

CA IDMS™ Visual DBA

Release Notes

Version 18.0.00



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CA Technologies Product References

This document references the following CA Technologies products:

- CA Mainframe Software Manager (CA MSM)

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Chapter 1: Introduction

This guide explains the CA IDMS Version 18.0.00 enhancements that support CA IDMS Visual DBA. CA IDMS Visual DBA is being enhanced to reflect the changes that have been made for CA IDMS Version 18.0. This guide also provides information about compatibility between CA IDMS Visual DBA r17 and Version 18.0.

This section contains the following topics:

[Overview](#) (see page 7)

[Compatibility with CA IDMS Visual DBA r17](#) (see page 7)

Overview

The chapter [Changes Supporting CA IDMS Version 18.0 New Features](#) (see page 9) describes the changes and enhancements to CA IDMS Visual DBA that directly support new features in CA IDMS Version 18.0.

The following list contains the changes and enhancements:

- Non-stop processing
- SQL enhancements
- Alter index extensions
- Serviceability aids
- Administrative and operational enhancements

Compatibility with CA IDMS Visual DBA r17

The following sections discuss the compatibility of CA IDMS Visual DBA Version 18.0 with r17:

- Coexistence
- Configuration File Compatibility

Coexistence

Because CA IDMS Visual DBA Version 18.0 exists independently of CA IDMS Visual DBA r17, you can have both installed on the same computer. Therefore, you do not need to uninstall CA IDMS Visual DBA r17 before installing CA IDMS Visual DBA Version 18.0. Additionally, there is no need to remove the previous version at any time after installation. This practice is applicable for both the PC client and MF server components of CA IDMS Visual DBA.

Configuration File Compatibility

Saved configuration files from prior releases of CA IDMS Visual DBA are not compatible with CA IDMS Visual DBA Version 18.0. You cannot reuse any saved configuration files with CA IDMS Visual DBA Version 18.0. Create them manually in CA IDMS Visual DBA Version 18.0.

Chapter 2: Changes Supporting CA IDMS Version 18.0 New Features

This section contains the following topics:

[Non-Stop Processing](#) (see page 9)

[SQL Enhancements](#) (see page 13)

[Serviceability Aids](#) (see page 17)

[Administrative and Operational Enhancements](#) (see page 27)

Non-Stop Processing

The following sections describe the enhancements that enable CA IDMS Visual DBA to support continuous operations:

- Expanded statistics fields
- Interval roll statistics

Expanded Statistics Fields

Several fields used to collect CA IDMS run-time statistics have been enlarged to accommodate the larger values that can be expected with faster processors and non-stop operations. The field size has been increased from single to double words for statistics related to storage management and CPU use.

