CA Telon® Application Generator

Best Practices Guide

r5.1

CA Product References

This document references the following CA products:

CA Telon®

Contact CA

Contact Technical Support

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

- 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

Provide Feedback

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

If you would like to provide feedback about CA product documentation, complete our short customer survey, which is also available on the CA Support website, found 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, contact 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 CA's Mainframe 2.0 strategy and features, and describes the best practices for installing and configuring CA Telon.

Audience

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

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 our 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 CA metadata input that identifies the component parts of a product and user-supplied input that identifies the deployment criteria, such as where it will go and what will it be called.

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: Best Practices for Installation

This section contains the following topics:

Installation

Best Practice:

Use CA MSM to acquire, install, and maintain your product.

Business Value:

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

CA MSM lets you download product and maintenance releases over the Internet directly to your system from the CA Support website. 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 product's Install Utility to set it up. CA MSM can continue to help you maintain your product.

Note: If there is maintenance for VSAM data sets, you must use the Install Utility to update those data sets for each region you have set up.

More Information:

For more information about CA MSM, see the *CA Mainframe Software Manager Guide*. For more information about product setup, see the *Installation Guide*.

Support

Best Practice:

Make sure that you are running a currently supported version of CA Telon.

Value:

To obtain full support from CA Technical Support, you must be running a supported version of the product.

More Information:

For a list of supported releases, see solution QI18745 using the CA Telon home page on CA Support.

CA Common Services

Best Practice:

Make sure you have installed the most current release of CA Common Services.

Value:

The latest release of CA Common Services contains the latest infrastructure updates. This lets you use the latest features, and prevents potential errors that can occur from using out-of-date services.

More Information:

For more information about CA Common Services, see the *Installation Guide*.

IBM APARs

Best Practice:

Install all of the most recent IBM APARs appropriate for your environment.

Value:

If pertinent APARS are missing, it may impact the operation or performance of your CA products. We recommend that you review our current list of IBM APARs and apply only those that are appropriate to your environment.

More Information:

Be sure to review the system requirements in the *Installation Guide* and the upgrade information for CA Telon at CA Support.

Installation in a Test Environment

Best Practice:

Perform your installation and initial evaluations of the product and its components on a test system.

Value:

New releases of CA Telon can always co-exist with previous releases. This allows you to test a new release on a test system while still running the older version on a production system. Evaluating the product in a test environment lets you detect any possible problems before you roll out the product to a production system.

More Information:

Be sure to review any migration considerations in the *Installation Guide* prior to upgrading CA Telon.

Chapter 3: Best Practices for Configuration

This section contains the following topics:

Customize the TLNIIS, TELONIIS, PGMNAMES, and USREDITS Macros

Best Practice:

Modify the customizable macros that control the CA Telon Generator environment to suit your needs.

Business Value:

Customizable macros allow you to control how your programs are generated so that you generate a program as you need it:

- TLNIIS allows you to set values for parameters that influence the code generated by CA Telon.
- TELONIIS allows you to set up multiple TLNIIS members, for example TLNIISAA. You can define multiple versions of TLNIIS so that different versions can be used for different applications. TELONIIS can be set up to determine which TLNIIS is used for which programs.
- PGMNAMES sets the naming conventions for program names.
- USREDITS defines editing or validation subroutines (field edits) that may be invoked by programs generated by CA Telon.

More Information:

CA Telon provides the Load or Build Custom Macros utility to automate conversion of your customizable macros (one at a time) from a previous release to the new release.

Converting customized macros using this utility is a two-step process:

1. JCL member JUMKINI calls TLNUMKIN to create an INI file from the old macro; you can edit this file to customize the parameters listed in parameter-value pairs.
2. JUMKMAC calls TLNUMKMC to convert the INI file to the new release macro format.

For more information about the customizable macros and the Load or Build Custom Macros utility, see the *Implementation Guide*.

Run CA Telon in a Sysplex Environment with Shared DASD

Best Practice:

Run CA Telon in a sysplex environment with shared DASD.

CA Telon gives you the option to select the best environment for running the product—either in a single LPAR or in a sysplex with shared DASD.

Business Value:

Shared DASD lets users access CA Telon from multiple LPARs without risking data corruption and Telon Design Facility (TDF) abends.

More Information:

Bring the Data Administration objects required for your programs into your TDF before you import your programs. This helps ensure that you have accurate global definitions for your SQL tables and joins, IMS databases and PSBs, VSAM files and sequential files, and CICS queues and journals. Import DB2 tables from the DB2 catalog, IMS DBDs, and PSBs so that you have the latest definitions in your new database. You may also transport your global Data Administration objects from one TDF to another.

To run in a sysplex environment using shared DASD, you must change the default of SHAREOPTIONS(4,3) to SHAREOPTIONS(4,4) to maintain cross-system integrity.

Note: Accessing a set of VSAM database files with SHAREOPTIONS(4,3) from two different LPARs will cause corruption and possibly abend the TDF.

VSAM and sequential files, CICS queues, and journals need not be imported in advance or defined in Data Administration, but doing so gives your programmers access to centralized definitions of these files.

Be sure to review any migration considerations in the *Installation Guide* prior to upgrading CA Telon.

Avoid Sharing TDF Database Files

Best Practice:

Avoid possible problems by not sharing individual database files between two or more TDF databases.

Business Value:

Not sharing any TDF files between two TDF databases protects your data. For example, using a single TNTDX (SQL objects) or TNTDD (all other DBMSes) file with multiple TNTDF, TNTCCL, help, hold, and WIP files will cause unexpected results such as abends and loss of access to the Data Administration objects stored in it.

