CA SMF Director®

Installation Guide

12.6.00

CA Technologies Product References

This document references the following CA Technologies products:

- CA Mainframe Software Manager™ (CA MSM)
- CA MIM™ Resource Sharing
- CA Service Desk
- CA ACF2™ for z/OS
- CA Top Secret® for z/OS
- CA Auditor for z/OS

Contact CA Technologies

Contact CA Support

For your convenience, CA Technologies provides one site where you can access the information you need for your Home Office, Small Business, and Enterprise CA Technologies products. At http://ca.com/support, you can access the following:

- Online and telephone contact information for technical assistance and customer services
- Information about user communities and forums
- Product and documentation downloads
- CA Support policies and guidelines
- Other helpful resources appropriate for your product

Provide Feedback

If you have comments or questions about CA Technologies product documentation, you can send a message to techpubs@ca.com.

If you would like to provide feedback about CA Technologies product documentation, complete our short customer survey, which is available on the CA Support website at http://ca.com/docs.

Contents

Chapter 1: Overview

This guide describes how to install and implement CA SMF Director.

This section contains the following topics:

Audience

Readers of this book should have knowledge in the following areas:

- JCL
- TSO/ISPF
- IBM MVS System Management Facilities (SMF)
- z/OS environment and installing software in this environment
- z/OS UNIX System Services
- Your organization's IT environment, enterprise structure, and region structure

You may need to work with the following personnel:

- Systems programmer for z/OS definitions
- Storage administrator for DASD allocations

How the Installation Process Works

CA Technologies has standardized product installations across all mainframe products. Installation uses the following process:

- Acquisition—Transports the software to your z/OS system.
- Installation using SMP/E—Optionally creates a new CSI environment and runs the RECEIVE, APPLY and ACCEPT steps. The software is untailored.
- Deployment—Copies the target libraries to another system or LPAR.
- Configuration—Creates customized load modules, bringing the software to an executable state.

CA MSM provides a web-based interface to make the standardized installation process easier. Using CA MSM, someone with limited knowledge of JCL and SMP/E can install a product.

Note: If you do not have CA MSM, you can download it from the Download Center at the CA Support Online website. Follow the installation instructions in the CA Mainframe Software Manager documentation bookshelf on the CA Mainframe Software Manager product page. The standardized installation process can also be completed manually.

The install your product, do the following:

1. Prepare for the installation by confirming that your site meets all installation requirements (see page 13).
2. Use one of the following methods to acquire the product:
   - Download the software from CSO using CA MSM (see page 22).
   - Download the software from CSO using Pax-Enhanced Electronic Software Delivery (ESD) (see page 29).
   - Order a tape or a DVD.
3. Perform an SMP/E installation using one of the following methods:
   - If you used CA MSM to acquire the product, start the SMP/E step from the SMP/E Environments tab in CA MSM.
   - If you used ESD to acquire the product, you can install the product manually or use the Insert New Product option in CA MSM to complete the SMP/E install.
   - If you used a tape (see page 45) or DVD, install the product manually.

   Note: If a CA Recommended Service (CA RS) package is published for your product, install it before continuing with deployment.

4. Deploy the target libraries using one of the following methods:
   - If you are using CA MSM, deployment is required; it is a prerequisite for configuration.
   - If you are using a manual process, deployment is an optional step.

   Note: Deployment is considered part of starting your product.
5. Configure your product using CA MSM or manually.

   Note: Configuration is considered part of starting your product.

Chapter 2: Preparing for Installation

This section describes what you need to know and do before you install the product.

This section contains the following topics:

Hardware Requirements

CA SMF Director runs on any processor that supports z/OS 1.9 or above.

CA SMF Director works with any DASD device using 3380 or 3390 geometry.

Software Requirements

The following software is required for CA SMF Director:

- IBM supported release of z/OS 1.9 or above
- SMP/E
- The CA Resource Initialization Manager (CAIRIM), one of the CA Common Services for z/OS.
- The target library, CASFLOAD, must be in the LINKLST.
- We recommend that CASFLOAD be APF-authorized. If you prefer not to authorize CASFLOAD, the following load modules *must* reside in an APF-authorized library:
  - SMFD
  - SMFDLS
  - SMFDLX1
  - SMFDLX2
  - SMFDLX3
  - SMFINIT
  - SMFIX110

- If the SMF Control Data Set (SCDS) is to be shared by two or more LPARs, all LPARs sharing the SCDS must either belong to the same Global Resource Serialization (GRS) ring or be connected to each other via CA MIM. If CA MIM is to be used, you must define a QNAME of CAIMSMF for CA SMF Director. For more information about QNAME definitions, see the *CA MII Data Sharing for z/OS Programming Guide*.
- If you are going to set up CA SMF Director to open CA Service Desk requests, the CA Common Services SOAP Client Service (CAISDI/soap) address space must be up and running. For more information about SOAP, see the *CA Common Services for z/OS Service Desk Integration Guide.*

CA Common Services Requirements

The following CA Common Services are used with CA SMF Director:

- CAIRIM
- CA LMP

Note: If other CA Technologies products are installed at your site, some of these services may already be installed.

LMP Key Requirements

The CA License Management Program (CA LMP) tracks licensed software in a standardized and automated way. It uses common real-time enforcement software to validate the user's configuration. CA LMP reports on activities related to the license, usage, and financials of CA Technologies products.

CA LMP features include the following:

- Common Key Data Set can be shared among many CPUs.
- Check digits are used to detect errors in transcribing key information.
- Execution keys can be entered without affecting any CA Technologies software product already running.
- No special maintenance is required.

CA SMF Director is licensed with an LMP key. You acquire the LMP key with one of the following methods:

- From your product media
- With ESD
- From CA Support Online

Storage Requirements

Ensure that you have the following storage available:

- If installing with ESD, 1 cylinder for the downloaded files and 4 cylinders for the unzipped files.
- For installation and setup:
  - Installation = a minimum of 8 cylinders.
  - SMP/E temporary libraries = 4 cylinders.
- To run this product, the region size must be set to at least 1 MB (1024 KB) of main storage. This does not include main storage for the operating system and user routines, but does include buffers for the SMF records. We recommend that you set REGION=0M in your JCL for all executions of CA SMF Director, especially when performing a logstream or substream dump process.
- Sufficient space (see page 15) for the SCDS file.

Calculating SCDS Space Requirements

In calculating the size of the SCDS file, it is helpful to understand the factors that affect its size. These are:

- The number of systems (SMF IDs) for which SMF history and inventory information is to be kept.
- The number of systems that are recording to logstreams and the number of logstreams.
- The number of substreams that will be used on any systems using substreams.
- The number of history data sets.
- The number of magnetic tape volume serials to be defined for use by this product, and how long the SMF data is to be kept.

The SCDS consists of 4096 byte blocks with a minimum of at least 6 blocks needed for use by CA SMF Director. One block is required for every four system configurations defined. If specific magnetic tape volumes are to be used, one block can contain 135 volume serials. These volumes are predefined to this product using the DUMPTAPES Control Statement (see the *User Guide*). If no volumes are defined, CA SMF Director requests a scratch tape (non-specific tape request), when a new magnetic tape volume is needed.

The number of history data sets depends upon how frequently SMF dumps occur. Up to 30 data sets can be described per block, with one block required for every different year of SMF data retained. The following formula can be used to calculate the number of blocks needed for the SCDS file:

```
  n1 = (c/4)
+ n2 = (v/135)
+ n3 = (((d * 365)/30)* y)* c
+ n4 = (cl * l) + (cs * (l + s)/4)
+ y
+ 6

_________________________
z   Total number of SCDS blocks (note: round up fractional numbers)
```

where:

c

Number of different systems for which SMF data is to be retained.

v

Number of specific magnetic tape volumes to be defined.

d

Average number of SMF dump requests per day.

y

Number of years for which SMF data is to be kept.

cl

Number of systems that will be recording SMF data to logstreams.

l

Maximum number of logstreams that any system will be using to record SMF data.

cs

Number of systems that will be using any streams (logstreams or substreams).

s

Maximum number of substreams that any system will use.

Example:

```
    1 = (3/4)                          Three systems (remember to always round up)
+   0 = (0/135)                        No dedicated tapes (using DASD or SCRATCH)
+ 365 = (((2 * 365/30) * 5) * 3        Two dumps a day per system for 5 years
+   4 = (1 * 2) + (2 * (2 + 2)/4)      Three systems: one with 2 logstreams,
                                                      one with 2 substreams
+   5                                  Five years of SMF data
+   6                                  Six management blocks
_____________________________________________________________________________
381                                    Total blocks needed
```

Target Libraries

The following table lists the amount of disk space needed to install the target libraries:

Note: If you are using PDS/Es to install CA SMF Director, you can ignore the directory block amounts.

Library Name	Blksize	Tracks	Dir Blks	Description
CASFEXEC	3120	5	8	EXECs library
CASFJCL	3120	3	5	JCL library
CASFLOAD	6144	14	5	Common load library
CASFMAC	3120	2	2	Macro library
CASFMSG0	3120	2	3	ISPF message library
CASFPARM	3120	2	2	Parameter library
CASFPNL0	3120	5	12	ISPF panel library
CASFPROC	3120	5	12	Common procedure library
CASFSRC	3120	3	2	Source library
CASFTBL0	3120	2	2	ISPF table library
CASFXML	32760	31	2	MSM XML Metadata

Distribution Libraries

The following table lists the amount of disk space needed to install the distribution libraries:

Note: If you are using PDS/Es to install CA SMF Director, you can ignore the directory block amounts.

Library Name	Blksize	Tracks	Dir Blks	Description
AASFEXEC	3120	5	8	EXECs library
AASFJCL	3120	3	5	JCL library
AASFMAC	3120	2	2	Macro library
AASFMOD0	6144	19	18	Load library
AASFMSG0	3120	2	3	ISPF message library
AASFPARM	3120	2	2	Parameter library
AASFPNL0	3120	5	12	ISPF panel library
AASFPROC	3120	2	2	Procedure library
AASFSRC	3120	3	2	Source library
AASFTBL0	3120	2	2	ISPF table library
AASFXML	32760	31	2	MSM XML Metadata

Concurrent Releases

You can install this release of CA SMF Director and continue to use an older release for your production environment. If you plan to continue to run a previous release, consider the following points:

- When installing into an existing SMP/E environment, this installation deletes previous releases.

  Note: For migration purposes, you must back up your SCDS before the previous release is deleted.

- If you acquired your product from tape or with Pax-Enhanced ESD, select different target and distribution zones for your new release from where your current release is installed. The new zones use different libraries than your current release.

  Note: CA MSM installs into a new CSI by default.

Define DDDEF entries in your new zones to point SMP/E to the proper libraries for installation. Ensure that they point to the new release libraries.

Chapter 3: Installing Your Product Using CA MSM

This section contains the following topics:

These topics provide information to get you started managing your product using CA MSM. You can use the online help included in CA MSM to get additional information.

Before using these topics, you must already have CA MSM installed at your site. If you do not have CA MSM installed, you can download it from the Download Center at the CA Support Online website, which also contains links to the complete documentation for CA MSM.

Note: The information in this section applies to the latest version of CA MSM. If you are using an earlier version, see the appropriate bookshelf on the CA Mainframe Software Manager product page.

How to Use CA MSM: Scenarios

In the scenarios that follow, imagine that your organization recently deployed CA MSM to simplify the installation of CA Technologies products and unify their management. You have also licensed a new CA Technologies product. In addition, you have a number of existing CSIs from previously installed products.

- The first scenario shows how you can use CA MSM to acquire the new product.
- The second scenario shows how you can use CA MSM to install the new product.
- The third scenario shows how you can use CA MSM to maintain products already installed in your environment.
- The fourth scenario shows how you can use CA MSM to deploy the product to your target systems.
- The fifth scenario shows how you can use CA MSM to configure the deployed product to your target systems.

How to Acquire a Product

The *Product Acquisition Service (PAS)* facilitates the acquisition of mainframe products and the service for those products, such as program temporary fixes (PTFs). The PAS retrieves information about the products to which your site is entitled and records these entitlements in a software inventory maintained on your driving system.

You can use the PAS component of CA MSM to acquire a CA Technologies product.

To do this, complete the following tasks:

1. Set up a CA Support Online account.

   To use CA MSM to acquire or download a product, you must have a CA Support Online account. If you do not have an account, you can create one on the CA Support Online website.