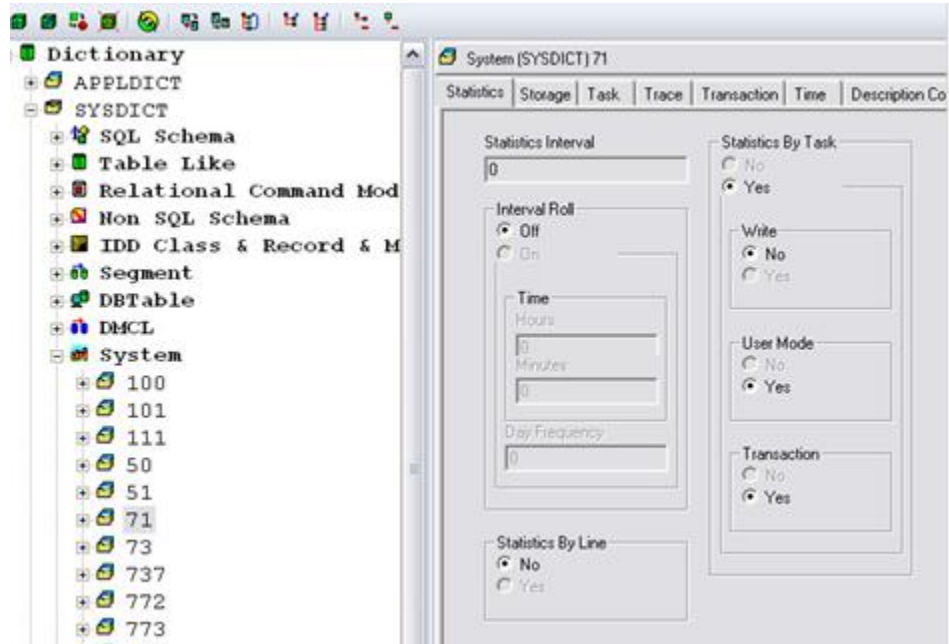
Interval Roll for Statistics

Systemwide statistics and histograms can be now automatically written to the log and cleared at a specified time and day. This process verifies that the values of these statistics are synchronized by avoiding overflow. It also makes analysis easier because statistics are gathered over a standard time interval.

A new Interval Roll time specifies the time of day and day frequency when the statistics are written and reset. When the interval roll time is reached, current systemwide statistics and histograms are written to the CA IDMS log, and then cleared in preparation for the next collection interval.

System Object

A new Interval Roll field has been added to the Statistics tab to show the system definition parameters for statistics interval roll.



The following illustration shows a Statistics tab in the properties dialog for system properties.

The screenshot shows a 'Properties' dialog box with a menu bar at the top containing: Prealloc RU, Print, Print Ctrl, Program, Queue, Resource, Scratch, Transaction, Time, Description Codes, Route Codes, General, Central Version, Sysctl, Journal, Limit, Lock, Log, Snap, Signon, Statistics, Storage, Task, and Trace. The 'Statistics' menu item is highlighted.

The main content area is divided into several sections:

- Statistics Interval:** A text box containing the value '0'.
- Interval Roll:** Radio buttons for 'Off' and 'On' (selected). Below it, a 'Time' section contains text boxes for 'Hours' (value: 20), 'Minutes' (value: 20), and 'Day Frequency' (value: 5).
- Statistics By Line:** Radio buttons for 'No' (selected) and 'Yes'.
- Statistics By Task:** Radio buttons for 'No' and 'Yes' (selected). Below this are three sub-sections, each with radio buttons for 'No' and 'Yes':
 - Write:** 'No' (selected) and 'Yes'.
 - User Mode:** 'No' and 'Yes' (selected).
 - Transaction:** 'No' and 'Yes' (selected).

At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Apply'.

Statistics Roll Object

A new Statistics Roll object was added to the statistics object. It has only one instance that is either OFF or interval roll time in HH:MM format (for example, 10:00).

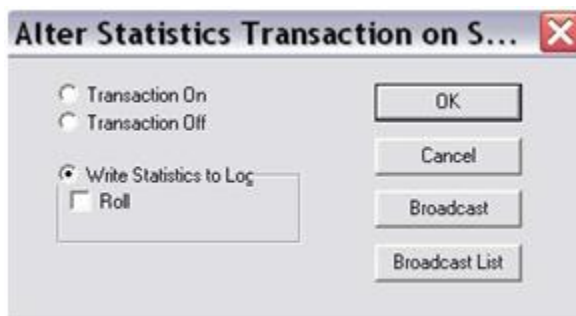


The Alter Statistics Roll dialog was implemented to include options for changing the time-of-day and the day frequency values for the interval roll.



Statistics Object

The Alter Statistics dialog (accessed by right-clicking the statistics object in the DOMs object tree pane) has been modified to include a roll option to reset statistics when writing.



Note: For more information, see the *CA IDMS Version 18.0 Release Notes*.

SQL Enhancements

The SQL-related enhancements for CA IDMS Visual DBA make it easier and faster to change the structure of an existing database and provide new options for defining SQL databases.

