VAX Storage Library System Installation Guide

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Preface

This document contains installation instructions for the VAX Storage Library System software.

Purpose of This Document

This manual is a guide for installing VAX SLS (Storage Library System) server and client software. Each installation procedure will result in the placement of software on the system in a condition ready for configuration.

Applicability: This document applies to VAX SLS Version 2.1 software and all maintenance updates to, but not including, the next major version.

What is not covered: This manual does not contain information you need to configure your system to meet your site-specific needs.

Before You Continue

Please take note of the following:

- Keep this document with your distribution kit. You must refer to it again if you receive any maintenance updates or need to reinstall the VAX Storage Library System software for any reason.
- At the back of this manual is a Reader's Comment Card. If you have any comments about this manual, please fill it out and mail it.
- This document does not provide release notes information. Release notes are provided on line. You can read the release notes after completing the installation procedure by entering:

```
$ TYPE SYS$HELP:SLS021.RELEASE_NOTES
```

Intended Audience

This manual is intended for anyone who must install the VAX SLS software. In most cases, VAX SLS software is installed by an experienced VMS system manager. Basic VMS system management skills are assumed.

Associated Documents

- System Manager Subkit of the VMS documentation set, specifically:
  - *VMS Authorize Utility Manual*
  - *VMS Backup Utility Manual*
  - *Guide to DECnet–VAX Networking*
  - *Guide to Maintaining a VMS System*
- *VMS License Management Utility Manual*
- *VMS System Messages and Recovery Procedures Reference Volume*
- Your processor-specific installation/operations guide
- *VAX Jukebox Control Software Installation Guide*
- *Optical Planning Guide*

Conventions

`Starting test...`	This type font denotes system response and user input.
Return	A key name enclosed in a box indicates that you press that key.
Ctrl/X	Hold down the key labeled Ctrl (Control) and the specified key simultaneously.
[ ]	Square brackets enclose default answers to question prompts during interactive procedures (for example, [YES]). To select a default, press the Return key.
Italics	Indicates variable system information or information for which you must supply a value.
. . .	A vertical ellipsis indicates the omission of information from an example or command format. The information has been omitted because it is not important to the topic being discussed.
VAX SLS	Throughout this document, VAX SLS refers to the VAX Storage Library System Version 2.1 software.

New and Changed Features

Version 2.1 of VAX Storage Library System features

- a high-availability server that takes advantage of the VAXcluster system environment
- support for the TA90E Magnetic Tape Subsystem data compaction and record blocking
- up-to-date and reorganized documentation, and
- a new system backup error handling process.

For further information on features, enhancements, and fixes in this version, refer to the on-line release notes, SYS$HELP:SLS021.RELEASE_NOTES.

The Version 2.1 documentation set has been updated and contains the following manuals:

- *VAX Storage Library System User's Guide*
- *VAX Storage Library System Operator's Guide*
- *VAX Storage Library System Installation Guide*
- *VAX Storage Library System Storage Administrator's Guide*
- *VAX Storage Library System Release Notes*

1

Installing VAX SLS Full-Function Software

This chapter describes how to prepare for and conduct the installation of VAX SLS (VAX Storage Library System) full-function software.

1.1 Preparing for Installation

Before you install VAX SLS full-function software, you must fulfill some prerequisites. The following table lists these requirements.

Stage	Action
1	Verify operating system and layered software components.
2	Verify installation storage requirements and where the images will be installed.
3	If you are running a previous version of VAX SLS software, remove it from the system.
4	Register the Product Authorization Key.

1.1.1 Verifying Operating System and Layered Software Components

This section describes how to begin the installation process by verifying the required VMS operating system classes and layered software products required for installing and executing VAX SLS full-function software.

1.1.1.1 Account, privileges, and quotas

Log in to the SYSTEM account and enable all privileges to prepare and install VAX SLS full-function software.

Quota requirement: If your SYSTEM account quotas are set to the same or higher values as the defaults provided with the VMS operating system, you should have no problem with the installation.

1.1.1.2 Required VMS operating system components

If your system has been modified with the VMSTAILOR utility, you should verify the following VMS operating system classes are still resident on the system disk.

- Network support
- Programming support
- Secure user's environment
- System programming environment
- Utilities, and
- VMS required save set.

More information: For more information, refer to the *VMS V5.4 Upgrade and Installation Procedures Manual.*

1.1.1.3 Prerequisite software requirements

Before you install the VAX Storage Library System, you must have the following software installed.

- VMS operating system, Version 5.2 or later
- DECnet communications software
- VAX Forms Management System (FMS), run-time only

1.1.1.4 Prerequisite hardware requirements

Before you install the VAX Storage Library System, your minimum hardware requirements are

- four megabytes of memory
- one or more tape drives or optical disks, and
- one disk, such as a Digital RD- or RA-series disk.

1.1.1.5 Jukebox control software

If you plan to support the RV64 Jukebox Subsystem, you must install VAX JCS (Jukebox Control Software) before installing VAX SLS software.

1.1.2 Planning Disk Use

This section describes disk use planning for the purpose of installation only.

1.1.2.1 Determining free blocks on current system disk

Use this DCL command to determine the number of free blocks available on your current system disk.

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

1.1.2.2 Planning for VAX SLS full-function installation

Follow the steps in Table 1–1 to ensure you have enough disk space to install VAX SLS full-function software.

Table 1–1 Planning VAX SLS Full-Function Software Disk Space

Step	Action
1	Ensure you have at least 4,900 free blocks on your system disk.
2	Choose the disk on which you want to install the VAX SLS full-function software, and ensure you have at least 3,500 blocks free.
3	Make a note of this disk for the VMSINSTAL procedure.

1.1.3 Removing Previous Version Images

If you are running a previous version of VAX SLS software, you must shut it down on all nodes before you can install the VAX SLS full-function software.

1.1.3.1 Shutting down and removing a previous version

Follow the steps in Table 1–2 to shut down VAX SLS software.

Table 1–2 Shutting Down VAX SLS Software

Step	Action
1	Shut down the VAX SLS software with this command `$ @SLS$SYSTEM:SLS$SHUTDOWN`
2	Remove any images or message files from the previous version of VAX SLS software.

1.1.4 How to Register Your VAX SLS License

This section describes the licensing requirement and how to register the VAX SLS full-function software license.

1.1.4.1 VAX SLS full-function software installation kit and license name

The VAX SLS full-function software license name is **SLS**.

The VAX SLS full-function software kit name is **SLS021**.

1.1.4.2 Unloading the license from VAX SLS Version 2.0 software

Requirement: If you are upgrading from VAX SLS Version 2.0 software, you must unload the previous license.

Follow the steps in Table 2–3 to unload the VAX SLS software license. After completing this procedure, you may register the VAX SLS full-function software license.

Table 1–3 How to Unload the VAX SLS Software License

Step	Action
1	Obtain the authorization key value for the previous VAX SLS software license by entering this command at the VMS prompt. `$ LICENSE LIST SLS/FULL` Look for a license with a status of ''Active'' and write down the authorization key.

2	Cancel the previous VAX SLS software license by entering the following command and key authorization value at the VMS prompt.
	`$ LICENSE CANCEL SLS/AUTHORIZATION=key_value`
	`/TERMINATION=YESTERDAY`

(continued on next page)

Table 1–3 (Cont.) How to Unload the VAX SLS Software License

Step	Action
3	Disable the previous VAX SLS client software license by entering the following command and key authorization value at the VMS prompt. `$ LICENSE DISABLE SLS/AUTHORIZATION=key_value`
4	Unload the previous VAX SLS client software license by entering the following command at the VMS prompt. `$ LICENSE UNLOAD SLS`

1.1.4.3 Where to find registration information

The license registration information you need is contained in the Product Authorization Key (PAK). The PAK is a paper certificate that is shipped with the VAX SLS package.

