

CA JARS® Resource Accounting

Installation Guide

Release 12.7



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CA Technologies Product References

This document references the following CA products:

- CA 1®
- CA ACF2™ for z/OS
- CA Auditor for z/OS
- CA Common Services for z/OS
- CA Datacom
- CA Datacom/AD
- CA Datacom/DB
- CA Earl™
- CA Easytrieve®
- CA IDMS™
- CA PMA Chargeback™
- CA Mainframe Software Manager (CA MSM)
- CA Service Desk
- CA SMF Director
- CA SRAM® for z/OS
- CA TLMS® Tape Management
- CA Top Secret® for z/OS

Contact CA Technologies

Contact CA Support

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

- 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

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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>.

Documentation Changes

The following documentation updates have been made since the last release of this documentation:

Note: In PDF format, page references identify the first page of the topic in which a change was made. The actual change may appear on a later page.

- Installation Procedures—Changed and added install steps to include information on using CA MSM configuration.
- Added [Installing your Product from DVD](#) (see page 65) section.

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Chapter 1: Overview

This guide describes how to install and implement CA JARS.

This section contains the following topics:

[Audience](#) (see page 11)

[How the Installation Process Works](#) (see page 12)

Audience

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

- JCL
- TSO/ISPF
- z/OS environment and installing software in this environment
- Your organization's IT environment, enterprise structure, and region structure
- Working knowledge of SMP/E

You may need to work with the following personnel:

- Systems programmer for z/OS
- Storage administrator, for DASD allocations
- DB2 or CA Datacom database administrator

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 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.

To install your product, do the following tasks:

1. Prepare for the installation by [confirming that your site meets all installation requirements](#) (see page 15).
2. Use one of the following methods to acquire the product:
 - [Download the software from CSO using CA MSM](#) (see page 27).
 - [Download the software from CSO using Pax-Enhanced Electronic Software Delivery \(ESD\)](#) (see page 35).
 - 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 in the following ways:
 - Install the product manually.
 - Use the Insert New Product option in CA MSM to complete the SMP/E installation.
 - If you used a [tape](#) (see page 57) 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:
 - Deployment is optional for CA JARS unless a customer is using CA MSM for configuration.
 - If you are using a manual process, deployment is an optional step.
- Note:** Deployment is considered part of [starting your product](#) (see page 69).
5. Configure your product using CA MSM or manually.
Note: Configuration is considered part of [starting your product](#) (see page 69).

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:

- [Software Requirements](#) (see page 15)
- [Storage Requirements](#) (see page 19)
- [DVD Space Requirements](#) (see page 23)
- [CA Common Services Requirements](#) (see page 23)
- [LMP Key Requirements](#) (see page 25)
- [Other Requirements](#) (see page 25)
- [Concurrent Releases](#) (see page 26)
- [Complete the Configuration Worksheet](#) (see page 26)

Software Requirements

CA JARS provides a single, integrated report writer that accepts data from the following multiple input sources:

Data Source	System Requirements
CA SMF Director	z/OS
DOS/VSE	CA-\$JOBACCT
VM	VM/SP
CA Roscoe	Release 5.2 or above
ADABAS	Release 4.1 or above
IMS	Release 1.3 or above
CA Datacom	All supported CA Datacom releases
DB2	Release 2 or above
Disk Space Accounting	z/OS
CICS	Release 6.2 or above (CA JARS Resource Management for CICS is a chargeable option)
CA IDMS	Release 12.0 or above (CA JARS Resource Management CA IDMS Option is a chargeable option)
TVA	CA 1 Release 4.1 or above CA TLMS Release 5.3 or above

Data Source	System Requirements
Network	IBM NetView product

SMF Records Processed

Full use of this product requires that you collect SMF statistics for the following record types. SMF collection specifications are defined in the SYS1.PARMLIB member SMFPRMxx.

SMF Record Type	Description
0	IPL
4	Step/Session Totals
5	Job/Session END
6	Output Writer (JES2/JES3)
7	Data Lost
8	I/O Configuration
9	Vary Device ONLINE
10	Allocation Recovery
11	Vary Device OFFLINE
19	DASD Volumes at IPL
25	JES3 Device Allocation
26	Job Purge (JES2/JES3)
30	Task Measured Usage Task OpenEdition Usage
30-1	Job Initiation
30-2	Interval End
30-3	Step/Session Termination
30-4	Step/Session Total
30-5	Job/Session END
32	TSO/E User Work Accounting
33	APPC TP Accounting
39	NLDM Response Time (NETVIEW Interface Only)

SMF Record Type	Description
41	DIV Access/Unaccess VLF Statistics
42	DFSMS and DFP Statistics
42-5	Storage Class Response
42-6	Data Set Statistics
47	RJE Signon (JES2/JES3)
48	RJE Signoff (JES2/JES3)
49	RJE Integrity (JES2/JES3)
50	VTAM Statistics
52	Supported - EXT + JARS
53	Supported - EXT + JARS
54	Supported - EXT + JARS
57	Network Transmission
88	System Logger
89	System Measured Usage
92	Hierarchical File System Usage
94	VTS (Virtual Tape Subsystem)
101	DB2 User Accounting (DB2 Interface Only)
103	Websphere
110	CICS Monitoring Facility
115/116	MQSeries
118	TCP/IP Statistics
119	TCP/IP
120	WebSphere
nnn (default 240)	User Record number (CA JARS DSA Resource Management Option Only)
nnn (default 237)	User Record number (CA JARS Resource Management for CICS)

RMF Records Processed

The following RMF records are supported:

RMF Record Type	Description
70	CPU Activity
71	Paging Activity
72	Workload Activity
73	Channel Path Activity
74	Device Activity
75	Page/Swap Data Set Activity
77	ENQ/Reserve Contention
78	I/O Queuing Activity

SMF Extensions

In addition to these data sources, an optional component called SMF Extensions (SMF/E) is provided that enhances z/OS system capabilities. This exit provides a banner box in all output SYSPRINT and an end of session TSO report that computes an estimated charge for the job, job step, or TSO session. The JARSTATS exit uses a subset of the chargeback capabilities employed in this product. It can serve as an effective tool for improving user awareness of the costs associated with their individual job executions.

There is no SMF exit requirement to support the SMF/E option of this product. The CA Common Services for z/OS Resource Initialization Manager (CAIRIM), supplies a comprehensive step-termination statistic routine without any disturbance or integration with existing IEFACTRT exits.

XML Requirements

If CA JARS is going to be used to produce XML report documents and schema, the IBM XML Toolkit for z/OS must be installed. You can use either the SMP/E method or the non-SMP/E method to install Version 1.6 or higher of the Toolkit on the system where CA JARS will be run.

The IBM XML Toolkit for z/OS can be downloaded from IBM's website, <http://www.ibm.com>. Installation instructions and documentation are included with the download.

Library Authorization

CA JARS contains authorized programs. To run successfully, they must be executed from an authorized linklist library.

Storage Requirements

The following storage requirements are required for CA JARS.

TSO Requirements

We recommend that TSO users run the JARS/OLF online facility using 4 MB or more. However, online processing can function using 2 MB.

DASD Requirements

This section shows the device independent allocation requirements, in tracks, for this product's SMP/E target and distribution libraries.

CA JARS Family Permanent (Target) Libraries

This table shows the CA JARS family permanent (target) libraries with required block sizes, tracks, directory blocks, and descriptions.

Library Name	Blksize	Tracks	Dir Blocks	Description
CAJRCLS0	32720	8,2	6	CA JARS Family CLIST Library
CAJRLOAD	6144	105,21	33	CA JARS Family Load Library
CAJRMAC	32720	9,2	9	CA JARS Family Macro Library
CAJRRPROC	32720	4,1	3	CA JARS Family Procedure Library
CAJRPNLO	32720	10,2	36	CA JARS Family ISPF Panel Library
CAJRTBLO	32720	3,1	5	CA JARS Family ISPF Table Library
CAJRSKLO	32720	2,1	2	CA JARS Family ISPF Skeleton Library
CAJRMSG0	32720	2,1	3	CA JARS Family ISPF Message Library
CAJRLMDO	27998	3,1	2	CA JARS Family ISPF Load Library
CAJRJCL	32720	15,3	30	CA JARS Family Sample JCL Library
CAJRSAMP	32720	16,4	12	CA JARS Family Sample Source Library

Library Name	Blksize	Tracks	Dir Blocks	Description
CAJROPTN	32720	160,32	21	CA JARS Family Sample Option Library
CAJRDATA	32720	4,1	2	CA JARS Family FB80 Data Library
CAJRDAT1	32600	7,2	2	CA JARS Family FB200 Data Library
CAJRDATV	32760	167,34	3	CA JARS Family Variable Data Library
CAJREARL	32720	102,21	188	CA JARS Family EARL Library
CAJREZTR	32720	70,14	129	CA JARS Family Easytrieve Library
CAJXML	32760	75,75	10	CA JARS Family XML Library
CAJRSQL	32720	156,32	42	CA JARS Family SQL Library - OLF
CAJRCPNO	32760	6,2	23	CA JARS Family cBASE OLF Panel Library - OLF
CAJRCPNS	32760	30,6	137	CA JARS Family cBASE Shared Panel Library - OLF
CAJRCLST	32760	5,1	33	CA JARS Family cBASE List Library - OLF
CAJRCMSG	32760	16,4	161	CA JARS Family cBASE Message Library - OLF
CAJRCDLG	32760	208,42	50	CA JARS Family cBASE Dialog Library - OLF
CAJRCSQL	32720	19,4	168	CA JARS Family cBASE SQL Library - OLF
CAJRCTMP	32720	2,1	2	CA JARS Family cBASE Template Library - OLF

CA JARS Distribution Libraries

This table shows the CA JARS distribution libraries with required block sizes, tracks, directory blocks, and descriptions.