Alter and Drop Column Support

With this release, you can alter and drop columns in SQL tables. This ability lets you change the structure of a table without unloading and reloading data.

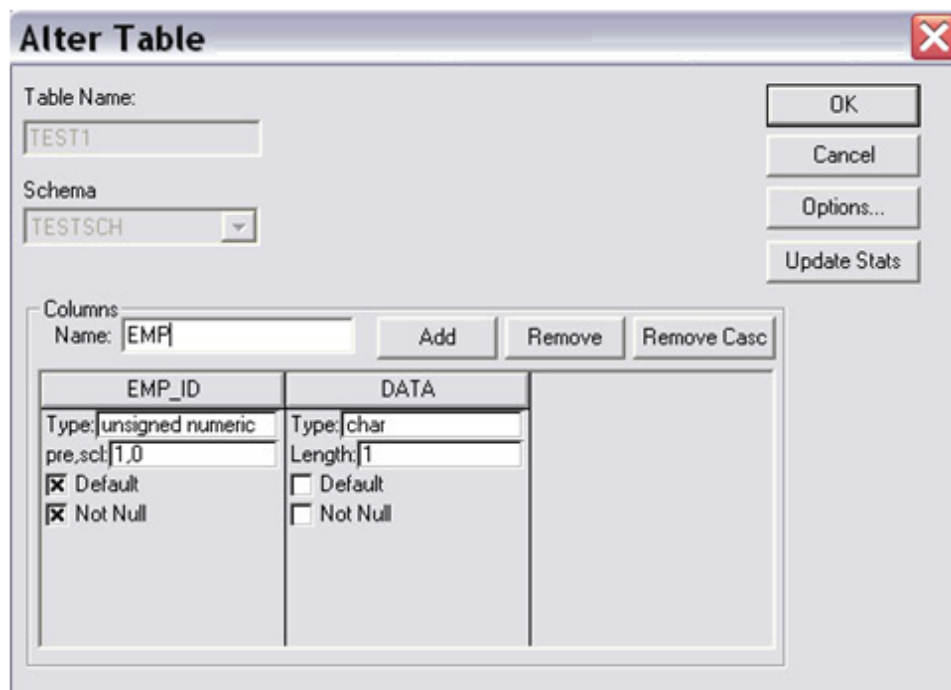
You can now make the following types of column changes:

- Change the data type or null attribute of a column
- Drop or change default clause of a column
- Rename a column
- Drop a column

Table Object

The Alter Table dialog (accessed by right-clicking the table object in the DOMs object tree pane) has been modified to enable you to make the following types of column changes:

- Modify of the Type, Default and Not Null attributes of an existing column.
- Allow an existing column to be dropped or renamed.



Note: For more information, see the *CA IDMS Version 18.0 Release Notes*.

Alter Index Extensions

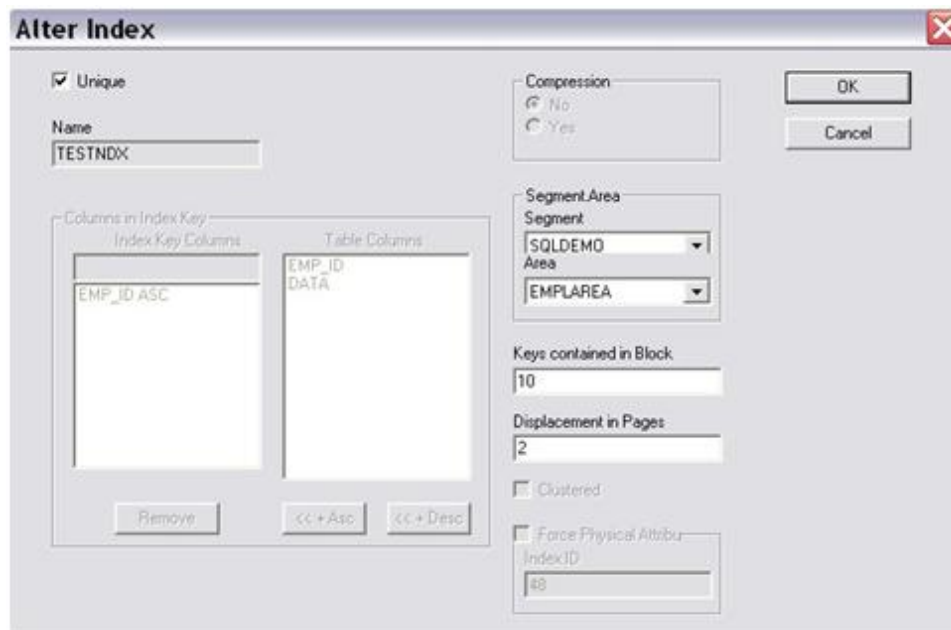
CA IDMS Version 18.0 supports changing additional index characteristics. This support lets you change the structure and location of an index without dropping and recreating it.

