log of actions, users, and remarks that apply to a particular product.	*/ACTION* */BEFORE* */BRIEF* */FULL* */REMARK* */SINCE* */STATE* */USER*
SHOW PRODUCT Displays information about the products installed on your system.	*/ACTION* */BEFORE* */BRIEF* */DEVICE* */DIRECTORY* */FILE* */FULL* */LINK* */PATCHED* */SINCE* */SOFTWARE* */STATE* */STATUS* */USER*
UNREGISTER PROCESSOR Removes a processor from a computing facility. Used primarily within a DCL command procedure during system startup.	*/HELP* */LOG* */OUTPUT* */PURGE* */REMARK*

Using Motif Help

The following Motif help options are available.

Option	Action
1	Choose On C ontext from the H elp menu. For a description of objects and labels in the main window, move the resulting ? to a screen object or label and click MB1.
2	Choose O n Window from the H elp menu. For a description of how fonts are used to convey different types of information, double click the **List Box Display Conventions** topic. Double click other help topics for information on how to perform a specific task.
3	Double click option names that are preceded by a right arrow ⟹ in the Selected Products to be Installed list box. For a full description of suboptions (if provided), continue clicking on the resulting right arrow ⟹ that precedes each suboption.

Option	Action
4	Choose On H elp from the H elp menu to learn more about using the online help system.

Motif help topics

Motif help on the following topics describes how to get started performing a task from the Motif interface.

Step	Help Topic
1	Select the task.
2	Select one or more products.
3	Select product options.
4	Start the task.

For information about how you can customize menus by adding and removing menu items, refer to the Customize help topic for each menu.

Creating and Using a Product Configuration File

Some software products require you to make a set of choices when you install the product. For example, if you are installing a tool that checks spelling, you might choose which languages you want to include. When you use the POLYCENTER Software Installation Utility, you can select the options for a product (that is, configure it) in one of three ways:

- By creating a product configuration file (PCF), before you install the product
- By responding to questions asked during the installation procedure
- By modifying your choices after you install a product

By saving your answers in a PCF and using the file for subsequent installations, you can reduce or eliminate the questions asked when you install a product. You can also create multiple PCFs for each product. This lets you customize software installations for unique hardware situations or for different usage patterns within a group.

If you create a PCF as a separate operation, rather than as part of the installation procedure, you can determine whether and how your choices are recorded in the PCF. You have the following options:

- *Saving your answer.* You can specify that your response to an installation question (rather than the current default value) be stored in the PCF.
- *Using your answer only once.* You can answer a question without recording your answer in the PCF. This is useful for responding to questions that are specific to a single system (such as a DECnet node name) or installation (such as a time setting).
- *Deferring a question so that it is asked again during a future installation.* For example, you might want an installer to verify that a particular response is still valid for the systems on which each installation is being performed.
- *Preventing a question from being asked again.* If you do not defer a question when you create a PCF, the default response recorded in the PCF is used during future installations. The installer is not prompted for the information. This reduces the length and complexity of the actual installation procedure.

Interface	Help Topic
DCL	PRODUCT CONFIGURE PRODUCT RECONFIGURE
Motif	Creating a Product Configuration File Using an Existing Product Configuration File Supplying Answers from a Product Configuration File Making and Saving Product Configuration Choices Before Installation

Verifying Pre-installation Tasks

The POLYCENTER Software Installation Utility verifies that any or all of the following are true, depending on your product:

- You are logged in to a privileged account.

  It is good practice to install software from the system manager's account with your default device and directory set to SYS$UPDATE.

- Quotas, system parameters, disk space, [and memory] for installation are adequate.

  The POLYCENTER Software Installation Utility checks for the quota values specified in Chapter 2. If sufficient disk space is not found, the installation procedure provides options:

  - You can restart the installation and specify another disk to use as an alternate working device for the temporary working directory. See Chapter 2 for information about how to use an alternate working device.
  - You can abort the installation and then create more disk space on the system disk. The *OpenVMS Upgrade and Installation Manual* and *OpenVMS DECwindows Motif Installation Guide* describe how to use tailoring utilities so that you can delete files and create more disk space.

  If you lack sufficient free disk space for installation or have no other disk to use as an alternate working device, the installation procedure exits.

- OpenVMS Alpha Version V6.1 is installed.
- Users have logged out.

When the POLYCENTER Software Installation Utility detects a problem in any of these areas, it asks if you want to continue the installation. If you want to continue, type YES. If you want to stop the installation, press Return.

