StorageTek
Enterprise Library Software

Installing ELS

Version 7.1

Installing ELS 7.1

E20868-02

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Preface

Oracle's StorageTek Enterprise Library Software (ELS) is a solution consisting of the following 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)

Additionally, the following software is provided with the ELS package:

■ 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

This publication describes how to install ELS from tape or CD-ROM. It is intended for storage administrators, system programmers and operators responsible for installing and configuring ELS.

To perform the tasks described in this publication, you should already understand the following:

■ z/OS operating system
■ JES2 or JES3
■ Enterprise Library Software (ELS)

Related Documentation

StorageTek Enterprise Library Software (ELS)

- *Introducing ELS*
- *ELS Command, Control Statement, and Utility Reference*
- *ELS Syntax Quick Reference*
- *ELS Messages and Codes*
- *ELS Programming Reference*
- *ELS Legacy Interfaces Reference*
- *Configuring HSC and VTCS*
- *Managing HSC and VTCS*
- *Configuring and Managing SMC*
- *ELS Disaster Recovery and Offsite Data Management Guide*

StorageTek Library Content Manager (LCM)

- *LCM User's Guide*
- *LCM Messages and Codes*
- *LCM Quick Reference*

StorageTek Client System Component for MVS Environments (MVS/CSC)

- *MVS/CSC Configuration Guide*
- *MVS/CSC Messages and Codes Guide*
- *MVS/CSC Operator's Guide*
- *MVS/CSC Syntax Quick Reference*
- *MVS/CSC System Programmer's Guide*

StorageTek LibraryStation

- *LibraryStation Configuration and Administration Guide*
- *LibraryStation Syntax Quick Reference*

Documentation, Support, and Training

Function	URL
Oracle Home	http://oracle.com
Documentation	http://oracle.com/technetwork/indexes/documentation/index.html
Support	http://www.oracle.com/us/support/044752.html
Training	http://www.oracle.com/global/us/education/sun_select_country.html

Additional Information

Conventions for Reader Usability

Typographic

Some JCL examples in this guide include *italic* type. Italic type is used to indicate a variable. You must substitute an actual value for these variables.

The use of mixed upper and lower case characters for commands, control statements, and parameters indicates that lower case letters may be omitted to form abbreviations. For example, you may simply enter POL when executing the POLicy command.

Control Statements

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.
- /* and */ can be used to enclose comments in the job stream. Comments can be continued over multiple lines, but cannot be nested.

  PARMLIB members **must** include a /*...*/ comment as the **first** control statement. Otherwise, the old format is assumed. Comments in the old format must begin with an asterisk (*) in column 1.

  For definition data sets (e.g., VOLATTRs, UNITATTRs and TAPEREQs), comments **must** be in the new format (/*...*/).

  - Asterisk (*) comments are **not** allowed.
  - A /*...*/ comment in the first line is **not** required.
- The maximum length for a control statement is 1024 characters.

What's New?

This publication includes information about the following ELS enhancements:

Revision 02

■ Clarification of installation order with respect to base functions and product maintenance. See "Installation Checklist" on page 28.

Revision 01

■ Support for Oracle's StorageTek T10000C tape drive.
See "Hardware Requirements" on page 24.

Preparing for Installation

Overview

This chapter describes the ELS installation package and its pre-installation requirements. The following topics are included:

- The ELS installation package
- Software and hardware requirements
- Virtual storage requirements
- Pre-installation considerations

The ELS Installation Package

The ELS installation package includes the following materials:

- ELS installation file or media (tape or 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 corrective service file or media (tape or CD-ROM) containing ELS PTFs, HOLDDATA, cover letters, and summary information released since the installation media was created.

  - For tape installations, corrective service is provided on a separate corrective service tape.
  - For CD-ROM installations, corrective service is included in the PTF directory of the ELS installation CD-ROM.

  See Chapter 3, "Installing ELS Maintenance" for more information.

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

Note –

- Contact StorageTek Software Support for information about additional PTFs that might be required before installing ELS software.
- Use the MVS Program Binder when installing ELS software and service. Failure to do so may result in link-editing errors.

