CA Datacom®/AD

Installation Guide for z/OS

Version 14.0

CA Technologies Product References

This document references the following CA products:

- CA Datacom®/DB
- CA Datacom® Datadictionary™
- CA Datacom®/AD
- CA Datacom® CICS Services
- CA Datacom® DB2 Transparency
- CA Datacom® DL1 Transparency
- CA Datacom® Fast Restore
- CA Datacom® IMS/DC Services
- CA Datacom® Presspack
- CA Datacom® Server
- CA Datacom® SQL
- CA Datacom® STAR
- CA Datacom® TOTAL Transparency
- CA Datacom® VSAM Transparency
- CA Dataquery™ for CA Datacom® (CA Dataquery)
- CA Ideal™ for CA Datacom® (CA Ideal)
- CA ACF2™ for z/OS
- CA APCDDS™ Automated Report Balancing (CA APCDDS)
- CA Common Services for z/OS
- CA Disk™ Backup and Restore (CA Disk)
- CA IMS Tools
- CA IPC
- CA Jobtrac™ Job Management (CA Jobtrac)
- CA Scheduler® Job Management (CA Scheduler)
- CA SYSVIEW® Performance Management (CA SYSVIEW)
- CA Top Secret® for z/OS
- CA Workload Automation Restart Option for z/OS Schedulers (CA WA Restart Option for z/OS Schedulers) formerly CA 11® Workload Automation Restart and Tracking

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

Providing Feedback About Product Documentation

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

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:

- This manual has been completely revised.

- Upgrade information has been removed because you must do a new installation at this release.

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Chapter 1: Overview

This guide describes how to install and implement [assign the value for ENDV in your book].

This section contains the following topics:

Audience

gure your productReaders of this book should have knowledge in the following areas:

- JCL

- TSO/ISPF

- z/OS environment and installing software in this environment

- The IT environment, enterprise structure, and region structure for your organization

You may need to work with the following personnel:

- Systems programmer for z/OS or VTAM definitions

- Storage administrator for DASD allocations

- Security administrator for data set or Multi-User Facility (MUF) security access

How the Installation Process Works

The following steps describe the installation process:

1. Prepare for the installation by confirming that your site meets all installation requirements.

2. Acquire the product using one of the following methods:

   - CA MSM

     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.

   - Pax-Enhanced Electronic Software Delivery (ESD)

   - Tape

3. Install the product based on your acquisition method.

4. Install the CA Common Services using the pax files that contain the CA Common Services you need at your site. All sites should install all CA Common Services contained in the Required CA Common Service bundle.

5. Apply maintenance, if applicable.

6. Configure your product.

Products Installed

CA Datacom/AD is a packaged set of the CA Datacom products. Included in this package is the CA Datacom/DB database engine. Included in the CA Datacom/DB engine is CA Datacom Datadictionary, various database and CA Datacom Datadictionary utilities, and a built-in batch reporting facility. Also included as part of this package are the CA Dataquery, CA Datacom SQL, CA Datacom Server, and CA IPC products.

Considerations for Installation

The following are considerations you should review prior to installing any product.

Prerequisite

When you are familiar with your system requirements for this installation, complete the necessary preliminary steps, including the worksheet, before you begin the installation process.

IBM SMP/E

SMP/E in a version and release as supported by IBM is required to install and maintain CA Datacom in the z/OS environment. It is the program installation standard methodology for all CA z/OS products and ensures the stability and integrity of the execution libraries.

SMP/E controls and simplifies the installation and maintenance of z/OS products and provides a log of all installation and maintenance activities.

SMP/E performs three major operations when installing a product or performing maintenance. These operations (discussed in Processing Operations) manage a structure contained in a VSAM KSDS data set called the Consolidated Software Inventory (CSI).

In addition to the CSI, the SMP/E environment contains two libraries. *Target libraries* contain the executable system modules used at system runtime. *Distribution libraries* contain the backup modules used for maintenance operations.

How to Access the README File

For the most current information that can be provided after publication of the documentation set, see the README file.

The README is a live document that is kept current for any problems or concerns dealing with the processes for the installation and upgrade. Review this member often to get the most current information. The following steps provide directions.

Follow these steps::

1. Log in at CA Support Online, https://support.ca.com/.

2. On the Support By Product page, specify CA Datacom.

3. In the Product Status section, select "CA Datacom/CA Ideal/CA IPC Maintenance Grid for z/OS."

4. Click the link in the Installation Information (README) column of the row for CA Datacom/AD Version 14.0.

The README file has been accessed.

How to Obtain the Sample Members

The sample members are usage examples of different products and functions for the CA Datacom/DB product family. The following steps allow you to access any sample jobs that are listed in the appendixes of this guide.

To access the sample members

1. Log in at CA Support Online, http://support.ca.com.

2. On the Support By Product page, specify CA Datacom.

3. In the Recommended Reading section, select "Use and Disclosure of Sample Members".

4. Click ACCEPT to accept the terms and conditions of this agreement as presented.

5. Click the link under each product for "SAMGEN sample assemblies and jobs".

6. Click the link and save the text files.

Reading Syntax Diagrams

Syntax diagrams illustrate the format of statements and some basic language elements. Read syntax diagrams from left to right and top to bottom.

Syntax diagrams use the following terminology, symbols, and concepts:

■ Keywords appear in uppercase letters, for example, COMMAND or PARM. Enter these words exactly as shown.

■ Variables appear in italicized lowercase letters, for example, *variable*.

■ Required keywords and variables appear on a main line.

■ Optional keywords and variables appear below a main line.

■ Default keywords and variables appear above a main line.

■ Double arrowheads pointing to the right indicate the beginning of a statement.

■ Double arrowheads pointing to each other indicate the end of a statement.

■ Single arrowheads pointing to the right indicate a portion of a statement, or that the statement continues in another diagram.

■ Punctuation marks or arithmetic symbols that are shown with a keyword or variable must be entered as part of the statement or command. Punctuation marks and arithmetic symbols can include the following:

,	comma	>	greater than symbol
.	period	<-	less than symbol

(	open parenthesis		=	equal sign
)	close parenthesis		¬	not sign
+	addition		-	subtraction
*	multiplication		/	division

Statement Without Parameters

The following is a diagram of a statement without parameters:

►►─ COMMAND ── ►◄

For this statement, you must write the following:

```
COMMAND
```

Statement with Required Parameters

Required parameters appear on the same horizontal line, the main path of the diagram, as the command or statement. Separate the parameters with one or more blanks.

The following is a diagram of a statement with required parameters:

►►─ COMMAND ─ PARM1 ─ PARM2 ───────────────────────────── ►◄

You must write the following:

```
COMMAND PARM1 PARM2
```

Delimiters Around Parameters

Delimiters, such as parentheses or quotation marks, around parameters or clauses must be included.

The following is a diagram of a statement with delimiters around parameters:

►►─ COMMAND ─ (PARM1) ─ PARM2='*variable*' ─────────────── ►◄

If the word *variable* is a valid entry, you must write the following:

```
COMMAND (PARM1) PARM2='variable'
```

Choice of Required Parameters

When you see a vertical list of parameters as shown in the following example, choose one of the parameters. This format indicates that one entry is required, and only one of the displayed parameters is allowed in the statement.

The following is a diagram of a statement with a choice of required parameters:

```
►►─ COMMAND ──┬── PARM1 ──┬────────────────────────────────────►◄
              ├── PARM2 ──┤
              └── PARM3 ──┘
```
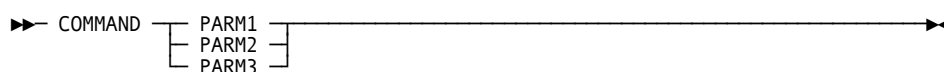
Choose one of the parameters from the vertical list, such as in the following examples:

```
COMMAND PARM1
COMMAND PARM2
COMMAND PARM3
```

Default Value for a Required Parameter

When a required parameter in a syntax diagram has a default value, the default value appears above the main line, and it indicates the value for the parameter if the command is not specified. If you specify the command, code the parameter and specify one of the displayed values.

The following is a diagram of a statement with a default value for a required parameter:

```
►►─ COMMAND ─ PARM1= ──┬── YES ◄ ──┬── PARM2 ──────────────────────────►◄
                       └── NO ─────┘
```
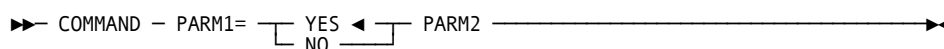
If you specify the command, write one of the following:

```
COMMAND PARM1=NO PARM2
COMMAND PARM1=YES PARM2
```

Optional Parameter

A single optional parameter appears below the horizontal line that marks the main path.

The following is a diagram of a statement with an optional parameter:

```
►►─ COMMAND ──┬────────────────┬──────────────────────────────►◄
              └── PARAMETER ───┘
```
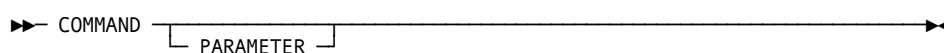
You can choose to use the optional parameter, as shown in the following examples:

```
COMMAND
COMMAND PARAMETER
```

Choice of Optional Parameters

If you have a choice of more than one optional parameter, the parameters appear in a vertical list below the main path.

The following is a diagram of a statement with a choice of optional parameters:

```
►►─ COMMAND ──────────────────────────────────────◄◄
              ├─ PARM1 ─┤
              └─ PARM2 ─┘
```
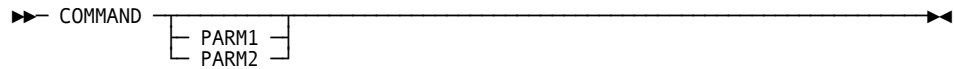
You can choose any of the parameters from the vertical list, or you can write the statement without an optional parameter, such as in the following examples:

```
COMMAND
COMMAND PARM1
COMMAND PARM2
```

Repeatable Variable Parameter

In some statements, you can specify a single parameter more than once. A repeat symbol indicates that you can specify multiple parameters.

The following is a diagram of a statement with a repeatable variable parameter:
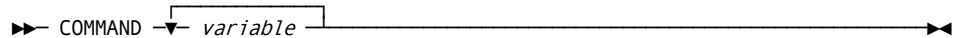
```
            ┌─────────┐
►►─ COMMAND ─▼─ variable ─┴──────────────────────────◄◄
```

In the preceding diagram, the word *variable* is in lowercase italics, indicating that it is a value you supply, but it is also on the main path, which means that you are required to specify at least one entry. The repeat symbol indicates that you can specify a parameter more than once. Assume that you have three values named VALUEX, VALUEY, and VALUEZ for the variable. The following are some of the statements you might write:

```
COMMAND VALUEX
COMMAND VALUEX VALUEY
COMMAND VALUEX VALUEX VALUEZ
```

Separator with Repeatable Variable and Delimiter

If the repeat symbol contains punctuation such as a comma, you must separate multiple parameters with the punctuation. The following diagram includes the repeat symbol, a comma, and parentheses:

The following is a diagram of a statement with a separator with a repeatable variable and a delimiter:
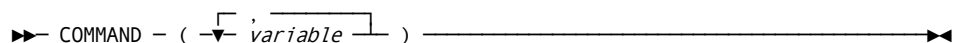
```
               ┌─ , ─────┐
►►─ COMMAND ─ ( ─▼─ variable ─┴─ ) ──────────────────────◄◄
```

In the preceding diagram, the word *variable* is in lowercase italics, indicating that it is a value you supply. It is also on the main path, which means that you must specify at least one entry. The repeat symbol indicates that you can specify more than one variable and that you must separate the entries with commas. The parentheses indicate that the group of entries must be enclosed within parentheses. Assume that you have three values named VALUEA, VALUEB, and VALUEC for the variable.

The following are some of the statements you can write:

```
COMMAND (VALUEC)
COMMAND (VALUEB,VALUEC)
COMMAND (VALUEB,VALUEA)
COMMAND (VALUEA,VALUEB,VALUEC)
```

Optional Repeatable Parameters

The following diagram shows a list of parameters with the repeat symbol for optional repeatable parameters:
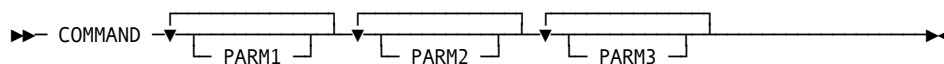
The following are some of the statements you can write:

```
COMMAND PARM1
COMMAND PARM1 PARM2 PARM3
COMMAND PARM1 PARM1 PARM3
```

Default Value for a Parameter

The placement of YES in the following diagram indicates that it is the default value for the parameter. If you do not include the parameter when you write the statement, the result is the same as if you had actually specified the parameter with the default value.

The following is a diagram of a statement with a default value for an optional parameter:
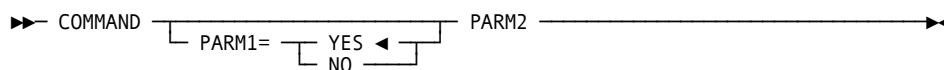
For this command, COMMAND PARM2 is the equivalent of COMMAND PARM1=YES PARM2.

Variables Representing Several Parameters

In some syntax diagrams, a set of several parameters is represented by a single reference.

