

StorageTek Enterprise Library Software

Installing ELS

Release 7.3 for MVS

E63115-05

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StorageTek Enterprise Library Software Installing ELS Release 7.3 for MVS

E63115-05

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Preface

This publication describes how to install Oracle's StorageTek Enterprise Library Software (ELS).

This software solution consists of the following software:

Base software:

- Oracle's StorageTek Storage Management Component (SMC)
(includes the product formerly known as StorageTek HTTP Server)
- Oracle's StorageTek Host Software Component (HSC)
- Oracle's StorageTek Virtual Tape Control Software (VTCS)
- Oracle's StorageTek Concurrent Disaster Recovery Test (CDRT)

Additional supportive software:

- Oracle's StorageTek Library Content Manager (LCM). LCM includes an enhanced version of the product formerly known as Offsite Vault Feature.
- Oracle's StorageTek Client System Component for MVS Environments (MVS/CSC)
- Oracle's StorageTek LibraryStation

Audience

This document is intended for storage administrators, system programmers and operators responsible for installing and configuring their storage environment.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Related Documents

Visit the Oracle Technical Network (OTN) at the following URL to access related documentation for StorageTek libraries, tape drives, and associated software and hardware:

<http://docs.oracle.com>

Conventions

The following conventions are used in this document:

Text Conventions

Text conventions are as follows:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Control Statement Conventions

The standard syntax conventions for control statements are as follows:

- The only valid control statement information area is from column 1 to column 72. Columns 73-80 are ignored.
- Parameters may be separated by one or more blanks or a comma.
- A value is associated with a parameter by an equal (=) sign or by enclosing the value in parentheses, and concatenating it immediately after the parameter.
- Case (upper or lower) is ignored in actual control statements.
- Continuations are supported by including a plus (+) sign at the end of the line to be continued. A control statement is terminated if the statement is not continued.
- Use /* and */ to enclose comments in the job stream. HSC PARMLIB members and definition data sets must specify comments in this format.
 - A comment is not required as the first control statement of any PARMLIB member.
 - Comments can be continued over multiple lines, but cannot be nested.
- The maximum length for any control statement is 1024 characters.

Preparing for Installation

This chapter describes the ELS installation package and pre-installation requirements. It includes the following topics:

- "Installation Package"
- "Software Requirements"
- "Hardware Requirements"
- "Virtual Storage Requirements"
- "Pre-Installation Considerations"

Installation Package

The ELS installation package includes the following materials:

- ELS installation ZIP file or media (CD-ROM) containing ELS software functions (FMIDs) and the samples used to install them. Software functions are provided for the following software:

Base software:

- StorageTek Storage Management Component (SMC)
(includes the product formerly known as StorageTek HTTP Server)
- StorageTek Host Software Component (HSC)
- StorageTek Virtual Tape Control Software (VTCS)
- StorageTek Concurrent Disaster Recovery Test (CDRT)

Additional software:

- StorageTek Library Content Manager (LCM) (formerly ExLM)
(includes the product formerly known as Offsite Vault Feature)
- StorageTek Client System Component for MVS Environments (MVS/CSC)
- StorageTek LibraryStation

- *ELS Read Me First* letter containing important release-specific product information.

As part of the installation, you must obtain and install the latest cumulative maintenance (PTFs and HOLDDATA) for ELS 7.3 and for any release of Oracle StorageTek software that coexists with ELS 7.3.

Download cumulative maintenance from the My Oracle Support (MOS) site:

<http://www.myoraclesupport.com>

Visit this site frequently for HOLDDATA and PTF updates and install cumulative maintenance updates on a regular schedule. PTFs are released monthly to MOS.

See [Chapter 3, "Installing ELS Maintenance"](#) for information about installing ELS cumulative maintenance.

ELS Installation Zip File Contents

The following table describes the folders and files included in the ELS installation ZIP file:

Table 1–1 ELS 7.3 Installation Zip File Contents

Folder or File	Description
Documents folder	Includes ELS installation notes
SEA73.pax	Compressed file containing ELS products including JCL samples
Samples folder	ELS samples
README.html	XML starting point to the documentation folder

ELS Installation CD-ROM Contents

ELS is distributed on a standard CD-ROM.

The following table describes the files included on the ELS installation CD-ROM:

Table 1–2 ELS 7.3 Installation CD-ROM Contents

File Number	Data Set Name	Description
1	Documents	ELS CD installation notes
2	SEA73.pax	Compressed file containing ELS products including JCL samples
3	Samples	ELS samples
4	README.html	XML starting point to the documentation folder

Software Requirements

ELS software requirements include the following:

Operating System

Any IBM supported version of z/OS (JES2 and JES3 environments)

ELS Software

ELS Release 7.3

Additional Software

Any of the following:

- StorageTek LCM 7.3
- StorageTek LibraryStation 7.3
- StorageTek MVS/CSC 7.3

TCP/IP Communications

One of the following:

- IBM TCP/IP Release 3.1 or higher
- CA Unicenter TCPaccess Communications Server Release 5.0 or higher
- CA Unicenter TCPaccess X.25 Server Release 1 or higher

SNA LU 6.2 Communications

One of the following:

- IBM ACF/VTAM Release 3.4.2 or higher
- IBM APPC/MVS communication services

SNA LU 6.2 only applies for the following types of communication:

- HSC host to host
- MVS/CSC to ACSLS on IBM UNIX
- RMLS 400 client to LibraryStation

HSC Server System Communications

IBM ACF/VTAM Release 3.4.2 or higher

Independent Software Vendor Products

Any of the following:

- ASG-Zara
- CA-1
- CA-DYNAM/TLMS
- CA-1®/Copycat Computer Associates International
- CA-Dynam®/TLMS/Copycat Computer Associates International
- CONTROL-M/TAPE
- DFSMS
- DFSMSdfp
- DFSMSdss
- DFSMSHsm
- DFSMSrmm
- DFSORT
- FATSCopy Innovation Data Processing
- FDR MIM Syncsort
- Sysplex
- Tape/Copy OpenTech Systems, Inc.
- TelTape Cartagena Software Limited

Software Compatibility

All hosts must be at ELS version 7.1 before moving to VSM CDS level H. This requirement does not apply to SMC client LPARs, which are compatible at versions 7.0, 7.1, 7.2, and 7.3.

Consider the following product compatibility guidelines:

SMC Compatibility

SMC 7.3 is compatible with the following:

- HSC/VTCS 7.3 on the same host
- HSC/VTCS 7.0, 7.1, 7.2, or 7.3 on a different host
- MVS/CSC 7.3

HSC/VTCS Compatibility

HSC/VTCS 7.3 is compatible with the following:

- SMC 7.3 on the same host
- SMC 7.0, 7.1, 7.2, or 7.3 on a different host
- LibraryStation 7.3
- ExPR 6.1

VTCS 7.3 requires minimum CDS level F.

Support for 32GB VTVs requires CDS level I.

LCM Compatibility

LCM 7.3 is compatible with HSC/VTCS 7.3 only.

LibraryStation Compatibility

LibraryStation 7.3 is compatible with HSC/VTCS 7.3 only.

MVS/CSC Compatibility

MVS/CSC 7.3 is compatible with SMC 7.3 only.

Hardware Requirements

Note:

- An ACS can contain mixed library transports and media.
 - Refer to the publication *Managing HSC and VTCS* for more information about HSC support for the SL8500 and SL3000 libraries.
 - Refer to the publication *Configuring HSC and VTCS* for SL8500 and SL3000 configuration information.
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ELS hardware requirements include the following:

Processor

IBM or compatible processor running MVS (any IBM-supported version of z/OS)

StorageTek Library Storage Modules (LSMs)

- StorageTek SL3000 modular library system
- StorageTek SL8500 modular library system
- StorageTek PowderHorn™ 9310
- StorageTek TimberWolf 9740
- StorageTek WolfCreek 9360
- StorageTek Standard 4410

Transports and Associated Media

- StorageTek T10000A/B/C/D
- StorageTek T9940A/B
- StorageTek T9840A/B/C/D
- StorageTek TimberLine™ 9490EE
- StorageTek TimberLine™ 9490
- StorageTek 4490
- StorageTek 4480
- StorageTek SD3
- HP LTO Generations 2-6
- IBM LTO Generations 2-7 and 8 (when available)

Note: LTO-6, LTO-7, and LTO-8 drives and media are supported in VSM6 and VSM7 only.

StorageTek Virtual Storage Manager System (VSM)

- All VSM release levels
- For 32GB VTV support, VSM6 minimum microcode level 6.2

Note: T9840A and T9840B transports do not support 32GB VTV migration.

StorageTek Virtual Library Extension (VLE)

- Minimum microcode level 1.4.2 patch A3
- For 32GB VTV support, VLE minimum microcode level 1.5.1

Virtual Storage Requirements

Note:

- An additional amount of ECSA above the line is dynamically acquired and released during operation of the MVS/CSC and HSC. The actual amount varies with the activity and size of the library, but would rarely, if ever, exceed an additional 10K.
 - The actual amount of ECSA varies slightly based on the size of the library and number of transports defined to MVS.
 - Additional CSA may be required when installing corrective service tapes, software enhancements, or newer software releases.
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ELS virtual storage requirements include the following:

SMC Virtual Storage Requirements

- In JES2, approximately 2.8 MB of ECSA above the 16M line for load modules and data structures.
- In JES3, an additional 800K of ECSA above the 16M line.
- There are no CSA requirements below the 16M line.

HSC, VTCS, and LibraryStation Virtual Storage Requirements

- Approximately 215K of ECSA above the 16M line for load modules and data structures.
- Approximately 20K of CSA below the 16M line for some load modules and data structures.
- An additional amount of ECSA above the line is dynamically acquired and released during operation of the HSC. The actual amount varies with the activity and size of the library, but would rarely, if ever, exceed an additional 10K.
- Minimum region size of 6 MB, unless you run utilities or commands that manipulate manifest files, in which case you require the maximum region size your system will support.

Note:

- These requirements also apply to VTCS and LibraryStation, as they execute in the HSC address space on MVS.
 - Approximately 400 bytes of the below-the-line CSA storage is located in subpool 228 (FIXED).
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MVS/CSC Virtual Storage Requirements

- Approximately 200K of ECSA above the 16M line for load modules and data structures.
- Approximately 34K of CSA below the 16M line for some load modules and data structures.

Pre-Installation Considerations

- SMC and HSC are required ELS components and must be installed.
- Contact StorageTek Software Support for information about additional PTFs that might be required before installing the ELS product components.
- If you are migrating from a previous ELS software release, study the appropriate migration and coexistence guidelines in your ELS product publications.
- ELS software is installed with SMP/E. All installation instructions in this guide are based on SMP/E.
- Use the MVS Program Binder when installing ELS products and maintenance. Failure to do so may result in link-editing errors.

Installing ELS and Additional Software

This chapter describes the tasks required to install ELS software. It includes the following topics:

- ["Installation Checklist"](#)
- ["Unloading the SMP/E JCL Library"](#)
- ["Editing the CHGIT Member"](#)
- ["Testing the CHGIT Member"](#)
- ["Preparing the SMP/E Environment"](#)
- ["Reviewing the ELS FMIDs"](#)
- ["Receiving the ELS Functions"](#)
- ["Applying the ELS Functions"](#)
- ["Accepting the ELS Functions"](#)

Before installing ELS, verify ELS requirements and review pre-installation considerations. See ["Preparing for Installation"](#) for more information.

Installation Checklist

Perform the following steps to verify that you have completed all ELS installation tasks:

Note: Before installing ELS, verify ELS requirements and review pre-installation considerations. See ["Preparing for Installation"](#) for more information.

1. Unload the SMP/E JCL library from ZIP file, or CD-ROM.
See ["Unloading the SMP/E JCL Library"](#) for more information.
2. Optionally, edit the CHGIT member according to your requirements.
Use sample member CHGIT.
See ["Editing the CHGIT Member"](#) for more information.
3. Test the CHGIT member to verify your edits.
Use sample member I20TST.
See ["Testing the CHGIT Member"](#) for more information.

4. Define and initialize the SMP/E CSI.
Use sample member I30CSI.
See ["Defining and Initializing the ELS Global SMP/E Consolidated Software Inventory \(CSI\)"](#) for more information.
5. Allocate the ELS and JES3 target and distribution library data sets and their required DDDEF entries.
Use sample member I40ZON.
See ["Allocating Target and Distribution Library Data Sets and Required DDDEF Entries"](#) for more information.
6. Update the SYSLIB concatenation.
Use sample member I50LIB.
See ["Updating the SYSLIB Concatenation"](#) for more information.
7. Review the ELS FMIDs.
See ["Reviewing the ELS FMIDs"](#) for more information.
8. SMP/E RECEIVE the desired base functions, communication functions, and optionally, the SMC JES3 function. Use sample member I60RNTS.
See ["Receiving the ELS Functions"](#) for more information.
9. SMP/E APPLY the desired base functions, communication functions, and optionally, the SMC JES3 function.
Use sample member I70APP.
See ["Applying the ELS Functions"](#) for more information.
10. SMP/E ACCEPT the desired base functions, communication functions, and optionally, the SMC JES3 function.
Use sample member I80ACC.
See ["Accepting the ELS Functions"](#) for more information.
11. SMP/E RECEIVE maintenance for the ELS base functions.
Use sample member MAINTRCF.
See ["SMP/E RECEIVE Maintenance"](#) for more information.
12. SMP/E APPLY maintenance for the ELS base functions.
Use sample member MAINTAPF.
See ["SMP/E APPLY Maintenance"](#) for more information.
13. Optionally, SMP/E ACCEPT maintenance for the base functions.
Use sample member MAINTACF.
See ["SMP/E ACCEPT Maintenance"](#) for more information.
14. Proceed with ELS post-installation tasks. See ["Performing ELS Post Installation Tasks"](#) for more information.
15. Proceed with ELS additional software post-installation tasks. See ["Performing Post Installation Tasks for ELS Additional Software"](#) for more information.

Unloading the SMP/E JCL Library

To begin ELS installation, unload the SMP/E JCL library from the ELS installation ZIP file or CD-ROM. This library includes JCL sample members used to prepare your installation environment and install the ELS functions and associated maintenance.

The following sample members are included:

- CHGIT
Optional REXX exec used to customize ELS installation sample members
- I20TST
Test and verify CHGIT settings.
- I30CSI
Define and initialize the ELS Global SMP/E CSI.
- I40ZON
Allocate target and distribution data sets for ELS (and additional software) and define the appropriate DDDEF entries in the SMP/E CSI.

Allocate ELS (and optionally, JES3) target and distribution data sets and define the appropriate DDDEF entries in the SMP/E CSI.
- I50LIB
Add required DDDEF entries and modify the SYSLIB concatenation.
- I60RNTS
SMP/E RECEIVE ELS and additional functions from the ELS installation ZIP file or CD-ROM.
- I70APP
SMP/E APPLY ELS and additional functions.
- I80ACC
SMP/E ACCEPT ELS and additional functions.
- MAINTACF
SMP/E ACCEPT maintenance in a mass mode for specific FMIDs.
- MAINTAPF
SMP/E APPLY maintenance in mass mode for specific FMIDs.
- MAINTRCF
SMP/E RECEIVE maintenance for a specific FMID.

Unloading the SMP/E JCL Library from the ELS Installation Zip File

To unload the SMP/E JCL library from the ELS installation ZIP file:

1. Establish network connectivity between your PC, MVS Host, and UNIX Systems Services (USS).
2. Extract the contents of the ELS Installation ZIP file.
3. Open the file README.html.
4. Follow the on-screen instructions to unload the SMP/E JCL library.

Note: Many of the on-screen command examples can be cut and pasted from your browser window to your terminal window.

Unloading the SMP/E JCL Library from the ELS Installation CD-ROM

To unload the SMP/E JCL library from the ELS installation CD-ROM:

1. Establish network connectivity between your PC, MVS Host, and UNIX Systems Services (USS).
2. Insert the ELS Installation CD-ROM into the CD-ROM drive of your PC.
3. Navigate to the root directory of your CD-ROM drive and open the file README.html. (This will open automatically on some systems.)
4. Follow the on-screen instructions to unload the SMP/E JCL library.

Note: Many of the on-screen command examples can be cut and pasted from your browser window to your terminal window.

Editing the CHGIT Member

The CHGIT member in the SMP/E JCL library includes typical ISPF edit commands used to customize the ELS installation sample members according to your requirements.

CHGIT enables you to edit installation settings and apply them to the sample members used to install the ELS functions. CHGIT runs as an optional REXX exec.

To edit the CHGIT member:

1. Edit the CHGIT member according to the instructions commented in the sample member and save your changes.
2. Copy CHGIT into your SYSEXEC concatenation to enable CHGIT to be executed as a command.