2. Determine the CA MSM URL for your site.

   To access CA MSM (see page 26), you require its URL. You can get the URL from your site's CA MSM administrator and log in using your z/OS credentials. When you log in for the first time, you are prompted to create a CA MSM account with your credentials for the CA Support Online website. This account enables you to download product packages.

3. Log in to CA MSM and go to the Software Catalog page to locate the product that you want to manage.

   After you log in to CA MSM, you can see the products to which your organization is entitled on the Software Catalog tab.

   If you cannot find the product you want to acquire, update the catalog. CA MSM refreshes the catalog through the CA Support Online website using the site IDs associated with your credentials for the CA Support Online website.

4. Download the product installation packages.

   After you find your product in the catalog, you can download the product installation packages.

   CA MSM downloads (acquires) the packages (including any maintenance packages) from the CA FTP site.

After the acquisition process completes, the product is ready for you to install or maintain.

How to Install a Product

The *Software Installation Service (SIS)* facilitates the installation and maintenance of mainframe products in the software inventory of the driving system, including browsing downloaded software packages, managing SMP/E consolidated software inventories (CSIs) on the driving system, and automating installation tasks.

You can use the SIS component of CA MSM to install a CA Technologies product.

To do this, complete the following tasks:

1. Initiate product installation and review product information.
2. Select an installation type.
3. Review installation prerequisites if any are presented.
4. Do *one* of the following to select a CSI:
   - Create a new CSI:
     a. Set up the global zone.
     b. Create a target zone.
     c. Create a distribution zone.
   - Use an existing CSI from your working set:
     a. Update the global zone.
     b. Set up the target zone: either create a new target zone or use an existing target zone.
     c. Set up the distribution zone: either create a new distribution zone or use an existing distribution zone.
5. Review the installation summary and start the installation.

After the installation process completes, the product is ready for you to deploy. You may have to perform other steps manually outside of CA MSM before beginning the deployment process.

How to Maintain Existing Products

If you have existing CSIs, you can bring those CSIs into CA MSM so that you can maintain all your installed products in a unified way from a single web-based interface.

You can use the PAS and SIS to maintain a CA Technologies product.

To do this, complete the following tasks:

1. Migrate the CSI to CA MSM to maintain an existing CSI in CA MSM.

   During the migration, CA MSM stores information about the CSI in the database.

2. Download the latest maintenance for the installed product releases from the Software Catalog tab.

   If you cannot find a release (for example, because the release is old), you can add the release to the catalog manually and then update the release to download the maintenance.

3. Apply the maintenance.

Note: You can also install maintenance to a particular CSI from the SMP/E Environments tab.

After the maintenance process completes, the product is ready for you to deploy. You may have to perform other steps manually outside of CA MSM before beginning the deployment process.

How to Deploy a Product

The *Software Deployment Service (SDS)* facilitates the deployment of mainframe products from the software inventory of the driving system to the target system, including deploying installed products that are policy driven with a set of appropriate transport mechanisms across a known topology.

You can use the SDS component of CA MSM to deploy a CA Technologies product that you have already acquired and installed.

To do this, complete the following tasks:

1. Set up the system registry:
   a. Determine the systems you have at your enterprise.
   b. Set up remote credentials for those systems.
   c. Set up the target systems (Non-Sysplex, Sysplex or Monoplex, Shared DASD Cluster, and Staging), and validate them.
   d. Add network information, including data destination information, to each system registry entry.
2. Set up methodologies.
3. Create the deployment, which includes completing each step in the New Deployment wizard.

   After creating the deployment, you can save it and change it later by adding and editing systems, products, custom data sets, and methodologies, or you can deploy directly from the wizard.

   Note: If you must deploy other products to the previously defined systems using the same methodologies, you must create a separate deployment.
4. Deploy the product, which includes taking a snapshot, transmitting to target, and deploying (unpacking) to your mainframe environment.

After the deployment process completes, the product is ready for you to configure. You may have to perform other steps manually outside of CA MSM before beginning the configuration process.

How to Configure a Product

The *Software Configuration Service (SCS)* facilitates the configuration of your mainframe products from the software inventory of the driving system to targeted z/OS operating systems.

You can use the SCS component of CA MSM to configure a CA Technologies product that you have already acquired, installed, and deployed.

To do this, complete the following tasks:

1. Select a deployed product to configure from the Deployments tab to open the Create Configuration wizard.
2. Create the configuration, which includes completing each step in the Create Configuration wizard, including the following:
   a. Define a configuration name and select a target system.
   b. Select configuration functions and options.
   c. Define system preferences.
   d. Create target settings.
   e. Select and edit resources.
3. Build the configuration. The last step of the Create Configuration wizard lets you build the configuration.
4. Implement the configuration. The implementation process in CA MSM is a step-by-step process that carefully guides you and provides detailed instructions to start, stop, and manage the steps of the implementation process.

After the configuration process completes, the product is ready for you to use. You may have to perform other steps manually outside of CA MSM.

Note: You cannot use CA MSM to configure a product to a Staging System.

Access CA MSM Using the Web-Based Interface

You access CA MSM using the web-based interface. Obtain the URL of CA MSM from the CA MSM administrator.

To access CA MSM using the web-based interface

1. Start your web browser, and enter the access URL.

   The login page appears.

   Note: If the Notice and Consent Banner appears, read the information provided, and click the link to confirm it.
2. Enter your z/OS login user name and password, and click the Log In button.

   The initial page appears. If you log in for the first time, you are prompted to define your account on the CA Support Online website.

   Note: For more information about the interface, click the Help link at the top right corner of the page.

3. Click New.

   You are prompted for the credentials to use on the CA Support Online website.

   Important! The account to which the credentials apply *must* have the Product Display Options set to BRANDED PRODUCTS. You can view and update your account preferences by logging into the CA Support Online website and clicking My Account. If you do not have the correct setting, you are not able to use CA MSM to download product information and packages.

4. Specify the credentials, click OK, and then click Next.

   You are prompted to review your user settings.

   Note: These settings are available on the User Settings page.

5. Change the settings or keep the defaults, and then click Finish.

   A dialog shows the progress of the configuration task. You can click Show Results to view the details of the actions in a finished task.

Important! If your site uses proxies, review your proxy credentials on the User Settings, Software Acquisition page.

Chapter 4: Installing Your Product from Pax-Enhanced ESD

This section contains the following topics:

How to Install a Product Using Pax-Enhanced ESD

This section describes the Pax-Enhanced ESD process. We recommend that you read this overview and follow the entire procedure the first time you complete a Pax-Enhanced ESD installation. For experienced UNIX users, the *Pax-Enhanced ESD Quick Reference Guide* has sufficient information for subsequent installations.

Important! Downloading pax files for the SMP/E installation as part of the Pax-Enhanced ESD process requires write authority to the UNIX System Services (USS) directories used for the ESD process.

If you prefer not to involve all CA Technologies product installers with z/OS UNIX System Services, assign a group familiar with USS to perform Steps 1 through 4 and provide the list of the unpacked MVS data sets to the product installer. USS is not required for the actual SMP/E RECEIVE of the product or for any of the remaining installation steps.

To install files using Pax-Enhanced ESD, use the following process:

1. Allocate and mount the file system. This process requires a USS directory to receive the pax file and to perform the unpack steps. We recommend that you allocate and mount a file system dedicated to Pax-Enhanced ESD and create the directory in this file system. Ensure that all users who will be working with pax files have write authority to the directory.
2. Copy the product pax files into your USS directory. To download files, choose one of the following options:
   - Download a zip file from CA Support Online to your PC, unzip the file, and then upload the product pax files to your USS file system.
   - FTP the pax files from CA Support Online directly to your USS directory.

   Note: Perform Steps 3 through 6 for each pax file that you upload to your USS directory.

3. Create a product directory from the pax file. Set the current working directory to the directory containing the pax file, and create a new directory in your USS directory by entering the following command:

   pax `-rvf` *pax-file-name*

4. Use the SMP/E GIMUNZIP utility to create z/OS installation data sets. The file UNZIPJCL in the directory created by the pax command in Step 3 contains a sample job to GIMUNZIP the installation package. Edit and submit the UNZIPJCL job.

5. Receive the SMP/E package. For this step, use the data sets created by GIMUNZIP in Step 4. Perform a standard SMP/E RECEIVE using the SMPPTFIN and SMPHOLD (if applicable) DASD data sets. Also, specify the high-level qualifier for the RELFILEs on the RFPREFIX parameter of the RECEIVE command.

6. Proceed with product installation. Consult product-specific documentation, including AREADME files and installation notes to complete the product installation.

7. (Optional) Clean up the USS directory. Delete the pax file, the directory created by the pax command, all of the files in it, and the SMP/E RELFILEs, SMPMCS, and HOLDDATA data sets.

More Information:

Allocate and Mount a File System (see page 34)
Create a Product Directory from the Pax File (see page 36)
Copy Installation Files to z/OS Data Sets (see page 37)

How the Pax-Enhanced ESD Download Works

Important! To download pax files for the SMP/E installation as part of the Pax-Enhanced ESD process, you must have write authority to the UNIX System Services (USS) directories used for the ESD process and available USS file space before you start the procedures in this guide. For additional ESD information, go to ca.com/mainframe. Under Events, we offer an ESD webcast to further explain the Pax-Enhanced ESD process.

Use the following process to download files using Pax-Enhanced ESD:

1. Log in to https://support.ca.com/, and click Download Center.

   The CA Support Online web page appears.

2. Under Download Center, select Products from the first drop-down list, and specify the product, release, and genlevel (if applicable), and click Go.

   The CA Product Download window appears.

3. Download an entire CA Technologies product software package or individual pax files to your PC or mainframe. If you download a zip file, you must unzip it before continuing.

   For both options, The ESD Product Download Window (see page 31) topic explains how the download interface works.

   Note: For traditional installation downloads, see the *Traditional ESD User Guide*. Go to https://support.ca.com/, log in, and click Download Center. A link to the guide appears under the Download Help heading.

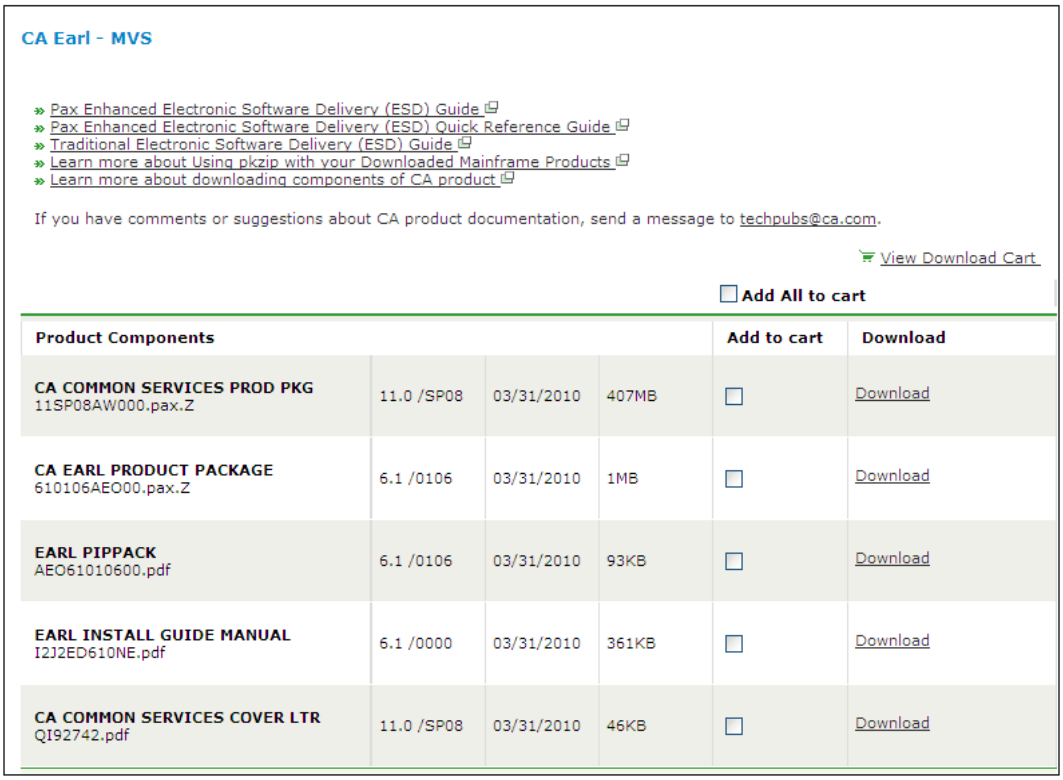
4. Perform the steps to install the product based on the product-specific steps.

