CA Chorus™ for DB2 Database Management

Release Notes

Version 04.0.00

ca technologies

CA Technologies Product References

This document references the following CA Technologies products:

- CA ACF2
- CA Chorus™
- CA Chorus™ for DB2 Database Management
- CA Chorus™ Software Manager
- CA Top Secret

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Contents

Chapter 1: New Features

This section contains the following topics:

Installation and Configuration Enhancements

The CA Chorus for DB2 Database Management installation and configuration process has been enhanced to:

- Support configuration without [set the dad variable for your book]. [set the dad variable for your book] is no longer required. Removal of this dependency has simplified the installation process and JCL requirements around configuration of the Object Migrator component. You no longer have to perform the following manual steps:

  1. Updating the MJETJOM model JCL member in *your_db2tools_hlq*.CDBAMDL. Prior to this release, this member had to be manually updated as follows:
     - Replacement of the JOBPARM SYSTEM statement if you were using JES3.
     - Setting the CA Chorus target library data set name prefix.
     - Adding the DD statement for the TCPDATA data set name to all steps executing FLQMASTT.
     - Replacing the /* JOBPCA Chorus target library data set name prefix and other variables.
  2. Updating the OFAPROC to add the CA Chorus load library and TCPDATA data set name.

  To support this change, the following new columns have been added to the BPLOG_0203 table in RBPDDL: BPLOG_LPAR, BPLOG_TRGSSID, BPLOG_CONFED, and BPLOG_DESCR.

- Support <csm> Version 6.0 (decoupling of configuration and deployment)
- Xnet now supports the addition of an IBM DB2 load module library to Xnet STEPLIBs. This feature provides SQL communication area (SQLCA) formatting using the most current version of the IBM DSNTIAR service routine that is available on the Xnet system. To enable this feature, you must customize PXNPROCE during post-installation tailoring of the CA Database Management Solutions for DB2 for z/OS.
- Add a new OFS parmlib member in *db2tools_hlq.*CDBAPARM for the CA Database Management Solutions for DB2 for z/OS. OFS (Object Framework Services) is a common component that performs DDL generation and parsing and catalog retrieval for a set of related DB2 catalog data.

  This new member lets you:

  - Control the DDL that is generated making it verbose or compact.
  - Make the DDL compact by controlling whether to generate:
    - Partition specification
    - Column names with SELECT*
    - Default clauses in CREATE DDL
- Remove many manual steps around configuration of the Object Migration function using the Object Framework Services (OFS) agent (OFA). The customization process has been simplified and can be completed using the CA Products for DB2 for z/OS Post-Install Tailoring (INS) panels. These panels are provided for configuration of the CA Database Management Solutions for DB2 for z/OS outside of CA CSM. This enhancement means that you no longer need to manually edit different JCL members to complete this processing.

  The following processing can now be completed through these panels:

  - Setup of the following parmlib members using option 1 on the Post-Install Tailoring menu or the EP option on the CA Database Management Solutions for DB2 for z/OS Products Main Menu:
    - New OFS (Object Framework Services) member. This member lets you set default execution values for various products that access the DB2 system catalog.
    - OFA (CA Chorus OFS agent). This member lets you set default execution values for CA Chorus for DB2 Database Management. You no longer have to manually edit this member in *hlq*.CDBAPARM.

- Execution of the following product-specific customization tasks on each LPAR (PTISYS member). Use the Tailor option (2) on the Post-Install Tailoring Menu to select OFA (Chorus OFS Agent) and perform the following tasks:
  - Review the OFA customization member.

    This member summarizes the required customization steps and provides additional installation processing instructions. Xmanager and Xnet customization is required.
  - Allocate the OFA log file data sets.
  - Allocate and define the OFA configuration file.

    This task includes defining default and user-specific configuration parameters.
  - Prepare the OFA started task JCL.

Note: For more information about performing these tasks, see the CA Database Management Solutions for DB2 for z/OS Implementation Guide.

Investigator Enhancements

The following enhancements have been made to the DB2 for DBA Investigator in this release:

- Active Threads—You can now perform the following actions from an active thread display:
  - Cancel a DB2 thread
  - Cancel a thread and generate a dump
  - Cancel a thread with force
  - Show full SQL text

    This action shows the full SQL text displayed as a single row in the grid and in the Details at the bottom of the display. When the text is displayed, you can use the Explain action to explain the statement or view and execute it using the DBA Command Manager.
- New Thread History displays
- Dynamic SQL Cache—You can now execute the Show Full SQL text action, and then Explain the statement or execute it using the DBA Command Manager.
- Simplified access to SQL statement text
- Simplified tree navigation

Simplified Investigator Tree Navigation

The data that is provided from the DB2 for DBA Investigator has been simplified to make access faster and to remove redundancies. This enhancement means that the Confederation, LPAR, Group, and SSID categories have been removed. Instead, filters are used to determine the desired routing of each request and to access data sharing and non-data sharing data systems.