Stopping and Restarting the Installation

Depending on the interface to your system, use the appropriate one of the following procedures to stop and restart the installation:

Interface	Action
DCL	To stop the procedure at any time: 1. Press Ctrl/Y 2. Enter the command PRODUCT REMOVE X25-CLIENT to reverse any changes to the system that occurred during the partial installation. This command deletes all files created up to that point and causes the installation procedure to exit. To restart the installation, refer to **Starting the Installation of X.25 Client**.
Motif	To close the POLYCENTER Software Installation Utility window: • Choose End Session from the Session menu.

Responding to Installation Questions

The following are valid responses to questions asked during an installation:

- Enter your own value and press the <Return> key
- Press the <Return> key to accept a default value
- Press the defer key (F17 or ~D) to ask the same question during future installations.
- Press F18 (or ~W) if you do not want to record the answer as the default value in the PCF.
- Press the noexpand key (F19) to accept default values for a subset of options

Interface	Help Topics
DCL	Performing the installation as a batch job
Motif	Getting an Online Description of Options Selecting Product Options Supplying Answers from a Product Configuration File

Resolving Conflicts

The POLYCENTER Software Installation Utility resolves some conflicts automatically. For other types of conflicts, the POLYCENTER Software Installation Utility provides feedback on the nature of the conflict, letting you decide how you want to proceed.

Similarly, if the correct version of OpenVMS Alpha is installed and you elect not to use the default values when installing X.25 Client, the Software Integrator warns you that you will need to use the RECONFIGURE option if you want to change the version of OpenVMS Alpha to be used.

Determining Installation Progress

As an installation procedure progresses, the system displays a percentage to indicate how much of the installation has been completed. For example:

```
Percent Done: 15%...30%...46%...61%...76%...92%
%POLYCENTER Software Installation Utility-I-SUCCESS, operation
                                ... completed successfully
```

If you started the installation using the /LOG qualifier, the system displays details of the installation.

Recovering from Errors

This section describes how to recover from errors during product installation.

If the installation of X.25 Client fails for any reason, the following message is displayed:

```
%POLYCENTER Software Installation Utility INSTAL-E-INSFAIL, The
... installation of X.25 Client for OpenVMS Alpha V1.2 has failed.
```

In addition to this message, brief details of why the error occurred are displayed.

If the installation fails, you must restart the installation procedure (refer to **Starting the Installation of X.25 Client**).

An error during the installation can occur if one or more of the following conditions exist:

- The operating system version is incorrect.
- The prerequisite software version is incorrect.
- Quotas necessary for successful installation of X.25 Client are inadequate.
- Process quotas required by the POLYCENTER Software Installation Utility are inadequate (see Chapter 2).
- The OpenVMS Help library is currently in use.

If you are notified that any of these conditions exist, you should take the appropriate action as described in the message. For an explanation of any system messages, refer to the *OpenVMS System Messages and Recovery Procedures Reference Manual* or the online HELP/MESSAGE facility.

Files Installed on Your System

The X.25 Client installation procedure installs a number of files on your system. To list the files, enter the command:

```
$ PRODUCT SHOW OBJECT /PRODUCT=X25CLIENT
```

4
Post-installation Tasks

Table 4–1 summarizes the tasks that should be performed after X.25 Client has been installed.

Table 4–1 Post-installation Task Summary

Task	Task Description
1	Edit the System Startup and Shutdown Files
2	Configure X.25 Client
3	Set User Account Privileges
4	Activate the New DCL Command Table
5	Reboot the System
6	Start the X.25 Client Software

In addition, this chapter details how to de-install X.25 Client (refer to **De-installing X.25**) and what to do if you have problems while using X.25 Client (refer to **Determining and Reporting Problems**).

Edit the System Startup and Shutdown Files

You must edit the system startup and shutdown files to provide for automatic startup and shutdown of X.25 Client when your system is rebooted.

Step	Action

1	Add the command line that starts X.25 Client to the system startup file, SYS$MANAGER:SYSTARTUP_VMS.COM.
	The following example shows the network startup command line followed by the X.25 Client startup command line:
	`$ @SYS$MANAGER:STARTNET.COM`
	`.`
	`.`
	`.`
	`$ IF F$SEARCH ("SYS$STARTUP:X25$STARTUP.COM") .NES. "" THEN @SYS$STARTUP:X25$STARTUP`
	X.25 Client cannot start until after the network has started. You must position this new command line after the line that invokes the network startup command procedure.