   The product is installed on the mainframe.

ESD Product Download Window

CA Technologies product ESD packages can be downloaded multiple ways. Your choices depend on the size of the individual files and the number of files you want to download. You can download the complete product with all components or you can select individual pax and documentation files for your product or component.

The following illustration shows sample product files. It lists all components of the product. You can use the Download Cart by checking one or more components that you need or check the box for Add All to cart. If you prefer to immediately download a component, click the Download link.



CA Earl - MVS

» Pax Enhanced Electronic Software Delivery (ESD) Guide
» Pax Enhanced Electronic Software Delivery (ESD) Quick Reference Guide
» Traditional Electronic Software Delivery (ESD) Guide
» Learn more about Using pkzip with your Downloaded Mainframe Products
» Learn more about downloading components of CA product

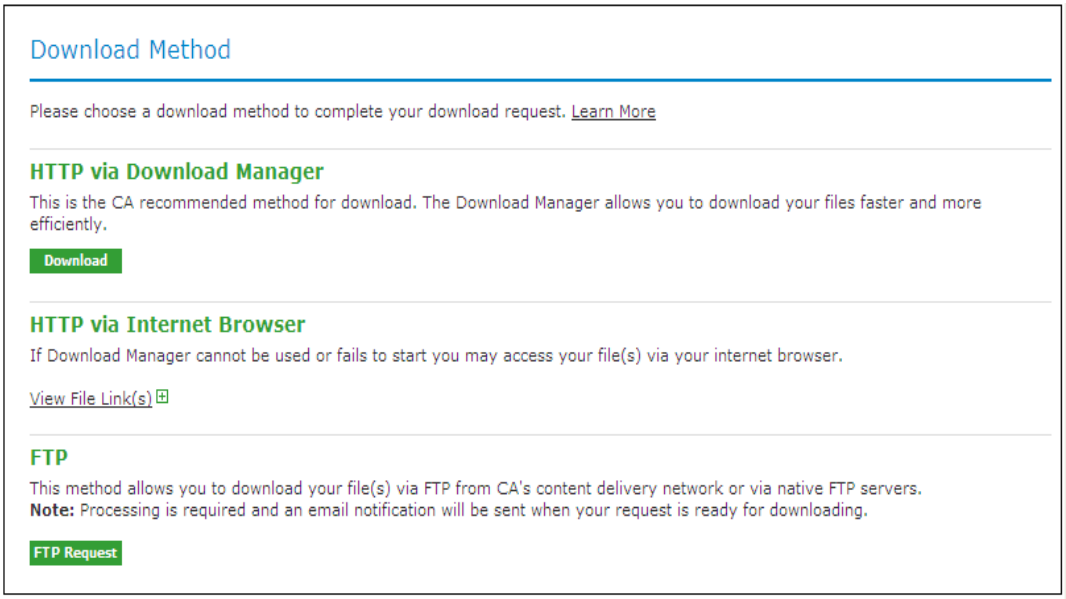
If you have comments or suggestions about CA product documentation, send a message to techpubs@ca.com.

View Download Cart

☐ Add All to cart

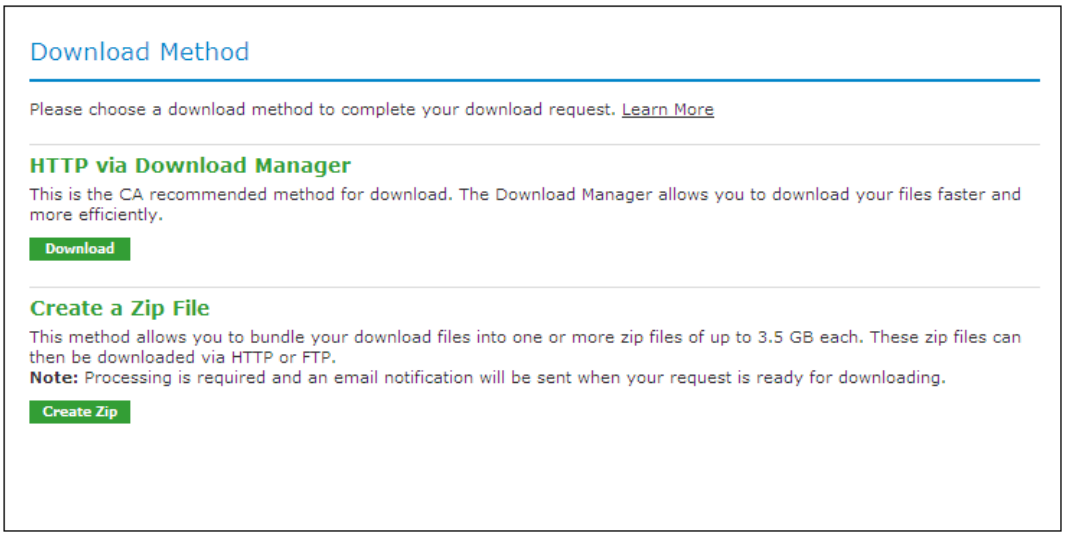
Product Components				Add to cart	Download
CA COMMON SERVICES PROD PKG 11SP08AW000.pax.Z	11.0 /SP08	03/31/2010	407MB	☐	Download
CA EARL PRODUCT PACKAGE 610106AEO00.pax.Z	6.1 /0106	03/31/2010	1MB	☐	Download
EARL PIPPACK AEO61010600.pdf	6.1 /0106	03/31/2010	93KB	☐	Download
EARL INSTALL GUIDE MANUAL I2J2ED610NE.pdf	6.1 /0000	03/31/2010	361KB	☐	Download
CA COMMON SERVICES COVER LTR QI92742.pdf	11.0 /SP08	03/31/2010	46KB	☐	Download

Clicking the link for an individual component takes you to the Download Method page.



Depending on the size and quantity of product files ordered, the Download Method screen could also have these options:

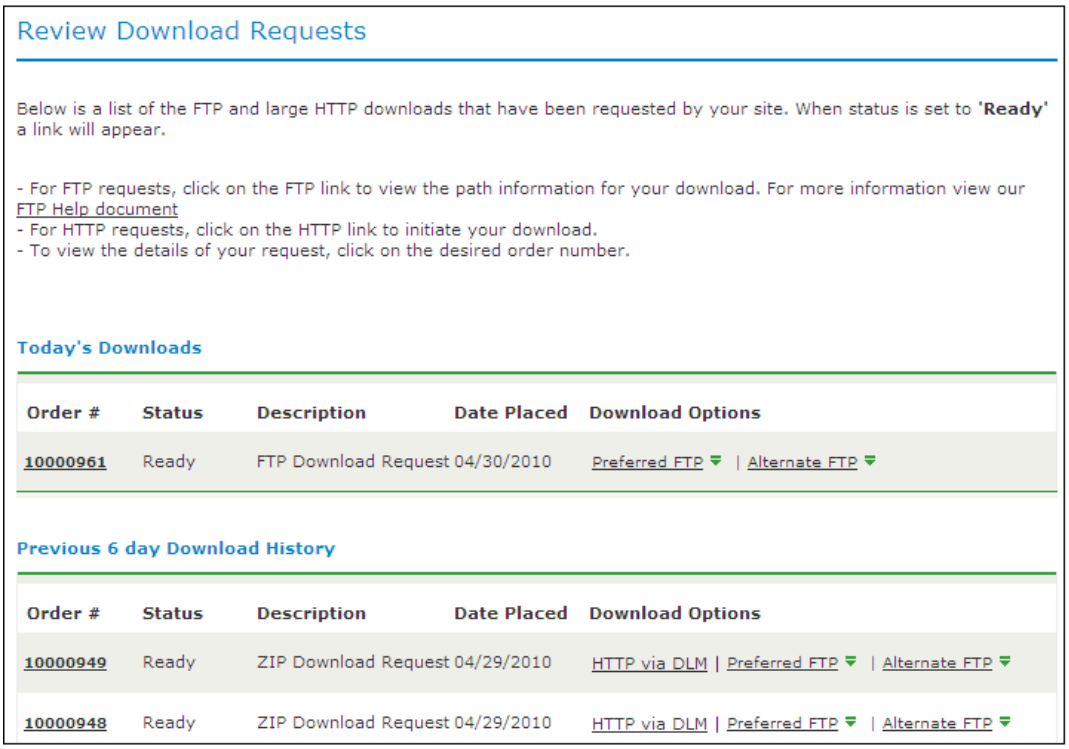
Note: For mainframe downloads using this HTTP method, click the Learn More link.



The HTTP method lets you start downloading immediately. The FTP method takes you to the Review Orders page that displays your order, first in a Pending status changing to Ready when your order has been processed.

Preferred FTP uses the new content delivery network (CDN). Alternate FTP uses the CA Technologies New York-based FTP servers.

The Create a Zip File option first creates the zip, and when ready, offers the options shown by the Zip Download Request examples in the next screen.



Review Download Requests

Below is a list of the FTP and large HTTP downloads that have been requested by your site. When status is set to **'Ready'** a link will appear.

- For FTP requests, click on the FTP link to view the path information for your download. For more information view our FTP Help document
- For HTTP requests, click on the HTTP link to initiate your download.
- To view the details of your request, click on the desired order number.

Today's Downloads

Order #	Status	Description	Date Placed	Download Options
10000961	Ready	FTP Download Request	04/30/2010	Preferred FTP | Alternate FTP

Previous 6 day Download History

Order #	Status	Description	Date Placed	Download Options
10000949	Ready	ZIP Download Request	04/29/2010	HTTP via DLM | Preferred FTP | Alternate FTP
10000948	Ready	ZIP Download Request	04/29/2010	HTTP via DLM | Preferred FTP | Alternate FTP

Allocate and Mount a File System

You can use the zSeries File System (zFS) or hierarchical file system (HFS) for Pax-Enhanced ESD downloads.

This procedure details how to perform the following tasks:

- Allocate a zFS or an HFS file system.
- Create a mount point in an existing maintenance directory.
- Mount the file system on the newly created mount point.
- Optionally permit write access to anyone in the same group as the person who created the directory.

Important! USS commands are case-sensitive.

To allocate and mount the file system

1. Allocate the HFS. For example:

   ```
   //ALCHFS  EXEC  PGM=IEFBR14
   //CAESD  DD  DSN=yourHFS dataset name,
   // DISP=(NEW,CATLG,DELETE),UNIT=3390,
   // DSNTYPE=HFS,SPACE=(CYL,(primary,secondary,1))
   ```

   The HFS is allocated.

   Note: Ensure that the HFS data set name that you use conforms to your data set naming conventions for USS file systems. If the allocation of the HFS data set fails allocation, it is because of environmental settings not allowing for the allocation. Try using the ISPF 3.2 Data Set Utility to allocate your HFS.

2. Create a mount point for the file system. This example shows how to create a /CA/CAESD directory in an existing directory, /u/maint. From the TSO OMVS shell, enter the following commands:

   ```
   cd /u/maint/
   mkdir CA
   cd CA
   mkdir CAESD
   ```

   Note: This document refers to this structure as *yourUSSESDdirectory*.

   The mount point is created.

3. Mount the file system. For example, from TSO, enter the following command:

   ```
   MOUNT       FILESYSTEM('yourHFS dataset name')
               MOUNTPOINT('yourUSSESDdirectory')
               TYPE(HFS)   MODE(RDWR)
   ```

   The file system is mounted.

4. (Optional) Set security permissions for the directory. You can use the chmod command to let other users access the ESD directory and its files. For example, to allow write access to the ESD directory for other users in your USS group, from the TSO OMVS shell, enter the following command:

   ```
   chmod-R 775 /yourUSSESDdirectory/
   ```

   Write access is granted.

   Note: For more information about the chmod command, see the *z/OS UNIX System Services User Guide (SA22-7802)*.

Create a Product Directory from the Pax File

Use the sample job attached to the PDF file as Unpackage.txt to extract the product pax file into a product installation directory.

