CA Librarian®

Best Practices Guide

r4.3

CA Technologies Product References

This document references the following CA Technologies products:

- CA Librarian® (CA Librarian)
- CA MIM™ Resource Sharing (CA MIM RS)
- CA Roscoe® Interactive Environment (CA Roscoe IE)
- CA ACF2™ for z/OS (CA ACF2 for z/OS)
- CA Top Secret® for z/OS (CA Top Secret for z/OS)

Contact CA Technologies

Contact CA Support

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

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

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.

Best Practices Guide Process

These best practices represent years of product experience, much of which is based on customer experience reported through interviews with development, technical support, and technical services. Therefore, many of these best practices are truly a collaborative effort stemming from customer feedback.

To continue and build on this process, we encourage users to share common themes of product use that might benefit other users. Please consider sharing your best practices with us.

To share your best *practices, c*ontact us at techpubs@ca.com and preface your email subject line with "Best Practices for product name" so that we can easily identify and categorize them.

Contents

Chapter 1: Introduction

This section contains the following topics:

Purpose of this Guide

The guide provides a brief introduction to the CA Technologies mainframe management strategy and features, and describes the best practices for installing and configuring CA Librarian.

Audience

The intended audience of this guide is systems programmers and administrators who install, configure, deploy, and maintain CA Librarian.

Mainframe 2.0 Overview

Mainframe 2.0 is our strategy for providing leadership in the mainframe operating environment. We intend to lead the mainframe marketplace for customer experience, Out-Tasking solutions, and solution innovation. After listening to customer needs and requirements to keep the mainframe operating environment viable and cost-effective, we are providing new tools to simplify usage and to energize this operating environment for years to come.

CA Mainframe Software Manager™ (CA MSM) is an important step in realizing the Mainframe 2.0 strategy. CA MSM simplifies and standardizes the delivery, installation, and maintenance of mainframe products on z/OS systems. CA MSM has a browser-based user interface (UI) with a modern look and feel for managing those solutions. As products adopt Mainframe 2.0 features and CA MSM services, you can acquire, install, and manage your software in a common way.

CA MSM provides software acquisition and installation that make it easier for you to obtain and install CA mainframe products, and apply the recommended maintenance. The services within CA MSM enable you to manage your software easily based on industry accepted best practices. The common browser-based UI makes the look and feel of the environment friendly and familiar.

We follow the IBM z/OS packaging standards using SMP/E, with some additional CA qualities of service added, to make installation simple and consistent. Additionally, through the synchronization of product releases and the use of common test environments, we will declare a yearly mainframe software stack that includes many new releases with enhanced functionality. This stack is certified for interoperability across the CA mainframe product portfolio and the base IBM z/OS product stack.

Mainframe 2.0 Features

Mainframe 2.0 has the following main features:

CA Mainframe Software Manager (CA MSM)

Delivers simplified acquisition, installation, and deployment capabilities using a common z/OS-based web application delivered through a browser-based UI. CA MSM includes the following services:

Product Acquisition Service (PAS)

Facilitates the acquisition of our mainframe products and services, including product base installation packages and program temporary fixes (PTFs). This service integrates the inventory of products available on your system with CA Support, providing a seamless environment for managing and downloading software and fixes onto your system.

Software Installation Service (SIS)

Facilitates the installation and maintenance of our mainframe products in the software inventory of the driving system. This service enables you to browse and manage the software inventory using a web interface, and automates tasks for products that use SMP/E to manage installation. You can browse downloaded software packages, and browse and manage one or more consolidated software inventories (CSIs) on the driving system.

Software Deployment Service (SDS)

Facilitates the deployment of CA Technologies mainframe products from the software inventory of the driving system. This service enables you to deploy installed products that are policy-driven with a set of appropriate transport mechanisms across a known topology. The enterprise system topology can include shared DASD environments, networked environments, and z/OS systems. Policies represent a combination of metadata input and user-supplied input. Metadata input identifies the component parts of a product. User-supplied input identifies the deployment criteria, such as where it goes and what it is named.

Electronic Software Delivery (ESD)

Enables you to get our products from an FTP server. We have improved this process so that you no longer need to build a tape to install the product.

Best Practices Management

Integrates with IBM Health Checker for z/OS to verify that deployed software follows our best practices. The health checks continually monitor the system and software to provide feedback on whether the software continues to be configured optimally.

Best Practices Guide

Provides best practices for product installation and configuration.

Note: For additional information about the CA Mainframe 2.0 initiative, see http://ca.com//mainframe2.

Chapter 2: Installation Best Practices

This section contains the following topics:

CA Mainframe Software Manager

We recommend that you use CA Mainframe Software Manager (CA MSM) to acquire, install, and maintain your product.

Business Value:

CA MSM provides a web interface, which works with Electronic Software Delivery (ESD) and standardized installation, to provide a common way to manage CA mainframe products. You can use it to download and install CA Librarian.