ELS Installation Tape Contents

ELS is distributed on a standard label 9840C or 9940B tape with a volume serial number of SEA710. The ELS installation tape includes the following files:

TABLE 1-1   ELS 7.1 Installation Tape Contents

File	Data Set Name	Description
1	SMPMCS	SMP/E control statements
2	SSEA710.F1	ELS (HSC, SMC, VTCS, and CDRT) JCLIN and installation samples
3	SSEA710.F2	ELS samples
4	SSEA710.F3	ELS macros
5	SSEA710.F4	ELS source modules
6	SSEA710.F5	ELS object modules
7	SCS7100.F1	MVS/CSC JCLIN
8	SCS7100.F2	MVS/CSC macros and samples
9	SCS7100.F3	MVS/CSC source modules
10	SCS7100.F4	MVS/CSC object modules
11	SMZ7100.F1	SMC JES3 JCLIN
12	SMZ7100.F2	SMC JES3 samples
13	SMZ7100.F3	SMC JES3 macros
14	SMZ7100.F4	SMC JES3 source modules
15	SMZ7100.F5	SMC JES3 object modules
16	SOC7100.F1	LibraryStation JCLIN
17	SOC7100.F2	LibraryStation macros and samples
18	SOC7100.F3	LibraryStation object modules
19	SSCR70C.F1	SAS/C 7.0 JCLIN
20	SSCR70C.F2	SAS/C 7.0 object modules
21	SSCR70D.F1	SAS/C 7.0 JCLIN
22	SSCR70D.F2	SAS/C 7.0 object modules
23	SLM7100.F1	LCM JCLIN
24	SLM7100.F2	LCM object modules
25	SLM7100.F3	LCM samples
26	SLM7100.F4	LCM GUI

ELS Installation CD-ROM Contents

ELS is distributed on a standard CD-ROM. The installation CD-ROM includes the following files:

TABLE 1-2   ELS 7.1 Installation CD-ROM Contents

File	Data Set Name	Description
1	Documents	ELS CD installation notes
2	SEA71.gimzip	Compressed file containing ELS products excluding JCL samples
3	SEA71.pax	Compressed file containing ELS products including JCL samples
4	Samples.unix	Unix version of ELS samples
5	Samples.win	Windows version of ELS samples (with CR/LF)
6	Start Here.html	XML starting point to the documentation folder

Software and Hardware Requirements

Software Requirements

TABLE 1-3   ELS 7.1 Software Requirements

Category	Supported Software
Operating system	Any IBM supported version of z/OS (JES2 and JES3 environments)
Required ELS software	■ StorageTek SMC 7.1 ■ StorageTek HSC 7.1
Optional ELS software	■ StorageTek VTCS 7.1 ■ StorageTek CDRT 7.1
Additional Software	■ StorageTek LCM 7.1 ■ StorageTek LibraryStation 7.1 ■ StorageTek MVS/CSC 7.1
TCP/IP communications	■ 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

TABLE 1-3   ELS 7.1 Software Requirements (Continued)

Category	Supported Software

SNA LU 6.2 communications	■ IBM ACF/VTAM Release 3.4.2 or higher
	■ IBM APPC/MVS communication services
	
	Note: 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. ■ LMU Microcode Release 1.5.x or higher is required for multiple-level host-to-host communications.
Independent Software Vendor Products	■ 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

ELS Software Compatibility

Use the following matrix to determine ELS 7.1 software compatibility:

TABLE 1-4   ELS 7.1 Software Compatibility Matrix

ELS 7.1 Software	Compatible Software Releases				
	SMC	HSC/VTCS	MVS/CSC	LibraryStation	ExPR
SMC 7.1		7.1 (same host) 6.1, 6.2, 7.0, 7.1 (different host)	6.1, 6.2, 7.0, 7.1		
HSC/VTCS 7.1 VTCS 7.1 requires minimum CDS level E	7.1 (same host) 6.1, 6.2, 7.0, 7.1 (different host)			7.1 only	6.1
LCM 7.1		7.1 only			
LibraryStation 7.1		7.1 only			
MVS/CSC 7.1	7.1 only				

Hardware Requirements

TABLE 1-5 ELS 7.1 Hardware Requirements

Category	Supported Hardware
Processor	IBM or compatible processor running MVS (any IBM-supported version of z/OS)
StorageTek Library Storage Modules (LSMs)	■ SL3000 modular library system ■ SL8500 modular library system ■ PowderHorn™ 9310 ■ TimberWolf 9740 ■ WolfCreek 9360 ■ Standard 4410
StorageTek transports and associated media	■ T10000A/B/C ■ T9940A/B ■ T9840A/B/C/D ■ TimberLine™ 9490EE ■ TimberLine™ 9490 ■ 4490 ■ 4480 ■ SD3

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.

