

Release 18.5.00, 2nd Edition



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# CA Technologies Product References

This document references the following CA Technologies products:

- CA IDMS<sup>™</sup> product family
- CA Chorus<sup>™</sup> Software Manager (CA CSM), formerly CA MSM

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CA IDMS maintains a common code base across all operating systems. This 2nd Edition update reflects maintenance and changes made in source modules for the 18.5.00 level across z/OS and z/VSE.

For z/OS customers, the features that are described in Chapters 2 and 3 are available in the CA IDMS 18.5.00 May 2013 deliverable. The features described in Chapters 4 and 5 are available via regular maintenance in June 2014, and PTFs RO7114, RO71146, and RO71147.

For z/VSE customers, all z/VSE related features described throughout this document are available via the CA IDMS 18.5.00 for z/VSE deliverable in July 2014.

**Note:** In addition to this document, refer to the *CA IDMS 18.5.00 Cover Letter* for other important information. z/VSE customers should also refer to the *CA IDMS 18.0.00 Release Notes* for updated feature information.

# Chapter 2: New Features (May 2013)

This section contains the following topics:

Enhanced Support for Very Large Databases Using Mixed Page Group Index Sets (see page 9) External Performance Monitoring (see page 14) Daylight Savings Time - UTC Time Stamps (see page 15) SQL Web Connect (see page 18)

# Enhanced Support for Very Large Databases Using Mixed Page Group Index Sets

In some very large CA IDMS databases, customers have reached capacity limits in the number of database pages and records that applications can access. Meanwhile organizations need more database growth capabilities in order to meet their business needs. CA IDMS Release 18.5 introduces Mixed Page Group Index (MPGI) sets for database structures in CA IDMS 18.5 Mixed Page Groups (MPG).

CA IDMS has a limit on the number of pages that can be defined within a page group due to the structure of the DBKEY that is used to identify a record. Page groups were introduced to increase the number of available pages. Using the default DBKEY format, a single page group can have 16,777,214 pages, and you can define up to 32,767 page groups. Page groups provide enough pages in total to address customer needs. However, prior to CA IDMS 18.5, certain limitations constrained maximizing pages through page groups. The primary restriction was that sets could not cross a page group boundary. Because owner and member records had to be in the same page group, they had to share the same set of 16,777,214 pages.

The restriction remains for chain sets, but this enhancement removes the restriction that the owner and member records of an indexed set must be in the same page group.

Allowing the owner and member records within a set relationship to reside in different page groups doubles the number of pages available to the two types of records, provided they reside in different areas. Previously, if more than two records were linked through multiple set relationships, all the records had to be in the same page group. With this enhancement, they can now each reside in different page groups further increasing the number of available pages.

This enhancement also applies to both system-owned indexes and user-owned indexes. For system-owned indexes, the index structure can reside in a different page group from the one in which the indexed records are stored.

Another benefit of this feature is that the number of records per page (the DBKEY format) can be adjusted to optimize storage for the records assigned to each page group.

#### Implementing MPGI Sets

To take advantage of this feature, the database must contain a user-owned index set or system-owned index in which the owner and member record types are in separate areas associated with different segments that are to be assigned to different page groups. Database administrators may need to do any or all of the following:

- Convert a chain set to an index set.
- Move the member or owner record to a separate area.
- Move the index structure of a system-owned index into an area different from that of the indexed records.
- Assign an area to a different segment.
- Assign a segment to a different page group.
- Alter a DBNAME to allow mixed page groups.
- Specify the new auto-READY extension for an area.

**Note:** For more information about performing these tasks, see the CA IDMS 18.5 product documentation. For an example MPGI scenario, see the 'How to Expand the Employee Demo Database With Mixed Page Group Index Sets' scenario available on the product bookshelf.

