CA Datacom®

Installation Guide for z/OS

Version 14.02

CA Technologies Product References

This document references the following CA Technologies products:

- CA Datacom®/DB
- CA Datacom® CICS Services
- CA Datacom® Datadictionary™
- 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 ACF2™
- CA Ideal™ for CA Datacom® (CA Ideal)
- CA IPC
- CA Librarian®
- CA SYSVIEW® Performance Management (CA SYSVIEW)
- CA Top Secret®
- CA Common Services for z/OS
- CA Mainframe Software Manager ™ (CA MSM)

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.

Contents

Chapter 1: Introduction

This guide describes how to install and implement CA Datacom/DB.

This section contains the following topics:

Audience

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

- JCL
- TSO/ISPF
- SMP/E
- z/OS environment and installing software in this environment
- Your IT environment, enterprise structure, and region structure

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 to Obtain the README File

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

To access the README file

1. Login at CA Support Online, http://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 Core products Version 14.0.

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.

How the Installation Process Works

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

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

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

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

To install your product, do the following tasks:

1. Prepare for the installation by confirming that your site meets all installation requirements (see page 15).
2. Use one of the following methods to acquire the product:
   - Download the software from CSO using CA MSM (see page 35).
   - Download the software from CSO using Pax-Enhanced Electronic Software Delivery (ESD) (see page 41).
   - Order a tape or a DVD.
3. Perform an SMP/E installation using one of the following methods:
   - If you used CA MSM to acquire the product, start the SMP/E step from the SMP/E Environments tab in CA MSM.
   - If you used ESD to acquire the product, you can install the product in the following ways:
     - Install the product manually.
     - Use the Insert New Product option in CA MSM to complete the SMP/E installation.
   - If you used a tape (see page 65) or DVD, install the product manually.

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

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

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

   Note: Configuration is considered part of starting your product.

Chapter 2: Preparing for Installation

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

This section contains the following topics:

Products Installed

You can install various CA Technologies products with your CA Datacom products, add CA Datacom to other CA Technologies products you have already installed, or add individual products not included in the initial installation. Contact your local CA representative regarding compatibility.

The amount of space you must allocate for any installation depends on the product mix. For more information, see DASD Requirements (see page 27).

CA IPC, CA Ideal, and CA Common Services for z/OS Utilities

Following is a list of products and 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*

Product	Utility Name	Function	See:
CA Ideal	IDBATCH	Batch Execution Utility	*CA Ideal for CA Datacom Command Reference Guide*
CA Ideal	IDUTILTY	Library Integrity Utility	*CA Ideal for CA Datacom Administration Guide*
CA Ideal	IDUTOTRN	Object Transport Utility	*CA Ideal for CA Datacom Working in the Environment Guide*
CA Ideal	IDUTSTRN	Source Transport Utility	*CA Ideal for CA Datacom Working in the Environment Guide*
CA Common Services for z/OS	CAIRIM	CA Resource Initialization Manager	*CA Common Services for z/OS Administration Guide*

Considerations for Installation

The following are considerations you should review before installing any product.

JCL Editing

After running the install jobs to install the SMP/E libraries, the next step of the installation or upgrade process is to download a sample JCL PDS that contains all the JCL necessary to install or upgrade the CA Datacom/DB environment. Each job included in the sample PDS has a "flower box" at the top that describes the changes required to edit the JCL to meet the installation requirements for your site. The following is a sample:

```
//* INSTRUCTIONS:
//*      ***  CHANGE JOB CARD AS NECESSARY FOR YOUR SITE.
//*   1. PERFORM A GLOBAL CHANGE OF "CAI.SMPCSI.CSI"
//*      TO THE NAME OF THE SMP/E CSI DATA SET.
//*      WORKSHEET PARAMETER 1
//*   2. PERFORM A GLOBAL CHANGE OF "CAI.SHLQ"
//*      TO THE HIGH LEVEL QUALIFIER OF THE SMP/E DATA SETS.
//*      WORKSHEET PARAMETER 2
//*   4. PERFORM A GLOBAL CHANGE OF "BDC0SS"
//*      TO THE VOLSER OF THE INSTALL TAPE.
//*      WORKSHEET PARAMETER 24
//*   5. PERFORM A GLOBAL CHANGE OF "TAPE"
//*      TO THE UNIT TYPE OF THE INSTALL TAPE, E.G."CART"
//*      WORKSHEET PARAMETER 25
```

The list of JCL "edits" needed is covered in Installation Worksheets.

You can choose to edit each job manually according to the flower box instructions or you can use a PDS utility to perform the edits. In the following sections, we discuss a few available PDS editing tools. Remember to save the original sample PDS before doing any mass edits in case you want to redo your edits.

Editing Install Using the Supplied REXX Execs under ISPF

If you use ISPF, there are two ISREDIT macros that are included that can be used to facilitate editing the install, new, or upgrade JCL job members. PDS member DCMSEDIT in the SAMPJCL PDS library and member $DCBDEDT in the CABDSAMP Target PDS library can be used to make global changes in their respective PDS libraries for the desired worksheet parameter strings.

DCMSEDIT

Sample ISREDIT macro that makes the global changes to the SMP/E install jobs.

$DCBDEDT

Sample ISREDIT macro that makes the global changes to the new or upgrade jobs.

These members contain an edit command for each worksheet item in the form of 'ISREDIT C "STRING1" "STRING2" ALL'. In each case, STRING1 represent what is currently in the job members in their respective PDS libraries. Change STRING2 so that the worksheet values for your installation are incorporated.

Once you have made the appropriate changes, save this member to your SYSPROC location and then execute this macro from the command line in ISPF.

This global edit procedure eliminates the requirements for almost all manual editing of the sample jobs. However, review the instruction block in each job for any optional changes.

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 helps ensure 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, RECEIVE, APPLY, and ACCEPT, when installing a product or performing maintenance. These operations manage the Consolidated Software Inventory (CSI) structure contained in a VSAM KSDS data set.

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.

Related Publications

The following publications are not available from CA, but are referenced in this document or are recommended reading.

- *IBM System Modification Program User's Guide*
- *IBM System Modification Program Reference*
- *IBM System Modification Program Packaging Guide*

Hardware and Software Requirements

All hardware and software requirements for your system must be met before installing, upgrading, or maintaining the CA Datacom product line for the z/OS environment.

Hardware Requirements

Hardware requirements are as follows:

- An IBM mainframe that runs any currently supported IBM z/OS operating system.
- Any z/OS that is in the IBM extended support program is *not* included as supported by CA Datacom.

Note: If System Managed Storage (SMS) is being used, you are required not to mix device types in a storage class used for CA Datacom. Because CA Datacom/DB uses its own proprietary DASD access method, the use of striping with SMS is not applicable and not supported.

Software Requirements

Software requirements are as follows:

- A version of z/OS as supported by IBM is required.
- IBM SMP/E in a version and release as supported by IBM is required.

  Note: The installation process for CA Datacom has been enhanced consistent with CA Technologies policy to take advantage of standard operating system installation and maintenance methodologies. The installation and maintenance processes for CA Datacom in the z/OS environment require the IBM System Modification Program Extended (SMP/E).

Important: SMP/E is required for CA Datacom product installation and for the application of product maintenance and upgrades.

- For upgrades, CA Datacom Version 12.0 is required.
- CA IPC at r11 with all current maintenance applied is required or CA IPC Version 14.0 requires RO33703 with this install.
- Installation of CA Datacom requires installation of certain components of CA Common Services for z/OS with all current maintenance applied. CA Common Services must be Version12.0 or later.
  - Component CAIRIM is required for CA LMP support. CA Technologies mainframe products require CA LMP.
  - Components CAICCI, CAIENF, and CAISSF are required.
  - Component CAMASTER Address Space is required. For information, see APAR RI18890.

  For more information, see Introduction to CA Common Services for z/OS (see page 21).

- CA SYSVIEW is not required. However, if you have this product with the CA Datacom component, it provides a unique toolset. SYSVIEW Version 12.7 is a toleration release which means limited support for CA Datacom 14.0. SYSVIEW Version 13.0 provides full support for CA Datacom Version 14.0.
- CA Datacom CICS Services r11 SP1 with PTF RO31698 supports Version 14.0

  Note: CA Datacom does not require CICS, but if you are running CICS, be aware that CA Datacom CICS Services is the CA Datacom product that supports CICS. See the CA Datacom CICS Services documentation for installation of that product. Read the installation step descriptions carefully to help ensure that you are installing appropriately for your version of CICS.

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 APFADD 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 BDRIM01 (see Step 2. Load DB Program Call Using CAIRIM) requires use of CAIRIM to install the Datacom Program Call PC routines. CAIRIM and the invoking CA Datacom/DB module, DBCR4PR, must operate from an APF authorized library to complete successfully.

Introduction to CA Common Services for z/OS

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

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 components offers individual benefits. The following components are used with and benefit the CA Datacom products.

CA-C Runtime

This component is a C language runtime engine that enables you to take advantage of C language-based programs

CA Health Checker

This component provides checks and advice for best performance of the product. CAMASTER is part of this component.

CAICCI

This component allows your CA products to work together across platforms, making your software more powerful.

CAIENF, CA LMP, and CAIRIM

These components assist you in getting your CA products running and keeping them running.

CAISSF

This component enables your CA products to offer standardized security interfaces.

The remaining sections of this chapter discuss these components in more detail.

CA-C Runtime

CA-C Runtime is a runtime 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

CAMASTER

The CAHCHECK and CAMASTER address spaces are part of CA Health Checker Common Services Release 12.1 which is not included in the CA Common Services Version 12.0 package. The newer version of the CA Health Checker Common Services should be installed separately to replace the version that was delivered with CA Common Services Version 12.0. For more information, see Product Maintenance Letter RI18890. For documentation relating to CAMASTER and CAHCHECK, see Appendix A and B of the *CA Common Services for z/OS Reference Guide* Version 12.0.

CAMASTER is a noncancelable started task. CAMASTER provides an anchor point for permanently resident PC routines and data spaces used by various CA products and CA Common Services. The CA Health Checker address space is a good example. Storage resources are provided to CA components that are used instead of CSA and ECSA which reduces 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 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 Technologies products to communicate with one another. This facility provides a layer that isolates application software from the specifics of the communications environment. CAICCI features include:

- Single point-of-control
- Multiple operating environment 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 features include:

- Dynamic installation and reconfiguration
- True recovery from system or individual power outages
- High performance asynchronous processing
- Single interface between CA Technologies 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 features include:

- 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 Technologies 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 features include:

- Obtaining SMF data
- Verification of proper software installation
- Installation of z/OS interfaces
- Automatic startup of CA Technologies 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 Technologies security products (CA ACF2 or CA Top Secret) or compatible other security products. CAISSF is a subservice contained within CAIRIM.

For CA Technologies security products, CAISSF features include:

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

For non-CA security products, CAISSF features include:

- 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.

Note: The Multi-User startup option DATACOM specifies the licensed CA Technologies products that execute with this MUF. These features are verified to be licensed for execution by CA LMP.

Examine the CA LMP Key Certificate you received with your product installation package. 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 is not provided at all.

Expiration Date

The date (month dd, yyyy, as in March 8, 2011) 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. This 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 a part of CAIRIM. Once CAIRIM has been installed, CA LMP support is available for all CA Technologies products.

Defining KEYS

Proper initialization of any CA Technologies 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 less than four characters, blank spaces are inserted for the unused characters.

(ssssss)

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

(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(BD) DATE(30JUN03) 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.

Security Requirements

For information about security requirements, see the *CA Datacom Security Reference Guide.*

Storage Requirements

The following sections discuss storage requirements.

DASD Requirements

The following tables provide the estimated blocks of DASD space required. The column heading Volume in the tables refers to the VOLSER given in the installation worksheet.

Summary of DASD Space Requirements

The following tracks by volume are needed for new installs:

Volume	3390 Tracks
DASD01	3360
DASD02	4088
DASD03	7536
DASD04	
DASD06	
DASD07	
Total	14984

The following tracks by volume are needed for upgrade installs:

Volume	3390 Tracks
DASD01	
DASD02	160
DASD03	
DASD04	10200
DASD06	
DASD05	
DASD06	
DASD07	
Total	10360

SMP/E CSI and Data Sets

The following tracks are needed for both new and upgrade installs:

Name	Volume	3390 Tracks
SMPCSI.CSI	VS KSDS	
SMPCSI.CSI.DATA	DASD01	45
SMPCSI.CSI.INDEX	DASD01	75
SMPSCDS	DASD01	120
SMPLTS	DASD01	75
SMPMTS	DASD01	75
SMPPTS	DASD01	75
SMPSTS	DASD01	75
SMPLOG	DASD01	75
SMPLOGA	DASD01	30
SAMPJCL	DASD01	30
NULLFILE	DASD01	1
Total		721

Distribution Libraries

The following tracks are needed for both new and upgrade installs:

Name	Volume	3390 Tracks
AABDMOD0	DASD01	352
AABDMAC	DASD01	24
AABDSAMP	DASD01	93
AABDDATV	DASD01	371
AABDXML	DASD01	17
Total		857

Target Libraries

The following tracks are needed for both new and upgrade installs:

Name	3390 Tracks
CABDMAC	90
CABDLOAD	2741
CABDSAMP	167
CABDLPA	343
CABDDATV	371
CABDXML	17
Total	3729

Custom Libraries

The following tracks are needed for both new and upgrade installs:

Name	Volume	3390 Tracks
CUSMAC	DASD02	30
CUSLIB	DASD02	100
CUSPROC	DASD02	30
Total		160

Database Control, Log, and Print

The following tracks are needed for new installs only:

Name	Volume	3390 Tracks
CXX	DASD01	500
LXX	DASD01	2400
PXX	DASD01	100
FXX	DASD01	300
Total		3300

HUMAN RESOURCE Sample Database

The following tracks are needed for new installs only:

Name	Volume	3390 Tracks
IXX001	DASD02	3
DBPAY	DASD03	2
DBPMF	DASD03	2
DBDEM	DASD03	3
Total		10

ORDER ENTRY Sample Database

The following tracks are needed for new installs only:

Name	Volume	3390 Tracks
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		21

CBS Databases

The following tracks are needed for new installs only:

Note: IXX006 needs to be allocated *only* if it is not set up as a virtual data area in the MUF startup option VIRTUAL.