Important! To simplify the Pax-Enhanced ESD process, the PDF version of this guide includes a sample JCL job that you can copy directly to the mainframe. To access this job, click the paper clip icon in the lower left corner of the PDF reader. This opens a window displaying attachments. Double-click the file to view the sample JCL.

To create a product installation directory using the Unpackage.txt sample job

1. Supply a valid JOB statement.
2. Replace *yourUSSESDdirectory* with the name of the USS directory that you use for ESD downloads.

   The job points to your specific directory.
3. Replace *paxfile.pax.Z* with the name of the pax file.

   The job points to your specific pax file.
4. Submit the job.

   The job runs and creates the product directory.

Note: After making the changes noted in the job, if the PARM= statement exceeds 71 characters, uncomment and use the second form of UNPAXDIR instead. This sample job uses an X in column 72 to continue the PARM= parameters to a second line.

Example Job to Execute the Pax Command (Unpackage.txt)

The following text appears in the attached Unpackage.txt JCL file:

```
//ESDUNPAX JOB (ACCOUNTNO),'UNPAX ESD PACKAGE ',
// MSGCLASS=X,CLASS=A,NOTIFY=&SYSUID
//*********************************************************************
//* This sample job can be used to invoke the pax command to create   *
//* the product-specific installation directory.                      *
//*                                                                   *
//* This job must be customized as follows:                           *
//* 1. Supply a valid JOB statement.                                  *
//* 2. Replace "yourUSSESDdirectory" with the name of the USS         *
//*    directory used on your system for ESD downloads.               *
//* 3. Replace "paxfile.pax.Z" with the name of the pax file.         *
//* NOTE: If you continue the PARM= statement on a second line, make  *
//*       sure the 'X' continuation character is in column 72.        *
//*********************************************************************
//UNPAXDIR EXEC PGM=BPXBATCH,
// PARM='sh cd /yourUSSESDdirectory/; pax -rvf paxfile.pax.Z'
//*UNPAXDIR EXEC PGM=BPXBATCH,
//* PARM='sh cd /yourUSSESDdirectory/; pax                            X
//*             -rvf paxfile.pax.Z'
//STDOUT DD SYSOUT=*
//STDERR DD SYSOUT=*
```

Copy Installation Files to z/OS Data Sets

Use this procedure to invoke the SMP/E GIMUNZIP utility to create MVS data sets from the files in the product-specific directory.

To copy the Pax-Enhanced ESD installation files to z/OS data sets

1. Locate and read the product readme file or installation notes, if applicable, which resides in the product-specific directory that the pax command created. This file contains product-specific details you need to complete the installation procedure.

   You have identified product-specific installation details.

2. Use ISPF EDIT or TSO ISHELL to edit the UNZIPJCL sample job. You can perform this step in one of the following ways:

   - Use ISPF EDIT. Specify the full path name of the UNZIPJCL file.
   - Use TSO ISHELL. Navigate to the UNZIPJCL file and use the E line command to edit the file.

   The job is edited.

3. Change the SMPDIR DD PATH to the product-specific directory created by the pax command.

   Your view is of the product-specific directory.

4. If ICSF is not active, perform the following steps:

   a. Change the SMPJHOME DD PATH to your Java runtime directory. This directory varies from system to system.

   b. Perform one of the following steps:

      - Change the SMPCPATH DD PATH to your SMP/E Java application classes directory, usually /usr/lpp/smp/classes/.
      - Change HASH=YES to HASH=NO on the GIMUNZIP parameter.

   One of the following occurs: ICSF is active or you are using Java.

5. Change all occurrences of *YourHLQ* to the high-level qualifier (HLQ) for z/OS data sets used by the installation process. We suggest that you use a unique HLQ for each expanded pax file to uniquely identify the package. Do not use the same value for *yourHLQ* as you will use for the SMP/E RELFILEs.

   All occurrences of *YourHLQ* are set to your high-level qualifier for z/OS data sets.

6. Submit the UNZIPJCL job.

   The UNZIPJCL job completes with a zero return code. Messages GIM69158I and GIM48101I in the output and IKJ56228I in the JES log are acceptable.

   GIMUNZIP creates z/OS data sets with the high-level qualifier you specified in the UNZIPJCL job. You use these data sets to perform the product installation. The pax file and product-specific directory are no longer needed at this point.

   Note: For more information, see the IBM Reference Manual, *SMP/E for z/OS Reference (SA22-7772)*.

Receiving the SMP/E Package

If you are installing the package into a new SMP/E environment, use the sample jobs included with the product to set up an SMP/E environment before proceeding.

At this point, complete the SMP/E RECEIVE using files on DASD that the UNZIPJCL job created. Consult the product sample JCL library that contains a sample job customized to receive the product from DASD. Specifically, you must specify the following values:

- DASD data set names for SMPPTFIN and SMPHOLD (if applicable)
- The HLQ that you used in the UNZIPJCL job on the RFPREFIX parameter on the RECEIVE command

How to Install Products Using Native SMP/E JCL

The following steps describe the process to install products using native SMP/E JCL:

1. Allocate product data sets and SMP/E data sets.
2. Create SMP/E CSI.
3. Receive base functions.
4. Apply base functions.
5. Accept base functions.
6. Configure the product according to your site requirements.

Prepare the SMP/E Environment for Pax Installation

The members used in this procedure prepare the data sets, initialize the zones, and create the DDDEFs for CA SMF Director.

For information about the members, see the comments in the JCL.

To prepare the SMP/E environment for your product

1. Customize the macro ASFSEDIT with your site-specific information and then copy the macro to your SYSPROC location. Replace the rightmost parameters for each ISREDIT CHANGE macro command. Each time you edit an installation member, type ASFSEDIT on the TSO command line, and press Enter to replace the defaults with your specifications.

   The macro is ready to customize the *yourHLQ*.SAMPJCL members.

   Note: Set the DASD HLQ to the same value specified for *yourHLQ* for the unzip to DASD ESD JCL.

   Note: The following steps include instructions to execute the ASFSEDIT macro each time you open a new SAMPJCL member. To edit all SAMPJCL members simultaneously, read and follow the instructions in the ASFEDALL member.

2. Open the SAMPJCL member ASF1ALL in an edit session and execute the ASFSEDIT macro from the command line.

   ASF1ALL is customized.

3. Submit ASF1ALL.

   This job produces the following results:

   - The target and distribution data sets for CA SMF Director are created.
   - Unique SMPLTS, SMPMTS, SMPSCDS, and SMPSTS data sets for this target zone are created.

4. Open the SAMPJCL member ASF2CSI in an edit session and execute the ASFSEDIT macro from the command line.

   ASF2CSI is customized.

5. Submit ASF2CSI.

   This job produces the following results:

   - The CSI data set is defined.
   - The SMPPTS and SMPLOG data sets are allocated.
   - The global, target, and distribution zones are initialized.
   - The DDDEF entries for your product are created.
   - The DDDEFs for the required SMP/E data sets are created.

Run the Installation Jobs for a Pax Installation

Submit and run these *yourhlq*.SAMPJCL members in sequence. Do not proceed with any job until the previous job has completed successfully.

To run the installation jobs

1. Open the SAMPJCL member ASF3RECD in an edit session and execute the ASFSEDIT macro from the command line.

   ASF3RECD is customized.

2. Submit the *yourhlq*.SAMPJCL member ASF3RECD to receive SMP/E base functions.

   CA SMF Director is received and now resides in the global zone.

3. Open the SAMPJCL member ASF4APP in an edit session and execute the ASFSEDIT macro from the command line.

   ASF4APP is customized.

4. Submit the *yourhlq*.SAMPJCL member ASF4APP to apply SMP/E base functions.

   Your product is applied and now resides in the target libraries.

5. Open the SAMPJCL member ASF5ACC in an edit session and execute the ASFSEDIT macro from the command line.

   ASF5ACC is customized.

6. Submit the *yourhlq*.SAMPJCL member ASF5ACC to accept SMP/E base functions.

   Your product is accepted and now resides in the distribution libraries.

Apply Maintenance

CA Support Online has maintenance and HOLDDATA published since the installation data was created. When the maintenance process is complete the product is ready to deploy.

To apply maintenance

1. Check CA Support Online and download any PTFs and HOLDDATA published since this release was created. If the base release was created recently, no PTFs or HOLDATA will have been published yet.
2. Transfer the downloaded files to two separate FB 80 sequential data sets. Use one data set to contain the PTFs and the other to contain the HOLDDATA.

   The PTFs and HOLDDATA become accessible to the *yourhlq*.SAMPJCL maintenance members.
3. The ASFSEDIT macro was customized in the installation steps. Verify that you still have the values from the base install.
4. Open the SAMPJCL member ASF6RECP in an edit session and execute the ASFSEDIT macro from the command line.

   ASF6RECP is customized with your JOB statement, CSI location, and zone names.
5. Customize the ASF6RECP SMPPTFIN and SMPHOLD DD statements to reference the FB 80 data sets for the PTFs and HOLDDATA.
6. Submit ASF6RECP.

   The PTFs and HOLDDATA are received.
7. Open the SAMPJCL member ASF7APYP in an edit session and execute the ASFSEDIT macro from the command line.

   ASF7APYP is customized.
8. Submit ASF7APYP.

   The PTFs are applied.
9. (Optional) Open the SAMPJCL member ASF8ACCP in an edit session and execute the ASFSEDIT macro from the command line.

   ASF8ACCP is customized.
10. (Optional) Submit *yourhlq*.SAMPJCL member ASF8ACCP.

    The PTFs are accepted.

    Note: You do not have to submit the job at this time. You can accept the PTFs according to your site's policy.

HOLDDATA

When you apply maintenance, you typically encounter SMP/E HOLDDATA. We use HOLDDATA to notify your SMP/E system of SYSMODs that have errors or special conditions. We support system and external HOLDDATA.

System HOLDDATA

System HOLDDATA indicates data that is an in-stream part of the SYSMOD, informing you of special conditions. The following reasons are used with SYSTEM HOLDDATA for CA SMF Director:

ACTION

Indicates that you must perform special processing before or after you apply this SYSMOD.

AO

This SYSMOD affects automated operations. It changes either the message identifier or the displacement of a field inside the message.

DDDEF

Indicates that data sets and DDDEFs are being added or modified.

DELETE

Deletes the SYSMOD load module. You cannot reverse this type of SYSMOD with the SMP/E RESTORE command.

DEP

Indicates a dependency for this SYSMOD that you must externally verify.

DOC

Indicates a documentation change with this SYSMOD.

DYNACT

Describes the steps to dynamically activate this fix without performing an IPL.

ENH

This SYSMOD introduces a small programming enhancement. The hold contains the instructions to implement the enhancement. If no action is needed to implement the enhancement, give a summary of the enhancement.

EXIT

Changes delivered by this sysmod require reassembly of user exits.

EXRF

Indicates that the sysmod must be installed in both the Active and Alternate Extended Recovery Facility Systems.

IPL

Indicates that an IPL is required for this SYSMOD to take effect. This is used only when there is no alternative for dynamic activation.

MSGSKEL

Indicates that the sysmod contains internationalized message versions which must be run through the message compiler for each language.

MULTSYS

Apply this sysmod to multiple systems for either pre-conditioning, coexistence, or exploitation.

RESTART

Indicates that after applying this SYSMOD, the site must perform a special restart as opposed to a routine restart.

SYSMOD

Some or all of the elements delivered by this sysmod are to be downloaded to a workstation.

Code a bypass operand on your APPLY command to install SYSMODs that have internal holds. Code the bypass operand only after you have performed the required action, or if you are performing the action after the APPLY, if that is appropriate.

External HOLDDATA

External HOLDDATA is not part of the PTF. It resides in a separate file. It is commonly used for SYSMODs that have been distributed and later are discovered to cause problems.

Download the external HOLDDATA from CA Support to a DASD file, and allocate the file to the SMPHOLD DD statement. To take care of the external HOLDDATA, receive it into your SMP/E environment. SMP/E receives the HOLDDATA from CA supplied jobs.

If a SYSMOD has an unresolved hold error, SMP/E does not install it unless you add a bypass to your APPLY command. You can bypass an error hold in situations that are not applicable to you. Error holds that are not applicable to you can include a problem that happens only with a hardware device that you do not have or in a product feature that you do not use.

When CA publishes a SYSMOD that resolves the hold, the resolving SYSMOD supersedes the hold error. This action lets you apply the original SYSMOD in conjunction with the fixing SYSMOD.