#### Application Program Changes

In many cases, implementing MPGI sets requires little or no changes to the application program. Following is a list of program attributes that may need to be changed:

- Unqualified FIND or OBTAIN DBKEY statements
- Ambiguous ACCEPT DBKEY statements (for example, those without a specified area, set or record)
- If a chained set is converted to an indexed set and return codes from the ACCEPT DBKEY verbs are interrogated
- The use of an area sweep is used to process a record that has been moved to a new area

With this release, a new auto-ready extension is available. The extension forces a READY to occur on the added areas even if other READY statements have been issued. This feature removes the need to modify a program when an area is added.

**Note:** For more information about the READY enhancement, see <u>Enhanced Automatic</u> <u>READY</u> (see page 22) enhancement.

If there are unqualified FIND/OBTAIN DBKEY statements in a program that is using MPG, the system-invoked exit 34 can help identify and correct unqualified FIND/OBTAIN DBKEY use.

**Note:** For more information about calling exit 34, see the Numbered Exits section in the chapter "User Exits" in the *CA IDMS System Operations Guide*.

**Note:** For more information about addressing ambiguous ACCEPT DBKEY statements (for example, ACCEPT DBKEY statements for which no area, set, or record name is specified), see the <u>ACCEPT DBKEY page info parameter</u> (see page 12) section of this document.

#### Other Enhancements

#### Enhanced Reporting and Displays

Since the page group can now be different for an owner and member of an index set, a number of displays and messages now show the page group in addition to the DBKEY to correctly identify a record.

Following are some of the displays and messages that now display page group information:

- PRINT INDEX
- IDMSDBAN
- CA OLQ
- IDMS-STATUS
- The trace facility in CA ADS
- IDMSLOOK
- SYMDUMP
- REORG

#### ACCEPT DBKEY Page Info Parameter

All ACCEPT DBKEY statements have been extended to include a page info parameter. This parameter specifies the location into which the qualifying page group and radix will be returned. The page info is then used in conjunction with the DBKEY to correctly identify a record.

#### **DBNAME** Parameter on Utilities

A DBNAME parameter was added to utilities that previously accepted only a target segment. Instead of running the utility for each segment, you can now specify a DBNAME to process multiple segments at the same time. This is necessary for MPGI sets that span page groups.

You can now specify DBNAME in the following utilities:

- PRINT INDEX
- MAINTAIN INDEX
- RESTRUCTURE
- REORG

#### MPGI Support in CA IDMS Product Options

With the exceptions listed below, all CA IDMS product options have been updated to support MPGI sets. This includes CA ADS, CA CULPRIT for CA IDMS, CA OLQ, CA IDMS Tools, CA IDMS Presspack, CA IDMS SQL against network databases and the CA IDMS utilities including PRINT INDEX, MAINTAIN INDEX, TUNE INDEX, IDMSDBAN, RESTRUCTURE, and REORG.

The following CA IDMS product options do not support MPGI sets:

- CA IDMS LRF
- CA IDMS SQL DDL
- CA IDMS Transparency for VSAM/DL1/TOTAL

The following CA IDMS utilities do not support MPGI sets:

- LOAD
- FASTLOAD
- CONVERT PAGE
- UNLOAD/RELOAD

The following CA IDMS tools do not support MPGI sets:

- CA IDMS DB Analyzer
- CA IDMS DB Reorg
- CA IDMS DB Audit
- CA IDMS DB Extractor
- CA IDMS Schema Mapper

# **External Performance Monitoring**

The CA IDMS Performance Monitor Realtime Monitor can now monitor an external system. You can specify a system when you start the Performance Monitor or select a system from the new Active System Summary window.

The new IDMSINFO address space must be running on the same LPAR to enable external performance monitoring.

Note: This feature is available only on z/OS.