Name	Volume	3390 Tracks
IXX006*	DASD02	150
IXX1006	DASD02	15
CBS1006	DASD03	15
Total		180

CA Datacom/DB SQL Databases

The following tracks are needed for new installs only:

Name	Volume	3390 Tracks
IXX016	DASD02	210
SQ1016	DASD03	300
IXX017	DASD02	120
TTM017	DASD03	150
Total		780

CA Datacom Datadictionary Database

The following tracks are needed for new installs only:

Name	Volume	3390 Tracks
IXX002	DASD02	1500
DD1002	DASD03	2100
DDDIXX	DASD02	900
DDD015	DASD03	1200
MSG015	DASD03	90
SIT015	DASD03	90
Total		5880

Online VLS Data Sets

The following tracks are needed for both new and upgrade installs:

Name	Volume	3390 Tracks
V140.DDMAP	DASD04	75
DDOL1	DASD04	50
DDOL2	DASD04	50
Total		175

Database Backup Data Sets

The following tracks are needed for both new and upgrade installs:

Name	Volume	3390 Tracks
DB12.CXX.BACKUP	DASD04	500
DB12.DDDBBU.BACKUP	DASD04	2100
DB12.DDDDBBU.BACKUP	DASD04	900
Total		3500

CA Dataquery Database

The following tracks are needed for new installs only:

Name	Volume	3390 Tracks
IXX003	DASD06	60
DQE003	DASD07	30
DQF003	DASD07	50
DQM003	DASD07	60
DQQ003	DASD07	30
DQR003	DASD07	10
DQS003	DASD07	50
DQT003	DASD07	50
DQU003	DASD07	60
DQW003	DASD07	60

Name	Volume	3390 Tracks
Total		460

VOS Backup Data Set

The following tracks are needed for new and upgrade installs:

Name	Volume	3390 Tracks
V120.ADRPNL.BKUP	DASD03	150
V140.DDMAP.BKUP	DASD04	75
Total		225

Upgrade Backup Data Sets

The following tracks are needed for upgrade installs only:

(*These data sets can be removed after installation is complete.*)

Name	Volume	3390 Tracks
DB14.DB002.BACKUP	DASD04	2100
DB14.CXX.BACKUP	DASD04	500
DB12.DQBBU.BACKUP	DASD03	1200
DB14.DB015.BACKUP	DASD04	900
DB12CXX.BACKUP	DASD04	500
DD12DB.BACKUP	DASD04	2100
DDD12DB.BACKUP	DASD04	900
DB14.DB003.BACKUP	DASD03	1200
DDD12DB.BACKUP	DASD04	900
Total		10300

History Database

The following tracks are needed for both new and upgrade installs:

Name	Volume	3390 Tracks
IXX1007	DASD06	30
A011007	DASD07	150
A021007	DASD07	150
Total		330

Concurrent Releases

You can install this release of CA Datacom/DB 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.

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 35).
2. Install the new product (see page 36).
3. Maintain products already installed in your environment (see page 37).
4. Deploy the product to your target systems (see page 38).
5. Configure the deployed product to your target systems (see page 39).

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

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

Follow these steps:

1. Set up a CA Support Online account.

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

2. Determine the CA MSM URL for your site.

   To access CA MSM (see page 40), you require its URL. You can get the URL from your site's CA MSM administrator and log in using your z/OS credentials. When you log in for the first time, you are prompted to create a CA MSM account with your credentials for the CA Support Online website. This account enables you to download product packages.

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

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

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

4. Download the product installation packages.

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

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

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

How to Install a Product

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

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

Follow these steps:

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

4. Take *one* of the following steps to select an SMP/E environment:
   - Create an SMP/E environment:
     a. Set up the global zone.
     b. Create a target zone.
     c. Create a distribution zone.
   - Use an existing SMP/E environment from your working set:
     a. Update the global zone.
     b. Set up the target zone: Either create a target zone or use an existing target zone.
     c. Set up the distribution zone: Either create a distribution zone or use an existing distribution zone.

     Note: If you install a product or its components into an existing target or distribution zone, older versions are *deleted* from the zone and associated data sets. We recommend that you use new target and distribution zones for this installation so that you can apply maintenance to your current version, if necessary.
5. Review the installation summary and start the installation.

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

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 mainframe product deployment from the software inventory of the driving system to the target system. This facilitation includes deploying installed products that are policy-driven with a set of appropriate transport mechanisms across a known topology.

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

Follow these steps:

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

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

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

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

How to Configure a Product

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

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

Follow these steps:

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

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

Note: You cannot use CA MSM to configure a product to a staging system.

Access CA MSM Using the Web-Based Interface

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

Follow these steps:

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

   The login page appears.

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

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

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

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

3. Click New.

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

   Important! The account to which the credentials apply *must* have the Product Display Options set to BRANDED PRODUCTS. You can view and update your account preferences by logging in to the CA Support Online website and clicking My Account. You need the correct setting 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 that are 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 that is 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 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 that the pax command created in Step 3 contains a sample JCL to GIMUNZIP the installation package. Edit and submit the UNZIPJCL JCL.

5. Receive the SMP/E package. Use the data sets that GIMUNZIP created 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 that the pax command created, all of the files in it, and the SMP/E RELFILEs, SMPMCS, and HOLDDATA data sets.

More Information:

USS Environment Setup (see page 46)
Allocate and Mount a File System (see page 47)
Copy the Product Pax Files into Your USS Directory (see page 50)
Create a Product Directory from the Pax File (see page 55)
Copy Installation Files to z/OS Data Sets (see page 56)

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 43) 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.

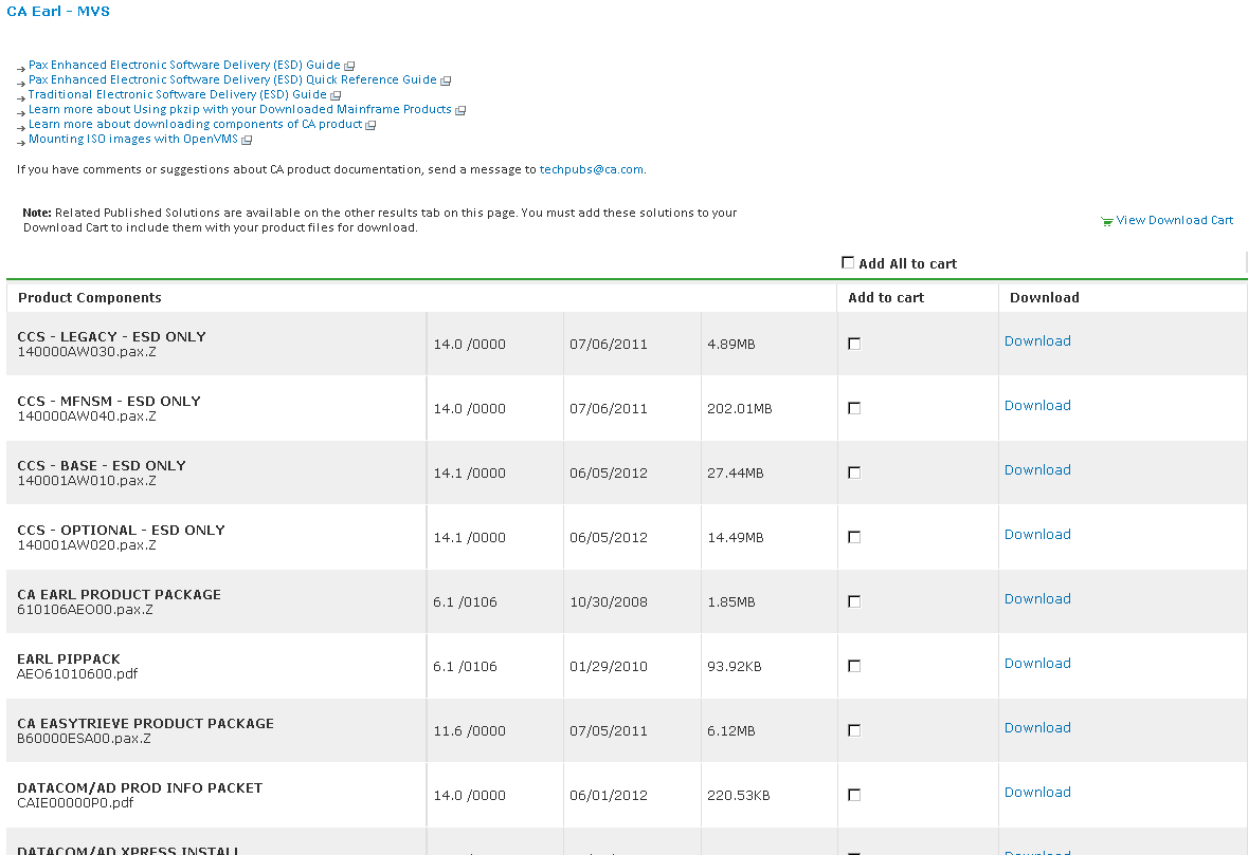
4. Perform the steps to install the product based on the product-specific steps.

   The product is installed on the mainframe.

ESD Product Download Window

You can download CA Technologies product ESD packages multiple ways. Your choices depend on the size of the individual files and the number of files that 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. The illustration lists all components of the product. You can use the Download Cart by selecting one or more components that you need, or selecting the check box for Add All to cart. If you prefer to immediately download a component, click the Download link.



CA Earl - MVS

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

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

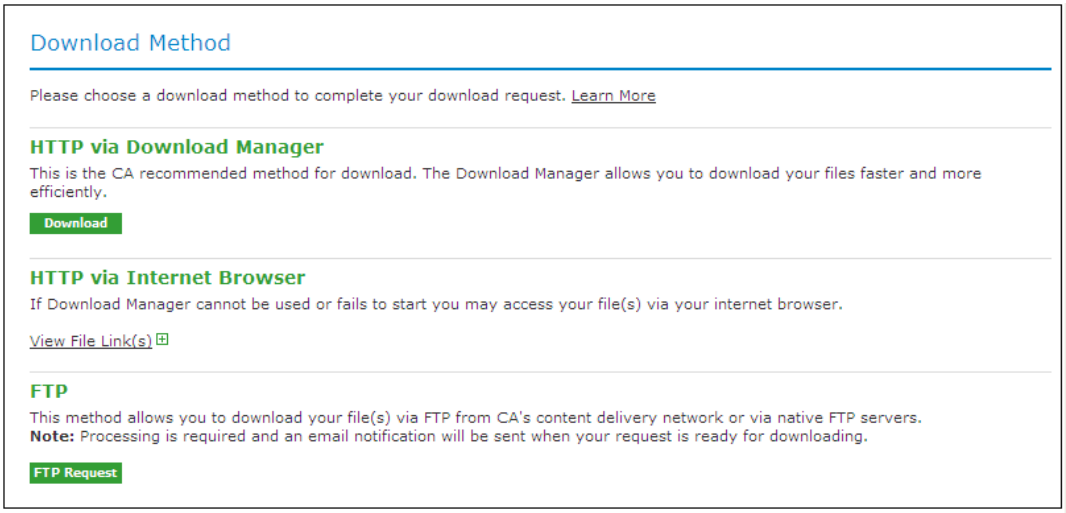
Note: Related Published Solutions are available on the other results tab on this page. You must add these solutions to your Download Cart to include them with your product files for download.