More Information:

If there is concern about keeping Data Administration objects consistent across TDF databases, you can opt to maintain a *parent* TNTDD or TNTDX. For example, TNTDD and TNTDX files get transported or REPROed to all other TNTDD files whenever they change. Security access can also be restricted to prevent inadvertent changes from being made to globally defined objects in Data Administration.

Migrate Data Administration Objects

Best Practice:

Populate the Data Administration area of your new TDF files with the objects you need for your new database:

- DB2
- IDMS SQL
- Datacom tables
- IMS DBDs
- PSBs

Business Value:

To protect the integrity of your data, you must migrate your data to a new release TDF in the way that best suits your needs. CA Telon provides two methods for migrating data from your current TDF to the TDF for the new release:

- Partial method—If you want to run tests to verify that CA Telon works as expected, you can transport, import, or export a few programs from your current TDF to your new TDF.
- Full method—If you need to implement the new release quickly, start accessing your current TDF with the new release load library. If you are going to use this method, remember to back up your current TDF before beginning the migration.

  Note: After accessing the current TDF with the load library for the new release, you cannot access the TDF with a previous release without risking unexpected results such as loss or corruption of data.

VSAM and sequential files, CICS queues, and journals need not be imported in advance.

More Information:

Be sure to review any migration considerations in the *Installation Guide* prior to upgrading CA Telon.

Migrate Your Programs

Best Practice:

Migrate your programs from your old release of CA Telon to the new one.

Business Value:

Migrating your programs to the new release of CA Telon allows you to take advantage of the improvements in the new release.

More Information:

Select the best method for migrating your programs to the new release:

- Partial method—To proceed cautiously, you can migrate your programs to the new database singly or in groups. This type of migration allows you to continue using the previous release of CA Telon for the programs in your existing TDF database and use the new release to update the programs in your new TDF database. To perform a partial migration, you can either export the programs from your existing TDF and import them into your new TDF, transport programs from the old TDF and into the new one, or import from an external data set into the new TDF. This enables you to continue using the previous release for the programs in the old TDF database and use the new release to update the programs in the new TDF database.
- Full method—Migrate quickly by accessing your current database files with the new release load library (after backing up the TDF files). This method migrates the entire TDF by updating it directly with the new release. This method saves time.

  You can update the programs in the TDF without exporting, and then importing them.

  Note: After you have accessed a TDF database with the new release, accessing it again with the load library from an older release can lead to unpredictable results.

Customize TDF Definition Defaults

Best Practice:

Assign values to global and user level parameters to customize the TDF.

Business Value:

Customizing the TDF allows you to set up program definition defaults that will be accessible to all users. Default definitions can provide a consistent starting point for all programs through default definitions such as header and ID length.

More Information:

The Installation menu (global profile) allows you to customize the program name structure, the format of exported CA Telon source, and default program environment, classify user IDs, and reset the TDF password.

You can add an identifying line to the main menu of your TDF by using the TDF Identification parameter. For example, you can name the high-level qualifier of the current TDF database files, allowing your users to verify that they are accessing the correct TDF database. For more information about the Installation menu, see the *Implementation Guide*.

User defaults can be used to customize PFKeys in the TDF and assign default values for a number of program parameters (for example IMS SPASIZE and whether you want your CICS programs to use BMS maps) by target environment. For more information about the user profile information, see the *Design Facility Reference Guide*.

Customize TDF Security

Best Practice:

Control access to TDF functions using the Security options.

Business Value:

Setting TDF security allows you to control security access to specific options and operations in the TDF. For example, by setting security, you can limit programmers to read-only access to Data Administration so that data integrity is maintained and unauthorized changes cannot get made inadvertently.

More Information:

The Security options on the Installation menu allow you to control access to the functions of the TDF by three user types (Controller, Programmer, and Analyst) and by the functions of the TDF, such as updating programs, deleting Data Administration objects, and copying panels. In addition, the security module (supplied with CA Telon) TNxCSCUR (where x is M for the TSO TDF and L for the CICS TDF) can be customized, or a separate program written, to create further layers of security.

For more information about the security module TNMCSCUR or TNLCSCUR, see the *Implementation Guide*.

Customize JCL and Procedures

Best Practice:

Customize the JCL and procedures provided with CA Telon, and generate additional JCL to export, generate, and compile your CA Telon program.

Business Value:

Both the supplied JCL and procedures that you generate with CA Telon provide you with working jobstreams to generate your programs and to run all of the CA Telon utilities, such as Import, Export, Transport and Automated Documentation.

More Information:

For more information about customizing and generating JCL and procedures, see the *Installation Guide*.

Implement the DB2 Catalog Interface

Best Practice:

If your shop uses CA Telon to build DB2 programs, implement the DB2 catalog interface utility.

Business Value:

The DB2 catalog interface allows you to import DB2 table definitions to the TDF from the DB2 catalog so that the DB2 table definitions used in the TDF program definitions match the actual table. Select one of the following source members that will suit your needs:

Select source member	To be used within
#DB2ICOB	TSO TDF with COBOL program definitions
#DB2ICOC	CICS TDF with COBOL program definitions
#DB2IPLC	CICS TDF with PL/I program definitions
#DB2IPLI	TSO TDF with PL/I program definitions

You can find these source members in #pdsqual.SOURCE.

More Information:

For more information about the DB2 catalog interface, see the *Installation Guide* and review the comments and instructions in the appropriate source module.

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