**Note:** For information about how to run the IDMSINFO address space, see the *CA IDMS System Operations Guide*.

To monitor an external system, use one of the following options:

- Specify the external system as an option when you start the Performance Monitor. The format is 'task-code SYStem job-name' where task-code is the task that your site uses to start the performance monitor and job-name is the job name of the external system.
- Enter the command 'SYStem job-name' on the Performance Monitor command line, where job-name is the job name of the external system that you want to monitor. All information windows that you select display data from that system. If the selected system is not available, an informational message is shown.
- Display the Active System Summary window and select the external system from the list of all CA IDMS systems currently running on the same LPAR as the local system. To display the Active System Summary window, enter the command 'SYStem \*' or select 'PF19 Active System Summary' from the main menu. Specify the system that you want to monitor by placing an 's' on the line next to its name, and Performance Monitor begins monitoring that system. All information windows that you select display data from that system.

To return to monitoring the local system, use one of the following options:

- Enter 'SYStem' with no operands on the command line.
- Enter 'SYStem *local-job-name*' where *local-job-name* is the job name of your local system on the command line.
- Display the Active System Summary window and select the local system.
- Exit and re-enter Performance Monitor.

The commands and windows of Performance Monitor work exactly as they worked in the past, regardless of whether you monitor an external or local system. The only extra requirements for monitoring external systems are ensuring that IDMSINFO is running and the process of selecting an external system to monitor.

# Daylight Savings Time - UTC Time Stamps

With web presences and round-the-clock customer service, business and government organizations are open 24/7. Their systems need the same high availability to service transactions and queries that support all their business services. CA IDMS makes extensive use of local time stamps in control files. Each year, this usage causes time/date conflicts when the switch from Daylight Savings Time (or Summer Time) to Standard Time occurs.

This new feature replaces internal local time stamps with UTC (Coordinated Universal Time) time stamps. Using UTC avoids the need to shut down for one hour each fall when switching back to Standard Time.

External times are still entered and displayed in local time. Internally, times are in UTC, so most processing is unaffected by changing the time zone or local date/time in the system.

Most utilities now support a UTC keyword. Using this keyword allows start/stop times to be entered in UTC and internal time stamps to be displayed in UTC without conversion. Using UTC is useful in situations where entering a local time leads to confusion or a false interpretation.

#### Implementing UTC Time Stamps

This feature is automatically enabled. No extra action is required to activate it.

**Important!** Before starting an 18.5 CV for the first time, start with a fresh log file. Do not mix the log data from the previous release with the log data from the new release. Mixing data is problematic, as the time stamps in the old release are in local time, but the new data is stamped in UTC time.

You can decide to use the UTC keyword on Archive Log jobs, so that printed log times do not change during time changes.

#### **Application Program Changes**

No program changes are required. Requests for the current time are returned in local time as before.

#### Log Records

The time stamp that is carried in each CV log record is now UTC time instead of local time. Utilities and reports which work with log records automatically convert the time stamp value to local time when it is displayed.

When you specify start/stop date-time ranges for processing, do so in local time. Internally, the start/stop times are converted to UTC when they are compared to the log data time stamps.

Times are converted to UTC time or to local time using the current time zone value defined in the system.

The following utilities and products support the UTC keyword:

- Archive Log utility
- Print Log utility
- Archive Trace utility
- Print Trace utility
- CA IDMS Log Analyzer product

When you specify the UTC keyword, the functionality changes as follows:

- 1. Input start and stop times are considered to be in UTC.
- 2. Internal times are not converted to local time for reporting or display purposes.

The Online Print Log task and the CA IDMS Online Log Analyzer product support both the UTC and the LOCAL keyword. The default is LOCAL. They allow the session to switch between local and UTC mode.

#### Journal Records

Journal records have not changed in release 18.5. All journal records carry UTC times and checkpoint records carry both local and UTC times.

By default, the journal utilities continue to use the local time for start and stop processing and for reporting.

The following utilities and products support the UTC keyword:

- Print Journal utility
- Extract Journal utility
- Rollback utility

- Rollforward utility
- CA IDMS Journal Analyzer product

When you specify the UTC keyword, the functionality changes as follows:

- 1. The start and stop times are compared against the UTC times instead of the local times.
- 2. The UTC times are displayed instead of the local times.

Rollback and Rollforward no longer support the GMT keyword. The UTC keyword replaces it.

