

CA Allocate™ DASD Space and Placement

Best Practices Guide
r12.5, Second Edition



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 © 2015 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 products:

- CA Allocate™ DASD Space and Placement (CA Allocate)
- CA Auditor for z/OS
- CA Service Desk Manager (CA SDM)

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*, 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	7
Purpose of this Guide	7
Audience	7
Mainframe 2.0 Overview.....	7
Chapter 2: CA Allocate Installation and Configuration Best Practices	9
Installation.....	9
Configuration for Optimal Performance	9
Use the CA Auditor for z/OS Interface	10
Use CA Service Desk Support	11
Disable Unused CA Allocate Environments.....	12
Use Same Local Parmlib for All Systems	13
Use the Automatic Class Selection Environment	14
Use End of Volume Support for Zero Secondary.....	14
Avoid Space Not Available Failures for New DFSMS-Managed Data Sets	15
Use STUB Methodology for Operating System Interfaces	16
Activate Diagnostic Tracing.....	17
Monitor the CA Allocate Health Checks.....	18

Chapter 1: Introduction

This section contains the following topics:

[Purpose of this Guide](#) (see page 7)

[Audience](#) (see page 7)

[Mainframe 2.0 Overview](#) (see page 7)

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 Allocate DASD Space and Placement.

Audience

The intended audience of this guide is systems programmers and administrators who need to install, set up, 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.

Chapter 2: CA Allocate Installation and Configuration Best Practices

This section contains the following topics:

[Installation](#) (see page 9)

[Configuration for Optimal Performance](#) (see page 9)

Installation

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 Allocate.

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 *Installation Guide* to set it up. 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 *Installation Guide*.

Configuration for Optimal Performance

The following sections explain the best practices for configuring CA Allocate for optimal performance.

Use the CA Auditor for z/OS Interface

Use the CA Auditor for z/OS Interface.

Business Value:

The CA Auditor for z/OS Interface provides installation verification and ensures runtime integrity.

Additional Considerations:

CA Auditor for z/OS is an optional product, which requires a separately installed licensed LMP Key. The Product Validation Interface (PVI) of CA Auditor for z/OS provides an installation verification service to ensure that the software products are correctly installed and to verify runtime integrity. PVI audits the z/OS operating system and reports its findings to its users, auditors, systems security administrators, and so on. PVI allows direct queries to acquire information about CA Allocate, its intercepts, exits, and other attributes of concern to the security and audit community. This capability is possible through the use of the Product Description Module (PDM), which is shipped with CA Allocate. Once installed, the PVI uses the information described in the PDM to verify that CA Allocate is correctly installed and running properly.

Sysparm PLSEXAMI is used to activate the CA Auditor for z/OS Interface. To activate the CA Auditor for z/OS interface, change the value of sysparm PLSEXAMI from its default value of (N) to (Y), then perform either an INSTALL or PARMREF operation, whichever is appropriate. The INSTALL or PARMREF operation will activate the change to sysparm PLSEXAMI. Once activated, output from STATUS operation will be augmented with a new message indicating when CA Auditor Interface is active:

```
VAM0254 CA Allocate IS RUNNING WITH AN ACTIVE CA Auditor INTERFACE
```

More Information:

For more information, see the section CA Auditor Interface in the chapter "Introduction" in the *User Guide*.

Use CA Service Desk Support

Use the CA Service Desk interface.

Business Value:

The CA Service Desk interface immediately notifies you of serious mainframe problems.

Additional Considerations:

CA Service Desk Manager is an optional product, which requires a separately installed licensed LMP Key. Use of the CA Service Desk interface feature of CA Allocate is optional. The CA Common Services component, CAISDI (Service Desk Integration), enables CA mainframe z/OS products to automatically open request tickets for CA Service Desk for serious conditions that have been detected. You can optionally assign the request tickets to individuals of your choice. Important problems are brought to the attention of the selected individual only seconds after they have been detected.

With CA Allocate, many other CA products are using the CA Service Desk Integration for centralizing the management of serious mainframe problems.

More Information:

For more information, see the section Unicenter Service Desk Support in the Chapter "Introduction" in the *User Guide*. For more information about activating and customizing the USD interface, see the *CA Common Services r11 Unicenter Service Desk Integration Guide*.