In addition, you can change the following attributes:

- Displacement
- Uniqueness
- Area association

Index Object

The Alter Index dialog has been changed to allow you to modify Unique, Displacement Pages and Segment Area attributes.



Note: For more information, see the *CA IDMS Version 18.0 Release Notes*.

Alter Constraint Support

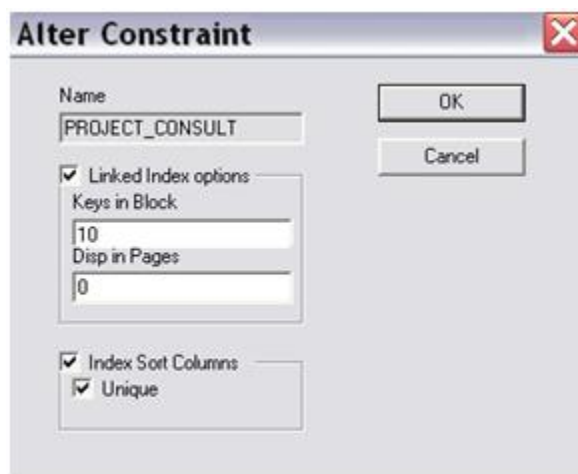
You can now alter certain characteristics of a linked index referential constraint. This ability lets you change the constraint without dropping and recreating it and, potentially, without recreating the associated tables of the constraint.

The new functionality lets you change the following constraint attributes:

- Index block entry count
- Index displacement
- Uniqueness

Constraint Object

Using the new Alter Constraint dialog you can now modify index keys in block, index displacement in pages, and the unique attribute of sort columns. You can access this dialog by right-clicking a constraint object in the DOMs object tree pane.



Note: For more information, see the *CA IDMS Version 18.0 Release Notes*.

Add a Default Index

You can now add a default index to an existing table. Adding a default index can improve performance when accessing the table or making additional definitional changes.

Table Object

The Alter Table object has been modified to support adding a default index.



Note: For more information, see the *CA IDMS Version 18.0 Release Notes*.

Serviceability Aids

The following sections describe the enhancements that have been made to make it easier to maintain CA IDMS and diagnose problems that occur:

- Enhanced system tracing
- Enhanced module identification

Enhanced System Tracing

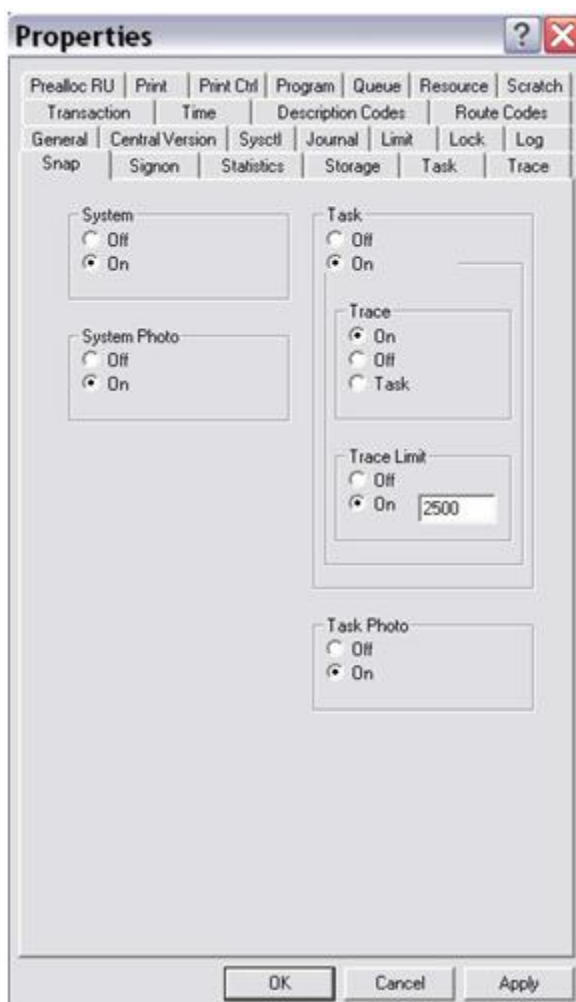
Enhanced tracing provides improved diagnostic tools for faster problem resolution by technical support. The following list describes the enhanced capabilities:

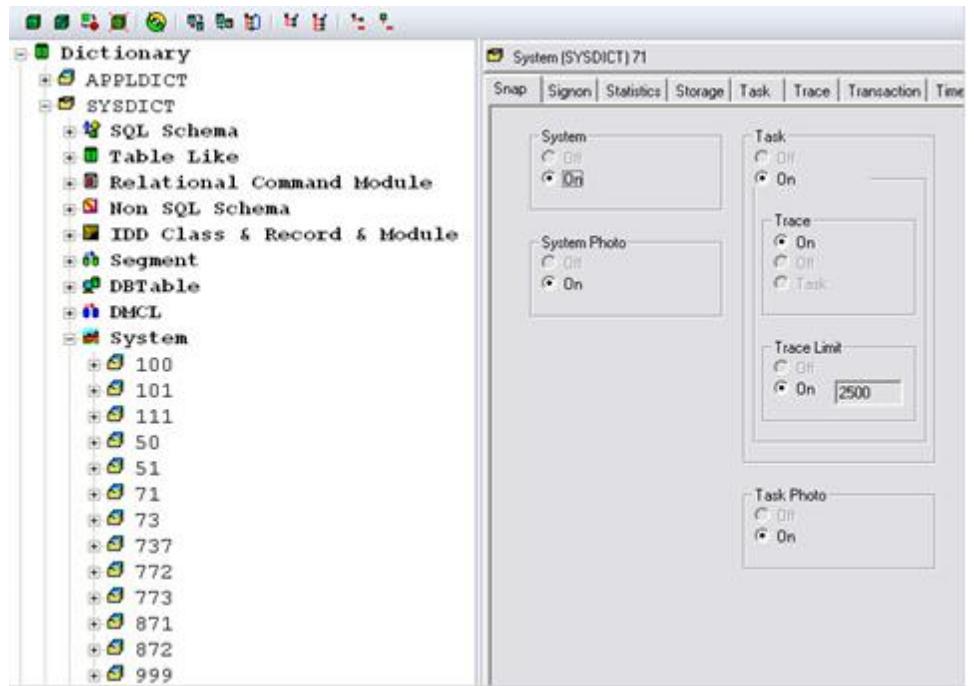
- Optional merging of system and extended (formerly named DBTRACE) trace information for easier determination of the events leading up to a problem.
- The ability to save trace data in a persistent data store (either a new trace area or the log area). This persistent data store provides more information during problem diagnosis.
- The ability to report on saved trace information and to merge information chronologically from multiple data sharing members.
- Syntactic control over the inclusion of trace information in task snaps, which eliminates the need for optional APAR flag 246.