#### DCMT Vary Statistics Roll Time Interval

If you change the local time while Statistics Interval Roll is active, the time interval is not adjusted accordingly. The interval continues to occur every 24 hours from the local time originally specified. As a result, the statistics run an hour later or earlier in local time after a time change, for instance to Daylight Savings Time.

To reset the statistics so that they run at the originally specified local time, perform one of the following actions:

- Restart your system. The interval is reset based on the SYSGEN values.
- Use the DCMT VARY STATISTICS ROLL TIME HH:MM command. This command resets the interval to the local time.

#### Deactivation of the IDMSDST Program

The IDMSDST program has been deactivated which leads to the following consequences:

- The IDMSDST program is no longer invoked.
- The messages DC998005 and DC998006 are no longer issued. These messages indicate a change in Daylight Savings Time.
- The IDMSDST program continues to be delivered to satisfy residual system definitions, but the TASK IDMSDST and PROGRAM IDMSDST definitions are no longer delivered.
- The TASK IDMSDST and PROGRAM IDMSDST definitions can be removed from existing systems.

## SQL Web Connect

All CA IDMS/DB customers can now take advantage of SQL, ODBC, and JDBC connectivity technology using the new CA IDMS 18.5 feature, SQL Web Connect. Previously, this connectivity technology was only available to customers who licensed the CA IDMS SQL and CA IDMS Server optional products. SQL Web Connect provides access for two concurrent users of dynamic SQL through ODBC and JDBC from the Web, Windows, Java, and other non-mainframe platforms, and through the usual CA IDMS tools (for example, OCF, BCF).

SQL Web Connect is perfect for:

- Prototyping
- Pilot projects
- Application development
- Low-volume application usage

With SQL Web Connect, you can access CA IDMS mainframe data from:

- Business intelligence, analytics, and reporting application tools
- Application servers that access data through ODBC and JDBC. These servers include popular environments such as Microsoft IIS, IBM WebSphere, SAP Business Objects, Oracle WebLogic and many more.

The SQL Web Connect feature works by tracking product usage across all CVs for a given LPAR. Two concurrent users of both CA IDMS SQL and CA IDMS Server ODBC/JDBC technology are permitted. For z/OS, usage is tracked using IBM's Product Registration facility. Calls to the IBM Product Registration facility are handled using the LMP Seat License Registration Service within CA Common Services (CCS). When two simultaneous users of either IDMS SQL or ODBC/JDBC are registered, any subsequent attempt to use that technology will result in either a failure or an LMP warning, as dictated by the current RHDCPINT product bit setting as well as the presence of the appropriate LMP key. You can continue to use the RHDCPINT module to prevent unwanted product usage above the usage that is permitted by the SQL Web Connect feature.

#### Feature Activation

No action is needed in order to activate the SQL Web Connect feature. For z/OS, no action is needed provided that the necessary CA Common Services release requirements are met. Usage tracking automatically takes place when either an ODBC/JDBC connection or an SQL session (or both) is established, and the system determines that you do not have an LMP key in place for the product you are attempting to use.

No LMP warnings occur for connections and sessions that are established under SQL Web Connect.

**Note:** For more information about this feature, see the SQL Web Connect chapter in the *CA IDMS System Operations Guide*.

# Chapter 3: Additional Enhancements (May 2013)

This section contains the following topics:

Store Clock Performance Improvements (see page 21) Breaking Event Address Now Displayed with a Task Snap (see page 22) Enhanced Automatic READY (see page 22) Updated IDD and OCF/BCF DISPLAY ALL Command (see page 22) Software Configuration Service (SCS) in CA CSM (see page 23) Documentation (see page 25)

# Store Clock Performance Improvements

CA IDMS 18.5 has been modified to use the Store Clock Extended (STCKE) instruction throughout the product instead of the Store Clock (STCK) instruction. This results in better scalability as the speed and number of processors increase with each generation of hardware.

The architecture of the previously used STCK instruction requires that each 64-bit value returned is unique across all processors. This requirement sometimes forces the CPU to delay a STCK until a unique value can be generated. Delays are more likely as the number and speed of processors increase.