CA MSM lets you download product and maintenance releases over the internet directly to your system from http://ca.com/support. After you use CA MSM to download your product or maintenance, you use the same interface to install the downloaded software packages using SMP/E.

Additional Considerations:

After you install the product, use the CA Librarian documentation set at http://ca.com/support to configure your product. CA MSM can continue to help you maintain your product.

More Information:

For more information about CA MSM, see the *CA Mainframe Software Manager Guide*. For more information about product setup, see the *CA Librarian Getting Started* guide. Both documents are available at http://ca.com/support.

ELIPS Installation

ELIPS is the CA Librarian master file-editing package used under ISPF. When installing ELIPS, we recommend the following parameter settings:

- CCFCHK=NO
- CHECK=NO
- DESC=NO
- HIST=NO
- PGMR=SYSUID
- PSWD=N
- PRTBLK=3990
- UNIT=VIO
- TLICD=*data set name*. If you are using LIB/TSO, this data set name *must* match the TLICD data set name you created during installation.

Business Value:

The following list describes the business value for these settings.

- CCFCHK=NO

  If you set CCFCHK=YES and you are not using CCF, an S806 error occurs. Additionally, setting CCFCHK=YES adds considerable overhead costs because all CCF chains in the system master file are read to determine the allowable chain access.

- CHECK=NO

  Setting CHECK=YES adds a small amount of overhead for reading the TLICD (LIB/TSO) data set.

- DESC=NO

  This parameter setting saves ELIPS users time by not making them repeatedly enter description field information.

- HIST=NO

  This parameter setting saves ELIPS users time by not requiring them to enter history field information.

- PGMR=SYSUID

  This parameter setting saves auditors time when they are looking up a programmer TSOID.

- PSWD=N

  This parameter setting saves users time by not making them repeatedly enter passwords.

- PRTBLK=3990

  When used with UNIT=VIO, this parameter setting provides the greatest efficiency.

- UNIT=VIO

  When used with MODE=EDIT or MODE=BROWSE, this parameter setting provides the greatest performance.

- TLICD=*data set name*

  If you are using LIB/TSO and the data set name and the TLICD data set name do not match, you could have unpredictable results.

More Information:

For more information about ELIPS installation, see the ELIPSGEN macro.

LIB/CCF Installation

LIB/CCF is a comprehensive change management system for packages. There are three types of LIB/CCF installations:

- LIB/CCF Model System
- LIB/CCF-ISPF
- LIB/CCF-CA Roscoe IE

Note: For more information about LIB/CCF installation, see the $CCFGEN macro.

LIB/CCF Model System

We recommend including the LIB/CCF model system as part of your initial installation.

Business Value:

The LIB/CCF model system provides a framework for essential master files and object and load libraries. You can use this framework to help reduce the time users spend before working with CA Librarian.

LIB/CCF-ISPF

When you are installing LIB/CCF-ISPF, we recommend setting the APFLIB= parameter to the data set name containing the $CCFP101 load module (which must be APF-authorized).

Business Value:

If you do not specify the appropriate data set for APFLIB, you could receive an IKJ56005I error.

LIB/CCF-CA Roscoe IE

When you are determining which programs to execute under ETSO in the Eligible Program List (EPL), we recommend you set the programs to MODE=Y and using the specified values in the SAMPJCL member LJCCFEPL. Also properly update RPF $CHGT100.

Business Value:

If the programs are set to MODE=N, you could receive sporadic ETS30 messages. If you do not properly update RPF $CHGT100, you could accidentally use an unintended system master file, causing unexpected results.

LIB/TSO Installation

We recommend installing LIB/TSO if you are at a site that uses TSO instead of ELIPS or CA Roscoe IE. LIB/TSO lets you use PDS members or sequential files to edit master file members. Specify the TLICD data set name on the TLICD= parameter in the ELIPSGEN and $LIBTSO macros.

When installing LIB/TSO, we recommend the following parameter settings:

- CHECK=NO
- LIBPARM=NRJS
- TLICD=*data set name*. If you are using LIB/TSO, this data set name *must* match the TLICD data set name you created during installation.

Business Value:

The following list describes the business value for these settings.

- CHECK=NO

  This parameter setting saves overhead during additional TLICD checking.

- LIBPARM=NRJS

  This parameter setting reduces the potential for errors by maintaining the same name for each job step.

- TLICD=*data set name*

  If you are using LIB/TSO and the data set name and the TLICD data set name do not match, you could have unpredictable results.

Master File Installation

We recommend using the Cross Operating System Sharing (COSS) facility to control access to CA Librarian master files across z/OS, VM, and VSE platforms. When you share files among VSE and other platforms, set SHARE=COSS in the LIBGEN macro to activate COSS.

Business Value:

By controlling access to your master files, you can reduce the risk of a user overwriting changes made by another user, which helps maintain data integrity.

CA Librarian Reinitialization

You do not need to perform an initial program load (IPL) when you install CA Librarian. However, you must start the CAS9 procedure to reinitialize the CA Librarian Access Method (LAM) subsystem.