The following is a diagram of a statement with variables representing several parameters:

```
►►─ COMMAND ─┬─ PARM1 ──────────┬─────────────────────────◄►
             └─ parameter-block ┘
```
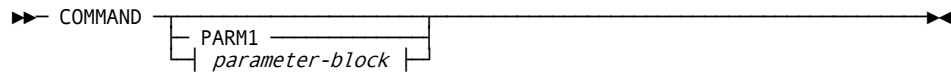
Expansion of parameter-block

```
├────────────────────────────────────────────┤
   ┌─ PARM2 ──────────┐
   ├─ PARM3 ─┬────────┤
             ├─ PARM4 ─┤
             └─ PARM5 ─┘
```
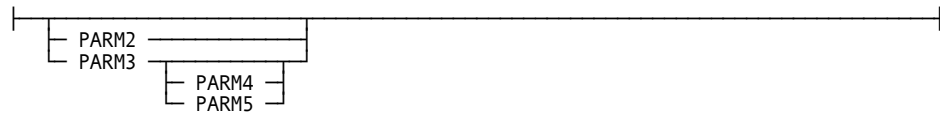
The *parameter-block* can be displayed in a separate syntax diagram.

Choices you can make from this syntax diagram include, but are not limited to, the following:

```
COMMAND PARM1
COMMAND PARM3
COMMAND PARM3 PARM4
```

Note: Before you can specify PARM4 or PARM5 in this command, you must specify PARM3.

Listing Libraries in Your JCL

Guidelines to assist you in preparing your JCL are provided in this manual. The sample code provided in this document is intended for use as a reference aid only and no warranty of any kind is made as to completeness or correctness for your specific installation.

Samples and product customization JCL and programs are provided in the installation library (in z/OS, the default name for this library is CAAXSAMP). These members are copied to an INSTJCL PDS so they can be modified for the actual installation and customization process.

Any JOB statements should be coded to your site standards and specifications. All data set names and library names should be specified with the correct names for the installation at your site. In many examples, a REGION= or SIZE= parameter is displayed in an EXEC statement. The value displayed should be adequate in most instances, but you can adjust the value to your specific needs.

The libraries listed for searching must include the following in the order shown:

1. User-customized libraries you may have defined for specially assembled and linked tables, such as DBMSTLST, DBSIDPR, DDSRTLM, DQSYSTBL, or User Requirements Tables (CUSLIB)

2. CA Datacom/AD base executable library (CAAXLOAD): CA Datacom/DB, CA Datacom Datadictionary, CA Dataquery, CA IPC, CA Datacom Server, and CA Datacom SQL

3. CA Common Services for z/OS base libraries

CA Dataquery users also need the following libraries and data sets for the following specific functions:

- The z/OS data set DQOUT is used only if the DQBATCH execution uses the EXPORT function.

- In z/OS, running deferred queries with separate JCL members in batch requires the SYSIN statement DEFER. A DD statement for the internal reader used by VPE is also required, as follows:

```
//IRDR DD       SYSOUT=(A,INTRDR)
```

Introduction to CA Common Services for z/OS

To help you quickly understand all that the CA Common Services for z/OS offer, this section provides a description of each service used by CA Datacom/AD.

CA Common Services for z/OS is a group of system services that protect your investment in software by helping you manage your data center more efficiently. Each of the CA Common Services for z/OS offers individual benefits. The following components are used with and benefit CA Datacom/AD:

- CA-C Runtime is a C language runtime engine that allows you to take advantage of C language-based programs.

- CA Health Checker provides checks and advice for best performance of the product.

- CAMASTER is required for CAIRM PC Call installation.

- CAICCI allows your CA products to work together across platforms, making your software more powerful.

- CAIENF, CA LMP, and CAIRIM assist you in getting your CA products running and keeping them running.

- CAISSF enables your CA products to offer standardized security interfaces.

CA-C Runtime

CA-C Runtime is a run-time facility with reentrant capabilities. Its modular architecture insulates CA-C Runtime programs from system and version dependencies. There is little, if any, system-dependent code linked with the user program. This allows for smaller user programs and easier maintenance. CA-C Runtime uses a memory manager to handle dynamic allocation requests for small pieces of storage. This enables fewer calls to be made on the operating system, resulting in faster allocation and deallocation. CA-C Runtime features include:

- Calling functions written on other languages, such as Assembler or COBOL

- Runtime kernels for each host environment

- Device drivers for each environment

- Single data structure for entry points

CA Health Checker

The CA Health Checker (CAHCHECK) common service provides a simple and consistent method for CA products to create health checks to run under the IBM Health Checker for z/OS. The IBM Health Checker for z/OS lets you identify potential problems in your z/OS environment by checking system or product parameters and system status against recommended settings. CA Technologies has joined other vendors in creating checks for CA z/OS products. CA Datacom health checks are automatically activated on the target system when the product is started on a system where the following components are installed and configured:

- CA Health Checker Common Service

- IBM Health Checker for z/OS

For more information about installing the CA Health Checker common service, see the *CA Common Services Installation Guide*.

For more information about the IBM Health Checker for z/OS, see the *IBM Health Checker for z/OS User Guide*.

CAMASTER

CAMASTER is a noncancelable started task. CAMASTER provides an anchor point for permanently resident PC routines and data spaces used by various CA Technologies products and CA Common Services. The CA Health Checker address space is a good example. Storage resources are provided to CA Technologies components that are used instead of CSA and ECSA, which reduce the demand on common storage for your system.

Historically, the IBM Master Scheduler address space was used for this purpose. However, the accumulation of such routines and data spaces in the IBM Master Scheduler address space is perceived as undesirable. Therefore, CA Technologies is moving toward using the CAMASTER permanent address space instead.

CAICCI

The CAI Common Communications Interface (CAICCI) is a communications facility that offers a simple and flexible approach enabling CA products to communicate with one another. This facility provides a layer that isolates application software from the specifics of the communications environment. The routines which make this possible are grouped under the CA z/OS service code W410. CAICCI features include:

- Single point-of-control

- Multiple platform support

- Performance optimization

- Peer-to-peer (program to program) communication

- Parallel conversations

- Dynamic installation configuration

- Ease of customization

- Error handling

CAIENF

The CAI Event Notification Facility (CAIENF) is an operating system interface service that offers a simple and flexible approach for CA Technologies products to obtain data from z/OS. By centralizing operating system interfaces within CAIENF, many features which were formerly available within a single product can be shared across the entire product line. CAIENF includes the following features:

- Dynamic installation and reconfiguration

- True recovery from system or individual power outages

- High performance asynchronous processing

- Single interface between CA products and operating system data

- Built-in diagnostic aids

- Ease of customization

- Exploitation of relational database technology

CA LMP

The CA License Management Program (CA LMP) provides a standardized and automated approach to the tracking of licensed software. It uses common real-time enforcement software to validate user configuration. CA LMP reports on activities related to the license, usage, and financials of your CA Technologies products. CA LMP includes the following features:

- Common key data set, which can be shared among many CPUs

- "Check digits" used to detect errors in transcribing key information

- Execution keys you can enter without affecting any CA product already running

- No special maintenance requirements

CAIRIM

The CAI Resource Initialization Manager (CAIRIM) is the common driver for a collection of dynamic initialization routines that eliminate the need for user SVCs, SMF exits, subsystems, and other installation requirements commonly encountered when installing system software. CAIRIM includes the following features:

- Obtaining SMF data

- Verification of proper software installation

- Installation of z/OS interfaces

- Automatic startup of CA and other vendor products

- Proper timing and order of initialization

CAISSF

The CAI Standard Security Facility (CAISSF) allows CA Technologies products to offer standardized security interfaces without regard to the particular needs of underlying access control software. CAISSF offers user authentication and resource access validation facilities, and can interface with CA security products (CA ACF2 for z/OS or CA Top Secret for z/OS) or compatible non-CA security products.

For CA security products, CAISSF includes the following features:

- A single security mechanism
- Isolation of CA Technologies products from other product mechanisms

For non-CA security products, CAISSF includes the following features:

- Resource class translation
- Access level translation
- Selective logging of requests
- Request type control
- Message support for failed access

Using CA LMP

CA Datacom requires CA LMP to initialize correctly. CA LMP also provides a standardized and automated approach to the tracking of licensed software.

Examine the CA LMP Key Certificate you received with your product installation package. To obtain the CA LMP Key again, see the Licensing section on CA Support at support.ca.com. That certificate contains the following information:

Key Certificate

Product Name

The trademarked or registered name of the CA Technologies product licensed for the designated site and CPUs.

Supplement

The reference number of your license for the particular product, in the format *nnnnnn - nnn*. This format differs slightly inside and outside North America, and in some cases may not be provided at all.

Expiration Date

> The date (*month dd, yyyy*, as in March 20, 2012) your license for this product expires.

Technical Contact

> The name of the technical contact at your site who is responsible for the installation and maintenance of the designated product, that is, the person to whom CA Technologies addresses all CA LMP correspondence.

MIS Director

> The name of the Director of MIS, or the person who performs that function at the site. If the title but not the name of the person is indicated on the Certificate, supply the actual name when correcting and verifying the Certificate.

CPU Location

> The address of the building where the CPU is installed.

Execution Key

> An encrypted code required by CA LMP for product initialization. During installation, it is referred to as the LMP Code.

Product Code

> A two-character code that corresponds to this particular product.

CPU ID

> The code that identifies the specific CPU for which installation of your product is valid.

CA LMP is provided as an integral part of CAIRIM. After CAIRIM has been installed, CA LMP support is available for all CA products.

Defining KEYS

Proper initialization of any CA product requires the addition of the CA LMP execution key provided on the Key Certificate to the CAIRIM parameters. To define a CA LMP execution key to the CAIRIM parameters, modify member KEYS in the OPTLIB data set. This is the parameter structure of member KEYS:

```
PROD(pp) DATE(ddmmmyy) CPU(tttt-mmmm/ssssss) LMPCODE(kkkkkkkkkkkkkkkk)
```

(*pp*)

> The two-character product code. For any given CA LMP product, this code agrees with the product code already in use by the CAIRIM initialization parameters for earlier genlevels of the product.

(*ddmmmyy*)

The CA LMP licensing agreement expiration date.

(*tttt-mmmm*)

The CPU type and model (for example, 3090–600) on which the CA LMP product will run. If the CPU type, model, or both require fewer than four characters, blank spaces are inserted for the unused characters.

(*ssssss*)

The serial number of the CPU on which the CA LMP product will run.

(*kkkkkkkkkkkkkkkk*)

The execution key needed to run the CA LMP product. This CA LMP execution key is provided on the Key Certificate shipped with each CA LMP product.

Example

In this example, the CA LMP execution key value is invalid and provided *as an example only*.

```
PROD(AX) DATE(30JUN09) CPU(3090-600 /370623) LMPCODE(52H2K06130Z7RZD6)
```

For a full description of the procedure for defining the CA LMP execution key to the CAIRIM parameters, see your CA Common Services for z/OS documentation.

CAMASTER Reminder

Important! Verify that you have read the information about the new CAMASTER-related requirement in CA Datacom/AD Version 14.0 (see CAMASTER (see page 22)).

Chapter 2: Preparing for Installation

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

This section contains the following topics:

Hardware Requirements

All hardware and software requirements for your system must be met prior to installing, upgrading, or maintaining the CA Datacom/AD package of products for the z/OS environment.

Hardware requirements are as follows:

- An IBM mainframe that runs any currently supported IBM z/OS operating system.

  Note: Any z/OS that is in the IBM extended support program is not included as supported by CA Datacom.

If System Managed Storage (SMS) is being used, you are required not to mix device types in a storage class used for CA Datacom.

Software Requirements

Software requirements are as follows:

Note: For documentation about the migrate or porting procedure (Quick Upgrade), see Migration/Porting Phase for Non-SQL Created Databases (see page 91).

■ A version of z/OS as supported by IBM is required.

■ SMP/E in a version and release as supported by IBM is required. For more information about SMP/E, see IBM SMP/E (see page 13).

■ Installation of CA Datacom/AD Version14.0 requires installation of certain components of CA Common Services for z/OS with all current maintenance applied.

 – Component CAIRIM is required for CA LMP support. CA LMP is required by all CA products.

 – Components CAICCI, CAIENF, and CAISSF are required.

 – Component CAMASTER Address Space is required.

 For more information, see Introduction to CA Common Services for z/OS (see page 20).

CA SYSVIEW is not required. However, if you have this product with the CA Datacom component, it provides a unique toolset. CA SYSVIEW Version 12.7 is a toleration release, which means limited support for CA Datacom 14.0. CA SYSVIEW Version 13.0 provides full support for CA Datacom Version 14.0.

CA IPC and CA Common Services for z/OS Utilities

Following is a list of CA IPC and CA Common Services for z/OS utilities, with references to the location of related documentation.