IBM z/Architecture provides the STCKE instruction on all hardware. This instruction returns a unique 104-bit value without delays and supports dates beyond 2042.

CA IDMS 18.5 typically does not require uniqueness at the 64-bit level. When uniqueness is not required, CA IDMS extracts the portion of the 104-bit STCKE value which corresponds to a STCK value. CA IDMS uses this value instead of the full 104 bits. In some locations, all 104 bits are used.

This feature is automatically activated. No application changes are required.

# Breaking Event Address Now Displayed with a Task Snap

When a task fails due to a program check, the Breaking Event Address is now saved and displayed in a task snap. This address can be used to determine the last instruction in a program to cause a break in the sequential instruction execution before the program check. Determining the last instruction can help when resolving a programming problem.

**Note:** For more information about how this address is generated, see z/Architecture Principles of Operation.

## Enhanced Automatic READY

The default ready mode in the area definition of a subschema has a new FORCE option that enables the automatic READY mechanism even when an explicit READY has already been issued. In previous releases of CA IDMS, the automatic READY mechanism was disabled when a program issued an explicit READY before issuing another DML statement.

The new FORCE option enables access to an area added to the subschema without the need to add READY statements to the program. Previously, adding READY statements was necessary in cases when the program contained explicit READY statements for the other areas.

**Important!** This feature is provided to allow application changes to be deferred when an existing record is moved to a new area added to a subschema, which might be done to implement a Mixed Page Group Index Set. The use of this feature is not recommended for existing areas that ADS dialogs access using an extended run unit.

**Note:** For more information on the limitations of using the FORCE option with ADS dialogs, see the Area Statement section (in the Subschema Statements chapter) in the *CA IDMS Database Administration Guide*.

# Updated IDD and OCF/BCF DISPLAY ALL Command

The RECURSIVE keyword has been added to the DISPLAY ALL command in IDD and OCF/BCF. This keyword modifies the AS SYNTAX and AS COMMENTS options. When you use this keyword, output is displayed with either AS SYNTAX or AS COMMENTS appended to the end of each line. This functionality eliminates the need to manually add AS SYNTAX or AS COMMENTS to each line of punched output before resubmitting it to IDD or OCF/BCF.

# Software Configuration Service (SCS) in CA CSM

The Software Configuration Service (SCS) is available in CA CSM Version 5.1. Use this service to configure your CA IDMS products and options from the software inventory of the driving system to your target enterprise systems.

Note: This feature is available only on z/OS.

The SCS guides you through the configuration creation process, and through the manual steps to implement the configuration. The SCS also includes an address space communications service running on each targeted z/OS system.

**Note:** For more information, see the CA Chorus Software Manager User Guide and the CA IDMS Installation Guide for z/OS.

#### SCS Enhancements

You can now specify any number of dictionaries of a Central Version in the SCS definition that is used for upgrading to CA IDMS 18.5. You are no longer limited to using the predefined set of dictionaries. Additionally, the SCS can now use the dictionary database file definitions from the DMCL of the current CV. Using the definitions from the DMCL means that you do not need to specify these definitions manually. To use this functionality, select the Use\_DMCL\_File\_Definitions option available when the Upgrade\_only option is selected. These options are on panel 2 of the Configuration Wizard.

**Note:** Use this functionality only if the DMCL of the CV you are upgrading contains database file definitions for all of the dictionaries you are upgrading.

To define which dictionaries to upgrade, you can either:

 Use the predefined standard set of dictionaries: a system and application dictionary, and, if applicable, a tools or ASF dictionary, or both.