Disable Unused CA Allocate Environments

Disable unused CA Allocate Environments to improve performance.

Business Value:

You can reduce CPU usage by eliminating the overhead associated with initializing an unused Environment. You improve the performance of CA Allocate.

Additional Considerations:

The CA Allocate Environment indicates what allocation action CA Allocate requires. Depending on the Environment, your Allocation Selection Routine (ASR) takes different actions. For example, the `&NEWNAME` variable is selected only in the RENAME Environment, because only the RENAME Environment creates a new name. Likewise, for a new space allocation, you select different variables and take different actions than the actions that you do for a scratch operation.

If you do not want to use an Environment, CA Allocate provides a sysparm for each Environment that allows you to disable logically the initialization of that Environment. Logically disabling the Environment initialization results in a run-time performance improvement because the overhead associated with the logical initialization of those Environments is not needed. The default value of each of the Environment sysparms is (Y), which causes each Environment to be initialized for applicable allocation requests. To disable logically the initialization of any particular Environment, specify a value of (N) in your sysparm override member before either an INSTALL or PARMREF operation.

More Information:

For more information, see the section Environments in the chapter "Concepts and Facilities" in the *User Guide*.

Use Same Local Parmlib for All Systems

Define a single parmlib for all systems in a multisystem complex.

Business Value:

Maintaining all CA Allocate configurations in a single library reduces the overhead and unnecessary complexity.

Additional Considerations:

When maintaining a single sysparm library for all systems, the configuration members must have unique names for each system. For example, if you have four CA Allocate systems, you cannot have four sysparm override members with the same name in the same library. Instead, you can name the sysparm override members VAMPSYS1, VAMPSYS2, VAMPSYS3, and VAMPSYS4. From the CONFIG member, you can specify which sysparm override member should each system use. The benefit is that all CA Allocate configurations are maintained in a single library.

More Information:

For more information, see the section Multiple Systems – Parmlib Considerations in the chapter "Implementation" in the *User Guide*.

Use the Automatic Class Selection Environment

Use the Automatic Class Selection (ACS) environment as a direct replacement for IBM ACS routines.

Business Value:

You can use the CA Allocate Allocation Selection Routine (ASR) language for managing both DFSMS-managed and non-DFSMS-managed data sets. The ASR language eliminates the need for ACS routines or ACS exits.

Additional Considerations:

Using the ACS environment, you can change any of the following DFSMS constructs:

- DATA CLASS
- STORAGE CLASS
- MANAGEMENT CLASS
- STORAGE GROUP

Normal ISMF setup is done to create and define the constructs. CA Allocate gets control after all IBM ACS processing is complete, but before returning to the original requester of the ACS services. You can use the ACS environment to change or remove any of the four DFSMS construct names.

More Information:

For more information about the ACS environment, see the section ACS Support in the chapter "Concepts and Facilities" in the *User Guide*.

Use End of Volume Support for Zero Secondary

Set sysparm PLSZSBC to (Y) to avoid D37-04 abends for non-VSAM data sets.

Business Value:

Non-VSAM data sets allocated with no secondary space cause D37-04 abends when their primary space is exhausted. By setting sysparm PLSZSEC to (Y), you avoid costly downtime.

Additional Considerations:

End of Volume (EOV) support for Zero Secondary gives your ASR the ability to give secondary space to data sets to prevent D37-04 abends.

More Information:

For more information about EOV support, see the section EOV Support for Zero Secondary in the chapter "Concepts and Facilities" in the *User Guide*.

Avoid Space Not Available Failures for New DFSMS-Managed Data Sets

Set the sysparm PLSOPT10 to (Y) to avoid failures due to insufficient space for new DFSMS-managed data sets.

Business Value:

Your ASR detects and prevents potential Space Not Available (SNA) failures in the ALLOC and DEFINE Environments. Set the sysparm PLSOPT10 to (Y) to let your ASR to detect and correct any potential SNA failures for new DFSMS-managed data sets.

Additional Considerations:

Sysparm PLSOPT10 set to (Y) allows DFSMS-managed data set allocations to be intercepted in the ALLOC and DEFINE Environments. Specifying a value of (Y) gives new DFSMS-managed data set allocations access to both the Does It Fit (DIF) and LSPACE Support features. The LSPACE feature was formulated by using the IBM DADSM LSPACE macro to retrieve DASD volume information. You can use either DIF or LSPACE to prevent failures due to insufficient space.