The new format provides faster loading time, quicker navigation between different requests and DB2 subsystems, and enables generic reporting on DBA objects.

The following diagram shows the new tree collapsed format:

insert diagram

The following diagram shows the new tree expanded format:

insert diagram

New Performance Warehouse Displays

The new Performance Warehouse folder in the Investigator lets you view historical performance data from [set the PDT variable for your book], [set the PSA variable for your book], and CA SYSVIEW for DB2 that is stored in DB2 tables. Using the Performance Warehouse data, you can:

- Access data that you have in DB2 and avoid duplication of data and save resources.
- Take advantage of existing backup and recovery procedures for DB2 data.
- Save on storage using the built in data compression that is available in DB2.
- Monitor data points graphically in the Time Series Facility by plan, packages, SQL activity, and dynamic SQL activity.
- Sort application data for plans, SQL statements, dynamic SQL, and exception SQL by totals or averages.
  - Display a specific row in the View by Keys view (for example for an user).
  - View data by average just as you can with current performance data for plans, SQL statements, dynamic SQL, and exception SQL.

You can also navigate to the Performance Warehouse from the Application Performance and Subsystem Performance folders.

New Thread History Displays

The new Thread History application performance display provides an overview of activity for a completed thread, thread details, and navigation to summary information by:

- Buffer Pool
- Group Buffer Pool
- Packages
- Remote Stats

Use this information to examine completed threads for potential problems. For example, you can use the Thread Details action to examine more detailed information about a completed thread including:

- Response times
- SQL counts
- Routine counts
- Resource limits and more

New SQL Exceptions Display

A new node, SQL Exceptions, has been added to the CA Chorus for DB2 Database Management Investigator tree under Application Performance. Exceptions are grouped by user ID (OPID). Individual rows selected from the list show SQL exception requests for that OPID. This feature lets you view SQL exceptions grouped by user ID (OPID) and a list of exceptions for that OPID. You can review the information to determine why the exception SQL request was collected and analyze the reason for the collection. You can view the SQL text, execute, and EXPLAIN it.

You can view exception requests and monitor historical data using the Time Series facility.

Simplified Access to SQL Statement Text

You can now view SQL statement text for static and dynamic SQL from one action, Show SQL Text. This enhancement lets you display and investigate the text of poorly performing SQL statements using a single display action. This action lets you see the text of the statement without having to know whether it is dynamic or static.

This new action is available from the following displays:

- SQL Activity
- Packages, Package SQL
- Plan, Plan Packages, Package SQL

View Application Performance Data by Average or Total

You can now view application performance data by totals or averages from the CA Chorus for DB2 Database Management Investigator:

- When filtered by total, the total amount for each column is displayed.
- When filtered by average, an average amount is displayed that is calculated using the number of SQL calls.

For example, you can display the total number of getpage requests or the average number of getpage requests based on the number of SQL calls executed. This feature makes it easier to identify problem areas and lets you maintain a view by average when drilling down from the plan and package level.

This functionality is supported using the new Total/Avg column in the following CA Chorus for DB2 Database Management Investigator folders:

- Application performance:
  - Plans
  - Packages
  - SQL activity
  - Dynamic SQL activity
  - View by keys
- Application data sharing:
  - Plans
  - Packages
  - SQL activity
  - View by keys

- Performance Warehouse - Application:
  - Exception SQL Activity
  - Dynamic SQL Statements
  - Plans
  - Plan Packages
  - SQL Statements

View System Performance Data by Accum or Delta

You can now view system performance data by accum or delta from the CA Chorus for DB2 Database Management Investigator:

- When filtered by accum, the displayed data represents total statistics accumulation since DB2 started.
- When filtered by delta, the displayed data represents the difference between values that are found at this interval and the last interval (current interval value - previous interval value).

This functionality is supported using the new Accum/Delta column in the following subsystem performance CA Chorus for DB2 Database Management Investigator folders:

- Overview Snapshot
- System Statistics
- Remote Locations
- Buffer Pool List
- Group Buffer Pool List
- IFI Destination Statistics
- IFCID Activity

Retrieve SQL Text from SQL Errors List View

You can now retrieve the SQL text for an SQL error to understand and fix problems.

Populated Filters Improve Performance

As a dba, I would like the filter dialog to open quickly with populated values.

You can now select the Confederation, Group, System, and SSID in the investigator from a populated drop down, so that he does not have to remember and type in the correct values. The visible names should also be consistent across disciplines.