To use this predefined set of dictionaries, do not select the Configure\_Dictionary option.

or

- Define a custom list of dictionaries. You can define this list in the CA IDMS\_dictionary subtree (on panel 3 of the Configuration Wizard). These definitions are permanently stored in the CA CSM system registry, so that they can be reused for new configurations. The definition contains the following attributes:
  - DBNAME
  - SYSCTL\_DSN
  - VERSION
  - DESCRIPTION
  - HAS\_SYSGEN
  - HAS\_DIRL
  - HAS\_REPORTS
  - HAS\_MSGS
  - HAS\_APPL
  - HAS\_ADS
  - HAS\_VDBA
  - HAS\_SQL
  - HAS\_ASF
  - HAS\_TOOLS

The settings of the HAS\_*xxxx* flags control the type of configuration process which is used for the dictionary.

To define a custom list of dictionaries, select the Configure\_Dictionary option.

You can upgrade different dictionaries of a Central Version in separate configurations when you define a custom list of dictionaries. To indicate that the CV that updates the dictionaries is already configured, select the CV\_Already\_Configured option.

**Note:** Keep the following facts and recommendations in mind when selecting or deselecting the Configure\_Dictionary and CV\_Already\_Configured options:

- If you do not select Configure\_Dictionary—The maximum number of dictionaries that is upgraded will be the predefined dictionaries (SYSTEM, SYSDIRL, APPLDICT, TOOLDICT, and ASFDICT).
- If you select Configure\_Dictionary, but not CV\_Already\_Configured—Specify all the dictionaries that you want to upgrade, including the default set.
- If you select both Configure\_Dictionary and CV\_Already\_Configured—In standard cases you only need to specify the dictionaries that are not in the default set. The dictionaries in the default set are already upgraded when configuring the CV that is the owner of the default set.

## Documentation

Several CA IDMS guides were updated to reflect changes made in this release. Each of these guides contains a Documentation Changes page at the beginning of the guide.

**Note:** For specific information on the documentation changes, refer to the Documentation Changes page in each guide or the *CA IDMS Documentation Changes* document, which contains all documentation changes for the current version.

*CA ADS Reference Guide*—All forms of the ADS ACCEPT DBKEY command were updated to describe how users can specify a variable data field to which the page info associated with the database key will be moved. A description of the enhanced automatic READY was also added.

*CA IDMS DML Online User Guide*—All forms of the DMLO ACCEPT DBKEY command were updated to describe how users can specify a page info keypad to which the page info associated with the database key will be moved. Message E5019 was added, which pertains to page info retrieval.

*CA OLQ Online Query Reference Guide*—Updated to contain new screenshots of OLQ reports with enhanced DBKEY column formatting.

#### CA IDMS Guides

*Callable Services Guide*—Added IDMSIN01 function for enhanced display of dbkey (as page number and line index).

Database Administration Guide—Updated to support mixed page group index sets. Added a description of the new FORCE option for the default ready mode of areas within subschemas.

Database Design Guide—Updated to support mixed page group index sets.

*DML Reference Guide for Assembler*—Updated the @ACCEPT DBKEY statements to include the PGINFO parameter. Updated the description of @READY regarding enhanced automatic ready.

*DML Reference Guide for COBOL*—IDMS-STATUS routine has been enhanced to display database key (by page number and line index and also in hexadecimal format), page group, and database-key format. Updated the description of READY regarding enhanced automatic ready.

*DML Reference Guide for PLI*—IDMS\_STATUS routine has been enhanced to display database key (by page number and line index and also in hexadecimal format), page group, and database-key format. Updated the description of READY regarding enhanced automatic ready.

*Installation and Maintenance Guide for z/OS*—Updated to include support for Software Configuration Services.

Messages Guides—Updated to contain new messages for Release 18.5.00.

*Navigational DML Programming Guide*—Updated with the description of enhanced automatic ready.

Utilities Guide—Updated the documentation for the RESTRUCTURE, RESTRUCTURE CONNECT, PRINT INDEX, and REORG utilities to support DBNAME syntax and mixed page group indexes. The IDMSDBAN, MAINTAIN INDEX, and TUNE INDEX utilities were also updated to support mixed page group indexes, but did not require documentation updates to the Utilities Guide.

