

CA Datacom®

Installation Guide for z/OS Version 15.00



This Documentation, which includes embedded help systems and electronically distributed materials, (hereinafter referred to as the "Documentation") is for your informational purposes only and is subject to change or withdrawal by CA at any time.

This Documentation may not be copied, transferred, reproduced, disclosed, modified or duplicated, in whole or in part, without the prior written consent of CA. This Documentation is confidential and proprietary information of CA and may not be disclosed by you or used for any purpose other than as may be permitted in (i) a separate agreement between you and CA governing your use of the CA software to which the Documentation relates; or (ii) a separate confidentiality agreement between you and CA.

Notwithstanding the foregoing, if you are a licensed user of the software product(s) addressed in the Documentation, you may print or otherwise make available a reasonable number of copies of the Documentation for internal use by you and your employees in connection with that software, provided that all CA copyright notices and legends are affixed to each reproduced copy.

The right to print or otherwise make available copies of the Documentation is limited to the period during which the applicable license for such software remains in full force and effect. Should the license terminate for any reason, it is your responsibility to certify in writing to CA that all copies and partial copies of the Documentation have been returned to CA or destroyed.

TO THE EXTENT PERMITTED BY APPLICABLE LAW, CA PROVIDES THIS DOCUMENTATION "AS IS" WITHOUT WARRANTY OF ANY KIND, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT. IN NO EVENT WILL CA BE LIABLE TO YOU OR ANY THIRD PARTY FOR ANY LOSS OR DAMAGE, DIRECT OR INDIRECT, FROM THE USE OF THIS DOCUMENTATION, INCLUDING WITHOUT LIMITATION, LOST PROFITS, LOST INVESTMENT, BUSINESS INTERRUPTION, GOODWILL, OR LOST DATA, EVEN IF CA IS EXPRESSLY ADVISED IN ADVANCE OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE.

The use of any software product referenced in the Documentation is governed by the applicable license agreement and such license agreement is not modified in any way by the terms of this notice.

The manufacturer of this Documentation is CA.

Provided with "Restricted Rights." Use, duplication or disclosure by the United States Government is subject to the restrictions set forth in FAR Sections 12.212, 52.227-14, and 52.227-19(c)(1) - (2) and DFARS Section 252.227-7014(b)(3), as applicable, or their successors.

Copyright © 2014 CA. All rights reserved. All trademarks, trade names, service marks, and logos referenced herein belong to their respective companies.

CA Technologies Product References

This document references the following CA Technologies products:

- CA Chorus™ Software Manager (CA CSM)
- CA Chorus™
- CA Mainframe Software Manager™ (CA MSM)
- 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

Contact CA Technologies

Contact CA Support

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

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

Providing Feedback About Product Documentation

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

To provide feedback about CA Technologies product documentation, complete our short customer survey which is available on the CA Support website at <http://ca.com/docs>.

Documentation Changes

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

- Prepare the SMP/E Environment for a Pax Installation—Steps were modified for CA Datacom.
- Procedure for obtaining sample members for JCL and programs is now located on the bookshelf under the Scenario topic.
- Installation Worksheet for New/Upgrades has been removed from this guide and resides on the bookshelf under the heading Worksheet.
- Troubleshooting has been removed from this guide and resides on the bookshelf under the heading Troubleshooting.

Contents

Chapter 1: Overview 11

Audience	11
How to Obtain the README File	11
How the Installation Process Works.....	12

Chapter 2: Preparing for Installation 15

Products Installed.....	15
CA IPC, CA Ideal, and CA Common Services for z/OS Utilities	15
Considerations for Installation.....	16
JCL Editing	17
Editing Install Using the Supplied REXX Execs under ISPF.....	17
IBM SMP/E	18
Related Publications.....	18
Hardware and Software Requirements.....	18
Hardware Requirements	19
Software Requirements	19
Library Requirements.....	20
Introduction to CA Common Services for z/OS	21
CAMASTER	21
CAICCI.....	22
CAIENF.....	22
CA LMP	23
CAIRIM	23
CAISSF.....	24
Using CA LMP	25
Security Requirements	26
Storage Requirements.....	27
DASD Requirements.....	27
USS Space Requirements	33
Concurrent Releases	34

Chapter 3: Installing Your Product Using CA CSM 35

How to Install Your Product Using CA CSM.....	35
Access CA CSM Using the Web-Based Interface	36
Acquire a New Product	37
Install a Product	38

Maintain the Installed Products.....	40
Deploy the Product to the Destination System.....	41
Configure the Deployed Product.....	42

Chapter 4: Installing Your Product Using Pax ESD **45**

How to Install Your Product Using a Pax File.....	45
USS Environment Setup	46
Allocate and Mount a File System.....	46
Acquire the Product Pax Files.....	49
Download Files to a PC Using Pax ESD	50
Download Using Batch JCL	50
Download Files to Mainframe through a PC	53
Create a Product Directory from the Pax File	54
Example: JCL File, Unpackage.txt, to Customize	55
Copy Installation Files to z/OS Data Sets.....	55
Prepare the SMP/E Environment for a Pax Installation	57
Run the Installation Jobs for a Pax Installation	58
Clean Up the USS Directory.....	59
Apply Preventive Maintenance	60
HOLDDATA	62

Chapter 5: Configuring Your Product **65**

Installation Procedures	65
Preparing for Installation	66
New Installations.....	66
Upgrading Existing Products	67
APF Authorized Libraries.....	68
Installation in the SYSPLEX Environment	68
Sample JCL Data Sets.....	68
INSTJCL Member Names	69
Product Options	70
Special Notes for Upgrades	70
Before You Begin.....	71
New Install Requires SIMPLIFY	71
Upgrade Process Key Points.....	72
CA Dataquery Panels Translated Versions	75
APF Authorized Libraries.....	75
Change Data Capture (CDC)	75
DD Comparator Process before Upgrades.....	75
Installation Sequence	76
Customization Steps.....	77

Customizing CA Datacom for Installation or Upgrade	78
New Installation Phase	82
Step 1. Allocates, Loads Databases, and Init Control Data Sets	83
Step 2. LOAD/FORMAT/INIT VLS Files	83
Upgrade Installation Phase	84
Step 1. Add JCLLIB Members	86
Step 2. Start Up the Version 14.0 MUF	86
Step 3. Back Up Version 14.0 CXX and Datadictionary	87
Step 3B. Back Up Version 14.0 Database for CA Dataquery	87
Step 3R. Reload Database Files	88
Step 4. Shut Down the Version 14.0 MUF	88
Step 5. Start Up the Version 15.0 MUF	89
Step 6. Upgrade DATA-DICT, DDD-DATABASE CASYSTEMTABLE Databases	89
Step 6B. Load CA Dataquery Database	90
Step 7. Back Up Version 15.0 CXX and Datadictionary/DDD	90
Step 7B. Back Up Version 15.0 CA Dataquery Database	91
Step 8. Shut Down the MUF (Optional)	91
Step 9. Allocate Backups and Load VLS Files	91
Fallback to Version 14.0 Phase	92
Step 1. No Longer Required	92
Step 2. Execute DBMUFPR to Start Version 14.0 MUF	93
Step 3B. Convert the CA Dataquery Panels	93
Step 4. Datadictionary, DDD, and Dynamic Syst Tbls Set Back to V 14	93
Step 5. Restore the DDOL Signon/Signoff Panels to ADRPNL	94
Reinstalling the Version 15.0 Environment After Fallback	94
Step 1. No Longer Required	95
Step 2. Execute DBMUFPR to Start the MUF for Fall Back	95
Step 3B. Convert the CA Dataquery Panels	95
Step 4. Converts DD/DDD Back to V15.0 and Restores SYSTEMTABLES	96
Step 5 Restore the DDOL Signon/Signoff Panels to ADRPNL	96
Installation Verification Phase	97
IVP Jobs for the New Install Process	97
IVP for Upgrades	98
Post-Installation Considerations	99
Planning for Initial MUF Roll Out	102
Tailoring the CA Datacom Products	103
Maintaining the CA Datacom Products	105
Activating CA Datacom for CA Auditor z/OS Support	105

Chapter 1: Overview

This section contains the following topics:

[Audience](#) (see page 11)

[How to Obtain the README File](#) (see page 11)

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

Audience

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

- JCL
- TSO/ISPF
- 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 installation and upgrade. Review this member often to get the most current information. The following steps provide directions.

To access the README file

1. Log in 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 15.0.

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—Creates an SMP/E environment and runs the RECEIVE, APPLY, and ACCEPT steps. The software is untailed.
- Deployment—Copies the target libraries to another system or LPAR.
- Configuration—Creates customized load modules, bringing the software to an executable state.

[CA Chorus™ Software Manager \(CA CSM\)](#) - formerly known as CA Mainframe Software Manager™ (CA MSM) - is an intuitive web-based tool that can automate and simplify many CA Technologies product installation activities on z/OS systems. This application also makes obtaining and applying corrective and recommended maintenance easier. A web-based interface enables you to install and maintain your products faster and with less chance of error. As a best practice, we recommend that you install mainframe products and maintenance using CA CSM. Using CA CSM, someone with limited knowledge of JCL and SMP/E can install a product.