Library Name	Blksize	Tracks	Dir Blocks	Description
AJRCLS0	32720	8,2	6	AJR CLIST Library
AAJRMODO	6144	13,3	12	AJR Object Module Library
AAJRMAC	32720	7,2	8	AJR Macro Library
AAJRPROC	32720	3,1	2	AJR Procedure Library
AAJRPNL0	32720	10,2	36	AJR ISPF Panel Library
AAJRTBL0	32720	3,1	5	CA JARS Family ISPF Table Library

Library Name	Blksize	Tracks	Dir Blocks	Description
AAJRSKLO	32720	2,1	2	AJR ISPF Skeleton Library
AAJRMMSG0	32720	2,1	3	AJR ISPF Message Library
AAJRJCL	32720	8,2	1	AJR Sample JCL Library
AAJRSAMP	32720	9,2	8	AJR Sample Source Library
AAJROPTN	32720	6,2	3	AJR Sample Option Library
AAJRDATA	32720	4,1	2	AJR FB80 Data Library
AAJRDAT1	32600	7,2	2	AJR FB200 Data Library
AAJRDATV	32760	156,32	3	AJR Variable Data Library
AAJRXML	32720	75,75	10	CA JARS Family XML Library
AAJ1MAC	32720	4,1	2	AJ1 Macro Library
AAJ1PROC	32720	3,1	2	AJ1 Procedure Library
AAJ1JCL	32720	6,2	6	AJ1 Sample JCL Library
AAJ1SAMP	32720	9,2	5	AJ1 Sample Source Library
AAJ1OPTN	32720	158,32	17	AJ1 Sample Option Library
AAJ1EARL	32720	83,17	143	AJ1 CA Earl Library
AAJ1EZTR	32720	70,14	129	AJ1 CA Easytrieve Library
AAJ1MOD0	27998	59,12	41	AJ1 Object Module Library
AAJ2MOD0	6144	2,1	2	AJ2 Object Module Library

CA JARS Wizard Distribution Libraries

This table shows the CA JARS wizard distribution libraries with required block sizes, tracks, directory blocks, and descriptions.

Library Name	Blksize	Tracks	Dir Blocks	Description
AAJWMAC	32720	3,1	2	AJW Macro Library
AAJWMODO	6144	9,2	5	AJW Object Module Library
AAJWJCL	32720	4,1	2	AJW Sample JCL Library
AAJWSAMP	32720	3,1	2	AJW Sample Source Library

JARS/OLF Distribution Libraries

This table shows the CA JARS/OLF distribution libraries with required block sizes, tracks, directory blocks, and descriptions.

Library Name	Blksize	Tracks	Dir Blocks	Description
AAWFEARL	32720	22,5	36	AWF CA Earl Library
AAWFSQL	32720	46,10	18	AWF SQL Library
AAWFJCL	32720	5,1	2	AWF JCL Library
AAWFCPNO	32760	6,2	23	AWF cBASE Panel Library
AAWFMOD0	6144	2,1	2	AWF Object Module Library
AAKRSAMP	32720	4,1	2	AKR Sample Library
AAKRSQ	32720	16,4	8	AKR SQL Library
AAKREARL	32720	8,2	9	AKR Earl Library
AAKRJCL	32720	7,2	11	AKR JCL Library
AAKRCLSO	32720	2,1	2	AKR CLIST Library
AAKRPROC	32720	3,1	2	AKR Procedure Library
AAKROPTN	32720	5,1	2	AJR Sample Option Library
AAKRMOD0	27998	24,5	5	AKR Object Module Library
AAKRCLST	32760	5,1	33	AKR cBASE List Library
AAKRCMSG	32760	16,4	161	AKR cBASE Message Library
AAKRCPNS	32760	30,6	137	AKR cBASE Shared Panel Library
AAKRCDLG	32760	208,42	50	AKR cBASE Dialog Library
AAKRCSQL	32760	19,4	168	AKR cBASE SQL Library
AAKRCTMP	32720	2,1	2	AKR cBASE Template Library
AAKRDATV	32760	13,3	2	AJK Variable Data Library
AAKSSQ	32720	99,20	18	AKS SQL Library
AAKSEARL	32720	6,2	2	AKS Earl Library
AAKSJCL	32720	5,1	3	AKS JCL Library
AAKSPROC	32720	3,1	2	AKS Procedure Library
AAKSOPTN	32720	5,1	2	AKS Sample Option Library
AAKSMOD0	27998	19,4	6	AKS Object Module Library

DVD Space Requirements

Ensure that you have sufficient free space in the USS file system that you are using for Pax-Enhanced ESD to hold the directory created by the pax command and its contents. You need approximately 3.5 times the pax file size in free space.

If you do not have sufficient free space, you receive error message EDC5133I.

CA Common Services Requirements

Before installing CA JARS, the following CA Common Services for z/OS *must* be installed:

- CAIRIM (S910 or higher)

Before installing CA JARS with JARS/OLF, the following CA Common Services for z/OS *must also* be installed:

- ViewPoint (CAG3000 or higher)
- CA-C Runtime (F330 or higher)

If CA Earl and JARS/OLF are being used at your site, the following CA Common Services for z/OS *must also* be installed:

- SRAM Service (SR66 or higher)
- Earl Service (XE61)

CAIRIM

Prepares your operating system environment for all CA applications and starts them. The common driver for a collection of dynamic initialization routines eliminates the need for user SVCs, SMF exits, subsystems, and other installation requirements commonly encountered when installing systems applications.

Integral parts of CAIRIM are CAISSF, CA LMP, and CA zIIP Enablement Services.

CAISSF

Provides an external security mechanism for controlling and monitoring access to all system and application resource processes. CAISSF is integrated into many CA enterprise applications and is also used by other CCS for z/OS services. CAISSF provides security services for user logon, resource access control, process use control, and recording and monitoring of violation activity.

CA LMP

Provides a standardized and automated approach to the tracking of licensed software and is provided as an integral part of CAIRIM. After CAIRIM is installed, you have access to Technical Support for all CA LMP-supported products.

CA zIIP Enablement Services

Provides a common service for CA products to allow their code to run on zIIP processors, if available.

ViewPoint

Provides an SQL engine for PC-based workstation products. Workstation products can use ViewPoint to query z/OS product databases without knowledge of the underlying database structure.

CA-C Runtime

Provides a C run-time facility that insulates programs from system and release dependencies.

SRAM Service

Allows the activation of several sort processes concurrently, simplifying the data and logic flow. The incoming data to the sort can be manipulated as desired by the user program in a high-level language without the need for special exit routines.

Earl Service

Provides a user-friendly report-definition facility with the power of a comprehensive programming system. Earl Service allows you to modify and print the contents and layout of a pre-defined CA application report using English-like statements.

LMP Key Requirements

The CA License Management Program (LMP) is one of the components of CA TCC (Total Client Care). LMP is comprised of the following three components:

- The CA product
- The LMP Product Key Certificate
- The common LMP Enforcement software

The LMP Product Key Certificate contains an execution key for each CPU licensed at your site.

The common LMP Enforcement software is distributed as part of CAIRIM, one of the CA Common Services for z/OS.

Note: For more information, see the *CA Common Services for z/OS Getting Started*.

Other Requirements

The following other requirements are required for CA JARS.

JARS/OLF Requirements

Note: The CA JARS product can be installed in either of two ways: you can install the full product including JARS/OLF, or you can install CA JARS base only without JARS/OLF. To install the full product including JARS/OLF, use the AWF-prefixed SAMPJCL members in the installation steps. To install CA JARS base only without JARS/OLF, use the AJR-prefixed SAMPJCL members.

JARS/OLF can be run on both nonprogrammable color and monochrome terminals. We require that any supported release of DB2, CA Datacom with SQL, or CA Datacom/AD be installed. If your site does not have one of these databases, CA provides CA Datacom/AD as a separate installation.

Also required for database access is either one of the CA security solutions or compatible non-CA security products. JARS/OLF uses the cBase component of ViewPoint to provide online facilities.

Reporting and sorting are accomplished with two CA Common Services for z/OS components: Earl Service XE61 and CA SRAM SR66 or higher.

Concurrent Releases

You can install this release of CA JARS and continue to use an older release for your production environment. However, due to substantial changes in target and distribution libraries, you must install into a new SMP/E environment.

Complete the Configuration Worksheet

Plan your installation by completing the [Configuration Worksheet](#) (see page 97).

Chapter 3: Installing Your Product Using CA MSM

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

Imagine that your organization has started using 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 CA Technologies products.

You can use the following scenarios to guide you through the process:

1. [Acquire the new product](#) (see page 27).
2. [Install the new product](#) (see page 28).
3. [Maintain products already installed in your environment](#) (see page 29).
4. [Deploy the product to your target systems](#) (see page 30).
5. [Configure the deployed product to your target systems](#) (see page 31).

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 products to which your site is entitled. Then it records these entitlements in a software inventory that is maintained on your driving system.

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

Follow these steps:

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 32), 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. This facilitation includes browsing downloaded software packages, managing SMP/E consolidated software inventories on the driving system, and automating installation tasks.

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

Follow these steps:

1. Initiate product installation and review product information.
2. Select an installation type.
3. Review installation prerequisites if any are presented.

4. Take *one* of the following steps to select an SMP/E environment:
 - Create an SMP/E environment:
 - a. Set up the global zone.
 - b. Create a target zone.
 - c. Create a distribution zone.
 - Use an existing SMP/E environment from your working set:
 - a. Update the global zone.
 - b. Set up the target zone: Either create a target zone or use an existing target zone.
 - c. Set up the distribution zone: Either create a distribution zone or use an existing distribution zone.
- Note:** If you install a product or its components into an existing target or distribution zone, older versions are deleted from the zone and associated data sets. We recommend that you use new target and distribution zones for this installation so that you can apply maintenance to your current release, if necessary.
5. Review the installation summary and start the installation.

After the installation process completes, check for and install available product maintenance. The product is ready for you to deploy. Sometimes there are other steps to perform manually outside of CA MSM before beginning the deployment process.

More information:

[How to Prepare for Deployment](#) (see page 69)

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.

Follow these steps:

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.

More information:

[How to Prepare for Deployment](#) (see page 69)

How to Deploy a Product

The *Software Deployment Service (SDS)* facilitates the mainframe product deployment from the software inventory of the driving system to the target system. This facilitation includes 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.

Follow these steps:

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.

More information:

[How to Complete Deployment With CA MSM](#) (see page 70)

How to Configure a Product

The *Software Configuration Service (SCS)* facilitates the mainframe product configuration 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.

Follow these steps:

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.

More information:

[How to Complete Configuration With CA MSM](#) (see page 71)

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.

Follow these steps:

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

The login page appears.

Note: If the Notice and Consent Banner appears, read and confirm the provided information.