1.1.4.4 Example VAX SLS full-function software PAK registration procedure

This example illustrates the two commands used in the PAK registration procedure.

Note: The values shown in the LICENSE REGISTER command are for example purposes only. Use the values from your PAK.

Command 1

```
$ LICENSE REGISTER SLS -
_$ /ISSUER="DEC" -
_$ /AUTHORIZATION=ALZ-QY-12345-67 -
_$ /PRODUCER="DEC" -
_$ /UNITS=35 -
_$ /DATE=29-JUL-1991 -
_$ /AVAILABILITY=E -
_$ /OPTIONS=(MOD_UNITS) -
_$ /CHECKSUM=1-FEEN-IPNE-VOTS-REYE
```

Command 2

```
$ LICENSE LOAD SLS
```

1.1.4.5 Command description

The two commands for the PAK registration procedure are listed in the following table.

Command number	VMS command	Value
1	LICENSE REGISTER Note: This is a multiline command. • All lines except last end with a hyphen (–), and • _$ prompt indicates continuation.	See your PAK
2	LICENSE LOAD	SLS

1.1.4.6 How to register your PAK

Follow the steps detailed in Table 1–4 to register your VAX SLS PAK.

Table 1–4 How to Register Your PAK

Step	Action
1	Invoke the LICENSE REGISTER command with the product name and a dash. `$ LICENSE REGISTER SLS -`

(continued on next page)

Table 1–4 (Cont.) How to Register Your PAK

Step	Action
2	Enter the issuer name, assigning the value DEC in quotes. `_$ /ISSUER="DEC" -`
3	Enter the AUTHORIZATION qualifier, assigning it the value from the AUTHORIZATION NUMBER entry of the PAK. `_$ /AUTHORIZATION=xxxxxxx -`
4	Enter the PRODUCER qualifier, assigning the value DEC in quotes. `_$ /PRODUCER="DEC" -`
5	Enter the UNITS qualifier, assigning the value from the UNITS entry of the PAK. `_$ /UNITS=nn -`
6	Enter the product's release date, assigning the value from the PRODUCT RELEASE DATE entry of the PAK. `_$ /DATE=dd-mmm-yyyy -`
7	Enter the AVAILABILITY qualifier, assigning the value from the AVAILABILITY TABLE CODE entry of the PAK. `_$ /AVAILABILITY=x -`

(continued on next page)

Table 1–4 (Cont.) How to Register Your PAK

Step	Action
8	Enter the OPTIONS qualifier, assigning the value from the KEY OPTIONS entry of the PAK. `_$ /OPTIONS=xxxxxx -`
9	Enter the CHECKSUM qualifier, assigning the value from the CH entry of the PAK. Important: Do NOT end the entry with a dash. `_$ /CHECKSUM=1-xxxx-xxxx-xxxx-xxxx`
10	Invoke the LICENSE LOAD command with the product name. `$ LICENSE LOAD SLS`

1.1.4.7 Preparing for installation

DECnet software and the VMS Queue Manager must be running when VAX SLS full-function software is installed. Follow the steps in Table 1–5 before continuing.

Table 1–5 Preparing for Installation

Step	Action
1	Enter the following command at the DCL prompt to start the DECnet software. `$ @SYS$MANAGER:STARTNET`

(continued on next page)

Table 1–5 (Cont.) Preparing for Installation

Step	Action
2	Enter the following command at the DCL prompt to start the VMS Queue Manager. `$ START/QUEUE/MANAGER` Note: Digital recommends you backup your system disk prior to installing VAX SLS software. Refer to the *VMS Backup Utility Manual* for more details.

1.2 VAX SLS Full-Function Software Installation

This section describes the execution of the VMSINSTAL utility to install VAX SLS software. By following the steps in the procedure, you will install the VAX SLS full-function software which will then be ready for post-installation procedures.

1.2.1 Installing VAX SLS Full-Function Software

This section describes the execution of the VMSINSTAL procedure for VAX SLS full-function software.

1.2.1.1 Before you begin

Time taken: The installation of full-function software will take approximately 30 minutes.

Getting help: VMSINSTAL provides additional information about the decisions for which you are required to respond. To get help at any prompt, enter ? and press Return.

Sample log file: A sample log file for VAX SLS full-function software installation is shown in Appendix A.

Aborting: To abort the installation process, enter Ctrl/Y.

Note

You must restart the installation from the beginning if you abort the VMSINSTAL procedure.

1.2.1.2 How to install VAX SLS full-function software

Follow the steps in Table 1–6 to install VAX SLS full-function software.

Table 1–6 How to Install VAX SLS Full-Function Software

Step	Action
1	Load and mount the media.
2	At the VMS prompt, invoke the VMSINSTAL procedure with this DCL command. `$@SYS$UPDATE:VMSINSTAL SLS021 location: OPTIONS N` location: is the device or directory that contains the installation save set.

3	IF you see these messages
	`%VMSINSTAL-W-ACTIVE, The following processes are still active`
	`* Do you want to continue anyway [NO]?`
	enter **Y** and press Return.
	ELSE proceed with step 3.

4	Confirm the state of the system backup. `* Are you satisfied with the backup of your system disk [Yes]?` Press Return.

(continued on next page)

Table 1–6 (Cont.) How to Install VAX SLS Full-Function Software

Step	Action

5	Respond to the Release Notes option.
	`Release notes included with this kit are always copied to SYS$HELP.`
	`Additional Release Notes Options:`
	`1. Display release notes`
	`2. Print release notes`
	`3. Both 1 and 2`
	`4. None of the above`
	`* Select option [2]:`
	Respond to the prompt with the number indicating the option you want.

6	Continue the installation. `* Do you want to continue the installation [NO]?` Enter **Y** and press Return.
7	Select to run the Installation Verification Procedure (IVP). `* Do you want to run the IVP after the installation [YES]?` Recommendation: Digital recommends running the IVP. If you want to run the IVP, press Return. If you do not want to run the IVP, enter **NO**.
8	Acknowledge the PAK registration. `* Does this product have an authorization key registered and loaded?` If so, enter **Y** and press Return.

(continued on next page)

Table 1–6 (Cont.) How to Install VAX SLS Full-Function Software

Step	Action
9	Choose to purge old VAX SLS software files if you want to recover storage space on your disk. Custom files: If you are upgrading from a previous version of VAX SLS software and you have files in the SLS$ROOT:[CUSTOM] directory, these files will be placed in a directory created by the VMSINSTAL procedure. Refer to Section 1.3.3.1. `* Do you want to purge files replaced by this installation [YES]?` If you want to purge old files, press Return. If you do not want to purge old files, enter **NO** and press Return.
10	Specify the device on which VAX SLS software will reside. `* Enter the name of the disk device VAX SLS will use [DUA0:]:` Enter the name of the device you noted earlier, then press Return.
11	Specify the directory in which VAX SLS software will reside. `* Enter the name of the directory VAX SLS will use [SLS$FILES]:` Enter the directory name, then press Return.
12	Identify the VAX SLS manager account UIC. `* Enter the UIC for the SLS manager account. [[300,301]]` IF you see the message, supply a UIC then press Return.
13	Select to update the VAX SLS account process quotas. Authorize: Choosing to update the VAX SLS process account quotas will cause the Authorize utility to be run on your behalf. `* Do you wish to update these quotas now [YES]?` Recommendation: IF you see the message, Digital recommends updating quotas now. Press Return.