Virtual Storage Requirements

MVS virtual storage requirements for the ELS software include the following:

TABLE 1-6 ELS 7.1 MVS Virtual Storage Requirements

ELS Software	Virtual Storage Requirements
SMC	■ 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 LibraryStation	■ 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 are running utilities or commands that manipulate manifest files, in which case you require the maximum region size your system will allow. **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).
MVS/CSC	■ 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.

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.

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 NCS 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.

CHAPTER **2**

Installing ELS and Additional Software

Overview

This chapter describes the tasks required to install the ELS software. The following topics are included:

- Installation checklist
- Unloading the SMP/E JCL library
- Editing and testing the CHGIT member
- Preparing the SMP/E CSI environment
- Allocating ELS target and distribution library data sets and required DDDEF entries
- Updating the SYSLIB concatenation
- Reviewing the ELS FMIDs
- Receiving the ELS functions (SMP/E RECEIVE)
- Applying the ELS functions (SMP/E APPLY)
- Accepting the ELS functions (SMP/E ACCEPT)

Before installing ELS, verify ELS requirements and review pre-installation considerations described in *"Preparing for Installation" on page 17*.

Installation Checklist

Use the following checklist to verify that you have completed all ELS installation tasks.

Note – Before installing ELS, verify ELS requirements and review pre-installation considerations described in "Preparing for Installation" on page 17.

TABLE 2-1 Installation Checklist

✓	Step	Description	Sample Member	Page
	1	Unload the SMP/E JCL library from tape or CD-ROM.		29
	2	Optionally, edit the CHGIT member according to your requirements.	CHGIT	32
	3	Test the CHGIT member to verify your edits.	I20TST	32
	4	Define and initialize the SMP/E CSI.	I30CSI	33
	5	Allocate the ELS and JES3 target and distribution library data sets and their required DDDEF entries.	I40ZON	35
	6	Update the SYSLIB concatenation.	I50LIB	38
	7	Review the ELS FMIDs.		39
	8	SMP/E RECEIVE the desired base functions, communication functions, and optionally, the SMC JES3 function.	I60RCV (tape) I60RNET/I60RNTS (CD)	40
	9	SMP/E APPLY the desired base functions, communication functions, and optionally, the SMC JES3 function.	I70APP	42
	10	SMP/E ACCEPT the desired base functions, communication functions, and optionally, the SMC JES3 function.	I80ACC	43
	11	SMP/E RECEIVE maintenance for the ELS base functions.	MAINTRCF	48
	12	SMP/E APPLY maintenance for the ELS base functions.	MAINTAPF	48
	13	Optionally, SMP/E ACCEPT maintenance for the base functions.	MAINTACF	49
	14	Proceed with ELS post-installation tasks described in Chapter 4.		51
	15	Proceed with ELS additional software post-installation tasks described in Chapter 5.		75

Unloading the SMP/E JCL Library

To begin ELS installation, unload the SMP/E JCL library from the ELS installation tape 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:

TABLE 2-2   SMP/E JCL Sample Members

Member Name	Function
CHGIT	Optional REXX exec used to customize ELS installation sample members
I10JCL	Unload SMP/E JCL library from the ELS installation tape
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
I60RCV	SMP/E RECEIVE ELS and additional functions from the ELS installation tape
I60RNET (CD-ROM only)	Network version of I60RNTS (below)
I60RNTS (CD-ROM only)	SMP/E RECEIVE ELS and additional functions from the ELS installation 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 Tape

To unload the SMP/E JCL library from file 2 of the ELS installation tape, use the following sample JCL and perform the steps below.

```
//jobname   JOB your jobcard parameters
//UNLOAD    EXEC PGM=IKJEFT01,REGION=16385K
//SYSPRINT  DD SYSOUT=(,)
//SYSTSPRT  DD SYSOUT=(,)
//*
//  SET TUNIT=3480
//*
//SYSUT1    DD DISP=SHR,DSN=SSEA710.F1,VOL=SER=SEA710,
//  LABEL=(2,SL,EXPDT=98000),UNIT=(&TUNIT,,DEFER)
//*
//SYSTSIN   DD *
    allocate dd(SYSUT2) mod catalog dir(10) dsntype(library) -
        avblock(10000) space(100,100) -
        dsn(your.ELS71.samples.JCL)

    call *(IEBCOPY)

//SYSIN     DD *
L1  COPY OUTDD=SYSUT2,INDD=((SYSUT1,R))
L2  EXCLUDE MEMBER=SSEA710
//
```

FIGURE 2-1   JCL to Unload SMP/E JCL Library from the ELS Installation Tape

In the JCL examples in this publication and the sample JCL provided on the ELS installation tape, some fields appear in lower case. You must update these fields to match your installation requirements.