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 online 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](#) (see page 35)
- [Allocate and Mount a File System](#) (see page 41)
- [Copy the Product Pax Files into Your USS Directory](#) (see page 43)
- [Create a Product Directory from the Pax File](#) (see page 48)
- [Copy Installation Files to z/OS Data Sets](#) (see page 49)
- [How to Install Products Using Native SMP/E JCL](#) (see page 51)
- [Clean Up the USS Directory](#) (see page 54)
- [Apply Maintenance](#) (see page 55)

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-filename
```
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.
7. (Optional) Clean up the USS directory. Delete the following items:
 - Pax file
 - Directory that the pax command creates and all of the files in it
 - SMP/E RELFILEs, SMPMCS, and HOLDDATA data sets

More Information:

[Allocate and Mount a File System](#) (see page 41)
[Copy the Product Pax Files into Your USS Directory](#) (see page 43)
[Create a Product Directory from the Pax File](#) (see page 48)
[Copy Installation Files to z/OS Data Sets](#) (see page 49)

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.

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 37) 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 [\[?\]](#)
- Mounting ISO Images with OpenVMS [\[?\]](#)

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

Note: Related Published Solutions are available on the other results tab on this page. You must add these solutions to your Download Cart to include them with your product files for download.

[View Download Cart](#)

<input type="checkbox"/> Add All to cart					
Product Components				Add to cart	Download
CCS - LEGACY - ESD ONLY 140000AW030.pax.Z	14.0 /0000	07/06/2011	4.89MB	<input type="checkbox"/>	Download
CCS - MFNSM - ESD ONLY 140000AW040.pax.Z	14.0 /0000	07/06/2011	202.01MB	<input type="checkbox"/>	Download
CCS - BASE - ESD ONLY 140001AW010.pax.Z	14.1 /0000	06/05/2012	27.44MB	<input type="checkbox"/>	Download
CCS - OPTIONAL - ESD ONLY 140001AW020.pax.Z	14.1 /0000	06/05/2012	14.49MB	<input type="checkbox"/>	Download
CA EARL PRODUCT PACKAGE 610106AE000.pax.Z	6.1 /0106	10/30/2008	1.85MB	<input type="checkbox"/>	Download
EARL PIPPACK AEO61010600.pdf	6.1 /0106	01/29/2010	93.92KB	<input type="checkbox"/>	Download
CA EASYTRIEVE PRODUCT PACKAGE B60000ESA00.pax.Z	11.6 /0000	07/05/2011	6.12MB	<input type="checkbox"/>	Download
DATACOM/AD PROD INFO PACKET CAIE000000P0.pdf	14.0 /0000	06/01/2012	220.53KB	<input type="checkbox"/>	Download
DATACOM/AD XPRESS INSTALL				<input type="checkbox"/>	Download

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

Download Method

Please choose a download method to complete your download request. [Learn More](#)

HTTP via Download Manager

This is the CA recommended method for download. The Download Manager allows you to download your files faster and more efficiently.

[Download](#)

HTTP via Internet Browser

If Download Manager cannot be used or fails to start you may access your file(s) via your internet browser.

[View File Link\(s\)](#) 

FTP

This method allows you to download your file(s) via FTP from CA's content delivery network or via native FTP servers.

Note: Processing is required and an email notification will be sent when your request is ready for downloading.

[FTP Request](#)

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.

Download Method

Please choose a download method to complete your download request. [Learn More](#)

HTTP via Download Manager

This is the CA recommended method for download. The Download Manager allows you to download your files faster and more efficiently.

[Download](#)

Create a Zip File

This method allows you to bundle your download files into one or more zip files of up to 3.5 GB each. These zip files can then be downloaded via HTTP or FTP.

Note: Processing is required and an email notification will be sent when your request is ready for downloading.

[Create Zip](#)

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	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	04/29/2010	HTTP via DLM Preferred FTP Alternate FTP
10000948	Ready	ZIP Download Request 04/29/2010	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 ESD downloads.

This procedure describes how to perform the following tasks:

- Allocate a zFS or an HFS.
- Create a mount point in an existing maintenance USS directory of your choice.
- Mount the file system on the newly created mount point.

Note: You must have SUPERUSER authority to do this.

- Optionally, permit write access to anyone in the same group as the person who created the directory.

Important! USS commands are case-sensitive.

Follow these steps:

1. Allocate the file system by customizing one of the following samples to your site's requirements:

- On a zFS, use the following sample:

```
//DEFINE EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//AMSDUMP DD SYSOUT=*
//SYSIN DD *
  DEFINE CLUSTER ( +
    NAME(your_zFS_dataset_name) +
    STORAGECLASS(class) +
    LINEAR +
    CYL(primary secondary) +
    SHAREOPTIONS(3,3) +
  )
/*
//FORMAT EXEC PGM=IOEAGFMT,REGION=0M,
// PARM=('-aggregate your_zFS_dataset_name -compat')
//SYSPRINT DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//STDOUT DD SYSOUT=*
//STDERR DD SYSOUT=*
//CEEDUMP DD SYSOUT=*
/*
```

- On an HFS, use the following sample:

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

The file system is allocated.

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

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 by customizing one of the following samples to your site's requirements:

- On a zFS, use the following sample:

```
MOUNT FILESYSTEM('your_zFS_dataset_name')
  MOUNTPOINT('yourUSSESDDirectory')
  TYPE(ZFS)  MODE(RDWR)
  PARM(AGGRGROW)
```

- On an HFS, use the following sample:

```
MOUNT FILESYSTEM('your_HFS_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 *IBM z/OS UNIX System Services User Guide* (SA22-7802).

Copy the Product Pax Files into Your USS Directory

To begin the CA Technologies product installation procedure, copy the product's pax file into the USS directory you set up. Use one of the following methods:

- Download the product pax files directly from the CA Support Online FTP server to your z/OS system.
- Download the product pax file from the CA Support Online FTP server to your PC, and upload it to your z/OS system.
- Download the product file from CA Support Online to your PC. If your download included a zip file, unzip the file, and upload the unzipped pax files to your z/OS system.

This section includes a sample batch job to download a product pax file from the CA Support Online FTP server directly to a USS directory on your z/OS system and sample commands to upload a pax file from your PC to a USS directory on your z/OS system.

Important! The FTP procedures vary due to local firewall and other security settings. Consult your local network administrators to determine the appropriate FTP procedure to use at your site.

Ensure that sufficient free space is available in the USS file system you are using for Pax-Enhanced ESD to hold the product pax file. If you do not have sufficient free space, error messages similar to the following appear:

EZA1490I Error writing to data set
EZA2606W File I/O error 133

When the download finishes, the pax file size in your USS directory matches the value in the Size column for the corresponding pax file on the CA Technologies Products Download window.

More Information:

[How the Pax-Enhanced ESD Download Works](#) (see page 37)
[ESD Product Download Window](#) (see page 37)

Download Using Batch JCL

Use this process to download a pax file from the CA Support Product Downloads window by running batch JCL on the mainframe. Use the sample JCL attached to the PDF file as CAtoMainframe.txt to perform the download.

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 at the left of the PDF reader. A window displaying attachments opens. Double-click the file to view the sample JCL.

Note: We recommend that you follow the preferred method as described on CA Support Online. This procedure is our preferred download method; however, we do include the procedure to download to the mainframe through a PC in the next section.

Follow these steps:

1. Supply a valid JOB statement.
The job points to your profile.
2. Replace *yourTCPIP.PROFILE.dataset* with the name of the TCP/IP profile data set for your system. Consult your local network administrators, if necessary.
The job points to your email address.
3. Replace *YourEmailAddress* with your email address.
The job points to your USS directory.
4. Replace *yourUSSESDDirectory* with the name of the USS directory that you use for ESD downloads.
The job points to your USS directory.
5. Locate the product component to download on the CA Support Product Download window.
You have identified the product component to download.
6. Click Download for the applicable file.
Note: For multiple downloads, add files to a cart.
The Download Method window opens.
7. Click FTP Request.
The Review Download Requests window displays any files that you have requested to download.
Note: We send you an email when the file is ready to download or a link appears in this window when the file is available.

8. Select one of the following methods:

Preferred FTP

Uses CA Technologies worldwide content delivery network (CDN). If you cannot download using this method, review the security restrictions for servers that company employees can download from that are outside your corporate network.

Host Name: `ftp://ftpdownloads.ca.com`

Alternate FTP

Uses the original download servers that are based on Long Island, New York.

Host Name: `ftp://scftpd.ca.com` for product files and download cart files and `ftp://ftp.ca.com` for individual solution files.

Both methods display the host, user name, password, and FTP location, which you then can copy into the sample JCL.

Note: The following links provide details regarding FTP: the FTP Help document link in the Review Download Requests window and the Learn More link available in the Download Methods window.

9. Submit the job.

Important! If your FTP commands are incorrect, it is possible for this job to fail and still return a zero condition code. Read the messages in the job `DDNAME SYSPRINT` to verify the FTP succeeded.

After you run the JCL job, the pax file resides in the mainframe USS directory that you supplied.

Example: CAtoMainframe.txt, JCL

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

```
//GETPAX  JOB (ACCOUNTNO),'FTP GET ESD PACKAGE',  
//           MSGCLASS=X,CLASS=A,NOTIFY=&SYSUID  
//*****  
//** This sample job can be used to download a pax file directly from *  
//** CA Support Online to a USS directory on your z/OS system.          *  
//**  
//** When editing the JCL ensure that you do not have sequence numbers *  
//** turned on.                                                        *  
//**  
//** This job must be customized as follows:                            *  
//** 1. Supply a valid JOB statement.                                  *  
//** 2. The SYSTCPD and SYSFTPD JCL DD's statements in this JCL maybe *  
//** optional at your site. Remove the statements that are not       *  
//** required. For the required statements, update the data set       *  
//** names with the correct site specific data set names.           *  
//** 3. Replace "Host" based on the type of download method.        *  
//** 4. Replace "YourEmailAddress" with your email address.          *  
//** 5. Replace "yourUSSESDdirectory" with the name of the USS       *  
//** directory used on your system for ESD downloads.             *  
//** 6. Replace "FTP Location" with the complete path                *  
//** and name of the pax file obtained from the FTP location       *  
//** of the product download page.                                    *  
//*****  
//GETPAX  EXEC PGM=FTP,PARM='(EXIT',REGION=0M  
//SYSTCPD  DD  DSN=yourTCPIP.PROFILE.dataset,DISP=SHR  
//SYSFTPD  DD  DSN=yourFTP.DATA.dataset,DISP=SHR  
//SYSPRINT DD  SYSOUT=*  
//OUTPUT   DD  SYSOUT=*  
//INPUT    DD  *  
Host  
anonymous YourEmailAddress  
lcd yourUSSESDdirectory  
binary  
get FTP location  
quit
```

Download Files to Mainframe through a PC

If you download pax or zip files from CA Support Online to your PC, use this procedure to upload the pax file from your PC to your z/OS USS directory.

Follow these steps:

1. Follow the procedures in How the Pax-Enhanced ESD Download Works to download the product pax or zip file to your PC. If you download a zip file, first unzip the file to use the product pax files.