A special HOLDDATA class called ERREL exists. We have determined that the problem fixed by the SYSMOD is more important than the one that it causes. We recommend that you apply these SYSMODs.

The only manual task is running a REPORT ERRSYSMODS. This report identifies the following:

- Any held SYSMODs already applied to your system.
- Any resolving SYSMODs that are in receive status.

SMP/E identifies the SYSMOD to apply to correct the situation.

Chapter 5: Installing Your Product from Tape

This section contains the following topics:

Unload the Sample JCL from Tape

The sample JCL to install the product is provided in the CAI.SAMPJCL library on the distribution tape.

To unload the sample JCL from tape

1. Run the following sample JCL:

```
//COPY      EXEC PGM=IEBCOPY,REGION=4096K
//SYSPRINT  DD   SYSOUT=*
//SYSUT1    DD   DSN=CAI.SAMPJCL,DISP=OLD,UNIT=unitname,VOL=SER=nnnnnn,
//          LABEL=(1,SL)
//SYSUT2    DD   DSN=yourhlq.SAMPJCL,
//          DISP=(,CATLG,DELETE),
//          UNIT=sysda,SPACE=(TRK,(15,3,6),RLSE)
//SYSUT3    DD   UNIT=sysda,SPACE=(CYL,1)
//SYSIN     DD   DUMMY
```

unitname

Specifies the tape unit to mount the tape.

nnnnnnn

Specifies the tape volume serial number.

yourhlq

Specifies the data set prefix for the installation.

sysda

Specifies the DASD where you want to place the installation software.

The SAMPJCL data set is created and its contents are downloaded from the tape.

2. Continue with one of the following options:
   - If you already have the SMP/E environment set up, go to Run the Installation Jobs for a Tape Installation.
   - If you *do not* have the SMP/E environment set up, go to Prepare the SMP/E Environment for Tape Installation.

How to Install Products Using Native SMP/E JCL

The following steps describe the process to install products using native SMP/E JCL:

1. Allocate product data sets and SMP/E data sets.
2. Create SMP/E CSI.
3. Receive base functions.
4. Apply base functions.
5. Accept base functions.
6. Configure the product according to your site requirements.

Prepare the SMP/E Environment for Tape Installation

The members used in this procedure prepare the data sets, initialize the zones, and create the DDDEFs for CA SMF Director.

For information about the members, see the comments in the JCL.

To prepare the SMP/E environment for your product

1. Customize the macro ASFSEDIT with your site-specific information and then copy the macro to your SYSPROC location. Replace the rightmost parameters for each ISREDIT CHANGE macro command. Each time you edit an installation member, type ASFSEDIT on the TSO command line, and press Enter to replace the defaults with your specifications.

   The macro is ready to customize your ASF.SAMPJCL members.

   Note: The following steps include instructions to execute the ASFSEDIT macro each time you open a new SAMPJCL member. To edit all SAMPJCL members simultaneously, read and follow the instructions in the ASFEDALL member.

2. Open the SAMPJCL member ASF1ALL in an edit session and execute the ASFSEDIT macro from the command line.

   ASF1ALL is customized.

3. Submit ASF1ALL.

   This job produces the following results:

   - The target and distribution data sets for CA SMF Director are created.
   - Unique SMPLTS, SMPMTS, SMPSCDS, and SMPSTS data sets for this target zone are created.

4. Open the SAMPJCL member ASF2CSI in an edit session and execute the ASFSEDIT macro from the command line.

   ASF2CSI is customized.

5. Submit ASF2CSI.

   This job produces the following results:

   - The CSI data set is defined.
   - The SMPPTS and SMPLOG data sets are allocated.
   - The global, target, and distribution zones are initialized.
   - The DDDEF entries for your product are created.
   - The DDDEFs for the required SMP/E data sets are created.

Run the Installation Jobs for a Tape Installation

Submit and run these SAMPJCL members in sequence. Do not proceed with any job until the previous job has completed successfully.

To run the installation jobs

1. Open the SAMPJCL member ASF3RECT in an edit session and execute the ASFSEDIT macro from the command line.

   ASF3RECT is customized.

2. Submit the *yourhlq*.SAMPJCL member ASF3RECT to receive SMP/E base functions.

   CA SMF Director is received and now resides in the global zone.

3. Open the SAMPJCL member ASF4APP in an edit session and execute the ASFSEDIT macro from the command line.

   ASF4APP is customized.

4. Submit the *yourhlq*.SAMPJCL member ASF4APP to apply SMP/E base functions.

   Your product is applied and now resides in the target libraries.

5. Open the SAMPJCL member ASF5ACC in an edit session and execute the ASFSEDIT macro from the command line.

   ASF5ACC is customized.

6. Submit the *yourhlq*.SAMPJCL member ASF5ACC to accept SMP/E base functions.

   Your product is accepted and now resides in the distribution libraries.

Apply Maintenance

CA Support Online has maintenance and HOLDDATA published since the installation data was created. When the maintenance process is complete the product is ready to deploy.

To apply maintenance

1. Check CA Support Online and download any PTFs and HOLDDATA published since this release was created. If the base release was created recently, no PTFs or HOLDATA will have been published yet.
2. Transfer the downloaded files to two separate FB 80 sequential data sets. Use one data set to contain the PTFs and the other to contain the HOLDDATA.

   The PTFs and HOLDDATA become accessible to the *yourhlq*.SAMPJCL maintenance members.

3. The ASFSEDIT macro was customized in the installation steps. Verify that you still have the values from the base install.
4. Open the SAMPJCL member ASF6RECP in an edit session and execute the ASFSEDIT macro from the command line.

   ASF6RECP is customized with your JOB statement, CSI location, and zone names.

5. Customize the ASF6RECP SMPPTFIN and SMPHOLD DD statements to reference the FB 80 data sets for the PTFs and HOLDDATA.
6. Submit ASF6RECP.

   The PTFs and HOLDDATA are received.

7. Open the SAMPJCL member ASF7APYP in an edit session and execute the ASFSEDIT macro from the command line.

   ASF7APYP is customized.

8. Submit ASF7APYP.

   The PTFs are applied.

9. (Optional) Open the SAMPJCL member ASF8ACCP in an edit session and execute the ASFSEDIT macro from the command line.

   ASF8ACCP is customized.

10. (Optional) Submit *yourhlq*.SAMPJCL member ASF8ACCP.

    The PTFs are accepted.

    Note: You do not have to submit the job at this time. You can accept the PTFs according to your site's policy.

HOLDDATA

When you apply maintenance, you typically encounter SMP/E HOLDDATA. We use HOLDDATA to notify your SMP/E system of SYSMODs that have errors or special conditions. We support system and external HOLDDATA.

System HOLDDATA

System HOLDDATA indicates data that is an in-stream part of the SYSMOD, informing you of special conditions. The following reasons are used with SYSTEM HOLDDATA for CA SMF Director:

ACTION

Indicates that you must perform special processing before or after you apply this SYSMOD.

AO

This SYSMOD affects automated operations. It changes either the message identifier or the displacement of a field inside the message.

DDDEF

Indicates that data sets and DDDEFs are being added or modified.

DELETE

Deletes the SYSMOD load module. You cannot reverse this type of SYSMOD with the SMP/E RESTORE command.

DEP

Indicates a dependency for this SYSMOD that you must externally verify.

DOC

Indicates a documentation change with this SYSMOD.

DYNACT

Describes the steps to dynamically activate this fix without performing an IPL.

EC

Indicates that this SYSMOD requires a hardware engineering change. An EC hold SYSMOD usually does not affect the product unless the EC is present on the hardware device.

ENH

This SYSMOD introduces a small programming enhancement. The hold contains the instructions to implement the enhancement. If no action is needed to implement the enhancement, give a summary of the enhancement.

EXIT

Changes delivered by this sysmod require reassembly of user exits.

EXRF

Indicates that the sysmod must be installed in both the Active and Alternate Extended Recovery Facility Systems.

IPL

Indicates that an IPL is required for this SYSMOD to take effect. This is used only when there is no alternative for dynamic activation.

MSGSKEL

Indicates that the sysmod contains internationalized message versions which must be run through the message compiler for each language.

MULTSYS

Apply this sysmod to multiple systems for either pre-conditioning, coexistence, or exploitation.

RESTART

Indicates that after applying this SYSMOD, the site must perform a special restart as opposed to a routine restart.

SYSMOD

Some or all of the elements delivered by this sysmod are to be downloaded to a workstation.

Code a bypass operand on your APPLY command to install SYSMODs that have internal holds. Code the bypass operand only after you have performed the required action, or if you are performing the action after the APPLY, if that is appropriate.

External HOLDDATA

External HOLDDATA is not part of the PTF. It resides in a separate file. It is commonly used for SYSMODs that have been distributed and later are discovered to cause problems.

Download the external HOLDDATA from CA Support to a DASD file, and allocate the file to the SMPHOLD DD statement. To take care of the external HOLDDATA, receive it into your SMP/E environment. SMP/E receives the HOLDDATA from CA supplied jobs.

If a SYSMOD has an unresolved hold error, SMP/E does not install it unless you add a bypass to your APPLY command. You can bypass an error hold in situations that are not applicable to you. Error holds that are not applicable to you can include a problem that happens only with a hardware device that you do not have or in a product feature that you do not use.

When CA publishes a SYSMOD that resolves the hold, the resolving SYSMOD supersedes the hold error. This action lets you apply the original SYSMOD in conjunction with the fixing SYSMOD.

A special HOLDDATA class called ERREL exists. We have determined that the problem fixed by the SYSMOD is more important than the one that it causes. We recommend that you apply these SYSMODs.

The only manual task is running a REPORT ERRSYSMODS. This report identifies the following:

- Any held SYSMODs already applied to your system.
- Any resolving SYSMODs that are in receive status.

SMP/E identifies the SYSMOD to apply to correct the situation.

Chapter 6: Configuring Your Product

This section describes the minimum configuration tasks needed before CA SMF Director can be started, customized, and used in your environment.

This section contains the following topics:

Step 1. Tailor LMP Keys

If you are upgrading from a previous release of this product, skip this step.

The CA License Management Program (LMP) is comprised of three components: the CA product, the LMP Product Key Certificate, and the common LMP Enforcement software.

The LMP Product Key Certificate contains an execution key for each CPU licensed at your site. These keys must be entered into the CASFPARM data set LMP product key member, which has a default name of KEYS.

Define the LMP execution key at this time. For more information, see the CA Common Services for z/OS documentation.

Step 2. Secure Functions

CA SMF Director provides the use of its functions to be secured by an external security product, such as CA Top Secret for z/OS, CA ACF2 for z/OS, or IBM RACF. The resource class CA$MSMF must be defined to the external security product prior to using CA SMF Director. The resource class must allow resource names to be greater than eight characters and access levels of UPDATE, READ, or NONE. To allow use of a function, the required resources must be defined to a user's security record with the proper access levels.

For more information about securing functions, see Chapter 2 in the *Systems Programmer Guide.*

Step 3. Allocate the Control Data Set (SCDS)

Note: You may also use the SCS component of CA MSM to configure the SCDS (see page 63). If you want to do that, skip this step.

If this is the first time CA SMF Director is installed, use JCL member CASFJCL(CASFNCDS) to allocate the control data set. See Chapter 2 of the *User Guide* on how to define a system configuration.

If you are upgrading from a previous release of CA SMF Director, use member CASFJCL(CASFSCNV) to back up the existing SCDS file, allocate a SCDS for the new release, and restore it using the backup file. This process converts the old SCDS records to the format used by the new release.

After editing the supplied JCL and adjusting the space (see page 15) value for the SCDS data set, submit the job.

Step 4. Customize the Product

Note: You may also use the SCS component of CA MSM to customize the product by adding system (see page 66) and stream (see page 73) definitions to the SCDS. If you want to do that, skip this step.

You can tailor CA SMF Director to your environment. If this is **not** an upgrade from a previous release, you can create a batch job to define the customized configuration of your system complex to CA SMF Director. For more information, see Chapter 2 in the *User Guide* and Customization Considerations in Chapter 1 of the *Systems Programmer Guide.*

If you are upgrading from a previous release of this product, the previous SCDS file is converted to the format needed by the new release. The previous configuration is copied intact.