Note: If you do not have CA CSM, you can download it from the Download Center at <http://ca.com/support>. Follow the installation instructions in the CA Chorus Software Manager documentation bookshelf on the CA Chorus Software Manager product page.

You can also complete the standardized installation process manually using pax files that are downloaded from <http://ca.com/support>.

To install your product, do the following tasks:

1. Prepare for the installation by confirming that your site meets all installation requirements.
2. Verify that you acquired the product using one of the following methods:
 - Download the software from <http://ca.com/support> using CA CSM.
 - Download the software from <http://ca.com/support> using Pax-Enhanced Electronic Software Delivery (Pax ESD).

3. Perform an SMP/E installation using one of the following methods:
 - If you used CA CSM to acquire the product, start the installation process from the SMP/E Environments tab in CA CSM.
 - If you used Pax ESD to acquire the product, you can install the product in the following ways:
 - Install the product manually.
 - Complete the SMP/E installation using the Add Product option in CA CSM.

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 CSM to configure your products, a CA CSM deployment is required.
 - If you are using a manual configuration process, a manual deployment is an optional step.

Note: Deployment is considered part of starting your product.

5. Configure your product using CA CSM 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](#) (see page 15)
- [CA IPC, CA Ideal, and CA Common Services for z/OS Utilities](#) (see page 15)
- [Considerations for Installation](#) (see page 16)
- [Hardware and Software Requirements](#) (see page 18)
- [Library Requirements](#) (see page 20)
- [Introduction to CA Common Services for z/OS](#) (see page 21)
- [Security Requirements](#) (see page 26)
- [Storage Requirements](#) (see page 27)
- [USS Space Requirements](#) (see page 33)
- [Concurrent Releases](#) (see page 34)

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	<i>CA IPC Implementation Guide</i>
CA IPC	VLSUTIL	VLS Utility	<i>CA IPC Implementation Guide</i>

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

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 "BDCOSS"
/**     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 DCMSEEDIT in the SAMPJCL library and member \$DCBDEEDT in the CABDSAMP Target library can be used to make global changes in their respective libraries for the desired worksheet parameter strings.

DCMSEEDIT

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

\$DCBDEEDT

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 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.

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 14.0 is required.
- CA IPC at Version 15.0 is highly recommended. CA IPC at Version 14.0 is supported.
- Installation of CA Datacom requires the installation of certain components of CA Common Services for z/OS with all current maintenance applied. CA Common Services must be Version 14.1 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 more information, see Introduction to CA Common Services for z/OS.

- CA SYSVIEW is not required. However, if you have this product with the CA Datacom component, it provides a unique toolset. SYSVIEW Version 13.9 is a toleration release which means limited support for CA Datacom 15.0. SYSVIEW Version 14.0 provides full support for CA Datacom Version 15.0.
- CA Datacom CICS Services Version 15.0 supports CA Datacom Version 15.0

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

All the libraries that are generated and used during the installation process are defined as PDSE except for the CABDLPA library, which must be defined as PDS.

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.

If you have a SYSVIEW license to help add the libraries to the APF list dynamically, INSTJCL member APFADD can be used. This is not a permanent path and is lost on the next IPL. Make these permanent changes to the APF list according to your site.

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 that CA Datacom uses.

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 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.

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(ddmmyy) CPU(tttt-mmmm/ssssss) LMPCODE(kkkkkkkkkkkkkkk)

(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.

(ddmmyy)

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	4833
DASD02	3063
DASD03	4118
DASD04	3750
DASD06	30
DASD07	300
Total	16094

The following tracks by volume are needed for upgrade installs:

Volume	3390 Tracks
DASD01	1533
DASD02	160
DASD03	2550
DASD04	11650
DASD06	30
DASD07	300
Total	16223

SMP/E CSI and Data Sets

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

Name	3390 Tracks
SMPCSI.CSI	VS KSDS
SMPCSI.CSI.DATA	225
SMPCSI.CSI.INDEX	2
SMPSCDS	120
SMPLTS	75
SMPMTS	75
SMPPTS	900
SMPSTS	75
SMPLOG	75
SMPLOGA	75
SAMPJCL	5
SMPPTS1	75
Total	1702

Distribution Libraries

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

Name	3390 Tracks
AABDMOD0	520
AABDMAC	109
AABDSAMP	231
AABDDATV	768
AABDXML	70
Total	1698

Target Libraries

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

Name	3390 Tracks
CABDMAC	109
CABDLOAD	3513
CABDSAMP	231
CABDLPA	440
CABDDATV	768
CABDXML	70
Total	5131

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
SHPO10	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
V150.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
DB15.CXX.BACKUP	DASD04	500
DB15.DDDDBBU.BACKUP	DASD04	2100
DB15.DDDDBBU.BACKUP	DASD04	900
Total		3500

VLS Backup Data Set

The following tracks are needed for new and upgrade installs:

Name	Volume	3390 Tracks
V150.ADRPNL.BKUP	DASD03	150
V150.DDMAP.BKUP	DASD04	75
Total		225

Upgrade Backup Data Sets

The following tracks are needed for upgrade installs only:

(These datasets can be removed after installation is complete.)

Name	Volume	3390 Tracks
DB15.DB002.BACKUP	DASD04	2100

Name	Volume	3390 Tracks
DB15.CXX.BACKUP	DASD04	500
DB14.DQBBU.BACKUP	DASD03	1200
DB15.DB015.BACKUP	DASD04	900
DB14CXX.BACKUP	DASD04	500
DD14DB.BACKUP	DASD04	2100
DDD14DB.BACKUP	DASD04	900
DB15.DB003.BACKUP	DASD03	1200
DDD15DB.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

USS Space Requirements

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

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

Concurrent Releases

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

- When you install the product into an existing SMP/E environment, this installation deletes previous releases in that environment.
- If you acquired your product with Pax 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 CSM installs a product into a new SMP/E environment by default. You can select an existing SMP/E environment from your working set. For more information, see the online help that is included in CA CSM.

- 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 CSM

This section contains the following topics:

[How to Install Your Product Using CA CSM](#) (see page 35)

How to Install Your Product Using CA CSM

As a system programmer, your responsibilities include acquiring, installing, maintaining, deploying, and configuring CA Technologies mainframe products on your system.

CA CSM is an application that simplifies and unifies the management of your CA Technologies mainframe products on z/OS systems. As products adopt the CA CSM services, you can install your products in a common way according to industry best practices.

This scenario describes the steps for a system programmer to acquire, install, deploy, and configure products and maintenance. Not all tasks may apply to your organization. For example, you may decide not to deploy and configure products. In this case, do not perform the product deployment task and the product configuration task.

Before you use this scenario, you must have CA CSM installed at your site. If you do not have CA CSM installed, you can download it from the Download Center at <http://ca.com/support>. This web page also contains links to the complete documentation for CA CSM.

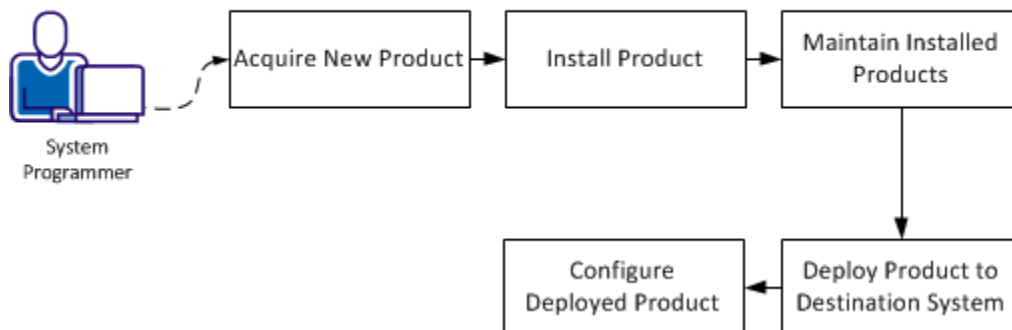
You [access CA CSM](#) (see page 36) from a web browser.

Note: This scenario applies to the latest version of CA CSM. If you are using an earlier version, see the appropriate bookshelf on the CA Chorus Software Manager product page.

This scenario is a high-level overview of steps that you perform using CA CSM. For more detailed information, use the online help that is included in CA CSM.

You perform the following tasks to install products and manage them on your system:

How to Install Your Product Using CA CSM



1. [Acquire a new product](#) (see page 37).
2. [Install the product](#) (see page 38).
3. [Maintain the installed products](#) (see page 40).
4. [Deploy the product to the destination system](#) (see page 41).
5. [Configure the deployed product](#) (see page 42).

Access CA CSM Using the Web-Based Interface

You access CA CSM using the web-based interface.

You need the URL of CA CSM from the CA CSM 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.
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](#).