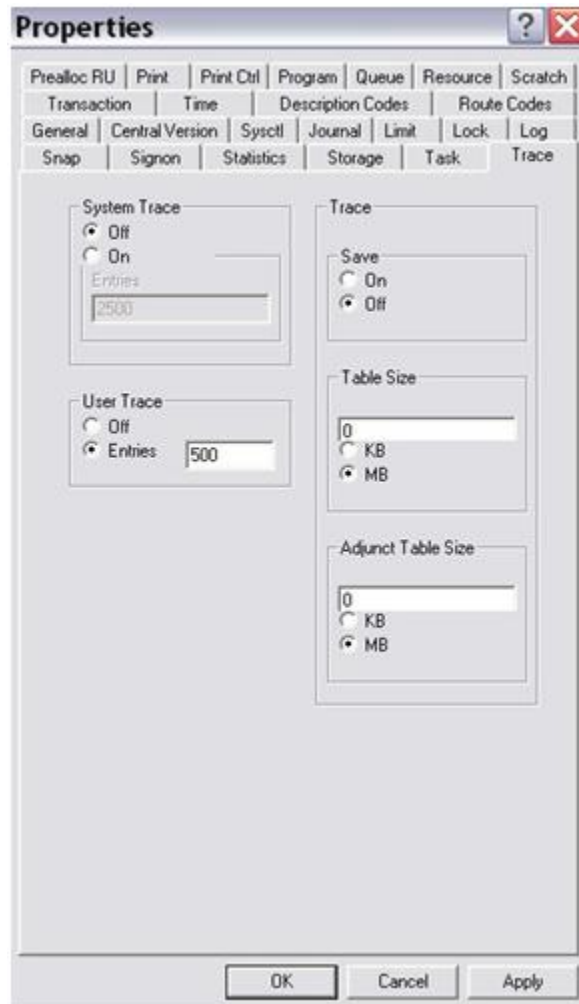
System Object

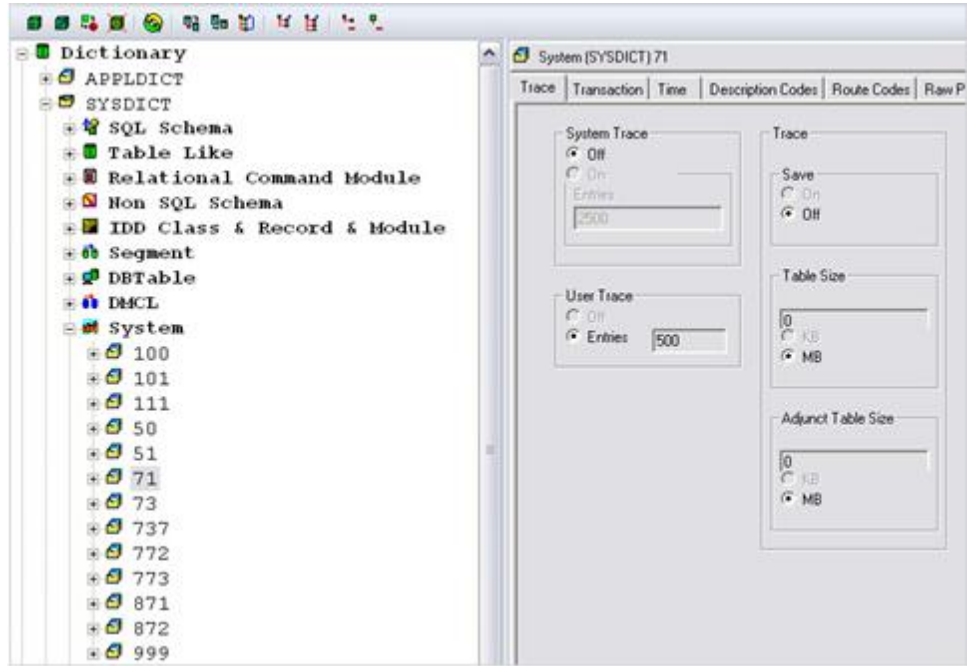
The Snap tab and Trace tab of the system instance properties window (under the Dictionary object on the DOM tree) are updated to reflect the modifications made for the Enhanced system tracing feature in CA IDMS Version 18.0. The same panels are also visible in the DIP (Detail Information Pane) window when the system instance is selected in the DOM. These panels affect the permanent settings for the system snap and trace options, as established in the system definition. These updated dialogs are shown next.

