CA MIM™ Resource Sharing for z/OS

Release Notes

Release 12.0

Second Edition

CA Technologies Product References

This document references the following CA Technologies products:

- CA Chorus™ Software Manager (CA CSM)
- CA Chorus™
- CA MIA Tape Sharing (CA MIA)
- CA MIC Message Sharing (CA MIC)
- CA MII Data Sharing (CA MII)
- CA MIM™ Resource Sharing (CA MIM)
- CA OPS/MVS® Event Management and Automation (CA OPS/MVS)

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Contents

Chapter 1: New Features

This section contains the following topics:

CA MIM Driver

The features in this section have been added to the CA MIM Driver.

zIIP Enablement Feature

CA MIM is now able to offload significant portions of its workload to zIIP engines. Offloading eligible work to zIIP engines can reduce the total cost of ownership of your IBM mainframe.

This command is used to enable or disable the CA MIM zIIP Enablement feature:

```
SETOPTION MIM ZIIP
```

This command is used to display the amounts of general CP and zIIP engine time that the CA MIM address space consumed:

```
DISPLAY CPUTIME
```

For more information about the CA MIM zIIP Enablement feature, see the Scenario: How to Offload CA MIM Work to zIIP Engines.

Dynamic Reconfiguration of CA MIM

The CA MIM communication method is no longer constricted to the MIMINIT COMMUNICATION= parameter. You can now dynamically change communication methods without restarting the CA MIM address space. The following features work together to provide an unparalleled level of flexibility in dynamically changing the communication method for CA MIM.

For more information about the Dynamic Reconfiguration feature, see Scenario: Dynamically Changing Communication Methods.

Migration between DASD/XES Control Files and Virtual Control Files (VCF)

You can now migrate between DASD/XES Control Files and Virtual Control Files (VCF) dynamically without any shutdown/restart of CA MIM.

In previous releases, for COMMUNICATION=XCF or COMMUNICATION=CTCONLY, CA MIM ignored DASD and XES control files, whether specified through JCL, ALLOCATE initialization statements, or ALLOCATE commands. Once COMPATLEVEL=12.0 is activated, CA MIM makes any provided control files available for use, and allows migrations between the VCF master and DASD control files, in the same manner that is supported for COMMUNICATION=CTCDASD.

In previous releases, for COMMUNICATION=DASDONLY, CA MIM did not initialize the VCF communication. CA MIM now initializes the VCF communication even in a DASDONLY environment and builds VCFPATHs (XCF or CTC). Once the VCF connectivity is established between all the systems, CA MIM allows migrations between the VCF master and DASD control files, in the same manner that is supported for COMMUNICATION=CTCDASD.

This new CA MIM driver feature provides added flexibility when choosing communication methods for the CA MIM control file. Installations that run exclusively on VCF (Virtual Control File) can now dynamically allocate and migrate to DASD/XES control files. Installations that run exclusively on DASD can now dynamically allocate CTCPATHs or use XCF when operating in a SYSPLEX and migrate to VCF.

In some sites, DASD/XES control files can provide better performance than VCF and in other sites the reverse is true.

Dynamic Addition of Systems in Any Environment

CA MIM now allows systems to be added dynamically in any environment. Dynamically adding a system to a currently executing MIMPLEX was already possible in COMM=DASDONLY and COMM=XCF environments. This release of CA MIM has expanded this capability to COMM=CTCDASD and COMM=CTCONLY environments.

Dynamic Addition of CTCPATHs

Dynamically adding systems in your CTC environments with CTC as the underlying communication medium requires CTC paths to be added dynamically. You can now add the CTC paths dynamically in any communication environment using the CTCPATH command.

The CTCPATH command syntax has the following differences from the CTCPATH statements that are provided in the CA MIM initialization parameter member:

- FROMSYSTEM must always specify the local system.
- TOSYSTEM is optional.

Dynamic Update of System Definitions

This release introduces the ALTERSYS command with the following capabilities:

- Change the system definition tables (DEFSYS) while CA MIM is executing.
- Change the status of a currently inactive system to DISABLED, which prevents the system from joining the MIMPLEX.