1. Change the JOB card, specifying values for *jobname* and *your jobcard parameters*.

2. Change tape unit (SET TUNIT=3480) as necessary.

3. Change dsn(*your.ELS71.samples.JCL*) as necessary. An unquoted DSN will be prefixed by TSO.

4. Change VOL=SER=SEA710 to the library volser if you have copied the installation tape into a library.

5. Submit the job. A completion code of 0 for all steps indicates successful completion.

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 click on the file **Start Here.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 allows 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. This enables CHGIT to be executed as a command.

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

   ```
   TSO allocate dd(SYSUEXEC) shr dsn(your.ELS71.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 RECEIVEing, APPLYing, and ACCEPTing functions into the correct SMP/E target and distribution zones.

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 7.1 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, SLUDRTLM, and SLUDRZAR) are included in the SEALINK library generated during ELS installation. These modules are shared among HSC, SMC, and MVS/CSC.

Warning –

■ If you install an ELS 7.1 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.

  If you choose to do this, it is recommended that you back up the existing global SMP/E CSI prior to installing the ELS 7.1 product components.

■ If you install LibraryStation 7.1 or MVS/CSC 7.1 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 7.1 or MVS/CSC 7.1 and supportive SAS/C functions in a global SMP/E CSI containing other StorageTek products with SAS/C functions you wish 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 2-3 on page 36 and TABLE 2-4 on page 37 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.

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 I40ZON sample member, edit as needed, and submit the job.

■ If you install an ELS 7.1 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

TABLE 2-3 and TABLE 2-4 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 DDnames required for each DDDEF entry match the last qualifier of the data set name. For example, for data set *hlq*.SEALINK, the corresponding DDname is SEALINK.
- 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).

TABLE 2-3   ELS Target Library Data Sets

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

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

TABLE 2-4 ELS Distribution Library Data Sets

Data Set Name	Product	DSORG	RECFM	LRECL	BLKSIZE	Blocks (Pri/Sec)	Directory Blocks
hlq.ASEALINK	ELS	PO	U	-	32760	500/50	999
hlq.ASEAMAC	ELS	PO-E	FB	80	27920	20/10	5
hlq.ASEASAMP	ELS	PO-E	FB	80	27920	20/10	5
hlq.ASMZLINK	SMC JES3	PO	U	-	32760	20/10	5
hlq.ALCMLINK	LCM	PO-E	U	-	32760	2504/250	5
hlq.ALCMSAMP	LCM	PO-E	FB	80	27920	25/25	5
hlq.ALCMGUI	LCM	PO	U	-	32760	198/500	5
hlq.ASCSLINK	MVS/CSC	PO	U	-	32760	500/100	100
hlq.ASCSMAC	MVS/CSC	PO-E	FB	80	27920	30/10	5
hlq.ASCSSAMP	MVS/CSC	PO-E	FB	80	27920	30/10	5
hlq.ASLCLINK	LibraryStation	PO	U	-	32760	500/100	50
hlq.ASLCSAMP	LibraryStation	PO-E	FB	80	27920	30/10	5
hlq.ACSLLINK	MVS/CSC LibraryStation	PO	U	-	32760	50/10	20
hlq.ASACLINK	MVS/CSC LibraryStation	PO	U	-	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 (e.g. 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 7.1 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 following SMP/E FMIDs:

TABLE 2-5   ELS 7.1 FMIDs

FMID	Description
SSEA710	HSC, SMC, VTCS and CDRT load modules, distributed macros, and samples
SMZ7100	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
SLM7100	LCM 7.1 load modules, distributed macros, and samples
SOC7100	LibraryStation load modules and samples
SCS7100	MVS/CSC load modules, distributed macros, and samples
SSCR70C	SAS/C 7.0 selected components required for LibraryStation and MVS/CSC
SSCR70D	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 tape or CD-ROM.

Warning –

■ If you install an ELS 7.1 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 prior to installing the ELS 7.1 product components.
- The SMPCSI statement must point to the existing global CSI.

■ If you install LibraryStation 7.1 or MVS/CSC 7.1 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 7.1 or MVS/CSC 7.1 and supportive SAS/C functions in a global SMP/E CSI containing other StorageTek products with SAS/C functions you wish to preserve. Doing so may cause unpredictable results.

Receiving the ELS Functions from the ELS Installation Tape

Use the **I60RCV** sample member provided in your SMP/E JCL library to SMP/E RECEIVE the functions you wish to install. See "Reviewing the ELS FMIDs" on page 39 for a list of ELS SMP/E FMIDs.

To run the I60RCV job:

1. Enter Edit mode for member I60RCV and execute the CHGIT command to apply your CHGIT edits.

2. Submit the I60RCV 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 I60RCV sample member, edit as needed, and submit the job.

Warning – If you install an ELS 7.1 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.