Alternatively, you can enable CHGIT by issuing the following TSO commands:

```
TSO allocate dd(SYSUEXEC) shr dsn(your.ELS73.SAMPLES.JCL)
```

```
TSO altlib activate user(exec)
```

Supply the REUSE keyword if you intend to override a preexisting allocation of SYSUEXEC.

Note: Though the use of CHGIT is recommended, it is optional. You may choose to edit each installation sample individually using an editor. In this case, CHGIT can serve as a guide.

Testing the CHGIT Member

Use sample member I20TST (included in your SMP/E JCL library) to test and verify your CHGIT edits.

1. Enter Edit mode for member I20TST, and execute the CHGIT command.
2. Submit the I20TST job.

If the job is successful, the CHGIT member is ready to be applied to the remaining ELS installation jobs.

If errors are encountered, edit the CHGIT member to correct the errors, and submit it again.

Preparing the SMP/E Environment

This section describes how to prepare the SMP/E environment for installation of the ELS base functions and SMC JES3 support function. If you are installing service, see [Chapter 3, "Installing ELS Maintenance"](#) for more information.

ELS products are installed using SMP/E. The SMP/E installation process involves a RECEIVE, APPLY, and ACCEPT job to install functions into the correct SMP/E target and distribution zones.

SMP/E Considerations

The following are SMP/E considerations:

- ELS must be installed with SMP/E. All installation instructions in this guide are based on SMP/E.
- If you are installing ELS from CD, SMP/E version 3 Release 1 or higher is required to install ELS from the UNIX Systems Services (USS) platform. Additionally, you must have access to USS with read and write permissions.
- Install all ELS 7.3 product components in a new target and distribution SMP/E CSI.
- Do not install products from other vendors in the same global SMP/E CSI as ELS.
- SMP/E ACCEPT all of your ELS base products.
- Load modules for the TMS (Tape Management System) interface routines (SLUDRCA1, SLUDRRMM, SLUDRSMC, SLUDRTL, and SLUDRZAR) are included in the SEALINK library generated during ELS installation. These modules are shared among HSC, SMC, and MVS/CSC.

Additionally, consider the following warnings:

- If you install an ELS 7.3 product component in an existing global SMP/E CSI containing a previous release of that product, all SYSMODS for the previous release (except for those related to SAS/C) are deleted from the SMP/E CSI.
It is recommended that you back up the existing global SMP/E CSI before installing the ELS 7.3 product components.
- If you install LibraryStation 7.3 or MVS/CSC 7.3 in an existing global SMP/E CSI where a previous release of LibraryStation or MVS/CSC has been installed, it is not necessary to re-install the SAS/C functions (FMIDs SSCR70C and SSCR70D).
- Do not install LibraryStation 7.3 or MVS/CSC 7.3 and supportive SAS/C functions in a global SMP/E CSI containing other StorageTek products with SAS/C functions you want to preserve. Doing so may cause unpredictable results.

Defining and Initializing the ELS Global SMP/E Consolidated Software Inventory (CSI)

Use sample member I30CSI (included in your SMP/E JCL library) to define and initialize the ELS global Consolidated Software Inventory (CSI).

This job performs the following actions:

- Defines the required SMP/E data sets.
- Defines the Consolidated Software Inventory (CSI) data set that contains the SMP/E global, target, and distribution zones for this release.
- Initializes the SMP/E CSI.
- Adds zones, options, utilities, and DDDEF entries to the SMP/E CSI.

To run the I30CSI job:

1. Enter Edit mode for member I30CSI, and execute the CHGIT command to apply your CHGIT edits.
2. Submit the I30CSI job.

Note: Though the use of CHGIT is recommended, it is optional. If you choose not to use CHGIT, follow the instructions in the prologue of the I30CSI sample member, edit as needed, and submit the job.

Allocating Target and Distribution Library Data Sets and Required DDDEF Entries

Use sample member I40ZON (included in your SMP/E JCL library) to allocate target and distribution data sets and define the appropriate DDDEF entries in the SMP/E CSI. [Table 2-1, " ELS Target Library Data Sets"](#) and [Table 2-2, " ELS Distribution Library Data Sets"](#) list the target and distribution library data sets for ELS and additional software.

To run the I40ZON job:

1. Enter Edit mode for member I40ZON, and execute the CHGIT command to apply your CHGIT edits.
2. Submit the I40ZON job.

Consider the following:

- Though the use of CHGIT is recommended, it is optional. If you choose not to use CHGIT, follow the instructions in the prologue of the I40ZON sample member, edit as needed, and submit the job.
- If you install an ELS 7.3 product component in an existing global SMP/E CSI containing a previous release of that product:
 - SMPCSI statement must point to the existing global CSI.
 - SMPLOG and SMPLOGA statements must point to the global log.
 - SMPPTS statement must point to the global SMPPTS.
- If you are using PDS instead of PDSE (Partitioned Data Set Extended), increase directory blocks for SEAMAC and ASEAMAC to 50.

Target and Distribution Library Data Sets

The following tables list the target and distribution library data sets allocated by the I40ZON job.

Note:

- *hlq* represents the high-level qualifier for your data sets. Choose a high-level qualifier that conforms to the naming conventions defined for your installation.
- The numbers listed for directory blocks and blocks are the minimum required for the product.
- The numbers listed for directory blocks and blocks are the minimum required for the product.
- The SMP/E DSSPACE parameter, which specifies the amount of space to be allocated to temporary RELFILE data sets, must be set to at least (300,150,270).

The following table lists the target library data sets allocated by the I40ZON job:

Table 2–1 ELS Target Library Data Sets

Data Set Name	Product(s)	DSORG	RECFM	LRECL	BLKSIZE	Blocks (Pri/Sec)	Directory Blocks
<i>hlq</i> .SEALINK	ELS	PO	U	N/A	32760	500/50	99
<i>hlq</i> .SEAMAC	ELS	PO-E	FB	80	27920	20/10	5
<i>hlq</i> .SEASAMP	ELS	PO-E	FB	80	27920	20/10	5
<i>hlq</i> .SMZLINK	SMC JES3	PO	U	N/A	32760	20/10	5
<i>hlq</i> .LCMLINK	LCM	PO-E	U	N/A	32760	2504/250	5
<i>hlq</i> .LCMSAMP	LCM	PO-E	FB	80	27920	25/25	5
<i>hlq</i> .LCMGUI	LCM	PO	U	N/A	32760	198/500	5
<i>hlq</i> .SCSLINK	MVS/CSC	PO	U	N/A	32760	500/100	100
<i>hlq</i> .SCSMAC	MVS/CSC	PO-E	FB	80	27920	30/10	5
<i>hlq</i> .SCSSAMP	MVS/CSC	PO-E	FB	80	27920	30/10	5
<i>hlq</i> .SLCLINK	LibraryStation	PO	U	N/A	32760	500/100	50
<i>hlq</i> .SLCSAMP	LibraryStation	PO-E	FB	80	27920	30/10	5
<i>hlq</i> .CSLLINK	MVS/CSC LibraryStation	PO	U	N/A	32760	50/10	20
<i>hlq</i> .SACLINK	MVS/CSC LibraryStation	PO	U	N/A	32760	200/10	100

Note: If you are using PDS instead of PDSE (Partitioned Data Set Extended), increase directory blocks for ASEAMAC to 50.

The following table lists the distribution library data sets allocated by the I40ZON job:

Table 2–2 ELS Distribution Library Data Sets

Data Set Name	Product(s)	DSORG	RECFM	LRECL	BLKSIZE	Blocks (Pri/Sec)	Directory Blocks
<i>hlq</i> .ASEALINK	ELS	PO	U	N/A	32760	500/50	999
<i>hlq</i> .ASEAMAC	ELS	PO-E	FB	80	27920	20/10	5
<i>hlq</i> .ASEASAMP	ELS	PO-E	FB	80	27920	20/10	5
<i>hlq</i> .ASMZLINK	SMC JES3	PO	U	N/A	32760	20/10	5
<i>hlq</i> .ALCMLINK	LCM	PO-E	U	N/A	32760	2504/250	5
<i>hlq</i> .ALCMSAMP	LCM	PO-E	FB	80	27920	25/25	5
<i>hlq</i> .ALCMGUI	LCM	PO	U	N/A	32760	198/500	5
<i>hlq</i> .ASCSLINK	MVS/CSC	PO	U	N/A	32760	500/100	100
<i>hlq</i> .ASCSPMAC	MVS/CSC	PO-E	FB	80	27920	30/10	5
<i>hlq</i> .ASCSSAMP	MVS/CSC	PO-E	FB	80	27920	30/10	5
<i>hlq</i> .ASLCLINK	LibraryStation	PO	U	N/A	32760	500/100	50
<i>hlq</i> .ASLCSAMP	LibraryStation	PO-E	FB	80	27920	30/10	5
<i>hlq</i> .ACSLLINK	MVS/CSC LibraryStation	PO	U	N/A	32760	50/10	20
<i>hlq</i> .ASACLINK	MVS/CSC LibraryStation	PO	U	N/A	32760	200/10	100

Note: If you are using PDS instead of PDSE (Partitioned Data Set Extended), increase directory blocks for ASEAMAC to 50.

Updating the SYSLIB Concatenation

ELS supports different versions of MVS/ESA JES3 and multiple tape management systems. For example, TLMS and CA-1.

Use sample member `I50LIB` (included in your SMP/E JCL library) to add required DDDEF entries to the SMP/E CSI, and modify the SYSLIB concatenation to include the appropriate macro libraries.

To run the `I50LIB` job:

1. Enter Edit mode for member `I50LIB` and execute the `CHGIT` command to apply your `CHGIT` edits.
2. Submit the `I50LIB` job.

The return code must be 4 or less for all steps executed in this job. If you receive a different return code, contact StorageTek Software Support.

Note:

- Though the use of CHGIT is recommended, it is optional. If you choose not to use CHGIT, follow the instructions in the prologue of the I50LIB sample member, edit as needed, and submit the job.
 - If you install an ELS 7.3 product component in an existing global SMP/E CSI containing a previous release of that product, the SMPCSI statement must point to the existing global CSI.
-

Reviewing the ELS FMIDs

ELS is packaged in standard SMP/E format, and is delivered as multiple function SYStem MODifications (SYSMODs) identified by the following SMP/E FMIDs:

- SSEA730

This FMID includes HSC, SMC, VTCS and CDRT load modules, distributed macros, and samples.

- SMZ7300

This FMID includes SMC JES3 support load modules, distributed macros, and samples for MVS systems running JES3 Release 5.2.1, JES3 OS/390 Release 1.1 and higher, or JES3 z/OS Release 1.0 and higher.

- SLM7300

This FMID includes LCM 7.2 load modules, distributed macros, and samples.

- SOC7300

This FMID includes LibraryStation load modules and samples.

- SCS7300

This FMID includes MVS/CSC load modules, distributed macros, and samples.

- SSCR70C

This FMID includes SAS/C 7.0 selected components required for LibraryStation and MVS/CSC.

- SSCR70D

This FMID includes SAS/C 7.0 selected components required for LibraryStation and MVS/CSC.

Receiving the ELS Functions

You must issue the SMP/E RECEIVE command to receive the functions you want to install into the target and distribution zones. You can SMP/E receive the ELS functions from the ELS installation ZIP file or CD-ROM.

Consider the following warnings:

- If you install an ELS 7.3 product component in an existing global SMP/E CSI containing a previous release of that product, all SYSMODs for the previous release (except for those related to SAS/C) are deleted from the SMP/E CSI.
 - It is recommended that you back up the existing global SMP/E CSI before installing the ELS 7.3 product components.

- The SMPCSI statement must point to the existing global CSI.
- If you install LibraryStation 7.3 or MVS/CSC 7.3 in an existing global SMP/E CSI containing a previous release of LibraryStation or MVS/CSC, it is not necessary to re-install the SAS/C functions (FMIDs SSCR70C and SSCR70D).
- Do not install LibraryStation 7.3 or MVS/CSC 7.3 and supportive SAS/C functions in a global SMP/E CSI containing other StorageTek products with SAS/C functions you want to preserve. Doing so may cause unpredictable results.

Receiving the ELS Functions from the ELS Installation ZIP File or CD-ROM

Use the I60RNTS sample member to SMP/E RECEIVE the ELS functions from UNIX Systems Services (USS). I60RNTS RECEIVES the ELS functions from an SMPNTS (Network Temporary Store) directory.

This member uses the IBM SMP/E RECEIVE FROMNTS command. Refer to your IBM SMP/E publications for additional information about this command.

To run the I60RNTS job:

1. Enter Edit mode for member I60RNTS and execute the CHGIT command to apply your CHGIT edits:
2. Download current HOLDDATA from the My Oracle Support (MOS) site.
3. In the I60RNTS sample, replace the following four lines:

```
//SMPHOLD DD DATA,DLM='qq'  
Replace this data set with current HOLDDATA from MOS.  
++ NULL /* Wed 2015-03-25 22:09:56+0000 */ .  
qq end of inline HOLDDATA
```

with:

```
//SMPHOLD DD DISP=SHR,DSN=holddata.downloaded.from.mos
```

4. Submit the I60RNTS job.

The return code must be 4 or less for all steps executed in this job. If you receive a different return code, contact StorageTek Software Support.

Note:

- Though the use of CHGIT is recommended, it is optional. If you choose not to use CHGIT, follow the instructions in the prologue of the I60RNTS sample member, edit as needed, and submit the job.
 - If you install an ELS 7.3 product component in an existing global SMP/E CSI containing a previous release of that product, the SMPCSI statement must point to the existing global CSI.
 - If you install LibraryStation 7.3 or MVS/CSC 7.3 in a global SMP/E CSI containing a previous release of LibraryStation or MVS/CSC, it is not necessary to re-install the SAS/C functions (FMIDs SSCR70C and SSCR70D).
-

Applying the ELS Functions

Use the I70APP sample member provided in your SMP/E JCL library to install the ELS functions into the appropriate target zone.

To run the I70APP job:

1. Enter Edit mode for member I70APP and execute the CHGIT command to apply your CHGIT edits.
2. Submit the I70APP job.

The return code must be 4 or less for all steps executed in this job. If you receive a different return code, contact StorageTek Software Support.

Though the use of CHGIT is recommended, it is optional. If you choose not to use CHGIT, follow the instructions in the prologue of the I70APP sample member, edit as needed, and submit the job.

You can use the APPLY CHECK option as often as necessary to identify SMP/E processing problems before the actual APPLY process. All SMP/E detected problems must be resolved before the base functions can be successfully installed.

Consider the following warnings:

- If you install an ELS 7.3 product component in an existing global SMP/E CSI containing a previous release of that product, the SMPCSI statement must point to the existing global CSI.
- If you install LibraryStation 7.3 or MVS/CSC 7.3 in a global SMP/E CSI containing a previous release of LibraryStation or MVS/CSC, it is not necessary to re-install the SAS/C functions (FMIDs SSCR70C and SSCR70D).

Accepting the ELS Functions

Use the I80ACC sample member provided in your SMP/E JCL library to accept the ELS functions in the appropriate target zone.

To run the I80ACC job:

1. Enter Edit mode for member I80ACC and execute the CHGIT command to apply your CHGIT edits.
2. Submit the I80ACC job.

The return code must be 4 or less for all steps executed in this job. If you receive a different return code, contact StorageTek Software Support.

Though the use of CHGIT is recommended, it is optional. If you choose not to use CHGIT, follow the instructions in the prologue of the I80ACC sample member, edit as needed, and submit the job.

You can use the ACCEPT CHECK option as often as necessary to identify SMP/E processing problems before the actual ACCEPT process. All SMP/E detected problems must be resolved before the base functions can be successfully installed.

Consider the following warnings:

- If you install an ELS 7.3 product component in an existing global SMP/E CSI containing a previous release of that product, the SMPCSI statement must point to the existing global CSI.
- If you install LibraryStation 7.3 or MVS/CSC 7.3 in a global SMP/E CSI containing a previous release of LibraryStation or MVS/CSC, it is not necessary to re-install the SAS/C functions (FMIDs SSCR70C and SSCR70D).

Installing ELS Maintenance

This chapter describes how to install ELS maintenance. It includes the following topics:

- "Maintenance Installation Data Sets"
- "ELS Cumulative Service Contents"
- "Unloading the ELS Maintenance SMP/E JCL Samples"
- "Unloading Cumulative Maintenance"
- "SMP/E RECEIVE Maintenance"
- "SMP/E APPLY Maintenance"
- "SMP/E ACCEPT Maintenance"
- "Separate HELD ELS PTFs"

You must obtain and install the latest cumulative maintenance (PTFs and HOLDDATA) for ELS 7.3 and for any release of Oracle StorageTek software that coexists with ELS 7.2. Download cumulative maintenance from the My Oracle Support (MOS) site:

<http://www.myoraclesupport.com>

Visit this site frequently for HOLDDATA and PTF updates and install cumulative maintenance updates on a regular schedule. PTFs are released monthly to MOS.