(continued on next page)

Table 1–6 (Cont.) How to Install VAX SLS Full-Function Software

Step	Action
14	Update flags for the VAX SLS account. Authorize: Choosing to update the flags will cause the Authorize utility to be run on your behalf. `* Do you wish to update these flags now [YES]?` Recommendation: IF you see the message, Digital recommends updating flags now. Press Return.

15	Enter and verify the VAX SLS account password.
	Requirement: The password must be at least 15 characters long.
	`* Password:`
	`* Verify password:`
	Enter a valid VMS password.

1.3 Post-Installation Procedures for the VAX SLS Full-Function Software

After completing the VMSINSTAL procedure, you must take some final steps to prepare the VAX SLS software for configuration.

The first post-installation activity ensures VAX SLS software is available on a systemwide basis.

The remaining actions you take for post-installation depend on whether

- you intend to run VAX SLS software on a VAXcluster system, and
- you are upgrading from VAX SLS Version 2.0 software.

1.3.1 Systemwide Preparations

This section describes the systemwide preparations that must be made.

1.3.1.1 Editing the systemwide command files

System startup: To start VAX SLS software on every system boot, add this line of code to the system startup procedure SYS$MANAGER:SYSTARTUP_V5.COM.

```
$ @SYS$STARTUP:SLS$STARTUP
```

Note: Include the startup line after the STARTNET command in SYSTARTUP.COM.

System login: Edit the system login file SYS$MANAGER:SYLOGIN.COM to define symbols for VAX SLS software users.

```
$ @SYS$MANAGER:SLS$TAPSYMBOL
```

Note: Include the symbol line in a section of SYLOGIN.COM that is executed by all accounts.

1.3.2 VAXcluster System Installation

Preparation: You should have read the *VAX Storage Library System Release Notes* information regarding VAXcluster system availability for VAX SLS full-function software.

If you are installing VAX SLS software for the first time, or upgrading from a previous version and plan to take advantage of the VAX SLS server process failover capability, you must define a network object on your VAXcluster system nodes.

1.3.2.1 Defining the SLS$DBX NCP object for VAXcluster system nodes

Requirement: If you intend to implement the high-availability features of VAX SLS software, all nodes that participate in the VAXcluster system alias must have the SLS$DBX NCP object defined.

Follow the steps in Table 1–7 to define the SLS$DBX NCP object.

Table 1–7 How to Define the SLS$DBX NCP Object

Step	Action
1	From an account with BYPASS privilege, on the node on which VAX SLS software was just installed, invoke the Network Control Program (NCP) utility. `$ RUN SYS$SYSTEM:NCP`

(continued on next page)

Table 1–7 (Cont.) How to Define the SLS$DBX NCP Object

Step	Action

2	Obtain the password for the VAX SLS account.
	`NCP> SHOW OBJECT SLS$DBX CHARACTERISTICS`
	Results:
	`Object Volatile Characteristics as of 2-MAR-1991 13:08:15`
	`Object = SLS$DBX`
	`Number = 0`
	`File id = SYS$SYSTEM:SLS$FIND_DB_NODE.EXE`
	`User id = SLS`
	`Password = password`
	Note: The password is displayed only when the BYPASS privilege is enabled.

3	Exit the NCP utility. `NCP> EXIT`
4	Invoke the SYSMAN utility. `$RUN SYS$SYSTEM:SYSMAN`

5	Set the SYSMAN environment to include the VAXcluster system nodes which participate in the DECnet VAXcluster system alias.
	Some nodes: If only some nodes participate, identify those nodes explicitly with this command.
	`SYSMAN> SET ENVIRONMENT /NODE=(node_1,node_2,...node_n)`
	All nodes: If all participate, use this command.
	`SYSMAN> SET ENVIRONMENT /CLUSTER`

(continued on next page)

Table 1–7 (Cont.) How to Define the SLS$DBX NCP Object

Step	Action

6	Define the SLS$DBX object with this command.
	`SYSMAN>DO MCR NCP DEFINE OBJECT SLS$DBX NUMBER 0 USER SLS -`
	`_SYSMAN> FILE SYS$SYSTEM:SLS$FIND_DB_NODE.EXE PASSWORD password`
	Note: The password entered with this command must be the same password used for the SLS account during installation.

7	Read the SLS$DBX object on the node. `SYSMAN> DO MCR NCP SET KNOWN OBJECT ALL`
8	Exit the SYSMAN utility. `SYSMAN> EXIT`

1.3.3 Upgrading from a Previous Version

If you are upgrading VAX SLS software from a previous version, you should consider reviewing the applicability of customized files, which have been saved, and retaining your previous applicable TAPESTART.COM symbol assignments.

1.3.3.1 Removing outdated files from SLS$CUSTOM

Files you have placed in SLS$CUSTOM from a previous installation of VAX SLS software are likely to be incompatible with VAX SLS Version 2.1 software. These files could include patched images or modified command procedures.

Where to find old custom files: If found during installation, the installation procedure creates a temporary directory and renames all SLS$CUSTOM files to this temporary directory. The temporary directory is found at [SLS$FILES.OLDCUSTOM_n]. Each time you perform the installation, the value of *n* increases indicating a new directory has been created for the files in [SLS$FILES.CUSTOM] from the previous installation.

Recommendation: Digital recommends you review the customized files in [SLS$FILES.OLDCUSTOM_n] before you make them available in [SLS$CUSTOM]. Files that executed predictably in a previous version of VAX SLS software may be unpredictable in VAX SLS Version 2.1 software.

1.3.3.2 Modifying the TAPESTART.COM command file

Follow the steps in Table 1–8 to set up the new version of TAPESTART.COM.

Table 1–8 How to Update the TAPESTART.COM Command File

Step	Action
1	Set default to the directory that contains TAPESTART.COM. `$ SET DEFAULT SYS$MANAGER`

(continued on next page)

Table 1–8 (Cont.) How to Update the TAPESTART.COM Command File

Step	Action
2	Ensure you have your old and new versions of TAPESTART.COM. `$ DIRECTORY TAPESTART.*` Note: The previous version of TAPESTART.COM is named TAPESTART.OLD by the VMSINSTAL procedure. The version installed is properly named TAPESTART.COM.
3	Edit the new TAPESTART.COM to include the symbol assignments from the TAPESTART.OLD file. Some TAPESTART.COM symbols have changed function from previous versions of VAX SLS software. Refer to the *VAX Storage Library System Storage Administrator's Guide* when you edit TAPESTART.COM.
4	IF you have a VAXcluster node with unique requirements, such as a node with singular access to a tape drive, 1. Place a copy of TAPESTART.COM in that node's SYS$SPECIFIC:[SYSMGR] directory. 2. Set the protection with this command. `$ SET PROTECTION=W:RE TAPESTART.COM` 3. Make the node-specific changes.
5	Start VAX SLS software with the following command. `$ @SYS$STARTUP:SLS$STARTUP`

2

Preparing For and Installing VAX SLS Client Software

This chapter describes how to prepare for and conduct the installation of VAX SLS client software.

2.1 Preparing for Installation

Before you install VAX SLS client software, you must fulfill some prerequisite requirements. The following table lists the necessary requirements for the installation.

Stage	Action
1	Verify operating system and layered software components.
2	Verify installation storage requirements and where the images will be installed.
3	If you are running a previous version of VAX SLS software, remove it from the system.
4	Register the Product Authorization Key.

2.1.1 Verifying Operating System and Layered Software Components

This section describes how to begin the installation process by verifying the required VMS operating system classes and layered software products required for installing and executing VAX SLS client software.

2.1.1.1 Account, privileges, and quotas

Log in to the SYSTEM account and enable all privileges to prepare and install VAX SLS client software.