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 opens, which 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.

Acquire a New Product

Acquisition allows you to download products and product maintenance from the CA Support Online website at <http://ca.com/support> to a USS directory structure on your system. The products to which your site is entitled and the releases available are displayed in the Available Products section on the Products page.

You perform the following high-level tasks to acquire a product using CA CSM:

1. Set up a CA Support Online account at <http://ca.com/support>.

To use CA CSM to acquire or download a product, you must have a CA Support Online account. If you do not have an account, create one on <http://ca.com/support>.

2. Determine the CA CSM URL for your site.

To [access CA CSM](#) (see page 36), you require its URL. You can get the URL from your site CA CSM administrator and log in using your z/OS credentials. When you log in for the first time, you are prompted to create a CA CSM account with your credentials that you use to access <http://ca.com/support>. This account enables you to download product packages.

3. Log in to CA CSM and go to the Products page to locate the product that you want to acquire.

After you log in to CA CSM, you can see the products to which your organization is entitled on the Products tab.

If you cannot find the product that you want to acquire, update the product list. CA CSM refreshes the product list through <http://ca.com/support> using the site IDs associated with your credentials.

4. Download the product installation packages.

After you find your product in the product list, you can download the product installation packages. To do so, use the Update Product Release action.

CA CSM downloads (acquires) the packages (including any maintenance packages) from the CA Support Online website.

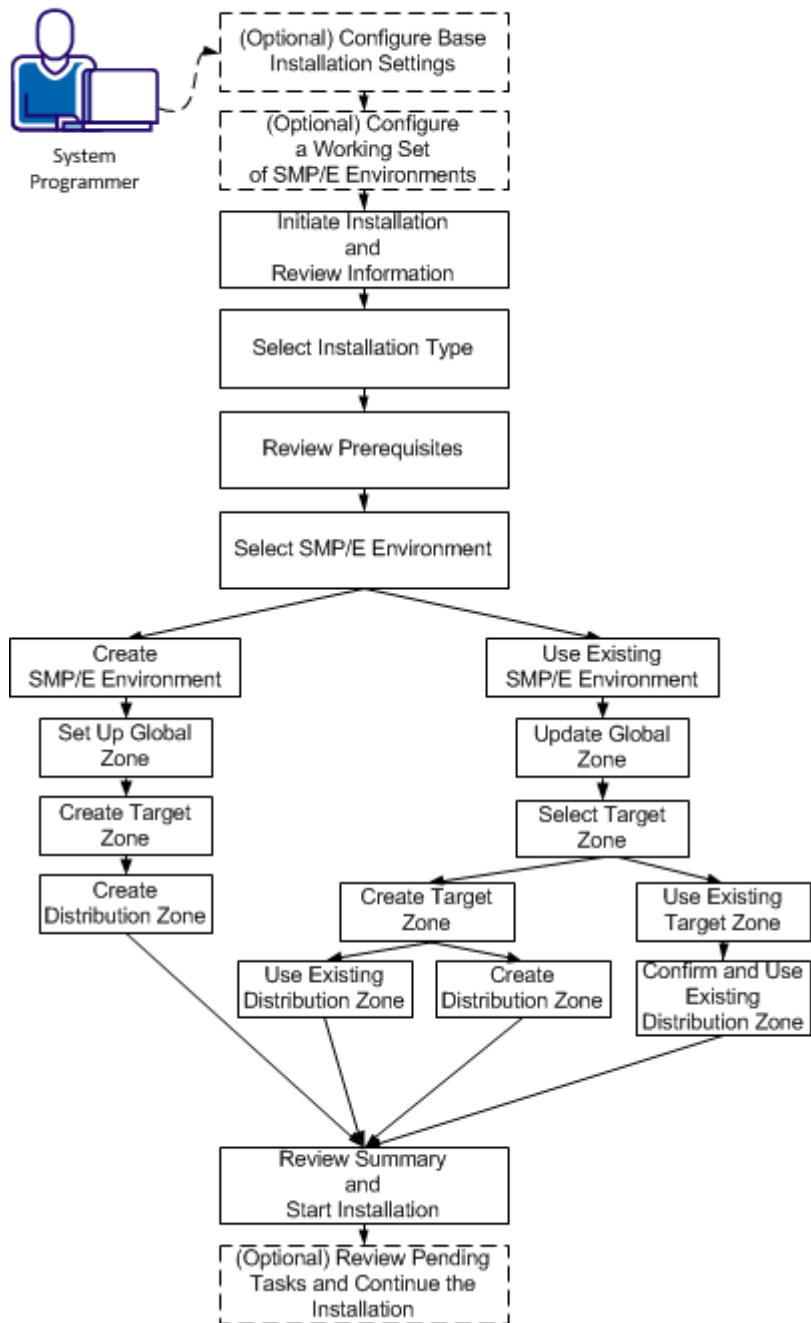
After the acquisition process completes, the product is ready for you to install or apply maintenance.

Install a Product

CA CSM simplifies and manages SMP/E installation tasks. You can browse and install a product that you acquired and that is available in the product list on the Products page. You can also install the maintenance for the products that are currently installed in a managed SMP/E environment on the driving system.

You perform the following high-level tasks to install a product using CA CSM:

How to Install a Product



1. (Optional) On the Settings tab, click Software Installation under System Settings, and configure base installation settings.
2. (Optional) Click the SMP/E Environments tab, and configure a working set of SMP/E environments.
3. Click the Products tab and select a product that you want to install. Start the installation wizard and review product information.
4. Select an installation type.
5. Review installation prerequisites if any are presented.
6. 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: Create a target zone or use an existing target zone.
 - c. Set up the distribution zone: Create a distribution zone or use an existing distribution zone.
7. Review the installation summary and start the installation.
8. (Optional) Review pending tasks for the SMP/E environment where you are installing your product. Continue the installation, if applicable.

CA CSM installs the product.

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 CSM before continuing.

Maintain the Installed Products

You can migrate existing SMP/E environments into CA CSM to maintain all your installed products in a unified way from a single web-based interface.

You can use CA CSM to maintain a CA Technologies product.

You perform the following high-level tasks to maintain a product using CA CSM:

1. Verify that CA CSM recognizes the SMP/E environment where your product is installed. If not, migrate the SMP/E environment to CA CSM.

During the migration, CA CSM stores information about the SMP/E environment in the database.

2. From the Product tab, download the latest maintenance for the installed product releases.

If you cannot find the required release, perform the following steps to download the maintenance:

- a. Add the release to the catalog manually.
 - b. Update the added release.
3. Apply the maintenance.

CA CSM applies the maintenance to your product.

After the maintenance process completes, the product is ready for you to deploy to systems that are defined in the system registry.

Deploy the Product to the Destination System

Deployment is a process of copying SMP/E target libraries to a destination system. The destination system could be the local z/OS system, a remote z/OS system, or a sysplex. You identify the destination system, deployed data set names, and the transport mechanism as part of the deployment process. Deploying a product makes it available for configuration.

Important! Before you deploy a product, set up the destination systems and remote credentials in the system registry.

You perform the following high-level tasks to deploy your products using CA CSM:

1. On the Deployments tab, set up methodologies.

Note: You can also set up methodologies when creating a deployment, or use existing methodologies, if you have set up any previously. If you do so, you can skip this step.

2. Start the New Deployment wizard to create a deployment. Complete each of the steps in the wizard. The wizard guides you through choosing deployment settings for your site. At any point, you can save your work and come back to it later.

3. Deploy:
 - a. Take a snapshot of the deployment.
 - b. Transmit the deployment to a destination system.
 - c. Deploy (unpack) to the mainframe environment.CA CSM deploys the product to the destination system.

After the deployment process completes, the product is ready for you to configure.

Configure the Deployed Product

Configuration is a process of copying the deployed libraries to run-time libraries and customizes the product for your site to bring it to an executable state. You can configure CA Technologies products that you have already acquired, installed, and deployed using CA CSM. You cannot use CA CSM to configure a product unless you have already used CA CSM to deploy the product.

You perform the following high-level tasks to configure your products using CA CSM:

1. Select a configurable deployment on the Deployments tab to view details and products for that deployment.
2. Select a product in the deployment and start the Configuration wizard to create a configuration. Complete each of the steps in the wizard. The wizard has multiple levels of detailed instructions and guides you through choosing configuration settings for your site. At any point, you can save your work and come back to it later. Configurations where you have partially completed the steps in the wizard are listed on the Configurations tab. The steps in the wizard include the following:
 - a. Define a configuration name and select a system for the configuration.
 - 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 Configuration wizard lets you build the configuration. If needed, you can edit the configuration and can build the configuration again. Building the configuration closes the wizard and creates a configuration with all your settings.
4. (Optional) Validate the configuration. Validation verifies access to resources that are going to be used when you implement the configuration.

5. Implement the configuration. You implement a configuration to make your deployed software fully functional. Implementation executes on the destination system, applying the variables, resources, and operations that are defined in the configuration.

CA CSM configures the product.