The pax or zip file resides on your PC.
2. Open a Windows command prompt.

The command prompt appears.
3. Customize and enter the FTP commands with the following changes:
 - a. Replace *mainframe* with the z/OS system's IP address or DNS name.
 - b. Replace *userid* with your z/OS user ID.
 - c. Replace *password* with your z/OS password.
 - d. Replace *C:\PC\folder\for\thePAXfile* with the location of the pax file on your PC.
 - e. Replace *yourUSSESDDirectory* with the name of the USS directory that you use for ESD downloads.
 - f. Replace *paxfile.pax.Z* with the name of the pax file to upload.

The pax file is transferred to the mainframe.

Example: FTP Commands

This list is a sample of FTP commands to upload the pax file from your PC to your USS Pax-Enhanced ESD directory:

```
ftp mainframe
userid
password
bin
lcd C:\PC\folder\for\thePAXfile
cd /yourUSSESDDirectory/
put paxfile.pax.Z
quit
exit
```

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 at the left of the PDF reader. A window displaying attachments opens. Double-click the file to view the sample JCL.

Follow these steps:

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: 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.

Sample 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.

Follow these steps:

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 the product-specific details you require to complete the installation procedure.
You have identified the 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, typically /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 identify uniquely the package. Do *not* use the same value for *yourHLQ* as you 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.

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

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.

Note: The CA JARS product can be installed in either of two ways: you can install the full product including JARS/OLF, or you can install CA JARS base only without JARS/OLF. The path you choose determines the value of pre in the following installation steps:

- Substitute AWF for pre if you are installing the full product including JARS/OLF (for example, AWFSEDIT).
- Substitute AJR for pre if you are installing only the base CA JARS without JARS/OLF (for example AJRSEDIT).

Prepare the SMP/E Environment for PAX Installation

The members in this procedure prepare the data sets, initialize the zones, and create the DDDEFs for CA JARS. External DDDEF data sets are required. The default is NULLFILE.

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

Note: We recommend that you make a backup copy of the SAMPJCL members before customizing them.

To prepare the SMP/E environment for your product

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

The macro is ready to customize your 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 preSEDIT macro each time you open a new SAMPJCL member. To edit all SAMPJCL members simultaneously, read and follow the instructions in the preEDALL member.

2. Open the SAMPJCL member pre1ALL in an edit session and execute the preSEDIT macro from the command line.
pre1ALL is customized.
3. Submit pre1ALL.

This job produces the following results:

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

4. Open the SAMPJCL member pre2CSI in an edit session and execute the preSEDIT macro from the command line.
pre2CSI is customized.

5. Submit pre2CSI.

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.

Follow these steps:

1. Open the SAMPJCL member pre3RECD in an edit session, and execute the preSEDIT macro from the command line.
pre3RECD is customized.
2. Submit the *yourHLQ.SAMPJCL* member pre3RECD to receive SMP/E base functions.
Third-Party Software for CA JARS is received and now resides in the global zone.
3. Open the SAMPJCL member pre4APP in an edit session, and execute the preSEDIT macro from the command line.
pre4APP is customized.
4. Submit the *yourHLQ.SAMPJCL* member pre4APP to apply SMP/E base functions.
Third-Party Software for CA JARS is applied and now resides in the target libraries.
5. Open the SAMPJCL member pre5ACC in an edit session, and execute the preSEDIT macro from the command line.
pre5ACC is customized.
6. Submit the *yourHLQ.SAMPJCL* member pre5ACC to accept SMP/E base functions.
Third-Party Software for CA JARS is accepted and now resides in the distribution libraries.

Clean Up the USS Directory

Important! This procedure is optional. Do not use this procedure until you complete the entire installation process.

To free file system disk space for subsequent downloads after downloading and processing the pax files for your CA Technologies product, we recommend removing the files from your USS directory and deleting unnecessary MVS data sets. You can delete the following items:

- Pax file
- Product-specific directory created by the pax command and all of the files in it
- SMP/E RELFILEs, SMPMCS, and HOLDDATA MVS data sets

These data sets have the HLQ that you assigned in the UNZIPJCL job.

Note: Retain non-SMP/E installation data sets such as *yourHLQ.INSTALL.NOTES* for future reference.

Follow these steps:

1. Navigate to your Pax-Enhanced ESD USS directory.

Your view is of the applicable USS directory.

2. Delete the pax file by entering the following command:

```
rm paxfile  
paxfile
```

Specifies the name of the CA Technologies pax file that you downloaded.

The pax file is deleted.

3. Delete the product-specific directory by entering the following command:

```
rm -r product-specific-directory  
product-specific-directory
```

Specifies the product-specific directory created by the pax command.

The product-specific directory is deleted.

Note: You can also use TSO ISHELL to navigate to the pax file and product-specific directory, and delete them using the D line command.

Apply Maintenance

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

Follow these steps:

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 HOLDDATA 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 preSEDIT macro was customized in the installation steps. Verify that you still have the values from the base install.
4. Open the SAMPJCL member pre6RECP in an edit session and execute the preSEDIT macro from the command line.
pre6RECP is customized with your JOB statement, CSI location, and zone names.
5. Customize the pre6RECP SMPPTFIN and SMPHOLD DD statements to reference the FB 80 data sets for the PTFs and HOLDDATA.
6. Submit pre6RECP.
The PTFs and HOLDDATA are received.
7. Open the SAMPJCL member pre7APYP in an edit session and execute the preSEDIT macro from the command line.
pre7APYP is customized.
8. Submit pre7APYP.
The PTFs are applied.
9. (Optional) Open the SAMPJCL member pre8ACCP in an edit session and execute the preSEDIT macro from the command line.
pre8ACCP is customized.
10. (Optional) Submit *yourHLQ.SAMPJCL* member pre8ACCP.
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 policy.

Note: We recommend that you check for available maintenance; however, you may find that none is available.

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.

Note: When you have completed the procedures in this section, go to [Configuring Your Product](#).

Chapter 5: Installing Your Product from Tape

This section contains the following topics:

[Unload the Sample JCL from Tape](#) (see page 58)

[How to Install Products Using Native SMP/E JCL](#) (see page 59)

[Prepare the SMP/E Environment for Tape Installation](#) (see page 60)

[Apply Maintenance](#) (see page 62)

Unload the Sample JCL from Tape

To simplify the 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 at the left of the PDF reader. A window displaying attachments opens. Double-click the `UnloadJCL.txt` file to view the sample JCL job.

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

Follow these steps:

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=nnnnnnn,
//              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 set up the SMP/E environment, go to Run the Installation Jobs for a Tape Installation.
- If you have *not* set up the SMP/E environment, 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.

Note: The CA JARS product can be installed in either of two ways: you can install the full product including JARS/OLF, or you can install CA JARS base only without JARS/OLF. The path you choose determines the value of pre in the following installation steps:

- Substitute AWF for pre if you are installing the full product including JARS/OLF (for example, AWFSEDIT).
- Substitute AJR for pre if you are installing only the base CA JARS without JARS/OLF (for example AJRSEDIT).

Prepare the SMP/E Environment for Tape Installation

The members in this procedure prepare the data sets, initialize the zones, and create the DDDEFs for CA JARS. External DDDEF data sets are required. The default is NULLFILE.

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

Note: We recommend that you make a backup copy of the SAMPJCL members before customizing them.

Important! When installing CA JARS by itself use the member prefixed with AJR. For example, preEDALL change to AJREDALL.

When Installing CA JARS with OLF use the member prefixed with AWF. For example, preEDALL change to AWFEDALL.

To prepare the SMP/E environment for your product.

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

The macro is ready to customize your SAMPJCL members.

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

2. Open the SAMPJCL member pre1ALL in an edit session and execute the preSEDIT macro from the command line.
pre1ALL is customized.
3. Submit pre1ALL.

This job produces the following results:

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

Remove this embedded object if your product does not use USS.

4. Open the SAMPJCL member pre2CSI in an edit session and execute the preSEDIT macro from the command line.
pre2CSI is customized.

5. Submit pre2CSI.

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.

Follow these steps:

1. Open the SAMPJCL member pre3RECT in an edit session and execute the preSEDIT macro from the command line.
pre3RECT is customized.
2. Submit the *yourHLQ.SAMPJCL* member pre3RECT to receive SMP/E base functions.
CA JARS is received and now resides in the global zone.
3. Open the SAMPJCL member pre4APP in an edit session and execute the preSEDIT macro from the command line.
pre4APP is customized.
4. Submit the *yourHLQ.SAMPJCL* member pre4APP to apply SMP/E base functions.
Your product is applied and now resides in the target libraries.
5. Open the SAMPJCL member pre5ACC in an edit session and execute the preSEDIT macro from the command line.
pre5ACC is customized.
6. Submit the *yourHLQ.SAMPJCL* member pre5ACC 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. After the maintenance process completes, the product is ready to deploy.

Follow these steps:

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 HOLDDATA 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 preSEDIT macro was customized in the installation steps. Verify that you still have the values from the base install.
4. Open the SAMPJCL member pre6RECP in an edit session and execute the preSEDIT macro from the command line.
pre6RECP is customized with your JOB statement, CSI location, and zone names.
5. Customize the pre6RECP SMPPTFIN and SMPHOLD DD statements to reference the FB 80 data sets for the PTFs and HOLDDATA.
6. Submit pre6RECP.
The PTFs and HOLDDATA are received.
7. Open the SAMPJCL member pre7APYP in an edit session and execute the preSEDIT macro from the command line.
pre7APYP is customized.
8. Submit pre7APYP.
The PTFs are applied.
9. (Optional) Open the SAMPJCL member pre8ACCP in an edit session and execute the preSEDIT macro from the command line.
pre8ACCP is customized.
10. (Optional) Submit *yourHLQ.SAMPJCL* member pre8ACCP.
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 policy.

Note: We recommend that you check for available maintenance; however, you may find that none is available.

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.

Chapter 6: Installing Your Product from DVD

This section contains the following topics:

- [DVD Contents](#) (see page 65)
- [The pax Command](#) (see page 65)
- [How to Install a Product](#) (see page 66)
- [Create a Product Directory from the Pax File](#) (see page 67)
- [Complete the Installation](#) (see page 68)

DVD Contents

The DVD contains a folder that includes the pax file for the product.

The files on the online site always have the most current product updates. To determine if you have the latest updates, go to <http://ca.com/support> and click Download Center.

The pax Command

The pax command does the following:

- Extracts the files and directories packaged within the pax file.
- Creates a USS directory in the same directory structure where the pax file resides.
- Automatically generates a product and level-specific directory name.