Quota requirement: If your SYSTEM account quotas are set to the same or higher values as the defaults provided with the VMS operating system you should have no problem with the installation.

2.1.1.2 Required VMS operating system components

If your system has been modified with the VMSTAILOR utility, you should verify the following VMS operating system classes are still resident on the system disk.

- Network support
- Programming support
- Secure user's environment
- System programming environment
- Utilities
- VMS required save set

More information: For more information, refer to the *VMS V5.4 Upgrade and Installation Procedures Manual.*

2.1.1.3 Prerequisite software requirements

Before you install the VAX Storage Library System, you must have the following software installed.

- VMS Operating System, Version 5.2 or later
- DECnet communications software
- VAX Forms Management System (FMS), run-time only

2.1.1.4 Prerequisite hardware requirements

Before you install the VAX Storage Library System, your minimum hardware requirements are

- four megabytes of memory
- one or more tape drives or optical disks, and
- one disk, such as a Digital RD- or RA-series disk.

2.1.1.5 Jukebox control software

If you plan to support the RV64 Jukebox Subsystem, you must install VAX JCS (Jukebox Control Software) before installing VAX SLS software.

2.1.2 Figuring Disk Space Requirements for VAX SLS Client Software

This section describes disk use planning for the purpose of installation only.

2.1.2.1 Determining free blocks on current system disk

Use this DCL command to determine the number of free blocks available on your current system disk.

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

2.1.2.2 Planning for VAX SLS client software installation

Follow the steps in Table 2–1 to ensure you have enough disk space to install VAX SLS client software.

Table 2–1 Planning VAX SLS Full-Function Software Disk Space

Step	Action
1	Ensure you have at least 3,800 free blocks on your system disk.
2	Choose the disk on which you want to install the VAX SLS client software, and ensure you have at least 2,900 blocks free.
3	Make a note of this disk for the VMSINSTAL procedure.

2.1.3 Removing Previous Version Images

If you are running a previous version of VAX SLS software, you must shut it down on all nodes before you can install the VAX SLS client software.

2.1.3.1 Shutting down and removing a previous version

Follow the steps in Table 2–2 to shut down VAX SLS software.

Table 2–2 Shutting Down VAX SLS Software

Step	Action
1	Shut down the VAX SLS software with this command. `$ @SLS$SYSTEM:SLS$SHUTDOWN`
2	Remove any images or message files from the previous version of VAX SLS software.

2.1.4 How to Register Your VAX SLS Client Software License

This section describes the licensing requirement, and how to register the VAX SLS client software license.

2.1.4.1 VAX SLS client software installation kit and license name

The VAX SLS client software license name is **SLS–REMOTE**.

The VAX SLS client software kit name is **SLSCLIENT021**.

2.1.4.2 Unloading the license from VAX SLS Version 2.0 software

Requirement: If you are upgrading from VAX SLS Version 2.0 software, you must unload the previous license.

Follow the steps in Table 2–3 to unload the VAX SLS remote software license. After completing this procedure, you may register the new VAX SLS client software license.

Table 2–3 How to Unload the VAX SLS Remote Software License

Step	Action
1	Obtain the authorization key value for the previous VAX SLS software license by entering this command at the VMS prompt. `$ LICENSE LIST SLS-REMOTE/FULL` Look for a license with a status of ''Active'' and write down the authorization key.
2	Cancel the previous VAX SLS remote software license by entering the following command and key authorization value at the VMS prompt. `$ LICENSE CANCEL SLS-REMOTE/AUTHORIZATION=key_value /TERMINATION=YESTERDAY`

(continued on next page)

Table 2–3 (Cont.) How to Unload the VAX SLS Remote Software License

Step	Action
3	Disable the previous VAX SLS client software license by entering the following command and key authorization value at the VMS prompt. `$ LICENSE DISABLE SLS-REMOTE/AUTHORIZATION=key_value`
4	Unload the previous VAX SLS client software license by entering the following command at the VMS prompt. `$ LICENSE UNLOAD SLS-REMOTE`

2.1.4.3 Where to find registration information

The license registration information you need is contained in the Product Authorization Key (PAK). The PAK is a paper certificate that is shipped with the VAX SLS package.

2.1.4.4 Example PAK registration procedure

This example illustrates the two commands used in the Product Authorization Key (PAK) registration procedure.

Note: The values shown in the LICENSE REGISTER command are for example purposes only. Use the values from your PAK.

Command 1

```
$ LICENSE REGISTER SLS-REMOTE -
_$ /ISSUER="DEC" -
_$ /AUTHORIZATION=ALZ-QY-12345-67 -
_$ /PRODUCER="DEC" -
_$ /UNITS=35 -
_$ /DATE=29-JUL-1991 -
_$ /AVAILABILITY=E -
_$ /OPTIONS=(MOD_UNITS) -
_$ /CHECKSUM=1-RELL-XXXX-VETS-REYE
```

Command 2

```
$ LICENSE LOAD SLS-REMOTE
```

2.1.4.5 Command description

The two commands for the PAK registration procedure are listed in the following table.

Command Number	VMS command	Value
1	LICENSE REGISTER Note: This is a multiline command. • All lines except last end with a hyphen (–), and • _$ prompt indicates continuation.	See your PAK
2	LICENSE LOAD	SLS–REMOTE

2.1.4.6 How to register your PAK

Follow the steps detailed in Table 2–4 to register your VAX SLS–REMOTE PAK.

Table 2–4 How to Register Your PAK

Step	Action
1	Invoke the LICENSE REGISTER command with the product name and a dash. `$ LICENSE REGISTER SLS-REMOTE -`
2	Enter the issuer name, assigning the value DEC in quotes. `_$ /ISSUER="DEC" -`
3	Enter the AUTHORIZATION qualifier, assigning it the value from the AUTHORIZATION NUMBER entry of the PAK. `_$ /AUTHORIZATION=xxxxxxx -`
4	Enter the PRODUCER qualifier, assigning the value DEC in quotes. `_$ /PRODUCER="DEC" -`
5	Enter the UNITS qualifier, assigning the value from the UNITS entry of the PAK. `_$ /UNITS=nn -`
6	Enter the product's release date, assigning the value from the PRODUCT RELEASE DATE entry of the PAK. `_$ /DATE=dd-mmm-yyyy -`

(continued on next page)

Table 2–4 (Cont.) How to Register Your PAK

Step	Action
7	Enter the AVAILABILITY qualifier, assigning the value from the AVAILABILITY TABLE CODE entry of the PAK. `_$ /AVAILABILITY=x -`
8	Enter the OPTIONS qualifier, assigning the value from the KEY OPTIONS entry of the PAK. `_$ /OPTIONS=xxxxxx -`
9	Enter the CHECKSUM qualifier, assigning the value from the CH entry of the PAK. `_$ /CHECKSUM=1-xxxx-xxxx-xxxx-xxxx` Important: Do NOT end the entry with a dash.
10	Invoke the LICENSE LOAD command with the product name. `$ LICENSE LOAD SLS-REMOTE`

2.1.5 Authorizing the Client Node

For the IVP to execute without failure, the VAX SLS client node must be registered on the VAX SLS server node. The VAX SLS server node is the node on which the VAX SLS full-function software is installed.

2.1.5.1 Client node database access authorization

Follow the steps in Table 2–5 to enable client node access to the VAX SLS volume database.

Table 2–5 How to Enable Client Node Access to the Database

Step	Action
1	On the VAX SLS server node, access the SLS Storage Administrator Menu with the following DCL command. `$ RUN SLS$SYSTEM:SLS$SLSMGR`
2	Select the Database Access Authorization function from the numeric keypad. Enter 3 and press Return.
3	Invoke the record insertion feature from the numeric keypad. Press keypad 8. OR Press Insert Here.