View Download Cart

Add All to cart

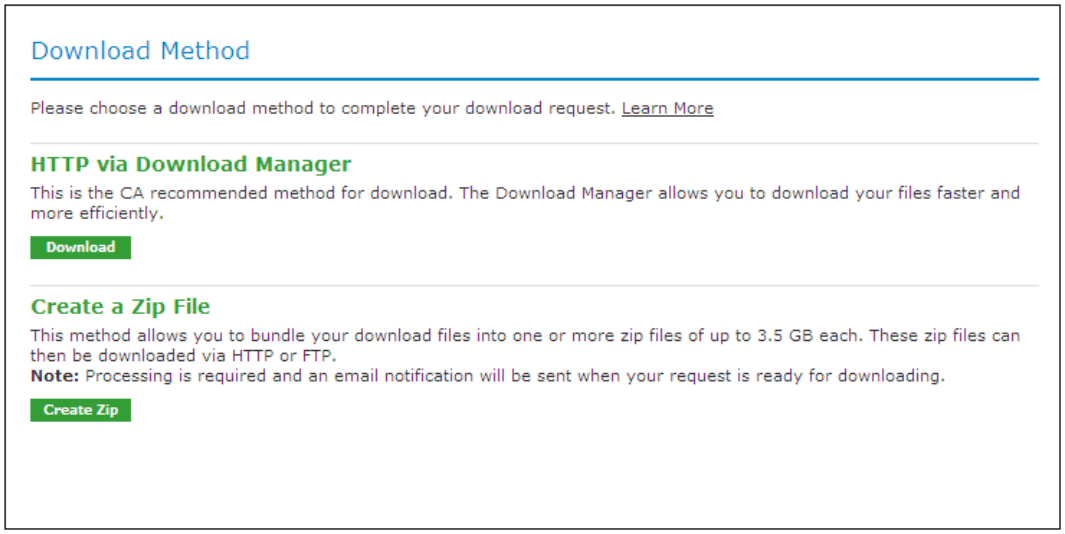
Product Components				Add to cart	Download
CCS - LEGACY - ESD ONLY 140000AW030.pax.Z	14.0 /0000	07/06/2011	4.89MB	☐	Download
CCS - MFNSM - ESD ONLY 140000AW040.pax.Z	14.0 /0000	07/06/2011	202.01MB	☐	Download
CCS - BASE - ESD ONLY 140001AW010.pax.Z	14.1 /0000	06/05/2012	27.44MB	☐	Download
CCS - OPTIONAL - ESD ONLY 140001AW020.pax.Z	14.1 /0000	06/05/2012	14.49MB	☐	Download
CA EARL PRODUCT PACKAGE 610106AEO00.pax.Z	6.1 /0106	10/30/2008	1.85MB	☐	Download
EARL PIPPACK AEO61010600.pdf	6.1 /0106	01/29/2010	93.92KB	☐	Download
CA EASYTRIEVE PRODUCT PACKAGE B60000ESA00.pax.Z	11.6 /0000	07/05/2011	6.12MB	☐	Download
DATACOM/AD PROD INFO PACKET CAIE00000P0.pdf	14.0 /0000	06/01/2012	220.53KB	☐	Download
DATACOM/AD XPRESS INSTALL				☐	

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



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

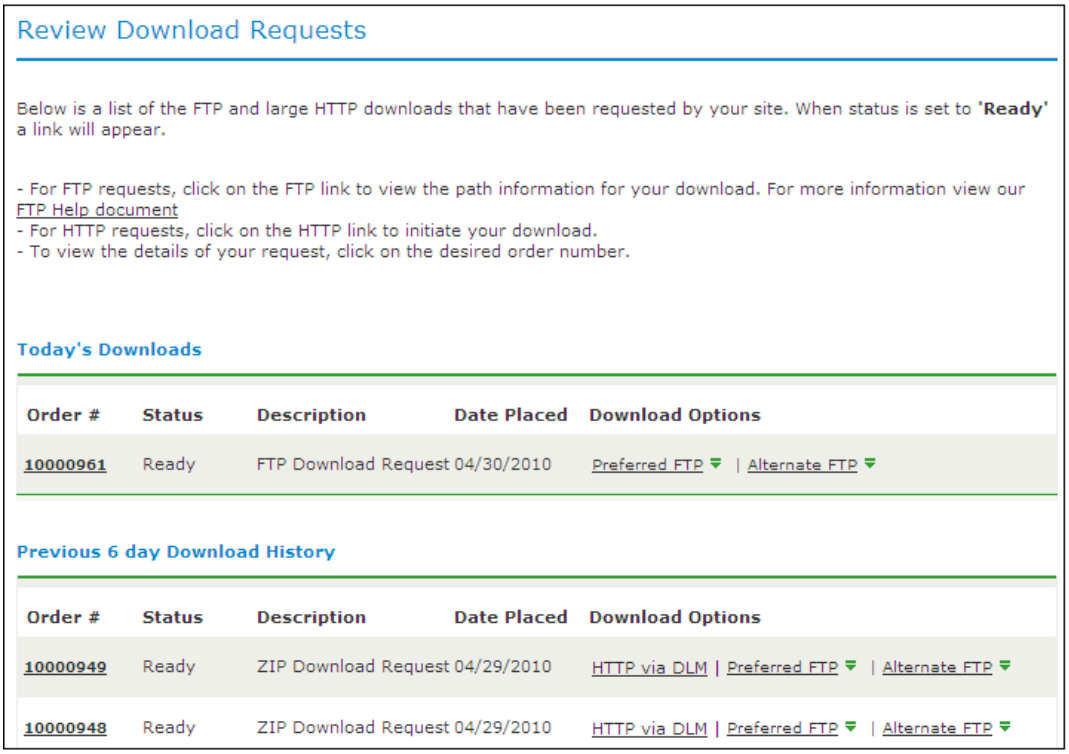
Note: For mainframe downloads using this HTTP method, click the Learn More link.



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

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

The Create a Zip File option first creates the zip, and when ready, offers the options that the Zip Download Request examples show in the next illustration.



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 MVS data sets that you can use to complete the product installation.

We recommend that you allocate and mount a file system that is 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 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 that are used for the ESD process. The USS file system that is used for Pax-Enhanced ESD must have sufficient free space to hold the directory that the pax command created, and its contents. You need approximately 3.5 times the pax file size in free space 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 either SUPERUSER authority, or the required SAF profile setting to allow you to issue the USS mount command for the file system.
- 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 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_data_set_name) +
  STORAGECLASS(class) +
  LINEAR +
  CYL(primary secondary) +
  SHAREOPTIONS(3,3) +
  )
/*
//FORMAT   EXEC PGM=IOEAGFMT,REGION=0M,
// PARM=('-aggregate your_zFS_data_set_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_data_set_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 requirements:

   - On a zFS, use the following sample:

     ```
     MOUNT FILESYSTEM('your_zFS_data_set_name')
           MOUNTPOINT('yourUSSESDdirectory')
           TYPE(ZFS)  MODE(RDWR)
           PARM(AGGRGROW)
     ```

   - On an HFS, use the following sample:

     ```
     MOUNT FILESYSTEM('your_HFS_data_set_name')
           MOUNTPOINT('yourUSSESDdirectory')
           TYPE(HFS)  MODE(RDWR)
     ```

   The file system is mounted.

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

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

   Write access is granted.

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

Copy the Product Pax Files into Your USS Directory

To begin the CA Technologies product installation procedure, copy the product pax file 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 computer, and upload it to your z/OS system.
- Download the product file from CA Support Online to your computer. 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 computer 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 that you are using for Pax-Enhanced ESD to hold the product pax file. If you do not have sufficient free space, error messages similar to the following appear:

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

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

More Information:

How the Pax-Enhanced ESD Download Works (see page 43)
ESD Product Download Window (see page 43)