Receiving the ELS Functions from the ELS Installation CD

Use the **I60RNET** or **I60RNTS** sample member to SMP/E RECEIVE the ELS functions from Unix Systems Services (USS).

- I60RNET RECEIVEs the ELS functions from a CD-ROM mounted on a network server.
- I60RNTS RECEIVEs the ELS functions from an SMPNTS (Network Temporary Store) directory loaded from a CD-ROM.

These members utilize IBM SMP/E RECEIVE FROMNETWORK and RECEIVE FROMNTS commands. Refer to your IBM SMP/E publications for more information about these commands.

To run the I60RNET or I60RNTS job:

1. Enter Edit mode for member I60RNET or I60RNTS and execute the CHGIT command to apply your CHGIT edits.

2. Submit the I60RNET or 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 I60RNET or I60RNTS sample member, edit as needed, and submit the job.

Warning –

- If you install an ELS 7.1 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 7.1 or MVS/CSC 7.1 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.

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 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.

Warning –

■ If you install an ELS 7.1 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 7.1 or MVS/CSC 7.1 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.

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 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.

Warning –

- If you install an ELS 7.1 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 7.1 or MVS/CSC 7.1 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

Overview

This chapter contains instructions for installing ELS maintenance.

Before attempting to install maintenance, contact StorageTek Software Support for information about the latest corrective service available for your ELS products.

See "Documentation, Support, and Training" on page 13 for information about contacting Oracle for assistance.

Note – Use the MVS Program Binder when installing ELS products and maintenance. Failure to do so may result in link-editing errors.

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" on page 35 for more information about these libraries.

ELS Corrective Service Media

ELS maintenance is distributed on a corrective service tape or CD-ROM. This tape or CD-ROM includes the following files:

TABLE 3-1   ELS 7.1 Corrective Service Tape Contents (Non Labeled Tape)

File	Data Set Name	Description
1	PTFS	Service PTFs
2	CVR	PTF cover letters and JCL samples
3	SMM	Summary data
4	HOLDDATA	SMP/E HOLDDATA

TABLE 3-2   ELS 7.1 Corrective Service CD Contents (Code Directory)

File	Data Set Name	Description
1	els71.cvr	PTF cover letters and JCL samples
2	els71.hdd	SMP/E HOLDDATA
3	els71.ptf	Service PTFs
4	els71.smm	Summary data

Unloading the ELS Maintenance SMP/E JCL Samples

Sample JCL members for installing ELS maintenance were unloaded from the ELS installation tape or CD-ROM during the ELS installation process. See "Unloading the SMP/E JCL Library" on page 29 for more information.

These JCL samples can be used to process maintenance in mass mode, or by individual SYSMOD.

Unloading the ELS Corrective Service CD-ROM

To unload COVER letters, HOLDDATA, PTFs, and SUMMARY data from your CD-ROM drive to your MVS host:

1. Pre-allocate the following FTP receiving data sets. Change "hlq" to your high-level-qualifier; change "v.r" to 7.1.

   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. Insert the Service CD into your CD-ROM drive.

3. Open a DOS window and cd to your CD-ROM drive.

4. Enter the following commands:

   ```
   FTP mvshost
   User
   Password
   binary
   mput els71.cvr
   mput els71.hdd
   mput els71.ptf
   mput els71.smm
   quit
   ```

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

   - `els71`.cvr
   - `els71`.hdd
   - `els71`.ptf
   - `els71`.smm

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

   - *hlq*.ELS71.CVR
   - *hlq*.ELS71.HDD
   - *hlq*.ELS71.PTF
   - *hlq*.ELS71.SMM

SMP/E RECEIVE Maintenance

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

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.

Note – If you are performing the SMP/E RECEIVE from CD-ROM, modify the MAINTRCF member as follows:

- Modify the SMPPTFIN DD statement to point to the *hlq*.ELS71.PTF data set.
- Modify the SMPHOLD DD statement to point to the *hlq*.ELS71.HDD data set.

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, SLUDRTLM, 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

Tape management system PTFs for a tape management system that is not installed at your site.

list 2

Tape management system PTFs where the tape management system is installed at your site and modification of the source is necessary.

list 3

Non-tape management system PTFs that cannot be applied because your site does not comply with the conditions defined in the PTF cover letters.

list 4

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 don't need to modify the source code.

APPLY Applicable ELS HOLDSYSTEM SYSMODS

Use the following JCL to SMP/E APPLY applicable 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
                 .
/*
```