After the configuration process completes, the product is ready for you to use.

Chapter 4: Installing Your Product Using Pax ESD

This section contains the following topics:

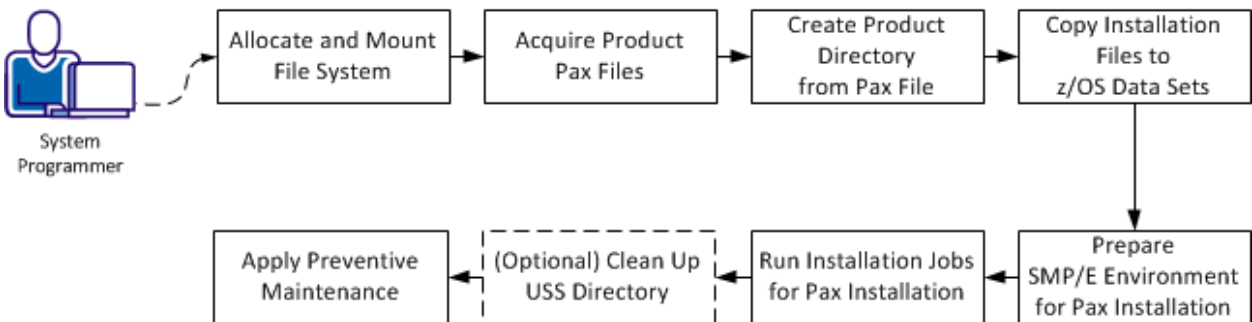
- [How to Install Your Product Using a Pax File](#) (see page 45)
- [Allocate and Mount a File System](#) (see page 46)
- [Acquire the Product Pax Files](#) (see page 49)
- [Create a Product Directory from the Pax File](#) (see page 54)
- [Copy Installation Files to z/OS Data Sets](#) (see page 55)
- [Prepare the SMP/E Environment for a Pax Installation](#) (see page 57)
- [Run the Installation Jobs for a Pax Installation](#) (see page 58)
- [Clean Up the USS Directory](#) (see page 59)
- [Apply Preventive Maintenance](#) (see page 60)

How to Install Your Product Using a Pax File

As a system programmer, your responsibilities include installing products on your mainframe system. With this option, you acquire a product pax file from <http://ca.com/support>.

You perform the following tasks to install a product with a pax file:

How to Install a Product Using a Pax File



1. [Allocate and mount the file system](#) (see page 46).
2. [Acquire the product pax files](#) (see page 49).
3. [Create a product directory from the pax file](#) (see page 54).
4. [Copy the installation files to z/OS data sets](#) (see page 55).
5. [Prepare the SMP/E environment for a pax installation](#) (see page 57).

6. [Run the installation jobs for a pax installation](#) (see page 58).
7. (Optional) [Clean up the USS directory](#) (see page 59) .
8. [Apply preventive maintenance.](#) (see page 60)

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 <http://ca.com/support>.
- 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 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 ESD process requires write authority to the UNIX System Services (USS) directories that are used for the Pax ESD process. In the file system that contains the Pax ESD directories, you also need free space approximately 3.5 times the pax file size to download the pax file and unpack its contents. For example, to download and unpack a 14 MB pax file, you need approximately 49 MB of free space in the file system hosting your Pax ESD directory.

Allocate and Mount a File System

The product installation 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 the product acquisition and create the directory in this file system.

You can use the zSeries File System (zFS) or hierarchical file system (HFS) for product 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
//CAPAX 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/CAPAX directory in an existing directory, /u/maint. From the TSO OMVS shell, enter the following commands:

```
cd /u/maint/
mkdir CA
cd CA
mkdir CAPAX
```

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

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('yourUSSpaxdirectory')
TYPE(ZFS) MODE(RDWR)
PARM(AGGRGROW)
```

- On an HFS, use the following sample:

```
MOUNT FILESYSTEM('your_HFS_data_set_name')
MOUNTPOINT('yourUSSpaxdirectory')
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 Pax ESD directory and its files. For example, to allow write access to the Pax ESD directory for other users in your USS group, from the TSO OMVS shell, enter the following command:

```
chmod -R 775 /yourUSSpaxdirectory/
```

Write access is granted.

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

Acquire the Product Pax Files

To begin the CA Technologies product installation procedure, copy the product pax file into the USS directory that you set up.

Important! Downloading pax files for the SMP/E installation as part of the Pax ESD process requires write authority to the UNIX System Services (USS) directories that are used for the Pax ESD process. Also, you must have available USS file space before you start the procedures in this guide.

Use one of the following methods:

- [Download the product pax file from http://ca.com/support](http://ca.com/support) to your PC (see page 50), and then upload it to your USS file system.
If you download a zip file, you must unzip it before uploading to your USS file system.
- [Download the pax files from http://ca.com/support](http://ca.com/support) directly to your USS file system (see page 50).

This section includes the following information:

- 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
- Sample commands to upload a pax file from your PC to a USS directory on your z/OS system

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

Ensure that sufficient free space is available in the USS file system that you are using 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.

Download Files to a PC Using Pax ESD

You can download product installation files from <http://ca.com/support> to your PC.

Follow these steps:

1. Log in to <http://ca.com/support>, and click Download Center.
The Download Center web page appears.
2. Under Download Center, select Products from the first drop-down list, and specify the product, release, and gen level (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. If you download a zip file, you must unzip it before continuing.

Note: For traditional installation downloads, see the *Traditional ESD User Guide*. For information about download methods, see the Download Methods and Locations article. Go to <http://ca.com/support>, log in, and click Download Center. Links to the guide and the article appear under the Download Help heading.

Download Using Batch JCL

You download a pax file from <http://ca.com/support> by running batch JCL on the mainframe. Use the sample JCL attached to the PDF file as [CAtoMainframe.txt](#) (see page 52) to perform the download.

Important! The PDF version of this guide includes sample JCL jobs that you can copy directly to the mainframe. To access these jobs, click the paper clip icon at the left of the PDF reader. A window displaying attachments opens. Double-click a file to view a sample JCL. We recommend that you use the latest version of Adobe Reader for viewing PDF files.

Note: We recommend that you follow the preferred download method as described on <http://ca.com/support>. This JCL procedure is our preferred download method for users who do not use CA CSM. We also include the procedure to download to the mainframe through a PC in the next section.

Follow these steps:

1. Replace *ACCOUNTNO* with a valid JOB statement.
The job points to your profile.
2. Replace *yourTCPIP.PROFILE.dataset* with the name of the TCP/IP profile data set for your system. Consult your local network administrators, if necessary.
The job points to your profile.
3. Replace *YourEmailAddress* with your email address.
The job points to your email address.

4. Replace *yourUSSpaxdirectory* with the name of the USS directory that you use for Pax 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://ftpdnloads.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 PAX 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 SYSFTPDD 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 "yourUSSpaxdirectory" with the name of the USS     *
/*    directory used on your system for Pax 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 TIMEOUT 120',REGION=0M
//SYSTCPD DD DSN=yourTCPIP.PROFILE.dataset,DISP=SHR
//SYSFTPDD DD DSN=yourFTP.DATA.dataset,DISP=SHR
//SYSPPRINT DD SYSOUT=*
//OUTPUT DD SYSOUT=*
//INPUT DD *
Host
anonymous YourEmailAddress
lcd yourUSSpaxdirectory
binary
get FTP_location
quit
/*
```

Download Files to Mainframe through a PC

You download the product installation files to your PC and transfer them to your USS system.

Follow these steps:

1. Download the product file to your PC using the [Pax ESD](#) (see page 50). If you downloaded a zip file, first unzip the file to use the product pax files.

The pax file resides on your PC.

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

2. Open a Windows command prompt.

The command prompt appears.

3. Customize and enter the following FTP commands:

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

mainframe

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

userid

Specifies your z/OS user ID.

password

Specifies your z/OS password.

C:\PC\folder\for\thePAXfile

Specifies the location of the pax file on your PC.

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

yourUSSpaxdirectory

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

paxfile.pax.Z

Specifies the name of the pax file to upload.

The pax file is transferred to the mainframe.

Create a Product Directory from the Pax File

The pax command performs the following actions:

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

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
```

Use the sample JCL that is attached to the PDF file as [Unpackage.txt](#) (see page 55) to extract the product pax file into a product installation directory.

Important! The PDF version of this guide includes sample JCL jobs that you can copy directly to the mainframe. To access these jobs, click the paper clip icon at the left of the PDF reader. A window displaying attachments opens. Double-click a file to view a sample JCL. We recommend that you use the latest version of Adobe Reader for viewing PDF files.

Follow these steps:

1. Replace *ACCOUNTNO* with a valid JOB statement.
2. Replace *yourUSSpaxdirectory* with the name of the USS directory that you use for product 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 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.