Before attempting to install maintenance, contact Oracle Global Customer Services for information about the latest maintenance available. See "Preface" for information about contacting Oracle for assistance.

Note: PTFs and HOLDDATA may not exist at ELS release launch but will follow in time and are released monthly to MOS.

Maintenance Installation Data Sets

ELS maintenance is installed with SMP/E. Thus, the SMP/E target and distribution libraries used for installation of the ELS base products are required. See "[Allocating Target and Distribution Library Data Sets and Required DDDEF Entries](#)" for more information about these libraries.

ELS Cumulative Service Contents

ELS cumulative maintenance is distributed in a ZIP file. The following table describes the files included in the ZIP file:

Table 3–1 ELS 7.3 Cumulative Service Contents (Code Directory)

File Number	Data Set Name	Description
1	els73.cvr	PTF cover letters and JCL samples
2	els73.hdd	SMP/E HOLDDATA
3	els73.ptf	Service PTFs
4	els73.smm	Summary data

Unloading the ELS Maintenance SMP/E JCL Samples

Sample JCL members for installing ELS maintenance were unloaded from the ELS ZIP file or CD-ROM during the ELS installation process. See ["Unloading the SMP/E JCL Library"](#) for more information.

You can use these JCL samples to process maintenance in mass mode, or by individual SYSMOD.

Unloading Cumulative Maintenance

Perform the following steps to unload COVER letters, HOLDDATA, PTFs, and SUMMARY data:

1. Pre-allocate the following FTP receiving data sets as shown in the following example. Change *hlq* to your high-level-qualifier; change *vr* to 73.

```
Data Set Name . . . :hlq.ELSVr.HDD - HOLDDATA
// RECFM=FB,LRECL=80,SPACE=(27920,(30,30))
```

```
Data Set Name . . . :hlq.ELSVr.PTF - PTFs
// RECFM=FB,LRECL=80,SPACE=(27920,(13000,300))
```

```
Data Set Name . . . :hlq.ELSVr.CVR - Cover Letters
// RECFM=FB,LRECL=80,SPACE=(27920,(30,30))
```

```
Data Set Name . . . :hlq.ELSVr.SMM - Summary
// RECFM=FB,LRECL=80,SPACE=(27920,(30,30))
```

2. Open a DOS window and use the `cd` (change directory) command to go to the directory that contains the downloaded cumulative maintenance files.
3. Enter the following commands:

```
FTP mvshost
(Supply your user and password credentials.)
```

```
binary
```

```
mput els73.cvr
mput els73.hdd
mput els73.ptf
mput els73.smm
```

quit

Running this sequence of `mput` commands copies the following files:

- `els73.cvr`
- `els73.hdd`
- `els73.ptf`
- `els73.smm`

...to the following data sets on your MVS system:

- `hlq.ELS73.CVR`
- `hlq.ELS73.HDD`
- `hlq.ELS73.PTF`
- `hlq.ELS73.SMM`

where `hlq` is your high-level qualifier.

SMP/E RECEIVE Maintenance

Sample member `MAINTRCF` provides sample JCL to SMP/E RECEIVE maintenance by specific FMID.

Modify this sample member as follows:

- Modify the `SMPPTFIN` DD statement to point to the `hlq.ELS73.PTF` data set.
- Modify the `SMPHOLD` DD statement to point to the `hlq.ELS73.HDD` data set.

Follow the instructions in the prologue of the sample member and submit the job to receive maintenance.

The return code must be zero (0) for all steps executed in this job. If you receive a different return code, contact StorageTek Software Support.

SMP/E APPLY Maintenance

Sample member `MAINTAPF` provides sample JCL used to SMP/E APPLY maintenance by specific FMID.

Follow the instructions in the prologue of the sample member for necessary modifications and procedures for performing an SMP/E APPLY CHECK followed by an actual SMP/E APPLY. Submit the job to apply maintenance.

Note: You must specify the `ASSEM` option on the `APPLY` command in the sample JCL when the `SMC JES3` FMID is included in the `APPLY`.

SMP/E ACCEPT Maintenance

Note: Performing an SMP/E ACCEPT for maintenance is optional.

Sample member `MAINTACF` provides sample JCL to SMP/E ACCEPT maintenance by specific FMID.

Follow the instructions in the prologue of the sample member for necessary modifications and procedures for performing an SMP/E ACCEPT CHECK followed by an actual SMP/E ACCEPT. Submit the job to apply maintenance.

Separate HELD ELS PTFs

Examine the output from the APPLY in the previous section to identify those PTFs that failed to be applied due to HOLDSYSTEM exception data. Examine the cover letters for those PTFs to determine if the PTFs are applicable to your environment. Generally, ELS SYSMODS with HOLDSYSTEM fall into two categories:

- SYSMODS that update the tape management system scratch conversion modules (SLUDRCA1, SLUDRRMM, SLUDRSMC, SLUDRTLML, and SLUDRZAR).
- Those SYSMODS that have dependencies beyond control of the ELS SMP/E environment. For example, certain ELS PTFs may require a particular MVS PTF to be applied or you may need to update an automated operations package.

From the examination of the SYSMODS that were not applied due to HOLDSYSTEM exception data, create four lists of PTFs as follows:

- list 1
Includes tape management system PTFs for a tape management system that is not installed at your site.
- list 2
Includes tape management system PTFs where the tape management system is installed at your site and modification of the source is necessary.
- list 3
Includes non-tape management system PTFs that cannot be applied because your site does not meet the conditions defined in the PTF cover letters.
- list 4
Includes all other PTFs held for HOLDSYSTEM exception data. These are held PTFs that are applicable to your installation. Included are tape management system PTFs where the tape management system is installed at your site and you do not need to modify the source code.

APPLY Applicable ELS HOLDSYSTEM SYSMODS

Use the sample JCL provided in the following example to SMP/E APPLY applicable HOLDSYSTEM SYSMODS:

Example 3–1 JCL to SMP/E APPLY HOLDSYSTEM SYSMODS

```
//jobname JOB .....
//S1      EXEC smpe-proc
//SMPCNTL DD *
    SET BDY(target-zone) .
    APPLY PTFS
        EXCLUDE(ptf1,ptf2,.....ptfn)
        GROUPEXTEND
        FORFMID(
            /* FMID-id */
        )
        BYPASS (HOLDSYSTEM)
        ASSEM
```

/*

.

Performing ELS Post Installation Tasks

This chapter describes ELS post-installation tasks. The following topics are included:

- ["ELS Load Library Authorization"](#)
- ["Performing SMC Post-Installation Tasks"](#)
- ["Performing HSC Post-Installation Tasks"](#)
- ["Performing JES3 Post-Installation Tasks"](#)

Before proceeding, verify that you have completed the installation tasks. See ["Installing ELS and Additional Software"](#) for more information.

There are no specific post-installation tasks for VTCS. Refer to the publication *Configuring HSC and VTCS* for required VTCS configuration tasks.

ELS Load Library Authorization

SMC, HSC, and VTCS must run as authorized programs in MVS. Therefore, you must perform the following steps to APF authorize the ELS load library:

1. Add the ELS load library to either the IEAAPFzz or PROGzz member of SYS1.PARMLIB.
2. Issue the commands described in ["Authorizing the ELS Load Library"](#) to authorize the load library.

Adding the ELS Load Library to the IEAAPFzz Member

Add the following entry to the IEAAPFzz member to authorize the ELS load library:

your.SEALINK volser,

Before adding this entry to your authorized program list, edit the high level qualifier and *volser* with appropriate values for your system.

If there are multiple entries in the IEAAPFzz member, each entry (except the last) must end with a comma to indicate continuation. Omit the comma on the last entry.

Note: If the ELS load library resides on an SMS-managed volume, you do not need to specify a volume in the authorized library entry. In this case, specify nothing after the library name, to indicate that SMS is managing the library. If you specify the wrong volume, the library cannot be authorized.

Adding the ELS Load Library to the PROGzz Member

Add the following entry to the PROGzz member to authorize the ELS load library:

```
APF ADD
      DSNNAME(your.SEALINK)
      VOLUME(volser) | SMS
```

Before adding this entry to your authorized program list, edit the high level qualifier and *volser* with appropriate values for your system.

Note: If the ELS load library resides on an SMS-managed volume, you do not need to specify a volume in the authorized library entry. In this case, specify the literal SMS after the library name, to indicate that SMS is managing the library. If you specify the wrong volume, the library cannot be authorized.

Authorizing the ELS Load Library

Adding an entry to the IEAAPFzz or PROGzz members is necessary so that the library will be authorized in event of an IPL.

In the meantime, dynamically authorize the library on your running system by issuing one of the following MVS system commands:

If the library is SMS managed, issue the following command:

```
SETPROG APF,ADD,DSN=your.SEALINK,SMS
```

If the library is not SMS managed, issue the following command:

```
SETPROG APF,ADD,DSN=your.SEALINK,volser
```

Edit the high level qualifier and *volser* with appropriate values for your system.

Performing SMC Post-Installation Tasks

This section describes required SMC post-installation tasks. The following topics are included:

- ["Defining SMC as an MVS Subsystem"](#)
- ["Copying or Moving the SMCBPRES Module to an MVS LINKLIST Library"](#)
- ["Adding SMC to the MVS Program Properties Table"](#)
- ["SMC Data Space Considerations"](#)

Defining SMC as an MVS Subsystem

SMC executes as a dynamically defined MVS subsystem. It can either run under the master MVS subsystem, or as a secondary subsystem under the primary Job Entry Subsystem.

Because SMC is dynamically defined, for many installations, it does not need to be added to the MVS subsystem name table.

However, under any of the following conditions, you must add SMC to the MVS subsystem name table (SYS1.PARMLIB member IEFSSNzz) as required.

- If you run SMC and a tape management system on the same host, and the tape management system is also executing as an MVS dynamic subsystem, add both

the tape management system and the SMC to the subsystem name table to ensure the correct order of message processing. See ["Tape Management System Interaction and the Subsystem Name Table"](#) for more information.

- If you run SMC and the Unicenter CA-MIA product on the same host, add both Unicenter CA-MIA and the SMC to the subsystem name table to ensure the correct order of EDL processing. See ["Unicenter CA-MIA Interaction and the Subsystem Name Table"](#) for more information.
- If you run SMC, a tape management system, and the Unicenter CA-MIA product on the same host, add all three products to the subsystem name table. See ["SMC, TMS, and Unicenter CA-MIA Interaction and the Subsystem Name Table"](#) for more information.
- To run the SMC under the master MVS subsystem (rather than under the primary Job Entry Subsystem), add the SMC to the subsystem name table. See ["Running SMC under MSTR and the Subsystem Name Table"](#) for more information.

In addition, the PROCLIB containing the SMC START procedure must be present in the PROCLIB concatenation for the master address space. This concatenation is defined in SYS1.PARMLIB(MSTJCLzz), under DD IEFPDSI.

Tape Management System Interaction and the Subsystem Name Table

If you run a Tape Management System (TMS), you must ensure that it processes MVS mount messages before the SMC. Add both the tape management system and the SMC to the subsystem name table with the (TMS) entry preceding the SMC entry. The following example shows entries for CA-1 Release 5.1 and above, and SMC.

```
SUBSYS SUBNAME(JES2) PRIMARY(YES) START(NO)
SUBSYS SUBNAME(TMS)
SUBSYS SUBNAME(SMC0) INITRTN (SMCBPREI)
```

In installations with tape management systems executing on the same host, it is recommended that you always add both the tape management system and the SMC to the subsystem name table.

The following are possible subsystem name definition scenarios for a tape management system and SMC when both are dynamic subsystems:

- Scenario 1
In this scenario, both SMC and the TMS are defined in the subsystem name table. This scenario is supported and recommended. The TMS must precede the SMC in the table.
- Scenario 2
In this scenario, SMC is defined in the subsystem name table, while the TMS is not. This scenario is not supported. The TMS cannot process MVS mount messages before the SMC.
- Scenario 3
In this scenario, the TMS is defined in the subsystem name table, while SMC is not. This scenario is supported but not recommended. You must ensure that the SMC is started after the TMS.

Note: See ["Notes on Subsystem Name Table Modifications for SMC"](#) for more information.

Unicenter CA-MIA Interaction and the Subsystem Name Table

If you run the Unicenter CA-MIA product, Computer Associates recommends that you add both SMC and Unicenter CA-MIA to the subsystem name table with the SMC entry preceding the entry for Unicenter CA-MIA.

The following example shows entries for SMC and Unicenter CA-MIA:

```
SUBSYS SUBNAME(JES2) PRIMARY(YES) START(NO)
SUBSYS SUBNAME(SMC0) INITRTN(SMCBPRES)
SUBSYS SUBNAME(MIA)
```

Unicenter CA-MIA compatibility also requires that the `ALLOCDEF MIACOMPAT(ON)` option be specified in SMC. Refer to the *ELS Command, Control Statement, and Utility Reference* for information about the `ALLOCDEF` command.

Note: See ["Notes on Subsystem Name Table Modifications for SMC"](#) for more information.

SMC, TMS, and Unicenter CA-MIA Interaction and the Subsystem Name Table

If you run SMC, a Tape Management System (TMS), and Unicenter CA-MIA all on the same host, add all three products to the subsystem name table in the order indicated in the following example:

```
SUBSYS SUBNAME(JES2) PRIMARY(YES) START(NO)
SUBSYS SUBNAME(TMS)
SUBSYS SUBNAME(SMC0) INITRTN(SMCBPRES)
SUBSYS SUBNAME(MIA)
```

Unicenter CA-MIA compatibility also requires that the `ALLOCDEF MIACOMPAT(ON)` option be specified in SMC. Refer to the *ELS Command, Control Statement, and Utility Reference* for information about the `ALLOCDEF` command.

Note: See ["Notes on Subsystem Name Table Modifications for SMC"](#) for more information.

Running SMC under MSTR and the Subsystem Name Table

To run the SMC under the `MSTR` subsystem rather than under the primary Job Entry Subsystem, you must add the following entry to the subsystem name table to identify the SMC subsystem name:

```
SUBSYS SUBNAME(SMC0)
```

If your primary Job Entry Subsystem is `JES3`, then the SMC cannot run under `MSTR`, but must be executed under `JES3`.

If the SMC subsystem is to execute under `MSTR`, you must also include the `MSTR` option on the `PARM` parameter in the `SMC START` procedure. Refer to the publication *Configuring and Managing SMC* for information about creating the `SMC START` procedure.

An alternative to adding the SMC to the subsystem name table to execute under `MSTR` is to start the SMC subsystem with the `SUB=MSTR` parameter on the `MVS Start` command. Refer to the publication *Configuring and Managing SMC* for information about executing the SMC start procedure.

Notes on Subsystem Name Table Modifications for SMC

Consider the following:

- The `SUBNAME (name)` parameter specifies a 1-4 character name that corresponds to the SMC `START` procedure name. If the SMC subsystem name you define using the `SUBNAME (name)` parameter does not match the SMC `START` procedure name, you must include the `SYSS` option on the `PARM` parameter in the `START` procedure. Refer to the publication *Configuring and Managing SMC* for information about creating the SMC `START` procedure.
- You must use the keyword format of the `SUBSYS` command rather than the positional format. Refer to your IBM z/OS publications for additional information about defining subsystem names.
- If you are not defining the subsystem name dynamically, you must perform an IPL of the MVS host system before the SMC subsystem name entry takes effect.
- If you have added the Unicenter CA-MIA subsystem name to the subsystem name table, one of the following is required:
 - The started task that uses this subsystem must be present in the `PROCLIB` concatenation for the master address space. This concatenation is defined in `SYS1.PARMLIB(MSTJCLzz)`, under `DD IEFPDSI`.
 - The `Start` command for Unicenter CA-MIA must specify the `SUB=JES2` parameter.

For example, `S CAMIA, SUB=JES2`.

Copying or Moving the SMCBPRESI Module to an MVS LINKLIST Library

The SMC subsystem pre-initialization routine module (`SMCBPREI`), which resides in the `SEALINK` library, must also reside in an MVS `LINKLIST` library if you run the SMC as a secondary MVS subsystem. You can copy or move the `SMCBPREI` module from `SEALINK` to a `LINKLIST` library.

The `SMCBPREI` pre-initialization routine module is functionally compatible between SMC releases. For future compatibility, however, use the most current release of the `SMCBPREI` pre-initialization module.

Adding SMC to the MVS Program Properties Table

You must modify the MVS Program Properties Table (PPT) to include an entry for the SMC subsystem.