In previous releases, swapping systems in a full (32) system MIMplex was indirect and cumbersome. You overrode the SYSID execution parameter in the started procedure of the new system to match an existing DEFSYS entry. In addition, the new system would assume the name of the old system, leading to a mismatch and confusion.

Using the ALTERSYS command, you can change the name of a FREED or DISABLED system. This name change eliminates the need for a SYSID override and prevents the system name confusion.

Mixed Mode VCF Communication

In previous releases, you could configure CA MIM to use CTC devices or XCF for global communications. This release announces the addition of the mixed VCF communication feature. CA MIM can now use a mix of CTC devices and XCF simultaneously. CA MIM systems within a sysplex can use XCF for global communications, while CA MIM systems outside the sysplex can use the CTC devices. XCF can increase the performance for CA MIM systems within a sysplex, while allowing cross-sysplex CTC communication to CA MIM systems outside the sysplex.

The mixed VCF communications feature provides an unparalleled degree of flexibility when configuring CA MIM before initialization and while CA MIM is executing when used with:

- The dynamic addition of CTC devices
- The dynamic addition of systems
- The removal of the TOSYSTEM requirement

Benefits include:

- A currently executing CA MIMplex using the XCF communication can now be expanded to include systems outside of the sysplex. You can dynamically add CTCPATHs and system definitions without restarting CA MIM.
- A synchronized CA MIMplex can now dynamically switch between using the XCF and CTC communications increasing the availability of your data center.
- When using the CTCONLY or CTCDASD communication method, it is no longer necessary to define CTC devices to every system. CA MIM systems within a sysplex now automatically build the XCF paths to other CA MIM systems in the sysplex. This automation eliminates the need to code CTCPATH statements for those systems.
- CA MIM automatically discovers the members of the CA MIM sysplex group, thus requiring no additional configuration effort.
- CA MIM systems within a sysplex that are currently using the CTC communication can dynamically switch to using XCF without requiring a restart.
- You can set a preferred communication medium with the VCFPREFERENCE set option. CA MIM then automatically switches to using the preferred medium when it becomes available.

Selectable Features

Previously, CA MIM supported only MIMINT COMPATLEVEL=nnn and ACTIVATE COMPATLEVEL=nnn to control whether new features should be available. The new FEATURE keyword on the MIMINIT statement and on the ACTIVATE command provide the ability to selectively activate individual features independently of each other. In addition, the DEACTIVATE FEATURE command can be used to deactivate individual features. Selectable features give you much finer control over that CA MIM environment than was possible in previous versions of CA MIM.

HYPERSTAR

For a MIMplex that has three or more active systems and is configured to use CTC and/or XCF communication, Virtual Control File performance may be improved by activating the Hyperstar feature. When this feature is active, a client system does not always transfer the VCF back to the master system after completing its processing. Instead, CA MIM examines a 'look ahead' list of systems waiting for the VCF. If the list is not empty, and the client has a CTC or XCF path to the next system in the list, the client transfers the VCF directly to that system instead of the master. When the 'look ahead' list becomes empty, or when there is no path to the next system in the list, the client transfers the VCF back to the master.

For many environments, enabling Hyperstar provides the following benefits:

- Reduced CPU consumption on the VCF Master system
- Reduced XCF or CTC I/O counts on the VCF Master system
- Reduced control file cycle times on all systems
- Reduced ENQ service times on all systems
- Increased throughput on all systems

Hyperstar benefits are more pronounced in a busy MIMplex with many active systems, because the probability of more than one system queued for the VCF increases with higher activity.

Hyperstar can be activated during a CA MIM initialization using the MIMINIT FEATURE=Hyperstar statement, or dynamically, using the ACTIVATE FEATURE=Hyperstar command.

MIA Tape Sharing

CA MIA has been enhanced to include new features.

Delay Detection and Notification (DDN)

Delay Detection and Notification (DDN) continually collects global tape device allocation information. This information is used to diagnose MIMplex wide tape device allocation delay problems. When a problem is detected, an optional warning is generated.