Example: JCL File, Unpackage.txt, to Customize

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

```
//ESDUNPAX JOB (ACCOUNTNO),'UNPAX PAX 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 "yourUSSpaxdirectory" with the name of the USS       *
/*    directory used on your system for Pax 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,   *
/*       start entering characters in column 16 and make sure     *
/*       the 'X' continuation character is in column 72.          *
//*****
//UNPAXDIR EXEC PGM=BPXBATCH,
// PARM='sh cd /yourUSSpaxdirectory/; pax -rvf paxfile.pax.Z'
/*UNPAXDIR EXEC PGM=BPXBATCH,
/* PARM='sh cd /yourUSSpaxdirectory/; 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.

The file UNZIPJCL in the product directory contains a sample job to GIMUNZIP the installation package. You edit and submit the UNZIPJCL job to create z/OS data sets.

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.
 - b. Perform one of the following steps:
 - Change the SMPCPATH DD PATH to your SMP/E Java application classes directory, typically `/usr/lpp/smp/classes/`.
 - Change HASH=YES to HASH=NO on the GIMUNZIP parameter.

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

5. Change all occurrences of *yourHLQ* to the high-level qualifier (HLQ) for z/OS data sets 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* remove CAI after *yourHLQ*. Do *not* use the same value for *yourHLQ* as you use for the SMP/E RELFILES.

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

6. Submit the UNZIPJCL job.

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

GIMUNZIP creates z/OS data sets with the high-level qualifier 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)*.

Prepare the SMP/E Environment for a Pax Installation

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

1. Download external HOLDDATA.
2. Allocate product data sets and SMP/E data sets.
3. Create an SMP/E environment.
4. Receive base functions and HOLDDATA.
5. Download and RECEIVE PTFs from <http://ca.com/support>.
6. Run an SMP/E APPLY CHECK operation.
7. Apply base functions using SELECT GROUPEXTEND.
8. Run an SMP/E ACCEPT CHECK operation.
9. Accept base functions using SELECT GROUPEXTEND.
10. Configure the product according to your site requirements.

The members that are used in this procedure prepare the data sets, initialize the zones, and create the DDDEFs for your product.

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

Follow these steps:

1. Customize the macro DCMSEEDIT 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 DCMSEEDIT 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* within the JCL that is used to unzip the pax file.

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

2. Open the SAMPJCL member DCM1HOLD in an edit session and execute the DCMSEEDIT macro from the command line.

DCM1HOLD is customized.

3. Submit DCM1HOLD.

This job downloads the error and FIXCAT HOLDDATA from <http://ca.com/support>.

4. Open the SAMPJCL member DCM2ALL in an edit session and execute the DCMSEEDIT macro from the command line.

DCM2ALL is customized.

5. Submit DCM2ALL.

This job produces the following results:

- The target and distribution data sets for your product are created.
- Unique SMPPTS, SMPMPTS, SMPSCDS, and SMPSTS data sets for this target zone are created.

6. Open the SAMPJCL member DCM3CSI in an edit session and execute the DCMSEEDIT macro from the command line.

DCM3CSI is customized.

7. Submit DCM3CSI.

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.

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

Follow these steps:

1. Open the SAMPJCL member DCM4RECD in an edit session, and execute the DCMSEEDIT macro from the command line.

DCM4RECD is customized.

2. Submit DCM4RECD to receive SMP/E base functions and error HOLDDATA.

Your product is received and now resides in the global zone.

3. If an FMID was placed in error, download and receive PTFs from <http://ca.com/support>.

4. Open the SAMPJCL member DCM5APP in an edit session, and execute the DCMSEEDIT macro from the command line.
DCM5APP is customized.
5. Submit DCM5APP to apply SMP/E base functions with the CHECK option. If you find unresolved hold errors, we recommend that you note these errors and verify that resolving PTFs are applied before implementing products in production. Update the JCL to BYPASS the unresolved hold error IDs. After successful completion, rerun APPLY with the CHECK option removed.
Your product is applied and now resides in the target libraries.
6. Open the SAMPJCL member DCM6ACC in an edit session, and execute the DCMSEEDIT macro from the command line.
DCM6ACC is customized.
7. Submit DCM6ACC to accept SMP/E base functions with the CHECK option. After successful completion, rerun ACCEPT with the CHECK option removed.
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 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 Preventive Maintenance

Important! We strongly recommend that you use CA CSM to maintain your CA Technologies z/OS-based products. The procedure that is discussed in this section is fully automated when you use CA CSM.

CA Support Online at <http://ca.com/support> has maintenance and HOLDDATA published since the installation data was created. After the maintenance process completes, the product is ready to deploy.

Use this procedure during product installation and for ongoing preventive maintenance in non-installation use cases according to your maintenance strategy.

Note: To review the CA Technologies mainframe maintenance philosophy, see your *Best Practices Guide* or visit the [CA Next-Generation Mainframe Management page](#).

This procedure directs you to use the CAUNZIP utility. The CAUNZIP utility processes ZIP packages directly on z/OS without the need for an intermediate platform, such as a Microsoft Windows workstation. If you are not familiar with this utility, see the *CA Common Services for z/OS Administration Guide*. This guide includes an overview and sample batch jobs. To use this utility, you must be running CA Common Services for z/OS Version 14.0 with PTF RO54887 or CA Common Services for z/OS Release 14.1 with PTF RO54635 and RO58216. These PTFs are included in CA Common Services for z/OS Release 14.1 at the S1401 Service Update level.

Follow these steps:

1. Check the Download Center at <http://ca.com/support> for PTFs that have been published since this release was created. If the base release was created recently, no PTFs will have been published yet. If PTFs exist, add published solutions for your product to your Download Cart, and click Checkout.

2. Specify that you want a complete package.

When processing completes, a link appears on the Review Download Requests page. You also receive an email notification.

3. Click the Alternate FTP link for your order to obtain FTP login information and the ZIP file location. Download the ZIP file into a USS directory on your z/OS system.

4. Run the CAUNZIP utility.

CAUNZIP unzips the package of published solutions and creates a SMPNTS file structure that the SMP/E RECEIVE FROMNTS command can process. For sample JCL to run the utility that is located in *yourHLQ.CAWOJCL(CAUNZIP)*, see the *CA Common Services for z/OS CAUNZIP Administration Guide*. After execution completes, the ZIPRPT data set contains the summary report. The summary report does the following:

- Summarizes the content of the product order ZIP file.
- Details the content of each data set and the z/OS UNIX files produced.
- Provides a sample job to receive the PTFs in your order.

5. Review the sample job that is provided in the CAUNZIP output ZIPRPT file. Cut and paste the JCL into a data set, specify your SMP/E CSI on the SMPCSI DD statement and submit the job to receive the PTFs in your order.

6. Verify that you have the values from the base installation in the DCMSEEDIT macro that was customized in the installation steps.

7. Open the SAMPJCL member DCM1HOLD in an edit session and execute the DCMSEEDIT macro from the command line.

Note: Update DCM1HOLD SAMPJCL to download the HOLDDATA file.

DCM1HOLD is customized.

8. Submit DCM1HOLD.

The job downloads the external HOLDDATA file.

9. Open the SAMPJCL member DCM7RECH in an edit session and execute the DCMSEEDIT macro from the command line.

DCM7RECH is customized.

10. Submit DCM7RECH.

The job receives the external HOLDDATA file.

11. (CA Recommended Service (CA RS)) installation only) Do the following:
 - a. Determine which ASSIGN statements to download.
 - The yearly CA RS ASSIGN statements are stored in the following file:
ftp.ca.com/pub/ASSIGN/YEARLY/CARyyyy.TXT
 - The quarterly CA RS ASSIGN statements are stored in the following file:
ftp.ca.com/pub/ASSIGN/CARyymm.TXT
 - b. Open the SAMPJCL member DCM7CARS in an edit session, update DCM7CARS SAMPJCL to download ASSIGN statements from <http://ca.com/support>, and execute the DCMSEEDIT macro from the command line.

DCM7CARS is customized.
12. (CA RS installation only) Submit DCM7CARS.

The job downloads the CA RS ASSIGN statements.
13. Open the SAMPJCL member DCM7RECP in an edit session, manually add the data set that contains the ASSIGN statements to the SMPPTFIN DD, and execute the DCMSEEDIT macro from the command line.

DCM7RECP is customized.
14. Submit DCM7RECP.

The job receives the PTFs.
15. Open the SAMPJCL member DCM8APYP in an edit session and execute the DCMSEEDIT macro from the command line.

DCM8APYP is customized.
16. Submit DCM8APYP.

The PTFs are applied.
17. (Optional) Open the SAMPJCL member DCM9ACCP in an edit session and execute the DCMSEEDIT macro from the command line.

DCM9ACCP is customized.
18. (Optional) Submit DCM9ACCP.

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.

DDDEF

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

DELETE

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

DEP

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

DOC

Indicates a documentation change with this SYSMOD.

DYNACT

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

ENH

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

EXIT

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

EXRF

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

MULTSYS

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

RESTART

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

SQLBIND

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

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

External HOLDDATA