Product	Utility Name	Function	See:
CA IPC	SCPSUTIL	Print Subsystem Utility	*CA IPC Implementation Guide*
CA IPC	VLSUTIL	VLS Utility	*CA IPC Implementation Guide*
CA Common Services for z/OS	CAIRIM	CA Resource Initialization Manager	*CA Common Services for z/OS Administration Guide*

Library Requirements

The CA Datacom load libraries are required to be APF authorized. The CA Common Services for z/OS load library and the CA IPC load library should already be APF authorized.

INSTJCL member AXAPFADD can be used if you have a SYSVIEW license to help add the libraries to the APF list dynamically. This is not a permanent path and is lost on the next IPL. Your site needs to make these permanent changes to the APF list.

INSTJCL member AXRIM01 (see Step 2. Load DB Program Call Using CAIRIM) requires use of CAIRIM to install the CA Datacom Program Call PC routines. CAIRIM and the invoking CA Datacom/DB module, DBCR4PR, must operate from an APF-authorized library to complete successfully. Add this functionality to your existing CAS9 process, which runs after each IPL, for each z/OS image that needs to support CA Datacom/AD. The next IPL then causes the loss of the PC Calls.

DASD Requirements

Disk space requirements depend on your product mix. The tables provided on the next few pages indicate the estimated tracks of DASD space required. Each data set, library, or database name is preceded by the high-level qualifier (for example, CAI.HLQ or CAI.SHLQ). The column heading **Volume** in the tables refers to the VOLSER given in the installation worksheet.

Summary of DASD Space Requirements (3390)

The following tracks by volume are needed for new installations.

Note: These totals reflect the required jobs only. The optional jobs are not included in the following totals.

Volume	CA Datacom/AD
DASD01	5817
DASD02	870
DASD03	2130
CSIVOL	120
Total	8937

SMP/E CSI and Data Sets

The following tracks are needed for new installations:

Name	3390 Tracks
SMPCSI.CSI	
SMPCSI.CSI.DATA	225
SMPCSI.CSI.INDEX	2
SMPSCDS	1 20
SMPLTS	75
SMPMTS	75
SMPPTS	825
SMPSTS	75
SMPLOG	75
SMPLOGA	75
SAMPJCL	43
NULLFILE	1
Total	1591

SMP/E Distribution Libraries

The following tracks are needed for new installations:

Name	3390 Tracks
AAAXMOD0	510
AAAXMAC	60
AAAXSAMP	210
AAAXDATV	585
AAAXHFS	150
AAAXXML	60
Total	1575

SMP/E Target Libraries

The following tracks are needed for new installations:

Name	3390 Tracks
CAAXMAC	60
CAAXLOAD	900
CAAXSAMP	210
CAAXLPA	10
CAAXDATV	585
CAAXML	60
Total	1825

UNIX System Services Component Installation

CA Datacom Server includes a JDBC component that runs under USS, instead of running CA Datacom Server using a desktop workstation. If you intend to install this component, follow the installation instructions for the USS optional installation in the SAMPJCL member AAXSEDIT.

job AX22MKD. After AX22MKD runs successfully, execute AX23CSIU. Complete the instructions for installing the USS component in each of these jobs.

USS Component HFS Allocation

Important! Ensure that the HFS is mounted in read/write mode before continuing further. The person who installs the USS component must have SUPERUSER authority for the HFS environment.

An existing HFS can also be used, but using a separate HFS eases any future changes to an upgraded release.

To allow for mounting the HFS automatically in subsequent IPLs, update your BPXPRM*xx* member in your SYS1.PARMLIB to include the mount point.

Non-SMP/E Managed INSTJCL Library (JCL High Level Qualifier, CAI.HLQ)

The following tracks are needed for all installations:

Name	Volume	3390 Tracks
INSTJCL	DASD01	100
Total		100

Non-SMP/E Managed Custom Libraries (JCL High-level Qualifier CAI.NEWCHLQ)

The following tracks are needed for new installations:

Name	Volume	3390 Tracks
CUSMAC (Customized Macros)	DASD01	30
CUSLIB (Customized Load Modules)	DASD01	100
CUSPROC (Customized PROCs)	DASD01	30
Total		160

Directory (CXX), Log Area (LXX), Statistics and Diagnostics Area (PXX) and Force Area (FXX) (JCL High-level Qualifier CAI.NEWHLQ)

The following tracks are needed for new installations only:

Name	Volume	3390 Tracks
CXX	DASD01	250
LXX	DASD01	2400
PXX	DASD01	100
FXX	DASD01	90
Total		2840

CBS Database (JCL High-level Qualifier CAI.NEWHLQ)

The following tracks are needed for new installations only:

Note: If not set up as a virtual data area in the MUF startup option VIRTUAL, allocate IXX006.

Name	Volume	3390 Tracks
IXX006*	DASD02	150
Total		150

CA Datacom/DB SQL Databases (JCL High-Level Qualifier CAI.NEWHLQ)

The following tracks are needed for new installations only:

Note: If not set up as a virtual data area in the MUF startup option VIRTUAL, allocate IXX017 and TTM017.

Name	Volume	3390 Tracks
IXX016	DASD02	15
SQ1016	DASD03	15
IXX017	DASD02	120
TTM017	DASD03	150
Total		300

CA Datacom Datadictionary Databases (JCL High-level Qualifier CAI.NEWHLQ)

The following tracks are needed for new installations only:

Name	Volume	3390 Tracks
IXX002	DASD02	300
DD1002	DASD03	900
DDDIXX	DASD02	30
DDD015	DASD03	600
MSG015	DASD03	90

Name	Volume	3390 Tracks
SIT015	DASD03	90
Total		2010

Optional Allocations

If any of the items described in the following sections are not used at your site, ignore their listed allocations, that is to say, depending on the requirements of your site, the allocations for the items described in the following sections are optional:

- Database Backup Data Sets (JCL High-level Qualifier CAI.CXX^BKUP) (see page 34)

- CA Dataquery Database (JCL High-level Qualifier CAI.NEWHLQ) (see page 34)

- History Database (see page 35)

- Sample Databases (see page 35)

- Sample AutoScope Populate (see page 36)

- Sample Accounting Databases Populate (see page 36)

- Sample Change Data Capture (CDC) Populate (see page 37)

Database Backup Data Sets (JCL High-level Qualifier CAI.CXX^BKUP)

The following track is needed for the porting/migration process (AXPOR01):

Name	Volume	3390 Tracks
CXX^NAME.DBID*xxx*.CXX12BKP	DASD01	250
Total		250

Note: In DBID*xxx*, the *xxx* is the database ID for the database being migrated.

CA Dataquery Database (JCL High-level Qualifier CAI.NEWHLQ)

The following tracks are needed for new installations only if you use CA Dataquery:

Name	Volume	3390 Tracks
IXX003	DASD02	60
DQE003	DASD03	30
DQF003	DASD03	50
DQM003	DASD03	60

Name	Volume	3390 Tracks
DQQ003	DASD03	30
DQR003	DASD03	10
DQS003	DASD03	50
DQT003	DASD03	50
DQU003	DASD03	60
DQW003	DASD03	60
Total		460

History Database

The following optional tracks are needed if you choose to install the History database using INSTJCL job AX14HIST

Name	Volume	3390 Tracks
IXX1007	DASD02	30
A011007	DASD03	150
A021007	DASD03	150
Total		330

Sample Databases

These optional databases are used by the IVP programs to test the system after a new installation.

Name	Volume	3390 Tracks
IXX001	DASD02	3
PAY001	DASD03	2
PMF001	DASD03	2
DEM001	DASD03	3
IXX010	DASD02	5
ACT010	DASD03	2
CUS010	DASD03	2
DTL010	DASD03	2

ITM010	DASD03	2
NUM010	DASD03	2
RCP010	DASD03	2
SAL010	DASD03	2
SHP010	DASD03	2
Total		31

Sample AutoScope Populate

The following optional tracks are needed if you choose to install the AutoScope databases using INSTJCL job AX14AUTO:

Name	Volume	3390 Tracks
IXX1018	DASD02	135
STA1018	DASD03	450
IXX1019	DASD02	300
SNP1019	DASD03	750
IXX1020	DASD02	300
DEL1020	DASD03	900
Total		2835

Sample Accounting Databases Populate

The following optional tracks are needed if you choose to install the Accounting databases using INSTJCL job AX14ACCT:

Name	Volume	3390 Tracks
IXX004	DASD02	30
PRM004	DASD03	150
IXX005	DASD02	300
A00005	DASD03	90
A01005	DASD03	90
A02005	DASD03	90
A03005	DASD03	90

A04005	DASD03	90
A07005	DASD03	90
Total		1020

Sample Change Data Capture (CDC) Populate

The following optional tracks are needed if you choose to install the CDC databases using INSTJCL job AX14CDC:

Name	Volume	3390 Tracks
IXX2009	DASD02	30
AR12009	DASD03	150
AR22009	DASD03	150
Total		330

Concurrent Releases

You can install this release of CA Datacom/AD and continue to use an older release in another SMP/E CSI environment. If you plan to continue to run a previous release, consider the following points:

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

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

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

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

Chapter 3: Installing Your Product Using CA MSM

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 39).
2. Install the new product (see page 40).
3. Maintain products already installed in your environment (see page 41).
4. Deploy the product to your target systems (see page 42).
5. Configure the deployed product to your target systems (see page 43).

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 and records these entitlements in a software inventory maintained on your driving system.

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

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 44), 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 (CSIs) 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. Do *one* of the following to select a CSI:

- Create a CSI:

a. Set up the global zone.

b. Create a target zone.

c. Create a distribution zone.

- Use an existing CSI from your working set:

a. Update the global zone.

b. Set up the target zone: Either create a 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, the product is ready for you to deploy. You may have to perform other steps manually outside of CA MSM before beginning the deployment process.

How to Maintain Existing Products

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

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

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.

How to Deploy a Product

The *Software Deployment Service (SDS)* facilitates the deployment of mainframe products from the software inventory of the driving system to the target system. 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 79)

How to Configure a Product

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

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

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 79)

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 the information provided, and click the link to confirm it.

2. Enter your z/OS login user name and password, and click the Log in button.

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

    Note: For more information about the interface, click the 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

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

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

More Information:

Allocate and Mount a File System (see page 51)
Create a Product Directory from the Pax File (see page 59)
Copy Installation Files to z/OS Data Sets (see page 60)

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 47) 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.

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	Preferred FTP ▼	Alternate FTP ▼

Previous 6 day Download History

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

USS Environment Setup

You need a UNIX System Services (USS) directory and a file system with adequate space to perform the following tasks:

■ Receive product pax files from CA Support Online.

■ Perform utility functions to unpack the pax file into z/OS data sets that you can use to complete the product installation.

We recommend that you allocate and mount a file system dedicated to Pax-Enhanced ESD. The amount of space that you need for the file system depends on the following variables:

- The size of the pax files that you intend to download.

- Whether you plan to keep the pax files after unpacking them. We do not recommend this practice.

We recommend that you use one directory for downloading and unpacking pax files. Reusing the same directory minimizes USS setup. You need to complete the USS setup only one time. You reuse the same directory for subsequent downloads. Alternatively, you can create a new directory for each pax download.

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. In the file system that contains the ESD directories, you also need free space approximately 3.5 times the pax file size to download the pax file and unpack its contents. For example, to download and unpack a 14 MB pax file, you need approximately 49 MB of free space in the file system hosting your ESD directory.

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 pax file of the product into the USS directory that 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, ensure that the pax file size in your USS directory matches the value in the Size column for the corresponding pax file on the CA Support Product Downloads window.

More Information:

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.

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 profile.

3. Replace *YourEmailAddress* with your email address.

    The job points to your email address.

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 (see page 47) 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:

    ■   Replace *mainframe* with the IP address of the z/OS system or DNS name.

    ■   Replace *userid* with your z/OS user ID.

    ■   Replace *password* with your z/OS password.

    ■   Replace *C:\PC\folder\for\thePAXfile* with the location of the pax file on your PC.

    ■   Replace *yourUSSESDdirectory* with the name of the USS directory that you use for ESD downloads.

    ■   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 y*ourHLQ* 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 y*ourHLQ* as you use for the SMP/E RELFILEs.

   All occurrences of y*ourHLQ* 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.

Prepare the SMP/E Environment for Pax Installation

The members used in this procedure prepare the data sets, initialize the zones, and create the DDDEFs for CA Datacom/AD.

Prior to beginning this procedure, confirm whether your product uses UNIX System Services (USS). If it does, establishing a hierarchical file system (HFS) may be required as part of the product installation or required as a feature of the product.

The procedure to prepare the SMP/E environment for your product follows.

Follow these steps:

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

   If your product requires HFS or if you want to install a feature of the product that requires HFS, follow the instructions in the AAXSEDIT to optionally install the USS function. The person who installs the USS component must have SUPERUSER authority for the HFS environment.

   The macro is ready to customize the *yourHLQ*.CAI.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 AAXSEDIT macro each time you open a new SAMPJCL member. To edit all SAMPJCL members simultaneously, read and follow the instructions in the AAXEDALL member.

2. Open the SAMPJCL member AAX1ALL in an edit session and execute the AAXSEDIT macro from the command line.

   AAX1ALL is customized.

3. Submit AAX1ALL.

   This job produces the following results:

   - The target and distribution data sets for CA Datacom/AD are created.