(continued on next page)

Table 2–5 (Cont.) How to Enable Client Node Access to the Database

Step	Action
4	Enter the name of the client node(s) in the Node field then press Return. Result: The list of client nodes is displayed with the new entry or entries.
5	Save the changes to the database. Enter **Y** then press Return.

2.2 VAX SLS Client Software Installation

This section describes the execution of the VMSINSTAL utility to install VAX SLS software. By following the steps in the procedure, you will install the VAX SLS client software which will then be ready for post-installation procedures.

2.2.1 Installing VAX SLS Client Software

This section describes the execution of the VMSINSTAL procedure for VAX SLS client software.

2.2.1.1 Before you begin

Time taken: The installation of client software will take approximately 30 minutes.

Getting help: VMSINSTAL provides additional information about the decisions for which you are required to respond. To get help at any prompt, enter ? and press Return.

Sample log file: A sample log file for VAX SLS client software installation is shown in Appendix B.

Aborting: To abort the installation process, enter Ctrl/Y.

Note

You must restart the installation from the beginning if you abort the VMSINSTAL procedure.

2.2.1.2 How to install VAX SLS client software

Follow the steps in Table 2–6 to install the VAX SLS client software.

Table 2–6 How to Install VAX SLS Client Node Software

Step	Action
1	Load and mount the media.
2	At the VMS prompt, invoke the VMSINSTAL procedure with the following DCL command. `$@SYS$UPDATE:VMSINSTAL SLSCLIENT021 location: OPTIONS N` **location:** is the directory that contains the installation save set.

3	IF you see these messages
	`%VMSINSTAL-W-ACTIVE, The following processes are still active`
	`* Do you want to continue anyway [NO]?`
	enter **Y** and press Return.
	ELSE proceed with step 3.

4	Confirm the state of the system backup. `* Are you satisfied with the backup of your system disk [Yes]?` Press Return.

(continued on next page)

Table 2–6 (Cont.) How to Install VAX SLS Client Node Software

Step	Action

5	Respond to the Release Notes option.
	`Release notes included with this kit are always copied to SYS$HELP.`
	`Additional Release Notes Options:`
	`1. Display release notes`
	`2. Print release notes`
	`3. Both 1 and 2`
	`4. None of the above`
	`* Select option [2]:`
	Respond to the prompt with the number indicating the option you want.

6	Continue the installation. `Do you want to continue the installation [NO]?` Enter **Y** and press Return.
7	Select to run the Installation Verification Procedure (IVP). `* Do you want to run the IVP after the initialization [YES]?` Recommendation: Digital recommends running the IVP. If you want to run the IVP, press Return. If you do not want to run the IVP, enter NO.
8	Acknowledge the PAK registration. `* Does this product have an authorization key registered and loaded?` If so, enter **Y** and press Return.

(continued on next page)

Table 2–6 (Cont.) How to Install VAX SLS Client Node Software

Step	Action
9	Choose to purge old VAX SLS software files if you want to recover storage space on your disk. Custom files: If you are upgrading from a previous version of VAX SLS software and you have files in the SLS$ROOT:[CUSTOM] directory, these files will be placed in a directory created by the VMSINSTAL procedure. Refer to Section 2.3.2.1. `* Do you want to purge files replaced by this installation [YES]?` If you want to purge old files, press Return. If you do not want to purge old files, enter **NO** and press Return.
10	Continue with the installation. `*Are you ready to proceed [YES]:` If you want to continue, enter **Y** and press Return. If you do not want to continue, enter **NO** and press Return.
11	Specify the node name or VAXcluster system alias of the VAX SLS server system. `* What is the name or cluster alias of the VAX SLS server node:` Enter the name of the system on which the full-function software is installed and press Return.
12	Specify the device on which VAX SLS software will reside. `* Enter the name of the disk device VAX SLS will use [DUA0:]:` Enter the name of the disk device you noted earlier, then press Return.
13	Specify the directory in which VAX SLS software will reside. `* Enter the name of the directory VAX SLS will use [SLS$FILES]:` Enter the directory name, then press Return.

(continued on next page)

Table 2–6 (Cont.) How to Install VAX SLS Client Node Software

Step	Action
14	Identify the VAX SLS manager account UIC. `* Enter the UIC for the SLS manager account. [[300,301]]` IF you see the message, supply a UIC then press Return.
15	Select to update the VAX SLS account process quotas. Authorize: Choosing to update the VAX SLS process account quotas will cause the Authorize utility to be run on your behalf. `* Do you wish to update these quotas now [YES]?` Recommendation: IF you see the message, Digital recommends updating quotas now. Press Return.
16	Update flags for the VAX SLS account. Authorize: Choosing to update the flags will cause the Authorize utility to be run on your behalf. `* Do you wish to update these flags now [YES]?` Recommendation: IF you see the message, Digital recommends updating flags now. Press Return.

17	Enter and verify the VAX SLS account password.
	Requirement: The password must be at least 15 characters long.
	`* Password:`
	`* Verify password:`
	Enter a valid VMS password.

2.3 Post-Installation Procedures for the VAX SLS Client Software

After completing the VMSINSTAL procedure, you must take some final steps to prepare the VAX SLS software for configuration.

The first post-installation activity ensures VAX SLS software is available on a systemwide basis.

The remaining actions you take for post-installation depend on whether you are upgrading from VAX SLS Version 2.0 software.

2.3.1 Systemwide Preparations

This section describes the systemwide preparations that must be made.

2.3.1.1 Editing the systemwide command files

System startup: To start VAX SLS software on every system boot, add this line of code to the system startup procedure SYS$MANAGER:SYSTARTUP_V5.COM

```
$ @SYS$STARTUP:SLS$STARTUP
```

Note: Include the startup line after the STARTNET command in SYSTARTUP.COM.

System login: Edit the system login file SYS$MANAGER:SYLOGIN.COM to define symbols for VAX SLS software users.

```
$ @SYS$MANAGER:SLS$TAPSYMBOL
```

Note: Include the symbol line in a section of SYLOGIN.COM that is executed by all accounts.

2.3.2 Upgrading from a Previous Version

If you are upgrading VAX SLS software from a previous version, you should consider reviewing the applicability of customized files which have been saved, and retaining your previous TAPESTART.COM symbol assignments.

2.3.2.1 Removing outdated files from SLS$CUSTOM

Files you have placed in SLS$CUSTOM from a previous installation of VAX SLS software are likely to be incompatible with VAX SLS Version 2.1 software. These files could include patched images or modified command procedures.

Where to find old custom files: If found during installation, the installation procedure creates a temporary directory and renames all SLS$CUSTOM files to this temporary directory. The temporary directory is found at [SLS$FILES.OLDCUSTOM_n]. Each time you perform the installation, the value of *n* increases indicating a new directory has been created for the files in [SLS$FILES.CUSTOM] from the previous installation.

Recommendation: Digital recommends you review the customized files in [SLS$FILES.OLDCUSTOM_n] before you make them available in [SLS$CUSTOM]. Files that executed predictably in a previous version of VAX SLS software may cause unpredictable behavior in VAX SLS Version 2.1 software.

2.3.2.2 Modifying the TAPESTART.COM command file

Follow the steps in Table 2–7 to set up the new version of TAPESTART.COM.