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 statements in this JCL may be   *
//*    optional at your site. Remove the statements that are not      *
//*    required. For the required statements, update the data set     *
//*    names with the correct site-specific data set names.           *
//* 3. Replace "Host" based on the type of download method.           *
//* 4. Replace "YourEmailAddress" with your email address.            *
//* 5. Replace "yourUSSESDdirectory" with the name of the USS         *
//*    directory used on your system for ESD downloads.               *
//* 6. Replace "FTP Location" with the complete path                  *
//*    and name of the pax file obtained from the FTP location        *
//*    of the product download page.                                  *
//*********************************************************************
//GETPAX   EXEC PGM=FTP,PARM='(EXIT',REGION=0M
//SYSTCPD  DD   DSN=yourTCPIP.PROFILE.dataset,DISP=SHR
//SYSFTPD  DD   DSN=yourFTP.DATA.dataset,DISP=SHR
//SYSPRINT DD   SYSOUT=*
//OUTPUT   DD   SYSOUT=*
//INPUT    DD   *
Host
anonymous YourEmailAddress
lcd yourUSSESDdirectory
binary
get FTP_location
quit
```

Download Files to Mainframe through a PC

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

Follow these steps:

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

   The pax or zip file resides on your PC.

2. Open a Windows command prompt.

   The command prompt appears.

3. Customize and enter the FTP commands with the following changes:

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

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

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

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

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

   f. Replace *paxfile.pax.Z* with the name of the pax file to upload.

   The pax file is transferred to the mainframe.

Example: FTP Commands

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

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

Create a Product Directory from the Pax File

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

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

Follow these steps:

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

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

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

   The job runs and creates the product directory.

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

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

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

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

Copy Installation Files to z/OS Data Sets

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

Follow these steps:

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

      Note: The default Java location is the following:

      `/usr/lpp/java/Java_version`

   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 that the installation process uses. 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 that 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 *SMP/E for z/OS Reference (SA22-7772)*.

Receiving the SMP/E Package

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

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

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

How to Install Products Using Native SMP/E JCL

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

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

Prepare the SMP/E Environment for Pax Installation

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

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

Follow these steps:

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

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

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

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

2. Open the SAMPJCL member DCM1ALL in an edit session and execute the DCMSEDIT macro from the command line.

   DCM1ALL is customized.

3. Submit DCM1ALL.

   This job produces the following results:

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

4. Open the SAMPJCL member DCM2CSI in an edit session and execute the DCMSEDIT macro from the command line.

   DCM2CSI is customized.

5. Submit DCM2CSI.

   This job produces the following results:

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

Run the Installation Jobs for a Pax Installation

Submit and run these 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 DCM3RECD in an edit session, and execute the DCMSEDIT macro from the command line.

   Note: Comment out any unwanted FMIDs.

   DCM3RECD is customized.

2. Submit the *yourHLQ*.SAMPJCL member DCM3RECD to receive SMP/E base functions.

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

3. Open the SAMPJCL member DCM4APP in an edit session, and execute the DCMSEDIT macro from the command line.

   Note: Comment out any unwanted FMIDs.

   DCM4APP is customized.

4. Submit the *yourHLQ*.SAMPJCL member DCM4APP to apply SMP/E base functions.

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

5. Open the SAMPJCL member DCM5ACC in an edit session, and execute the DCMSEDIT macro from the command line.

   Note: Comment out any unwanted FMIDs.

   DCM5ACC is customized.

6. Submit the *yourHLQ*.SAMPJCL member DCM5ACC 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 MVS data sets. You can delete the following items:

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

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

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

Follow these steps:

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

   Your view is of the applicable USS directory.
2. Delete the pax file by entering the following command:

   `rm paxfile`

   paxfile

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

   The pax file is deleted.
3. Delete the product-specific directory by entering the following command:

   `rm -r product-specific_directory`

   product-specific_directory

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

   The product-specific directory is deleted.

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

Apply Maintenance

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

Follow these steps:

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

   The PTFs and HOLDDATA become accessible to the *yourHLQ*.SAMPJCL maintenance members.
3. The DCMSEDIT macro was customized in the installation steps. Verify that you still have the values from the base installation.
4. Open the SAMPJCL member DCM6RECP in an edit session and execute the DCMSEDIT macro from the command line.

   DCM6RECP is customized with your JOB statement, CSI location, and zone names.
5. Customize the DCM6RECP SMPPTFIN and SMPHOLD DD statements to reference the FB 80 data sets for the PTFs and HOLDDATA.
6. Submit DCM6RECP.

   The PTFs and HOLDDATA are received.
7. Open the SAMPJCL member DCM7APYP in an edit session and execute the DCMSEDIT macro from the command line.

   DCM7APYP is customized.
8. Submit DCM7APYP.

   The PTFs are applied.
9. (Optional) Open the SAMPJCL member DCM8ACCP in an edit session and execute the DCMSEDIT macro from the command line.

   DCM8ACCP is customized.
10. (Optional) Submit *yourHLQ*.SAMPJCL member DCM8ACCP.

    The PTFs are accepted.

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

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 your product:

ACTION

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

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.

EXRF

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

Code a BYPASS(HOLDSYS) operand on your APPLY command to install SYSMODs that have internal holds. Code the BYPASS(HOLDSYS) 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. The HOLDDATA resides in a separate file. The HOLDDATA 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 Technologies 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 that is 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

To simplify the process, the PDF version of this guide includes a sample JCL job that you can copy directly to the mainframe. To access this job, click the paper clip icon at the left of the PDF reader. A window displaying attachments opens. Double-click the UnloadJCL.txt file to view the sample JCL job.

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

Follow these steps:

1. Run the following sample JCL:

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

unitname

Specifies the tape unit to mount the tape.

nnnnnnn

Specifies the tape volume serial number.

yourHLQ

Specifies the data set prefix for the installation.

sysda

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

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

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

How to Install Products Using Native SMP/E JCL

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

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

Prepare the SMP/E Environment for Tape Installation

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

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

Follow these steps:

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

   The macro is ready to customize your y*ourHLQ*.SAMPJCL members.

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

2. Open the SAMPJCL member DCM1ALL in an edit session and execute the DCMSEDIT macro from the command line.

   DCM1ALL is customized.

3. Submit DCM1ALL.

   This job produces the following results:

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

4. Open the SAMPJCL member DCM2CSI in an edit session and execute the DCMSEDIT macro from the command line.

   DCM2CSI is customized.

5. Submit DCM2CSI.

   This job produces the following results:

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

Run the Installation Jobs for a Tape Installation

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

Follow these steps:

1. Open the SAMPJCL member DCM3RECT in an edit session and execute the DCMSEDIT macro from the command line.

   DCM3RECT is customized.

2. Submit the *yourHLQ*.SAMPJCL member DCM3RECT to receive SMP/E base functions.

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

3. Open the SAMPJCL member DCM4APP in an edit session and execute the DCMSEDIT macro from the command line.

   DCM4APP is customized.

4. Submit the *yourHLQ*.SAMPJCL member DCM4APP to apply SMP/E base functions.

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

5. Open the SAMPJCL member DCM5ACC in an edit session and execute the DCMSEDIT macro from the command line.

   DCM5ACC is customized.

6. Submit the *yourHLQ*.SAMPJCL member DCM5ACC to accept SMP/E base functions.

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

Apply Maintenance

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

Follow these steps:

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

   The PTFs and HOLDDATA become accessible to the *yourHLQ*.SAMPJCL maintenance members.
3. The DCMSEDIT macro was customized in the installation steps. Verify that you still have the values from the base installation.
4. Open the SAMPJCL member DCM6RECP in an edit session and execute the DCMSEDIT macro from the command line.

   DCM6RECP is customized with your JOB statement, CSI location, and zone names.
5. Customize the DCM6RECP SMPPTFIN and SMPHOLD DD statements to reference the FB 80 data sets for the PTFs and HOLDDATA.
6. Submit DCM6RECP.

   The PTFs and HOLDDATA are received.
7. Open the SAMPJCL member DCM7APYP in an edit session and execute the DCMSEDIT macro from the command line.

   DCM7APYP is customized.
8. Submit DCM7APYP.

   The PTFs are applied.
9. (Optional) Open the SAMPJCL member DCM8ACCP in an edit session and execute the DCMSEDIT macro from the command line.

   DCM8ACCP is customized.
10. (Optional) Submit *yourHLQ*.SAMPJCL member DCM8ACCP.

    The PTFs are accepted.

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

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 your product:

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

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.

EXRF

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

Code a BYPASS(HOLDSYS) operand on your APPLY command to install SYSMODs that have internal holds. Code the BYPASS(HOLDSYS) 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. The HOLDDATA resides in a separate file. The HOLDDATA 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 Technologies 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 that is called ERREL exists. We have determined that the problem fixed by the SYSMOD is more important than the one that it causes. We recommend that you apply these SYSMODs.

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

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

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

Chapter 6: Configuring Your Product

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

This section contains the following topics:

Installation Procedures

Complete the following before beginning this installation:

- 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.
- See Installation Worksheets. These procedure parameters are required for all new or upgrade CA Datacom product installations. Verify that each parameter has a valid value.

Preparing for Installation

Following are step-by-step instructions for installing, customizing, and verifying CA Datacom in the z/OS environment.

Review the README file before beginning the installation. This file contains information that is not available elsewhere about various important topics, including product concerns, new features, and installation or maintenance issues. The README file is available through support.ca.com. For more information about how to access the README File, see How to Obtain the README File (see page 12). To confirm if additional tasks are required after the install, upgrade, or maintenance, see Checking the README File (see page 114).

This install process uses DISP=(MOD,DELETE,DELETE) to allow JOBs to be rerunable. For this post install process, use the correct High Level Qualifier for your data set names when running these JOBs. The first part of these JOBs does the clean up using this technique.

New Installations

If you are installing CA Datacom for the first time, read this entire guide before you begin the installation process. Some pre-installation considerations apply directly to new installations.

After completing the steps commonly required for all installations (see Steps for All Installations (see page 86)), complete the steps listed in New Installation Phase. Do not perform the steps in the section for the upgrade installation phase.

When you finish the last step, you have completed your new installation. Verify the successful installation of your CA Datacom products as shown in Installation Verification Phase (see page 109).

Upgrading Existing Products

If you are upgrading your existing CA Datacom products from Version 12.0 to Version 14.0, some pre-installation considerations apply directly to upgrades. Refer to the README File (see page 12) to determine if there are additional requirements.

APF Authorized Libraries

The MUF must be run as an APF authorized job or task. This means that the CUSLIB data set and all product target libraries that occur in the JOBLIB/STEPLIB must be APF authorized. Your current Version 12.0 libraries should already be APF authorized. This is required before the upgrade and fall back procedures.

If you have SYSVIEW, INSTJCL member ADDAPF can be used to add the libraries to the APF list dynamically. This is not a permanent change for APF authorization.

Certain functions of DBUTLTY require that the job run APF authorized. To find out which features require APF authorization, see the *CA Datacom DBUTLTY Reference Guide* for z/OS.

Installation in the SYSPLEX Environment

When installing in a SYSPLEX environment, remember to add the appropriate JOBPARM card to help ensure that the installation jobs are consistently executed on the appropriate processor.

Sample JCL Data Sets

Beginning with Version 12.0, the SAMPJCL data set was split into two separate data sets, the SAMPJCL data set itself and the CABDSAMP target library. The SAMPJCL data set now contains only the JCL needed for the SMP/E install. See Installing Your Product From Pax-Enhanced ESD.

The CABDSAMP target library contains the JCL needed to create a new or upgraded MUF environment. After the SMP/E install, copy the necessary jobs to the newly created INSTJCL library using the provided BDCUS00 job so they can be edited for use. The following sample SMP/E jobs located in the CABDSAMP PDS are used to receive, apply, and accept APARs/PTFs:

- DCM6RECP
- DCM7APYP
- DCM8ACCP

Note: Before you submit each step, review the JCL for any DD statements that need to be added or removed to properly reflect the environment at your site.