# Chapter 4: New Features for Second Edition Release (July 2014)

This section contains the following topics:

<u>SQL Web Connect for z/VSE</u> (see page 27) <u>Canceling Tasks on Remote CVs</u> (see page 27) <u>PassTicket Support</u> (see page 28) <u>DMLO Batch CLIST Processing</u> (see page 29) <u>MEMORY CACHE in 64-bit Storage Space</u> (see page 29)

# SQL Web Connect for z/VSE

All z/VSE customers can now take advantage of the SQL Web Connect connectivity technology.

SQL Web Connect provides access for two concurrent users of dynamic SQL through ODBC and JDBC from the Web, Windows, Java, and other non-mainframe platforms, and through the usual CA IDMS tools (for example, OCF, BCF).

**Note:** For more information about this feature, see the SQL Web Connect chapter in the *CA IDMS System Operations Guide*.

# Canceling Tasks on Remote CVs

You can now cancel an active task executing on a remote Central Version directly from the Active User Task Detail (PF4) screen. This screen is available within the CA IDMS Performance Monitor Realtime Monitor.

Note: This feature is available only on z/OS.

To enable canceling tasks on remote systems you need to:

- Use an external security manager CA Top Secret (TSS), CA ACF2, or IBM RACF.
- Grant access to TASK resources for specific users in the external security manager.
- Ensure that the IDMSINFO address space is active.
- Set the monitored Central Version to run non-swappable.

**Note:** For more information about defining external security systems, see the Installation and Customization section of the *CA IDMS Performance Monitor System Administration Guide*.

# PassTicket Support

CA IDMS for z/OS now supports the use of PassTickets. Using PassTickets requires the use of an external security system such as CA Top Secret, CA ACF2 or IBM RACF.

**Note:** This feature is available only on z/OS.

A PassTicket can be described as a temporary substitute for a password, which means that PassTickets are:

- Single-use—You can only log on once using a PassTicket. Any further attempts to log on using the same PassTicket are rejected unless multiple-use is allowed in the external security system.
- Time-limited—The PassTicket must be used within 10 minutes, after this time it becomes invalid and logging on using this PassTicket is no longer possible.

PassTickets are generated by an authorized program (not CA IDMS) explicitly for a particular user and application. A PassTicket consists of the following elements:

- User ID
- Application name (Applid)

The Applid is a unique identifier to the IDMS CV system. The Applid is composed of the first VTAM line defined to the system. If no VTAM lines exist, the system node name (SYSTEM ID) of the CA IDMS CV can be used instead.

- Session key
- Date and time information

PassTickets are typically used in situations where it is desired to avoid sending a multi-use password without any time limitation across a computer network in clear text.

#### **PassTicket Processing in CA IDMS**

In a typical situation, PassTicket processing proceeds as follows:

- 1. A user receives a PassTicket and enters a user name and PassTicket to log on.
- CA IDMS Central Security uses a RACROUTE call to invoke IBM's System Authorization Facility (SAF) and provide log on information to the appropriate external security manager (e.g. CA ACF2, CA Top Secret, IBM RACF). The RACROUTE that is issued passes the User ID, Applid and password/PassTicket.
- 3. The external security system processes the sign on attempt and checks the password/PassTicket. In this case, the system detects that the user's regular password is not used, so the system performs PassTicket authentication for the specified application and user. The PassTicket is verified and the external security system allows the sign on attempt to proceed.

**Note:** For more information about PassTickets, see the *CA IDMS Security Administration Guide*.

### DMLO Batch CLIST Processing

z/VSE customers can now take advantage of batch CLIST processing for DML Online. This allows for easy migration of DMLO CLISTs between IDMS systems. The batch CLIST processor, USDBCLST, provides the ability to upload, download, print, and remove DMLO CLISTs in batch.

Documentation for this feature has been updated for both z/OS and z/VSE customers.

**Note:** For more information about DMLO batch CLIST processing, see the CA IDMS DML Online User Guide.

# MEMORY CACHE in 64-bit Storage Space

With IDMS files, you can now use Memory Cache in the 64-bit storage space, or "above the bar," on z/VSE. z/VSE Release 5.1 and above supports the ability to store data objects "above the bar" in the 64-bit storage region.