   - Unique SMPLTS, SMPMTS, SMPSCDS, and SMPSTS data sets for this target zone are created.

4. Open the SAMPJCL member AAX2CSI in an edit session and execute the AAXSEDIT macro from the command line.

   AAX2CSI is customized.

5. Submit AAX2CSI.

   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.

6. If your product requires HFS or if you want to install a feature of the product that requires HFS, complete the following substeps: The person who installs the USS component must have SUPERUSER authority for the HFS environment.

   1. Open the SAMPJCL member AX22MKD in an edit session, and execute the AAXSEDIT macro from the command line.

      AX22MKD is customized.

   2. Submit AX22MKD.

      This job allocates your HFS data sets, creates all directories, and mounts the file system.

   3. Open the SAMPJCL member AX23CSIU in an edit session, and execute the AAXSEDIT macro from the command line.

      AX23CSIU is customized.

   4. Submit AX23CSIU.

      This job customizes the CSI by adding the DDDEFs associated with the directory.

Run the Installation Jobs for a Pax Installation

Submit and run these *yourHLQ*.CAI.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 AAX3RECD in an edit session and execute the AAXSEDIT macro from the command line.

   AAX3RECD is customized.

2. Submit the *yourHLQ*.CAI.SAMPJCL member AAX3RECD to receive SMP/E base functions.

   CA Datacom/AD is received and now resides in the global zone.

3. Open the SAMPJCL member AAX4APP in an edit session and execute the AAXSEDIT macro from the command line.

   AAX4APP is customized.

4. Submit the *yourHLQ*.CAI.SAMPJCL member AAX4APP to apply SMP/E base functions.

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

5. Open the SAMPJCL member AAX5ACC in an edit session and execute the AAXSEDIT macro from the command line.

   AAX5ACC is customized.

6. Submit the *yourHLQ*.CAI.SAMPJCL member AAX5ACC to accept SMP/E base functions.

   Your product 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 z/OS 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 z/OS 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 may have maintenance and HOLDDATA that have been published since the installation data was created. The following steps describe the procedure to apply maintenance.

Follow these steps:

1. Check CA Support Online and download any PTFs and HOLDDATA published since this release was created.

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*.CAI.SAMPJCL maintenance members.

3. The AAXSEDIT macro was customized in the installation steps. Verify that you still have the values from the base install.

4. Open the SAMPJCL member AAX6RECP in an edit session and execute the AAXSEDIT macro from the command line.

   AAX6RECP is customized with your JOB statement, CSI location, and zone names.

5. Customize the AAX6RECP SMPPTFIN and SMPHOLD DD statements to reference the FB 80 data sets for the PTFs and HOLDDATA.

6. Submit AAX6RECP.

   The PTFs and HOLDDATA are received.

7. Open the SAMPJCL member AAX7APYP in an edit session and execute the AAXSEDIT macro from the command line.

   AAX7APYP is customized.

8. Submit AAX7APYP.

   The PTFs are applied.

9. (Optional) Open the SAMPJCL member AAX8ACCP in an edit session and execute the AAXSEDIT macro from the command line.

   AAX8ACCP is customized.

10. (Optional) Submit *yourHLQ*.CAI.SAMPJCL member AAX8ACCP.

    The PTFs are accepted.

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

HOLDDATA

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

System HOLDDATA

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

ACTION

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

AO

Affects automated operations. It changes either the message identifier or the displacement of a field inside the message.

DB2BIND

Indicates that DBRMs have changed and packages need to be rebound.

DDDEF

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

DELETE

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

DEP

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

DOC

Indicates a documentation change with this SYSMOD.

DYNACT

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

EC

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

ENH

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

EXIT

Indicates that changes delivered by this SYSMOD require reassembly of user exits.

EXRF

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

IPL

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

MSGSKEL

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

MULTSYS

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

RESTART

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

SQLBIND

Indicates that a bind is required for a database system other than DB2.

SYSMOD

Indicates that some or all of the elements delivered by this SYSMOD are to be downloaded to a workstation.

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

External HOLDDATA

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

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

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

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

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

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

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

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

Chapter 5: Installing Your Product from Tape

This section contains the following topics:

Unload the Sample JCL from Tape

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

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=nnnnnn,
    //                LABEL=(1,SL)
    //SYSUT2    DD    DSN=yourHLQ.CAI.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.

    nnnnnn

    Specifies the tape volume serial number.

    yourHLQ

    Specifies the data set prefix for the installation.

    sysda

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

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

2. Continue with one of the following options:

   ▪ If you already have the SMP/E environment set up, go to Run the Installation Jobs for a Tape Installation (see page 74).

   ▪ If you *do not* have the SMP/E environment set up, go to Prepare the SMP/E Environment for Tape Installation (see page 73).

How to Install Products Using Native SMP/E JCL

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

1. Allocate product data sets and SMP/E data sets.

2. Create SMP/E CSI.

3. Receive base functions.

4. Apply base functions.

5. Accept base functions.

6. Configure the product according to your site requirements.

Prepare the SMP/E Environment for Tape Installation

The members used in this procedure prepare the data sets, initialize the zones, and create the DDDEFs for CA Datacom/AD.

Before beginning this procedure, confirm whether your product uses UNIX System Services (USS). If it does, establishing a hierarchical file system (HFS) may be required as part of the product installation or required as a feature of the product.

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

The following procedure prepares the SMP/E environment for your product.

Follow these steps:

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

    If your product requires HFS or if you want to install a feature of the product that requires HFS, follow the instructions in the AAXSEDIT to optionally install the USS function. The person who installs the USS component must have SUPERUSER authority for the HFS environment.

    The macro is ready to customize the *yourHLQ*.CAI.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 AAXSEDIT macro each time you open a new SAMPJCL member. To edit all SAMPJCL members simultaneously, read and follow the instructions in the AAXEDALL member.

2. Open the SAMPJCL member AAX1ALL in an edit session and execute the AAXSEDIT macro from the command line.

    AAX1ALL is customized.

3. Submit AAX1ALL.

    This job produces the following results:

    ■   The target and distribution data sets for CA Datacom/AD are created.

    ■   Unique SMPLTS, SMPMTS, SMPSCDS, and SMPSTS data sets for this target zone are created.

4. Open the SAMPJCL member AAX2CSI in an edit session and execute the AAXSEDIT macro from the command line.

    AAX2CSI is customized.

5. Submit AAX2CSI.

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.

6. If your product requires HFS or if you want to install a feature of the product that requires HFS, complete the following substeps: The person who installs the USS component must have SUPERUSER authority for the HFS environment.

    1. Open the SAMPJCL member AX22MKD in an edit session, and execute the AAXSEDIT macro from the command line.

        AX22MKD is customized.

    2. Submit AX22MKD.

        This job allocates your HFS data sets, creates all directories, and mounts the file system.

    3. Open the SAMPJCL member AX23CSIU in an edit session, and execute the AAXSEDIT macro from the command line.

        AX23CSIU is customized.

    4. Submit AX23CSIU.

        This job customizes the CSI by adding the DDDEFs associated with the directory.

Run the Installation Jobs for a Tape Installation

Submit and run these *yourHLQ*.CAI.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 AAX3RECT in an edit session and execute the AAXSEDIT macro from the command line.

    AAX3RECT is customized.

2. Submit the *yourHLQ*.CAI.SAMPJCL member AAX3RECT to receive SMP/E base functions.

    CA Datacom/AD is received and now resides in the global zone.

3. Open the SAMPJCL member AAX4APP in an edit session and execute the AAXSEDIT macro from the command line.

    AAX4APP is customized.

4. Submit the *yourHLQ*.CAI.SAMPJCL member AAX4APP to apply SMP/E base functions.

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

5. Open the SAMPJCL member AAX5ACC in an edit session and execute the AAXSEDIT macro from the command line.

   AAX5ACC is customized.

6. Submit the *yourHLQ*.CAI.SAMPJCL member AAX5ACC to accept SMP/E base functions.

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

Apply Maintenance

CA Support Online may have maintenance and HOLDDATA that have been published since the installation data was created.

The following steps apply maintenance.

Follow these steps:

1. Check CA Support Online and download any PTFs and HOLDDATA published since this release was created.

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*.CAI.SAMPJCL maintenance members.

3. The AAXSEDIT macro was customized in the installation steps. Verify that you still have the values from the base install.

4. Open the SAMPJCL member AAX6RECP in an edit session and execute the AAXSEDIT macro from the command line.

   AAX6RECP is customized with your JOB statement, CSI location, and zone names.

5. Customize the AAX6RECP SMPPTFIN and SMPHOLD DD statements to reference the FB 80 data sets for the PTFs and HOLDDATA.

6. Submit AAX6RECP.

   The PTFs and HOLDDATA are received.

7. Open the SAMPJCL member AAX7APYP in an edit session and execute the AAXSEDIT macro from the command line.

   AAX7APYP is customized.

8. Submit AAX7APYP.

   The PTFs are applied.

HOLDDATA

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

System HOLDDATA

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

ACTION

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

AO

Affects automated operations. It changes either the message identifier or the displacement of a field inside the message.

DB2BIND

Indicates that DBRMs have changed and packages need to be rebound.

DDDEF

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

DELETE

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

DEP

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

DOC

Indicates a documentation change with this SYSMOD.

DYNACT

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

EC

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

ENH

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

EXIT

Indicates that changes delivered by this SYSMOD require reassembly of user exits.

EXRF

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

IPL

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

MSGSKEL

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

MULTSYS

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

RESTART

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

SQLBIND

Indicates that a bind is required for a database system other than DB2.

SYSMOD

Indicates that some or all of the elements delivered by this SYSMOD are to be downloaded to a workstation.

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

External HOLDDATA

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

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

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

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

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

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

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

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

Chapter 6: Starting Your Product

This section describes what you need to do to start CA Datacom/AD.

This section contains the following topics:

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 .

Startup JCL Procedures Customized by CA MSM

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.

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 .

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.

Customizing the CA Datacom AD Environment

Create Installation JCL Data Set (INSTJCL)

Sites should run the steps to build, populate, and mass-edit the installation JCL data set. This is accomplished by running member AXCUS00 in CAAXSAMP to create the INSTJCL PDS. Before executing AXCUS00, fill out the Installation Worksheet according to your site standards (see Installation Worksheet (see page 103)). When you have accomplished that task, apply those values to a special member, $DCAXEDT. To modify this member, use special instructions in the member or execute $DCAXEDT member ISREDIT. Never save this member in CAAXSAMP because it is under SMP/E control.

You can copy $DCAXEDT to your personal CLIST library and make the changes necessary following the work sheet you have filled out.

This installation process assumes that you are using an ISPF terminal that displays the " ^ " (the caret symbol). This character exists as the shift key character above the number 6 key on your keyboard. The ISPF terminal type is set in ISPF option 0, and 3278 is a terminal type that displays the caret symbol correctly. Your 3270 terminal or terminal emulation code page setting can also influence the display of characters.

Installing the CA Datacom Version 14.0 PC Calls

All sites should run the step to utilize CAIRIM to load the CA Datacom Version 14.0 PC Calls into the z/OS operating system. Sites should also follow the procedure to permanently add this PC Call activation to the sites CAS9 procedure. The installation process that follows gives details about using member AXRIM01 to install the PC Calls.

New Installations for All Sites

All sites should run the AXCUS01 and AXNEW01 steps to build a new CA Datacom/AD environment. Upon completion, you have a fully functional CA Datacom/AD environment ready to be used to support the other CA Technologies products installed.

Prerequisites

Before to starting this installation, do the following:

- Read the cover letter and any Product Information Packets (PIPs) delivered with the installation tape.

- Read the README file for the product on CA Support Online http://support.ca.com. For information on finding the README file, see How to Access the README File (see page 13).

- Fill out the Installation Worksheet before you run any post-installation jobs (see Installation Worksheet (see page 103)). Having the Installation Worksheet available during the actual running of the CA Datacom/AD installation jobs is a requirement.

Each step for the required installation procedures, customization, and demonstration of the CA Datacom in the z/OS environment is presented in the topics that follow.

Worksheet

Before you perform any installation activity, see the Installation Worksheet (see page 103). These procedure parameters are required for all CA Datacom product installation jobs. Verify that each parameter has a valid value. Use the worksheet in Installation Worksheet (see page 103) or see member @AXWKSHT for an electronic copy.

Preparing for Installation

The procedure for this installation only supports new installations for CA Datacom/AD. No upgrade process is available.

Install the CA Technologies product that uses CA Datacom/AD after you have completed the CA Datacom/AD installation process.

Check the README file. The README file contains information not available elsewhere about various important topics, including product concerns, new features, and installation or maintenance issues. The README file is available through the online support site at http://support.ca.com. For more information, see How to Access the README File (see page 13).

CA Datacom/AD Environment

A single CA Datacom/AD environment consists of the following:

- A set of data sets containing unique information about and for the environment.
- One logical server/controller known as a Multi-User Facility (MUF).

Because a site has many z/OS systems and multiple Sysplex occurrences, more than one CA Datacom environment can sometimes be needed.