Table 2–7 How to Update the TAPESTART.COM Command File

Step	Action
1	Set default to the directory which contains TAPESTART.COM. `$ SET DEFAULT SYS$MANAGER`

(continued on next page)

Table 2–7 (Cont.) How to Update the TAPESTART.COM Command File

Step	Action
2	Ensure you have your old and new versions of TAPESTART.COM. `$ DIRECTORY TAPESTART.*` Note: The previous version of TAPESTART.COM is named TAPESTART.OLD by the VMSINSTAL procedure. The version installed is properly named TAPESTART.COM.
3	Edit the new TAPESTART.COM to include the symbol assignments from the TAPESTART.OLD file. Some TAPESTART.COM symbols have changed function from previous versions of VAX SLS software. Refer to the *VAX Storage Library System Storage Administrator's Guide* when you edit TAPESTART.COM.
4	IF you have a VAXcluster node with unique requirements, such as a node with singular access to a tape drive, 1. Place a copy of TAPESTART.COM in that node's SYS$SPECIFIC:[SYSMGR] directory. 2. Set the protection with this command. `$ SET PROTECTION=W:RE TAPESTART.COM` 3. Make the node-specific changes.
5	Start VAX SLS software with the following command. `$ @SYS$STARTUP:SLS$STARTUP`

A

VAX SLS Server Installation Example Log File

A.1 Example Log

```
$ @sys$update:vmsinstal sls021 location: options n

        VAX/VMS Software Product Installation Procedure V5.4-1


It is 1-MAR-1991 at 15:19.

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

%VMSINSTAL-W-ACTIVE, The following processes are still active:
        _LTA11:

* Do you want to continue anyway [NO]? y

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

The following products will be processed:

  SLS V2.1


        Beginning installation of SLS V2.1 at 15:20

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

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

    Additional Release Notes Options:

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

* Select option [2]:

* Do you want to continue the installation [NO]? y
```

VAX SLS Server Installation Example Log File
A.1 Example Log

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

        Product:      SLS
        Producer:     DEC
        Version:      2.1
        Release Date:

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

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

* Enter the name of the disk device the VAX SLS software
    will use [MERKUR$DJA9:]:

* Enter the name of the directory the VAX SLS software
    will use [SLS$FILES]:

 In order for the VAX SLS software to perform system management tasks,
 a privileged account called SLS is created.

 You must specify a unique UIC for this account so that it
 will not conflict with other accounts on your system.

%SLS-I-EXISTS, the identifier SLS already exists with UIC [300,301]
This procedure will assume the SLS account also exists.

 The VAX SLS account is used to establish quotas for the processes
 in which Backups are run.  The quota values should be updated in
 accordance with the recommendations set forth in the 'VMS Backup
 Utility Reference Manual'.  If you wish, this installation
 procedure will automatically update these quotas now.

* Do you wish to update these quotas now [YES]?

%SLS-I-UPDACC, Updating account SLS quotas.
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated

 Digital recommends that the VAX SLS account be used only by the
 VAX SLS software and not as an interactive account.  It is
 recommended that the Storage Administrator and Operators use
 other accounts to perform VAX SLS functions.  If you wish, this
 installation procedure will automatically set the appropriate
 flags to disallow interactive access to this account.

* Do you wish to update these flags now [YES]?
```

```
%SLS-I-UPDACC, Updating account SLS flags.
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated
%SLS-I-UPDACC, Updating account SLS for client network access
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated
%SLS-I-UPDACC, Updating account SLS privileges and login directory
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated

 Please enter a password for the VAX SLS account.  The password you
 specify must contain at least 8 and no more than 31 characters and
 may not refer to the account/product name, or your system
 node or cluster name.

 Valid characters include A through Z, 0 through 9, $ (dollar sign) and
 _ (underscore).

 As with the DCL SET PASSWORD command, your input will not echo on the
 terminal and you will be asked to verify the password.

* Password:

* Verify password:

%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated
%SLS-I-QUOTA, Checking for DISKQUOTAs on the VAX SLS server device ...

 There will be no further questions asked.  The installation of
 VAX Storage Library System will take an average of 30 minutes
 more to complete.


%VMSINSTAL-I-RESTORE, Restoring product saveset B ...
%SLS-I-PROCEED, Proceeding with saveset B
%SLS-I-LINKING, Linking privileged shareable image

 The parameter command file SYS$MANAGER:TAPESTART.COM has changed
 format for VAX SLS V2.1.  Your current TAPESTART.COM will be
 renamed by this installation procedure to the name TAPESTART.OLD.  You
 must edit the new TAPESTART.COM to reflect the parameters you wish
 the VAX SLS software to use.

 TAPESTART.COM will be placed in the cluster common directory rather
 than the node specific directory.  If you have devices which are
 node specific, edit and rename/copy TAPESTART.COM to the node specific
 directory.  Note that TAPESTART.COM must have W:RE access set after
 a rename/copy.
```

VAX SLS Server Installation Example Log File
A.1 Example Log

```
%SLS-I-CRTSTART, Creating TAPESTART.COM
%SLS-I-CRTDIR, Creating SLS subdirectories...
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DJA9:[SLS$FILES].
%CREATE-I-EXISTS, MERKUR$DJA9:[SLS$FILES] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DJA9:[SLS$FILES.AUDIT].
%CREATE-I-EXISTS, MERKUR$DJA9:[SLS$FILES.AUDIT] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DJA9:[SLS$FILES.CUSTOM].
%CREATE-I-EXISTS, MERKUR$DJA9:[SLS$FILES.CUSTOM] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DJA9:[SLS$FILES.DATA].
%CREATE-I-EXISTS, MERKUR$DJA9:[SLS$FILES.DATA] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DJA9:[SLS$FILES.HIST].
%CREATE-I-EXISTS, MERKUR$DJA9:[SLS$FILES.HIST] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DJA9:[SLS$FILES.PARAMS].
%CREATE-I-EXISTS, MERKUR$DJA9:[SLS$FILES.PARAMS] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DJA9:[SLS$FILES.PRIMAST].
%CREATE-I-EXISTS, MERKUR$DJA9:[SLS$FILES.PRIMAST] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DJA9:[SLS$FILES.SYSBAK].
%CREATE-I-EXISTS, MERKUR$DJA9:[SLS$FILES.SYSBAK] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DJA9:[SLS$FILES.SYSTEM].
%CREATE-I-EXISTS, MERKUR$DJA9:[SLS$FILES.SYSTEM] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DJA9:[SLS$FILES.USRBAK].
%CREATE-I-EXISTS, MERKUR$DJA9:[SLS$FILES.USRBAK] already exists
%SLS-I-DEFFILE, Defining files that need to be moved

 The following post-installation steps are necessary.
 Refer to the Installation Guide for details.

 1. Edit the system startup procedure to start the VAX SLS software
    on this client.  Add
  $ @SYS$STARTUP:SLS$STARTUP

 2. Edit the system wide login file.  Add
  $ @SYS$MANAGER:SLS$TAPSYMBOL

 3. Run SLS$SYSTEM:SLS$SLSMGR.EXE to perform the following functions:
  a. Authorize access to the VAX SLS server database for VAX
     SLS client nodes.
  b. Authorize access to VAX SLS pools for VAX SLS users.

