CA InterTest™ Batch

Best Practices Guide

Release 9.1.00

Second Edition

CA Technologies Product References

This document references the following CA Technologies products:

- CA ACF2™ for z/OS (CA ACF2 for z/OS)
- CA Chorus Software Manager (CA CSM)
- CA Disk Backup and Restore (CA Disk)
- CA JCLCheck™ Workload Automation (CA JCLCheck WA)
- CA OPS/MVS® Event Management and Automation (CA OPS/MVS EMA)
- CA Service Desk (CA Service Desk)
- CA TLMS® Tape Management (CA TLMS)
- CA Top Secret® for z/OS (CA Top Secret for z/OS)
- CA Vtape™ Virtual Tape System (CA Vtape VTS)
- CA Workload Automation Restart Option for z/OS Schedulers (CA WA Restart Option for z/OS Schedulers)

Documentation Changes

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

- Changed the release number to Release 9.1.00.
- Introduction (see page 9)—Streamlined and improved.
- Installation best practices and configuration best practices have been moved into a single chapter "Installation and Configuration Best Practices (see page 11)."
- Implement a proactive Preventive Maintenance Strategy—Added to the guide.

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 are based on customer experience reported through interviews with development, technical support, and technical services. Therefore, many of these best practices are a collaborative effort stemming from customer feedback.

To continue to build on this process, we encourage you 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 guide describes the best practices for installing and configuring your product.

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

Chapter 2: Installation and Configuration Best Practices

This section contains the following topics:

Use CA Chorus Software Manager for Installation

Use CA CSM to acquire, install, deploy, and maintain your product. Although CA CSM is the preferred method for installing CA Technologies mainframe products, some sites may decide to use the Electronic Software Delivery (ESD) installation method instead.

Business Value:

CA CSM provides a web interface, which works with ESD and standardized installation, to provide a common way to manage CA Technologies mainframe products. You can use it to download, install, and deploy your product.

CA CSM lets you download product and maintenance releases over the Internet directly to your system from the CA Support website. After you use CA CSM to download your product or maintenance, you use the same interface to install the downloaded software packages using SMP/E. After installation, deployments allow system objects to be deployed across your enterprise's different environments.

For more information about CA CSM, see the *CA Chorus Software Manager Product Guide*. For more information about installation, see the *Installation Guide.*

Use Electronic Software Delivery

Although CA CSM is the preferred method for installing your CA Technologies mainframe products, some sites may decide to use the Electronic Software Delivery (ESD) method instead. For sites who have decided to use ESD, download the installation files from ca.com/support and install directly from your disk.

Business Value:

Using electronic software delivery (ESD) avoids ordering, shipping, and processing physical tape media to install the application. It is more timely, more cost-effective, and environmentally friendly. It uses standard z/OS utilities to prepare the product installation image on your system.

For information about how to download your CA Technologies products from the CA Support Online web site for installation using the enhanced ESD pax process, see the *Installation Guide.*

CA Common Services

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

Business Value:

The latest release of CA Common Services contains the most current infrastructure updates, allowing you to successfully use the latest features and preventing potential errors that can occur from using out-of-date services.

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

IBM APARs

No IBM APARs are required at this time.

Business Value:

There are no known IBM APARs that impact the operation or performance of the product. You may apply the most recent IBM APARs appropriate for your environment as needed.

Installation in a Test Environment

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

Business Value:

New releases of CA Technologies testing tools can always co-exist with previous releases, letting you 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.

Additional Considerations:

Always be sure to review any migration considerations in the *Installation Guide* before upgrading your CA Technologies product.

Common Symbolic Component

When installing more than one of the CA Technologies mainframe testing tools, we recommend that you install and maintain only one version of CA Technologies common symbolic component that is shared by all of the testing tool products.

Several testing tool products (CA InterTest Batch, CA InterTest for CICS, CA SymDump for CICS, CA SymDump Batch, CA Optimizer/II, and CA Mainframe Application Tuner) each distribute the common symbolic component in the VH FMID. This FMID was named CVHrr00 in previous versions and is now named CAVHrr0. The *rr* portion of the FMID contains the version number. For example, CAVH910 contains the symbolic common component provided with Release 9.1.00.