Step 5. Set Up the Online Interface (Optional)

An online ISPF interface lets you view information in the SCDS. For more information about this interface, see the *User Guide.*

To set up the online interface, customize CASFEXEC(SMFDOL) so that the 'prefix' variable points to the high-level qualifier of the target libraries.

To bring up the online interface, run the SMFDOL EXEC under ISPF. The EXEC will allocate the required libraries automatically.

We recommend that you copy the SMFDOL EXEC to any convenient library in your SYSPROC or SYSEXEC TSO allocation. That way, you can start it as a TSO command from any ISPF panel. You can also modify the ISPF primary panel (or some other menu panel) by assigning 'CMD(%SMFDOL)' to the &ZSEL. variable in the)PROC section.

Step 6. Set Up Automatic Dump Processing

Enabling Automatic Dump Processing for Traditional MAN File Recording

CA SMF Director uses the CA Common Services for z/OS program CAIRIM to install its own copy of SMF exit IEFU29, which receives control when a SMF SYSx.MANx file is full or was switched. The IEFU29 exit is designed to issue a z/OS START command for the procedure CASFDUMP, which executes CA SMF Director to dump and clear the SMF files.

To activate this facility, the following control statement must be added to the CARIMPRM member pointed to by the CAS9 procedure that executes CAIRIM:

```
PRODUCT(CA-SMF AUTODUMP) VERSION(SFC6) INIT(SMFINIT) PARM(ENABLE)
```

A sample of this statement is provided in member CASFRIMP in the CASFPARM library.

Note: To provide a user exit to alter the START command issued to initiate the dump process, you must indicate it in the PARM operand by providing the MX subparameter. See the *Systems Programmers Guide* for more information on coding and activating the user exit.

Enabling Automatic Dump Processing for Logstream Recording

CA SMF Director uses the CA Common Services for z/OS program CAIRIM to install its own copy of SMF exit IEFU29L, which receives control when a SWITCH SMF (or I SMF) command is issued. The IEFU29L exit is designed to issue a z/OS START command for the CASFDUML procedure, once for each logstream that is actively recording SMF data. The CASFDUML procedure executes the CA SMF Director logstream interface program, which invokes CA SMF Director to archive the records from the logstream.

To activate this facility, the following control statement must be added to the CARIMPRM member pointed to by the CAS9 procedure that executes CAIRIM:

```
PRODUCT(CA-SMF AUTODUMP) VERSION(SFC6) INIT(SMFINIT) PARM(ENABLELS)
```

Note: This form of the statement is not included in the CASFRIMP member in the CASFPARM library.

Note: To provide a user exit to alter the START command issued to initiate the dump process, you must indicate it in the PARM operand by providing the LX subparameter. See the *Systems Programmers Guide* for more information on coding and activating the user exit.

Disabling Automatic Dump Processing

Change the keyword ENABLE or ENABLELS to DISABLE in the above mentioned control statement and rerun CAIRIM. To permanently disable this feature, remove the above control statement from the CARIMPRM member.

Registering Logstream Dump Process Exits

You can skip this step if you are not using SMF logstream recording, but if you are planning to use it in the future, it is a good idea to perform this step now. It will have no impact on your operation but when you do convert to SMF logstream recording, the logstream dump process exits will already be registered.

If you are using SMF logstream recording and have a level of z/OS that supports the SMFDLEXIT parameter in the SMFPRMxx member of PARMLIB, you must complete this step. (SMFDLEXIT was added to z/OS 1.9 through 1.11 with a PTF and is built into z/OS 1.12 and above.)

CA SMF Director uses the IBM utility IFASMFDL to dump data from SMF logstreams. To do this, these three user exits control how IFASMFDL obtains the data for CA SMF Director:

Exit Point	CA SMF Director Exit Name
USER1	SMFDLX1
USER2	SMFDLX2
USER3	SMFDLX3

In order for these exits to be called, they must be registered with SMF in the SMFDLEXIT statement in the SMFPRMxx member that is active. To do this, code this statement:

```
SMFDLEXIT (USER1(SMFDLX1),USER2(SMFDLX2),USER3(SMFDLX3))
```

If additional user exits for IFASMFDL are needed, they can be added to the USER1, USER2, and USER3 operands as needed. For example, if your site has another IFASMFDL user exit 2 named UX2TEST, it can be coded like this:

```
SMFDLEXIT (USER1(SMFDLX1),USER2(SMFDLX2,UX2TEST),USER3(SMFDLX3))
```

For more information on the SMFDLEXIT parameter, see the IBM *MVS Initialization and Tuning Reference* guide.

Step 7. Tailor the JCL Procedures

The CASFPROC target library contains all the procedures relevant to this product. These procedures were placed here during SMP APPLY processing.

Edit each JCL procedure to conform to your installation standards and the previously completed worksheet. Optional JCL modifications are discussed individually in future steps.

After completing these modifications, the procedures may be copied into a PROCLIB of your choice, or the CAI Common Procedure library can be added to the system PROCLIB concatenations.

The following procedures are supplied with CA SMF Director: (All CA SMF Director procedures begin with CASF.)

- CASFDUML dumps SMF data from logstreams.
- CASFDUMP dumps the SMF SYSx.MANx files.
- CASFXSMF extracts SMF data.

Further modifications to the CASFDUMP and CASFDUML procedures are discussed in the next step.

Step 8. Modify and Copy Dump Procedure (Optional)

Modifying the SYSx.MANx Dump Procedure CASFDUMP

CA SMF Director provides a JCL procedure that is automatically executed whenever the MAN files are switched under z/OS.

Procedure CASFDUMP uses this product to dump SMF MAN files. If you plan to use this SMF feature and want to change the started task name, do it now by editing member SMFIDTBL in the CASFSRC target library. Replace the CASFDUMP constant in the source code with the new task name. In a later step, this task starts the dumping of the appropriate MAN files.

Edit the sample JCL member SMFIDTBJ to conform to your installation standards, and submit the job.

If the automatic SMF dumping feature is active, the following steps must be performed in order for the change to the dump procedure name to take effect:

1. Deactivate the automatic dump feature. This is accomplished by rerunning the CA Common Services for z/OS program CAIRIM with the control statement:

   ```
   PRODUCT(CA-SMF AUTODUMP) VERSION(SFC6) INIT(SMFINIT) PARM(DISABLE)
   ```

2. If your CASFLOAD target library is in the link list, you must perform a Linklist Look Aside refresh. To do this, issue this command from the operator console:

   ```
   F LLA,REFRESH
   ```

   If your CASFLOAD target library is not in the system link list, the SMFIDTBL program that you assembled and linked must be copied to a data set in the system link list. Once the program is copied to a link list data set, perform a Linklist Look Aside refresh with the same command.

3. Reactivate the automatic dump feature. Rerun the CA Common Services for z/OS procedure CAS9, which executes program CAIRIM, with the control statement:

   PRODUCT(CA-SMF AUTODUMP) VERSION(SFC6) INIT(SMFINIT) PARM(ENABLE,MX=*name*)

   where *name* is the name of your exit. For example, the name is SMFIDTBL if you have not renamed the sample exit.

Modifying the Logstream Dump Procedure CASFDUML

CA SMF Director provides a JCL procedure that is automatically executed when a switch command is issued for the logstreams. Procedure CASFDUML uses the CA SMF Director logstream interface as well as CA SMF Director to archive SMF data that has been recorded to the logstreams and to keep an inventory on a logstream basis by SMF ID.

If you want to change the started task name that is used or limit which SMF logstreams will be managed, you must modify user exit SMFLSTBL. A sample skeleton exit is provided in the sample library. Sample JCL to assemble and link this exit are provided in the sample library.

The default action for automatic dumping is to start the CASFDUML procedure for all logstreams that are actively recording SMF data, so if this is what you want to occur when the SWITCH SMF command is issued, you do not need to take any action with SMFLSTBL.

If the action needed is something else, you must take the following steps in this order:

1. Make any necessary changes to the SMFLSTBL sample program as needed by your data center. For more information about the SMFLSTBL user exit, see the *Systems Programmer Guide*.
2. Modify the sample JCL member LSTBLAL to your data center standards, submit it to assemble the SMFLSTBL exit, and link it.

3. If your CASFLOAD target library is in the link list, you must perform a Linklist Look Aside refresh. To do this, issue this command from the operator console:

   ```
   F LLA,REFRESH
   ```

   If your CASFLOAD target library is not in the system link list, the SMFLSTBL program that you assembled and linked must be copied to a data set in the system link list. Once the program is copied to a link list data set, perform a Linklist Look Aside refresh with the same command.

4. Disable and reenable the automatic dumping exit intercept. To do this, you must run the CAS9 procedure twice. Run it the first time with this statement to disable the existing automatic dump procedure:

   ```
   PRODUCT(CA-SMF AUTODUMP) VERSION(SFC6) INIT(SMFINIT) PARM(DISABLE)
   ```

5. Run it again with this statement to re-enable the intercept:

   ```
   PRODUCT(CA-SMF AUTODUMP) VERSION(SFC6) INIT(SMFINIT) PARM(ENABLELS,LX=name)
   ```

   where *name* is the name of your exit. For example, the name is SMFLSTBL if you have not renamed the sample exit.

Step 9. Review the Checklist

1. The CASFDUMP and CASFDUML procedures must be copied into your System Procedure library, or the CASFPROC target procedure library must be included in the PROC00 concatenation in the JES2/JES3 Startup JCL.
2. If you have upgraded from a previous release, we recommend that you use the DYNAM Option to dynamically allocate the SMF history files, overriding the HISTORY1 and HISTORY2 DD Statements in the CASFDUMP Procedure. See the *User Guide* for an explanation of how to activate this facility. If logstream or substream dumping is being performed, CA SMF Director must be customized with the DYNAM option active.
3. CA Common Services for z/OS procedure CAS9, which executes CAIRIM, must contain the parameter generated by the step that modifies and copies dump procedures if automatic dumping of z/OS SMF data sets is desired. Automatic dumping will not start until the CAS9 procedure is started.

4. If the automatic dumping of z/OS SMF data sets is used, check the following:

   - If your site is using a security product such as CA Top Secret for z/OS, CA ACF2 for z/OS, or IBM RACF, the resources mentioned in the step you used to secure functions should be defined to allow the use of CA SMF Director functions. The userid assigned to the CASFDUMP procedure must allow access to resources CMD.DUMP and PRM.DUMP. If other functions are performed within the CASFDUMP procedure such as BACKUP, the userid must allow access to that function as well. In addition, the userid must allow CREATE access for the history files.
   - CA SMF Director must run as an authorized program, in an authorized Library, when dumping SMF data sets.

5. If Release 1.5 or below was installed, remove this release from the system that will run CA SMF Director. Verify that you have migrated your SCDS to the current release because CA SMF Director cannot use a SCDS file from a previous release.

6. In the preparation worksheet in the appendix, if you answered that you have installed CA Auditor for z/OS and that the CA SMF Director load library will not be in the system link list, copy the load module CAIXASF$ from the CA SMF Director load library to the link library identified in the worksheet.

   If the load library will be in the system link list, you will need to do a link-list look-aside refresh in order for CA Auditor for z/OS to pick up the information about CA SMF Director. This can be done by issuing the following command on the z/OS console:

   ```
   F LLA,REFRESH
   ```

Step 10. Save Configuration Materials

Be sure to save all of your configuration materials and all output from the configuration process. This material is essential for timely and accurate CA maintenance and support of the product.

Chapter 7: Starting Your Product

This section describes what you need to do to start CA SMF Director.

This section contains the following topics:

How to Configure the SCDS with CA MSM

The topics in this section describe the manual tasks you can use to configure the SMF Control Data Set (SCDS).

Prepare for the SCDS Allocation

Before configuring the SCDS with the SCS component of CA MSM, you must plan how it will be allocated.

To prepare for the SCDS allocation

1. Calculate the size needed for your SCDS by following the instructions in Calculating SCDS Space Requirements (see page 15).

   Note: The calculation gives you the number of blocks you need, but SCS only allows allocations in tracks or cylinders. Allocations smaller than 10 cylinders must be made in tracks.

   - For devices with 3390 track geometry, use 12 blocks per track.
   - For devices with 3380 track geometry, use 10 blocks per track.

   Perform the calculation as indicated and if you are not sure of the value, estimate and be generous. Make sure you round up the final total to a multiple of the number of blocks as indicated. For example, in the sample calculation the number of blocks needed comes to 381. For a 3390, allocating 32 tracks would provide space for 384 blocks.