INSTJCL Member Names

The INSTJCL member names can be easily identified during any installation. These names are constructed as follows:

- The following members are grouped by the first 5 characters:
  - **BDCUS** indicates a customization job with MUF-specific SYSIN generation, assemblies, and link-edits.
  - **BDNEW** indicates a job for new installations only.
  - **BDUPG** indicates a job for upgrading a MUF from Version 12 only.
  - **IVPNEW** indicates a job to execute sample JOBs for new install only.
  - **IVPUPG** indicates a job to execute sample JOBs for upgrades only.
  - **BDFBK** indicates a job for returning to the previous version after completing the upgrade installation jobs.
  - **BDFFW** indicates a job for falling forward back from Version 12 to Version 14.0 at some future date.
  - **BDCDC** indicates a job for implementing the Change Data Capture feature.
  - **BDRIM** indicates a job for installing the CA Datacom PC CALLS.
- The remainder of each name indicates the number of the step and can include a suffix. The meaning of the suffix is explained in the following section.

Suffixes: Jobs with suffixes are conditional and are executed only if you are installing the indicated product option.

Run these jobs after the job member without a suffix is complete. A job member name with no suffix after the number indicates that the step is for the base product (CA Datacom/DB) and is required for all CA Datacom installations.

Each installation step, including the base product and any product options, must be complete before you begin the next step.

Suffixes to the installation step numbers are assigned by product option as follows (last value in the member name):

B

Indicates the CA Dataquery product.

R

Indicates a restore of CA Datacom/DB data sets from a previous backup step.

Product Options

All of the CA Datacom product options are now installed together as part of an initial installation. Presspack and Fast Restore have no jobs to run as part of this process. All databases are defined to the CXX and marked loaded for DB, DD, SQL, and DQ.

- The CA Dataquery product option is required to run the B suffix jobs for new install and upgrade. If you are not licensed for this product, it is not necessary to run these jobs.
- The SQL product option is *not* used for a new install or upgrade for this release.
- The IVP Jobs have to run against your own internal MUF that you plan to use for your site. The IVP process does *not* run against the MUF as configured for the install or upgrade processes.

The INSTJCL process delivers a private MUF startup JCL that is customized for this upgrade process that is used as part of the upgrade process. Do not use it once the upgrade process is complete. Use member MUFSTRTU as an example for your MUF startup. The configured MUF jobs are not designed to be used by your site except for upgrade, fall back or fall forward processes.

Review the following members for completeness:

- Update CUSMAC member DBDATIN2. This member is not used as part of the upgrade or new install process. The DBDATIN2 member is first used for the MUF that runs the IVP processes. When you are ready to start the MUF for your site, member DBDATIN2 is used for your MUF Startup. Review this member for all MUF startup options. Also, review the MUF startup options section in the *CA Datacom/DB Database and System Administration Guide* to verify this is complete for your MUF instance.
- Update the B12STLIB CUSPROC member to add the target LOADLIBs for each product you are using if the product being installed is needed and is in different target libraries.

For the macro and load library names applicable to the product options, see Target and Distribution Libraries. For more information about the MUF startup options, see the *CA Datacom/DB Database and System Administration Guide*.

Special Notes for Upgrades

The upgrade process consists of the upgrade itself, fall back and fall forward. Each of these processes have a defined MUF that is highly customized. The communication protocol is only LOCAL for the upgrade processes. Therefore, no XCF or CCI is configured to be supported during these upgrade processes. All the jobs run on the same LPAR.

The following are considerations you should review before performing an upgrade.

Before You Begin

You must have adequate backups of your SMP/E and CA Datacom environments before beginning the upgrade. If there is a problem at any point, these backups are available for use.

The upgrade process to Version 14.0 converts a CXX from Version 12.0 format to Version 14.0 format. The level stays at 1. When you initialize the CXX as part of this convert process, continue to use the same CXX name that was used in Version 12.0. This upgrade process sets the DBID to format 2 for all bases as part of the upgrade process. If you want to change the CXX name, change it before or after the upgrade process. The CXX name change must be independent of the upgrade.

Note: DATCOMIN is an alias that can be used as a short form of DATACOM-INSTALL USER. If your site has a user ID length restriction of eight (8) characters or less, it can be used in place of the longer name. DATACOM-INSTALL is the user name for the CA Datacom Datadictionary ++USR statement.

New Install Requires Simplify

The new install process uses the Simplify feature being delivered with this version of CA Datacom/DB. To use the full Simplify feature, the same naming standards for data sets used for MUF are required. The naming conventions for your site can be different.

Before starting your new install, see the *CA Datacom/DB Database and System Administration Guide* and the *CA Datacom/DB DBUTLTY Reference Guide for z/OS* regarding the Simplify feature. The information provided will help you to understand the Simplify feature as delivered with CA Datacom/DB Version 14.0.

CAI.NEWHLQ.CXX^NAME.V140.* where asterisk (*) defines CUSLIB, CUSMAC, and CUSPROC. CAI.NEWHLQ.CXX^NAME.* defines all the database areas and MUF control data sets except the PXX. The install process controls the last node for these data sets. CXX^NAME and MUF name are the same value in this dialog. The CAI.NEWHLQ can be a user-defined length of 22 bytes. Due to data sharing requirements, the CXX name should only be a maximum value of 7 bytes. V140 is 4 bytes and in some cases, the last node uses all 8 bytes. For example, CAI.NEWHLQ2.CXX^NAME.AREANAMEDBID, CAI.NEWHLQ can be one node or as many nodes as you can use within the 22-byte restriction.

Following are two examples of how this looks if the CXXNAME is PRODMUFA:

- CAI.NEWHLQ.PRODMUFA.V140.CUSPROC
- CAI.NEWHLQ.PRODMUFA.IXX1001
- CAI.NEWHLQ.PRODMUFA.CXX

Once the customization is done, this new install process does loads for all bases. Every possible base is loaded on this install. After completing, the CICS portion that builds the VLS files are generated in the next job. No MUF is used during the new install process. The IVP process requires you to bring up a MUF to verify that the installation was successful. A sample MUF member, MUFSTRTS, in the **.INSTJCL is provided for your use. Be sure that the libraries for the MUF have been APF authorized. Make any changes that are required to the DBDATIN2 member before attempting to use this MUF.

DQ backup from the new install loads functional CA Dataquery systems through DBUTLTY LOAD. To modify the CA Dataquery options, refer to **.CABDSAMP in member DQSIM01. Be sure to copy it to another place to modify it. SMP/E controls **.CABDSAMP so this PDS is not an appropriate place to edit or save.

The System Identification Block (SID) assembly assumes the full implementation for Simplify and all of its protections. Do not remove any of the SID options that deal with Simplify. For more information about Simplify, see the *CA Datacom/DB Database and System Administration Guide* and the *CA Datacom/DB DBUTLTY Reference Guide for z/OS*.

This naming standard is a recommended best practice. With this fully implemented feature, MUF and DBUTLTY no longer need the DD cards for CXX/LXX/FXX. When the Simplify feature is installed, the primary benefit is that the DB RC 46/51 should be eliminated and the MUF has full ownership of the CXX except for a few DBUTLTY functions that can run with MUF down. After implementing this feature, your MUFs have more protection against a database outage by init/load going to the wrong CXX/MUF.

Upgrade Process Key Points

The upgrade process uses its own specially configured MUF. Use the MUF startup as it is defined. The System Identification Block (SID) uses a MUF name of UPGRMUF and can be used to help identify the SID for this process. Once the upgrade process is complete, modify the SID to be a unique name for your location. This upgrade process assumes that Simplify is not defined or used. The CXX name is not changed during this upgrade.

If you want to change the CXX name, change it before you start the upgrade process under Version 12.0 or wait until after the upgrade process completes and no chance for fall back to Version 12.0. The DBUTLTY CXX clone functions help with the change over to a new CXX NAME if that change is needed by your site once you have upgraded to Version 14.0.

No new features of the CA Datacom Version 14.0 product family should be used until fall back to Version 12.0 is fully eliminated or possible.

Fall back and fall forward actions use a process called soft fall back and soft fall forward processes for Version 12.0. If you have any issues with the fall back process and do not need to preserve SQL objects or CA Datacom Datadictionary changes after upgrading to Version 14.0, you can use the BDUPG03R to perform a hard fall back. However, any changes to the CXX, DD, and DDD can be lost. Also, SQL DEFAULT DBID (typically base 16) is not captured as part of this process. If you use the SQL DEFAULT base, you can add this base to the backup JOB BDUPG03. The hard fall back is not recommended for SQL sites unless it is a last resort to return to Version 12.0 for CA Datacom/DB.

If your site does not use the standard DBIDs that are included with the product, upgrade the process at your site to accommodate that level of change. The base upgrade assumes the DBIDs are the ones recommended by CA for use as delivered by a new product install.

The following provides information for sites that are not using the standard defaults:

- URT suffix (DBID),
  URT prefix (DBURT) for example, DBURT002
  CA Datacom Datadictionary module name DDURT002
  DBID 2 for CA Datacom Datadictionary
  - See members BDUPG02/BDUPG06/BDFBK02/BDFFW02 SYSIN for step DBMUFPR for the DICTIONARY option
  - Modify all URTS for CA Datacom Datadictionary
- DBID 15 FOR DDD
  - See members BDUPG02/BDUPG06/BDFBK02/BDFFW02 SYSIN for step DBMUFPR for DICTIONARY option
  - Modify all URTS for the DDD

Note: DBID 1 and 10 impact the related URTs. Modification is required but only impacts the IVPs.

Review the following members for CUSMAC members that need to be altered. If user-defined entities have been defined, update the "USRENTY" parameter on the DDSYSTBL macro assembly and the ENTFILS parameter on the DDURTBL macro assembly.

Members being moved from *.CABDSAMP to *.CUSMAC:

- BDCSDV CICS CSD for DB
- ADCSDV CICS CSD for DD/DDD
- DDFILE CICS Sample DD VLS File Names
- DBDATIN2 MUF Startup Option
- DBDATIN4 PXX Formatting Syntax
- DBDATIN5 MUF EOJ
- DBLSTPR Master List
- DDURTPR DD URT for Batch
- DDSYSTBL MACRO for DDSRTLM
- DDVPEFT MACRO for ROSFD'S
- VPEDDOFT MACRO for DD usage in Roscoe
- DBFT0PR CICS URT for DBID 1
- DBF10PR CICS URT for DBID 10
- DBFT2PR CICS URT for DBID 2
- DRDLIMOD Data Reporter Customization
- DBURSPR Batch URT for part of DBID 1
- DBURPPR SQL URT for Batch (DD/DDD)
- DBSOTPR SQL URT for CICS (DD/DDD)
- DQCSDV CICS CSD for CA Dataquery
- DQOPTLST CA Dataquery Customization
- DBFT3PR CICS URT for CA Dataquery

Note: These members are being moved to *.CUSMAC where any future changes can be made. However, no changes can be made to *.CABDSAMPS because it is under SMP/E control.

CA Dataquery Panels Translated Versions

To keep the translated version of your CA Dataquery panels when you upgrade to this version, run the DQLANGMT utility with the SYSIN RUNTYPE=UNLOAD,LANG=xx to back up the translated panels. After the upgrade, run the DQLANGMT again with SYSIN RUNTYPE=LOAD and the file from the previous UNLOAD as input to put the translated panels, literals, and vocabulary on the new version files. This is the only way to migrate the translated files to this version.

To see which panels do not have translated versions, select Language Maintenance from the Administration Menu. Display lists of panels, vocabulary, or literals online to see which do not have translated versions. The online displays list the AE (American English) version first, followed by the *xx* version, unless *xx* happens to sort higher in the list than AE. In any case, they are together on the lists, so new ones can be easily seen.

For more information about the DQLANGMT utility, see the *CA Dataquery Administrator Guide*.

APF Authorized Libraries

The MUF *must* be run as an APF authorized job or task in Version 14.0.

Version 14.0 PC Call

SVC is no longer required starting with this version of CA Datacom/DB.

CAMASTER is now a requirement to successful implementation of this feature. CAMASTER was initially delivered on CA Common Services 12.1.

The SVC for Version 14.0 has been replaced with a Program Call (PC). This feature makes better use of system resources. CA Datacom/DB Version 12.0 can continue to use the SVC. There is no conflict between Version 12.0 use of SVC and Version 14.0 use of PC Calls. Do *not* remove the Version 12.0 SVC until there is no chance of any Version 12.0 MUF/DBUTLTY/JOB that uses CA Datacom/AD on that LPAR.

Note: This PC Call installation is a requirement for this version of CA Datacom/DB.

DB Subsystem/Cross Memory

CA Datacom/DB Version 14.0 does not use the SUBSYSTEM that was used in previous releases. CA Datacom now builds a process named Cross Memory that uses PC CALLs.

CAIRIM installs the Cross Memory PC CALL process for you.

Note: Do *not* remove the Version 12.0 SUBSYSTEM until there is no chance for any Version 12.0 MUF to run on that LPAR.

For more information about the PC Cross Memory, see the *CA Datacom/DB Database and System Administration Guide*.

Change Data Capture (CDC)

The Change Data Capture feature is still optional in Version 14.0, but if you want to implement Change Data Capture, use INSTJCL job BDCDC01. With the new installation process, the base is automatically built.

DD Comparator Process before Upgrades

CA Datacom Datadictionary has a comparator tool that can be used for Versions 12.0 and 14.0. RO25207 delivered this tool for Version 12.0. In Version 14.0, this is part of the base code line. INSTJCL member ADSDC12 is for Version 12.0 and ADSDC14 is for Version 14.0. Before you upgrade, we recommend that you run the comparator in Version 12.0 to see if your CA Datacom Datadictionary is a good candidate. We also recommend that you run the comparator tool for each CA Datacom Datadictionary that you have and for all MUF instances before attempting an upgrade. Plan at least a minimum of one month before an upgrade to perform this process. Once the MUF is at Version 12.0 and has the above PTF applied, you can run this tool at any time.

If you have any questions or concerns about the comparator report being generated or about each MUF instance you run this for, contact CA Support Level 1.

Installation Sequence

To execute sample jobs, they *must* be executed in sequential order by name and number. Review, edit, execute, and complete each installation step before proceeding to the next step. Read the CA Common Services requirements before starting this process.

Follow these steps:

1. SMP/E Installation Phase

   Perform the SMP/E jobs as outlined in the following:

   - Installing Your Product Using CA MSM (see page 35)
   - Installing Your Product from Pax-Enhanced ESD (see page 41)
   - Installing Your Product from Tape (see page 65)

2. CAIRIM Phase

   Install PC Calls on the LPAR before running either a new install or upgrade. (SVC and SUB System have been replaced with PC Calls.)

3. Customization Phase

   Before performing either a new install or an upgrade, execute the members that have names that start with BDCUS. It is assumed that each INSTJCL only does a new install or upgrade and not both within the same PDS.

   - BDCUSNEW is used for new installs only
   - BDCUSUPG is used for upgrades only

4. New Installation Phase

   If you are installing CA Datacom for the first time, execute the members that have names that start with BDNEW. After all BDNEW jobs have executed successfully, the new CA Datacom environment is ready for use.

5. Upgrade Installation Phase

   If you are performing an upgrade installation, execute the members that have names that start with BDUPG. When the BDUPG jobs have executed successfully, the upgrade is complete and the new environment is ready for use.