2	Add the following command line to the system shutdown file, SYS$MANAGER:SYSHUTDWN.COM: `$ IF F$SEARCH ("SYS$STARTUP:X25$SHUTDOWN.COM") .NES. "" THEN @SYS$STARTUP:X25SHUTDOWN`
3	Add the following command line to SYLOGIN.COM: `$ IF F$SEARCH ("SYS$MANAGER:X25$SYLOGIN.COM") .NES. "" THEN @SYS$MANAGER:X25SYSLOGIN`

Configure X.25 Client

Once X.25 Client has been installed, your system needs to be configured.

Full details on how to configure the product are provided in the *DEC X.25 Client for OpenVMS Alpha Systems - Configuration Guide*.

Set User Account Privileges

To use X.25 Client, each account must have **at least** the following privileges:

TMPMBX
NETMBX
PSI$X25_USER
PSI$DECLNAME

Use the OpenVMS Authorize Utility to determine whether users have the privileges they require.

Activate the New DCL Command Table

The installation procedure modifies the DCL command table so that X.25 Client specific commands are recognized and processed. However, the previous command table is still in effect for users who are currently logged in.

To use the X.25 Client specific commands, users must either log out and then log in again, or issue the following DCL command:

```
$ SET COMMAND /TABLES=SYS$LIBRARY:DCLTABLES
```

Reboot the System

Once you have completed the required post-installation tasks, reboot the system.

Start the X.25 Client Software

Provided that you have edited the system startup file correctly, the X.25 Client software is started automatically when you reboot the system on which it is installed.

To start the X.25 Client software manually, enter the following command from the SYSTEM account:

```
$ @SYS$STARTUP:X25$STARTUP.COM
```

De-installing X.25 Client

To de-install X.25 Client, enter the command:

```
$ PRODUCT REMOVE X25CLIENT
```

Invoking this command automatically calls the shutdown procedure before removing the product files. Note that complete shutdown of X.25 Client does not occur until the system is next rebooted. An annotated example of the de-installation prompt and response sequence presented is provided in Appendix B.

To invoke the shutdown procedure manually, enter the following command from the SYSTEM account:

```
$ @SYS$STARTUP:X25$SHUTDOWN.COM
```

Note

You do not have to remove X.25 Client before re-installing the same or a different version. If a version of the product exists on the system on which you are attempting to install the same or another version of the product, the Software Integrator will warn you that a version of the product is already installed. You can then choose whether to continue with the installation.

After de-installing the product:

1. Remove or comment out

   @SYS$STARTUP:X25$STARTUP.COM

   from SYS$MANAGER:SYS$STARTUP_VMS.COM

2. Remove or comment out

   @SYS$STARTUP:X25$SHUTDOWN.COM

   from SYS$MANAGER:SYSHUTDWN.COM

Determining and Reporting Problems

If you encounter a problem while using X.25 Client, please report it to Digital. Depending on the nature of the problem and the type of support you have, you can take one of the following actions:

- If your software contract or warranty agreement entitles you to telephone support, call Digital.
- Submit a Software Performance Report (SPR).
- If the problem is related to X.25 Client documentation, fill out and submit a Reader's Comments form located at the back of each manual. Use the form from the manual in which you found the error. Include the section and page number.

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

When you submit an SPR, please take the following steps:

1. Describe as accurately as possible the circumstances and state of the system when the problem occurred. Include in the description the version number of X.25 Client being used. Demonstrate the problem with specific examples.
2. Describe the problem as concisely as possible.
3. Remember to include listings of any command files, INCLUDE files, relevant data files, and so forth.
4. Provide a listing of the program.
5. If the program is longer than 50 lines, submit a copy of it on machine-readable media (floppy diskette or magnetic tape). If necessary, also submit a copy of the program library used to build the application.
6. Mail the SPR to Digital.

Experience shows that many SPRs do not contain enough information to duplicate or identify the problem. Concise, complete information helps Digital give accurate and timely service to software problems.