2. Select a DASD volume or storage class for the SCDS.
   - To put the SCDS on a specific volume, select the volume and appropriate unit esoteric.
   - If you want SMS to select a volume, just specify a storage class.
3. Select a meaningful data set name for the SCDS.

More information:

Step 3. Allocate the Control Data Set (SCDS) (see page 54)

Allocate the SCDS

You can use SCS to allocate and initialize the SCDS.

Step 1 - Build the Configuration for the SCDS

Before allocating the SCDS, you must build its configuration.

To build the configuration for the SCDS

1. Display the configurable deployments on the CA MSM Deployments page.
2. Select the CA SMF Director deployment that is being configured.
3. Click Actions.

   The Actions Menu is displayed.
4. Click Create Configuration.

   The Configuration Wizard opens. The first panel is displayed.
5. Name your configuration or generate a name.
6. (Optional) Describe the operation you are going to perform.
7. Select the system where you are going to build the configuration.
8. Click Next at the bottom.
9. Click Next to go past panel two.
10. Click Next to go past panel three.

    Panel four, Target Settings, is displayed. This is where all the configuration options are specified for CA SMF Director.

11. Do the following on the Target Settings panel:
    - Expand the Global Variables tree.
    - Enter the data set name selected in the GL-SCDS Name field.
    - Expand the SCDS Attributes tree branch.
    - Enter the number of tracks or cylinders required to store the SCDS in the GL-SCDS Space Primary field.

      Setting this value initializes the SCDS allocation process.
    - Indicate whether the space indicated is for tracks or cylinders in the GL-SCDS Space Type field.
    - If an SMS allocation is desired, enter the SMS storage class to use in the GL-SCDS STORCLAS field.
    - If SMS is not being used or if you want to be more precise in the SCDS allocation, enter a unit esoteric in the GL-SCDS Unit field.
    - If a specific DASD volume is needed, enter the volume serial number in the GL-SCDS Vol Ser field.
12. Click Next at the bottom of the panel when all the options are filled in.

    Panel five is displayed.
13. Click Next to move on.

    Panel six displays the information about the configuration you have entered.
14. Click Build to build the configuration.

Step 2 - Allocate and Initialize the SCDS

After the build completes, you are ready to allocate and initialize the SCDS.

To allocate and initialize the SCDS

1. Click Hide at the bottom of the Build Configuration Task display.
2. Proceed to the Configurations display.

   The configuration you just built is available with a status of Build Complete.
3. Click Action at the far right of the line with the SCDS allocation configuration.
4. Select Implement from the menu.

   The Configuration Implementation Wizard appears, showing one step that will allocate and initialize the SCDS.

5. Click Release Next or Release All at the top to start the allocation.

   The SCDS allocation is run by CA MSM. If successful, the SCDS is allocated and initialized and ready for further configurations that will add systems, logstreams, and substreams.

   The output from CA SMF Director is available on the system where CA MSM is running as an output generated from an auxiliary address space.

   Note: For more information about locating JES2 output from CA MSM processes, see the CA MSM documentation.

Add the First System to the SCDS

Once the SCDS is allocated, the systems whose SMF data will be managed must be defined to the SCDS. To define each system, a configuration must be built to install that system's information into the SCDS.

Step 1 - Build the Configuration for the First System

Before adding the first system to the SCDS, you must build its configuration.

Since this is the first configuration, you must set up global options to provide default values for all systems that will be managed by CA SMF Director. (The global options are listed on the OPTIONS control statement outside of SCS.) Use this list to determine which options from the OPTIONS control statement you want to set now:

Global Options Defined on SCS Panels	Options on the OPTIONS Control Statement
GL-Dynamic History Allocation	DYNAM, NODYNAM, DYNAMVTS
GL- Site Name	SITE
GL-SDAY Hour, SDAY Minute	SDAY
GL-Primary Allocation Method and Name	PSTORC, PDEVN
GL-Alternate Allocation Method and Name	ASTORC, ADEVN
GL-Max Print Lines	MAXLINES
GL-MAXFILES on Volume	MAXFILESONVOL
GL-Overlap	OVERLAP
GL-Autodelete	AUTODEL, NOAUTODEL
GL-Primary EXPDT Year and Date	EXPDT
GL-Alternate EXPDT Year and Date	AEXPDT
GL-Primary RETPD	RETPD

GL-Alternate RETPD	ARETPD
GL-Primary DSN Large	PDSNLARGE
GL-Alternate DSN Large	ADSNLARGE
GL-Daystack	DAYSTACK
GL-First Year	FIRSTYEAR
GL-Primary TRTCH	TRTCH
GL-Alternate TRTCH	ATRTCH
GL-Prefix	PREFIX
GL-Alternate Prefix	APREFIX
GL-Catalog	CATLG, NOCATLG
GL-Copies	COPIES
GL-Scratch	SCRATCH, NOSCRATCH

Note: For more information about the global options, see the OPTIONS control statement in the *CA SMF Director User Guide*.

Other options can be used to set management criteria for SMF data being managed by CA SMF Director for this system only. (The system options are listed on the DUMPOPTIONS control statement outside of SCS.) Use this list to see which options are available:

System Options Defined on SCS Panels	Options on the DUMPOPTIONS Control Statement
SYS-Dynamic History Allocation	DYNAM, NODYNAM, DYNAMVTS, UPDYNAM
SYS-SDAY Hour and Minute	SDAY
SYS-Primary Allocation Method and Name	PSTORC, PDEVN
SYS-Alternate Allocation Method and Name	ASTORC, ADEVN
SYS-MAXFILES on Volume	MAXFILESONVOL
SYS-Primary EXPDT Year and Date	EXPDT
SYS-Alternate EXPDT Year and Date	AEXPDT
SYS-Primary RETPD	RETPD
SYS-Alternate RETPD	ARETPD
SYS-Primary DSN Large	PDSNLARGE

SYS-Alternate DSN Large	ADSNLARGE
SYS-Daystack	DAYSTACK
SYS-First Year	FIRSTYEAR
SYS-TRTCH	TRTCH
SYS-Alt TRTCH	ATRTCH
SYS-Prefix	PREFIX
SYS-Alt Prefix	APREFIX
SYS-Catalog	CATLG, NOCATLG, UPCATLG
SYS-Copies	COPIES
SYS-Scratch	SCRATCH, NOSCRATCH, UPSCRATCH

Note: The EXPDT, AEXPDT, RETPD, ARETPD, PREFIX, APREFIX, and COPIES options allow you to use an asterisk to default to the value on the OPTIONS control statement, but this is only valid if you create the system using the DUMPOPTIONS control statement outside of SCS.

Note: For more information about the system values, see the DUMPOPTIONS control statement in the *CA SMF Director User Guide*.

To build the configuration for the first system

1. Display the configurable deployments on the CA MSM Deployments page.
2. Select the CA SMF Director deployment that is being configured.
3. Click Actions.

   The Actions Menu is displayed.
4. Click Create Configuration.

   The Configuration Wizard opens. The first panel is displayed.
5. Name your configuration or generate a name.
6. (Optional) Describe the operation you are going to perform.
7. Select the system where you are going to build the configuration.
8. Click Next at the bottom.
9. Click Next to go past panel two.
10. Click Next to go past panel three.

    Panel four, Target Settings, is displayed. This is where all the configurations are specified for CA SMF Director.

11. Do the following on the Target Settings panel:
    - Expand the Global Variables tree.
    - Re-enter the data set name of the SCDS if you did not prepopulate the options.
    - Set the global options listed at the top of this topic.
    - Expand the System Variables Tree.
    - Enter the SMF ID of the system being added to the SCDS in the SYS-SMF ID field.

      Setting this value indicates to SCS that you are adding a system to the SCDS.
    - Assign a unique number to this system configuration in the SYS-Config Number field.

      Value: 1 to 255

      Note: SCDS checks for uniqueness, but you will not see an error for a duplicate number until the configuration is implemented.
    - (Optional) Assign a name to the system configuration in the SYS-Name field.
    - Set the DUMPOPTIONS values for this system. The DUMPOPTIONS are listed on the previous page.
12. Click Next at the bottom of the panel when all the options are filled in.

    Panel five is displayed.
13. Click Next to move on.

    Panel six displays the information about the configuration you have entered.
14. Click Build to build the configuration.

Step 2 - Add the First System to the SCDS

After the build completes, you are ready to add a system to the SCDS.

To add a system to the SCDS

1. Click Hide at the bottom of the Build Configuration Task display.
2. Proceed to the Configurations display.

   The configuration you just built is available with a status of Build Complete.
3. Click Action at the far right of the line with the SCDS allocation configuration.
4. Select Implement from the menu.

   The Configuration Implementation Wizard appears, showing one step that will allocate and initialize the SCDS.

5. Click Release Next or Release All at the top to start the allocation.

   The SCDS allocation is run by CA MSM. If successful, the SCDS is set up to index and manage SMF data from the system with the SMF ID indicated in the SYS-SMF ID field.

   The output from CA SMF Director is available on the system where CA MSM is running as an output generated from an auxiliary address space.

   Note: For more information about locating JES2 output from CA MSM processes, see the CA MSM documentation.

Add More Systems to the SCDS

Once the first system is added to the SCDS, the addition of more systems is fairly straightforward.

Step 1 - Build Configurations for Additional Systems

Before adding more systems, their configurations must be built.

In addition to the global options you set to provide default values for all systems, other options can be used to set management criteria for this system only. (These options are listed on the DUMPOPTIONS control statement available outside of SCS.) Use this list to determine which options you want to set for this system:

System Options Defined on SCS Panels	Options on the DUMPOPTIONS Control Statement
SYS-Dynamic History Allocation	DYNAM, NODYNAM, DYNAMVTS, UPDYNAM
SYS-SDAY Hour and Minute	SDAY
SYS-Primary Allocation Method and Name	PSTORC, PDEVN
SYS-Alternate Allocation Method and Name	ASTORC, ADEVN
SYS-MAXFILES on Volume	MAXFILESONVOL
SYS-Primary EXPDT Year and Date	EXPDT
SYS-Alternate EXPDT Year and Date	AEXPDT
SYS-Primary RETPD	RETPD
SYS-Alternate RETPD	ARETPD
SYS-Primary DSN Large	PDSNLARGE
SYS-Alternate DSN Large	ADSNLARGE

SYS-Daystack	DAYSTACK
SYS-First Year	FIRSTYEAR
SYS-TRTCH	TRTCH
SYS-Alt TRTCH	ATRTCH
SYS-Prefix	PREFIX
SYS-Alt Prefix	APREFIX
SYS-Catalog	CATLG, NOCATLG, UPCATLG
SYS-Copies	COPIES
SYS-Scratch	SCRATCH, NOSCRATCH, UPSCRATCH

Note: The EXPDT, AEXPDT, RETPD, ARETPD, PREFIX, APREFIX, and COPIES options allow you to use an asterisk to default to the value on the OPTIONS control statement, but this is only valid if you create the system using the DUMPOPTIONS control statement outside of SCS.

Note: For more information on the values, see the DUMPOPTIONS control statement in the *CA SMF Director User Guide*.

To build a configuration for each additional system

1. Display the configurable deployments on the CA MSM Deployments page.
2. Select the CA SMF Director deployment that is being configured.
3. Click Actions.

   The Actions Menu is displayed.
4. Click Create Configuration.

   The Configuration Wizard opens. The first panel is displayed.
5. Name your configuration or generate a name.
6. (Optional) Describe the operation you are going to perform.
7. Select the system where you are going to build the configuration.
8. Click Next at the bottom.
9. Click Next to go past panel two.
10. Click Next to go past panel three.

    Panel four, Target Settings, is displayed.

11. Do the following on the Target Settings panel:
    - Click Use Configuration Values on the right of the Wizard to prepopulate the options if the new system has the same values as the first system.
    - Expand the Global Variables Tree.
    - Enter YES in the GL-Skip OPTIONS field since you have already set the global options for the SCDS.
    - Expand the System Variables Tree.
    - Enter the SMF ID of the system being added to the SCDS in the SYS-SMF ID field.

      Note: Setting this value indicates to SCS that you are adding a system to the SCDS.
    - Assign a unique number to this system configuration in the SYS-Config Number field.