External HOLDDATA is not part of the PTF. The HOLDDATA resides in a separate file and contains both error and FIXCAT HOLDDATA. The error HOLDDATA is commonly used for SYSMODs that have been distributed and later are discovered to cause problems. The FIXCAT HOLDDATA helps identify maintenance that is required to support a particular hardware device, software, or function.

Download the external HOLDDATA from <http://ca.com/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.

You can find JCL to download the external HOLDDATA in your SAMPJCL member. Open DCM1HOLD in an edit session and execute the DCMSEEDIT macro on the command line. Then, submit the JCL.

Error HOLDDATA

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.

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.

FIXCAT HOLDDATA

CA Technologies provides [FIXCAT HOLDDATA](#) to help identify maintenance that is required to support a particular hardware device, software, or function. Fix categories are supplied as SMP/E FIXCAT HOLDDATA statements. Each FIXCAT HOLDDATA statement associates an APAR and its related fixing PTF to one or more fix categories.

Chapter 5: 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](#) (see page 65)
- [Preparing for Installation](#) (see page 66)
- [Installation in the SYSPLEX Environment](#) (see page 68)
- [Sample JCL Data Sets](#) (see page 68)
- [INSTJCL Member Names](#) (see page 69)
- [Product Options](#) (see page 70)
- [Special Notes for Upgrades](#) (see page 70)
- [Installation Sequence](#) (see page 76)
- [Customization Steps](#) (see page 77)
- [New Installation Phase](#) (see page 82)
- [Upgrade Installation Phase](#) (see page 84)
- [Fallback to Version 14.0 Phase](#) (see page 92)
- [Reinstalling the Version 15.0 Environment After Fallback](#) (see page 94)
- [Installation Verification Phase](#) (see page 97)
- [Activating CA Datacom for CA Auditor z/OS Support](#) (see page 105)

Installation Procedures

Important! All information that is required to start the installed CA Datacom products using the documented procedures is provided during the installation and validation of the products.

Complete the following list 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 the Installation Worksheets that are on the CA Datacom bookshelf. 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

Use the following 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 accessing the README File, see [How to Obtain the README File](#). To confirm if additional tasks are required after the install, upgrade, or maintenance, see [Checking the README File](#) (see page 101).

This install process uses `DISP=(MOD,DELETE,DELETE)` to allow JOBS to run multiple times. 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, complete the steps that are 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 97).

Upgrading Existing Products

If you are upgrading your existing CA Datacom products from Version 14.0 to Version 15.0, some pre-installation considerations apply directly to upgrades. To determine if there are more requirements, see the README File.

The upgrade process is intended to be performed in multiple phases.

- Phase 1: Execute the DDSDCLM program.

This program is used to determine the status of your Datadictionary database and should be executed against each multi-user region before beginning the upgrade. Member ADSDC14 in the CABDSAMP library contains sample JCL to perform this step. For information about running this utility, see the *CA Datacom/DB Datadictionary Batch User Guide*.

- Phase 2: Install CA Datacom/DB 15.0 into a new MUF region using the new install members of INSTJCL.

This phase is optional but highly recommended. Additionally, you can use this phase for initial testing.

This phase can be used for initial testing.

- Phase 3: Select a test multi-user region for the first upgrade.
- Phase 4: Upgrade the multi-user region from Version 14.0 to Version 15.0.

You can continue to run CICS and batch regions that are still at the 14.0 level against this multi-user. This phase allows you to test the following against a multi-user at 15.0 with minimum impact if a fallback to 14.0 is necessary:

- DB utilities
- Datadictionary batch and online
- Dataquery batch and online
- Your applications
- Phase 5: Upgrade the Datadictionary to 15.0.

This upgrade can be fully performed against the 15.0 multi-user with no need to recycle the multi-user or close the Datadictionary or DDD databases. You can still continue to execute 14.0 level batch and online against the 15.0 multi-user.

- Phase 6: Upgrade your batch and CICS jobs to run at the 15.0 level.
If you have multiple CICS regions executing against the Multi-User Facility (MUF), you do not have to upgrade them all simultaneously. Both the 14.0 and 15.0 level CICS regions can run against the multi-user at the 15.0 level.
- Phase 7: Perform Phases 3 through 4 for each of your test and production multi-user regions.

Note: Each of these phases can last for any length of time from minutes to months.

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 14.0 libraries should already be APF authorized. This is required before the upgrade and fall back procedures.

If you have SYSVIEW, INSTJCL member APFADD 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

The SAMPJCL data set and the CABDSAMP target library are the two sample JCL data sets. The SAMPJCL data set contains only the JCL needed for the SMP/E installation. For more information, see [Installing Your Product From Pax-ESD](#) (see page 45).

The CABDSAMP target library contains the required JCL used to create a new or upgraded MUF environment. After the SMP/E is installed, copy the necessary jobs to the newly created INSTJCL library using the provided BDCUS00 job so they can be edited.

Note: Before you submit each step, review the JCL for any DD statements to add or remove to 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 five 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 14.0 only.
 - **IVPNEW** indicates a job to execute sample JOBS for new installation 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 14.0 to Version 15.0 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.

C

Indicates member that is used in the Parallel Upgrade scenario.

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 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 installation 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 installation 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 installation 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 for use 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 B14STLIB 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 has 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.

Review the following considerations 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.

CA Datacom/DB at Version 15.0 supports the CXX set as Version 14.0 at Level 1. There is no Version 15.0 CXX. Even an INIT using the Version 15.0 code line initializes the CXX as Version 14.0. This philosophy allows a much easier upgrade from Version 14.0 to Version 15.0 and any possible downgrade or fall back from Version 15.0 to Version 14.0. The Version 15.0 code line accepts as input to a LOAD AREA=CXX or CXXCLONE backups produced by Versions 15.0 downward through Version 10.0 backup. A Version 15.0 backup is also accepted as input to a Version 14.0 LOAD AREA=CXX or CXXCLONE. However, it is not supported by older Versions.

CA Datacom/DB at Version 15.0 uses a database format in the CXX of 3 whereas Version 14.0 uses a database format of 2. If Version 15.0 opens a database that is format 2, it automatically converts it to format 3 and issues a message to note the fact. If Version 14.0 opens a database that is format 3, it automatically converts it to format 2 and issues a message.

Note: DATCOMIN is an alias that can be used as a short form of DATAKOM-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. DATAKOM-INSTALL is the user name for the CA Datacom Datadictionary ++USR statement.

New Install Requires SIMPLIFY

The new install process uses the SIMPLIFY feature of CA Datacom/DB. To use the full Simplify feature, the same MUF data set naming standards are required. The naming conventions for your site can be different.

For more information regarding the Simplify feature, see the *CA Datacom/DB Database and System Administration Guide* and the *CA Datacom/DB DBUTLTY Reference Guide for z/OS* before starting your new installation. This information will help you to understand the Simplify feature.

CAI.NEWHLQ.9CXX_NAME.V150.* where asterisk (*) defines CUSLIB, CUSMAC, and CUSPROC. CAI.NEWHLQ.9CXX_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. 9CXX_NAME and MUF name are the same value in this dialog. The CAI.NEWHLQ can be a user-defined length of 19 bytes. Due to data sharing requirements, the CXX name should only be a maximum value of 7 bytes. V150 is 4 bytes and in some cases, the last node uses all 8 bytes. For example, CAI.NEWHLQ2.9CXX_NAME.AREANAMEDBID, CAI.NEWHLQ can be one node or as many nodes as you can use within the 19-byte restriction.

The following examples show how this looks if the CXXNAME is PRODMUFA:

- CAI.NEWHLQ.PRODMUFA.V150.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 installation. 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 required changes 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. Your MUFs have more protection against a database outage by init/load going to the wrong CXX/MUF after implementing this feature.

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 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 14.0 or you can wait for completion of the upgrade process and no chance for fall back to Version 14.0. The DBUTLTY CXX clone functions help with the changeover to a new CXX NAME if your site needs the change once you have upgraded to Version 15.0.

Do not use any new features of the CA Datacom Version 15.0 product family until fall back to Version 14.0 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 14.0. You can use the BDUPG03R to perform a hard fall back 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 15.0. 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.

Important! The hard fall back is not recommended for SQL sites unless it is a last resort to return to Version 14.0 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 that CA recommends for use as delivered by a new product installation.

The following information is provided 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 to alter. 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:

- 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 DDSRTL