 4. Customize SYS$MANAGER:TAPESTART.COM to reflect VAX SLS environment
    parameters.

 5. Check that SLS$DBX object is defined on all nodes participating
    in the VAXcluster System alias.
```

VAX SLS Server Installation Example Log File
A.1 Example Log

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

%SLS-I-STARTUP, Starting VAX SLS
%RUN-S-PROC_ID, identification of created process is 000005C3
%SLS-I-WAIT, Waiting for VAX SLS to start

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

   Beginning VAX SLS Version 2.1 Installation Verification Procedure (IVP)

******************************************************************************
        Installation verification begun at  1-MAR-1991 15:35:23.03

        Checking for correct version of VMS.

        Checking for presence of DECnet.

        Checking for SLS executable images.

        Checking system-wide logical names.

        Checking for SLS database files.

        Checking for SLS client process.

        Checking for SLS server process.

        Checking for FMS executable images.

        Checking for correct version of SLS.

        Waiting for subprocess SLS$IVP to complete.

%SLS-I-VERSION, VAX Storage Library System, Version 2.1

        Doing a STORAGE ADD VOLUME.

        Waiting for subprocess SLS$IVP to complete.

        Waiting for subprocess SLS$IVP to complete.

        Waiting for subprocess SLS$IVP to complete.

        Doing a STORAGE ALLOCATE.

        Doing a STORAGE SHOW VOLUME.
```

VAX SLS Server Installation Example Log File
A.1 Example Log

```
  Volume:      XYZZY9               Owner:      MERKUR::SLS
  Format:      BACKUP               Brand:
  Allocated:    1-MAR-1991 15:35    Scratch:    29-FEB-1992 15:35
  Purchased:    1-MAR-1991 15:35    Cleaned:     1-MAR-1991 15:35
  Media type:  9TRACK               Length:          0
  Mounts:           0               UIC:        [SLS]
  Location:    HEADQUARTERS         Protection: S:RW,O:RW,G:R,W:
  Notes:
  Offsite:                          Onsite:
  IO Errors:        0               Flag:       ALLOCATED
  Next volume: *none*               Previous:   *none*
  Pool:                             Rec len: 0  Block factor: 0
  Initialized:  1-MAR-1991 15:35    Density:    6250
  Slot number:
  Side:                             Other side:
  Jukebox / slot:      /
  Drive:
  Volume is not in a jukebox.

        Doing a STORAGE DEALLOCATE.

        Doing a STORAGE REMOVE VOLUME.

        Doing a STORAGE SHOW VOLUME; there should be no such volume.

%SLS-W-NOSUCHVOL, no such volume(s)

        * * *  All tests have completed sucessfuly. * * *

        Installation verification finished at  1-MAR-1991 15:36:00.63

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

        Successful Installation Verification of VAX SLS Version 2.1

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

        Installation of SLS V2.1 completed at 15:36

        VMSINSTAL procedure done at 15:36
```

B

VAX SLS Client Installation Example Log File

B.1 Example Log

```
$ @sys$update:vmsinstal slsclient021 location: options n

        VAX/VMS Software Product Installation Procedure V5.4-1

It is 1-MAR-1991 at 15:19.

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

%VMSINSTAL-W-ACTIVE, The following processes are still active:
        _LTA11:

* Do you want to continue anyway [NO]? y

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

The following products will be processed:

  SLSCLIENT V2.1


        Beginning installation of SLSCLIENT V2.1 at 15:20

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

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

    Additional Release Notes Options:

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

* Select option [2]:

* Do you want to continue the installation [NO]? y
```

VAX SLS Client Installation Example Log File
B.1 Example Log

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

        Product:      SLS-CLIENT
        Producer:     DEC
        Version:      2.1
        Release Date:

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

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

 Before proceeding with the installation of the VAX SLS software,
 you should have read the VAX SLS Installation Guide discussion about
 the use of the VAX SLS server node or VAXcluster System alias.

 You will need the name of the VAX SLS server node or VAXcluster
 System alias.

* Are you ready to proceed [YES]?
* What is the name or VAXcluster System alias of the VAX SLS server node: aim4
* Enter the name of the disk device the VAX SLS software
    will use [MERKUR$DUA0:]:
* Enter the name of the directory the VAX SLS software
    will use [SLS$FILES]:

 In order for the VAX SLS software to perform system management tasks,
 a privileged account called SLS is created.

 You must specify a unique UIC for this account so that it
 will not conflict with other accounts on your system.

%SLSCLIENT-I-EXISTS, the identifier SLS already exists with UIC [300,301]
This procedure will assume the SLS account also exists.

 The VAX SLS account is used to establish quotas for the processes
 in which Backups are run.  The quota values should be updated in
 accordance with the recommendations set forth in the "VMS Backup
 Utility Reference Manual."  If you wish, this installation
 procedure will automatically update these quotas now.

* Do you wish to update these quotas now [YES]?
%SLSCLIENT-I-UPDACC, Updating account SLS quotas.
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated

 Digital recommends that the VAX SLS account be used only by the
 VAX SLS software and not as an interactive account.  It is
 recommended that the Storage Administrator and Operators use
 other accounts to perform VAX SLS functions.  If you wish, this
 installation procedure will automatically set the appropriate
 flags to disallow interactive access to this account.
```

```
* Do you wish to update these flags now [YES]?
%SLSCLIENT-I-UPDACC, Updating account SLS flags.
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated
%SLSCLIENT-I-UPDACC, Updating account SLS privileges and login directory
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated

 Please enter a password for the VAX SLS account.  The password you
 specify must contain at least 8 and no more than 31 characters and
 may not refer to the account/product name, or your system
 node or cluster name.

 Valid characters include A through Z, 0 through 9, $ (dollar sign) and
 _ (underscore).

 As with the DCL SET PASSWORD command, your input will not echo on the
 terminal and you will be asked to verify the password.

* Password:

* Verify password:

%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named SLS.
%UAF-I-MDFYMSG, user record(s) updated
%SLSCLIENT-I-QUOTA, Checking for DISKQUOTAs on the VAX SLS device ...

 There will be no further questions asked.  The installation of
 VAX Storage Library System will take an average of 30 minutes
 more to complete.


%VMSINSTAL-I-RESTORE, Restoring product save set B ...
%SLSCLIENT-I-PROCEED, Proceeding with saveset B
%SLSCLIENT-I-LINKING, Linking privileged shareable image

 The parameter command file SYS$MANAGER:TAPESTART.COM has changed
 format for VAX SLS V2.1.  Your current TAPESTART.COM will be
 renamed by this installation procedure to the name TAPESTART.OLD.  You
 must edit the new TAPESTART.COM to reflect the parameters you wish
 the VAX SLS software to use.

 TAPESTART.COM will be placed in the cluster common directory rather
 than the node specific directory.  If you have devices which are
 node specific, edit and rename/copy TAPESTART.COM to the node specific
 directory.  Note that TAPESTART.COM must have W:RE access set after
 a rename/copy.
```

VAX SLS Client Installation Example Log File
B.1 Example Log

```
%SLSCLIENT-I-CRTSTART, Creating TAPESTART.COM
%SLSCLIENT-I-CRTDIR, Creating SLS subdirectories...
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DUA0:[SLS$FILES].
%CREATE-I-EXISTS, MERKUR$DUA0:[SLS$FILES] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DUA0:[SLS$FILES.AUDIT].
%CREATE-I-EXISTS, MERKUR$DUA0:[SLS$FILES.AUDIT] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DUA0:[SLS$FILES.CUSTOM].
%CREATE-I-EXISTS, MERKUR$DUA0:[SLS$FILES.CUSTOM] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DUA0:[SLS$FILES.DATA].
%CREATE-I-EXISTS, MERKUR$DUA0:[SLS$FILES.DATA] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DUA0:[SLS$FILES.HIST].
%CREATE-I-EXISTS, MERKUR$DUA0:[SLS$FILES.HIST] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DUA0:[SLS$FILES.PARAMS].
%CREATE-I-EXISTS, MERKUR$DUA0:[SLS$FILES.PARAMS] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DUA0:[SLS$FILES.SYSBAK].
%CREATE-I-EXISTS, MERKUR$DUA0:[SLS$FILES.SYSBAK] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DUA0:[SLS$FILES.SYSTEM].
%CREATE-I-EXISTS, MERKUR$DUA0:[SLS$FILES.SYSTEM] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DUA0:[SLS$FILES.USRBAK].
%CREATE-I-EXISTS, MERKUR$DUA0:[SLS$FILES.USRBAK] already exists
%SLSCLIENT-I-DEFFILE, Defining files that need to be moved

 NOTE:

   There are files in the SLS$CUSTOM: directory from a previous
   installation.  Note that these files may be incompatible with
   this version of the VAX SLS software.