Add the following entry to member `SCHEDzz` of `SYS1.PARMLIB`:

```
PPT PGMNAME(SMCBINT) , PRIV, SYST, KEY(3)
```

Note:

- The SMC must run in a low key (from 1-7). The examples in this section use key 3. Using keys 8-15 causes unpredictable results.
 - After modifying the `SCHEDzz` member, you must perform an IPL or dynamic update.
-

SMC Data Space Considerations

SMC uses a data space with `SCOPE=COMMON` to perform its inter-address space communications. Ensure that the `IEASYSzz` member `MAXCAD` parameter is set appropriately in MVS to account for the SMC. This parameter controls the number of common data spaces that can be enabled on an MVS system.

For additional information, refer to your IBM z/OS publications.

Performing HSC Post-Installation Tasks

This section describes required HSC post-installation tasks. The following topics are included:

- ["Defining HSC as an MVS Subsystem"](#)
- ["HSC User Exit Library Authorization"](#)
- ["Copying or Moving the SLSBPREI Module to an MVS LINKLIST Library"](#)
- ["Adding HSC to the MVS Program Properties Table"](#)
- ["Adding SMF Parameters for HSC and VTCS"](#)
- ["Re-assembling the TMS Interface \(SLUDR*\) Routines"](#)

Defining HSC as an MVS Subsystem

HSC can either run under the master MVS subsystem, or as a secondary subsystem under the primary Job Entry Subsystem.

- If you run HSC under the master MVS subsystem, you must add a line to your subsystem name table (`SYS1.PARMLIB` member `IEFSSNzz`) to identify the subsystem name. This is a one- to four-character name that corresponds to the procedure name for the HSC started task procedure.
- If you run HSC as a secondary MVS subsystem, you must add a line to your subsystem name table (`SYS1.PARMLIB` member `IEFSSNzz`) to identify the following:
 - The subsystem name. This is a one- to four-character name that corresponds to the HSC `START` procedure name.
 - The HSC subsystem initialization routine name, which must be `SLSBPREI`.

Assuming your HSC subsystem name is `SLS0`, the following lines correctly add HSC to your subsystem name table when running HSC under the master MVS subsystem, or as a secondary MVS subsystem:

```
SUBSYS SUBNAME(SLS0) INITRTN(SLSBPRI) /* keyword format */
```

You can also define the HSC subsystem name dynamically using the MVS `SETSSI` command. For example:

If running under the master subsystem:

```
SETSSI ADD,SUB=SLS0
```

If running as a secondary subsystem:

```
SETSSI ADD,SUB=SLS0,INITRTN=SLSBPREI
```

In both examples, `SLS0` is the HSC subsystem name, and `SLSBPREI` is the name of the HSC subsystem initialization routine.

Note:

- If the HSC subsystem name you define in the subsystem name table does not match the HSC `START` procedure name, you must include the `SYSS` option on the `PARM` parameter in the `START` procedure. Refer to the publication *Configuring HSC and VTCS* for information about creating an HSC startup procedure.
- If you are not defining the HSC subsystem name dynamically, you must perform an IPL of the MVS host system before the HSC subsystem name entry takes effect.
- HSC no longer interacts with tape management systems in processing MVS messages. Therefore, the order of definition of the HSC subsystem and a tape management subsystem is irrelevant. However, the SMC subsystem definition, if specified, must follow the tape management system entry.
- HSC no longer interacts with tape management systems in processing MVS messages. Therefore, the order of definition of the HSC subsystem and a tape management subsystem is irrelevant. However, the SMC subsystem definition, if specified, must follow the tape management system entry.

HSC User Exit Library Authorization

The HSC user exit library can either be the same as the HSC load library, or a separate library. If the HSC user exit library is a separate library, you must perform the following steps to APF authorize the user exit load library:

1. Add the HSC user exit load library to either the IEAAPFzz or PROGzz member of SYS1.PARMLIB.
2. Issue the commands described in ["Authorizing the HSC User Exit Load Library"](#) to authorize the load library.

Adding the HSC User Exit Load Library to the IEAAPFzz Member

Add the following entries to the IEAAPFzz member to authorize the HSC user exit load library:

```
your.SEALINK      volser
your.HSC_USEREXIT.LOAD  volser
```

Before adding these entries to your authorized program list, edit the high level qualifier and `volser` with appropriate values for your system.

If there are multiple entries in the IEAAPFzz member, each entry (except the last) must end with a comma to indicate continuation. Omit the comma on the last entry.

Note: If the HSC user exit load library resides on an SMS-managed volume, you do not need to specify a volume in the authorized library entry. In this case, specify nothing after the library name, to indicate that SMS is managing the library. If you specify the wrong volume, the library cannot be authorized.

Adding the HSC User Exit Load Library to the PROGzz Member

Add the following entry to the PROGzz member to authorize the HSC user exit load library:

```
APF ADD
    DSNNAME(your.SEALINK)
    VOLUME(volser) | SMS
APF ADD
    DSNNAME(your.HSC_USEREXIT.LOAD)
    VOLUME(volser) | SMS
```

Before adding this entry to your authorized program list, edit the high level qualifier and *volser* with appropriate values for your system.

Note: If the HSC user exit load library resides on an SMS-managed volume, you do not need to specify a volume in the authorized library entry. In this case, specify the literal SMS after the library name, to indicate that SMS is managing the library. If you specify the wrong volume, the library cannot be authorized.

Authorizing the HSC User Exit Load Library

Adding an entry to the IEAAPFzz or PROGzz members is necessary so that the library will be authorized in event of an IPL. In the meantime, dynamically authorize the library on your running system by issuing one of the following MVS system commands:

If the library is SMS managed:

```
SETPROG APF,ADD,DSN=your.HSC_USEREXIT.LOAD,SMS
```

If the library is not SMS managed:

```
SETPROG APF,ADD,DSN=your.HSC_USEREXIT.LOAD,volser
```

In both commands, edit the high level qualifier and *volser* with appropriate values for your system.

Copying or Moving the SLSBPRESI Module to an MVS LINKLIST Library

The HSC subsystem pre-initialization routine module (SLSBPRESI), which resides in the SEALINK library, must also reside in an MVS LINKLIST library if you run the HSC as a secondary MVS subsystem. You can copy or move the SLSBPRESI module from SEALINK to a LINKLIST library.

The SLSBPRESI pre-initialization routine module is functionally compatible between HSC releases. For future compatibility, however, use the most current release of the SLSBPRESI pre-initialization module.

Adding HSC to the MVS Program Properties Table

You must modify the MVS Program Properties Table (PPT) to include an entry for the HSC subsystem.

Add the following entry to member SCHEDzz of SYS1.PARMLIB:

```
PPT PGMNAME(SLSBINIT),PRIV,SYST,KEY(3)
```

Note: The HSC must run in a low key (from 1-7). The examples in this section use key 3. Using keys 8-15 causes unpredictable results including SOC1 and SOC4 abends.

Adding SMF Parameters for HSC and VTCS

HSC can produce SMF record subtypes for HSC and VTCS events. To produce these record subtypes, you must add two lines to your System Management Facility (SMF) parameters in SYS1.PARMLIB member SMFPRMzz to specify the following:

- HSC subsystem name
- HSC recording interval, specified as `INTERVAL(hhmmss)`.

The smaller the number, the more often data is recorded.

A minimum of 15 minutes (001500) is strongly recommended to avoid impacts to library performance. For HSC systems that do not support VSM, an interval of one hour (010000) is recommended.

`INTERVAL` is only valid for the following SMF subtype records:

- BLOS (OSHDBLOS, x'01')
- LMU Read Statistics (OSHDLRST, x'04')

- HSC SMF record type
- HSC/VTCS SMF record subtypes to be recorded.

Refer to the *ELS Programming Reference* for additional information about the subtypes that HSC and VTCS can generate.

Assuming your HSC subsystem name is SLS0, the following example shows the lines that add HSC and VTCS record subtypes:

```
SUBSYS(SLS0, INTERVAL(001500), TYPE(255))
SUBPARM(SLS0 (SUBTYPE, (1-8, 10, 11, 13-21, 25-33)))
```

Note: If you do not specify the `SUBTYPE` parameter in your SMF options, HSC generates subtypes 1 through 6. You must code a `SUBPARM` parameter and include subtypes 7 and 8 to generate cartridge move and view records.

The SMC Collector requires activation of a supplied SMF IEFU83/IEFU84 exit module. This module is installed using the z/OS Dynamic Exit Facility. To enable this facility, the SMF IEFU83 and IEFU84 exits must be specified in the SMFPRMxx PARMLIB member for SYS and SUBSYS(STC) entries. Review the SMF parameters to ensure the SMF IEFU83 and IEFU84 exits are specified.

```
SYS(... EXITS(... IEFU83, IEFU84 ...))
SUBSYS(STC, ... EXITS(... IEFU83, IEFU84 ...))
```

If HSC subsystems are defined with the IEFU83 and IEFU84 exits (both must be defined), these subsystems names must be included in the `COLLECTOR SUBSYS` parameter.

The `ORDER` parameter (`FIRST` or `LAST`) on the `COLlector` command will be used to place the supplied exit module in that calling sequence if other IEFU83 and IEFU84 exits are installed.

Re-assembling the TMS Interface (SLUDR*) Routines

Depending on your tape management system and its associated release level, you may need to re-assemble the TMS (Tape Management System) interface (SLUDR*) routines called by the HSC `SLUCONDB` utility and SMC `SMCUBDX` utility. This is also necessary if local modifications are made to these routines. These routines are included in the `SEALINK` library generated during ELS installation.

Note:

- The source of the TMS interface routines changed for ELS 7.0. If you have local modifications to any module with a name matching `SLUDR*`, you must modify the ELS 7.0/7.1/7.2/7.3 source with your local changes and re-assemble. Older versions of the `SLUDR*` modules are not compatible with the ELS 7.0/7.1/7.2/7.3 versions of `SLUCONDB`.
 - Refer to the *ELS Command, Control Statement, and Utility Reference* for additional information about the `SLUCONDB` and `SMCUBDX` utilities, and the TMS interface routines.
 - Refer to the publication *Managing HSC and VTCS* for additional information about Scratch Conversion (`SLUCONDB`) utility re-assembly requirements.
-
-

Performing JES3 Post-Installation Tasks

This section describes required post-installation tasks for JES3 environments with `TAPE SETUP` processing. The following topics are included:

- ["Assembling and Link-editing the SMCERSLV module for SMC"](#)
- ["SMC JES3 Load Library Authorization"](#)
- ["Creating and Installing SMC Type 1 Modifications"](#)
- ["Creating and Installing the JES3 IATUX09 User Exit Modification for SMC"](#)
- ["Creating and Installing the JES3 IATUX71 User Exit Modification for SMC"](#)

Assembling and Link-editing the SMCERSLV module for SMC

If you installed the SMC JES3 support function with the `ASSEM` option, a link-edit and assembly of the `SMCERSLV` module was automatically performed. The `SMCERSLV` module obtains the correct offsets and lengths of the JES3 macro fields required by the SMC.

After the initial assembly and link-edit of the `SMCERSLV` module, you must manually reassemble this module each time IBM maintenance is applied to the JES3 macros. You can run member `SMCJRSLV` of the SMC `SAMPLIB`, causing a reassembly of `SMCERSLV` when certain JES3 macros are updated.

The `SMCJRSLV` library member is run against the MVS/JES3 target and distribution zones. Follow the instructions contained in the prologue of the `SMCJRSLV` job, make any necessary changes and run the job.

Note: It is strongly recommended that you use the `SMCJRSLV` library member to reassemble the `SMCERSLV` module. Failure to reassemble the `SMCERSLV` module after applying maintenance to JES3 macros can result in unpredictable SMC operations.

SMC JES3 Load Library Authorization

Load Module Access for SMC and JES3

All load modules in the SMC JES3 load library must be accessible to the JES3 address space. Therefore, you must perform the following steps to APF authorize the SMC JES3 load library:

1. Add the SMC JES3 load library to either the `IEAAPFzz` or `PROGzz` member of `SYS1.PARMLIB`.
2. Issue the commands described in ["Authorizing the SMC JES3 Load Library"](#) to authorize the load library.

Note:

- A JES3 “hot start” is required to activate the modules listed above.
 - Module `SMCERSLV` must be accessible to the JES3 address space if the `NOSMC` parameter of the `IATIIP1` Type 1 modification has been set to `PROMPT`. See ["Creating and Installing SMC Type 1 Modifications"](#) for more information about this modification.
 - Module `SMCERSLV` must be accessible to the SMC address space. This module is automatically assembled into the `SMZLINK` library where the `SMZ7300` FMID is installed.
-

Adding the SMC JES3 Load Library to the IEAAPFzz Member

Add the following entry to the `IEAAPFzz` member to authorize the SMC JES3 load library:

```
your.SMZLINK volser,
```

Before adding this entry to your authorized program list, edit the high level qualifier and *volser* with the appropriate values for your system.

If there are multiple entries in the `IEAAPFzz` member, each entry (except the last) must end with a comma to indicate continuation. Omit the comma on the last entry.

Note: If the SMC JES3 load library resides on an SMS-managed volume, you do not need to specify a volume in the authorized library entry. If you specify the wrong volume, the library cannot be authorized.

Adding the SMC JES3 Load Library to the PROGzz Member

Add the following entry to the `PROGzz` member to authorize the SMC JES3 load library:

```
APF ADD
      DSNAME(your.SMZLINK)
```

VOLUME(*volser*)

Before adding this entry to your authorized program list, edit the high level qualifier and *volser* with the appropriate values for your system.

Note: If the SMC JES3 load library resides on an SMS-managed volume, you do not need to specify a volume in the authorized library entry. If you specify the wrong volume, the library cannot be authorized.

Authorizing the SMC JES3 Load Library

Adding an entry to the IEAAPFzz or PROGzz members is necessary so that the library will be authorized in event of an IPL. In the meantime, dynamically authorize the library on your running system by issuing one of the following MVS system commands:

If the library is SMS managed:

```
SETPROG APF,ADD,DSN=your.SMZLINK,SMS
```

If the library is not SMS managed:

```
SETPROG APF,ADD,DSN=your.SMZLINK,volser
```

In both commands, edit the high level qualifier and *volser* with appropriate values for your system.

Creating and Installing SMC Type 1 Modifications

You must create and SMP/E install Type 1 modifications to certain JES3 modules for JES3 environments with TAPE SETUP processing.

Note: If you plan to run the SMC on an MVS/JES3 system where HSC, MVS/CSC, or a prior release of SMC is currently running, you must remove the existing Type 1 modifications and create and install the SMC Type 1 modifications.

Creating SMC Type 1 Modifications

Use the SMCEHOOK macro to create an SMC Type 1 modification for each of the following JES3 modules:

IATIICM (optional) The type 1 modification to JES3 module IATIICM enables the SMC to retrieve DFSMS DATACLAS recording technique and media values when specified on the JCL DD statement. Install this modification only if your installation permits DATACLAS to be specified on JCL DD statements.

IATIIP1 (required) The type 1 modification to JES3 module IATIIP1 enables the SMC to perform device exclusion. The SMCEHOOK macro provides an ACALL in the IATIIP1 module that enables the SMC to determine where a data set's volume resides, and substitutes an esoteric name based on the volume's location in the job's intermediate job summary table (IJS). JES3 then creates a job summary table (JST) for the job that is used during device preferencing and volume fetch processing. This Type 1 modification is required.

Code the NOSMC parameter of the SMCEHOOK macro to indicate the action you want JES3 C/I to take if SMC is not active when C/I processing occurs. Choose the parameter value based on whether you want JES3 allocation to proceed if the SMC has not initialized. Valid values and actions include the following:

- If NOSMC=PROMPT, one C/I process prompts the operator to start SMC and waits for SMC initialization.
- If NOSMC=NONE, the C/I process continues with no StorageTek tape subsystem.

IATMDAL (required) The type 1 modification to JES3 module IATMDAL enables the SMC to perform device preferencing. The SMCEHOOK macro provides an ACALL in the IATMDAL module that enables the SMC to direct the allocation of transports to the closest LSM containing the volume (specific requests), or to the LSM containing the largest number of scratch volumes (nonspecific requests). The JST created for the job is used during device preferencing and fetch processing. This Type 1 modification is required.

Code the TASKID parameter of the SMCEHOOK macro to indicate the task ID for device preferencing. The value must be between 151 and 255 inclusive. The default is 203.

IATMDFE (optional) The Type 1 modification to JES3 module IATMDFE enables the SMC to suppress operator fetch messages for library cartridge transports during dynamic allocation. Install this modification to suppress these fetch messages. This user modification is optional.

Installing SMC Type 1 Modifications

The prologue for the SMCEHOOK macro provides detailed instructions regarding its use. The SMCEHOOK macro resides in the SMCMAC library.

SMC sample members SMCUIICM, SMCUIIP1, SMCUMDAL, and SMCUMDFE contain examples of the SMC JES3 Type 1 modifications.