How to Install a Product

The pax.Z files delivered on the DVD must be uploaded to your z/OS USS directory.

Follow these steps:

1. Copy the entire product software package (or individual pax files) to your PC from the CA Technologies product DVD.

Note: Do not change the format of the pax.Z.

2. Open a Windows command prompt.

The command prompt appears.

3. Customize and enter the following FTP commands:

```
FTP mainframe
userid
password
bin
lcd C:\PC\folder\for\thePAXfile
cd /yourUSSESDDirectory/
put paxfile.pax.Z
quit
exit
```

mainframe

Specifies the z/OS system IP address or DNS name.

userid

Specifies your z/OS user ID.

password

Specifies your z/OS password.

C:\PC\folder\for\thePAXfile

Specifies the location of the pax file on your PC.

Note: If you specify a location that has blanks or special characters in the path name, enclose that value in double quotation marks.

yourUSSESDDirectory

Specifies the name of the USS directory that you use for ESD downloads.

paxfile.pax.Z

Specifies the name of the pax file to upload.

The pax file is transferred to the mainframe.

Create a Product Directory from the Pax File

The sample job [Unpackage.txt](#) (see page 68) simplifies the Pax-Enhanced ESD process; you can copy this JCL job directly to the mainframe.

Follow these steps:

1. Enter the following JCL:

```
//ESDUNPAX JOB (accountnumber), 'UNPAX ESD PACKAGE ' ,  
// MSGCLASS=X,CLASS=A,NOTIFY=&SYSUID  
//UNPAXDIR EXEC PGM=BPXBATCH,  
// PARM='sh cd /yourUSSESDDirectory/; pax -rvf paxfile.pax.Z'  
//STDOUT DD SYSOUT=*  
//STDERR DD SYSOUT=*
```

accountnumber

Specifies a valid JOB statement.

yourUSSESDDirectory

Specifies the name of the USS directory for your ESD downloads.

Note: If the PARM= statement exceeds 71 characters after making these changes, uncomment and use the second form of UNPAXDIR in the sample JCL instead.

paxfile.pax.Z

Specifies the name of the pax file.

2. Submit the job.

The job runs and creates the product directory.

Sample JCL

The following is the text for the 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=*
```

Complete the Installation

Chapter 7: Starting Your Product

This section describes what you need to do to start CA JARS.

This section contains the following topics:

- [Introduction](#) (see page 69)
- [How to Prepare for Deployment](#) (see page 69)
- [How to Complete Deployment With CA MSM](#) (see page 70)
- [How to Deploy Without CA MSM](#) (see page 70)
- [How to Complete Configuration With CA MSM](#) (see page 71)
- [How to Configure Without CA MSM](#) (see page 76)
- [Required Manual Configuration](#) (see page 84)

Introduction

How to Prepare for Deployment

This section contains topics that describe the manual tasks you need to perform before beginning the deployment process.

Copy the CAIKSPAR and CAIKRPAR Files

When installing JARS/Online Facility (OLF), copy the CAIKSPAR and CAIKRPAR parameter files when upgrading from a previous release. Copying these files is necessary because the deployment does not have the customized value.

Current users can record where their existing CAIKSPAR and CAIKRPAR parameter files are so they can use them as references when setting up these parameter files.

Prepare the DB2 Database

Important! If you are using DB2 with JARS/OLF, preparing the DB2 database is required.

1. Have the DB2 database administrator authorize the ID being used to install JARS/OLF for DATABASE CREATE, TABLE CREATE, and GRANT authority.
2. Create a database, buffer pool, and storage group to be used by the JARS/OLF product.

3. Grant access to the database and buffer pool to the ID being used to install JARS/OLF.
4. Continue this installation with [Create and Load Tables](#) (see page 83).

Example:

The following SQL commands may be used as a guide for setting up DB2 to prepare for the JARS/OLF product.

```
CREATE DATABASE PMA490
STOGROUP SGPMA490
BUFFERPOOL BPO
CREATE STOGROUP SGPMA490 VOLUMES ("*", "*", "*") VCAT xxxx;
```

The above SQL statement will create and identify the PMA490 database for DB2 using storage group SGPMA490 and buffer pool zero. The xxxx represents the four-character database subsystem ID.

```
GRANT DBADM ON DATABASE PMA490 TO userid;
GRANT USE OF BUFFERPOOL BPO TO userid;
GRANT USE OF STOGROUP SGPMA490 TO userid;
GRANT EXECUTE ON PLAN CAISSL2,CAISSL3,CAISSL9 TO userid;
```

The above SQL statements grant database administrator authority and use of the buffer pool and storage group to the userid specified.

How to Complete Deployment With CA MSM

The topics in this section describe the manual tasks you perform when [deploying your product using CA MSM](#) (see page 30).

You can use CA MSM to deploy a runtime copy of all of the application SMP/E-installed Target libraries to one or all of the systems at your site.

You can choose to deploy the application profile libraries, ALIBs, and INCLUDE libraries as custom data sets using CA MSM.

For more information, see [How to Deploy a Product](#). (see page 30)

How to Deploy Without CA MSM

The topics in this section describe the manual tasks you perform if you are not deploying your product using CA MSM.

Deploy without CA MSM

The application does not require any additional procedures when deploying this product without CA MSM. However, you will need to follow the procedures in [How to Configure Without CA MSM](#) (see page 76) before starting the product.

Note: It is not required to deploy the product at all, CA JARS can be run directly from the Target Libraries.

How to Complete Configuration With CA MSM

The topics in this section describe the manual tasks you perform when [configuring your product using CA MSM](#) (see page 31).

Follow these steps:

1. Use a deployment that was generated through CA MSM.
The deployment appears in the list of Deployments in the Configurable category.
2. Select the deployment from the Configurable deployments menu.
3. Select create a configuration.
The Configuration wizard is initialized.

Configuration Wizard

To configure your product using CA MSM, use the Configuration wizard.

How to Define your Target Configuration

Use the Define and Target panel to define your target configuration.

Follow these steps:

1. Name your configuration and indicate which functions you want deployment to configure.
Configurations can be named manually, or a name can be generated.
2. Select the system where this configuration is processed.
3. (optional) Specify a description.
4. Click Next.

How to select functions and options

To select which functions and options are used in this configuration, use the Functions and Options panel.

Follow these steps:

1. Click the checkbox for configure JARS/OLF if you are installing with JARS/OLF. If you are installing the SMF/E component, indicate this installation as well.
2. To configure select the options.
3. (New customers) Indicate which database DB2 or CA Datacom you are initializing to use.
4. (New customers) Select create a chargeback environment.

Recommended: For new and existing customers, install or update your IRD and ORD entries.

5. Click Next.
6. Click Next. No changes are needed on the Define System Preferences panel.

How to Create Target Settings

To select the target settings for your configuration, use the Target Settings panel.

Follow these steps:

1. Open the Chargeback Parameters options by expanding the tree.
2. Find the database product that is used to manage the chargeback environment.

DB2

- a. Name the DB2 subsystem.
- b. (Optional) Enter the PLAN name.
- c. Using European formatting, set the Euro DB2 option to YES.

Note: For existing customers, these values are set in your existing CAIKSPAR file.

CA Datacom

- a. Enter the database owner ID.

Note: This value is set in your existing CAIKSPAR file.

3. Verify the database name.

Default: PMA490

DB2

The database name can be changed to any valid name.

Recommended: Use the default.

CA Datacom

Required: Default is used.

4. Specify the database.

- DB2
- Specify CA Datacom/DB or CA Datacom/AD.

5. Specify the chargeback parameters.

For existing customers, the name in parentheses indicates which value is in either the CAIKSPAR or CAIKRPAR parameter files. For new customers, fill in the value that matches the description.

Customer Name

The name of your company or what you would like to see in the report headers (CAIKSPAR, CUST).

Base Version

The base version for chargeback (CAIKRPAR, BASE).

CBLOAD

The version name where chargeback data is loaded (CAIKRPAR, CBLOAD).

Charge Precision

The number of decimal places to use when calculating and saving charge information (CAIKSPAR, CHARGE).

Rate Precision

The number of decimal places to use when saving rate information (CAIKSPAR, RATE).

Unit Precision

The number of decimal places to use when saving unit quantity information (CAIKSPAR, UNIT).

Reconciliation

Whether or not a Reconciliation file is produced (CAIKRPAR, RECON).

6. Select names for the CAIKSPAR and CAIKRPAR members in the CAJROPTN data set.

Recommended: The member names should be changed, if they are not the default values are overwritten in place in the Options (CAJROPTN) data set.

7. Name the CAIKSPAR and CAIKRPAR members.

Recommended: The member names are changed, because the default values are overwritten in place in the Options (CAJROPTN) data set.

8. Specify the JCL for the configuration steps.

Default: SYSOUT class is an asterisk, meaning this default started task output class.

Recommended: If the default output class is not a held class, change it to a held output class.

9. Specify the database settings.

- a. Select the database Owner for DB2 and CA Datacom.

- b. Select if configuring JARS/OLF (default).

- c. For DB2, indicate the DB2 load library that is used for your DB2 subsystem.

- d. For CA Datacom, enter the CA Datacom dataset names for various files that CA Datacom uses. Provide the names of the CA Datacom load library, the CA Datacom CUSLIB, the CA Datacom IPC library, and the CA Datacom. Consult with your CA Datacom administrator for the correct names.

10. Specify the IXX and Data files.

The IXX and Data files are created with a new installation. Specify the data set names allocation units, the volume serials, and the number of blocks.

Recommended: The number of blocks remain unchanged.

11. Specify the CA Common Services Load Library and Macro Library.

Suffix names for these libraries are CCCSLOAD and CCCSMAC respectively. Specify the name of a temporary PDS that is used during the configuration process, as well as the unit where it is allocated. This PDS only uses two cylinders on a 3390 and is deleted upon completion of configuration.

12. Specify the IRD/ORD Definitions.

1. IRD and ORD entries can be added or updated as part of configuration by selecting or excluding these items.

Default: All the shipped entries are the actions included.

Note: Only change entries that are to be excluded.

Important! Entries that are excluded are removed from an existing database, be careful when excluding a set of IRD and ORD entries.

2. Click Next.

3. Click Next. No changes are needed on the Edit Resources panel.

How to Review and Build your Configuration

To review and build your configuration use the Review and Build panel.

Follow these steps:

Recommended: Review the options and setting for SMF/E:

1. Click Target Settings.
2. Review your selected values and defaults that were set.
3. If the settings are valid, click Build.
4. To make any needed changes, click Back, until you are at the Target Setting.
5. Make any necessary adjustments, click Next, until you are back on the Review and Build panel.

What to do when the Configuration is built

Follow these steps:

1. Click the Configurations Tab.
2. Locate the Configuration in the table under the Configurations tab.
3. Click the Action button.
4. Select Implement.
5. The implementation displays
6. **Recommended:** To process the implementation one-step at a time, use the Release Next button.

Note: If there is a failure, the last output that is produced can be used for diagnosis.

Complete the Configuration

Once you have configured CA JARS using CA MSM:

Follow these steps:

1. For CA Datacom databases, complete the [CA Datacom Database Procedures](#) (see page 80).
2. For DB2 complete the [Prepare DB2 Database](#) (see page 15) procedure, only.
3. For all installations, complete the [Required Manual Configuration](#) (see page 84) procedures.
4. If you opted not to have CA MSM copy the IRD and ORD entries, follow the [IRD/ORD Configuration](#) (see page 89) procedures as needed.

Note: When configuring using CA MSM these tasks are done automatically. Skip this section if configuring using CA MSM.

You are now ready to customize certain programs and user exits.

How to Configure Without CA MSM

The topics in this section describe the manual tasks you perform if you are not configuring your product using CA MSM.

Run CAIRIM for CA JARS SMF/E

This step is required if you are going to enable the SMF/E option. Even though you can choose to defer actually using the options, the following procedures are recommended.

In order to test SMF/E, first install CAIRIM from CA Common Services for z/OS.

Submit member *JRC6INIT* from your CAJRJCL library. If you have other CA products already operational on your system, informational messages to that effect displays.

Note: This job does *not* activate SMF/E. This job only prepares the environment for future activation. For more information about implementing the SMF/E option, see the *CA JARS Systems Programmer Guide*.

Define Wizard Company Name

This step defines the CA JARS Wizard default company name has the following two parts:

1. Copy member WIZOPT from CAJRSAMP into your own source library and update it to define your company name.
2. Copy, customize, and submit the CAJRJCL member WIZCOMP. This JCL is used to assemble and link edit the company name load module, WIZCMPNY, using the WIZOPT member that you updated in step 1.

Note: The company name that is specified cannot exceed 40 characters, and can be overridden during reporting using the COMPUTE COMPANY statement. For more information, see the *CA JARS Wizard Reference Guide*.

Run CA JARS Installation Verification Tests

Successful execution of the Installation Verification Procedure (IVP) is a major goal of the installation process. This procedure is in two steps:

1. Activate SMF/E (optionally installed).
2. Run the report IVPs

Customized and use this supplied job streams to complete this step of the installation process. They are provided in the sample JCL library.

SMFIVP

SMF/E activation (optional)

Note: When SMF/E is activated, the subsequent IVP jobs should specify IVP in the appropriate job card accounting field.

JARIVP

The sample CA JARS, CA JARS Wizard, and CA Earl Service reports

VMIIVP

The sample translate program and reports for VM.

ADAIVP

The sample translate program and reports for ADABAS.

IMSIIVP

The sample translate program, FFGRAPHS, and reports for IMS.

ROSIVP

The sample translate program and reports for CA Roscoe.

NETIVP

The sample translate program and CA JARS Wizard report for NETVIEW.

TVAIIVP

The sample translate program and CA JARS Wizard report for TVA.

Note: Input data for the previous IVPs is supplied with the CA JARS system. The supplied IVPs must execute against this data before using data from your own environment. This procedure ensures that the product is successfully installed and helps determine problems if you experience difficulty during the product customization.

Invoke the ISPF Interface

The following steps are required in order to run the Online System. Steps 1, 2 and 3 are done only once, at installation. Step 4 starts the Online System; it is performed at each execution of the system.

1. The CLISTS in CAI.CAJRCLSO must be continually available through the *TSO SYSPROC DD* statement. To facilitate this availability, do one of the following procedures.
 - a. Copy the entire contents of CAI.CAJRCLSO into a library that your installation has permanently allocated to SYSPROC.
 - b. Allocate CAI.CAJRCLSO to SYSPROC on a permanent basis.
2. Each user of the Online System must have an empty ISPF table library named *&USERID.JOS.V100.ISPTLIB*. This data set is allocated by the CLIST when it is invoked.
3. Customize the JOS CLIST by changing the value of the JOS ISPF library dsname prefix, set *&JOSPRF=.&STR(CAI)*, to the high level qualifier of the data set names that are used during installation.
4. Execute the JOS CLIST to dynamically allocate all other Online System libraries and start the system. To invoke the JOS CLIST, go to the ISPF Primary Option Menu and enter Option 6. From the ISPF Command Shell screen, enter %JOS.

Install XML Support

If CA JARS is going to be used to produce XML report documents, the IBM XML Toolkit for z/OS must be installed.

After the IBM XML Toolkit is installed, it must be made available to CA JARS in either of two ways:

- Toolkit can be added to the system linklist.
- Toolkit can be concatenated to the STEPLIB DD when running CA JARS.

Note: The XML Toolkit is only needed when generating XML reports from CA JARS. For more information about XML reporting with CA JARS, see the *CA JARS User Guide*.

More information:

[XML Requirements](#) (see page 18)

Integrate with CA SMF Director

If CA SMF Director is installed, you can use a CA SMF Director *split* file or can *extract* as input to CA JARS.

Why Use CA SMF Director

Mainframes produce a large volume of SMF records, many of which are irrelevant to accounting and chargeback. The time spent reading and discarding SMF record types that are not chosen for chargeback can be significant. CA SMF Director split files are created at the time the SMF MANx or SMF logstream files are dumped. The split files are created in a single pass, as SMF data is being dumped. This eliminates redundant EXTRACT processing. If your SMF volume is large and only a small part of that volume is to be processed by CA JARS, integration with CA SMF Director can save processing time and money. A sample SPLIT statement is discussed below.

If policy or procedure at your shop prevents the use of SPLIT files, it is also possible to use the SMF Director EXTRACT function to extract only those SMF records that are processed by CA JARS. Although this is not as efficient as using SPLIT, it is still more efficient than passing all SMF data and letting CA JARS reject what is not needed.

SPLIT Processing

Typically, CA JARS is run once a day after midnight to process the last day's SMF data. CA SMF Director is run at each SMF dump event. Supplied with an SPLIT statement, as in this example, CA SMF Director builds a split file that contains only SMF records needed for CA JARS.

This sample statement is in CAJROPTN(JARSSPLT)::