Note: For customers running VM systems, see COMPATLEVEL Considerations in the *Installation Guide*.

ANALYZE TAPEDELAY Command

The ANALYZE TAPEDELAY command provides a way for users to request global tape allocation delay information. When issued, this command analyzes tape allocations occurring in the MIMplex and provides a display to assist users in handling tape allocation delays.

Device Exclusion

The CA MIM Device Exclusion feature allows users to exclude specific tape devices from the CA MIM management. Excluding a tape device causes CA MIA to ignore the device, causing the device activity to be unserialized with the rest of the MIAplex.

A DEVEXCL= parameter was added to the MIMINIT statement and the RESYNCH command. The DEVEXCL= parameter allows users to specify a CA MIM parmlib member that contains a list of devices to exclude from the CA MIM management. Use the parameter with DEVCLASS=TAPE. This parameter combination causes CA MIM to discover and manage all manageable tape devices EXCEPT for the devices that are specified in the DEVEXCL= member. The CA MIM Device Exclusion enhancement increases CA MIM serviceability at z/OS sites wishing to exclude tape devices from the CA MIM management.

MII Data Sharing

CA MII has been enhanced to include this new feature.

MIM_GDIF_RESTART_MNGR Health Check

The MIM_GDIF_RESTART_MNGR health check verifies that GDIF is started with the Restart Manager feature active. The health check occurs once during initialization and has a severity of medium.

Chapter 2: Enhancements to Existing Features

This section contains the following topics:

Changes to Statements and Commands

These statements or commands were added.

- ALTERSYS
- ANALYZE TAPEDELAY
- DISPLAY MIM CPUTIME
- DISPLAY EXCLUDED
- DUMP DNE
- DUMPDTOKEL
- MIMINIT DEVEXCL
- MIMINIT VCFPREFERENCE
- RESYNCH DEVEXCL
- SETOPTION GTAF ANALYZE
- SETOPTION GTAF DDN
- SETOPTION GTAF SETPRINT(DDN)
- SETOPTION GTAF SETPRINT(PINSTAT)
- SETOPTION GTAF SETTRACE(DDN)
- SETOPTION GTAF SETTRACE(PINSTAT)
- SETOPTION GTAF RESETPRINT(DDN)
- SETOPTION GTAF RESETPRINT(PINSTAT)
- SETOPTION GTAF RESETTRACE(DDN)
- SETOPTION GTAF RESETTRACE(PINSTAT)
- SETOPTION MIM VCFPREFERENCE
- SETOPTION MIM ZIIP

These statements or commands were updated:

- CTCPATH
- DISPLAY EDIF STATISTICS
- DISPLAY GTAF OPTIONS
- DISPLAY MIM CTCPATH
- DISPLAY MIM INIT
- DISPLAY MIM OPTIONS
- DISPLAY MIM CTCPATH
- DISPLAY MIM PATH

- EDITEST
- MIGRATE
- MIMINIT COMPATLEVEL
- ACTIVATE COMPATLEVEL

The following statements or commands were deleted:

- REMOVE

For more information about these keywords, see the *Statement and Command Reference Guide* and the C*A MIM Resource Sharing for z/OS Programming Guide.*

Implemented Demand Analysis Requests (DARs)

The following DARs have been addressed in this release of CA MIM:

19768682;01, 13147027;02, 13957592;02, 14354224;01, 14363758;01

Dynamically define systems, allocate CTCPATHs, or both.

20500053;01, 20508238;01

Enhance the EDITEST command

20525284;01, 21013248;01

CA MIA tape device exclusion.

21013246;01

CA MIA SWAP serialization

CA MIM Driver

This section provides the enhancements made to the CA MIM Driver in this release.

CTCPATH Command TOSYSTEM Parameter

You are no longer required to include the TOSYSTEM parameter:

- On the CTCPATH statements in your CA MIM initialization parameter
- When issuing the new CTCPATH command while CA MIM is executing.