After creating the SMC Type 1 modifications to the JES3 modules, you must SMP/E install the Type 1 modifications. Use the SMC SAMPLIB member SMCJTYP1 to SMP/E install the SMC Type 1 modifications for IATIICM, IATIIP1, IATMDAL, and IATMDFE. The following example shows the JCL included in the member SMCJTYP1:

Example 4-1 SMCJTYP1 JCL

```
//jobname JOB .....
//INSTTYP1 EXEC PGM=GIMSMP,REGION=4096K
//SMPCSI DD DSN=your.jes3.global.csi,DISP=SHR
//SMPPTFIN DD DSN=your.usermods,DISP=SHR
//SMPHOLD DD DUMMY
//SMPCNTL DD *
  SET BDY(GLOBAL) .
  RECEIVE S(
    LUSIICM
    LUSIIP1
    LUSMDAL
    LUSMDFE
  ) .
  SET BDY(jes3-target-zone) .
  APPLY S(
    LUSIICM
    LUSIIP1
    LUSMDAL
    LUSMDFE
  ) .
```

/*

Perform the following steps:

1. Allocate a new data set representing a working copy of your SMC `SAMPLIB`. Use your own naming conventions and specify the same `LRECL`, `RECFM`, and `DSORG` values as the original SMC `SAMPLIB`.

Note: Do not edit your original SMC `SAMPLIB`.

2. Copy SMC `SAMPLIB` members `SMCUIIP1` and `SMCUMDAL` into the data set allocated in step 1. Perform the modifications documented at the top of both members.

Line numbering must be `OFF` when editing this data set, as described in steps 2-4.

3. Determine if the modification to `IATIICM` is appropriate for your system. If it is, copy the SMC `SAMPLIB` member `SMCUIICM` into the data set allocated in step 1. Perform the modification documented at the top of the member.
4. Determine if the modification to `IATMDFE` is appropriate for your system. If it is, copy the SMC `SAMPLIB` member `SMCUMDFE` into the data set allocated in step 1. Perform the modification documented at the top of the member.
5. Edit the SMC `SAMPLIB` member `SMCJTYP1`:
 - Change the `JOB` card to meet your local standards.
 - Change *your.jes3.global.csi* to the name of your JES3 global CSI.
 - Change *your.usermods* to the name of the data set allocated in step 1.
 - Change *jes3-target-zone* to the JES3 SMP/E target zone name.
 - If you have decided not to install the modification to `IATIICM`, remove `LUSIICM` from the `RECEIVE` and `APPLY` statements.
 - If you have decided not to install the modification to `IATMDFE`, remove `LUSMDFE` from the `RECEIVE` and `APPLY` statements.
6. Submit the job.

Creating and Installing the JES3 IATUX09 User Exit Modification for SMC

You must create and SMP/E install the JES3 `IATUX09` user exit modification to enable deferred mounting and suppression of operator fetch messages for library volumes.

Creating the JES3 IATUX09 User Exit Modification for SMC

To defer mounts and suppress fetch messages for library volumes during common allocation, you must create the JES3 `IATUX09` user exit source and user modification.

The JES3 `IATUX09` user exit modification enables the suppression of operator fetch messages for library cartridge transports, and enables the deferred mount processing function. The use of this user exit is optional. However, it must be installed to defer mounts and suppress fetch messages for library volumes during common allocation.

If your installation already uses JES3 user exit `IATUX09`, rename the existing user exit and place your new load module name in the `SETC`'s operand field at label `"&OLDUX09."` See the `SETC` at label `"&OLDUX09"` in the sample user exit, `SMC3UX09`.

An example of the source is contained in SMC sample member `SMC3UX09`, and an example of the user modification is contained in SMC `SAMPLIB` member `SMCUUX09`.

Installing the JES3 IATUX09 User Exit Modification for SMC

After you create the JES3 IATUX09 user exit modification, you must SMP/E install the user exit modification. Use sample library member `SMCJUX09` to SMP/E install the JES3 user exit modification.

The following example shows the JCL included in `SMCJUX09`:

Example 4-2 SMCJUX09 JCL

```
//jobname JOB .....
//INSTUX09 EXEC PGM=GIMSMP,REGION=4096K
//SMPCSI DD DSN=your.jes3.global.csi,DISP=SHR
//SMPPTFIN DD DSN=your.usermods,DISP=SHR
//SMPHOLD DD DUMMY
//SMPCNTL DD *
    SET BDY(GLOBAL) .
    RECEIVE S(
        LUSUX09
    ) .
    SET BDY(jes3-target-zone) .
    APPLY S(
        LUSUX09
    ) .
/*
```

Perform the following steps:

1. Allocate a new data set representing a working copy of your SMC `SAMPLIB`. Use your own naming conventions and specify the same `LRECL`, `RECFM`, and `DSORG` values as the original SMC `SAMPLIB`. If you previously allocated a data set as described in ["Installing SMC Type 1 Modifications"](#) you can use that data set.

Note: Do not edit your original SMC `SAMPLIB`.

2. Copy SMC `SAMPLIB` members `SMCUUX09` and `SMC3UX09` into the data set you allocated in step 1.

Examine the instructions documented at the top of `SMCUUX09`, and perform any necessary modifications.

Note: If you are already using `IATUX09`, you must rename the existing user exit modification.

3. Edit the SMC `SAMPLIB` member `SMCJUX09`:
 - Change the `JOB` card to meet your local standards.
 - Change `your.jes3.global.csi` to the name of your JES3 global CSI.
 - Change `your.usermods` to the name of the data set you allocated in step 1.
 - Change `jes3-target-zone` to the JES3 SMP/E target zone name.
4. Submit the job.

Creating and Installing the JES3 IATUX71 User Exit Modification for SMC

You must create and SMP/E install the JES3 IATUX71 user exit modification to enable JES3 mount message (IAT5210) processing for library volumes.

Creating the JES3 IATUX71 User Exit Modification for SMC

To enable JES3 mount messaging processing for library volumes, you must create the JES3 IATUX71 user exit source and user modification.

The JES3 IATUX71 user exit modification enables the mounting of the required volume in response to JES3 mount message IAT5210. This user exit is optional. However, it must be installed to enable JES3 mount message processing for library volumes if the library subsystem policy requests no mount deferral. For HSC, no mount deferral is requested by setting the ALLOC command parameter DEFER to OFF. For MVS/CSC, no mount deferral is requested by setting the DEFER startup parameter to NO or by resetting its value to NO with an ALTER command.

An example of the user exit modification is contained in SMC sample member SMCUUX71.

Installing the JES3 IATUX71 User Modification for SMC

After creating the JES3 IATUX71 user exit modification, you must SMP/E install the user exit modification. Use sample library member SMCJUX71 to SMP/E install the JES3 user exit modification.

The following example shows the JCL included in SMCJUX71:

Example 4-3 SMCJUX71 JCL

```
//jobname JOB .....
//INSTUX71 EXEC PGM=GIMSMP,REGION=4096K
//SMPCSI DD DSN=your.jes3.global.csi,DISP=SHR
//SMPPTFIN DD DSN=your.usermods,DISP=SHR
//SMPHOLD DD DUMMY
//SMPCNTL DD *
        SET BDY(GLOBAL) .
        RECEIVE S(
                LUSUX71
                ) .
        SET BDY(jes3-target-zone) .
        APPLY S(
                LUSUX71
                ) .
/*
```

Perform the following steps:

1. Allocate a new data set that will be a working copy of your SMC SAMPLIB. Allocate this data set as RECFM=FB, DSORG=PS, LRRECL=80, using your own data set naming conventions. If you previously allocated a set as described in ["Installing SMC Type 1 Modifications"](#) you can use that data set.

Note: Do not edit your original SMC SAMPLIB.

2. Copy SMC SAMPLIB members SMCUUX71 and SMC3UX71 into the data set you allocated in step 1. Follow the directions in ["Creating and Installing the JES3"](#)

[IATUX71 User Exit Modification for SMC](#)" and then examine the instructions at the beginning of SMC3UX71 and perform any necessary modifications.

Note: If you are already using IATUX71, you must rename the existing user exit modification.

3. Edit the SMC `SAMPLIB` member `SMCJUX71`:
 - Change the `JOB` card to meet your local standards.
 - Change *your.jes3.global.csi* to the name of your JES3 global CSI.
 - Change *your.usermods* to the name of the data set you allocated in step 1.
 - Change *jes3-target-zone* to the JES3 SMP/E target zone name.
4. Submit the job.

Performing Post Installation Tasks for ELS Additional Software

This chapter describes post-installation tasks for additional mainframe software included with the ELS package. The following topics are included:

- ["LCM Post-Installation Tasks"](#)
- ["MVS/CSC Post-Installation Tasks"](#)
- ["LibraryStation Post-Installation Tasks"](#)

Before proceeding, verify that you have completed ELS installation tasks. See ["Installing ELS and Additional Software"](#) for more information.

LCM Post-Installation Tasks

This section describes required LCM post-installation tasks. The following topics are included:

- ["LCM Load Library Authorization"](#)
- ["Excluding the HSC CDSs from EDI"](#)
- ["Verifying LCM Installation"](#)
- ["Installing and Configuring LCM Agent \(Optional\)"](#)
- ["Installing LCM Explorer \(Optional\)"](#)

LCM Load Library Authorization

LCM must run as an authorized program in MVS. Therefore, you must perform the following steps to APF authorize the LCM load library:

1. Add the LCM load library to either the IEAAPFzz or PROGzz member of SYS1.PARMLIB.
2. Issue the commands described in ["Authorizing the LCM Load Library"](#) to authorize the load library.

Adding the LCM Load Library to the IEAAPFzz Member

Add the following entry to the IEAAPFzz member to authorize the LCM load library:

```
your.LCMLINK volser,
```

Before adding this entry to your authorized program list, edit the high level qualifier and *volser* with appropriate values for your system.

If there are multiple entries in the IEAAPFzz member, each entry (except the last) must end with a comma to indicate continuation. Omit the comma on the last entry.

Note: If the LCM load library resides on an SMS-managed volume, you do not need to specify a volume in the authorized library entry. In this case, specify nothing after the library name, to indicate that SMS is managing the library. If you specify the wrong volume, the library cannot be authorized.

Adding the LCM Load Library to the PROGzz Member

Add the following entry to the PROGzz member to authorize the LCM load library:

```
APF ADD
      DSNNAME(your.LCMLINK)
      VOLUME(volser) | SMS
```

Before adding this entry to your authorized program list, edit the high level qualifier and *volser* with appropriate values for your system.

Note: If the LCM load library resides on an SMS-managed volume, you do not need to specify a volume in the authorized library entry. In this case, specify the literal SMS after the library name, to indicate that SMS is managing the library. If you specify the wrong volume, the library cannot be authorized.

Authorizing the LCM Load Library

Adding an entry to the IEAAPFzz or PROGzz members is necessary so that the library will be authorized in event of an IPL. In the meantime, dynamically authorize the library on your running system by issuing one of the following MVS system commands:

If the library is SMS managed:

```
SETPROG APF,ADD,DSN=your.LCMLINK,SMS
```

If the library is not SMS managed:

```
SETPROG APF,ADD,DSN=your.LCMLINK,volser
```

Edit the high level qualifier and *volser* with appropriate values for your system.

Excluding the HSC CDSs from EDI

If using the Enhanced Data Integrity (EDI) feature of z/OS 1.5 or above, all copies of the HSC CDSs must be excluded from EDI processing. For more information, see *DFSMS: Using Data Sets* for the installed version(s) or z/OS for appropriate entries in the IFGPSEDI PARMLIB member.

Verifying LCM Installation

You can customize LCM SAMPLIB member LCMRUN and run it to verify LCM installation. LCMRUN runs LCM with the CHECK option, which prevents LCM from making any changes to the LSM, the HSC database, or the tape management system files. Refer to the *LCM User's Guide* for more information about the CHECK option. LCMRUN runs with LCM default management techniques and default reports.

Before invoking LCMRUN, modify the job as follows:

- Provide the data set name of your system's Tape Management Catalog (TMC) or Volume Master File (VMF).
- Verify that the data set names on the STEPLIB DD statement for LCM and HSC are correct for your system.
- Supply the name of the parameter file to use for verification. Select the appropriate verification parameter file from the provided SAMPLIB member described in [Table 5-1](#).

Note: It is recommended that you allocate at least 32 MB of region to run effectively. Some larger environments may require a larger region size to be specified.

Table 5-1 SAMPLIB Member Parameter Files

Tape Management System	SAMPLIB Member
CA-1	LCMVCA1
CA-TLMS	LCMVTLMS
DFSMSrmm	LCMVRMM
TMS CUSTOM	LCMVCUST
TMS COMMON	LCMVCOMM
none	LCMVNTMS

Installing and Configuring LCM Agent (Optional)

This section tells how to install and configure LCM Agent. The LCM Agent is an MVS started task that can access TMS information from multiple MVS hosts without shared DASD. The base LCM program executes on the same MVS host as HSC and uses TCP/IP to communicate with an LCM Agent on each host. Each instance of an LCM Agent operates as a started task on the MVS host it is serving.

Install LCM base as described in this guide before you install and configure LCM Agent. Refer to the *LCM User's Guide* for information about LCM Agent commands.

Caution: The host running the LCM batch job must be at the same version as the hosts running the LCM Agent. LCM Agent on hosts with LCM 4.0 installed are incompatible with batch jobs run on hosts with LCM 5.0.0 and above installed.

To install and configure LCM Agent:

1. For OS/390 eNetwork Communications Server V2R6 or higher and above, ensure that the OpenEdition root file system is installed.

The LCM Agent requires that the OpenEdition root file is installed in full-function mode. Refer to the *IBM Open Edition Planning Guide* for more information about creating an HFS root file, modifying the BPXPRMxx PARMLIB member, and creating the root file system directories.

2. Create the LCM Agent access codes data set by customizing SAMPLIB member LCMCODES.

Ensure that the access codes data set specifies a list of hosts authorized to retrieve information for each defined access code. After creating the LCM Agent access code data set, populate the data set with a string of random characters that will be used for the access codes. Also ensure that the access codes data set specifies a list of hosts authorized to retrieve information for each defined access code. An exact copy of this data set should exist on both the LCM Agent host and the host running the LCM batch job. The LCM batch job will use the access codes when communicating with the LCM Agent. If the access codes being used on both sides do not match, access to the remote TMS information will be denied by the LCM Agent.

3. Use your system security software (such as RACF, ACF-2, or TopSecret) to give READ access to referenced data sets to the user ID associated with an LCM Agent started task.

These data sets include the LCM Agent access codes data set you created in Step 2 and any TMCs that the LCM Agent accesses.

Additionally, use your system security software to grant the following access:

- WRITE access to the access codes data set to personnel who maintain access codes
- READ access to the access codes data set to LCM jobs

Create an LCM Agent started task procedure by customizing `SAMPLIB` member `LCMAGENT`.

See ["LCM Agent Started Task Parameters"](#) for more information.

Note:

- You must specify the security code data set (DDname `LCMSECUR`) in the JCL for both the LCM Agent started task and the batch job for base LCM. For example:

```
//LCMSECUR DD DSN=<agent access code file>,DISP=SHR
```
 - If you use the custom TMS module interface, include the correct load module containing the custom TMS module in the `STEPLIB` ddname.
 - When starting more than one Agent in a shared environment, each Agent should have its own uniquely named dump data set.
-

4. Install the agent started task procedure in your system `PROCLIB`.
5. To connect the LCM batch job to an LCM Agent, do one of the following:
 - Specify the following TMS statement parameters in the LCM job:
 - For CA1, use `TMCDSN` to identify the data set name of the LCM Agent's TMS catalog.
 - For TLMS, use `VMFDSN` to identify the data set name of the LCM Agent's TMS catalog.
 - For all other TMS types, use `DSN` to identify the data set name of the LCM Agent's TMS catalog.
 - In Explorer, use the Access tab of the TMS property sheet.

6. If you specified a value other than the default port (3002) in Step 6, insert a service entry ("lcm-agent") for this port number in your TCP/IP ETC.SERVICES file.

For example:

```
lcm-agent 4096/tcp # LCM Agent
```

7. Optionally, reserve the LCM Agent's TCP/IP port for the LCM Agent's exclusive use with the PORT statement in your TCP/IP configuration profile.

This is recommended to avoid port conflicts. In the following example, the first column is the PORT number:

```
PORT
7 UDP MISCSERV ; Miscellaneous Server
.
3002 TCP LCMAGENT ; LCM Agent ***** ADD THIS LINE **
```

Note: You must restart your TCP/IP address space or use the OBEYFILE command or the MVS VARY TCPIP command to force a running TCP/IP address space to reserve the added port number.

8. Optionally, set the TCP/IP address space to monitor the LCM Agent.

This is recommended because this configuration causes the LCM Agent started task to automatically start or stop when the TCP/IP address space starts or stops. In addition, the TCP/IP address space periodically queries the state of LCM Agent, and restarts it if not active. You can set up this configuration in the AUTOLOG statement in the TCP/IP configuration profile.