```
*-----  
DUMP.  
SPLIT ALL TODD(CAIJSSMF)  
  SELECT(0,4:11,19,25,26,30,32,33,39,41,42,47:50,  
        52:54,57,59,70:79,88,89,92,94,101,103,110,  
        115,116,118:120).  
*-----
```

You can modify the sample SPLIT statement to only select records that are of interest to your CA JARS configuration. For more information about the SPLIT statement, see the *CA SMF Director User Guide*.

The split file is usually configured as a generation data set (GDG) or as a group of GDGs. You must define the //CAIJSSMF DD statement in the CA JARS execution JCL to point to the split file. You must also configure CA JARS, CA SMF Director, and your own scheduling software to make sure that only the correct files are input to CA JARS.

Integrate with CA Auditor for z/OS

Note: If you do not want CA Auditor for z/OS to report on CA JARS, skip this section.

Load module CAIXAJ1\$ is placed in the target CAJLOAD during the installation of CA JARS. To use the module with CA Auditor for z/OS, do one of the following procedures.

1. Either, place the CA JARS CAJLOAD in the system link list.
2. Or the module must be moved (through IEBCOPY) to a load library that is in the system link list.

Run cBASE Link-Edit

Members IF23LKDC and IF23LKD2 link edit the CA Datacom service routines or the DB2 plan database, respectively. Choose the appropriate member, depending on which database you are using.

To conform to your standards for installation and the previously completed worksheet, edit the JCL. Submit the job and review the output. Processing should complete with a return code of 0 or 4.

Note: Members IF23LKDC and IF23LKD2 are located in the CA Common Services for z/OS sample JCL library.

Note: The resultant load module is named CA\$SUDB and resides in the CA Common Services load library.

Database Procedures

Run cBASE Data Dictionary Link-Edit for CA Datacom

If you are using CA Datacom, you must process member SP23DDLK to link edit the Data Dictionary.

To conform to your standard for installation and the previously completed worksheet, edit the JCL. Submit the job and review the output. Processing should complete with a return code of 4.

Note: Member SP23DDLK is located in the CA Common Services for z/OS sample JCL library.

Prepare the CA Datacom Database

If the database system used by JARS/OLF is:

- For CA Datacom/DB, complete [Prepare CA Datacom/DB Database](#) (see page 81) section.
- For CA Datacom/AD, complete [Prepare CA Datacom/AD Database](#) (see page 81) section.

Prepare CA Datacom/DB Database

Set up the PMA490 database, before [creating the schema for CA Datacom/DB](#) (see page 82). JCL to set up the database can be found in the CAJRJCL as the member name CADBDATA. The JCL contains five steps:

1. DDUPDATE—Adds the PMA490 database definitions to the dictionary.
2. COPYPRD—Copies the PMA490 definitions to PROD status
3. CATALOG—Catalogs the PMA490 definitions to the CXX
4. IEFBR14—Allocates the datasets for index and data areas
5. INITLD—Initializes and NULL LOADs the PMA490 areas

After successful completion of these steps, continue to [Create Schema for CA Datacom Users](#) (see page 82).

Note: If you are using CA Datacom r12 or later, the DBUTLTY program (see step INITLD) must be authorized.

Prepare CA Datacom/AD Database

The following jobs, provided in CAJRJCL, must be executed in the order that is listed to prepare the CA Datacom/AD database.

1. CADBDEF—Adds PMA490 database definitions
2. CADDRTV—Verifies, copies to PROD, catalogs, and enables
3. CADBALLC—Allocates datasets for index and data areas
4. CADBUTIL—INITs and NULL LOADs the database

After successful completion of these steps, continue to [Create Schema for CA Datacom Users](#) (see page 82).

Note: If you are using CA Datacom r12 or later, the DBUTLTY program (see step INITLD in the CADBUTIL job) must be authorized.

Run the DB2 BIND Procedure

When using DB2 as your database access method, member SP23BIND runs the BIND procedure for the CA SDBS modules that were installed by SYSMOD CSP2300. If you are not using DB2, proceed to the next step in this installation.

To conform to your standards for your data center and the previously completed worksheet, edit the JCL. Submit the job and review the output. Processing should complete with a return code of 4.

Note: Member SP23BIND is located in the CA Common Services for z/OS sample JCL library.

Important! The user ID (referred to as the owner ID) used in subsequent steps *must* be authorized for the database by your database administrator. This user ID *must* be used to complete the installation.

Allocate CAIKSPAR

Member CAKSPALL in CAJRJCL allocates the CAIKSPAR file. To conform to your standards for your data center use the previously completed worksheet, edit this JCL. To verify that processing completed, submit the job and review the output with a return code of 0.

Customize CAIKSPAR

Customize the CAIKSPAR data set to define your database environment.

Note: For more information about customization, see the Batch Processing and Reporting in the *CA JARS JARS/OLF User Guide*.

Important! Review all the batch JCL STEPLIB statements and customized these statements before processing. When using CA Datacom, verify that the data set name matches the data set names that are used during the CA Datacom installation. Also delete references to the DB2 library.

If DB2 is being used, make sure that the data set name of the DB2 library is correct. Also delete the references to the CA Datacom libraries and remove the DCIND symbolic from all JCL members and PROCs.

Create Schema for CA Datacom Users

CAJRJCL member CAKRSCH creates a schema authorizing an owner ID to allow access to the database. Customize the CAKRTAB PROC contained in CAJRPC and CAKRSCMA contained in CAJRSQ.

- In CAKRSCMA, change the default owner ID of DUMMY to the authorized ID (installer ID).

- In CAKRTAB, set the PARM statement as follows:

```
EXEC PGM=CAKRINST,PARM='CAIKSPCB,SYSADM'
```

The second parameter of the PARM statement indicates to the database installation program how to connect to the database. The SYSADM AUTH ID is a preauthorized ID that can be used to authorize the first new user ID (usually the installer's). Use SYSADM to perform the CREATE schema task authorizing the new owner ID (installer ID). After successful completion of this step, change SYSADM in the CAKRTAB PROC to the user ID just authorized in the CREATE schema step. Continue with the installation tasks.

Create and Load Tables

To execute JCL members CAKRTBLI and CAKRTBLO follow this two-step procedure. Both members invoke the CAKRTAB procedure found in the CAJRPROC library. Update CAKRTAB according to directions found in the member, before executing CAKRTBLI and CAKRTBLO.

1. Member CAKRTBLI in CAJRJCL allocates and loads the required tables for JARS/OLF. This member also creates indexes and synonyms for the owner ID and loads and commits the startup definitions.

This jobstream consists of four steps. Each of these steps utilizes input from additional CAJRSQI members. An overview of the steps and the input statements is provided in this table. The last two columns of the table indicate whether customization is required for DB2 or CA Datacom.

Step	Description	Input	DB2	Datacom
STEP010	Creates Tables	CAKRDC8 CAKRDB8	N/A Y	Y N/A
STEP020	Create Synonyms	CAKRCR84	Y	Y
STEP030	Load Dispatch Tables	CAKSCR81	N	N
STEP040	Load JARS/OLF Tables-IVP	CAKRCR88	N	N

For CA Datacom, customize input members CAKRDC8 and CAKRCR84. In member CAKRDC8, change PMA490 to reflect the correct database name. In member CAKRCR84, change owner ID to the DB owner ID.

For DB2, customize CAJRSQI library members CAKRDB8 and CAKRCR84. For member CAKRDB8, change DSNDB04 to reflect the correct database name. For member CAKRCR84, change owner ID to the DB owner ID.

Continue by, customizing the CAJRJCL library member CAKRTBLI. The STEP010 step must be reviewed to make sure that the INPUT symbolic reflects the appropriate input, either CAKRDC8 or CAKRDB8. To verify that processing complete, submit the job and review the output with a return code of 0.

Note: Input members are from CAJRSQ.

2. Member CAKRTBLO loads JARS/OLF IRD/ORD tables. Edit this member and select only the tables that you want to load.

Note: For more information, see the predefined JARS History Records of the CA JARS JARS/OLF User Guide.

CAJRSQ library members that are distributed with the product are used as input to program CAKRINST include SQL *COMMIT* statements after every one hundred inserts. All work to the point of the comment statement is entered into the database and held storage is freed.

Important! This procedure removes the *ROLLBACK* capability if the job fails for any reason. Create necessary BACK-UPS for tables that will be modified after initial installation before using CAKRINST.

Allocate CAIKRPAR

Member CAKRCALL allocates CAIKRPAR. To conform to standard of your data center, use the previously completed worksheet and customize the JCL. To verify that processing has completed with a return code of 0, submit the job and review the output.

Customize CAIKRPAR

To ensure that the IVPs run successfully, customize the CAIKRPAR data set with the following settings.

- BASE = TEST
- CBLOAD = TEST
- RECON = YES

Note: For more information, see the Batch Processing and Reporting in the CA JARS JARS/OLF User Guide.

Continue by following the procedure under [Required Manual Configuration](#) (see page 84).

Required Manual Configuration

The topics in this section describe the required manual configurations tasks that must be performed.

Process JARS/OLF IVP

This step requires that the record definitions for *MBJ* exist in your table definitions. To accomplish this step process the table loaded in [Create Schema for CA Datacom Users](#) (see page 82) with CAJRSQ(MVSBAT).

To apply charges to the CCCTAB and to generate a detailed reconciliation file, use the *committed* JARS/OLF startup definitions. These definitions are downloaded during installation [Create Schema for CA Datacom Users](#) (see page 82), along with the IVP data.

CAJRJCL library member CAWFIVP processes IVP data using the startup definitions. To conform to your standards for installation, use the previously completed worksheet. To verify that processing has completed with a return code of 0, submit the job and review the output.

Validate that the IVP processing completed successfully by reviewing the condition codes and the JARS/OLF Summary Control Report. The control report must indicate the following records:

Input Statistics: JARS Record Read	544
IRDID Records Generated	213
Output Statistics: CAIKSOP MBJ	213
Records Read	213
Original Records Created	419
Records inserted into CCCTAB	61

Print ORD Data File

Customize the CA Earl PROC (CAKSEARL) located in CAJRPROC. Copy the CAKSEARL PROC to your user PROCLIB, or utilize instream in the CAJRJCL library member CAKSORDS.

To conform to your standards for use the previously completed worksheet, edit the member CAKSORDS. To verify that processing has completed with a return code of 0, submit the job and review the output.

Print JARS/OLF Reconciliation File

The JARS/OLF IVP process included generation of the reconciliation file. CAJRJCL member CAKRECON uses the Earl Service to print the reconciliation file.

Edit this member according to your standards for installation and the previously completed worksheet. To verify that processing has completed successfully, submit the job and review the output. The record count of the SYSEARL is:

Hitfile Records Written	419
Grand Total	2931.6712

Generate JARS/OLF Invoices

This step generates an invoice from the IVP data processed in Step 20. CAJRJCL member CAKRINVC uses the Earl Service to generate an invoice.

Edit this member according to your standards for installation and the previously completed worksheet. To verify that processing has completed successfully, submit the job and review the output.

Customize JARS/OLF Online

A. Customize Template:

Customize member NEWCB in CAI.CAJRCTMP.

For DB2, change the &&XXSSID, to the four-character SSID or driver that is used when DB2 links to data.

For CA Datacom, set the &&XXSSID, equal to the owner ID. To reflect the numeric value that is associated with the database system, set the &&XXWHTSQL.

These values are:

- 2 SQL/OS
- 3 DB2
- 4 CA Datacom/DB

If you are using DB2, change &&XXPLAN. to CAISQL3.

B. Customize CLIST:

To reflect the appropriate high-level qualifiers, edit the member PMACBC in CAI.CAJRCLSO. Remove the CAI.CAJRCPNC library from the concatenations.

Note: The library CAI.VPOINT.PANEL is a part of CA Common Services (Viewpoint).

C. Allocate Libraries for PMACBC CLIST:

The following load libraries must be allocated during the execution of the PMACBC CLIST in this order:

- CA JARS RA load library CAI.CAJRLOAD
- CA Common Services load library
- If you use CA Datacom, its load library (CAILIB or CABDLOAD) and custom load library (CUSLIB)
- If you use DB2, its load library is:
(SYS2.DSNLOAD)

Recommend: To create temporarily a TASKLIB that is available during the execution of the CLIST use ISPEXEC facility.

Example:

```

FREE DDN(PMALIB)
ALLOC F(PMALIB) DA          +
  'CAI.CAJRLOAD'           +
  'CA.COMMON.SERVICE.CAILIB' +
  'CA.DATACOM.DB.LIBRARY') SHR REUSE
.
.
.
  . PMACB CLIST statements
.
.
ISPEXEC LIBDEF ISPLLIB LIBRARY ID(PMALIB)
CBASEX NEWCB
ISPEXEC LIBDEF ISPLLIB LIBRARY

```

Updating your PMACBC CLIST as shown in this section (instead of adding a STEPLIB statement to your TSOPROC) reduces the system overhead. When STEPLIBs are added to TSO LOGON PROCs, they are searched every time TSO commands are entered. By allocating as a TASKLIB within the PMACBC CLIST and removing the TASKLIB on exiting the CLIST, no additional overhead is incurred.

D. Set European DB2 (optional):

Customize the CAIKSPAR data set to set EURODB2 = YES if you plan to use European DB2 with a comma as a decimal point separator. In addition, update the CAJRCTMP library member NEWCB and uncomment these three *)SET statements:

```

*)SET &&XXDECPNT = ,      ->  )SET &&XXDECPNT = ,
*)SET &&XXNTYPE = EUR     ->  )SET &&XXNTYPE = EUR
*)SET &&NTYPE = EUR      ->  *)SET &&NTYPE = EUR

```

Note: For more information about CAIKSPAR customization, see the chapter "Batch Processing and Reporting" in the *JARS/OLF User Guide*.

Invoke JARS/OLF Online

A.

Log on executing the TSOPROC.

B.

Execute the CAI.CAJRCLS0(PMACBC) either through TSO or the ISPF TSO command processor.

Prepare for Live Data

In order to complete the IVP process, the JARS/OLF tables were committed to TESTTEST. Processing of the JARS/OLF IVP resulted in updating the CCTAB. The following steps are required to remove IVP data:

A. Delete the CCCTAB:

CAJRJCL member CAKRDEL1 deletes the IVP data records from the CCCTAB.

To conform to your standards for installation use the previously completed worksheet, edit this member. To verify that the processing has completed with a return code of 0, submit the job and review the output.

Note: Processing of this member will result in the deletion of the JARS/OLF IVP data.

B. Delete JARS/OLF Definitions (Optional):

CAJRJCL member CAKRDEL2 deletes the CBdefs used to process the JARS/OLF IVP.

To conform to your standards for installation use the previously completed worksheet, edit this member. To verify that the processing is completed with a return code of 0, submit the job and review the output.

Grant Access to Additional Users

This step outlines the tasks necessary to grant additional user IDs access to the JARS/OLF tables.

A. Authorize user ID:

For DB2, the new user must be granted EXECUTE access on the plans that were created when the bind procedure was run. The plan names are CAISSQL2, CAISSQL3, and CAISSQL9. The following SQL statement grants execute access to user ID C0001:

```
GRANT EXECUTE ON PLAN CAISSQL2, CAISSQL3, CAISSQL9 TO C0001;
```

For CA Datacom, create a schema for the new user. Member CAKRSCH can be used. Be sure to customize CAKRSCMA; change the user ID to the new user ID.

B. Grant access to a user ID:

To reflect the user ID requiring grant access, customize the CAJRSQ library member CAKRCR87. To conform to your standards for the data center, edit the CAJRJCL library member CAKGRNNT. To make sure that the job completed with a condition code of 0, submit the job and review the output.

Note: When the database security is not turned on, SQL error -559 is returned. This error occurs, when attempting to grant other users access to JARS/OLF tables. You can proceed to the next step when this error occurs.

C. Establish synonyms:

Important! Execute this step by the user ID requiring the synonyms.

Member CAKRSYN establishes synonyms. This member uses input member CAKRCR84 to complete this process. To confirm your data center standards, EDIT CAKRSYN. Verify the owner ID of the tables you are creating synonyms for is reflected in CAKRCR84. The last SQL statement in member CAKRCR84 performs an insert into the options table to set up the default options for the new user. Change the first variable in the VALUES operand to the name of the new user ID. This variable appears in the statement directly after the word *VALUES* as illustrated in the following example:

```
INSERT INTO OWNERID.OPTTABS VALUES ('NEWUSER', 'BOTH', 'NOREV', ...)
```

Replace the *OWNERID* in this statement with the user ID (OWNER) that was originally used to create the tables. Replace the *NEWUSER* with the new user ID.

- For DB2, run the CAKRSYN step from the user ID that requires the synonyms.
- For CA Datacom/DB or AD, update the CAKRTAB PROC as follows:

```
EXEC PGM=CAKRINST,PARM='CAIKSPCB,NEWUSER'
```

Replace the *NEWUSER* parameter in the *PARM* statement with the name of the user ID for which you are creating synonyms.

Implement Security

Protection of dialogs implements security of JARS/OLF tables.

Note: For more information, see Security and Audit in the *CA JARS JARS/OLF User Guide*.

IRD/ORD Configuration

The topics in this section describe the IRD/ORD configurations tasks that must be performed.

Update Existing IRD/ORD Tables

Updates to the IRD/ORD table definitions are provided periodically.

More Information

[Update Database Tables](#) (see page 91)

Add New IRD/ORD Record Definitions

Member CAKRTBLP loads new IRD/ORD record definitions. Select only the members you want to add new.

Note: For a list of all available IRD/ORD record definitions, see Predefined CA JARS History Records, in the *CA JARS OLF User Guide*.

CAJRSQ library members that are distributed with the product are used as input to program CAKRINST include SQL *COMMIT* statements after every one hundred inserts. All work to the point of the comment statement is entered into the database and held storage is freed.

Important! This procedure removes the *ROLLBACK* capability if the job fails for any reason. Create necessary BACK-UPS for tables that will be modified after initial installation before using CAKRINST.

To add the new IRD/ORD record definitions.

Follow these steps:

1. From CAJRJCL, customize the member CAKRTBLP to conform standards for your organization.
2. The JCL mentioned in step 1 requires the use of the CAKRTAB proc. CAKRTAB proc points to the library that has this customized member from the initial product installation. Or customize the CAKRTAB PROC from the CAJRPROC on this tape.
3. Comment out all DD names except those pointing to members that contain IRD/ORD sets that you want to add to your database.
4. Submit the CAKRTBLP member. This loads the requested definitions. A condition code of 0 should be received.

Chapter 8: Migration Information

This section contains the following topics:

[Update Database Tables](#) (see page 91)

Update Database Tables

After applying CA JARS maintenance or installing a new version of CA JARS, there is an optional step to perform database table updates. Member CAKRTBLM contained in CAJRJCL contains the JCL and instructions on how to perform table updates. Note that it uses the CAKRTAB procedure, customized during installation.

Before running the update job, review member CAKRTBLZ in CAJRSQ to determine if table updates are required. Member CAKRTBLZ contains a list of all modified IRD/ORD data sets by release and the SQL statements to delete IRD/ORD sets that may need to be refreshed. Update job CAKRTBLM is required only if IRD/ORD data sets that are in use by the current chargeback algorithm are listed in CAKRTBLZ and new metrics provided by the updated IRD/ORD data sets are needed in a chargeback algorithm.

Appendix A: Troubleshooting

This section contains the following topics:

- [Verifying the Problem](#) (see page 93)
- [Collecting Diagnostic Data](#) (see page 93)
- [Interpreting Diagnostic Data](#) (see page 96)

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
Interfaces	<ul style="list-style-type: none">■ Check that the Interface data was input as history input (DDNAME=CAIJSHST).■ Check that all processing by the Interface programs completed successfully prior to inputting Interface data to CA JARS.

Type of Problem	Procedure
Exits	<ul style="list-style-type: none"> ■ Check that your library concatenation includes the library that contains the exit. ■ If this product abends with the exit yet runs successfully without it, the problem is probably in the exit itself. Make sure control is returned to this product correctly.
SMF/E	<ul style="list-style-type: none"> ■ Check that the target library, CAJRLOAD, is a linklist and an APF-authorized library. ■ CAIRIM processing completed successfully. ■ For SMF/E routine failures, an SVC dump is created and written to a dump data set (SYS1.DUMPxx).
Execution	<ul style="list-style-type: none"> ■ Check that sufficient space is allocated to the account file and work files to process all the input data provided (ddnames are: CAIJSACT, CAIJSCTL1, CAIJSCTL2, and the SORTWKxx files). ■ Check that the SELECT statement specifies the same input defined in the JCL and calls for at least one output report to be generated. ■ Check that the elements to be displayed on the report are available at the level of reporting specified. For example, Step Name and Program Name are only available for display if step records are printed, and cannot be displayed at the job or summary level. ■ Check that all control statements are coded correctly and each field begins in the proper columns. ■ Check that the desired SMF records are being collected as specified through SMFPRMxx. ■ Check that sequence numbers are not specified on any control statement.
Grouping	<ul style="list-style-type: none"> ■ Check that essential records have not been eliminated by the selection/rejection specifications coded on the GROUP or GROUPC or CRITERIA or DEVADDR or DEVNMB control statements.
SNAPDUMP	<ul style="list-style-type: none"> ■ Make sure the CAIJSNAP data definition statement is coded to produce a dump of records snapped. ■ See the section Interpreting SNAPDUMP Output in the "Special Usage Considerations" chapter of the <i>Systems Programmer Guide</i>. Records are snapped because of errors in the SMF record. A REASON CODE is provided for the snapped records.

JARS/OLF Online Facility

In the JARS/OLF Online Facility, if you encounter the following problems, perform the corresponding procedures listed below:

To bring up the online facility

1. Verify that member NEWCB in CAJRCTMP is correctly customized as outlined in the step Customize JARS/OLF Online in the chapter "Installation Steps."
2. Verify that member PMACBC in CAJRCLSO has been changed to reflect the appropriate high level qualifiers.
3. Verify that the CAJRLLOAD library is allocated and available to the TSO session.
4. Verify that the user CAIKRPAR (CAIKRPAR DD statement) correctly defines your database environment.
5. Verify that the step Grant Access to Additional Users has been completed as outlined in the section Installing CA JARS with JARS/OLF in the chapter "Installation Steps."

Error in definition

If you attempt to define accounting sources for an ORD Type and receive a message that says the ORD Type does not exist, perform the following steps.

1. Verify that the JARS/OLF version specified using the Option facility reflects the version with which the ORD Type was committed.
2. If the ORD Types definition exists in the Development version of JARS/OLF, you must process the commit before these ORD Types can be used by JARS/OLF definition.

Period Functions - Forecasting

If you receive a message stating the Forecast version does not match the version specified in Options, perform the following steps.

1. Exit the Forecasting panel
2. Select Options, then select item 2 (Versions) from the Options pull-down
3. Change the JARS/OLF Version to match the version specified during generation of the forecast

Batch Processing Error

If you encounter a Batch Processing Error, see the *JARS/OLF Messages and Codes Guide* to determine appropriate reason and action for the error message(s) received.

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](#).

Appendix B: Configuration Worksheet

This section contains the configuration worksheet.

This section contains the following topics:

[Complete the Configuration Worksheet](#) (see page 97)

Complete the Configuration Worksheet

Follow steps 9 through 23 only if you have installed JARS/OLF. If you have not installed JARS/OLF but have installed CA PMA Chargeback, you can skip to step 24. If you are not planning to use either JARS/OLF or CA PMA Chargeback, you can skip the rest of this chapter.

If you are configuring JARS/OLF, complete the following worksheet. The keywords on the worksheet are the same as the symbolic parameters used in the supplied configuration JCL. If a default has been assigned in the supplied JCL, it is identified below.

Description	Keyword
1. What high-level qualifier has been defined for the CA Common Services libraries? Default: CSIND='CAI'	1. CSIND=_____
2. If using CA Datacom, what high-level qualifier has been defined for those libraries? Default: DCIND='CAI'	2. DCIND=_____
3. If using DB2, what is the name of your DB2 load library? No Default	3. DSNLOAD=_____
4. If using DB2, what is the subsystem ID? No default	4. SUBSYSTEM_ID=_____

5. Which DASD volume do you plan to use for the JARS/OLF parameter files?

No Default

5. PARMVOL=_____

6. What high-level qualifier do you plan to assign to the parameter files?

Default: PINDEX='CAI'

6. PINDEX=_____

7. What values do you plan to use for the following parameters?

7. DATABASE_NAME=_____

DB2_PLAN_ID=_____

SQL_TYPE=_____

SUBSYSTEM_ID=_____

CUSTOMER_NAME=_____

BASE_VERSION=_____

CHARGE_PREC=_____

RATE_PREC=_____

UNIT_PREC=_____

EURODB2=_____

CBLOAD_VERSION=_____

RECONCILIATION_FILE=____

Note: For more information about these parameters, see the Batch Processing & Reporting in the *CA JARS JARS/OLF User Guide*.

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