When you omit the TOSYSTEM parameter, CA MIM follows the path to discover the connected system as the initial communication completes.

Making the TOSYSTEM parameter optional reduces the configuration effort to define CTCPATH statements in your CA MIM initialization parameter member. In addition, you can dynamically add paths for a system you have yet to define by omitting TOSYSTEM.

CA MIA Tape Sharing

This section provides the enhancements made to CA MIA in this release.

SWAP Enhancement

CA MIA now prevents DDR SWAP commands from causing HCD ACTIVATE commands to fail.

CA MII Enhanced Dataset Integrity Facility

This section provides the enhancements made to CA MII in this release.

EDITEST Command Enhancements

The EDITEST command now accepts another keyword parameter: DETAIL. The DETAIL parameter allows you to filter information the command displays. In addition, the EDITEST command can now display the list of AUTHORIZED, ACCESSLIST, EXEMPT, or CHECKEXCLUSIVE programs for the input data set.

Note: For more information, see the *CA MIM Statement and Command Reference Guide*.

DISPLAY EDIF STATISTICS Command Enhancement

The EDIF *DISPLAY STATISTICS* now displays more EDIF processing statistics.

Note: For more information, see the *CA MIM Messages and Codes Reference Guide*.

Chapter 3: System Information

This section contains the following topics:

CA CSM

CA Mainframe Software Manager™ (CA MSM) is renamed to CA Chorus™ Software Manager (CA CSM) and adopts the CA Chorus look-and-feel.

CA CSM Release 5.1 lets you manage and organize tasks with policies. Use task management policies to copy, delete, and move task output. Select tasks that are based on criteria including their age and their type. Create task policies using the Task Policy wizard.

Note: For more information, see the *CA Chorus Software Manager User Guide*.

Documentation

This section contains topics that are related to documentation enhancements.

Technical Information Content Philosophy

The documentation set focus on the following key areas:

- Role-based scenarios that detail steps to complete key business processes. These scenarios can appear in traditional guides and as standalone Knowledge Database articles on http://ca.com/support.
- An end-to-end view that gives you access to content across the full lifecycle of your product, including content from technical information, product management, support, sales, services, and education. The bookshelf that is based on the end-to-end model provides you with traditional guides and links to various information sources that are related to your product.
- Concise product content that promotes usability and accessibility.

Installation Guide

The Installation Guide has been restructured and describes the following methods of installing your product:

- CA CSM
- Pax-Enhanced Electronic Software Delivery (Pax ESD)
- DVD

Chapter 4: Changes to Messages

This section lists messages that are new or that have been changed at CA MIM Release 12.0 base release. This list serves as an alert aid for customers who have automation rules that are based on CA MIM messages.

For complete message text and explanations, see the CA MIM *Message and Code Reference Guide*.

This section contains the following topics:

New Messages

The following messages have been added at this release:

MIM0328W

VCF Reserve held by: system names

Note: This message replaces MIM0294I.

MIM0400W

VCF Reserves revoked for systems: system names

MIM0658W

zIIP offloading not available.

MIM0659E

Task_name terminated: unable to recover from ABEND.

MIM0660I

CPU Time:

```
WORKUNIT  TOTALCPU  TASKCP  ZIIPONCP  PCT  ZIIP  PCT
```

MIIM0670I

Features Display:

Facility Feature Status

MIM0680E

facilityname required for feature: *featurename*

MIM0681E

featurename is already active

MIM0682E

featurename is not active

MIM0683E

DEACTIVATE is not available for feature *featurename*

MIM0684I

action FEATURE=*featurename* has been scheduled

MIM0685E

Detected inconsistent usage on system sysname - FEATURE=*featurename*

MIM0703I

Path added for device *device number*

MIM0704E

CTCPATH Command Failed

MIM0705I

CTCPATH Command Ignored, FROMSYSTEM not the local system

MIM0706I

System *system name* attribute altered: attribute.

MIM0707I

No eligible masters detected during initialization.

MIM0708E

system name specified for both TOSYSTEM and FROMSYSTEM.