For example:

```
AUTOLOG

FTPSEVER ; FTP Server
LPSEVER ; LPD Server
NAMESRV ; Domain Name Server
NCPRUT ; NCPRUTE Server
PORTMAP ; Portmap Server
ROUTED ; Routed Server
RXSERVE ; Remote Execution Server
SMTP ; SMTP Server
SNMPD ; SNMP Agent Server
SNMPQE ; SNMP Client
MISCSERV ; Miscellaneous Server
LCMAGENT ; LCM Agent *****ADD THIS LINE *****

ENDAUTOLOG
```

LCM Agent Started Task Parameters

The following list describes the execution parameters you can specify in the LCM Agent started task JCL using PARM= on the EXEC statement:

- PORT

This parameter specifies the port number for client connections. The default is 3002.

- UPPERCASE

This parameter specifies that messages are in uppercase.

- MODLEVEL

This parameter displays the service level for the LCM Agent.

- MAXCONN

This parameter specifies the maximum number of concurrent client connections. The default is 50.

- LOG(SYSTEM|DD)

This parameter specifies the routing for messages.

- SYSTEM

This parameter routes messages to the system console.

- DD

This parameter routes messages to the ddname *LWSLOG* (the default).

- SWAPPable

This parameter specifies that the LCM Agent is swappable during idle periods. The default is non-swappable.

`OPTFILE('filename') or OPTFILE(DD:ddname)`

Specifies a fully qualified MVS data set or MVS ddname that contains execution parameters for the LCM Agent. This statement enables you to bypass the JCL parameter length limitations when coding multiple execution parameters. If coding a ddname instead of data set name, you must prefix it with "DD:". For example:

`OPTFILE(DD:LCMOPTS)`

Installing LCM Explorer (Optional)

LCM Explorer is provided in member *LCMXPLR* of the *LCMGUI* data set. Updates to the LCM Explorer are distributed as PTFs that replace this member. You can determine the build level of LCM Explorer that is installed on a workstation by viewing the "About LCM Explorer" item in its Help menu.

To update LCM Explorer on a workstation:

1. Install the LCM PTF that contains the Explorer update on an MVS host running LCM.
2. FTP a copy of the *LCMXPLR* member of the *LCMGUI* data set to each PC running Explorer and rename the member to *LCMINST.EXE* as follows:

```
ftp <host name>
User: <userid>
Password: <password>
ftp> binary
ftp> get 'LCM.LCMGUI(LCMXPLR)' LCMINST.EXE
ftp> quit
```

3. On each workstation run *LCMINST.EXE* and follow the instructions in the setup wizard.

Allocating the Explorer Configuration File Library

LCM Explorer produces a configuration file that must reside on the MVS host used to execute LCM runs. The library used to store configuration files should be a PDS. Allocation information can be found in the `SAMPLIB` member `LCMINSTH`.

Installing the JCL Procedure for Jobs Submitted by the Explorer

LCM Explorer 7.3 can submit LCM batch jobs. This function requires that you place a cataloged procedure to invoke LCM in `SYS1.PROCLIB` or another suitable location such as a private `JCLLIB`. `SAMPLIB` member `LCMEEXEC` contains a sample JCL procedure.

The JCL contained in the cataloged procedure in `SYS1.PROCLIB` (`LCMEEXEC`) must contain the same DD statements that are necessary to run the batch LCM application. This includes, but is not limited to, such DD statements as `LCMTMSDB` (tape management system catalog), `LCMSECU` (LCM Agent access code file), and, if you are using the SMC 7.3 UUI, the `SEALINK` DD card (points to the SMC 7.3 libraries).

MVS/CSC Post-Installation Tasks

This section describes required MVS/CSC post-installation tasks. The following topics are included:

- ["Defining MVS/CSC as an MVS Subsystem"](#)
- ["Defining Multiple MVS/CSC Subsystems Running on the Same MVS Host System"](#)
- ["MVS/CSC Load Library Authorization"](#)
- ["Authorizing the MVS/CSC User Exit Library"](#)
- ["Copying or Moving the SCSBPRES Module to an MVS LINKLIST Library"](#)
- ["Adding MVS/CSC to the MVS Program Properties Table"](#)
- ["Allocating MVS/CSC Event-Log and Trace Data Sets"](#)

Defining MVS/CSC as an MVS Subsystem

MVS/CSC executes as a secondary subsystem under the primary Job Entry Subsystem.

To define SMC as an MVS subsystem, you must add a line to your subsystem name table (`SYS1.PARMLIB` member `IEFSSNzz`) identifying the following:

- The one to four-character MVS/CSC subsystem name that corresponds to the procedure name for the MVS/CSC started task procedure.
- The MVS/CSC subsystem initialization routine name, which must be `SCSBPREI`.

Assuming your MVS/CSC subsystem name is `CSC0`, the following line correctly adds MVS/CSC to your subsystem name table. This sample entry is contained in member `IEFSSNYY` of the MVS/CSC sample library.

```
SUBSYS SUBNAME(CSC0) INITRTN(SCSBPREI) /* keyword
```

You can also define the MVS/CSC subsystem name dynamically using the `MVS SETSSI` command. For example:

```
SETSSI ADD,SUB=CSC0,INITRTN=SCSBPREI
```

where `CSC0` is the MVS/CSC subsystem name, and `SCSBPREI` is the name of the MVS/CSC subsystem initialization routine.

Note:

- If you are not defining the MVS/CSC subsystem name dynamically, you must perform an IPL of the MVS host system before the MVS/CSC subsystem name entry takes effect.
 - MVS/CSC no longer interacts with tape management systems in processing MVS messages. Therefore, the order of definition of the HSC subsystem and a tape management subsystem is irrelevant. However, the SMC subsystem definition, if specified, must follow the tape management system entry.
 - Refer to your IBM z/OS publications for more information about defining subsystem names.
-

Defining Multiple MVS/CSC Subsystems Running on the Same MVS Host System

Multiple MVS/CSC subsystems can run on the same MVS host system. Each MVS/CSC must be defined as a separate MVS subsystem. Multiple MVS/CSC subsystems only require additional disk space for the multiple JCL startup procedures, additional startup parameter files, and optional event-log, trace, and `TAPEREQ` definition data sets.

If you intend to run multiple MVS/CSCs, each connected to a separate server, the following operating requirements and restrictions must be considered:

- All MVS/CSC subsystems may run from a single copy of executable modules.
- Each MVS/CSC requires its own MVS subsystem definition, cataloged procedure, startup parameters, virtual storage, and optional event-log, trace, and `TAPEREQ` definition data sets.
- MVS/CSC user exits should be the same version running for each MVS/CSC subsystem.
- Operator command prefix characters can be the same or different depending on local operating preferences.

Note: The SMC interrogates MVS/CSC subsystems using volume and policy information to determine which subsystem owns the allocation request. The order of interrogation is determined by the order of the SMC `LIBRARY` commands (if specified). If `LIBRARY` commands are not specified, the order of the MVS/CSCs in the `SSCVT` table is used.

The following must be defined for each subsystem:

- Server attachment
- Startup parameter file
- Communications links
- MVS/CSC startup procedure

In addition, you can optionally define event-log and trace data sets for each subsystem.

The text from the USERDATA parameter specified in the startup parameter file is passed to these user exits. You can use this text and the parameter list (containing job name, data set name, and other information) to specify to the SMC which active MVS/CSC subsystem is considered the owner of the allocation request.

Note:

- Refer to the *ELS Legacy Interfaces Reference* for more information about MVS/CSC user exits.
 - Refer to the *MVS/CSC Configuration Guide* for information about MVS/CSC configuration tasks.
 - Refer to the *MVS/CSC Operator's Guide* for information about MVS/CSC operating procedures.
-
-

MVS/CSC Load Library Authorization

MVS/CSC must run as an authorized program in MVS. Therefore, you must perform the following steps to APF authorize the MVS/CSC load libraries:

1. Add the MVS/CSC load libraries to either the IEAAPFzz or PROGzz member of SYS1.PARMLIB.
2. Issue the commands described in ["Authorizing the MVS/CSC Load Libraries"](#) to authorize the load library.

Adding the MVS/CSC Load Libraries to the IEAAPFzz Member

Add the following entries to the IEAAPFzz member to authorize the MVS/CSC load libraries:

```
your.SCSLINK volser,
your.SACLINK volser,
your.CSLLINK volser,
```

Before adding these entries to your authorized program list, edit the high level qualifier and *volser* with appropriate values for your system.

If there are multiple entries in the IEAAPFzz member, each entry (except the last) must end with a comma to indicate continuation. Omit the comma on the last entry.

Note:

- If the MVS/CSC load libraries resides on an SMS-managed volume, you do not need to specify a volume in the authorized library entry. In this case, specify nothing after the library name, to indicate that SMS is managing the library. If you specify the wrong volume, the library cannot be authorized.
- The TCPLINK load library is required if you are using CA Unicenter TCPAccess Communications Server:

```
your.TCPLINK volser,
```

Refer to your CA publications for more information. If you are using IBM TCP/IP, this load library is not required.

Adding the MVS/CSC Load Libraries to the PROGzz Member

Add the following entries to the PROGzz member to authorize the MVS/CSC load libraries:

```
APF ADD
    DSNNAME(your.SCSLINK)
    VOLUME(volser) | SMS
APF ADD
    DSNNAME(your.SACLINK)
    VOLUME(volser) | SMS
APF ADD
    DSNNAME(your.CSLLINK)
    VOLUME(volser) | SMS
```

Before adding these entries to your authorized program list, edit the high level qualifier and *volser* with appropriate values for your system.

Note:

- If the MVS/CSC load libraries resides on an SMS-managed volume, you do not need to specify a volume in the authorized library entry. In this case, specify the literal SMS after the library name to indicate that SMS is managing the library. If you specify the wrong volume, the library cannot be authorized.
- The TCPLINK load library is required if you are using CA Unicenter TCPAccess Communications Server:

```
APF ADD
    DSNNAME(your.TCPLINK)
    VOLUME(volser) | SMS
```

Refer to your CA publications for more information. If you are using IBM TCP/IP, this load library is not required.

Authorizing the MVS/CSC Load Libraries

Adding an entry to the IEAAPFzz or PROGzz members is necessary so that the library will be authorized in event of an IPL. In the meantime, dynamically authorize the libraries on your running system by issuing one of the following sets of MVS system commands:

If the libraries are SMS managed:

```
SETPROG APF,ADD,DSN=your.SCSLINK,SMS
SETPROG APF,ADD,DSN=your.SACLINK,SMS
SETPROG APF,ADD,DSN=your.CSLLINK,SMS
```

If the libraries are not SMS managed:

```
SETPROG APF,ADD,DSN=your.SCSLINK,volser
SETPROG APF,ADD,DSN=your.SACLINK,volser
SETPROG APF,ADD,DSN=your.CSLLINK,volser
```

Authorizing the MVS/CSC User Exit Library

The MVS/CSC user exit library can either be the same as the MVS/CSC load library, or a separate library. If the MVS/CSC user exit library is a separate library, you must perform the following steps to APF authorize the MVS/CSC user exit load library:

1. Add the MVS/CSC user exit load library to either the IEAAPFzz or PROGzz member of SYS1.PARMLIB.
2. Issue the commands described in ["Authorizing the MVS/CSC User Exit Load Library"](#) to authorize the load library.

Adding the MVS/CSC User Exit Load Library to the IEAAPFzz Member

Add the following entries to the IEAAPFzz member to authorize the MVS/CSC user exit load library:

```
your.SCSLINK    volser,
your.CSC_USEREXIT.LOAD    volser,
```

Before adding these entries to your authorized program list, edit the high level qualifier and *volser* with appropriate values for your system.

If there are multiple entries in the IEAAPFzz member, each entry (except the last) must end with a comma to indicate continuation. Omit the comma in the last entry.

Note: If the MVS/CSC user exit load library resides on an SMS-managed volume, you do not need to specify a volume in the authorized library entry. In this case, specify nothing after the library name, to indicate that SMS is managing the library. If you specify the wrong volume, the library cannot be authorized.

Adding the MVS/CSC User Exit Load Library to the PROGzz Member

Add the following entry to the PROGzz member to authorize the MVS/CSC user exit load library:

```
APF ADD
      DSNAME(your.SCSLINK)
      VOLUME(volser) | SMS
APF ADD
      DSNAME(your.CSC_USEREXIT.LOAD)
      VOLUME(volser) | SMS
```

Before adding this entry to your authorized program list, edit the high level qualifier and *volser* with appropriate values for your system.

Note: If the MVS/CSC user exit load library resides on an SMS-managed volume, you do not need to specify a volume in the authorized library entry. In this case, specify the literal SMS after the library name, to indicate that SMS is managing the library. If you specify the wrong volume, the library cannot be authorized.

Authorizing the MVS/CSC User Exit Load Library

Adding an entry to the IEAAPFzz or PROGzz members is necessary so that the library will be authorized in event of an IPL. In the meantime, dynamically authorize the

library on your running system by issuing one of the following MVS system commands:

If the library is SMS managed:

```
SETPROG APF,ADD,DSN=your.CSC_USEREXIT.LOAD,SMS
```

If the library is not SMS managed:

```
SETPROG APF,ADD,DSN=your.CSC_USEREXIT.LOAD,volser
```

Edit the high level qualifier and *volser* with appropriate values for your system.

Copying or Moving the SCSBPRES Module to an MVS LINKLIST Library

The MVS/CSC subsystem pre-initialization routine module (SCSBPREI), which resides in the SCSLINK library, must also reside in an MVS LINKLIST library. You can copy or move the SCSBPRES module from SCSLINK to a LINKLIST library.

The SCSBPRES pre-initialization routine module is functionally compatible between MVS/CSC releases. For future compatibility, however, use the most current release of the SCSBPRES pre-initialization module.

Adding MVS/CSC to the MVS Program Properties Table

You must modify the MVS Program Properties Table (PPT) to include an entry for the MVS/CSC subsystem.

Note: The MVS/CSC must run in a low key (from 1-7). The examples in this section use key 3. Using keys 8-15 causes unpredictable results.

Add the following entry to member SCHEDzz of SYS1.PARMLIB:

```
PPT PGMNAME(SCSBINIT),PRIV,SYST,KEY(3)
```

Allocating MVS/CSC Event-Log and Trace Data Sets

You can use the event-log data set to record events logged by MVS/CSC's Event Log facility. The trace data set records trace output produced by MVS/CSC's Trace facility. If you plan to use MVS/CSC's Event Log and Trace facilities, you must allocate event-log and trace data sets to record the output produced by these facilities. The following table provides recommendations for size definitions. The numbers provided for blocks are the minimum required for the data sets.

Refer to the *MVS/CSC Configuration Guide* and *MVS/CSC System Programmer's Guide* for more information about MVS/CSC's Event Log and Trace facilities.

The following table lists the MVS/CSC trace and event-log data sets:

Table 5–2 MVS/CSC Trace and Event-Log Data Sets

Data Set Name	DSORG	RECFM	LRECL	BLKSIZE	Tracks	Directory Blocks
TRACE	PS	VB	3076	1000	2000	N/A
EVENT LOG	PS	VB	3076	1000	2000	N/A

LibraryStation Post-Installation Tasks

This chapter describes required LibraryStation post-installation tasks. The following topics are included:

- ["LibraryStation Load Library Authorization"](#)
- ["Defining the Persistent Data File \(Optional\)"](#)

LibraryStation Load Library Authorization

LibraryStation must run as an authorized program in MVS. Therefore, you must perform the following steps to APF authorize the LibraryStation load libraries:

1. Add the LibraryStation load libraries to either the IEAAPFzz or PROGzz member of SYS1.PARMLIB.
2. Issue the commands described in ["Authorizing the LibraryStation Load Libraries"](#) to authorize the load library.

Adding the LibraryStation Load Libraries to the IEAAPFzz Member

Add the following entries to the IEAAPFzz member to authorize the LibraryStation load libraries:

```
your.SLCLINK volser
your.SACLINK volser
your.CSLLINK volser
```

Before adding these entries to your authorized program list, edit the high level qualifier and *volser* with appropriate values for your system.

If there are multiple entries in the IEAAPFzz member, each entry (except the last) must end with a comma to indicate continuation. Omit the comma on the last entry.

Note:

- If the LibraryStation load library resides on an SMS-managed volume, you do not need to specify a volume in the authorized library entry. In this case, specify nothing after the library name, to indicate that SMS is managing the library. If you specify the wrong volume, the library cannot be authorized.
- The TCPLINK load library is required if you are using CA Unicenter TCPaccess Communications Server for TCP/IP communications:

```
your.TCPLINK volser,
```

Refer to your CA publications for more information. If you are using IBM TCP/IP, this load library is not required.