More Information:

For more information, see the section *Overriding the Default Value of Sysparms* in the chapter "Implementation" in the *User Guide*.

Use STUB Methodology for Operating System Interfaces

Set the sysparm PLSOPT94 to (N) to eliminate the requirement to remove Operating System Interfaces in the order they were installed, that is, last in, first out (LIFO).

Business Value:

Operating System Interfaces at intercept points IFGOEX0B, IGGPRE00, IGGDAC02, IGGPOST0, and SVC26 are not removed during a shutdown outside of an IPL. Setting the sysparm PLSOPT94 to (N) eliminates the compatibility problems with other OEM products that can also intercept at these locations.

Additional Considerations:

The default value for sysparm PLSOPT94 is (N), which causes CA Allocate to leave the Operating System Interfaces at IFGOEX0B, IGGPRE00, IGGDAC02, IGGPOST0, and SVC26 during a REMOVE operation. This process is referred to as the STUB process. The STUBs provide anchor points for CA Allocate and are effectively dormant when the system is not active. A value of (Y) causes the system to remove the Operating System Interfaces in the order they were set. This process is referred to as LIFO. If you run other OEM products that also intercept at IFGOEX0B, IGGPRE00, IGGDAC02, IGGPOST0, and SVC26, running with sysparm PLSOPT94 set to (N) eliminates the LIFO requirement for removal of the Operating System Interfaces at these locations.

More Information:

For more information, see the section *Overriding the Default Value of Sysparms* in the chapter "Implementation" in the *User Guide*.

Activate Diagnostic Tracing

Activate Diagnostic Tracing if you encounter any problems.

Business Value:

Activating Diagnostic Tracing provides you the necessary diagnostic to analyze any problem.

Additional Considerations:

You can obtain the complete diagnostics by using either the DIAG= operator command or the optional sysparm PLSDIAGS set to (Y).

A large volume of diagnostics can be generated. Running with sysparm PLSOPT98 (Y) confines these diagnostics to a single section of the JES Listing of the failing job. Using the default value of (N) for sysparm PLSOPT98 results in the diagnostics being issued twice to the JES Listing and once to the SYSLOG.

More Information:

For more information, see the section Technical Support Services in Chapter "Introduction" in the *User Guide*.

Monitor the CA Allocate Health Checks

Monitor the health checks generated for CA Allocate.

Business Value:

Health Checks alert you of conditions that could prevent CA Allocate from running properly, if left uncorrected, and they guide you in addressing the problem. These health checks provide best practices for running CA Allocate.

Additional Considerations:

The following health checks are provided for CA Allocate:

ALLOC_VRFY_EOV_X37_SVCS_STATUS

EOV Support automatically prevents SNA failures. If EOV support is disabled, reenable EOV Support to recover data sets from SNA conditions.

ALLOC_VRFY_ACT_ASR_IS_EXPECTED

If you make changes to your ASR, ensure that those changes are executed at the next opportunity. Syntax errors, which are reported to you in the SYSPRT file, are the most common reason for the rejection of an ASR. Discover and resolve the cause of the error so that your new ASR can carry out your new directives.

ALLOC_VRFY_PLSZSEC_EOV_X37_SVCE

EOV support for Zero Secondary gives your ASR the ability to give secondary space to data sets to prevent D37-04 abends. Set PLSZSEC to (Y) to avoid the D37-04 abends.

ALLOC_VRFY_PLSOPT10_SNA_X37_SVCE

The ALLOC and DEFINE Environments are where your ASR detects and prevents potential SNA failures. Set PLSOPT10 to (Y) to give your ASR the ability to detect and correct any potential SNA failures for new DFSMS-managed data sets.

ALLOC_VRFY_PLSOPT94_USE_STUB

This Health Check advises you if CA Allocate is not running with PLSOPT94 to (N), use the STUB methodology. Operating System Interfaces at IFGOEX0B, IGGPRE00, IGGDAC02, IGGPOST0, and SVC26 are not removed during a shutdown outside of an IPL. You eliminate compatibility problems with other OEMs who can also intercept at these locations.