Note –

■ The EXCLUDEd PTFs should consist of all PTFs in List 1, List 2, and List 3 (see "Separate HELD ELS PTFs" on page 49).

■ See "Reviewing the ELS FMIDs" on page 39 for a list of FMIDs.

Performing ELS Post-Installation Tasks

Overview

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

- ELS load library authorization
- SMC post-installation tasks
- HSC post-installation tasks
- JES3 post-installation tasks

Note –

- Before proceeding, verify that you have completed the installation tasks described in Chapter 2.
- 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 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
    DSNAME(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:

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

If the library is not SMS managed:

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

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 SMCBPREI module to an MVS LINKLIST library

■ Modifying 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 are running 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" on page 55.

■ If you are running 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" on page 56.

■ If you are running 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" on page 56.

■ If you wish 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" on page 57.

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 are running a Tape Management System (TMS), you must ensure that it processes MVS mount messages **before** the SMC. To do this, 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 table presents possible subsystem name definition scenarios for a tape management system and SMC when both are dynamic subsystems.

Is SMC defined in the subsystem name table?	Is TMS defined in the subsystem name table?	Possible Issues
YES	YES	Supported and recommended. The TMS must **precede** the SMC in the table.
YES	NO	Not supported. The TMS **cannot** process MVS mount messages before the SMC.
NO	YES	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" on page 57.

Unicenter CA-MIA Interaction and the Subsystem Name Table

If you are running 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(SMCBPREI)
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" on page 57.

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

If you are running 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(SMCBPREI)
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" on page 57.

Running SMC under MSTR and the Subsystem Name Table

If you wish 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 in order 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

- 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 via 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 more 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 SMCBPREI Module to an MVS LINKLIST Library

The SMC subsystem pre-initialization routine module (SMCBPREI), which resides in the SMCLINK library, must also reside in an MVS LINKLIST library if you are running the SMC as a secondary MVS subsystem. You can copy or move the SMCBPREI module from SMCLINK 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 IEASYS*zz* member MAXCAD parameter is set appropriately in MVS to account for the SMC. This parameter controls the number of common data spaces allowed on an MVS system.

For more 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 SLUCONDB (Scratch Conversion) modules

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(SLSBPREI)  /* keyword format */
```

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

```
SETSSI ADD,SUB=SLS0 /* If running under master subsystem */

or

SETSSI ADD,SUB=SLS0,INITRTN=SLSBPREI
/* If running as secondary subsystem */
```

where 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.

- Refer to your IBM z/OS publications for more information about defining subsystem names.

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 to authorize the load library.

Adding the HSC User Exit Load Library to the IEAAPFzz Member

Add the following entries to the IEAAPF*zz* 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
     DSNAME(your.SEALINK)
     VOLUME(volser) | SMS
APF ADD
     DSNAME(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
```

Copying or Moving the SLSBPREI Module to an MVS LINKLIST Library

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

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

■ HSC SMF record type

■ HSC/VTCS SMF record subtypes to be recorded.

   Refer to the *ELS Programming Reference* for more 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,
(1-8,10,11,13,14,15,16,17,18,19,20,21,25,26,27,28,29,30,31)))
```

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.

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 SMCUDBX 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 source with your local changes and re-assemble. Older versions of the SLUDR* modules **are not** compatible with the ELS 7.0/7.1 versions of SLUCONDB.
- Refer to the *ELS Command, Control Statement, and Utility Reference* for more information about the SLUCONDB and SMCUDBX utilities, and the TMS interface routines.
- Refer to the publication *Managing HSC and VTCS* for more 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 modification for the SMC
- Creating and installing the JES3 IATUX71 user modification for the 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" on page 66 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" on page 67 for more information about this modification.

■ Module SMCERSLV must be accessible to the SMC address space. This module is automatically assembled into the SMCLINK library where the SMZ6200 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 SMCJES3 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
```

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

If the library is not SMS managed:

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

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 allows 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 allows DATACLAS to be specified on JCL DD statements.