A

Example Installation

This appendix provides an annotated example that shows the prompt and response sequence presented when the POLYCENTER Software Installation Utility is run using the DCL interface to install X.25 Client. In this example, numbered callouts (❶, ❷, ❸, . . .) are used to indicate parts of the prompt and response sequence for which additional explanatory notes are provided. Such notes are given at the end of the example.

```
$ PRODUCT INSTALL X25CLIENT /SOURCE=DKA300:[KITS]  ❶

The following product has been selected:
DEC Alpha VMS X25CLIENT V1.2

Do you want to continue? [YES] Return

*** DEC Alpha VMS X25CLIENT V1.2: X.25 Client for OpenVMS Alpha V1.2

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Digital Equipment Corporation

Do you want all the default values for this product? [YES] Return ❷

This product uses the PAK: X25-CLIENT

The X25-CLIENT PAK should be loaded before continuing installation.
Do you want to continue? [YES]

DECnet IV (not DECnet/OSI) is required. Check this before continuing.
Do you want to continue? [YES]
Do you want to view the values? [NO] yes Return ❸


%PCSIUI-I-DONEASK, execution phase starting
The following product will be installed:
DEC Alpha VMS X25CLIENT V1.2
%PCSI-I-VOLINFO, estimated space information for volume DISK$AXPVMSSYS
-PCSI-I-VOLSPC, 12000 required; 1149300 available; 1137300 net
Portion Done: 10%...20%...30%...40%...50%...60%...70%...80%...90%...100%
The following product has been installed:

DEC Alpha VMS X25CLIENT V1.2

*** DEC Alpha VMS X25CLIENT V1.2: X.25 Client for OpenVMS Alpha V1.2

Insert the following lines in SYS$MANAGER:SYSTARTUP_VMS.COM:     ❹
        @sys$startup:x25$startup.com

Insert the following lines in SYS$MANAGER:SYSHUTDWN.COM:
        @sys$startup:x25$shutdown.com

Users of this product require the following lines in their login
command procedure:
        @sys$manager:x25$sylogin.com                                ❺

This product requires the following SYSGEN parameters:
        MAXBUF minimum 2048                                         ❻

$
```

Example Installation

Notes on Example Prompt and Response Sequence

❶ This command invokes the installation procedure for X.25 Client. The SOURCE and DESTINATION qualifiers have been used to define the location of the source files and the required location for the installed software.

❷ To accept the default values for the available installation options, enter "Yes" or press Return.

To enter values other than the default values, enter "No". In this case, the installation procedure prompts you to enter values for each of the installation options.

❸ The X.25 Client Licence PAK must be registered and loaded before X.25 Client can be started. Details about registering the X.25 Client License PAK are given in Register the X.25 Client Software License. If the X.25 Client License PAK is not loaded before completing the installation, X25$STARTUP (which is normally run automatically at the end of the installation) must be run manually after loading the License PAK.

❹ Responding "Yes" to this question displays the currently selected values for the installation options and prompts you to verify that the selections are correct. If you do not want to view and confirm the options selected, enter "No" or press Return.

❺ The installation utility has determined that this product has a dependency on OpenVMS Alpha Version V6.1. The correct version of OpenVMS Alpha has been installed.

If OpenVMS Alpha has not been installed, you are prompted whether to continue with the installation of X.25 Client and install the missing product, or discontinue the installation.

❻ Edit the system startup and shutdown files to include the specified commands. These commands ensure that X.25 Client is automatically started up when your system is rebooted, and is shut down when the system is shut down.

❼ Edit SYLOGIN.COM to add the specified command.

❽ Ensure that the SYSGEN parameter MAXBUF is set to a value of **at least** 2048. For details on determining the current settings of, and changing,for system parameter values, refer to **Determine system parameter values** and **Set dynamic system parameter values** respectively.

B

Example De-installation

This appendix provides an annotated example that shows the prompt and response sequence presented when the POLYCENTER Software Installation Utility is run using the DCL interface to de-install X.25 Client. In this example, numbered callouts (❶, ❷, ❸, . . .) are used to indicate parts of the prompt and response sequence for which additional explanatory notes are provided. Such notes are given at the end of the example.

```
$ PRODUCT REMOVE X25CLIENT     ❶

The following product has been selected:
DEC Alpha VMS X25CLIENT V1.2

Do you want to continue? [YES] Return     ❷
The following product will be removed:
DEC Alpha VMS X25CLIENT V1.2
%PCSI-I-VOLINFO, estimated space information for volume DISK$AVMS061FT6
-PCSI-I-VOLSPC, -11187 required; 1401780 available; 1412967 net
Portion Done: 10%...30%...40%...50%...60%...70%...80%...90%...100%

The following product has been removed:
DEC Alpha VMS X25CLIENT V1.2
$
```

Notes on Example Prompt and Response Sequence

❶ This command invokes the de-installation procedure for X.25 Client.

❷ To continue with the de-installation, enter "Yes" or press Return in response to this question. To abort the de-installation, enter "No". This action should be taken only if you decide not to de-install the product.

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