Note: This feature is available only on z/VSE.

In the DMCL definition you can specify MEMORY CACHE YES for an IDMS file, and it stores the virtual pages in the cache in 64-bit storage.

**Note:** For more information about using MEMORY CACHE, see the CA IDMS System Tasks and Operator Commands Guide.

In order to allocate 64-bit memory objects on z/VSE you have to direct z/VSE to provide virtual storage for 64-bit memory objects. By default, there is no storage set aside for 64-bit memory objects. You can use the 'SYSDEF MEMOBJ,MEMLIMIT=' command to set aside virtual storage.

**Note:** For more information about using SYSDEF MOMOBJ, see the *IBM z/VSE System Control Statements Guide*.

# Chapter 5: Additional Enhancements for Second Edition Release (July 2014)

This section contains the following topics:

Enhanced Installation Procedure for z/VSE (see page 31) Expansion of Dictionary (IDD) Records in the Assembler Precompiler (see page 32) =COPY IDMS Member Type Specification (see page 32) Documentation (see page 33)

# Enhanced Installation Procedure for z/VSE

The CA IDMS 18.5 installation procedure for z/VSE has been updated to improve and simplify the installation and enable easier recovery from any problems encountered.

Starting with this release, all users receive the software for all CA IDMS products. Passwords are no longer required for installation because of a new Product Intention Table (PINT) to indicate which products are being used. Additionally, the installation process for CA IDMS and CA IDMS tools products has been merged into one process for easier handling.

In the install itself, the jobs have been reorganized so each job addresses only a single task within the overall process and is self-contained. With this release if you encounter issues during installation, you can restart that job from the beginning to simplify the recovery process. You no longer have to edit the job control for a step before rerunning the step.

**Note:** For more information about the installation procedures for z/VSE, see the CA *IDMS v18.5.00 Installation and Maintenance Guide for z/VSE*.

# Expansion of Dictionary (IDD) Records in the Assembler Precompiler

When using the @COPY IDMS statement in an Assembler program, the precompiler now expands record elements using the Assembler EQU instruction instead of commented statements if the record element is:

 created in the dictionary (IDD) with the USAGE CONDITION-NAME parameter (according to the COBOL 88-level convention)

and

copied into a CSECT or DSECT.

Using the Assembler EQU instruction has the advantage that programs are more readable and maintainable because you can now use these EQUs directly in your Assembler program instead of having to use hard-coded constants.

This change influences the output from the DML precompiler and the Assembler.

**Note:** For more information about @COPY IDMS, see the CA IDMS DML Reference Guide for Assembler.

# =COPY IDMS Member Type Specification

=COPY IDMS has been enhanced to allow users to specify a 1-8 character type for the source statement library member to be copied. Typically, a user would specify a book name, optionally preceded by a sublibrary ID. A new keyword, MEM=, has been introduced to signify that the input instead represents a member name followed by an optional member type.

**Note:** This feature is available only on z/VSE.

**Note:** For more information about =COPY IDMS, see the *CA IDMS Utilities Guide*.

### Documentation

Many CA IDMS guides were updated to reflect changes made in version 18.5.00, 2nd Edition. Each of these guides contains a Documentation Changes page at the beginning of the guide and is version 18.5.00, 2nd Edition or 3rd Edition. Guides that were not updated for this release are version 18.5.00.

For a summary of these documentation changes, refer to the *CA IDMS Documentation Changes* document, which contains all documentation changes for the current 18.5.00, 2nd Edition version as well as for version 18.5.00.

#### CA IDMS Documentation now publicly available

The vast majority of CA IDMS documentation is now available without any restrictions on the <u>CA IDMS public bookshelf</u>. This means there is no log in required to view this content, and the bookshelf as well as the content of the guides available on the bookshelf is indexed and can be found via search engines such as Google.