IATIIP1 (required)

The type 1 modification to JES3 module IATIIP1 allows the SMC to perform device exclusion. The SMCEHOOK macro provides an ACALL in the IATIIP1 module that allows 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 or not you want JES3 allocation to proceed if the SMC has not initialized. Valid values and actions are listed in the following table.

NOSMC Value	Action
NOSMC=PROMPT	One C/I process prompts the operator to start SMC and waits for SMC initialization.
NOSMC=NONE	The C/I process continues with no StorageTek tape subsystem.

IATMDAL (required)

The type 1 modification to JES3 module IATMDAL allows the SMC to perform device preferencing. The SMCEHOOK macro provides an ACALL in the IATMDAL module that allows 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 allows the SMC to suppress operator fetch messages for library cartridge transports during dynamic allocation. Install this modification if you wish 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 figure shows the JCL included in the member SMCJTYP1.

```
//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
          ) .
/*
```

FIGURE 4-1   SMCJTYP1 JCL

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.

Note – 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 if you want to enable deferred mounting and suppression of operator fetch messages for library volumes.

Creating the JES3 IATUX09 User Exit Modification for SMC

If you want 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 allows 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 in order to defer mounts and suppress fetch messages for library volumes during common allocation.

If your installation already utilizes 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 figure shows the JCL included in SMCJUX09.

```
//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
           ) .
/*
```

FIGURE 4-2   SMCJUX09 JCL

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" on page 69, 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 if you want to enable JES3 mount message (IAT5210) processing for library volumes.

Creating the JES3 IATUX71 User Exit Modification for SMC

If you want 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 in order 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 figure shows the JCL included in SMCJUX71.

```
//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
          ) .
/*
```

FIGURE 4-3 SMCJUX71 JCL

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" on page 69, 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" on page 73, 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

Overview

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

Note – Before proceeding, verify that you have completed the installation tasks described in Chapter 2.

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" on page 77 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
    DSNAME(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
```

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 TMC or 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 on page 78.

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 communicates with an LCM Agent on each host via TCP/IP. Each instance of an LCM Agent operates as a started task on the MVS host it is serving.

Install LCM base as described 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 the OpenEdition root file installed in full-function mode. Refer to the *IBM Open Edition Planning Guide* for more information about creating an HFS root file, modifying the BPXPRM*xx* 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.

   For more information, see .

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
                              FTPSERVE ; FTP Server
                              LPSERVE ; LPD Server
                              NAMESRV ; Domain Name Server
                              NCPROUT ; NCPROUTE 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 via PARM= on the EXEC statement.

PORT

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

UPPERCASE

specifies that messages are in uppercase

MODLEVEL

displays the service level for the LCM Agent

MAXCONN

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

LOG(SYSTEM|DD)

specifies the routing for messages

SYSTEM

routes messages to the system console

DD

routes messages to the ddname LWSLOG (the default).

SWAPpable

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 allows you to bypass the JCL parameter length limitations when coding a large number of 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 7.1 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 LCMEXEC contains a sample JCL procedure.

Note – The JCL contained in the cataloged procedure in SYS1.PROCLIB (LCMEXEC) 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), LCMSECUR (LCM Agent access code file), and, if you are using the SMC 7.1 UUI, the SMCLINK DD card (points to the SMC 7.1 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 SCSBPREI 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 IEFSSN*zz*) 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 on the ELS installation tape.

```
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. This text and the parameter list (containing job name, data set name, and other information) can be used 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 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
    DSNAME(your.SCSLINK)
    VOLUME(volser) | SMS
APF ADD
    DSNAME(your.SACLINK)
    VOLUME(volser) | SMS
APF ADD
    DSNAME(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
    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 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 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 on 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
```

Copying or Moving the SCSBPREI 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 SCSBPREI module from SCSLINK to a LINKLIST library.

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

The event-log data set is used to record events logged by MVS/CSC's Event Log facility. The trace data set is used to record 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 that is 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.

TABLE 5-2 Trace and Event-Log Data Sets

Data Set	DSORG	RECFM	LRECL	BLKSIZE	Tracks	Directory Blocks
TRACE	PS	VB	3076	10000	2000	-
EVENT LOG	PS	VB	3076	10000	2000	-

LibraryStation Post-Installation Tasks

Overview

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

- LibraryStation load library authorization
- Optionally defining the Persistent Data File (PDF)

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" on page 96 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
     DSNAME(your.SLCLINK)
     VOLUME(volser) | SMS
 APF ADD
     DSNAME(your.SACLINK)
     VOLUME(volser) | SMS
 APF ADD
     DSNAME(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 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.

■ The TCPLINK load library is required if you are using CA Unicenter TCPaccess Communications Server:

```
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.CSLLINK,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.CSLLINK,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 (i.e., 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.