SQL Performance Enhancements

The following enhancements have been made for SQL performance:

- SQL exceptions
- TSF metric configuration
- TSF using DB2 tables
- SQL error details
- Stored procedure execution

System Performance Enhancements

The following enhancements have been made for System Performance categories in the Investigator:

- Thread history (with details)
- Cancel thread
- Dynamic SQL cache
- Explain SQL

Time Series Facility Metrics Selection Enhancements

You can now select [set the PDT variable for your book] metrics that are sent to the Time Series Facility for CA Chorus for DB2 Database Management application performance use. This enhancement:

- Increases the number of metrics that are available for charting in TSF.
- Provides control over how many and which metrics to send.
- Gives some control over resource utilization (network, traffic, storage, and CPU).

The following metrics are available:

COMMIT	CLAIM_WTIME	TIMEOUT	SPFAILCNO	ZIIP_CPU
ABORT	CLAIM_WCNT	LOCKSUS	SPFAILRRRS	ZONCP_CPU
*INDB2_TIME	ARCRD_WTIME	LATCHSUS	SPPLANNED	PROC_CPU
*INDB2_CPU	ARCRD_WCNT	OTHERSUS	SPFAILBUF	UDF_CPU
*SQL	PLATCH_WTIME	LOCKREQ	SMSG_WTIME	UNACC_TIME
WAIT_TIME	PLATCH_WCNT	UNLKREQ	SMSG_WCNT	LOG_WTIME
WAIT_CNT	*GETPAGE	QUERYREQ	GLOCK_WTIME	LOG_WCNT
IO_WTIME	PAGEUPDT	CHANGREQ	GLOCK_WCNT	LOB_WTIME
IO_WCNT	*SYNCREAD	OTHERREQ	REOPT	LOB_WCNT
LOCK_WTIME	SPFETCH	DRAINREQ	XLOCKREQ	OCS_WTIME
LOCK_WCNT	IMWRITE	DRAINFAIL	XCHNGREQ	OCS_WCNT
ORIO_WTIME	LPFETCH	CLAIMREQ	XUNLKREQ	SLS_WTIME
ORIO_WCNT	DYNPFETCH	CLAIMFAIL	GIRLMSUS	SLS_WCNT
OWIO_WTIME	GETPFAIL	PMAXDEG	GXESSUS	DSS_WTIME
OWIO_WCNT	PFPAGES	PGROUPS	FALSESUS	DSS_WCNT
SERV_WTIME	RID_USED	PFAILCUR	GLOCKFAIL	OTS_WTIME
SERV_WCNT	RID_FSTG	PFAILSRT	PSC_MATCH	OTS_WCNT
ARCH_WTIME	RID_FLIM	PFAILBUF	PSC_NMATCH	PLOCK_WTIME
ARCH_WCNT	ESCALSHR	PREDUCED	PSC_IPREP	PLOCK_WCNT
DRAIN_WTIME	ESCALEXC	PPLANNED	PSC_KDPREP	LLOCK_WTIME
DRAIN_WCNT	DEADLOCK	PFAILENC	USE_COUNT	LLOCK_WCNT

Metric selections are made by editing the parameter file and specifying the metric name. By default, all metrics are enabled.

New DB2 10 and DB2 11 Performance Data

New performance data from DB2 10 and DB2 11 is now displayed in the following Investigator folders and their column groups:

- System Parameters
- System Statistics (includes new column groups: Currently committed and Acclerator Stats)
- Overview Snapshot
- Buffer Pool List (added new buffer pool columns and a new column group)
- Group Buffer Pool List
- Group Buffer Pool History
- Dynamic SQL Cache
- Active Threads

- Active Threads by Connection
- Thread History
- IDB2.PROBLEM.DOCUMENT(P1602), P1622,

Reduce Overhead in Highly Parallel Environment

The session agent is now reused, which avoids the overhead of creating a new session over and over again, which significantly reduces CPU overhead when creating a new session repeatedly. This enhancement provides improved stability and scalability in highly parallel environments.

DBA Command Manager Enhancements

The CA Chorus for DB2 Database Management Command Manager has been enhanced to:

- Enable deletion of some or all commands from the Command Manager history. This feature is useful when incomplete or wrong commands entered earlier are displayed in the history.
- Use the connection toolbar to select the maximum number of rows to display in the Results tab for single or multiple SELECT statements (The maximum limit is 1000.).
- Enable running of a stored procedure using a CALL statement. This feature is useful when you need to test multiple stored procedures faster. You no longer need to write jobs for testing the stored procedures. The output is converted to an easily readable format.
- Enable CCSID support
- Enable export of the complete result set of an SQL statement to a .csv file.

Object Migration Analysis Enhancements

The object migration analysis process has been enhanced to:

- Use the Quick Links module to review the messages and results of object migration analysis, make necessary changes to results, and submit for migration. You can also submit the results without reviewing them.
- Provide an option to select the LPAR and SSID on which you want to view the status of submitted migrations.

Topology Viewer Enhancements

You can now include DB2 catalog objects in policy definitions and then add the objects to the topology viewer.

Chapter 2: Published Fixes and Known Issues

All published fixes are available at Published Solutions on CA Support.