To separate the identity of each environment, a unique name must be assigned. The name should be seven or fewer positions long and meet the requirements needed to be part of a data set name node. To make data set ownership clear and prevent problems caused by having data sets used by multiple (or wrong) environments, it is a best practice (though not a requirement) to make the name a node in each data set.

The CA Datacom system data set controlling the environment is the Directory with a data set DDNAME of CXX. The name selected for each environment is provided to CA Datacom as the CXXNAME. Access to the data set environment is primarily through the MUF and secondarily through the utility function processor named DBUTLTY. The MUF is often a single instance of an executing program DBMUFPR to provide services to all accesses to the data in this environment. In this configuration, the name of the MUF would be the same as the name of the CXX. The MUF can also be configured as two instances or Jobs with one the primary and active server and the second doing tracking as a shadow to take over processing quickly should the primary fail. In this configuration, the CXX name would become the MUFPLEX name as the identity of the group of MUF instances, and each MUF instance would need its own identity or MUF name that would be the CXX name suffix with numbers 1 and 2 or the letters A and B.

Choosing to use a full 8-byte name at this time causes the customization member AXCUS01 to receive a condition code 1. The only way to rectify a condition code 1 is to follow the best practices by using a 1 to 7 byte name. Using the 1 to 7 byte name allows member AXCUS01 to end with condition code zero.

To define the specific environment, CA Datacom provides one Macro (DBSYSID) with key word options providing the names of the CXX and the MUF instances. In addition, it provides many other options that define the environment configuration.

Installation in the SYSPLEX Environment

When installing in a SYSPLEX environment, add the appropriate JOBPARM or ROUTE XEQ statement to ensure that the installation jobs are consistently executed on the appropriate processor.

In a SYSPLEX environment, make the CXX name unique. A unique CXX name is not only a best practice but a requirement for using the Simply feature in CA Datacom/AD Version 14.0. To simplify naming standards, give the CA Datacom/AD MUF name and the CXX name the same value.

A valid CXX name can be 8 bytes in length. We recommend that you make the name 1 to 7 bytes long and use the eighth byte for the Data Sharing or MUFplex feature.

You can discover what CXX names are in use by each LPAR by running a DBUTLTY JOB using REPORT MEMORY=MVS as the SYSIN value. If all the MUFs have been enabled since the last IPL of that LPAR, the MEMORY=MVS report contains the complete list of MUFs for that LPAR. This report is complete only after all the available MUFs have been started on a given LPAR after IPL. If you run this report before any MUF is started, that CXX name will be missing from the report.

A column in the MEMORY=MVS report has a heading of CXX Name. Use that column to collect the values that are in use for all LPARs. CA Datacom forces an enqueue action on the CXX SYSPLEX wide for CA Datacom/AD. A good practice is a unique name for all CXX names for your site. Starting with CA Datacom/AD Version 14.0, the CXX name has no default value, therefore you must determine that unique value yourself.

CXX^NAME is symbolic for the CXX name.

The DBSIDPR parameter FORCE_DSN_CXXNAME=NO is the recommended default because of the need for the majority of existing CA Datacom/AD sites to port or migrate their existing application database from the Version 10.0, 11.0, or 12.0 CA Datacom/AD source MUF. Those data sets often do not use the CXX name as one of the data set nodes. Therefore, this feature is turned off. If you have this feature turned on in DBSIDPR and the physical open is attempted with a data set that has no matching data set node to the CXX name, the open fails.

Sample JCL Data Sets

The SAMPJCL data set now contains only the JCL needed for the SMP/E install.

The CAAXSAMP is under SMP/E control, which contains the JCL members to be copied to create the INSTJCL PDS. After the SMP/E installation is completed successfully, use member AXCUS00 in CAAXSAMP to create the INSTJCL. INSTJCL is the PDS you can actually edit and save the members for your installation. Be careful when you edit the AXCUS00 member and do not save changes in the PDS CAAXSAMP.

INSTJCL Member Names

The INSTJCL member names can be easily identified during any installation.

The following members are required to be run to build the CA Datacom/AD MUF.

AXRIM01

Installs the PC CALLS.

AXAPFADD

Is a CA SYSVIEW example to dynamically add libraries to be APF listed.

AXCUS01

Has all the customization for the CA Datacom/AD MUF.

AXNEW01

Allocates and populates all the datasets needed by the CA Datacom/AD MUF.

AD14STRT

Is the sample JCL to start the MUF.

AXIVP01

Is a sample install verification JOB.

The following members are optional jobs.

AD14*

Has the sample members that can be used to help maintain your MUF environment

AX14*

Has jobs to be used as directed by CA Support. The jobs populate other databases as needed.

AXIVP02X

Verifies, if sample databases 1 and 10 are populated, that the population was successful.

AXIVP03X

Verifies, if CA Dataquery (database 3) was populated, that the population was successful.

DSTUPD01

Is a sample of how to apply any future changes to the CA Dynamic System Tables (DST) that are delivered using CA Support.

AXPOR01

Is a sample member to be used to migrate or port a database from a CA Datacom/AD Version 10.0, 11.0, or 12.0 source MUF to a CA Datacom/AD Version 14.0 target MUF.

AXFFB01

Is a sample member used to move a database from a CA Datacom/AD Version 14.0 target MUF to a CA Datacom/AD Version 10.0, 11.0, or 12.0 source MUF.

Installation Sequence

Sample jobs *must* be executed in sequential order by name and number. Review, edit, execute, and successfully complete each installation step before proceeding to the next step.

Follow these guidelines when installing:

1. New Installation Phase

   If you are installing CA Datacom for the first time, the following members have to first be completed successfully: **AXCUS01, AXAPFADD, AXRIM01, AXNEW01,** and **AD14STRT**. If you are building a second MUF on the same LPAR, there is no need for AXAPFADD and AXRIM01 to be run on the same LPAR again if no IPL was generated since the last time those two jobs executed.

2. Installation Verification Phase

   After the installation, execute INSTJCL member **AXIVP01**. When this job has executed successfully, you have verified the CA Datacom/AD environment has been installed.

Review all MUF startup option statements in the job step that adds the MUF startup PARMs member AXDATIN1 to the CUSMAC PDS. Examine the documentation of the CA Technologies using product to see if any changes to this member are suggested.

Customization and Environment Steps

Perform the jobs in this section in before performing the steps in the new installation section (see New Installation Phase (see page 88)).

AXCUS01 creates one of the libraries needed for the APF Authorized process.

The following is a list of the steps that are explained on the following pages:

Step	Description	Purpose
1	Retrieve AXCUS00 from CAAXSAMP perform changes as directed, and submit the JCL.	Creates the INSTJCL PDS and copies members so they can be modified by the site.
2	Retrieve AXCUS01 from INSTJCL, perform changes as directed, and submit the JCL.	Builds CUSTOM data sets, assembles, and links all the customization for the MUF.
3	Retrieve AXAFPADD from INSTJCL. Perform changes as directed and submit the JCL.	APF authorizes the required data sets.
4	Retrieve AXRIM01 from INSTJCL, perform changes as directed, and submit the JCL.	Installs the PC Calls required for the product.

Step 1. Copy the JCL from Target to INSTJCL Library

This step creates the INSTJCL library and copies the new installation JCL from the target library to the INSTJCL library.

Note: If you plan to use the $DCAXEDT macro for editing the JCL members (see Considerations for Installation (see page 12)), do so before beginning the next step.

1. Retrieve member AXCUS00 from your CAAXSAMP library.

2. Make the required global changes (see the instruction block) but *do not save* this member in the CAAXSAMP library.

3. Submit the JCL to complete this step.

4. Review the output for successful completion.

5. Expected condition code is 00.

Step 2. Prepare Product Custom Assemblies

This step prepares the CA Datacom customized assemblies.

1. Retrieve member AXCUS01 from your INSTJCL library.

2. Make the required global changes (see the instruction block).

3. Submit the JCL to complete this step.

4. Review the output for successful completion.

5. Expected condition code is less than or equal to 01 (see the following note).

6. Review, edit, execute, and complete this step before continuing.

   Note: The only reason known to cause the Condition Code (CC) 0001 is when the CXX name is 8 bytes in length. The CXX name and the MUF name are used for this process by the same CXX^NAME symbolic name. The second to last step in this JOB is the step that generates a CC 1 because the name is 8 bytes in length. If CC 0000 is desired from this process, follow best practices for the CXX name. See CA Datacom/AD Environment (see page 82).

Step 3. APF Authorize the Libraries

This job uses CA SYSVIEW. If you do not have this product, use any tool you have to add the CUSLIB and CAAXLOAD to the APF List.

Note: Run this step before attempting any of the new installation jobs.

1. Retrieve member AXAPFADD from your INSTJCL library.

2. Make the required global changes (see the instruction block).

3. Submit the JCL to complete this step.

4. Review the output for successful completion.

5. Expected condition code is 00.

6. Review, edit, execute, and complete this step before continuing.

Step 4. Load DB PC Calls Using CAIRIM

This step loads the CA Datacom/DB PC Calls using CAIRIM.

Note: Run this step before attempting any of the new installation jobs.

1. Retrieve member AXRIM01 from your INSTJCL library.

2. Make the required global changes (see the instruction block).

3. Submit the JCL to complete this step.

4. Review the output for successful completion.

5. Expected condition code is 00.

6. Review, edit, execute, and complete this step before continuing.

For a list of the MUF startup options that can apply to your installation, and for an updated list of DBSIDPR macro parameters, see the *CA Datacom/DB Database and System Administration Guide*.

Important! Install the PC Calls on every machine that might run the MUF region, a DBUTLTY job, or make a database request through the Cross-System Coupling Facility (XCF).

New Installation Phase

The following is a comprehensive list of all possible steps *for a new installation only*. If this is your first time to install CA Datacom, perform these steps after completing those required for all installations. For each time you run AXCUS01, the following new installation steps need to be followed. This process builds all the MUF-related data sets.

Step	Description	Purpose
1	Retrieve AXNEW01 from INSTJCL, perform changes as directed, and submit the JCL.	Allocates and populates all the MUF owning data sets.
2	Modify AXDATIN1 member in the CUSMAC.	Any Customization required needs to be done now. See the *CA Datacom/DB Database and System Administration Guide*.
3	Retrieve AD14STRT from INSTJCL, perform changes as directed, and submit the JCL.	Sample AD MUF startup JCL.

Step 1. Allocate and Populate the MUF Owning Data Sets

This job allocates MUF control data sets, database data sets, and loads the databases required by the MUF for CA Datacom/AD.

1. Retrieve member AXNEW01 from your INSTJCL library.

2. Make the required global changes (see the instruction block).

3. Submit the JCL to complete this step.

4. Review the output for successful completion.

5. Expected condition code is 00.

6. Review, edit, execute, and complete this step before continuing.

If an abend occurs, correct the JCL and repeat the job. This entire job can be repeated as often as you need without any changes being required.

Step 2. Modify AXDATIN1 Member

Complete any required customizations before starting the MUF. This member can be found in the *.CUSMAC PDS. If you need to review any of the MUF Startup Options in this member, see the *CA Datacom/DB Database and System Administration Guide*.

Note: The Version 14.0 MUF does not support the XCFROM startup option that was used in previous releases. In Version 14.0, use the XCF_FROM startup option. For example, if the CA Datacom/AD Version 12.0 MUF startup option XCFFROM had a value of *,QA12, give the CA Datacom/AD Version 14.0 MUF startup option XCF_FROM a value of *,*,QA12,YES. For details, see the *CA Datacom/DB Database and System Administration Guide*.

Step 3. Start the MUF

This long-running job or STC must be up before starting the CA Technologies using product.

1. Retrieve member AD14STRT from your INSTJCL library.

2. Make the required global changes (see the instruction block).

3. Submit the JCL to complete this step.

Installation Verification Phase

Note: The MUF must be active for these jobs to run.

The INSTJCL library member names start with the prefix letters AXIVP are the members that can be run in the installation verification phase. The only member required to be run is AXIVP01. Only run jobs AXIVP02X and AXIVP03X at the direction of CA Support.

Step 1. Execute Sample CA Datacom/DB Programs

Edit and submit INSTJCL library member AXIVP01 to execute multiple programs for CA Datacom/AD execution.

Step 2. Execute Sample SQL Program (optional)

Note: This is an optional job. Run it only at the direction of CA Support.

Prior to running this job, ensure that INSTJCL library members AX14B001 and AX14B010 have run successfully to create databases 001 and 010.

Edit and submit INSTJCL library member AXIVP02X.

Step 3. Execute DQBATCH Program (optional)

Note: This is an optional job. Run it only at the direction of CA Support.

Before running this job, ensure that INSTJCL library member AX14B03 has run successfully to create database 003.

Edit and submit AXIVP03X. This job requires database 3 to be populated before it can run.

Migration/Porting Phase for Non-SQL Created Databases

Migrating the database of a CA Technologies using product from a CA Datacom/AD Version 10.0, 11.0, and 12.0 source MUF to a CA Datacom/AD Version 14.0 target MUF is described in this section.

Note: To clarify terminology, the term target MUF refers to CA Datacom/AD Version 14.0. The term source MUF refers to CA Datacom/AD Versions 10.0, 11.0, or 12.0.