Adding the LibraryStation Load Libraries to the PROGzz Member

Add the following entries to the PROGzz member to authorize the LibraryStation load libraries:

```
APF ADD
    DSNAM(your.SLCLINK)
    VOLUME(volser) | SMS
APF ADD
```

```
DSNAME(your.SACLINK)
VOLUME(volser) | SMS
APF ADD
DSNAME(your.CSLINK)
VOLUME(volser) | SMS
```

Before adding these entries to your authorized program list, edit the high level qualifier and *volser* with appropriate values for your system.

Note:

- If the LibraryStation load libraries resides on an SMS-managed volume, you do not need to specify a volume in the authorized library entry. In this case, specify the literal SMS after the library name to indicate that SMS is managing the library. If you specify the wrong volume, the library cannot be authorized.
- If the LibraryStation load libraries resides on an SMS-managed volume, you do not need to specify a volume in the authorized library entry. In this case, specify the literal SMS after the library name to indicate that SMS is managing the library. If you specify the wrong volume, the library cannot be authorized.

```
APF ADD
DSNAME(your.TCPLINK)
VOLUME(volser) | SMS
```

Refer to your CA publications for more information. If you are using IBM TCP/IP, this load library is not required.

Authorizing the LibraryStation Load Libraries

Adding an entry to the IEAAPFzz or PROGzz members is necessary so that the library will be authorized in event of an IPL. In the meantime, dynamically authorize the libraries on your running system by issuing one of the following sets of MVS system commands:

If the libraries are SMS managed:

```
SETPROG APF,ADD,DSN=your.SLCLINK,SMS
SETPROG APF,ADD,DSN=your.SACLINK,SMS
SETPROG APF,ADD,DSN=your.CSLINK,SMS
```

If the libraries are not SMS managed:

```
SETPROG APF,ADD,DSN=your.SLCLINK,volser
SETPROG APF,ADD,DSN=your.SACLINK,volser
SETPROG APF,ADD,DSN=your.CSLINK,volser
```

Defining the Persistent Data File (Optional)

LibraryStation software includes a Database Manager (DBM) that is initialized during LibraryStation initialization. The DBM manages several persistent data objects that are not maintained by the HSC, including resource locks and drive status.

Data objects managed by the DBM are stored in one or more VSAM files. These files are collectively referred to as the Persistent Data File (PDF). The PDF contains volume records, drive records, and lockid records.

Note:

- If you are migrating from a previous release of LibraryStation, you must delete the existing PDF and define a new PDF for the new release.
- You must define a PDF if LibraryStation is servicing heterogeneous clients (for example, non-MVS clients). If LibraryStation is servicing MVS clients in a sysplex environment, do not define the PDF. The PDF is not supported for sysplex environments. Refer to the *LibraryStation Configuration and Administration Guide* for more information about the PDF.
- You must define a PDF if LibraryStation is servicing heterogeneous clients (for example, non-MVS clients). If LibraryStation is servicing MVS clients in a sysplex environment, do not define the PDF. The PDF is not supported for sysplex environments. Refer to the *LibraryStation Configuration and Administration Guide* for more information about the PDF.

You must define the PDF when LibraryStation is servicing heterogeneous clients. Use IDCAMS to define data sets for the PDF.

The following example shows the JCL to define data sets for the PDF. This JCL is contained in member SLGDBCR of the LibraryStation sample library.

Example 5-1 JCL to Define LibraryStation PDF Data Sets

```
//SLGDBCR JOB job card info,REGION=1M
/*
/* NOTE: A minimum of 1 Meg of virtual storage is needed
/*   for this job (i.e., use REGION=1M on the job card)
/*
//CREATEDB EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=*
//INPUT DD *
000000000000 DB INITIALIZATION RECORD
//SYSIN DD *
DELETE (cluster_name) CLUSTER
DEFINE CLUSTER (
    NAME(cluster_name)
    VOLUMES(volser)
    RECORDS(nr,2*nr)
    RECORDSIZE(30 100)
    KEYS(12 0)
    UNIQUE )
REPRO INFILE(INPUT)
    OUTDATASET(cluster_name)
DEFINE ALTERNATEINDEX (
    NAME(alternate_index_name)
    RELATE(cluster_name)
    KEYS(10 2)
    RECORDS(nr,2*nr)
    RECORDSIZE(27 27)
    VOLUMES(volser)
    UNIQUEKEY
    UNIQUE
    UPGRADE )
DEFINE PATH (
```

```

NAME (path_name)           _
PATHENTRY (alternate_index_name) _
BLDINDEX                   _
INDATASET (cluster_name)   _
OUTDATASET (alternate_index_name)
LISTCAT ENTRIES (          _
cluster_name               _
alternate_index_name        _
path_name) ALL
/*

```

You must supply or modify the following information:

- Job card information
- PDF Data set names
- Volume location of the PDF
- Record keyword values

PDF Data Set Names

You must supply names for the data sets listed in the following table:

Table 5–3 PDF Data Set Names

NAME Keyword	Description
CLUSTER	The name for the SLSPDF base cluster (<i>cluster_name</i>), such as LSTAT.PDF.
ALTERNATEINDEX	The name for the SLSPDFX alternate index (<i>alternate_index_name</i>), such as LSTAT.PDFAIX.
PATH	The name for the path to SLSPDFX (<i>path_name</i>), such as LSTAT.PDFPATH.

Note: There is no predefined naming convention for data set names. You can use the same prefix for all three data sets and provide a unique file type for each name.

Volume Location

A single PDF is defined for LibraryStation, and the host system where LibraryStation is initialized must have access to the DASD volume where the PDF is located. Therefore, in a multiple host environment where more than one host can initialize LibraryStation, the PDF must be located on shared DASD that is accessible to each initializing host.

The volume where the PDF is to be allocated can be any available DASD. You identify the DASD by its volser.

Values for Record Keywords

The PDF record space calculation (*nr*) (shown below) is based on the maximum number of volumes (*nv*) that all client systems can have locked simultaneously, and the total number of tape cartridge drives that will be used by the network clients (*nd*).

number of records (*nr*) = (*nv* + *nd*) * 1.1

The secondary PDF space allocation is calculated as twice the number of records ($2*nr$).

Setting primary records to 2000 and secondary records to 4000 should be adequate for most LibraryStation installations. However, to verify the records for your specific installation, use the allocation formula with your site's number of volumes and network client data.

ELS Samples, Modules, and Macros

This appendix lists samples, source code modules load modules, and macros included in the ELS package. The following topics are included:

- ["ELS Samples, Source Code Modules, and Macros"](#)
- ["LCM Samples"](#)
- ["MVS/CSC Samples and Macros"](#)
- ["LibraryStation Samples and Source Code Modules"](#)

See ["Unloading the SMP/E JCL Library"](#) for information about JCL samples used for ELS installation.

Note: See ["Unloading the SMP/E JCL Library"](#) for information about JCL samples used for ELS installation.

ELS Samples, Source Code Modules, and Macros

This section describes ELS samples, source code modules and macros contained on the ELS installation CD-ROM.

ELS Samples

The following table describes ELS sample members:

Table A-1 *ELS Samples*

Member Name	Description
GTFEXTR	Sample extract for SMC trace of a single job
GTFLMU	Sample MVS 2.X PARMLIB member to trace LMU requests
GTFPARMS	Sample GTF parameters for SMC trace
GTFPROC	Sample GTF startup JCL
IEAAPFZZ	Sample SMC APF list entries
IEFSSNZZ	Sample SMC subsystem name table entry
INSTUXIT	Sample SMP/E for installing SMP/E managed user exits
LIBGNJCL	Sample JCL to assemble and link a LIBGEN source file
MSGMPFUX	Sample MPF user exit
POLCVT01	Sample POLCVT member

Table A–1 (Cont.) ELS Samples

Member Name	Description
POLCVT02	Sample POLCVT REXX data set program
PROGZZ	Sample ELS APF list entries
SCHEDZZ	Sample MVS Program Properties Table (PPT) entry for ELS
SENDEL	Sample SEN macro interface program
SENDISA	Sample SEN macro interface program

ELS Source Code Modules

The following table describes ELS source code module members:

Table A–2 ELS Source Code Modules

Member Name	Description
SENENA	Sample SEN macro interface program
SENEXIT	Sample SEN user exit
SENQRST	Sample SEN macro interface program
SLSSYS00	Sample HSC startup parameter file
SLSUX03	Default scratch subpool user exit
SLSUX05	Default programmatic interface (PGMI) user exit
SLSUX06	Default database insert/delete user exit
SLSUX14	Default volume access user exit
SLSUX15	Default command authority user exit
SLUCONDB	Source code for Scratch Conversion Utility
SMC3UX09	Sample SMC JES3 IATUX09 user exit source
SMC3UX71	Sample SMC JES3 IATUX71 user exit source
SMCCMDS	Sample command file for the SMCCMDS DD statement
SMCJRSLA	Sample JCL to assemble and link module SMCERSLV (JES3 only)
SMCJRSLV	Sample JCL for running UCLIN for SMCERSLV (JES3 only)
SMCJTYP1	Sample JCL to SMP/E install the SMC Type 1 modifications (JES3 only)
SMCJUX09	Sample JCL to SMP/E install the SMC IATUX09 user modification (JES3 only)
SMCJUX71	Sample JCL to SMP/E install the SMC IATUX71 user modification (JES3 only)
SMCPARMS	Sample parameter file for SMCPARMS DD statement
SMCPROC	Sample startup JCL
SMCUIICM	Sample IATIICM Type 1 modification (JES3 only)
SMCUIIP1	Sample IATIIP1 Type 1 modification (JES3 only)
SMCUMDAL	Sample IATMDAL Type 1 modification (JES3 only)
SMCUMDFE	Sample IATMDFE Type 1 modification (JES3 only)

Table A–2 (Cont.) ELS Source Code Modules

Member Name	Description
SMCUUX09	Sample SMC JES3 IATUX09 user modification (JES3 only)
SMCUUX71	Sample SMC JES3 IATUX71 user modification (JES3 only)
SMFPRMXX	Sample PARMLIB definitions for HSC SMF record subtypes
UX06SAM1	Sample HSC User Exit 06 interface to a tape management system

ELS Macros

The following table describes ELS macros:

Table A–3 ELS Macros

Member Name	Description
ACSRQ	format a parameter list for an ACS request
NCSCOMM	NCSCOMM parameter list
NCSUUII	NCS UUI call service
NUUIIA	NCS UUI interface area
SLSUX01P	HSC format User Exit 01 parameter list
SLSUX02P	HSC format User Exit 02 parameter list
SLSUX04P	HSC format User Exit 04 parameter list (JES3 only)
SLSUX08P	HSC format User Exit 08 parameter list
SLSUX09P	HSC format User Exit 09 parameter list
SLSUX10P	HSC format User Exit 10 parameter list
SLSUX11P	HSC format User Exit 11 parameter list (JES3 only)
SLSUX12P	HSC format User Exit 12 parameter list (JES3 only)
SLSUX13P	HSC format User Exit 13 parameter list (JES3 only)
SCSUX01P	MVS/CSC format User Exit 01 parameter list
SCSUX02P	MVS/CSC format User Exit 02 parameter list
SCSUX04P	MVS/CSC format User Exit 04 parameter list (JES3 only)
SCSUX08P	MVS/CSC format User Exit 08 parameter list
SCSUX09P	MVS/CSC format User Exit 09 parameter list
SCSUX10P	MVS/CSC format User Exit 10 parameter list
SCSUX11P	MVS/CSC format User Exit 11 parameter list (JES3 only)
SCSUX12P	MVS/CSC format User Exit 12 parameter list (JES3 only)
SCSUX13P	MVS/CSC format User Exit 13 parameter list (JES3 only)
SLIACS	LIBGEN SLIACS macro
SLIALIST	LIBGEN SLIALIST macro
SLICOV	Global configuration constants & variables
SLIDLIST	LIBGEN SLIDLIST macro
SLIDRIVS	LIBGEN SLIDRIVS macro
SLIENDGN	LIBGEN SLIENDGN macro

Table A-3 (Cont.) ELS Macros

Member Name	Description
SLIERMSG	LIBGEN error message macro
SLILBACS	LIBGEN ACS area
SLILBALS	LIBGEN ACLIST area
SLILBDLS	LIBGEN DRIVELST area
SLILBDRV	LIBGEN DRIVES area
SLILBEND	LIBGEN ENDGEN area
SLILBLIB	LIBGEN LIBRARY area
SLILBLSM	LIBGEN LSM area
SLILBREC	LIBGEN RECOVERY area
SLILBSTA	LIBGEN STATION area
SLILCV	Installation LCT constants - variables
SLILIBRY	LIBGEN LIBRARY macro
SLILSM	LIBGEN LSM macro
SLIPTPCK	LIBGEN SLIPTPCK macro
SLIRCVRY	LIBGEN RECOVERY macro
SLISTATN	LIBGEN STATION macro
SLSDILLT	LIBGEN LOCATION type
SLSDVAR	Distributed volume attribute record length
SMCEHOOK	SMC Type 1 modification macro (JES3 only)
SMCEMFLD	JES3 macro field resolution block (used by SMCERSLV) (JES3 only)
SLSSBLOG	INIT/TERM LOGREC record
SLSSBLOS	LSM operations statistics data area
SLSSCAPJ	CAP SMF EJECT record
SLSSCAPN	CAP SMF ENTER record
SLSSDJLR	Database journalling LOGREC map
SLSSFHDR	SMF record header
SLSSHLG1	Host communications LOGREC format 1
SLSSLHDR	LOGREC record header map
SLSSLLG1	LMU driver LOGREC format ONE
SLSSLLG2	LMU driver LOGREC format two
SLSSLLG3	LMU driver LOGREC format three
SLSSLLG4	LMU driver LOGREC format four
SLSSLLG5	LMU driver LOGREC format five
SLSSLLG6	LMU driver LOGREC format six
SLSSLSB	LMU ATHS statistics buffer
SLSSMF07	HSC format 7 SMF record

Table A-3 (Cont.) ELS Macros

Member Name	Description
SLSSMF08	HSC format 8 SMF record
SLSSMF09	HSC format 9 SMF record
SLSSMF10	HSC format 10 SMF record
SLSSMF11	HSC format 11 SMF record
SLSSMF12	HSC format 12 SMF record
SLSSMF13	HSC format 13 SMF record
SLSSMF14	HSC format 14 SMF record
SLSSMF15	HSC format 15 SMF record
SLSSMF16	HSC format 16 SMF record
SLSSMF17	HSC format 17 SMF record
SLSSMF18	HSC format 18 SMF record
SLSSMF19	HSC format 19 SMF record
SLSSMF20	HSC format 20 SMF record
SLSSMF21	HSC format 21 SMF record
SLSSMF22	HSC format 22 SMF record
SLSSMF23	HSC format 23 SMF record
SLSSMF24	HSC format 24 SMF record
SLSSMF25	HSC format 25 SMF record
SLSSMF26	HSC format 26 SMF record
SLSSMF27	HSC format 27 SMF record
SLSSMF28	HSC format 28 SMF record
SLSSMF29	HSC format 29 SMF record
SLSSMF30	HSC Format 30 SMF record
SLSSMF31	HSC format 31 SMF record
SLSSMF32	HSC format 32 SMF record
SLSSMF33	HSC format 33 SMF record (track MVCPOOL usage)
SLSSMLSM	Modify LSM SMF record subtype map
SLSSPSWI	Primary/shadow switch LOGREC record
SLSSRL00	Recovery ERDS record 0
SLSSRL01	Recovery ERDS record 1
SLSSVLG1	VOL/CELL force unselect record
SLSSVSTA	VARY station SMF record subtype map
SLSUREQ	Batch API request processor
SLSSUREQM	Batch API interface mapping macro
SLSUX03P	HSC User Exit 03 parameter list
SLSUX05P	HSC User Exit 05 parameter list
SLSUX06P	HSC User Exit 06 parameter list

Table A–3 (Cont.) ELS Macros

Member Name	Description
SLSUX14P	HSC User Exit 14 parameter list
SLSUX15P	HSC User Exit 15 parameter list
SLSXB2X	Translate 8 bits to a hexadecimal byte
SLSSWMSG	Map logrec records written for WTO-type messages issued by HSC
SLSXREQ	Issue an ACS request
SLSXREQM	ACS user interface mapping macro
SLXSSEN	HSC Significant Event Notification (SEN) request
SLXSSENM	Significant Event Notification (SEN) request parm list map
SLUDRINF	TMS DB Read parameter list
SLUVADAT	Flat file ACS/LSM information DSECT
SLUVCDAT	Flat file static configuration data DSECT
SLUVDDAT	QCDS drive information DSECT
SLUVHDAT	Flat file host information DSECT
SLUVIDAT	Flat file CDS information DSECT
SLUVMDAT	Flat file MVC data DSECT
SLUVPDAT	QCDS CAP information DSECT
SLUVSDAT	Flat file ACS station address DSECT
SLUVTDAT	Flat file VTV data DSECT
SLUVVDAT	Flat file volume data DSECT
SLX	HSC external interface reply
SWSPGMIA	VTCS PGMI interface area (VTCS only)