When installing any of these CA Technologies testing tool products, first query your Consolidated Software Inventory (CSI) to determine whether you already have a version of CVHrr00 or CAVHrr0 installed. If you use one CSI for all of your testing tool products then you need to perform only one query for these FMIDs. If you have one CSI for each testing tool product then you will need to query each CSI.

If you locate an installed version of CVHrr00 or CAVHrr0 during your query, compare the rr in your installed version of that FMID with the *rr* in the FMID provided with the product you are installing. Replace your existing FMID only if the *rr* in the product you are installing is higher than the *rr* in your existing function.

Business Value:

By installing and maintaining a single version of the CA Technologies common symbolic component, you reduce your maintenance effort, save disk space, and eliminate the possibility of executing symbolic utilities that are not up to date with the latest maintenance.

Additional Considerations:

The APPLY job of the installation places an SMP/E copy of the CAVH*rr*0 function in a library; however, many companies do not execute the testing tool products from this library. Therefore, always be sure to make the executables for the common symbolic component available for the testing tools products to use.

There are many ways to make the executables for the common symbolic component available, including:

- LNKLIST

  Always update your LNKLIST library after applying maintenance to CAVH*rr*0 if you have copied the executables for the common symbolic component from CAVH*rr*0 into a separate load library that you have added to your LNKLIST for all products to share.

- STEPLIBs
- CLISTs (for ISPF interfaces)

We recommend using the LNKLIST method because it has the specific advantage of making the executables available to all CA Technologies products with no additional changes to any JCL or CLISTs. If you cannot use LNKLIST for some reason (for example, your company has issues with updating LNKLIST or has specific rules prohibiting or limiting the use of LNKLIST), it is acceptable to add these executables to your STEPLIB or CLIST allocations. However, using STEPLIB or CLIST requires more initial setup and can be difficult to maintain if library names change.

CA JCLCheck Function CZ2rr00

If you are already licensed for CA JCLCheck on the CPU where you are installing your product, do not install function CZ2*rr*00 containing the CA JCLCheck common component.

Note: *rr* represents the release number associated with the CA JCLCheck common component, not CA InterTest Batch. The application uses the CA JCLCheck common component function CZ2*rr*00 during the JCL conversion process.

Business Value:

The application installation package includes the materials necessary to install the CA JCLCheck common component function CZ2*rr*00. However if you have already licensed and installed the CA JCLCheck product, you can save installation time, maintenance effort, and disk space by using your existing version instead.

Additional Considerations:

This common component is used to create ALIB members from your JCL for online allocations and to prepare JCL for use with the Batch Link facility. For the Batch Link facility, this JCL conversion is a convenience rather than a requirement, since JCL can be easily prepared manually for use with the Batch Link facility as described in the *User Guide*.

Note: When converting a PROC needed for use with DB2-stored procedures, a manual conversion is required and the JCL conversion feature is not used.

If you do not already have function CZ2*rr*00 installed on the same CPU, you must install it so you can convert JCL with your product. The materials needed to install that function have been provided as part of your product installation package.

If you decide to install a second copy of function CZ2*rr*00 on the same CPU, be sure to maintain both copies when applying maintenance. Solutions required for this function will be provided to the application and CA JCLCheck customers. As a result of this condition you may have two different releases of function CZ2*rr*00 installed, one with the CA JCLCheck product and the other with the CA InterTest Batch product. This is acceptable and fully supported provided that the version used with your product meets the minimum release number requirements as described in the *Installation Guide*.

Symbolic Files

Before configuring your CA Technologies testing tool product, carefully consider how to best organize your symbolic information that is stored in your PROTSYM files. Well organized symbolic information allows the most effective and efficient access to your symbolics during testing.