The current process supports those legacy databases that delivered Backup Transport Generator (BTG) transactions to fully define their databases. Legacy databases that used the BTG process can be termed non-SQL created databases, because they do not contain any SQL Data Definition Language (DDL) statements, for example, CREATE statements and ALTER statements.

The migration process supports the porting of Versions 10.0, 11.0, and 12.0 to CA Datacom/AD Version 14.0, that is to say, valid CA Datacom/AD source MUFs for the porting/migration process are Versions 10.0, 11.0, and 12.0. Both the source MUF and the target MUF must be enabled and able to take new work. Because the porting process uses the source MUF and target MUF in the same job, both MUFs must be executing before the migration process can start.

Note: Between the time the porting process begins and the time that a fallback to the previous release is no longer a consideration for a CA Datacom/AD using product, the porting/migration process does not support any kind of structure changes to any CA Datacom/AD using database. Also, do not under any circumstances make any CA Datacom/AD using database structure changes in the porting or fallback processes as delivered.

Two options exist for applying database structure changes, if needed, but both of the following options can only be processed outside of the time line between the beginning of the porting process and the end of any possible need for a fallback.

- If maintenance to any CA Datacom/AD using database is needed, apply the maintenance in the current release (that is, Versions 10.0, 11.0, or 12.0) before you start the porting process to CA Datacom/AD Version 14.0. After applying maintenance, however, be certain to verify that the new database structure is working and that you can successfully use the database in the CA Datacom/AD using product.

- Alternately, apply needed maintenance to any CA Datacom/AD using database after fallback is no longer a consideration by applying maintenance to the CA Datacom/AD using database structure under CA Datacom/AD Version 14.0.

Database Migration of a CA Technologies Using Product that Uses CA Datacom/AD

Before you start the porting process, verify that your site has successfully run the installation verification process for CA Datacom/AD Version 14.0.

The migration process migrates or ports a single database at a time. If, however, your source CA Datacom/AD MUF has more than one database, the process can migrate as many databases as you need to the CA Datacom/AD Version 14.0 target MUF. If your source for the database is a CA Datacom/AD Version 10.0 MUF, you are not required to have CA Datacom/AD Version 11.0 or 12.0 installed at your site. You can migrate your database to the CA Datacom/AD Version 14.0 target MUF directly from CA Datacom/AD Version 10.0. Likewise, if your source for the database is a CA Datacom/AD Version 11.0 MUF, you are not required to have CA Datacom/AD Version 12.0 installed at your site. You can migrate your database to the CA Datacom/AD Version 14.0 target MUF directly from CA Datacom/AD Version 11.0. However, fall back has to be back to the version of MUF from which you ported, that is, if you ported from a Version 10.0 MUF to Version 14.0, you have to fall back to that specific Version 10.0 MUF.

CA Technologies using product for CA Datacom/AD has a special module that allows the DDRTVCAT process to execute for that given CA Datacom/AD using product. To be successful, that library has to be part of the STEPLIB concatenation for this process. This module is called a basis module for this process. Expect this module to be delivered as part of your CA Datacom/AD using product installation when you first installed this product. A basis module can support more than one database DBID when running this process. Installation Worksheet Item 25 addresses this concern (see Installation Worksheet (see page 103)). The current process is set up for the CA Datacom/AD using product library to be placed into the library chain for PGM=DDRTVCAT STEPLIB.

Note: This process does not work If you have SQL-created objects.

If you reinstall the product from the CA Technologies using product , the data from the current CA Datacom/AD Version 10.0, 11.0, or 12.0 source MUF database is lost. Therefore, to make the definitions from the CA Technologies using product in the CA Datacom/AD Version 14.0 target MUF match the definitions in the CA Datacom/AD source MUF, after you unload or back up the database from the CA Datacom/AD supported source MUF, load the data back to the database newly defined to the CA Datacom/AD Version 14.0 target MUF. For an example of the backup or load that is needed, see the information about AD14BKUP or AX14DD in Post-Installation Considerations (see page 97).

Step	Description	Purpose
1	Retrieve AXPOR01 from INSTJCL, perform changes as directed, and submit the JCL.	Migrates a database from CA Datacom/AD Version 10.0, 11.0, or 12.0 source MUF to CA Datacom/AD Version 14.0 target MUF.

Migration/Porting Phase for Non-SQL Created Databases

This job allows an existing database that does not use SQL Objects to be moved from a CA Datacom/AD source MUF (Versions 10.0, 11.0, or 12.0) to a CA Datacom/AD Version 14.0 target MUF. You can process more than one database, if needed, because the process can be repeated, but be certain to follow all the special instructions listed in the member.

Follow these steps:

1. Retrieve member AXPOR01 from your INSTJCL library.

2. Make the required global changes (see the instruction block).

3. Submit the JCL to complete this step.

4. Review the output for successful completion.

5. Expected condition code is 00.

6. Review, edit, execute, and complete this step before continuing.

If an abend occurs, correct the JCL and repeat the job. This entire job can be repeated as often as needed for each database without any changes being required.

Fall back Phase for Non-SQL Created Databases

After migrating or porting a database to CA Datacom/AD Version 14.0, you can, if needed, fall back to the CA Datacom/AD source MUF (Versions 10.00, 11.0, or 12.0). If you have to fall back from Version 14.0 target MUF to the Version 10.0, 11.0, or 12.0 source MUF, do the following:

Follow these steps:

1. Shut down the CA Technologies using products. Make any changes to any JOBs or STCs that are needed to use CA Datacom/AD Versions that are the source CA Datacom/AD MUF.

2. Ensure that the CA Datacom/AD Version 14 MUF stays enabled and available while this JOB is executing.

3. Start the CA Datacom/AD Version 10.0, 11.0, or 12.0 source MUF.

4. Run member AXFFB01

5. Startup the CA Technologies using products so they can connect to the original CA Datacom/AD Version 10.0, 11.0, or 12.0 source MUF.

Step	Description	Purpose
1	Retrieve AXFFB01 from INSTJCL, perform changes as directed, and submit the JCL.	Migrates a database from CA Datacom/AD Version 14.0 target MUF back to the CA Datacom/AD Version 10.0, 11.0, or 12.0 source MUF.

Step 1. Fallback

The CA Datacom/AD Version 14.0 target MUF and the CA Datacom/AD Version 10.0, 11.0, or 12.0 source MUF both have to be up and running for this process to complete successfully. This JOB moves the database back from the CA Datacom/AD Version 14.0 target MUF to the CA Datacom/AD Version 10.0, 11.0, or 12.0 MUF. This job also assumes that AXPOR01 was able to successfully run the DDRTVCAT step, so that the database was cataloged to the CA Datacom/AD Version 14.0 MUF CXX. If AXPOR01 failed before or on the DDRTVCAT step, the database is probably not going to be defined to the CA Datacom/AD Version 14.0 MUF CXX. If this job fails in the first step, the following message is generated on the DBUTLTY COMM CLOSE function:

DB13041E – BASE XXX IS NOT DEFINED.

1. Retrieve member AXFFB01 from your INSTJCL library.

2. Make the required global changes (see the instruction block).

3. Submit the JCL to complete this step.

4. Review the output for successful completion.

5. Expected condition code is 00.

6. Review, edit, execute, and complete this step before continuing.

If an abend occurs, correct the JCL and repeat the job. This entire job can be repeated as often as you need to move the database back to the Version 10.0, 11.0, or 12.0 source MUF without any changes being required.

Chapter 7: Post-Installation Considerations

This section contains the following topics:

Production Jobs

Use the following INSTJCL members to set up production jobs. The CA Datacom MUF has to be enabled for most of these activities. AD14LXXI is an exception. If you need to execute AD14LXXI, ensure that the MUF is down.

- Set up production jobs for your site that are required to run the CA Datacom/AD environment on a daily basis by using INSTJCL member jobs AD14STRT, AD14STOP, AD14LXXS, and AD14PXXR. You can make these jobs standard PROCs or started tasks for your site.

- INSTJCL member AD14STRT starts the CA Datacom/AD environment. This job is a long running task that should be submitted to a job class without a time or CPU limit. This environment must be available for any access to the CA Datacom/AD databases.

   Note: Run the AD14STRT job or STC (Started Task) at a priority just under the priority of the JES subsystem if a CA Datacom/AD is being used with another CA Technologies system product such as CA WA Restart Option for z/OS Schedulers or CA Scheduler.

- INSTJCL member AD14STOP shuts down the CA Datacom/AD environment. All jobs and servers have to be stopped and no longer be attached to the MUF before this job is successful.

- INSTJCL member AD14LXXS spills the inactive Log Area (LXX) records to a Recovery File. If the CA Datacom/AD Log Area fills, update processing against the MUF is stopped until the records are spilled. If your sites are running with LOGRCV NEVER, ignore this job.

- INSTJCL member AD14PXXR prints out the Statistics and Diagnostics Area (PXX) that can be used for tuning or debugging purposes. A PXX report is also printed during the shutdown of the MUF. If MUF is running with MUF startup option SYSOUT, this job can be ignored.

- Back up the CA Datacom/AD Directory (CXX) and databases to tape using INSTJCL member AD14BKUP.

■ Use INSTJCL member AX14DD as a model to restore the backed up CXX and databases from tape created from member AD14BKUP. This member currently loads from the installation backups. If you run AX14DD as is, it uses those backups and returns the MUF to the installation values that initially existed before the products that use CA Datacom/AD were installed into the CA Datacom/AD MUF, which results in the loss of all maintenance done to the CXX, DD, DDD, and CASQLDEFAULT.

■ INSTJCL member AD14COMM uses the COMM option of DBUTLTY to communicate with the MUF.

■ INSTJCL member AD14CXXR prints a report of the CXX file.

■ INSTJCL member AD14LXXI initializes the LXX file. MUF must be down to execute this job.

■ INSTJCL member AXRIM01 executes CAIRIM to install the CA Datacom/AD PC Calls.

■ INSTJCL member AD14SVCR executes DBUTLTY to list all installed SVCs on a given LPAR.

■ INSTJCL member ADYTSTRT is a sample startup for CA Datacom Server to start the Server. CA Datacom/DB MUF has to be started before this job can start.

■ INSTJCL member ADYTSTOP is a sample member for CA Datacom Server to stop the Server. CA Datacom/DB MUF has to be enabled for this task to run.

Additional Optional Jobs

Most CA Datacom/AD sites do not need to use any of the features below, but if one of the features below is needed or required, they are provided.

The following INSTJCL members can be used to implement certain features in CA Datacom/AD:

■ INSTJCL member AX14HIST can be run after a new installation if you want to implement the History database. For more information, see the *CA Datacom/DB Database and System Administration Guide* and the *CA Datacom/DB Best Practices Guide*. Also review the MUF startup options in AXDATIN1 that is a member in PDS *.CUSMAC.

■ INSTJCL member AX14AUTO can be run after a new installation to implement the databases for the AutoScope Performance Metric Tools. For more information, see the *Release Notes*, the *CA Datacom/DB DBUTLTY Reference Guide*, and the *CA Datacom/DB AutoScope User Guide*.

■ INSTJCL member AD14MRAP is a sample job that can be used to install an individual APAR or PTF.

■ INSTJCL member AX14ACCT is a sample job that implements the Accounting Facility. It should be run at the direction of CA Support, if they determine that this is needed to resolve an issue, or at the direction of your CA Technologies using product. For more information, see the *CA Datacom/DB Database and System Administration Guide*. Also review the MUF startup options in PDS *.CUSMAC member AXDATIN1.

■ INSTJCL member AX14CDC is a sample job that implements the Change Data Capture facility. This feature should not be used by most AD sites. For more information, see the *CA Datacom/DB Database and System Administration Guide*. Also review the MUF startup options in PDS *.CUSMAC member AXDATIN1.

■ INSTJCL member AX14B001 can be run after a new install to implement a sample database (database 1). For more information, see the *CA Datacom/DB DBUTLTY Reference Guide*.

■ INSTJCL member AX14B010 can be run after a new install to implement a sample database (database 10). For more information, see the *CA Datacom/DB DBUTLTY Reference Guide*.

■ INSTJCL member AX14B003 is a sample job that implements the CA Dataquery database. For more information, see the *CA Datacom/DB Database and System Administration Guide*. Also review the MUF startup options in PDS *.CUSMAC member AXDATIN1.

■ INSTJCL member AX14DD is a sample job that loads the CA Datacom Datadictionary and CA SQLDEFAULT databases. If you run this member, it resets these databases back to the point at which you initially defined the CA Datacom/AD Version 14.0 MUF. Any changes made to these databases are lost. For more information, see the *CA Datacom/DB Database and System Administration Guide*. Also review the MUF startup options in PDS *.CUSMAC member AXDATIN1.

Checking the README File

Review the README file before you start the install *and* before you begin the implementation into production to see if any additional tasks are required after the installation or maintenance procedure. For information about how to find the README file, see How to Access the README File (see page 13).