6. Post-Installation Phase

   Configure a MUF using the DBDATIN2 member as your MUF JOB or STC, because installation verification programs run against the customized MUF. Member MUFSTRTS can be used as a starting shell for this JCL.

Do not use the preconfigured MUF for the upgrade process. This MUF is customized to support the upgrade process only. It is not intended to be used for the permanent MUF Startup process for your site. See the following examples:

- Member MUFSTRTS for a new install
- Member MUFSTRTU for an upgraded MUF
- Member DBUTLTYS for JCL used for NEW with DBUTLTY
- Member DBUTLTYU for JCL used in the upgrade process for DBUTLTY

Make any CA Datacom CICS Services modifications necessary for your specific site.

7. Install Verification Phase

   Start your customized MUF for your site. Do not use any of the MUFs from the upgrade process, for example, MUFs from the fallback or fall forward part of the upgrade process. Use the MUFs configured for each of these processes. Do *not* use any of your internal configured MUFs.

   Once the upgrade process is complete, verify that the DBDATIN2 member is ready to be used for your site. Start your MUF and begin the installation verification programs against that MUF instance.

   Execute the members that have names that start with IVPNEW* or IVPUPG*. When the IVP* jobs have executed successfully, the CA Datacom Version 14.0 product install is complete.

Steps for All Installations

For information about the SMP/E installation, see the following:

- Installing Your Product Using CA MSM
- Installing Your Product From Pax-Enhanced ESD
- Installing Your Product From Tape

Customization Steps

Perform the jobs in this section before performing the steps in either the upgrade or new install sections. You can run these jobs multiple times for as many MUFs as needed.

The following is a list of the steps that are explained in this chapter:

Step	Description	Purpose
0	Retrieve BDCUS00 from CABDSAMP perform changes as directed, and submit the JCL. *Do not save this job in CABDSAMP!*	Copy the sample JCL from the target library into the INSTJCL library.
1	Retrieve BDRIM01 from INSTJCL, perform changes as directed, and submit the JCL.	Load DB Program CALL (PC) using CAIRIM. CA Common Services CAMASTER is a prerequisite requirement to complete this task.
2A	Retrieve BDCUSNEW from INSTJCL, perform changes as directed, and submit the JCL.	Perform CA Datacom product custom assemblies and links for a new install only. Do *not* run BDCUSUPG if new install is selected.
OR		
2B	Retrieve BDCUSUPG from INSTJCL, perform changes as directed, and submit the JCL.	Performs CA Datacom product custom assemblies and links for upgrade install only. Do *not* run BDCUSNEW if upgrade is selected.

Step 0. Copy the JCL from Target to INSTJCL Library

This step creates the INSTJCL library and copies the new and upgrade JCL from the target library to the INSTJCL library. After this step is complete, you can perform any mass edits to the JCL using the $DCBDEDT macro.

Follow these steps:

1. Retrieve member BDCUS00 from your CABDSAMP library.
2. Make the required global changes (see the instruction block)

   Important! *Do not save* your edited BDCUS00 member in the CABDSAMP library so that you can use the original member to start over.
3. Submit the JCL to complete this step.
4. Review the output for successful completion which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

   The JCL was copied successfully.

Step 1 Load the CA Datacom/DB PC CALL Using CAIRIM

This step loads the CA Datacom/DB PC CALL using CAIRIM. Verify that CAMASTER is installed on the same LPAR where CAIRIM runs before performing this step.

Note: Verify that this step runs before attempting any of the new or upgrade jobs.

Follow these steps:

1. Run the DBUTLTY function REPORT MEMORY=MVS to request the Report so that you have the Program Call PC members in place.
2. Retrieve member BDRIM01 from your INSTJCL library.
3. Make the required global changes as specified in the instruction block in the member.
4. Submit the JCL to complete this step.
5. Review the output for successful completion which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

   CA Datacom/DB PC CALLs are loaded.

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

For this version of CA Datacom, make certain that this job runs on any LPAR on which you want any CA Datacom work to run.

Batch jobs, CICS, Servers, or MUF require this job to define the PC Calls. Run the DBUTLTY function REPORT MEMORY=MVS to verify.

Step 2. Prepare Product Custom Assemblies

To begin Step 2, prepare the CA Datacom customized assemblies.

BDCUSNEW uses the Simplify feature for its install and uses naming standards that have CXXNAME as part of the data sets. Review the *CA Datacom/DB Database and System Administration Guide* for this feature. Using CXXNAME as part of the data set name for custom libraries, control data sets, and database areas is considered to be best practice for data set naming conventions. With this naming convention and the Simplify options being turned on in the BDSIDPR module, the Simplify feature helps to protect these data sets.

Note: Do *not* modify BDCUSUPG if you are doing a new install. Skip to the New Installation Phase (see page 90) for more information about the BDNEW members.

BDCUSUPG does not use the simplify feature for this process. Be sure that the CXX name is not changed as part of this process. If you must change the CXX name, change it in Version 12.0 before the upgrade starts or in Version 14.0 after the upgrade is completed.

Use the BDCUSNEW custom assembly for a new installation. Use the BDCUSUPG custom assembly for an upgrade installation. The PDS assumes one or the other is used but not both processes for a new install and upgrade.

Follow these steps:

1. Retrieve member BDCUSNEW or BDCUSUPG from your INSTJCL library.
2. Make the required global changes as specified in the instruction block in the member.
3. Submit the JCL to complete this step.

   Custom assemblies are prepared.
4. Review the output for successful completion which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

   Custom assembly is now complete. You can now start using CA Datacom/DB.

New Installation Phase

If you are upgrading, do not perform these steps. To continue your installation, see Upgrade Installation Phase.

The following is a comprehensive list of all possible steps *for a new installation only*. If it is your first time to install CA Datacom, perform these steps after completing the SMP/E jobs described in the following:

- Installing Your Product Using CA MSM (see page 35)
- Installing Your Product From Pax-Enhanced ESD (see page 41)
- Installing Your Product From Tape (see page 65)

For this phase of the installation, run the INSTJCL library members whose names start with BDNEW.

Step	Description	Purpose
1	Retrieve BDNEW01 from INSTJCL, perform changes as directed, and submit the JCL.	Allocates all database areas and null loads all the bases. This process loads and marks as loaded all bases that delivered by CA Datacom. This job is fully rerunable.
2	Retrieve BDNEW02 from INSTJCL, perform changes as directed, and submit the JCL.	Manages all the VLS file build processes as needed by the new install process. This job uses the same process as Step 1 and is fully rerunable.

Step 1. Allocates, Loads Databases, and Init Control Data Sets

This step executes IEBUPDTE to add the customized JCLLIB members and allocates the backup and VLS files for CA Datacom/DB Version 14.0. Allocates all the database areas and control data sets. Formats all of them and loads all the bases.

Follow these steps:

1. Retrieve member BDNEW01 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 which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

Pay special attention to the edit instructions concerning CA Datacom Datadictionary user entities.

Step 2. LOAD/FORMAT/INIT VLS Files

This step loads, formats, and initializes VLS files.

Follow these steps:

1. Retrieve member BDNEW02 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 which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

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

This job is fully rerunable. No restart is needed.

The new installation phase is now completed. To verify your installation, proceed to Installation Verification Phase (see page 109).

Upgrade Installation Phase

If you are installing CA Datacom for the first-time, skip this section.

The following is a comprehensive list of all possible steps for CA Datacom Version 12.0 to Version 14.0 upgrade installations only.

Important: Before you perform these steps:

- Back up your entire CA Datacom environment using your standard site procedure.
- Complete the SMP/E jobs described in (as appropriate) the following:
  - Installing Your Product Using CA MSM (see page 35)
  - Installing Your Product From Pax-Enhanced ESD (see page 41)
  - Installing Your Product From Tape (see page 65)
- For additional information about upgrading from Version 12.0, see the Version 14.0 README.

For this phase of installation, run the INSTJCL library members whose names start with **BDUPG**.

Step	Description	Purpose
1	Retrieve BDUPG01 from INSTJCL, perform changes as directed, and submit the JCL.	Add JCLLIB members and the CA Datacom/DB upgrade data sets.
2	Retrieve BDUPG02 from INSTJCL, perform changes as directed, and submit the JCL.	Start the CA Datacom/DB Version 12.0 MUF.
3	Retrieve BDUPG03 from INSTJCL, perform changes as directed, and submit the JCL.	Run the CA Datacom Datadictionary and DDD backups.
3B	*(Conditional)* Retrieve BDUPG03B from INSTJCL, perform changes as directed, and submit the JCL.	Back up the Version 12.0 CA Dataquery database.

Step	Description	Purpose
3R	*(Conditional)* Retrieve BDUPG03R from INSTJCL, perform changes as directed, and submit the JCL.	Reload database files from Version 12.0 backups. This can be used as a hard restore back from Version 14.0 to Version 12.0. If you made changes to the CXX, DD, or DDD or have SQL, all changes are lost. This is not recommended. It is only used as a last resort. We recommend the soft fall back process as defined for this type of upgrade.
4	Retrieve BDUPG04 from INSTJCL, perform changes as directed, and submit the JCL.	Shut down the CA Datacom/DB Version 12.0 MUF.
5	Retrieve BDUPG05 from INSTJCL, perform changes as directed, and submit the JCL.	Convert the Version 12.0 CXX to Version 14.0 and back up the Version 14.0 CXX. Review the CXX name and verify that it is not changed from our Version 12.0 CXX name. The upgrade path assumes that the CXX name does not change. DBID format is set to 2 as part of this process.
6	Retrieve BDUPG06 from INSTJCL, perform changes as directed, and submit the JCL.	Start up the CA Datacom/DB Version 14.0 MUF.
7	Retrieve BDUPG07 from INSTJCL, perform changes as directed, and submit the JCL.	Performs the actual upgrade to DD/DDD and HSD RESET. Defines SYSTEMTABLES for this MUF instance.
7B	*(Conditional)* Retrieve BDUPG07B from INSTJCL, perform changes as directed, and submit the JCL.	Initialize and load the panel files in the CA Dataquery database.
8	Retrieve BDUPG08 from INSTJCL, perform changes as directed, and submit the JCL.	Back up the upgraded CA Datacom/DB Version 14.0 CXX and CA Datacom Datadictionary.
8B	Retrieve BDUPG08B from INSTJCL, perform changes as directed, and submit the JCL.	Back up the upgraded CA Dataquery Version 14.0 database.
9	Retrieve BDUPG09 from INSTJCL, perform changes as directed, and submit the JCL.	Shut down the CA Datacom/DB Version 14.0 MUF.

Step	Description	Purpose
10	Retrieve BDUPG10 from INSTJCL, perform changes as directed, and submit the JCL.	Load the VLS files for Version 14.0.
11	Retrieve BDUPG11 from INSTJCL, perform changes as directed, and submit the JCL	Convert the database 1018 AUTOSTATUS MFQ table to Version 14.0

Step 1. Add JCLLIB Members

This step executes IEBUPDTE to add the customized JCLLIB members and allocates the backup and VLS files for CA Datacom/DB Version 14.0. Allocates all the database areas and control data sets. Formats and loads all the databases and control areas for the MUF.

Follow these steps:

1. Retrieve member BDUPG01 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 which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

Pay special attention to the edit instructions concerning CA Datacom Datadictionary user entities.

Note: Pay attention to the allocation sizes of the backup data sets. If your CA Datacom environment is large, consider whether to increase the allocation size of these data sets.

Step 2. Start Up the Version 12.0 MUF

This step starts the Version 12.0 MUF. This MUF is configured to run the upgrade process and there is no need to modify the MUF startup options. This Version 12.0 MUF assumes that your site has already APF authorized the libraries.

Follow these steps:

1. Retrieve member BDUPG02 from your INSTJCL library.
2. Make the required global changes (see the instruction block).
3. Submit the JCL to complete this step.

No condition code is expected because the MUF stays up through Step 4.

Step 3. Back Up Version 12.0 CXX and Datadictionary

This step executes DBUTLTY to back up the Version 12.0 CA Datacom/DB CXX and CA Datacom Datadictionary. Backup is taken before any maintenance is applied to the Version 12 CA Datacom Datadictionary and HSD RESET is performed.

Note: Run ADSDC12 prior to running this job. If ADSDC12 receives CC 0000, you are ready to proceed. If CC is not 0000, contact CA Support. If you ran ADDSC12 and the problems reported were dealt with successfully, proceed with this job. It is imperative that the Datadictionary Comparator Process (DDSDCLM) runs to some kind of successful conclusion before running BDUPG03. For more information, see DD Comparator Process before Upgrades (see page 84).

Follow these steps:

1. Retrieve member BDUPG03 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 which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

This backup job step acts as a checkpoint. If any failure occurs in a job through BDUPG08, you can restore your CA Datacom Datadictionary and CXX from the backup files created here using INSTJCL library member BDUPG03R.

Pay special attention to the edit instructions concerning CA Datacom Datadictionary user entities.

Step 3B. Back Up Version 12.0 Database for CA Dataquery

Conditional

This step executes DBUTLTY to back up the Version 12.0 CA Dataquery database.

Follow these steps:

1. Retrieve member BDUPG03B from your INSTJCL library.
2. Make the required global changes (see the instructions block).
3. Submit the JCL to complete this step.
4. Review the output for successful completion which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

Step 3R. Reload Database Files

Conditional

This step executes DBUTLTY to reload the CA Datacom/DB databases from the backup taken in Step 3. Execute this job only if an upgrade has to fall back to the point where the CA Datacom CXX and CA Datacom Datadictionary were backed up in Step 3. Your changes are lost if you use this job after running on Version 14.0 and changes were made using SQL or to the DD/DDD/CXX. The last step of this job is for CA Dataquery. You can remove this step if you do not have this product.

Follow these steps:

1. Retrieve member BDUPG03R from your INSTJCL library.
2. Make the required global changes (see the instructions block).
3. Submit the JCL to complete this step.
4. Review the output for successful completion which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

Step 4. Shut Down the Version 12.0 MUF

This step executes DBUTLTY to shut down the Version 12.0 MUF.

Follow these steps:

1. Retrieve member BDUPG04 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 which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

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

Step 5. Convert the Version 12.0 CXX to Version 14.0

This step executes DBUTLTY to convert the Version 12.0 CXX to Version 14.0 then backs up the CXX. Verify that the CXX name used in this job is the same as what was used for the Version 12.0 CXX. This process also moves any bases left in format 1 to format 2.

Follow these steps:

1. Retrieve member BDUPG05 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 which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

Note: If you are upgrading a MUF environment that is externally secured, the Version 12.0 MUF startup used by this upgrade is customized to support only this upgrade and is not secured. We recommend that you use this set of startup options as is for this upgrade.

Step 6. Start Up the Version 14.0 MUF

This step starts up the CA Datacom/DB Version 14.0 MUF. Verify if the CA Dataquery product option must be commented out in this job. If you have not already done so, APF Authorize your 14.0 libraries before this job is started. If you have SYSVIEW, see member APFADD for help with APF authorization.