LCM Samples

The following tables list LCM samples contained on the ELS installation CD-ROM:

Table A–4 LCM Samples

Member Name	Description
LCMAGENT	Sample LCM Agent started task procedure
LCMAPFXX	Sample LCM authorized library list entry
LCMCGI	Sample CGI script for TMS OPEN host
LCMCHGS	Cumulative documentation changes for the release as PTFs are applied
LCMCODES	Sample LCM Agent access code file

Table A-4 (Cont.) LCM Samples

Member Name	Description
LCMEXEC	Sample JCL procedure for use with jobs submitted by the LCM Explorer, and other LCM jobs submitted by an installation. LCMEXEC pre-defines certain items that are common to all LCM runs at the installation. For example, if LCM is installed in a library that is not included in the linklist or LPA list, LCMEXEC should have a STEPLIB pointing to the production LCM load library. DD statements that are dynamically allocated by most LCM jobs or are different from one LCM job to the next should not be in LCMEXEC.
LCMINDEX	Index of LCM Sample Library
LCMKST	Documents the key values for each extended field. LCMKST contains a list of equates for all extended fields. All extended fields will have a key greater than 0 associated with them.
LCMMTHF	Macro for defining the layout of a method file record. For more information, refer to "METHODFILE Record" in the <i>LCM User's Guide</i> .
LCMRPMAC	LCMRHSC Record/Playback for RHSC/UII interface
LCMRUN	Sample JCL to run LCM
LCMTIDR	Sample TMS Interface Definition Response xml document
LCMTMCI	Macro for defining the layout of an LCM TMC information record
LCMTTIR	Sample TMS Tape Information Response xml document
LCMUX01P	Macro for defining the parameter list used by the LCM TMS CUSTOM interface. For more information, refer to "TMS CUSTOM Interface Module Parameters" in the <i>LCM User's Guide</i> .
LCMUX01S	Sample assembler program for use with the LCM TMS CUSTOM interface
LCMVAUTM	LCM parameter file for IVP with Automedia
LCMVCA1	LCM parameter file for IVP with CA-1
LCMVCOMM	LCM parameter file for IVP with common-format TMS extract files
LCMVCONT	LCM parameter file for IVP with Control-T
LCMVCUST	LCM parameter file for IVP with LCM custom tape management system interfaces (a tape management system vendor supplied user exit is required)
LCMVNTMS	LCM parameter file for IVP without a TMS
LCMVRMM	LCM parameter file for IVP with DFSMSrmm
LCMVTLMS	LCM parameter file for IVP with CA-TLMS
LCMXDMD	LCM parameter file for demand (or shift) run
LCMXDVLD	LCM parameter file for vaulting run with special data sets
LCMXDVLS	LCM parameter file for vaulting run with multiple subpools
LCMXDVLT	LCM parameter file for daily vaulting run
LCMXRAC1	LCM parameter file for a post action report

Table A–4 (Cont.) LCM Samples

Member Name	Description
LCMXREJ1	LCM parameter file for an eject report that includes data set name.
LCMXREJ2	LCM parameter file for a report of volumes ejected for need by data set name
LCMXREN1	LCM parameter file for a report of volumes on a Pull List that were not already in an LSM
LCMXRERV	Statement to produce a report of errant volumes
LCMXRMT1	LCM parameter file for a summary report with counts of several methods
LCMXRMVC	LCM parameter file for an MVC report
LCMXRSM1	LCM parameter file for an LSM summary report
LCMXRSR1	LCM parameter file for a non-LSM scratch list report
LCMXRVR1	LCM parameter file for a report of all volumes with HSC and TMS information
LCMXSYNC	LCM parameter file for scratch synchronization
LCMXTAC1	Sample source for a report template of LCMXRAC1
LCMXTAL1	Sample source for a report template of LCMXRAL1
LCMXTEJM	Sample source for a report template of LCMXREJM
LCMXTEJ1	Sample source for a report template of LCMXREJ1
LCMXTEJ2	Sample source for a report template of LCMXREJ2
LCMXTEN1	Sample source for a report template of LCMXREN1
LCMXTERV	Sample source for a report template of LCMXRERV
LCMXTINV	Sample source for a report template of LCMXRINV
LCMXTMT1	Sample source for a report template of LCMXRMT1
LCMXTMUL	Sample source for the built in REPORT MULTIPLE template
LCMXTMVC	Sample source for a report template of LCMXRMVC
LCMXTPHY	Sample source for the built in REPORT PHYSICAL template
LCMXTSM1	Sample source for a report template of LCMXRSM1
LCMXTSR1	Sample source for a report template of LCMXRSR1
LCMXTVIR	Sample source for the built in REPORT VIRTUAL template
LCMXTVR1	Sample source for a report template of LCMXRVR1

MVS/CSC Samples and Macros

This section describes the MVS/CSC samples and macros contained on the ELS installation CD-ROM:

MVS/CSC Samples

The following table describes MVS/CSC sample members:

Table A-5 MVS/CSC Samples

Member Name	Description
APPCPMYY	Sample definition of a system base LU for APPC/MVS
CSCPARM0	Sample MVS/CSC startup parameter file that is an example of an attachment to a VM-based (CLS) server using VTAM communications
CSCPARM1	Sample MVS/CSC startup parameter file that is an example of an attachment to VM-based (CLS) dual servers using TCP/IP communications
CSCPARM2	Sample MVS/CSC startup parameter file that is an example of an attachment to a UNIX-based (ACSL) server using TCP/IP communications
CSCPARM3	Sample MVS/CSC startup parameter file that is an example of an attachment to an MVS-based (LibraryStation) server using TCP/IP communications
CSCPARM4	Sample MVS/CSC startup parameter file that is an example of an attachment to an MVS-based (LibraryStation) server using LU 6.2 communications
CSCPARM5	Sample MVS/CSC startup parameter file that is an example of an attachment to a UNIX-based (ACSL) server using LU 6.2 communications
CSCPARM6	Sample MVS/CSC startup parameter file that is an example of an attachment to an MVS-based (LibraryStation) server using XCF communications
CSCPROC	Sample startup JCL
DEFAPPC	Sample JCL to create APPC Side Information File
IEAAPFYY	Sample MVS/CSC APF list entries
IEFSSNYY	Sample MVS/CSC subsystem name table entry
JCLCFGV1	Sample JCL for Configuration Verification Utility to verify startup parameters and MVS system definitions only
JCLCFGV2	Sample JCL for Configuration Verification Utility to verify startup parameters, MVS system definitions, and the server configuration for compatibility
JCLCONDB	Sample JCL for Scratch Conversion Utility
JCLLOGR	Sample JCL for Event Log Report Utility
JCLSCRUP	Sample JCL for Scratch Update Utility
LU6APPL	Sample definition of a local LU for VTAM
PGMISAM1	Sample QVOLUME request issued within a single MVS/CSC subsystem environment
PGMISAM2	Sample QCSC and QVOLUME request issued within a multiple MVS/CSC subsystem environment
PROGYY	Sample MVS/CSC APF list entries
SCHEDYY	Sample MVS Program Properties Table (PPT) entry for MVS/CSC
TREQSAM1	Sample TAPERREQ control statements
TREQSAM2	Sample TAPERREQ control statements

Table A–5 (Cont.) MVS/CSC Samples

Member Name	Description
UX05CSC1	Sample MVS/CSC User Exit 05 which returns a nonoperational return code

MVS/CSC Macros

The following table describes MVS/CSC macro members:

Table A–6 MVS/CSC Macros

Member Name	Description
SCSUX05P	MVS/CSC User Exit 05 parameter list
SCSXREQ	Programmatic Interface request
SCSXREQM	Programmatic Interface mapping macro
SCUDRINF	TMS DB Read parameter list

LibraryStation Samples and Source Code Modules

This section describes the LibraryStation samples and source code modules contained on the ELS installation CD-ROM:

LibraryStation Samples

The following table describes LibraryStation sample members:

Table A–7 LibraryStation Samples

Member Name	Description
SLGPROC	Sample LibraryStation startup JCL
SLGAPFXX	Sample LibraryStation APF list entries
SLGDBCR	Sample JCL for defining the LibraryStation PDF
SLGPRGXX	Sample LibraryStation APF list entries

LibraryStation Source Code Modules

The following table describes LibraryStation source code module members:

Table A–8 LibraryStation Source Code Modules

Member Name	Description
SLGDJCL	Sample JCL for running the SLGDIAG Installation Verification Program (IVP)
SLGDEXEC	Sample REXX exec for running the SLGDIAG IVP

Glossary

Note: Glossary entries that include the (I) designation are credited to the *IBM Dictionary of Computing*.

4410

Oracle's StorageTek standard Library Storage Module (LSM).

4480

Oracle's StorageTek 18-track 1/2-inch cartridge transport.

4490

Oracle's StorageTek 36-track long-tape cartridge transport with ESCON support. Also known as Silverton.

9310

Oracle's StorageTek Library Storage Module (LSM), a high-performance version of the standard 4410 LSM. Also known as PowderHorn.

9360

Oracle's StorageTek Library Storage Module (LSM). Also known as WolfCreek.

9740

Oracle's StorageTek Library Storage Module (LSM). Also known as TimberWolf.

access method

A technique for moving data between processor storage and I/O devices.

ACS

Automated Cartridge System, a fully-automated, cartridge storage and retrieval library subsystem consisting of one or more Library Storage Modules (LSMs) connected by pass-thru ports.

ACSLs

Automated Cartridge System Library Software, Oracle's StorageTek library control software, which runs in the UNIX®-based Library Control System.

APF

Authorized Program Facility, an installation security facility used to identify and authorize programs for use.

Authorized Program Facility (APF)

See [APF](#).

Automated Cartridge System (ACS)

See [ACS](#).

Automated Cartridge System Library Software (ACSL)

See [ACSL](#).

CDRT

Concurrent Disaster Recovery Test, Oracle's StorageTek software that streamlines disaster recovery testing in the tape storage environment.

Concurrent Disaster Recovery Test (CDRT)

See [CDRT](#).

Cross-system Coupling Facility (XCF)

See [XCF](#).

FMID

Function Modification Identifier, used to represent function SYStem MODifications (SYSMODs) used in software installation.

Functional Modification Identifier (FMID)

See [FMID](#).

Host Software Component (HSC)

See [HSC](#).

HSC

Host Software Component, Oracle's StorageTek software running on the Library Control System processor that controls the functions of the ACS.

JCL

A problem oriented language designed to describe a job's processing requirements to an operating system.

JES2

An MVS subsystem that receives jobs into the system, converts them to internal format, selects them for execution, processes their output, and purges them from the system. In an installation with more than one processor, each JES2 processor independently controls its job input, scheduling, and output processing.

JES3

An MVS subsystem that receives jobs into the system, converts them to internal format, selects them for execution, processes their output, and purges them from the system. In complexes that have several loosely coupled processing units, the JES3 program manages processors so that the global processor exercises centralized control over the local processors and distributes jobs to them using a common job queue.

Job Control Language (JCL)

See [JCL](#).

LCM

Library Content Manager, Oracle's StorageTek MVS host software that manages Nearline and VSM resources. LCM also includes LCM Explorer, a graphical user interface that you can use to configure LCM by creating configuration files instead of parameter files.

Library Content Manager (LCM)

See [LCM](#).

LibraryStation

Oracle's StorageTek software that enables MVS hosts to share ACS facilities with client systems.

Library Storage Module (LSM)

See [LSM](#).

LSM

Library Storage Module, a library storage structure with cartridge storage space, also including a free-standing, vision-assisted robot that moves the cartridges between their storage cells and attached transports.

operating system

Software that controls the execution of programs that facilitate overall system operation.

Program Temporary Fix (PTF)

See [PTF](#).

PTF

Program Temporary Fix, a software release designed to remedy one or a series of defects.

RACF

Resource Access Control Facility, security software used to control access to data sets.

Resource Access Control Facility (RACF)

See [RACF](#).

SD-3

Oracle's StorageTek helical cartridge transport. Also known as RedWood.

SL3000

Oracle's StorageTek SL3000 modular library offers mixed media, logical and physical partitioning capabilities, advanced management, and high availability. It supports mixed environments, including mainframe and open systems, and is scalable from 200 to just under 6,000 cartridge slots.

SL8500

Oracle's StorageTek SL8500 modular library offers mixed media, logical and physical partitioning capabilities, advanced management, and high capacity and availability. It supports mixed environments, including mainframe and open systems, and is scalable from the standard 1,450 cartridge slots to 100,880 cartridge slots in a complex configuration.

SMC

Storage Management Component, Oracle's StorageTek software interface between IBM's z/OS operating system and Oracle StorageTek real and virtual tape hardware. SMC performs the allocation processing, message handling, and SMS processing for the ELS solution.

SMP

System Modification Program.

SMP/E

System Modification Program Extended.

SMS

System Managed Storage.

SNA

Systems Network Architecture, a description of the logical structure, formats, protocols, and operational sequences for transmitting information units through and controlling the configuration and operation of networks.

Storage Management Component (SMC)

See [SMC](#).

sysplex

A set of MVS systems communicating and cooperating with each other through certain multisystem hardware components and software services to process customer workloads.(I)

Systems Network Architecture (SNA)

See [SNA](#).

T9840A

Oracle's StorageTek access-centric cartridge transport capable of reading and writing 9840A cartridges.

T9840B

Oracle's StorageTek access-centric cartridge transport capable of reading and writing T9840B cartridges.

T9840C

Oracle's StorageTek access-centric cartridge transport capable of reading and writing T9840C cartridges.

T9840D

Oracle's StorageTek access-centric cartridge transport capable of reading and writing T9840D cartridges.

T9940A

Oracle's StorageTek capacity-centric cartridge transport capable of reading and writing 60GB T9940A cartridges.

T9940B

Oracle's StorageTek capacity-centric cartridge transport capable of reading and writing 200GB T9940B cartridges.

T10000A

Oracle's StorageTek T10000 A high-capacity cartridge transport capable of reading and writing 120GB or 500GB T10000A cartridges.

T10000B

Oracle's StorageTek T10000 B high-capacity cartridge transport capable of reading and writing 240GB or 1TB T10000B cartridges

T10000C

Oracle's StorageTek T10000 C high speed/capacity tape drive, delivering up to 252 MB/sec and 5 TB, native, making it ideal for data center operations with growing data volumes.

T10000D

Oracle's StorageTek T10000D high speed/capacity tape drive, delivering up to 252 MB/sec and 8.5 TB native capacity, making it ideal for data center operations with growing data retention requirements.

Tape Management Catalog (TMC)

See [TMC](#).

TCP

Transmission Control Protocol, an inter-network standard protocol that provides a full-duplex stream service.

TCP/IP

Transmission Control Protocol/Internet Protocol.

TMC

Tape Management Catalog. A data set used by the CA-1 Tape Management System to record an inventory of the tape library.

transport

An electro-mechanical device used to thread, position, and read or write from a tape.

Transmission Control Protocol (TCP)

See [TCP](#).

virtual storage

A feature of the operating system where main storage requirements are allocated by segments (or pages) as needed by programs, thus creating the apparent existence of unlimited or virtual storage.

Virtual Storage Manager (VSM)

See [VSM](#).

Virtual Tape Control System (VTCS)

See [VTCS](#).

Virtual Tape Storage Subsystem (VTSS)

See [VTSS](#).

Virtual Telecommunications Access Method (VTAM)

See [VTAM](#).

VMF

Volume Master File. A data set used by the CA-TLMS tape management system to record an inventory of the tape library.

VOLSER

Volume Serial Number, an identifier of a physical volume.

volume

A tape cartridge (data carrier) that is mounted or dismounted as a unit.

Volume Master File (VMF)

See [VMF](#).

Volume Serial Number (VOLSER)

See [VOLSER](#).

VSM

Virtual Storage Manager, Oracle's StorageTek storage solution that virtualizes volumes and transports in a VTSS buffer to improve media and transport use. The hardware includes VTSS, which is the DASD buffer, and RTDs. The software includes VTCS, an HSC-based host software, and VTSS microcode

VTAM

Virtual Telecommunications Access Method, IBM host-resident communications software that serves as a common interface for communications.

VTCS

Virtual Tape Control System, the primary host code that controls activity and information about VTSSs, VTVs, RTDs, and MVCs.

VTSS

Virtual Tape Storage Subsystem, the DASD buffer containing virtual volumes (VTVs) and virtual drives (VTDs). The VTSS is a STK RAID 6 hardware device with microcode that enables transport emulation. The RAID device can read and write "tape" data from/to disk, and can read and write the data from/to an RTD.

XCF

a component of MVS that provides functions to support cooperation between authorized programs running within a sysplex.(I)

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