- 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 *.CABDSAMP 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 15.0.

Change Data Capture (CDC)

The Change Data Capture feature is still optional in Version 15.0, 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 14.0 and 15.0. INSTJCL member ADSDC14 is for Version 14.0 and ADSDC15 is for Version 15.0. Before you upgrade, we recommend that you run the comparator in Version 14.0 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 14.0, you can run this tool at any time.

Contact CA Support Level 1 if you have any questions or concerns about the comparator report being generated or about each MUF instance that you run.

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 list:
 - [Installing Your Product Using CA MSM](#) (see page 35)
 - [Installing Your Product from Pax-Enhanced ESD](#) (see page 45)
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 installation or upgrade and not both within the same PDS.
 - BDCUSNEW is used for new installations only
 - BDCUSUPG is used for upgrades only
4. New Installation Phase
Execute the members that have names starting with BDNEW if you are installing CA Datacom for the first time. After all BDNEW jobs have executed successfully, the new CA Datacom environment is ready for use.
5. Upgrade Installation Phase
Execute the members that have names starting with BDUPG if you are performing an upgrade installation. 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 once the upgrade process is complete. 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 installation
- 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 15.0 product installation is complete.

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 steps are explained in this chapter:

Step	Description	Purpose
0	Retrieve BDCUS00 from CABDSAMP perform changes as directed, and submit the JCL. <i>Do not save this job in CABDSAMP!</i>	Copy the sample JCL from the target library into the INSTJCL library and copy the custom macro source members into the CUSMAC 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 <i>not</i> run BDCUSUPG if new install is selected.
OR		

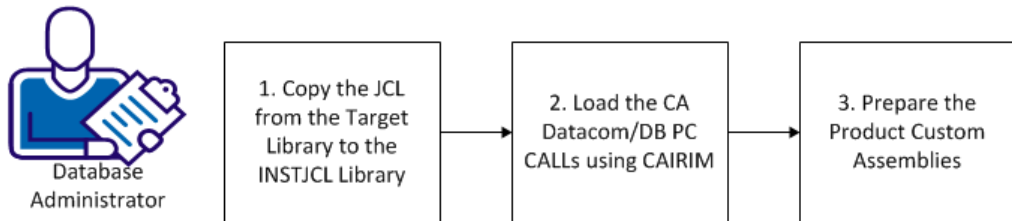
Step	Description	Purpose
2B	Retrieve BDCUSUPG from INSTJCL, perform changes as directed, and submit the JCL.	<p>Performs CA Datacom product custom assemblies and links for upgrade install only. Do <i>not</i> run BDCUSNEW if upgrade is selected.</p> <p>VERY IMPORTANT: The upgrade procedure is intended to finish with a CA Datacom/DB MUF at Version 15.0 executing with the same Multi-User Startup Options as your current Version 14.0 MUF. To ensure this, you must modify the DBSYSID parameters in the CUSMAC library to match your current Version 14.0 DBSYSID. These would normally be found in the Version 14.0 CUSMAC library as DBSIDPR but may be elsewhere depending on your site standards. All other core product custom macros, such as DDSYSTBL and DQOPTLST, should also be reviewed and updated as needed.</p>

Customizing CA Datacom for Installation or Upgrade

As a DBA in your mainframe environment, your responsibilities can include installing, maintaining, deploying, configuring, and customizing the database product. To complete your upgrade or install of CA Datacom, modify the CA Datacom configuration using the following procedures.

The following graphic shows the workflow for customizing CA Datacom:

Customizing your CA Datacom for Installation or Upgrade Workflow



Do the following to customize CA Datacom for installation or upgrade:

1. [Copy the JCL from the target library to the INSTJCL library](#) (see page 79)
2. [Load the CA Datacom/DB PC CALLs using CAIRIM](#) (see page 80)
3. [Prepare the product custom assemblies](#) (see page 81)

Note: You can perform these steps multiple times for as many Multi-User Facilities as needed.

Copy the JCL from the Target Library to the INSTJCL Library

This procedure copies the new and upgrade JCL from the target library to the INSTJCL library.

Follow these steps:

1. Retrieve member BDCUS00 from your CABDSAMP library.
2. Make the required global changes as specified in the instruction block in the member.

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 run the job.
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.

Load the CA Datacom/DB Program Call Routines Using CAIRIM

This procedure loads the CA Datacom/DB Program Call (PC) routines using CAIRIM. Ensure that CAMASTER is installed on the same LPAR where CAIRIM runs before performing this step. Verify that this step runs before attempting any of the new or upgrade jobs.

Follow these steps:

1. Retrieve member BDRIM01 from your INSTJCL library.
2. Make the required global changes as specified in the member instruction block.
3. Submit the JCL to run the job.
4. Review the output for successful completion which is indicated with a condition code of 0000. If you receive any other code, correct your changes and resubmit the JCL.
5. Retrieve member DBUTLYU from your INSTJCL library.
6. Make the required global changes as specified in the member instruction block.
7. Replace the 'REPORT AREA=CXX' statement with 'REPORT MEMORY=MVS'
8. Submit the JCL to run the job.
9. Review the output for successful completion which is indicated with a condition code of 0000. If you receive any other code, correct your changes and resubmit the JCL. The JCL produces an SVC Report so that you can verify that the PC members are in place. The report output should look similar to the following example:

MODULES IN COMMON MEMORY				MODULE	REL	DATE	TIME	RMID	FMID	SIZE
CROSS MEMORY	PC=PROD	14.0		DBPCCPR	14.0	20131018	14.43	R063772	CABDE00	4,346
PC XCF + RRS	PC=PROD	14.0		DBPCSPP	14.0	20130419	12.54	R056818	CABDE00	2,984
CROSS MEMORY	PC=PROD	15.0		DBPCCPR	15.0	20121129	07.06		CABDF00	7,034

This report shows that the CA Datacom/DB PC routines 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 the Multi-User Facility (MUF) require this job to define the PC routines. Run the DBUTLY function REPORT MEMORY=MVS to verify.

Prepare the Product Custom Assemblies

This procedure prepares the CA Datacom custom assemblies.

Use the BDCUSNEW custom assembly for a new installation. 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 a 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 installation. For more information about the BDNEW members, see the New Installation Phase topic.

Use the BDCUSUPG custom assembly for an upgrade installation. 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 14.0 before the upgrade starts or in Version 15.0 after the upgrade is completed.

VERY IMPORTANT: The upgrade procedure is intended to finish with a CA Datacom/DB MUF at Version 15.0 executing with the same Multi-User Startup Options as your current Version 14.0 MUF. To ensure this, you must modify the DBSYSID parameters in this member to match your current Version 14.0 DBSYSID. These would normally be found in the Version 14.0 CUSMAC library as BDSIDPR but may be elsewhere depending on your site standards. All the other CUSMAC macro members, including URTs, should also be reviewed and updated as needed before submitting BDCUSUPG for execution.

The PDS assumes that either BDCUSNEW or BDCUSUPG is used but not both processes for a new install and upgrade.

Follow these steps:

1. Review the custom macro parameter settings of all members in the CUSMAC library. Adjust the parameter values in each macro member as needed.
2. Retrieve either member BDCUSNEW or BDCUSUPG from your INSTJCL library.
3. Make the required global changes as specified in the instruction block in the member.
4. Submit the JCL to run this job.

Custom assemblies are prepared.

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.

Custom assembly is now complete. You can 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 45)

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 are 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
- Allocates the backup and VLS files for CA Datacom/DB Version 15.0
- 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 rerunnable. No restart is needed.

The new installation phase is now completed. To verify your installation, proceed to [Installation Verification Phase](#) (see page 97).

Upgrade Installation Phase

Skip this section if you are installing CA Datacom for the first time.

The following comprehensive list shows all possible steps for CA Datacom Version 14.0 to Version 15.0 upgrade installations only.

Important: Before you perform these steps:

- Back up your entire CA Datacom environment using your standard site procedure.
- Run ADSDC14 before beginning this process. If ADSDC14 receives CC 0000, you are ready to proceed. If CC is not 0000, contact CA Support. If you ran ADSDC14 and the reported problems were dealt with successfully, proceed with this process. The Datadictionary Comparator Process (DDSDCLM) must run to some kind of successful conclusion before running BDUPG03. For more information, see DDSDCLM in the *CA Datacom Datadictionary Batch Reference Guide*.
- Complete the SMP/E jobs described in the following topics (as appropriate):
 - [Installing Your Product Using CA MSM](#) (see page 35)
 - [Installing Your Product From Pax-Enhanced ESD](#) (see page 45)
- For more information about upgrading from Version 14.0, see the Version 15.0 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 14.0 MUF.
3	Retrieve BDUPG03 from INSTJCL, perform changes as directed, and submit the JCL.	Run the CA Datacom Datadictionary and DDD backups.
3B	<i>(Conditional)</i> Retrieve BDUPG03B from INSTJCL, perform changes as directed, and submit the JCL.	Back up the Version 14.0 CA Dataquery database.

Step	Description	Purpose
3R	<i>(Conditional)</i> Retrieve BDUPG03R from INSTJCL, perform changes as directed, and submit the JCL.	Reload database files from Version 14.0 backups. This can be used as a hard restore back from Version 15.0 to Version 14.0. 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 14.0 MUF.
5	Retrieve BDUPG05 from INSTJCL, perform changes as directed, and submit the JCL.	Start up the CA Datacom/DB Version 15.0 MUF.
6	Retrieve BDUPG06 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.
6B	<i>(Conditional)</i> Retrieve BDUPG06B from INSTJCL, perform changes as directed, and submit the JCL.	Initialize and load the panel files in the CA Dataquery database.
7	Retrieve BDUPG07 from INSTJCL, perform changes as directed, and submit the JCL.	Back up the upgraded CA Datacom/DB Version 15.0 CXX and CA Datacom Datadictionary.