The README informational PTF provides the information for a successful installation and implementation. This PTF is kept current with instructions and information about significant fixes that may not have been available at the time the software was packaged. The README enables the otherwise static install to be dynamic and as up-to-date as possible to maximize your success. We recommend that the README be carefully read before you begin the installation. We also encourage you to review it again prior to implementation in case something changed since you last read it.

MUF Tuning

CUSMAC members AXDATIN1 and AXDATIN2 contain the startup and tuning parameters required by the MUF at startup. Although the parameters in AXDATIN2 are not normally changed, to optimize the execution of the MUF you can change them as required. Most CA Datacom/AD sites do not need to modify AXDATIN2. For more information about these parameters, see the *CA Datacom/DB Database and System Administration Guide* and the *CA Datacom/AD Implementation Guide*.

Chapter 8: Tailoring Your Products

After demonstrating successful installation of the products, tailor them according to your site requirements before designating them as production systems. Be sure to back up the data sets before starting the tailoring process. Refer to the appropriate documentation for instructions on tailoring individual products. For instructions about finding these members, see How to Obtain the Sample Members (see page 14).

Defaults were established during the installation process. Consider these defaults as you determine the tailoring necessary for your site.

Important! The following tables in this chapter list and describe each job that can be found at the link for Use and Disclosure for Sample Programs under Recommended Reading on the CA Datacom product page on CA Support Online at http://support.ca.com.

on CA's online support.ca.com in the Sample download page.

CA Datacom/DB Samples

Job	Description
DBSAM01	Assemble and link sample online User Requirements Table for DBID 001.
DBSAM02	Assemble and link sample batch User Requirements Table for DBID 010.
DBSAM03	Assemble and link the sample Master List.
DBSAM04	Assemble and link the sample DB system ID module (DBSIDPR).
DBSAM05	Assemble and link the sample SQL batch User Requirements Table.
DBSAM06	Assemble and link the sample SQL online User Requirements Table.
DBSAM07	Assemble and link for DL/I access support in CA Datacom/DB Reporting Facility.

CA Datacom Datadictionary Samples

Job	Description
DDSAM01	Assemble and link the DDSRTLM module.
DDSAM02	Assemble and link CA Datacom Datadictionary User Requirements Table modules.

Job	Description
DDSAM03	Assemble and link VPE online file table.
DDSAM04	Assemble and link VPE batch file table.
DDSAM05	Assemble and link the SC00TRAN module for CA Datacom Datadictionary online.
DDSAM06	Assemble and link the block data utilities (DDBDULM AND DDDDULM).
DDSAM07	Assemble and link the Log Area (LXX) trace VPE file table.
DDSAM08	Execute DDCFBLD followed by DBUTLTY to post the PRODuction version of the DATA-DICT database to the CXX.
DDSAM09	Execute DDCFBLD followed by DBUTLTY to post the PRODuction version of the DDD database to the CXX.
DDSAM10	Link for CA Librarian access support in DDICF.

CA Dataquery Samples

Job	Description
DQSAM01	Assemble and link DQEIBPR for CA-Email access support in CA Dataquery.
DQSAM02	Assemble and link the VPEDQRFT module for using CA Dataquery in TSO.
DQSAM03	Assemble and link the DQSYSTBL module.
DQSAM04	Execute the DQLIBRMT Utility.
DQSAM05	Execute the DQWFINIT Utility.
DQSAM06	Execute the DQLANGMT Utility.
DQSAM07	Execute the DQCRRPT Utility.
DQSAM08	Execute the DQUSERMT Utility.
DQSAM09	Execute the DQPANPRT Utility.
DQSAM10	Assemble and link CA Dataquery User Requirements Table.
DQSAM11	Assemble and link DQDECPR module for CICS.

Appendix A: Installation Worksheet

The following parameters are required for all new jobs:

1   What is the job information for JOBCARD one.?
Default: 'JOBCARD1'

2   What is the job information for JOBCARD two?
Default: 'JOBCARD2'

3   What is the job information for JOBCARD three?
Default: 'JOBCARD3'

4   What is the job information for JOBCARD four?
Default: 'JOBCARD4'

5   What high level qualifier is used by your site for a new install to define all the MUF control data sets and database areas?
Limits: 1-27 bytes
Default: 'CAI.NEWHLQ'

6   What high-level qualifier is used to prefix the other SMP/E and distribution library data sets?
Default: 'CAI.SHLQ'

7   What high-level qualifier is used to prefix the SMP/E target library data sets for CA Datacom/AD Version 14.0?
Default: 'CAI.THLQ'

8   What high level qualifier is used by your site for a new installation to define all the custom libraries? Used to create CUSMAC, CUSPROC, and CUSLIB.
Limits: 1-27 bytes
Default: 'CAI.NEWCHLQ'

9   What high-level qualifier is used to prefix for the INSTJCL data set? **Limits:** 1-33 bytes
Default: 'CAI.HLQ'

10   What high-level qualifier is used to prefix the SMP/E target library data sets for the CA Datacom/AD Version 10.0, 11.0, or 12.0 source MUF? (Only used in the migration and fallback process.)
Default: 'CAI.PTHLQ'

11   What high-level qualifier is used to prefix the CA Datacom/AD Version 10.0, 11.0, or 12.0 source MUF control data sets, that is, LXX, FXX, CXX, and PXX? (Only used in the migration and fallback process.)
Default: 'CAI.PHLQ'

12   What high level qualifier to be used for creating the CXX backup for the CA Datacom/AD Version 10.0, 11.0, or 12.0 source MUF when migrating a database from the CA Datacom/AD source MUF to the CA Datacom/AD Version 14.0 target MUF? (Only used in the migration and fallback process.)
Default: 'CAI.CXX^BKUP'

13   What is the high-level qualifier for custom data sets used in the CUSMAC, CUSLIB, and CUSPROC data set names from the CA Datacom/AD Version 10.0, 11.0, or 12.0 source MUF? (Only used in the migration and fallback process.)
Default: 'CAI.PCHLQ'

14   What is the unit name of the device for temporary work DSNs?
Default: 'SYSDA'

15   What DASD volume serial name is to be used for the CA Datacom control data sets and CUS*/INSTJCL data sets?
Default: 'VOL=SER=DASD01'

16   What DASD type is the DASD01 volume? (for example, 'SYSDA,3380,3390,9345')
Default: 'AXUNI1=3390'

17   What DASD volume serial name is to be used for the CA Datacom index areas for the install databases and for VLS files, if needed?
Default: 'VOL=SER=DASD02'

18   What DASD type is the DASD02 volume? (for example, 'SYSDA,3380,3390,9345')
Default: 'AXUNI2=3390'

19   What DASD volume serial name is to be used for the CA Datacom data areas forDBIDXX the install databases?
Default: 'VOL=SER=DASD03'

20   What DASD type is the DASD03 volume? (for example, 'SYSDA,3380,3390,9345')
Default: 'AXUNI3=3390'

21 **Work sheet items 21-24 have different forms but all use the same DBID value and are only used in the migration and fallback process.**
What is the DBID to be migrated or ported from CA Datacom/AD Version 12.0 to CA Datacom/AD Version 14.0? The form is DBID*xxx*, where *xxx* is the database ID for the database being migrated.
If migrating the database, use one of the following:
"DBID100" for CA APCDDS
"DBID161" for CA Jobtrac
"DBID162" for CA Jobtrac
"DBID430" for CA Scheduler
"DBID601" for CA WA Restart Option for z/OS Schedulers (formerly CA 11 Workload Automation Restart and Tracking)
"DBID602" for CA WA Restart Option for z/OS Schedulers (formerly CA 11 Workload Automation Restart and Tracking)
"DBID650" for CA Disk
"DBID615" for the database for CA IMS Tools

22 **Work sheet items 21-24 have different forms but all use the same DBID value and are only used in the migration and fallback process.**
What is the value for "PDBID" to the CA Datacom Datadictionary CA Datacom/AD Version 12.0 database name to be cataloged, so that it can be selected to be migrated or ported to CA Datacom/AD Version 14.0?
(PDBID represents a product designator plus the databse ID number, as shown in the following list.)
If migrating the database, use one of the following:
"CH430" for CA Scheduler
"L7601" for CA WA Restart Option for z/OS Schedulers (formerly CA 11 Workload Automation Restart and Tracking)
"L7602" for CA WA Restart Option for z/OS Schedulers (formerly CA 11 Workload Automation Restart and Tracking)
"DDS100" for CA APCDDS
"HD0161" for CA Jobtrac
"HD0162" for CA Jobtrac
"DMS650" for CA Disk
"ITKREPDB" for the database for CA IMS Tools
Default: 'PDBID'

23   **Work sheet items 21-24 have different forms but all use the same DBID value and are only used in the migration and fallback process.**
        What is the value of "PBASIS" to the product basis module name? The value is the same as the "PDBID" on the first or only product database upgrade. If the product supports multiple database instances, change only the "PDBID" value on subsequent product upgrades. Ensure that the "PBASIS" value remains constant.
        If migrating the database, use one of the following:
        "CH430" for CA Scheduler
        "L7601" for CA WA Restart Option for z/OS Schedulers (formerly CA 11 Workload Automation Restart and Tracking)
        "DDS100" for CA APCDDS
        "HD0161" for CA Jobtrac
        "DMS650" for CA Disk
        "ITKREPDB" for the database for CA IMS Tools
        Default: 'PBASIS'

24
                                    Work sheet items 21-24 have different forms but all use the same DBID value and are only used in the migration and fallback process.
                                    What is the DBID to be migrated or ported from CA Datacom/AD Version 12.0 to CA Datacom/AD Version 14.0? The form is DBID=*xxx*, where *xxx* is the database ID for the database being migrated. It is used within the DBUTLTY steps for the migration or fallback process. Give the database ID the value used in DBID*xxx* from worksheet item number 21.
                                    If migrating the database, use one of the following:
                                    "DBID=430" for CA Scheduler
                                    "DBID=601" for CA WA Restart Option for z/OS Schedulers (formerly CA 11 Workload Automation Restart and Tracking)
                                    "DBID=602" for CA WA Restart Option for z/OS Schedulers (formerly CA 11 Workload Automation Restart and Tracking)
                                    "DBID=100" for CA APCDDS
                                    "DBID=161" for CA Jobtrac
                                    "DBID=162" for CA Jobtrac
                                    "DBID=650" for CA Disk
                                    "DBID=615" for the database for CA IMS Tools

25   What is the name of the library for the CA Datacom/AD using product that contains the DDRTVCAT basis module identified in worksheet item number 23?
        Default: 'PRODAD.TARGET.LOADLIB'

26   What is the name to be assigned to the CXX for this MUF? (Instance used for new installations only.)
   **Default:** 'CXX^NAME'

27   What is the region size?
      Note: We recommend that you use the default and do not change for this
      installation.
      Default: '0M'

28   What is the MEMLIMIT?
      Note: We recommend that you use the default and do not change for this
      installation.
      Default: 'NOLIMIT'

29   What is the data set name of the target load library for the CA Common
      Services for z/OS programs?
      This CA Technologies product authorized load library contains service-related
      executable modules for the BASE and OPTIONAL Common Services.
      Default: 'CAI.CACSS.CAW0LOAD'

30   What is the data set name of the IBM TCP stack DSN for SYSTCPD DD?
      Correlate this reference to the DSN specified by the SYSTCPD DD statement for
      the TCP stack. If the data set is a PDS, include a member name.
      Default: 'VTAM.TCPIP.TCPIP.DATA'

31   How many tasks does CA Datacom Server need to use to communicate with
      MUF? The MUF gives this number of threads or tasks to CA Datacom Server to
      allow work to be passed back and forth between the CA Datacom Server to
      the MUF and back to the CA Datacom Server. Default uses 10 tasks in CA
      Datacom Server. This is only used for CA Datacom Server.
      Default: 'DBUSERS=10'

32   What is the name of the CA Datacom Server? If using TCP/IP, it is a token value
      of from 1-20 unique bytes.
      Default: 'SERVERNAME=TCP_DEV_R140'

33   What is the name of the application ID for CA Datacom Server? If the TCP/IP
      communication protocol (z/OS only) is used, APPLID=, Servername=, and
      TCPIP_PORT= are used as tokens to uniquely identify the CA Datacom Server
      Mainframe Server component (1 to 20 alphabetic characters for APPLID
      following normal SQL names).
      Default: 'APPLID=TCP_DEV_R140'

34   What DASD volume serial number is to be used for the CAI.THLQ.CAAXLOAD
      VOLSER (worksheet item number 7) used for APF ADD in member AXAPFADD?
      Note: If using SMS, edit this entry *after* running the customization steps but
      before running member AXAPFADD.
      Default: 'DBAPF'

35   What DASD volume serial number is to be used for the CAI.NEWCHLQ.CUSLIB
      VOLSER (worksheet Item number 5) used for APF ADD in member AXAPFADD?
      Note: If using SMS, edit this AFTER running the customization steps but
      BEFORE running member AXAPFADD.
      Default: 'CDBAPF'

36   not used

37   not used

38   not used

39   What is the name of your Version 14.0 SMP/E target zone name?
        This is used by member AD14MRAP as a sample SMP/E receive and apply job.
        Default: 'CAIT0'