Note: This MUF startup job contains specific startup parameters to run the remaining upgrade steps successfully. The startup parameters are different from your standard MUF parameters specifically for the upgrade process.

Follow these steps:

1. Retrieve member BDUPG06 from your INSTJCL library.
2. Make the required global changes (see the instruction block).
3. Submit the JCL to complete this step.

No condition code is expected because the MUF stays up through Step 9.

Step 7. Upgrade DD/DDD and BTG CASYSTEMTABLES

This step executes DDUPDATE to update the DD and DDD to become Version 14.0 and DDCFBLD performs an HSD RESET. DDUPDATE defines the CASYSTEMTABLES database. No initialization or load is required or recommended for CASYSTEMTABLES.

Follow these steps:

1. Retrieve member BDUPG07 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 which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

Step 7B. Load CA Dataquery Database

Conditional

This step executes DQLANGMT to load the new panel files.

Follow these steps:

1. Retrieve member BDUPG07B 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 which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

Important: Verify that the DQM backup file allocation is large enough for your site requirements.

Step 8. Back Up Version 14.0 CXX and Datadictionary/DDD

This step executes DBUTLTY to back up the Version 14.0 CXX and CA Datacom Datadictionary.

Follow these steps:

1. Retrieve member BDUPG08 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 which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

Step 8B. Back Up Version 14.0 CA Dataquery Database

Conditional

This step executes DBUTLTY to back up the Version 14.0 CA Dataquery database after an upgrade.

Follow these steps:

1. Retrieve member BDUPG08B 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 which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

Step 9. Shut Down the MUF

This step executes DBUTLTY to shut down the MUF.

Follow these steps:

1. Retrieve member BDUPG09 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 which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

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

Step 10. Allocate Backups and Load VLS Files

This step allocates the upgrade backup VLS files and loads the VLS files.

Follow these steps:

1. Retrieve member BDUPG10 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 which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

New versions of the VLS files are created except for ADRPNL, leaving the Version 12.0 versions intact in case they are still needed. The DD statements for these new files can be found in CUSMAC member DDFILE, to be inserted into your CICS startup JCL.

Step 11. Convert the AUTOSTATUS database (DBID=1018) MFQ table to Version 14.0

Conditional

This step performs the following tasks:

- Allocates DBUTLTY EXTRACT output files
- Updates the AUTOSTATUS database MFQ table definition in the CA Datacom Datadictionary to Version 14.0
- Reformats the extract data to the Version 14.0 format
- Reloads the reformatted data back into the table

Follow these steps:

1. Retrieve member BDUPG11 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 which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL>

The upgrade installation phase is now complete. Proceed with the steps in the Installation Verification Phase (see page 109) to demonstrate your upgrade installation.

Fallback to Version 12.0 Phase

If you must fall back from Version 14.0 to Version 12.0, you can do so by executing the following jobs. This process performs a soft fall back meaning any changes to the CXX/DD/DDD are preserved with any modified SQL objects after Version 14.0. We recommend this process. If for some reason this process fails and you must go back to Version 12.0, use member BDUPG03R to fall back and only as a last resort. The BDFBK* members are recommended for fall back, not BDUPG03R.

For more information about Directory (CXX) Upgrade and formats, see the *CA Datacom Release Notes* and *CA Datacom/DB DBUTLTY Reference Guide*.

For this phase, run the INSTJCL library members whose names start with **BDFBK**.

Step	Description	Purpose
1	Retrieve BDFBK01 from INSTJCL, perform changes as directed, and submit the JCL.	Executes the appropriate DBUTLTY CXXMAINT option to convert the CXX.

Step	Description	Purpose
2	Retrieve BDFBK02 from INSTJCL, perform changes as directed, and submit the JCL.	MUF startup only used for the fall back process.
3B	Retrieve BDFBK03B from INSTJCL, perform changes as directed, and submit the JCL.	Restores the panels for CA Dataquery through DQM being reloaded from Version 12.0 backup for CA Dataquery
4	Retrieve BDFBK04 from INSTJCL, perform changes as directed, and submit the JCL.	Executes DDUPDATE to undo the Version 14.0 DD/DDD updates for fall back to Version 12.0. Restores SYSTEMTABLES back to Version 12.0 level. EOJs the MUF.
5	Retrieve BDFBK05 from INSTJCL, perform changes as directed, and submit the JCL.	Executes VLSUTIL to restore the Version 12.0 signon/signoff panels to the ADRPNL data set.
6	Retrieve BDFBK06 from INSTJCL, perform changes as directed, and submit the JCL.	Executes DDUPDATE to undo the Version 14.0 AUTOSTATUS (DBID 1018) database updates for fall back to Version 12.0.
7	Retrieve BDFBK07 from INSTJCL, perform changes as directed, and submit the JCL.	Executes DBUTLTY to EOJ the Version 12.0 MUF.

Step 1. Execute DBUTLTY to Convert the CXX

This step executes DBUTLTY to convert the CXX from Version 14.0 back to Version 12.0.

Follow these steps:

1. Retrieve member BDFBK01 from your INSTJCL library.
2. Make the required global changes.
3. Submit the JCL to complete this step.
4. Review the output for successful completion which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

Step 2. Execute DBMUFPR to Start the MUF

This MUF has been customized and configured to support the fall back process. You do not need to modify the MUF startup options. Be sure that no other jobs access this MUF other than the fall back jobs. This MUF configuration is only used for the fall back process and no other activity against this cycle of the MUF.

This step executes DBMUFPR to start the MUF as Version 12.0.

Follow these steps:

1. Retrieve member BDFBK02 from your INSTJCL library.
2. Make the required global changes.
3. Submit the JCL to complete this step.
4. Review the output for successful completion which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

Step 3B. Convert the CA Dataquery Panels

This step restores the CA Dataquery panel files from Version 14.0 to Version 12.0.

Follow these steps:

1. Retrieve member BDFBK03B from your INSTJCL library.
2. Make the required global changes.
3. Submit the JCL to complete this step.
4. Review the output for successful completion which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

Step 4. Datadictionary, DDD, and Dynamic System Tables Set Back to Version 12

This DDUPDATE undoes the Version 14.0 upgrade transactions from Version 14.0 to Version 12.0 and restores the SYSTEMTABLES.

Follow these steps:

1. Retrieve member BDFBK04 from your INSTJCL library.
2. Make the required global changes.
3. Submit the JCL to complete this step.
4. Review the output for successful completion which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

Step 5. Restore the DDOL Signon/Signoff Panels to ADRPNL

This step executes VLSUTIL to restore the DDOL signon and signoff panels to the ADRPNL data set for Version 12.0.

Follow these steps:

1. Retrieve member BDFBK05 from your INSTJCL library.
2. Make the required global changes.
3. Submit the JCL to complete this step.
4. Review the output for successful completion which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

The DDOL signon and signoff panels reference the CA Datacom version you are running. Skip this step if you do not use DDOL in CICS for your site.

Step 6. Restore the AUTOSTATUS MFQ table back to Version 12

This step performs the following tasks:

- Allocates DBUTLTY EXTRACT out files
- Updates the AUTOSTATUS database MFQ table definition in the CA Datacom Datadictionary to Version 12.0 format
- Reloads the reformatted data back into the table

Follow these steps:

1. Retrieve member BDFBK06 from your INSTJCL library.
2. Make the required global changes.
3. Submit the JCL to complete this step
4. Review the output for successful completion which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

Skip this step if you:

- are not using the CA Datacom/DB AUTOSTATUS feature
- do not want to retain any data collected while running Version 14.0

Step 7. Issue an EOJ request

This step executes DBUTLTY to issue an EOJ request to shut down the Version 12.0 MUF.

Follow these steps:

1. Retrieve member BDFBK07 from your INSTJCL library.
2. Make the required global changes.
3. Submit the JCL to complete this step
4. Review the output for successful completion which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

Reinstalling the Version 14.0 Environment After Fallback

This method assumes that you successfully ran the recommended fall back process and did not use member BDUPG03R to fall back. If BDUPG03R was used, rerun the normal upgrade procedure when you are ready to move forward to Version 14.0.

If you must fall forward to Version 14.0 from Version 12.0, you can do so by executing the following jobs.

For more information about Directory (CXX) Upgrade and formats, see the *CA Datacom Release Notes* and *CA Datacom/DB DBUTLTY Reference Guide*.

For this phase, run the INSTJCL library members whose names start with **BDFFW**.

Step	Description	Purpose
1	Retrieve BDFFW01 from INSTJCL, perform changes as directed, and submit the JCL.	Executes the appropriate DBUTLTY CXXMAINT option to convert the CXX.
2	Retrieve BDFFW02 from INSTJCL, perform changes as directed, and submit the JCL.	MUF startup only used for the fall forward process.
3B	Retrieve BDFFW03B from INSTJCL, perform changes as directed, and submit the JCL.	Restores the panels for CA Dataquery through DQM being reloaded from Version 14.0 backup for CA Dataquery.
4	Retrieve BDFFW04 from INSTJCL, perform changes as directed, and submit the JCL.	Executes DDUPDATE to redo the DD/DDD updates to fall forward to Version 14.0. Restores SYSTEMTABLES to Version 14.0 level. EOJs the MUF.
5	Retrieve BDFFW05 from INSTJCL, perform changes as directed, and submit the JCL.	Executes VLSUTIL to restore the Version 14.0 signon/signoff panels to the ADRPNL data set.

Step 1. Execute DBUTLTY to Convert the CXX

This step executes DBUTLTY to convert the CXX from Version 12.0 back to Version 14.0.

Follow these steps:

1. Retrieve member BDFFW01 from your INSTJCL library.
2. Make the required global changes.
3. Submit the JCL to complete this step.
4. Review the output for successful completion which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

Step 2. Execute DBMUFPR to Start the MUF for Fall Back

Use this configured MUF to fall forward. Do *not* modify this MUF startup option. Do *not* allow any other jobs to run against the MUF instance except the fall forward process. No other user work should run again this MUF instance.

This step executes DBMUFPR to start the MUF as Version 14.0.

Follow these steps:

1. Retrieve member BDFFW02 from your INSTJCL library.
2. Make the required global changes.
3. Submit the JCL to complete this step.
4. Review the output for successful completion which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

Note: This job does not stop until BDFFW04 completes.

Step 3B. Convert the CA Dataquery Panels

This step restores the CA Dataquery panel files from Version 12.0 to Version 14.0.

Follow these steps:

1. Retrieve member BDFFW03B from your INSTJCL library.
2. Make the required global changes.
3. Submit the JCL to complete this step.
4. Review the output for successful completion which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

Step 4. Converts DD/DDD Back to Version 14.0 and Restores SYSTEMTABLES

This DDUPDATE performs the Version 14.0 upgrade transactions from Version 12.0 to Version 14.0 and restores the SYSTEMTABLES back to Version 14.0.

Follow these steps:

1. Retrieve member BDFFW04 from your INSTJCL library.
2. Make the required global changes.
3. Submit the JCL to complete this step.
4. Review the output for successful completion which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

This step brings down the fall back MUF.

Step 5. Restore the DDOL Signon/Signoff Panels to ADRPNL

This step executes VLSUTIL to restore the DDOL signon and signoff panels to the ADRPNL data set for Version 14.0.

Follow these steps:

1. Retrieve member BDFFW05 from your INSTJCL library.
2. Make the required global changes.
3. Submit the JCL to complete this step.
4. Review the output for successful completion which is indicated with a condition code of 00. If you receive any other code, correct your changes and resubmit the JCL.

The DDOL signon and signoff panels reference the CA Datacom version you are running. Skip this step if your site does not use DDOL in CICS.

Installation Verification Phase

After you have finished all installation steps for your site, start your customized version of your MUF with all your options activated. To demonstrate successful product installation for batch processing, execute the jobs following the section about IVP jobs for a new installation process. The customizations must be completed and your customized MUF must be enabled (active) before any IVPs can run. INSTJCL library member names begin with IVP. The IVPNEW* (new install) members support the new naming standard for the Simplify option. The IVPUPG* members use the older naming standard from previous releases. Do not use any of the MUFs as delivered for the upgrade processes, because the delivered MUFs are configured specifically for the upgrade or new install processes only. Use only members from the **.INSTJCL: MUFSTRTS (new install) and MUFSTRTU (UPGRADE) for this process.

Important: The IVPs must be performed in the sequence shown following the section about IVP jobs for a new installation process, and the MUF must be active for these jobs to run.

IVP Jobs for the New Install Process

After modifying DBDATIN2 to support your site, start your MUF instance. Review the documentation for any questions about options you need to configure your MUF.

Use the IVPNEW* members for sites performing a new install. For your licensed products, start a MUF that is configured for your site. Review DBDATIN2 in your CAI.NEWHLQ.CXX^NAME.V140.CUSMAC. Start your MUF instance with this member once it is modified for your site requirements. For an example of the MUF startup JCL usage for new installs, see member MUFSTRTS in the INSTJCL.

Once the MUF is started, you can run the IVPNEW* members to verify the install.

Step 1. Execute Sample CA Datacom/DB Programs

Edit and submit INSTJCL library member IVPNEW01. This executes multiple programs for CA Datacom/DB execution.

Note: Ignore message code CSV003I if it appears.

Step 2. Execute Sample SQL Program

Edit and submit INSTJCL library member IVPNEW02 if you installed CA Datacom/DB with the SQL Option.

Step 3. Execute Sample Program for Building Sample Database

Edit and submit INSTJCL library member IVPNEW03 if you configured your CA Datacom/DB MUF with the SQL option. This member has two jobs. Run the jobs one at a time and sequentially from this member. The second job is optional if you want to delete what the first job in this member defined.

If you installed CA Datacom/DB with the SQL Option, edit and submit this member. This job includes a series of steps to demonstrate the procedure for allocating, defining, initializing, and loading the sample database that is used in the CA Datacom SQL training guide that is available on support.ca.com.

This INSTJCL member also contains a job that optionally uninstalls the sample database.

Step 4. Execute DQBATCH Program

Edit and submit INSTJCL library member IVPNEW04 if you configured your CA Datacom/DB MUF with the DQ option.

Step 5. Create a Custom DCT for Presspack

Edit and submit INSTJCL library member IVPNEW05 if you configured your CA Datacom/DB MUF with the Presspack option.

Step 6. Execute DBUTLTY from CA Datacom Fast Restore

Edit and submit INSTJCL library member IVPNEW06 if you configured your CA Datacom/DB MUF with the Fast Restore option.

IVP for Upgrades

After modifying DBDATIN2 to support your site, start your MUF instance. The upgrade process assumes that Simplify is not turned on and is using the old naming standards from previous releases.

IVPUPG* members are only used for sites performing upgrades. For your licensed products, start a MUF that is configured for your site.

Once the MUF is started, you can run the IVPUPG* members to verify the install.

Step 1. Execute Sample CA Datacom/DB Programs

Edit and submit INSTJCL library member IVPUPG01. This executes multiple programs for CA Datacom/DB execution.

Note: Ignore message code CSV003I if it appears.

Step 2. Execute Sample SQL Program

Edit and submit INSTJCL library member IVPUPG02 if you installed CA Datacom/DB with the SQL Option.