7B	Retrieve BDUPG07B from INSTJCL, perform changes as directed, and submit the JCL.	Back up the upgraded CA Dataquery Version 15.0 database.
8	Retrieve BDUPG08 from INSTJCL, perform changes as directed, and submit the JCL.	Shut down the CA Datacom/DB Version 15.0 MUF.
9	Retrieve BDUPG09 from INSTJCL, perform changes as directed, and submit the JCL.	Load the VLS files for Version 15.0.

Step 1. Add JCLLIB Members

This step:

- Executes IEBUPDTE to add the customized JCLLIB members
- Allocates the backup and VLS files for CA Datacom/DB Version 15.0
- 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 increasing the allocation size of these data sets.

Step 2. Start Up the Version 14.0 MUF

This step starts the Version 14.0 MUF. This MUF is configured to run the upgrade process and there is no need to modify the MUF startup options. This Version 14.0 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 14.0 CXX and Datadictionary

This step executes DBUTLTY to back up the Version 14.0 CA Datacom/DB CXX and CA Datacom Datadictionary. Backup is taken before any maintenance is applied to the Version 14 CA Datacom Datadictionary and HSD RESET is performed.

Note: Run ADSDC14 before running this job. If ADSDC14 receives CC 0000, you are ready to proceed. If CC is not 0000, contact CA Support. If you ran ADDSC14 and the reported problems were dealt with successfully, proceed with this job. The Datadictionary Comparator Process (DDSDCLM) *must* run to some kind of successful conclusion before running BDUPG03. For more information, see DDSDCLM in the *CA Datacom Datadictionary Batch Reference Guide*.

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 14.0 Database for CA Dataquery

Conditional

This step executes DBUTLTY to back up the Version 14.0 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 15.0 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 14.0 MUF

This step executes DBUTLTY to shut down the Version 14.0 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. Start Up the Version 15.0 MUF

This step starts up the CA Datacom/DB Version 15.0 MUF.

Bring up this MUF with the startup options that you used for your current Version 14.0 MUF as modified for Version 15.0. For example, the EXPAND option is no longer supported. Review the CA Datacom/DB Database and System Administration Guide for other changes to the MUF startup option. This process eliminates the need to recycle your MUF once the upgrade is complete.

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.

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

Step 6. Upgrade DATA-DICT, DDD-DATABASE CASYSTEMTABLE Databases

This step executes DDUPDATE to update the DD and DDD to become Version 15.0 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 BDUPG06 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 6B. Load CA Dataquery Database

Conditional

This step executes DQLANGMT to load the new panel files.

Follow these steps:

1. Retrieve member BDUPG06B 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 7. Back Up Version 15.0 CXX and Datadictionary/DDD

This step executes DBUTLTY to back up the Version 15.0 CXX and CA Datacom Datadictionary.

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. Back Up Version 15.0 CA Dataquery Database

Conditional

This step executes DBUTLTY to back up the Version 15.0 CA Dataquery database after an upgrade.

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.

Step 8. Shut Down the MUF (Optional)

This step executes DBUTLTY to shut down the MUF.

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.

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

Step 9. 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 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.

New versions of the VLS files are created except for ADRPNL, leaving the Version 14.0 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.

The upgrade installation phase is now complete. Proceed with the steps in the [Installation Verification Phase](#) (see page 97) to demonstrate your upgrade installation.

Fallback to Version 14.0 Phase

If you must fall back from Version 15.0 to Version 14.0, 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 15.0. We recommend this process. If for some reason this process fails and you must go back to Version 14.0, 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	This step is no longer required.	This step is retained here for possible future use.
2	Retrieve BDFBK02 from INSTJCL, perform changes as directed, and submit the JCL.	Bring up your Version 14.0 Multi-User Facility.
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 14.0 backup for CA Dataquery.
4	Retrieve BDFBK04 from INSTJCL, perform changes as directed, and submit the JCL.	Executes DDUPDATE to undo the Version 15.0 DD/DDD updates if necessary for fall back to Version 14.0. Restores SYSTEMTABLES back to Version 14.0 level. EOJs the MUF.

Step 1. No Longer Required

It is no longer required that the CXX be converted to switch from Version 15.0 to Version 14.0.

Step 2. Execute DBMUFPR to Start Version 14.0 MUF

This step brings up your Version 14.0 Multi-User Facility.

Follow these steps:

1. Retrieve member BDFBK02 from your INSTJCL library.
2. Follow the instructions in the member.
3. Submit your JCL.
4. Assure the Multi-User Facility is enabled.

Step 3B. Convert the CA Dataquery Panels

This step restores the CA Dataquery panel files from Version 15.0 to Version 14.0.

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 Syst Tbls Set Back to V 14

This DDUPDATE undoes the Version 15.0 upgrade transactions from Version 15.0 to Version 14.0 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 14.0.

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 that you are running. Skip this step if you do not use DDOL in CICS for your site.

Reinstalling the Version 15.0 Environment After Fallback

This method assumes that you successfully ran the recommended fall back process and did not use member BDUPG03R to fall back. Rerun the normal upgrade procedure when you are ready to move forward to Version 15.0 if BDUPG03R was used.

If you must fall forward to Version 15.0 from Version 14.0, 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	This step is no longer required.	This step is retained here for possible future use.
2	Retrieve BDFFW02 from INSTJCL, perform changes as directed, and submit the JCL.	Brings up your Version 15.0 Multi-User Facility.
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 15.0 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 15.0. Restores SYSTEMTABLES to Version 15.0 level. EOJs the MUF.

Step	Description	Purpose
5	Retrieve BDFFW05 from INSTJCL, perform changes as directed, and submit the JCL.	Executes VLSUTIL to restore the Version 15.0 signon/signoff panels to the ADRPNL data set.

Step 1. No Longer Required

It is no longer required that the CXX be converted to switch from Version 15.0 to Version 14.0.

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

This step brings up your Version 15.0 MUF.

Follow these steps:

1. Retrieve member BDFFW02 from your INSTJCL library.
2. Follow the instructions in the member.
3. Submit your JCL.
4. Assure the Multi-User Facility is enabled.

Step 3B. Convert the CA Dataquery Panels

This step restores the CA Dataquery panel files from Version 14.0 to Version 15.0.

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 V15.0 and Restores SYSTEMTABLES

This DDUPDATE performs the Version 15.0 upgrade transactions from Version 14.0 to Version 15.0 and restores the SYSTEMTABLES back to Version 15.0.

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 15.0.

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.9CXX_NAME.V150.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 required CICS table entries for these products that are 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 14.0 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, CA Datacom CICS Services must be installed, 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.

BDCICS

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

CA Datacom/DB

Version 15.0 Copybook for CICS Table Assemblies	Version 15.0 Copybook for CICS RDO	CICS CSD Group Name
	BDCSD	BDGRP
	BDCSDV	BDGRP

CA Datacom Datadictionary

Version 15.0 Copybook for CICS Table Assemblies	Version 15.0 Copybook for CICS RDO	CICS CSD Group Name
	ADCSD	ADGRP
ADFCT		ADGRP
	ADCSDV	ADGRP

CA Dataquery

Version 15.0 Copybook for CICS Table Assemblies	Version 15.0 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 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 installation. CA Technologies delivers a DBSYSID macro (which is used to assemble a DBSIDPR module) used only for the installations and upgrades. That is, the delivered DBSYSID is not meant to be used after the upgrade or new install process is completed. You are expected to customize the DBSYSID macro to meet your needs for each MUF after installing or upgrading. To support this rollout of the MUF, review the *CA Datacom/DB Database and System Administration Guide* in the following key areas. Plan ahead by listing the specifications that 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 15.0 to any of your environments. Your first rollout takes more time because of this initial recommended review. However, choices that are 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](#).

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 DDSRTL 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.
DDSAM05	Assemble and link the SCOOTRAN 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.

Maintaining the CA Datacom Products

If CSM is used to apply maintenance to your products see “Maintain the Installed Products” in the chapter on [Installing Your Product Using CA CSM](#) (see page 35). This method is recommended for applying maintenance.

If you intend to install maintenance using SMPE directly, see “Apply Preventative Maintenance” in the chapter on [Installing Your Product Using Pax ESD](#) (see page 45).

Activating CA Datacom for CA Auditor z/OS Support

For CA Datacom to be fully auditable by CA Auditor, it is necessary to have a specific load module available in the LPA. The CAIXCTT\$ module is provided in the CABDLPA library for this purpose. If you are using the CA Datacom CAIXCTT\$ module, it must reside in the currently active LPA. You can do this in one of two ways:

1. APF authorize the CABDLPA library and add it to the LPA.
2. Copy the CAIXCTT\$ module into an APF Authorized library already in the LPA.

See the CA Auditor documentation for more information about using the product.