MIM0710E

ALTERSYS command requires synchronization for operation.

MIM0711I

ALTERSYS command succeeded.

MIM0712I

Processing ALTERSYS Command…

MIM0713E

Duplicate name sysname specified on the ALTERSYS

MIM0714E

Target system *sysname reason*

MIM0715E

ALTERSYS command failed.

MIM0716E

Target system *sysname* not found.

MIM0717E

sysname is DISABLED: initialization terminated.

MIM0178E

System xxx is DISABLED - request to join the MIMPLEX rejected.

MIM0951I

Hyperstar Statistics for VCF Master System:

#Reserve #XFER #I/O #I/O Saved %Saved AvgDepth

MIM0954I

Hyperstar Statistics have been reset.

MIM2082I

The following is a list of excluded devices:

MIM2084I

The exclude list is empty.

MIM2085E

Syntax error in member, statement *'line'* invalid.

MIM2086E

Syntax error in member, invalid range (value1 – value2).

MIM2087E

Syntax error in member, erroneous '*' placement.

MIM2140W

Tape Device Allocation Delay warning.

MIM2141I

Tape Device Allocation Delay analysis.

MIM2142W

DDN disabled due to detected error.

MIM2226

DDN trace text.

For more information, see the *CA MIM Messages and Codes Reference Guide*.

Changed Messages

The following messages have changed at this release:

MIM0026E

Extra blanks removed.

MIM0031E

CompatLevel level that is required for the feature: *feature*.

MIM0039I

Changed the CURRENT field to indicate VCF or DASD. The CURRENT field is now valid regardless of the initial communication parameter.

MIM00176

The display path command response only indicates which path is in use on client systems. The Master systems do not indicate which path is in use.

MIM0199E

DEFSYS command – communication not VCF.

MIM0292I

VCF switched to the alternate VCF path xxx.

MIM0619I

May now specify either FEATURE= or COMPATLEVEL=.

MIM0620I

May now specify either FEATURE= or COMPATLEVEL=.

MIM0621I

May now specify either FEATURE= or COMPATLEVEL=.

MIM0622W

May now specify either FEATURE= or COMPATLEVEL=.

MIM0623W

May now specify either FEATURE= or COMPATLEVEL=.

MIM0624W

May now specify either FEATURE= or COMPATLEVEL=.

MIM0625W

May now specify either FEATURE= or COMPATLEVEL=.

MIM0627E

May now specify either FEATURE= or COMPATLEVEL=.

MIM0628E

May now specify either FEATURE= or COMPATLEVEL=.

MIM0629W

May now specify either FEATURE= or COMPATLEVEL=.

MIM0630E

May now specify either FEATURE= or COMPATLEVEL=.

MIM2130I

New Setoptions added to display.

Deleted Messages

The following messages have been removed at this release:

MIM0294I

System xxxx holding VCF reserve on path xxxx

Note: This message has been replaced by the new MIM0328W message.

MIM0354W

System xxxx - RESERVE on Virtual Control File has been revoked

Note: This message has been replaced by the new MIM0400W message.

Appendix A: Compatibility Levels

The following chart shows if a CA MIM 12.0 feature is available for a compatibility level.

Feature	**Required CompatLevel**			
	11.81	11.82* (VM Only)	11.90	12.00
zIIP Enablement	Yes	Yes	Yes	Yes
Dynamic Reconfiguration of CA MIM	No	No	No	Yes
Mixed VCF Communication	No	No	No	Yes
Delay Detection and Notification	No	Yes	No	Yes
ANALYZE TAPEDELAY	No	Yes	No	Yes
Device Exclusion for z/OS	Yes	Yes	Yes	Yes
CA CSM 5.1	Yes	Yes	Yes	Yes
SWAP Enhancement	Yes	Yes	Yes	Yes
EDITEST Command Enhancements	Yes	Yes	Yes	Yes
EDIF DISPLAY STATISTICS Enhancement	Yes	Yes	Yes	Yes

* Compatibility level 11.82 is only valid for customers with a VM system in their MIMplex.