There is no one correct way to organize symbolic information that works best for everyone. How you organize your symbolic information will always depend on your environments, your application systems, and the number of programs and programmers involved in your testing. Although there is no best organization that works for everyone, you should consider the following guidelines when planning for symbolic support:

- In a *production environment*, consider maintaining a separate PROTSYM file for each application system that can be shared by all of your programmers. Because only one copy of each program is typical in a production environment, the same symbolic information could be shared by any programmer debugging in that environment.

  In production environments, symbolic information is often limited to a single version of each program, and testing or debugging is typically less frequent and often limited to critical, real-time failures. Separate, shared PROTSYM files allow you to maintain a single set of symbolic information for each production application system that would be ready and available for access in the event of a failure.

- In a *test environment*, multiple versions of the same program are more likely to exist, and shared executable libraries are complimented by *sandbox* libraries that house test fixes or various works in progress. For this environment, a single shared symbolic repository is adequate for the shared executables. However,each programmer may want to own their own PROTSYM file, as it will provide them with the freedom to test using the correct symbolic information without impacting other members of the team.

Business Value:

Well organized symbolic information lets your application programmers easily locate, access, and share symbolic information for their programs. As a result, you could see better performance for your CA Technologies testing tools, optimal use of your DASD space, and the best possible productivity for your application programmers.

Additional Considerations:

As a general rule, think of your PROTSYM files as nothing more than a match for your load libraries, remembering that for each unique version of a load module you may require symbolic information for testing or debugging. Like the load libraries that exist at each level or stage of your development environment, the corresponding symbolic files should vary in size depending on the maximum number of programs expected at each level, with the individual PROTSYM files being the smallest by far.

If you are also licensed for CA Endevor Software Change Manager (CA Endevor SCM), CA testing tools provide an additional level of automation through dynamic symbolic support. This feature lets you populate your PROTSYM file dynamically on demand with symbolic information for programs built using CA Endevor SCM.

We recommend that you set the threshold for used space in the symbolic file to monitor the space utilization percentage. When the threshold is reached, a message is issued that indicates that the symbolic file is almost full. Set the threshold by specifying the USEDSPACEMSG parameter with the INITIALIZE or UPDATE functions of IN25UTIL.

More Information:

For more information about creating, populating, maintaining, and using your PROTSYM symbolic repositories to enhance your testing, see the *CA Application Quality and Testing Tools Symbolic Guide*, which is provided with each CA Technologies testing tool product.

For more information about dynamic symbolic support, see the *Installation Guide.*

Dynamic Symbolic Support for CA Endevor SCM

If you are licensed for CA Endevor Software Change Manager (CA Endevor SCM), CA Technologies recommends using the dynamic symbolic support feature provided by the CA Technologies testing tools. This feature allows you to populate your PROTSYM file dynamically on demand with symbolic information for programs built using CA Endevor SCM.

Because there are many ways to maintain the content of your PROTSYM files, you may encounter the scenario where you have multiple versions of the same program for which you need to locate and select the correct symbolic information. Using dynamic symbolic support gives you the option to create your symbolic information only when it is needed, rather than always reloading your PROTSYM file after each compilation or assembly. This can save you time, CPU utilization, and even DASD space.

Business Value:

The dynamic symbolic support feature is available with many of CA Technologies testing tool products including CA InterTest Batch, CA InterTest for CICS, CA SymDump Batch, and CA SymDump for CICS. This feature simplifies the setup requirements for using symbolic support, while simultaneously eliminating the majority of potential setup errors associated with it. By improving the accuracy of the content of your symbolic file and eliminating common setup errors, dynamic symbolic support can greatly increase the productivity of your programmers.

Additional Considerations:

Dynamic symbolic support requires that you compile or assemble your applications using a CA Endevor SCM process with the footprint feature active. When symbolic information is required by one of the CA Technologies testing tools, your PROTSYM files are inspected first for the matching symbolic information. When no matching information is found, the executable is inspected for a CA Endevor SCM footprint. If this footprint is found, that footprint is used to locate the matching listing that is dynamically loaded into your specified PROTSYM file. The matching symbolic information is then used by your test session.

More Information:

For specific instructions related to setting up and using dynamic symbolic support, see the *Installation Guide* and the *User Guide*.

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