40   What is the unit name your site uses for Cart/Tape/Vtape devices?
        This is used for the members AD14LXXS and AD14BKUP.
        Default: 'TAPEUNIT'

41   not used

42   not used

43   not used

44   not used

45   not used

46   What is the name of the Assembler program?
        Default: 'ASMA90'

47   not used

48   What is the name of the utility program for copying PDS data sets?
        Default: 'IEBCOPY'

49   What is the name of the utility program for allocating data sets?
        Default: 'IEFBR14'

50   What is the name of the Linkage Editor module for link editing?
        Default: 'IEWL'

51   What is the name of the utility used for updating PDS members?
        Default: 'IEBUPDTE'

52   What is the name of the utility used for copying data sets?
        Default: 'IEBGENER'

Appendix B: Troubleshooting

Diagnostic Procedures

Use the following flowchart to guide you through the procedures you should follow if you have a problem with a CA Technologies software product.
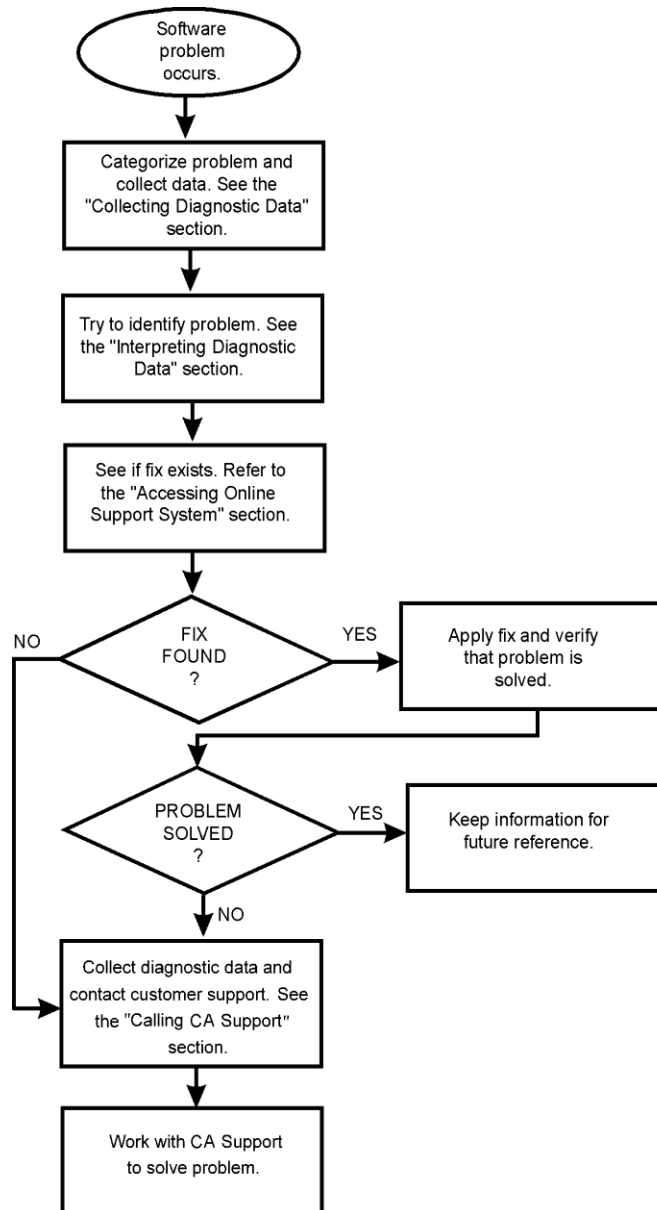
Problem Resolution

Before contacting CA Support, attempt to resolve the problem yourself using the following procedures identified in the following sections.

Verify the Problem

1. Examine the procedure that you used and compare it to the documented procedure for performing the required activity.

2. Section Diagnostic Procedures (see page 109) identifies several potential problem areas and presents general debugging suggestions. Review this section for solutions which apply to your current problem.

3. 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 can have caused the problem.)

4. 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, try to secure assistance in resolving the problem from others at your site.

Collect Diagnostic Data

This section identifies some potential problem areas and presents debugging suggestions. It also lists the documentation to have on hand when communicating with CA Support about each type of problem.

Interpret Diagnostic Data

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

1. What was the sequence of events prior to the error condition?

2. What circumstances existed when the problem occurred and what action did you take?

3. Has this situation occurred before? What was different then?

4. Did the problem occur after a particular PTF was applied or after a new version of the software was installed?

5. Have you recently installed a new version of the operating system?

6. Has the hardware configuration (tape drives, disk drives, and so forth) changed?

From your responses 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 Technologies software product, you can make use of the online client support system to see if a fix (APAR or PTF) or other solution to your problem has been published and call CA Support.

Access the Online Client Support System

CA Support Online is the CA Technologies online product support and service system available on the Internet. It contains an extensive Knowledge Base that allows you to retrieve many types of product-related information with a single search.

The online support system includes the following benefits:

- Solution downloads
- CA Support issue management
- Product downloads
- Product documentation downloads
- License key downloads
- Virus signature downloads
- Product-specific FAQs
- Newsgroup open forums
- E-News newsletters

For full access to all the services related to your licensed products, you must log in. Many areas require that you are a registered support.ca.com user. You can register at the site.

Licensing

Many CA Technologies products use license keys or authorization codes to validate your hardware configuration. If you need assistance obtaining a license key or authorization code, click the Licensing link on Support Online.

Contact CA Support

For online technical assistance and a complete list of locations, primary service hours, and telephone numbers, contact CA Support at http://support.ca.com/.

Prepare for a Call on a New Issue

Prior to placing the call on a new issue, prepare the following:

■ A photocopy of the *Support Contact Information* form (see SUPPORT CONTACT INFORMATION (see page 117)) with the following sections completed:

   – General Information

   – Your Company Information

   – Product Versions

■ Your most recent *Support Contact Number Log* or a blank form with the date of the call recorded in the "Date Opened" field (See SUPPORT CONTACT NUMBER LOG (see page 115).)

■ A history of the problem

Note: The person calling CA Support should be generally familiar with the CA Datacom products installed at the site, their current versions, their current maintenance levels, and the various options and features in use. For example, the CA Support Specialist might need to know various options specified in your MUF startup options, User Requirements Tables, CA Datacom Datadictionary System Resource Table, or CA Dataquery Options List assemblies. If the caller does not have this information, he should have immediate access to someone who does.

Prepare for a Call on an Existing Issue

When you call CA Support, see the issue at hand by contact number, not by the name of the Specialist with whom you previously spoke. The issue might have been transferred to a different group internally, and a new Specialist might have assumed responsibility for further action on the issue. All prior history of the contact is retained in the CA Support tracking and reporting system under that contact number, so that the new Specialist has immediate access to it.

Prior to placing the call, have the following available:

■ The Support Contact Information form containing the supplied information: CA Support Specialist name, contact number, issue number (if there is more than one issue associated with the contact number), solution number, if provided, and your CA Client ID.

   Note: If you no longer have the Support Contact Information form, look up the contact number recorded on your Support Contact Number Log form.

■ A brief description of the nature of this call.

Where to Call for Support

If you are in North America, see the telephone support directory on the CA Technologies website for the CA Support phone number. Outside North America, call your local CA Support Center during normal business hours.

Note: Only your local CA Support Center can provide native language assistance. Please use English when contacting any North American center.

Describe and Prioritize the Problem

If you are unable to resolve the problem, please have the following information ready before contacting CA Support:

1. Identify the context in which the problem occurred:

    Initial installation

    Problem during the installation of the product

    Product upgrade

    Problem during the installation of a maintenance tape or new version

    Pilot project

    Problem occurring during a pilot project

    Test

    Problem with something that is not in production

    Production

    Problem with something that is currently in production

2. If this is a new installation, product upgrade, pilot project, or problem with a test system, list the steps followed up to this point.

3. If the problem occurred in a production environment, describe the following in detail:

    a. The attempted activity, with expected results and actual results

    b. The attempts to resolve the problem and their results

    Note: The very act of producing an accurate description of the problem might be sufficient for you to determine its cause and perhaps a way to correct it. If not, an accurate description assists the CA Support Specialist in helping you to resolve it.

4. CA uses a rating system to expedite resolution of support calls. Use the following guide to establish the severity of your problem.

1

Production system down or major business impact

2

Major component nonfunctional or serious business impact

3

Minor component nonfunctional or moderate business impact

4

General question or a noncritical problem

5. Make a photocopy of each of the following forms and complete the applicable sections of each form.

Support Contact Information form

Prior to making the call, use this form to record all the information required by the CA Support Specialist. During the call, use this form to record all the information the Specialist provides. See SUPPORT CONTACT INFORMATION (see page 117).

Support Contact Number Log

Use this form to keep a permanent record of the contact numbers associated with the issues about which you contact CA Support. If an issue which has been closed reappears due to incomplete resolution, this form can serve as a reference of the original contact number so that the Specialist can reactivate the appropriate file. See SUPPORT CONTACT NUMBER LOG (see page 115).

Make the Call

1. Provide the CA Support Specialist with the following information:

   ■ Your CA Client ID, if known

   ■ Severity of your problem

   ■ "Your Company Information" (see *Support Contact Information* on SUPPORT CONTACT INFORMATION (see page 117))

   ■ History of your problem

   Note: When you call about a new issue, do not use a contact number previously assigned for a different issue. This could impede the resolution of your current problem.

   If you do not know your CA Client ID or are not certain what the problem severity code should be, the Specialist provides this information to you. Record the Client ID and severity level on the *Support Contact Information* form.

2. The Specialist enters your issue(s) in the CA Support tracking system and give you a contact number and, if you address multiple issues, the issue numbers. Record this information on the *Support Contact Information* form.

3. The Specialist might request that you:

   ■ Relate additional information.

   ■ Follow directions on a terminal to perform directed troubleshooting.

   ■ Relate certain options in use at your site.

4. If a solution is determined at the initial call, the Specialist gives you a solution number. Record the solution number on the *Support Contact Information* form. Also, record the current date under "Date Closed" on the *Support Contact Number Log.*

5. If the problem cannot be resolved immediately over the phone, the Specialist gives you a solution number and advise you to expect the solution in the form of a module replacement, ZAP, or source change. As soon as the solution is ready, the Specialist supplies it to you by one of the following methods:

   ■ FAX, telex, or through the mail

   ■ Over the telephone

   ■ On tape

   ■ Through the online client support system

6. If the solution resolves the problem, record the date of resolution under "Date Closed" on the *Support Contact Number Log*. Otherwise, continue the dialog with the Specialist until the problem is resolved.

Sample Forms

The forms on the following pages are designed to help you keep an accurate record of your contacts with CA Support. See these when making calls. For example, use the Support Contact Number Log to record the issues associated with a Contact Number. When they are solved (closed), enter the date in the last column. If a closed problem recurs, see this log for its Contact Number so that the appropriate file can be reactivated.

CA SUPPORT CONTACT NUMBER LOG

Product Support Assistance

Contact Number	Date Opened	Time	Description	Date Closed

CA SUPPORT CONTACT INFORMATION

Page 1 of 3

- **General Information:**
  - CA Support Telephone Number: (   ) _____
  - Date of Call: _____
  - Problem Severity: _____

- **CA Supplied Information:**
  - CA Support Specialist: _____
  - FAX Number: (   ) _____
  - Your CA Client ID: _____
  - Product: _____   Version: _____
  - Contact Number: _____   Issue Number: _____
  - Solution Number: _____

- **Your Company Information:**
  - Company Name: _____
  - Site ID: _____
  - Your Name: _____
  - Telephone Number: (   ) _____

    Extension: _____
  - FAX Number: (   ) _____
  - Alternate Contact Person: _____
  - Alternate Telephone Number: (   ) _____

    Extension: _____

- **Notes:**

CA SUPPORT CONTACT INFORMATION

Page 2 of 3

Operating System: _____

Product Versions and Service Packs:

Product Version   Service Pack

- Operating System   _____ _____
- CA IPC   _____ _____
- CICS   _____ _____
- CA Datacom/DB   _____ _____
- CA Datacom Fast Restore   _____ _____
- CA Datacom IMS/DC Services   _____ _____
- CA Datacom CICS Services   _____ _____
- CA Datacom Presspack   _____ _____
- CA Datacom Server   _____ _____
- CA Datacom STAR   _____ _____
- CA Datacom DB2 Transparency   _____ _____
- CA Datacom DL1 Transparency   _____ _____
- CA Datacom TOTAL Transparency   _____ _____
- CA Datacom VSAM Transparency   _____ _____
- CA Dataquery   _____ _____
- CA Ideal for Datacom _____ _____

CA SUPPORT CONTACT INFORMATION

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Additional solutions applied:

Product   **Solution Numbers**

_____

_____

_____

_____

_____

Enclosed Documentation:

1. _____   5. _____

2. _____   6. _____

3. _____   7. _____

4. _____   8. _____

Request Enhancements

CA Technologies welcomes your suggestions for product enhancements. All suggestions are considered and acknowledged. You can contact your Account Manager who initiates the request for you.

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