■ If you are running multiple LibraryStations, Refer to the *LibraryStation Configuration and Administration Guide* for special information regarding the PDF.

You must define the PDF when LibraryStation is servicing heterogeneous clients. Use IDCAMS to define data sets for the PDF. The following figure shows the IDCAMS statements used to define the PDF. The JCL to define data sets for the PDF is contained in member SLGDBCR of the LibraryStation sample library.

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

FIGURE 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 (*cluster_name*), such as LSTAT.PDF.
ALTERNATEINDEX	The name for the SLSPDFX alternate index (*alternate_index_name*), such as LSTAT.PDFAIX.
PATH	The name for the path to SLSPDFX (*path_name*), 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 is capable of initializing 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 at one time, 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, if you want 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

Overview

This appendix lists samples, source code modules load modules, and macros included in the ELS package.

Note – See TABLE 1-1 on page 19 and TABLE 1-2 on page 20 for information about JCL samples used for ELS installation.

ELS Samples, Source Code Modules, and Macros

The following tables list the ELS samples, source code modules and macros contained on the ELS installation tape/CD-ROM:

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
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
SENENA	Sample SEN macro interface program
SENEXIT	Sample SEN user exit
SENRQST	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)

TABLE A-1   ELS Samples (Continued)

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

TABLE A-2   ELS Source Code Modules

Member Name	Description
SMCERSLV	Source code for JES3 macro field resolution routine
SLSUX03	Source code for Scratch Subpool User Exit
SLSUX05	Source code for PGMI Authorization User Exit
SLSUX06	Source code for Insert/Delete User Exit
SLSUX14	Source code for Volume Access User Exit
SLSUX15	Source code for Command Authorization User Exit
SLUCONDB	Source code for SLUCONDB
SLUDRCA1	Source code for Scratch Conversion Utility CA-1 (TMS) database READ routine
SLUDRRMM	Source code for Scratch Conversion Utility DFSMSrmm database READ routine
SLUDRSMC	Source code for TMS database extract READ routine
SLUDRTLM	Source code for Scratch Conversion Utility CA-TLMS (TLMS) database READ routine
SLUDRZAR	Source code for Zara database extract READ routine

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
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

TABLE A-3 ELS Macros (Continued)

Member Name	Description
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
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

TABLE A-3 ELS Macros (Continued)

Member Name	Description
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
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
SLSUX14P	HSC User Exit 14 parameter list
SLSUX15P	HSC User Exit 15 parameter list
SLSXB2X	Translate 8 bits to a hex byte
SLSSWMSG	Map logrec records written for WTO-type messages issued by HSC
SLSXREQ	Issue an ACS request
SLSXREQM	ACS user interface mapping macro
SLSXSEN	HSC Significant Event Notification (SEN) request

TABLE A-3   ELS Macros (Continued)

Member Name	Description
SLSXSENM	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 the LCM samples contained on the ELS installation tape/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
LCMEXEC	Sample JCL procedure for use with jobs submitted by the LCM Explorer, as well as 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, see "METHODFILE Record" in the *LCM User's Guide*.
LCMRPMAC	LCMRHSC Record/Playback for RHSC/UUI 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, see "TMS CUSTOM Interface Module Parameters" in the *LCM User's Guide*.
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

TABLE A-4 LCM Samples (Continued)

Member Name	Description
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
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

TABLE A-4 LCM Samples (Continued)

Member Name	Description
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

The following tables list the MVS/CSC samples and macros contained on the ELS installation tape/CD-ROM:

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 (ACSLS) 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 (ACSLS) 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

TABLE A-5 MVS/CSC Samples (Continued)

Member Name	Description
TREQSAM1	Sample TAPEREQ control statements
TREQSAM2	Sample TAPEREQ control statements
UX05CSC1	Sample MVS/CSC User Exit 05 which returns a nonoperational return code

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

The following tables list the LibraryStation samples and source code modules contained on the ELS installation tape/CD-ROM:

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

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