Business Value:

Reinitializing the LAM subsystem with CAS9 can reduce implementation and testing times.

Additional Considerations:

Use the REINT keyword to start the LAM subsystem. The first time you initialize a LAM subsystem version after an IPL or DELETE, you can use the INIT or REINIT keyword because they provide the same basic functionality. However, if you do *not* issue an intermediate DELETE and then initialize the LAM subsystem, the INIT keyword does *not* load a new copy into the link pack area (LPA).

Customer and Installation ID Assignments

If your site has multiple CA Librarian installations, we recommend customizing the customer and installation IDs. Use the MLJ4305 USERMOD to assign unique customer and installation IDs for your site. The default values are INITM and CA Librarian.

Business Value:

Changing the customer and installation IDs can enhance your site security and improve productivity. CA Librarian requires customer IDs when assigning a management code (MCD) to a master file. You can increase security by using only customer IDs authorized to alter MCD codes. The installation ID appears on the batch CA Librarian job output header page and Comparator II default report. Assigning unique installation IDs can reduce the time you spend matching installations with reports.

Work Volume Assignments

We recommend using Virtual I/O (VIO) and the MLJ4305 USERMOD to assign temporary work units during installation. The MLJ4305 USERMOD lists the temporary work volumes for short-term work data sets.

Business Value:

VIO provides the greatest performance for work volume assignments during installation.

CA Librarian Security Installation

We recommend installing one of the following three external security packages to handle security for CA Librarian master files.

- CA ACF2 for z/OS
- CA Top Secret for z/OS
- IBM Resource Access Control Facility (RACF)

Note: Each of these security packages is available by default during installation.

Business Value:

The CA Librarian external security interface can help prevent corruption of your CA Librarian master files. You can also increase security by assigning stricter access rules to individual master file members than master files. If you have LIB/CCF, you can use the applicable access rules to help improve access to various members and increase flexibility for additional access.

Chapter 3: Configuration Best Practices

This section contains the following topics:

BDAM Master File Configuration

You should initialize any shared BDAM master files with DSORG=PS. We also recommend using the following BDAM block sizes:

- Device 2311: 3624; 1740; 828
- Device 2314: 7292; 3520; 1692; 1092; 792
- Device 3330: 13028; 6444; 3156; 2056; 1508; 1180
- Device 3340: 8368; 4100; 1966; 1254; 898; 680
- Device 3350: 9440; 4628; 3024; 2220; 1740; 1416; 1188; 1016
- Device 3375: 17600; 11616; 8608; 5600; 3200; 2176; 1504; 1056
- Device 3380: 23476; 15476; 11476; 7476; 4276; 2932; 2044;1044
- Device 3390: 27998; 18452; 13682; 7548; 4136; 2942; 2082; 1086
- Device 9345: 22928; 15072; 11156; 8808; 4100; 3008; 2144; 1180

Business Value:

Correctly configuring your BDAM master files helps improve performance and reduces the risk of unpredictable results.

Batch Processing

We recommend using batch processing instead of online processing when performing a high volume of copy-and-move transactions.

Business Value:

CA Librarian performs batch processing in the background, which helps improve performance for users initiating mass copy-and-move transactions.

Enqueue and Dequeue Processing

We recommend using CA MIM RS or Global Resource Serialization (GRS) for enqueue and dequeue processing in shared z/OS environments. If you are using CA MIM RS, define the following QNAME ADRPRDCT:

```
ADRPRDCT GDIF=YES,SCOPE=ALL,EXEMPT=NO,ECMF=NO
```

If you are using GRS, adding ADRPRDCT to the conversion RNL converts hardware reserves to system enqueues. You should define the following conversion RNL for the ADRPRDCT queue:

```
RNLDEF RNL(CON) TYPE(GENERIC) QNAME(ADRPRDCT) RNAME(master.file.qualifier)
```

Business Value:

Correctly configuring your enqueue and dequeue processing helps prevent data corruption.

LIB/CCF Chains

We recommend not altering LIB/CCF chains with checked-out members. We also recommend using change requests (work orders) or creating a change request convention to use with individual projects.

Business Value:

Altering LIB/CCF chain elements with checked-out members can lead to unpredictable results. Change requests log every activity against a member initiated using LIB/CCF, so improperly managing these requests can negatively affect performance.

Chapter 4: Integration Best Practices

This section contains the following topics:

CA Librarian Access Method Integration

We recommend using the CA Librarian Access Method interface when working with IBM software and CA Librarian master files or IBM-partitioned data sets.

Business Value:

The CA Librarian Access Method lets you use familiar JCL parameters to define CA Librarian modules, which helps improve input efficiency and allow for concatenation with other input sources. Because the CA Librarian Access Method permits programs using BPAM access techniques to read CA Librarian master files, the full range of CA Librarian capabilities are extended to your MACRO, COPY, and object libraries.

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