      Value: 1 to 255

      Note: SCDS checks for uniqueness, but you will not see an error for a duplicate number until the configuration is implemented.
    - (Optional) Assign a name to the system configuration in the SYS-Name field.
    - Set the DUMPOPTIONS values for this system only.

      Note: If you have prepopulated the global options in SCS or on the OPTIONS control statement, you only need to change the ones that are different for this system.
12. Click Next at the bottom of the panel when all the options are filled in.

    Panel five is displayed.
13. Click Next to move on.

    Panel six displays the information about the configuration you have entered.
14. Click Build to build the configuration.

Step 2 - Add the System to the SCDS

After the build completes, you are ready to add the system to the SCDS.

To add a system to the SCDS

1. Click Hide at the bottom of the Build Configuration Task display.
2. Proceed to the Configurations display.

   The configuration you just built is available with a status of Build Complete.
3. Click Action at the far right of the line with the SCDS allocation configuration.

4. Select Implement from the menu.

   The Configuration Implementation Wizard appears, showing one step that will allocate and initialize the SCDS.

5. Click Release Next or Release All at the top to start the allocation.

   The SCDS allocation is run by CA MSM. If successful, the SCDS is set up to index and manage SMF data from the system with the SMF ID indicated in the SYS-SMF ID field.

   The output from CA SMF Director is available on the system where CA MSM is running as an output generated from an auxiliary address space.

Note: For more information about locating JES2 output from CA MSM processes, see the CA MSM documentation.

Add Logstreams and Substreams to Systems in the SCDS

If a system is using SMF logstreams to record SMF data or you want to use CA SMF Director substreams, you can define the streams in SCS. If you are only using the traditional SMF MAN File recording method and want to keep all of the SMF data for the same amount of time, this section can be skipped.

Step 1 - Build the Configuration for a Stream

Before adding a logstream or substream to a system in the SCDS, its configuration must be built.

In addition to the global options you set to provide default values for all systems and individual systems, stream options can be used to set management criteria for this stream only. (The stream options are listed on the STREAMOPTIONS control statement available outside of SCS.) Use this list to determine which options you want to set for this stream:

Stream Options Defined on SCS Panels	Options on the STREAMOPTIONS Control Statement
ST-SDAY Hour and Minute	SDAY
ST-Primary Allocation Method and Name	PSTORC, PDEVN
ST-Alternate Allocation Method and Name	ASTORC, ADEVN
ST-MAXFILES on Volume	MAXFILESONVOL
ST-Primary EXPDT Year and Date	EXPDT
ST-Alt EXPDT Year and Date	AEXPDT
ST-Primary RETPD	RETPD

ST-Alt RETPD	ARETPD
ST-Primary DSN Large	PDSNLARGE
ST-Alt DSN Large	ADSNLARGE
ST-Daystack	DAYSTACK
ST-First Year	FIRSTYEAR
ST-Primary TRTCH	TRTCH
ST-Alt TRTCH	ATRTCH
ST-Prefix	PREFIX
ST-Alt Prefix	APREFIX
ST-Catalog	CATLG, NOCATLG, UPCATLG
ST-Copies	COPIES

Note: The EXPDT, AEXPDT, RETPD, ARETPD, PREFIX, APREFIX, and COPIES options allow you to use an asterisk to default to the value on the OPTIONS or DUMPOPTIONS control statement, but this is only valid if you create the stream using the STREAMOPTIONS control statement outside of SCS.

Note: For more information on the options, see the STREAMOPTIONS control statement in the *CA SMF Director User Guide*.

To build a configuration for each additional system

1. Display the configurable deployments on the CA MSM Deployments page.
2. Select the CA SMF Director deployment that is being configured.
3. Click Actions.

   The Actions Menu is displayed.
4. Click Create Configuration.

   The Configuration Wizard opens. The first panel is displayed.
5. Name your configuration or generate a name.
6. (Optional) Describe the operation you are going to perform.
7. Select the system where you are going to build the configuration.
8. Click Next at the bottom.
9. Click Next to go past panel two.
10. Click Next to go past panel three.

    Panel four, Target Settings, is displayed.

11. Do the following on the Target Settings panel:
    - Click Use Configuration Values on the right of the Wizard and select the configuration that added the system to which you are adding the stream.

      This prepopulates the options needed to configure the system for the stream.
    - Expand the Global Variables Tree.
    - Enter YES in the GL-Skip OPTIONS field since you have already set the global options for the SCDS.
    - Expand the System Variables Tree.
    - Expand the Stream Variables Tree under the System Variables Tree.
    - Enter the name of the stream in the ST-Stream Name field.
      - If you are defining an SMF logstream, enter the name of the logstream as coded in the active SMFPRMxx member in PARMLIB.
      - If you are defining a substream, the name can be any two or three node name, but the first node cannot begin with an “I” or the string “SYS.”

        Note: This cannot be edited when defined in SCS.
    - Indicate in the ST-Stream Type field if the stream is an SMF logstream or a CA SMF Director substream.
    - For a substream, select either the ST-Select or ST-Exclude field and insert the record types you want the substream to archive (Select) or not archive (Exclude). Set only one of the options and leave the other empty.

      Note: For more information about the syntax for specifying record types, see the description of the SELECT and EXCLUDE options on the STREAMOPTIONS statement in the *CA SMF Director User Guide*.

      For a logstream, skip this step.
    - Set the STREAMOPTIONS values for this logstream or substream only.

      Note: We recommend that you only change the values that are overrides for the values set for the system.
12. Click Next at the bottom of the panel when all the options are filled in.

    Panel five is displayed.
13. Click Next to move on.

    Panel six displays the information about the configuration you have entered.
14. Click Build to build the configuration.

Step 2 - Add a Stream to a System in the SCDS

After the build completes, you are ready to add a logstream or substream to a system in the SCDS.

To add a stream to a system in the SCDS

1. Click Hide at the bottom of the Build Configuration Task display.
2. Proceed to the Configurations display.

   The configuration you just built is available with a status of Build Complete.
3. Click Action at the far right of the line with the SCDS allocation configuration.
4. Select Implement from the menu.

   The Configuration Implementation Wizard appears, showing one step that will allocate and initialize the SCDS.
5. Click Release Next or Release All at the top to start the allocation.

   The SCDS allocation is run by CA MSM. If successful, the SCDS is set up to index and manage SMF data from the system named in the SYS-SMF ID field and the logstream or substream named in the ST-Stream Name field.

   The output from CA SMF Director is available on the system where CA MSM is running as an output generated from an auxiliary address space.

   Note: For more information about locating JES2 output from CA MSM processes, see the CA MSM documentation.

Post-Installation Considerations

For information on stopping the automated dumping of SMF data by CA SMF Director, see the *CA SMF Director System Programmers Guide*.

Chapter 8: Migration Information

CA SMF Director FMID CASFC60 deletes all components belonging to a previous release of CA SMF Director. If you want to retain the current production level of this product, we recommend installing the new version to a different CSI or copying the current modules into a separate load library prior to performing the SMP APPLY of CASFC60.

Note: To migrate from your installed release to the new release; you must use the installed release to back up the SCDS for migration.

If you are doing an MSM installation, CA MSM will, by default, install CA SMF Director into a new CSI and SMP/E environment.

More information:

Step 3. Allocate the Control Data Set (SCDS) (see page 54)

Appendix A: Preparation Worksheets

You can print out the worksheet in this section to record the values needed for your site when installing the product.

Unload Tape

If you are installing from tape, what is the generic tape drive unit name (the default is TAPE)?

TAPE = _____

DASD

What is your generic unit name for permanent DASD volumes (the default is SYSDA)?

PERMDA = _____

What is your generic unit name for temporary work DASD volumes (the default is SYSDA)?

WORK = _____

Which DASD volume do you plan to use for CA SMF Director target libraries?

LIBSER = _____

Which DASD volume do you plan to use for CA SMF Director distribution libraries?

DLIB = _____

Which DASD volume do you plan to use for your SMP temporary libraries?

TLIB = _____

SYSOUT Class

What is your standard SYSOUT class for CA product installations and SMP output (the default is *)?

SYSOUT = _____

What is the SYSOUT class for CA SMF Director product operation (the default is A)?

A = _____

High-level Qualifiers

What data set high-level qualifiers will you assign to your CA SMF Director target and distribution libraries (the default is CAI)?

CAI = _____

What data set high-level qualifiers will you assign to the SMP libraries for your installation of CA products (the default is CAI)?

SMP = _____

Data Set Names

What is the name of the control data set (SCDS)?

_____

If you are upgrading from a previous release, what was the name of the control data set (SCDS) for the previous release?

_____

What is the name of the backup file?

_____

Usage

What is the maximum number of z/OS systems CA SMF Director will maintain?

_____

What is the estimated number of years of SMF data that CA SMF Director will track?

_____

What is the average number of times per week the SMF data sets, logstreams, and substreams will be dumped?

_____

Tape Usage

What is the estimated number of tape volume serial numbers?

_____

Will a specific pool of tape volume serial numbers be used (Y/N)?

Note: If you plan to manage SMF data being recorded to logstreams or plan to use substreams to manage SMF data being recorded to MAN files, specify N.

_____

Dumping

Do you want to use the automatic SMF dump capability (Y/N)?

_____

What is the procedure or started task name used for dumping SMF data sets?

_____

Logstreams

Are you recording SMF data to System Logger logstreams (Y/N)?

_____

If so, what is the maximum number of logstreams and substreams that will be used for recording SMF data on any system?

_____

CA Auditor

Have you installed CA Auditor for z/OS (Y/N)?

_____

If Y, will the CA SMF Director load library be placed in the z/OS link list on all systems where CA SMF Director will be managing SMF data (Y/N)?

_____

If the load library will not be placed in the z/OS link list, provide the name of a library in the system link list in which CA Auditor is running where the CA SMF Director load module for CA Auditor can be placed.

_____

Appendix B: Troubleshooting

This section contains the following topics:

Verifying the Problem

Before contacting Technical Support, attempt to resolve the problem using the following steps.

1. Examine the procedure that you used and compare it to the documented procedure for performing the required activity.
2. If you find no discrepancies between your procedures and the documented procedures, repeat the activity under conditions similar to those that existed when the problem first appeared. (If you no longer get unsatisfactory results, an inadvertent error may have caused the problem.)
3. If the same error occurs when you repeat a given activity, and you can find nothing in the documentation to suggest that your procedure is flawed, check with others at your site to determine if they have had the same or similar problem and how they handled it.

Collecting Diagnostic Data

In the table below, use the left column to categorize the problem your site has encountered. Then, follow the instructions in the corresponding right column to generate useful diagnostic data.

Type of Problem	Procedure
SMP error message	See IBM's *System Modification Program Extended Messages and Codes* and check the listing for all messages. Save all SMP output.
Installation with SAMPJCL members	See the installation steps in this guide and all installation PDCs. Save all output.
SMFD not link edited correctly, or not selected on APPLY install step	The APPLY step must have the following APPLY select statement: APPLY SELECT (CASFC60) Save all SMP output.

Type of Problem	Procedure
SMP error message	See IBM's *System Modification Program Extended Messages and Codes* and check the listing for all messages. Save all SMP output.
CA error message	Review message in the *Message Guide*. Before rerunning the SMFD program, make sure the JCL contains the SYSXDIAG SYSOUT DD statement and the SYSMDUMP DD statement. Save output from SYSXDIAG, SYSPRINT, JES job and messages log.
SMFD program abend	Review the audit trail for error messages. See the *Message Guide* to determine if the problem can be resolved. If not, save output from SYSXDIAG, SYSMDUMP, SYSPRINT DD statements, along with the JES job and messages log. **Note:** For the last two problems listed in this table, you should back up the SCDS file at the time of the error.

Interpreting Diagnostic Data

When you have collected the specified diagnostic data, write down your answers to the following questions.

- What was the sequence of events prior to the error condition?
- What circumstances existed when the problem occurred and what action did you take?
- Has this situation occurred before? What was different then?
- Did the problem occur after a particular PTF was applied or after a new release of the software was installed?
- Have you recently installed a new release of the operating system?
- Has the hardware configuration (tape drives, disk drives, and so forth) changed?

From your response to these questions and the diagnostic data, try to identify the cause and resolve the problem.

If you determine that the problem is a result of an error in a CA product, you can make use of the CA online support system to see if a fix (APAR or PTF) or other solution to your problem has been published. Otherwise, contact Technical Support.

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