Step 3. Execute Sample Program for Building Sample Database

Edit and submit INSTJCL library member IVPUPG03 if you configured your CA Datacom/DB MUF with the SQL option. This member has two jobs.

If you have CA Sample SQL base 1001 already defined, run the second job in this member before running the first job. If the delete process has been run, the first job may receive a -118 on the create schemas due to them already existing and is expected.

If you installed CA Datacom/DB with the SQL Option, edit and submit this member. This job includes a series of steps to demonstrate the procedure for allocating, defining, initializing, and loading the sample database that is used in the CA Datacom SQL training guide that is available on support.ca.com.

This INSTJCL member also contains a job that optionally uninstalls the sample database.

Step 4. Execute DQBATCH Program

Edit and submit INSTJCL library member IVPUPG04 if you configured your CA Datacom/DB MUF with the DQ option.

Step 5. Create a Custom DCT for Presspack

Edit and submit INSTJCL library member IVPUPG05 if you configured your CA Datacom/DB MUF with the Presspack option.

Step 6. Execute DBUTLTY from CA Datacom Fast Restore

Edit and submit INSTJCL library member IVPUPG06 if you configured your CA Datacom/DB MUF with the Fast Restore option.

Post-Installation Considerations

CICS Modifications

Include a DD statement for the CA Datacom Custom Load Library (CUSLIB) and the CA Datacom Target Load Library (CABDLOAD) in the DFHRPL concatenation of the CICS startup JCL.

CICS requires the addition of DD statements for the CA Datacom files. The CA Datacom installation creates these statements for you. Fetch the DDFILE member from the Custom Macro Library (CUSMAC) and insert it into the CICS startup JCL.

The CA Datacom installation also produces all source members for CICS table modification. These source members are in either the CABDSAMP or CUSMAC libraries and contain all of the entries for all of the CA Datacom products being installed or upgraded. All of the CICS table entries required for these products defined to CICS are produced as a part of the installation.

For those sites using an existing CICS that already references a CA Datacom MUF, it is necessary to replace the CICS groups for the earlier version. Using the following charts, replace all references to the Version 12.0 copybooks. Then reassemble and relink your CICS table DFHFCTxx and add the new CICS groups to your DFHCSD.

For those sites using an existing CICS that does not already reference a CA Datacom MUF, it is necessary to install CA Datacom CICS Services, as specified in Software Requirements. Although they are included as illustrations only, the following JCL member in the INSTJCL library can be used to define the CA Datacom products to CICS.

Note: The BDCSD. BDGRP, and BDCSDV CSD copybooks are part of and provided by CA Datacom CICS Services (DBC) starting with DBC 11.0.

BDCICS

This job defines the programs, transactions, and files for CICS Transaction Server.

CA Datacom Datadictionary

Version 14.0 Copybook for CICS Table Assemblies	Version 14.0 Copybook for CICS RDO	CICS CSD Group Name
	ADCSD	ADGRP
ADFCT		ADGRP
	ADCSDV	ADGRP

CA Dataquery

Version 14.0 Copybook for CICS Table Assemblies	Version 14.0 Copybook for CICS RDO	CICS CSD Group Name
	DQCSD	DQGRP
	DQCSDV	DQGRP

For information about the required DCT and PLT entries and copybooks, see the *CA Datacom CICS Services System Guide* and the *CA Datacom VSAM Transparency System Guide*.

Double-Byte Character Set and Katakana Character Support

To use the double-byte character set or the Katakana, change the CA Datacom CICS Services control files from what is delivered for CA Datacom Datadictionary online (DDOL) and CA Dataquery (DQRY). The PROFILEs for DDOL, DQRY, and SCFD (for CA IPC) must have UCTRAN=NO. For each terminal type (TYPETERM) used on CA Datacom CICS Services, the value of UCTRAN must be TRANID instead of NO.

For CA Datacom Datadictionary online, change both the profile for the DDOL transaction and the profile for the SCFD transaction which is part of CA IPC. For CA Dataquery only, change the profile for the transaction DQRY.

Online Product Verification

CA Datacom Datadictionary

To verify the CA Datacom Datadictionary installation online, see the section on starting and ending a session in the chapter on using the online facilities in the *CA Datacom Datadictionary User Guide*.

CA Dataquery

To verify the CA Dataquery installation online, see the section about signing on in the *CA Dataquery User Guide* and perform the tasks indicated.

Checking the README File

Review the README (see page 12) file to confirm if any additional tasks are required after the installation, upgrade, or maintenance procedure. For more information, see To Access the README File.

Planning for Initial MUF Roll Out

The installation and upgrade process is designed to simplify those processes during the implementation of your upgrade or new install. CA Technologies delivers a DBSYSID macro (which is used to assemble a DBSIDPR module) used only for the installs and upgrades. That is, the delivered DBSYSID is not meant to be used after the upgrade or new install process is completed. After installing or upgrading, you are therefore expected to customize the DBSYSID macro to meet your needs for each MUF. To support this rollout of the MUF, review the *CA Datacom/DB Database and System Administration Guide* in the following key areas and plan ahead by listing the specifications you need to make or change for your site.

- DBSYSID macro
- MUF startup options
- Simplify feature

Note: Before the MUF is rolled out to your first environment, when making your changes in the key areas just listed we recommend reducing the risk of an outage by first using a test environment to verify the new specifications work as intended.

Important! We recommend that you customize the DBSYSID macro before you roll out CA Datacom Version 14.0 to any of your environments. Your first rollout takes more time because of this initial recommended review, but choices made during this process can be used for future rollouts to other MUFs in your environment.

Customizing the DBSYSID Macro

Review the *CA Datacom/DB Database and Administrator Guide* to learn about the features and options of the DBSYSID macro. Modify the existing DBSIDPR member in the CUSMAC PDS to fit your needs for the rollout of your first MUF. Your customized DBSIDPR is your model for other MUFs that are upgraded later if you have more than one MUF in your environment.

MUF Startup Options

Review the *CA Datacom/DB Database and System Administrator Guide* for any enhancements or modifications that need to be made to the DBDATIN2 member in the CUSMAC for this MUF. Your customized DBDATIN2 is your model for other MUFs that are upgraded later if you have more than one MUF in your environment.

Initial MUF Rollout Using Simplify

Review the Simplify feature in the *CA Datacom/DB Database and System Administrator Guide.* With the Simplify feature, the new install process builds and makes certain assumptions to be true, taking advantage of all the protections offered by Simplify. Depending on the special needs of your environment, Simplify can provide the protection that you want. Review the documentation provided in the *CA Datacom/DB DBUTLTY Reference Guide* and the *CA Datacom/DB Database and System Administration Guide*.

Note: The CXX name and MUF name have to be unique to use this feature.

Tailoring the CA Datacom 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. For instructions about tailoring individual products, see the appropriate documentation.

Defaults

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 section describe each job that can be found on support.ca.com in the Sample download page. For more information about accessing this site, see How to Obtain the Sample Members (see page 12).

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.
DDSAM03	Assemble and link VPE online file table.
DDSAM04	Assemble and link VPE batch file table.

Job	Description
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 CA Datacom CICS Services.

Appendix A: Installation Worksheets

The following preinstallation worksheet is designed to simplify modifying the JCL provided in the sample library. Values have been supplied for your convenience.

The following parameters are required for the SMP/E install job procedures.

Item	Parameter Description
1	Job card information for card one. **Default: 'JOBCARD1'**
2	Job card information for card two. **Default: 'JOBCARD2'**
3	Job card information for card three or a comment card. **Default: 'JOBCARD3'**
4	Job card information for card four or a comment card. **Default: 'JOBCARD4'**
5	Volume information for the product and SMP/E target and distribution data sets. Use either the VOL=SER or the SMS VOLINFO statement when editing the ISREDIT macro. **Default: 'VOLINFO'**
6	Volume information for the CSI VSAM data set. Use either the VOL=SER or the SMS CSIVOLINF statement when editing the ISREDIT macro. **Default: 'CSIVOLINF'**
7	High-level qualifier for the GLOBAL ZONE **Default: 'GLOBALHLQ'**
8	SMP/E high-level qualifier for the CAIT0 TARGET ZONE. **Default: 'CAIT0HLQ'**
9	Product data set high-level qualifier. **Default: 'PRODHLQ'**
10	(Required if installing from DASD) High-level qualifier for the data sets that were unzipped. **Default: 'DASDHLQ'**
11	High-level qualifier used for the SAMPJCL data set. **Default: 'SAMPHLQ'**
12	SMS Output data class. **Default: 'DCLAS'**
13	SMS Output storage class. **Default: 'SCLAS'**

Item	Parameter Description
14	SMS Output management class. **Default: 'MCLAS'**
15	Generic device type or symbolic group name for magnetic tape. **Default: 'TAPEUNIT'**
16	Disk unit name. **Default: 'DISKUNIT'**
17	High-level qualifier for SMP/E temporary files. **Default: 'SMPETEMP'**
18	Data set fixed block size. **Default: 'TGTBLKSZ'**
19	Target Zone name. **Default: 'ZNCAIT0'**
20	Distribution Zone name. **Default: 'ZNCAID0'**
21	The CA IPC target load library. **Default: 'CAIIPS'**
22	The IBM CICS/TS target load library. **Default: 'SDFHLOAD'**
23	The IBM Linkage Assist library. **Default: 'CSSLIB'**
24	The IBM Language Environment SCEELKED load library. **Default: 'SCEELKED'**
25	The IBM TCPIP link library. **Default: 'TCPIP'**
26	The CA Common Services CAICICS target load library. **Default: 'CA90CICS'**
27	The CA Common Services CAW0LOAD target load library. **Default: 'CA90S'**
28	The IBM C Language Environment SCEESPC load library. **Default: 'SEDCSPC'**

The following parameters are required for the new and upgrade install job procedures.

Item	Parameter Description
1	What high-level qualifier is used by your site for a new install to define all the custom libraries, MUF control data sets, and database areas? (Only used for the new install members BDCUSNEW, BDNEW01, and BDNEW02. Parameter is 1-23 bytes in length. New install data set name forms are used.) **Default: 'CAI.NEWHLQ'**
2	What high-level qualifier is used to prefix the other SMP/E and distribution library data sets? **Default: 'CAI.SHLQ'**
3	What high-level qualifier is used to prefix the SMP/E target library data sets? **Default: 'CAI.THLQ'**
4	What high-level qualifier is used to prefix INSTJLC PDS? It is also used for CUSTOM libraries for custom assembly/links. For example, DBSIDPR and DDSRTLM are used for the UPGRADE process (non-simplify). **Default: 'CAI.CHLQ'**
5	What high-level qualifier is used to prefix the VLS data sets? **Default: 'CAI.VHLQ'**
6	What high-level qualifier is used to prefix the new CA Datacom data sets? Parameter is 1-24 bytes in length. **Default: 'CAI.HLQ'**
7	What high-level qualifier is used to prefix the existing CA Datacom Version 12.0 custom HLQ (for example, CUSLIB)? **Default: 'CAI.PCHLQ'**
8	What high-level qualifier is used to prefix the existing CA Datacom Version 12.0 target libraries? **Default: 'CAI.PTHLQ'**
9	What high-level qualifier is used to prefix the existing CA Datacom data sets for upgrade installs? **Default: 'CAI.PHLQ'**
10	What is the version number of the product you are installing used in CUSMAC, CUSLIB, and CUSPROC data set names and for custom libraries for custom assembly or links? For example, DBSIDPR and DDSRTLM that are only used for new installs. **Default: 'V140'**
11	What is the unit name of the device for temporary work DSNs? **Default: 'SYSDA'**

Item	Parameter Description
12	What DASD volume serial name is used for the CA Datacom control data sets? **Default: 'VOL=SER=DASD01'**
13	What DASD type is the VOL1 volume? For example, SYSDA, 3380, 3390, 9345. **Default: '3390'**
14	What DASD volume serial name is used for the CA Datacom index areas for the install databases? **Default: 'VOL=SER=DASD02'**
15	What DASD type is the VOL2 volume? For example, SYSDA, 3380, 3390, 9345. **Default: '3390'**
16	What DASD volume serial name is used for the CA Datacom data areas for the install databases? **Default: 'VOL=SER=DASD03'**
17	What DASD type is the VOL3 volume? For example, SYSDA, 3380, 3390, 9345. **Default: '3390'**
18	What DASD volume serial name is used for the CA Datacom backups and VLS files? **Default: 'VOL=SER=DASD04'**
19	What DASD type is the VOL4 volume? For example, SYSDA, 3380, 3390, 9345. **Default: '3390'**
20	Not used
21	Not used
22	What DASD volume serial name is used for the CA Datacom/DB IXX data sets for CDC and SQL verification databases? **Default: 'VOL=SER=DASD06'**
23	What DASD type is the VOL6 volume? For example, SYSDA, 3380, 3390, 9345. **Default: '3390'**
24	What DASD volume serial name is used for the CA Datacom/DB database area data sets for CDC and SQL verification databases? **Default: 'VOL=SER=DASD07'**
25	What DASD type is the VOL7 volume? For example, SYSDA, 3380, 3390, 9345. **Default: '3390'**

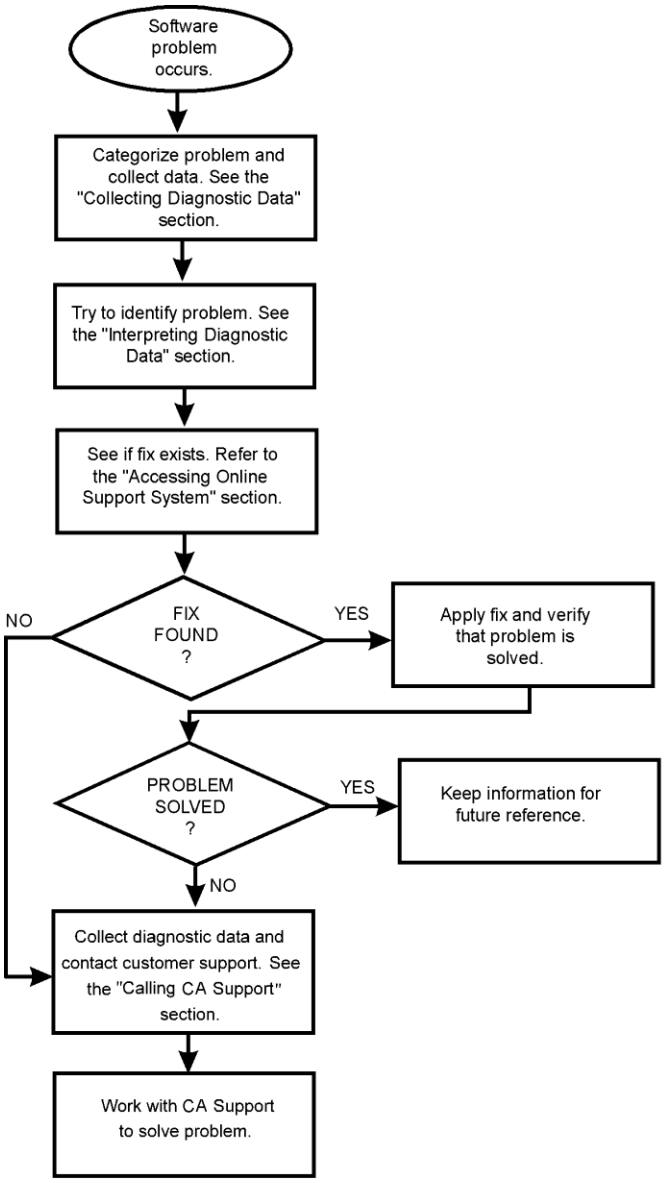
Item	Parameter Description
26	Not used
27	Not used
28	What is the name assigned to the CXX for this MUF? Instance used for new installs only. **Default: 'CXX^NAME'**
29	Not used
30	Not used
31	What is the data set name of the Target Load Library for the CA Common Services programs? **Default: 'CAI.CACCS.CAW0LOAD'**
32	What is the high-level qualifier for the Target Library MACLIB for the CA IPC product? **Default: 'CAI.IHLQ.CAVQMAC'**
33	What is the high-level qualifier for the Target Library LOADLIB for the CA IPC product? **Default: 'CAI.IHLQ.CAVQLOAD'**
34	What is the data set name of the CA IPC panel Library? **Default: 'CAI.ICHLQ.ADRPNL'**
35	What DASD volume serial number is used for the CA IPC CAVQLOAD volser (WRKST #33) used for APF ADD in member APFADD? **Default: 'APFIPC'**
36	What DASD volume serial number is used for the CAI.THLQ.CABDLOAD volser (WRKST #3) used for APF ADD in member DBAPF? **Default: 'DBAPF'**
37	Not used
38	What is the user name for CA Datacom Datadictionary ++USR statement? (**Note:** Do not change for new install.) **Default: 'DATACOM-INSTALL'**
39	What is the user password for the CA Datacom Datadictionary ++USR statement? (**Note:** Do not change for new install.) **Default: 'NEWUSER'**
40	What is the CA Datacom Datadictionary override name? **Default: 'PRIV'**
41	What is the data set name of the COBOL compiler library for the compilation of the CA Datacom sample programs? **Default: 'IGY.SIGYCOMP'**

Item	Parameter Description
42	What is the data set name of the COBOL Load Library for the link-edit of the CA Datacom sample programs? **Default: 'CEE.SCEELKED'**
43	What is the data set name of the CICS CSD for RDO? **Default: 'CICS.DFHCSD'**
44	What is the group list for CICS? **Default: 'CICSGRPL'**
45	What is the data set name of the CICS Macro Library? **Default: 'CICS.SDFHMAC'**
46	What is the data set name of the CICS Load Library? **Default: 'CICS.SDFHLOAD'**
47	What is the suffix used for CICS table assemblies for DB? **Default: '.BDSFX'**
48	What is the name of the assembler program? **Default: 'ASMA90'**
49	What is the name of the utility program for zapping load modules? **Default: 'IMASPZAP'**
50	What is the name of the utility program for copying PDS data sets? **Default: 'IEBCOPY'**
51	What is the name of the utility program for allocating data sets? **Default: ''IEFBR14'**
52	What is the name of the Linkage Editor module for link editting? **Default: 'IEWL'**
53	What is the name of the utility used for updating PDS members? **Default: 'IEBUPDTE'**
54	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 125) 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 134)) 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 132).)
- 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 134).

   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 132).

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 134))
   - 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

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 _____ _____
- [assign the value for IPC in your book] _____ _____
- 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 _____ _____

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.