      This procedure will move all files in MERKUR$DUA0:[SLS$FILES.custom]
      to MERKUR$DUA0:[SLS$FILES.OLDCUSTOM_2].

%SLSCLIENT-I-CRTDIR, Creating directory MERKUR$DUA0:[SLS$FILES.OLDCUSTOM_2]
  for existing files in SLS$CUSTOM...
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
  MERKUR$DUA0:[SLS$FILES.OLDCUSTOM_2].

 The following post-installation steps are necessary.
 Refer to the Installation Guide for details.

 1. Edit the system startup procedure to start the VAX SLS software
    on this client.  Add
  $ @SYS$STARTUP:SLS$STARTUP

 2. Edit the system wide login file.  Add
  $ @SYS$MANAGER:SLS$TAPSYMBOL
```

```
 3. Customize SYS$MANAGER:TAPESTART.COM to reflect VAX SLS environment
    parameters.

%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...
%SLS-I-STARTUP, Starting VAX SLS
%RUN-S-PROC_ID, identification of created process is 0000122E
%SLS-I-WAIT, Waiting for the VAX SLS software to start

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

    Beginning VAX SLS Version 2.1 Installation Verification Procedure (IVP)

******************************************************************************
        Installation verification begun at  1-MAR-1991 15:35:23.03

        Checking for correct version of VMS.

        Checking for presence of DECnet.

        Checking for SLS executable images.

        Checking system-wide logical names.

        Checking for SLS database files.

        Checking for SLS client process.

        Checking for FMS executable images.

        Checking for correct version of SLS.

        Waiting for subprocess SLS$IVP to complete.

%SLS-I-VERSION, VAX Storage Library System, Version 2.1

        Doing a STORAGE ADD VOLUME.

        Waiting for subprocess SLS$IVP to complete.

        Waiting for subprocess SLS$IVP to complete.

        Waiting for subprocess SLS$IVP to complete.

        Doing a STORAGE ALLOCATE.

        Doing a STORAGE SHOW VOLUME.
```

VAX SLS Client Installation Example Log File
B.1 Example Log

```
  Volume:      XYZZY9               Owner:      VOLKSW::SLS
  Format:      BACKUP               Brand:
  Allocated:    1-MAR-1991 15:35    Scratch:    29-FEB-1992 15:35
  Purchased:    1-MAR-1991 15:35    Cleaned:     1-MAR-1991 15:35
  Media type:  9TRACK               Length:          0
  Mounts:           0               UIC:        [SLS]
  Location:    HEADQUARTERS         Protection: S:RW,O:RW,G:R,W:
  Notes:
  Offsite:                          Onsite:
  IO Errors:        0               Flag:       ALLOCATED
  Next volume: *none*               Previous:   *none*
  Pool:                             Rec len: 0  Block factor: 0
  Initialized:  1-MAR-1991 15:35    Density:    6250
  Slot number:
  Side:                             Other side:
  Jukebox / slot:      /
  Drive:
  Volume is not in a jukebox.

        Doing a STORAGE DEALLOCATE.

        Doing a STORAGE REMOVE VOLUME.

        Doing a STORAGE SHOW VOLUME; there should be no such volume.

%SLS-W-NOSUCHVOL, no such volume(s)

        * * *  All tests have completed sucessfuly. * * *

        Installation verification finished at  1-MAR-1991 15:36:00.63

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

        Successful Installation Verification of VAX SLS Version 2.1

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

        Installation of SLSCLIENT V2.1 completed at 15:36

        VMSINSTAL procedure done at 15:36
```

C

VAX SLS Account User Authorization Data

C.1 Authorization Data

Table C–1 lists AUTHORIZE qualifiers used to update the VAX SLS account with values recommended for VAX SLS software. They are also used when the account is being created.

Table C–1 VAX SLS Account User Authorization Data

Authorization field and value	Description
/MAXJOBS=0	Maximum number of interactive, batch, and detached processes that can be active at one time with this user name is unlimited.
/MAXACCTJOBS=0	Maximum number of interactive, batch, and detached processes on the same account that can be active at one time is unlimited.

(continued on next page)

Table C–1 (Cont.) VAX SLS Account User Authorization Data

Authorization field and value	Description
/MAXDETACH=0	Maximum number of detached processes with this user name that may be active at one time is unlimited.
/PRCLM=10	Total number of subprocesses that may be active at one time.
/PRIORITY=4	Default base priority.
/QUEPRIO=4	Default queue priority.
/CPUTIME=0	Maximum amount of CPU time is unlimited.
/FILLM=128	Total number of files and network logical links that may be active at one time.
/SHRFILLM=0	Maximum number of shared files that may be open at one time is unlimited.
/BIOLM=128	Maximum number of buffered I/O operations that may be active at one time.

(continued on next page)

Table C–1 (Cont.) VAX SLS Account User Authorization Data

Authorization field and value	Description
/DIOLM=4096	Maximum number of direct I/O operations that may be active at one time.
/ASTLM=4096	Maximum number of pending AST requests that may be queued for the user 0.
/ENQLM=256	Total number of lock requests that may be outstanding at the same time.
/BYTLM=65536	Total number of bytes that may be specified for a buffered I/O operation.
/PBYTLM=0	Paged pool byte count limit (unlimited).
/JTQUOTA=1024	Byte count quota of the job-wide logical name table.
/WSDEF=1024	Initial limit of a working set for the user process.
/WSQUO=16384	Maximum to which the user's process may raise the working set limit when system memory is in demand.

(continued on next page)

Table C–1 (Cont.) VAX SLS Account User Authorization Data

Authorization field and value	Description
/WSEXTENT=16384	Maximum to which the user's process may raise its working set limit when there is free memory available.
/PGFLQUO=65536	Total pages that this process can use in the system paging file. Should be a minimum of 2048 for a typical interactive process.
/BATCH	Allow unrestricted access hours for batch jobs for this user name.
/NOINTER	Disallow interactive logins for this user name.
/NOLOCAL	Disallow interactive logins for this user name through a local terminal.
/NODIAL	Disallow interactive logins for this user name through dialup terminals.
/NOREM	Disallow interactive logins for this user name through network remote terminals.

(continued on next page)

Table C–1 (Cont.) VAX SLS Account User Authorization Data

Authorization field and value	Description
/NOEXPIRATION	Account is not expired.
/PWDEXPIRED	Password is pre-expired.
/FLAGS=	NODISUSER—Do not disable account completely. NOAUDIT—Do not audit all security relevant actions. DEFCLI—Prevent user from changing default CLI or CLI tables. NODISCTLY—Allow CTRL/Y interrupts. DISMAIL—Prevent mail delivery to this user. DISNEWMAIL—Suppress ''New Mail...'' announcements. DISRECONNECT—Disable automated reconnections. NODISREPORT—Disable time of last login and other security reports. NOGENPWD—Do not require user to use generated passwords. Note: These should be enclosed in parentheses and separated by commas if more than one is specified.
/UIC=	UIC as specified by the installer.
/OWNER=''SLS MANAGER''	Name of the account owner.

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