Note: DIP (Detail Information Pane) is the detailed view of the properties of a managed object (generally on the right-hand side of the VDBA workspace).









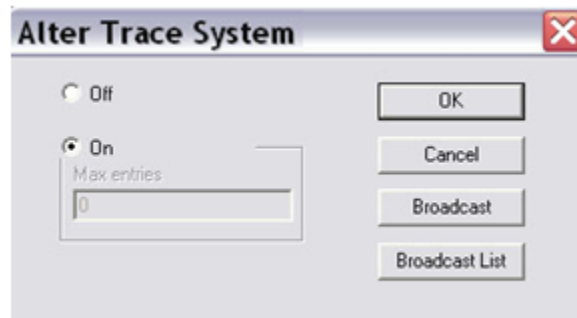
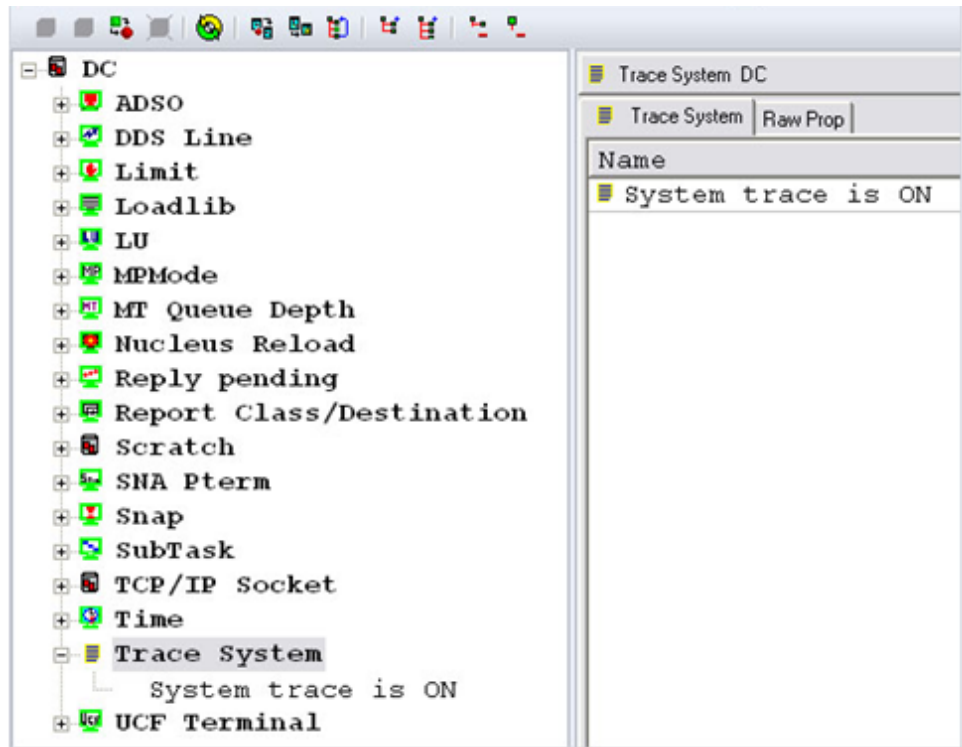
Snap Object

Existing Snap object now shows the new TRACE and TRACE LIMIT parameters. The Alter Snap dialog was enhanced to allow altering of the new options.



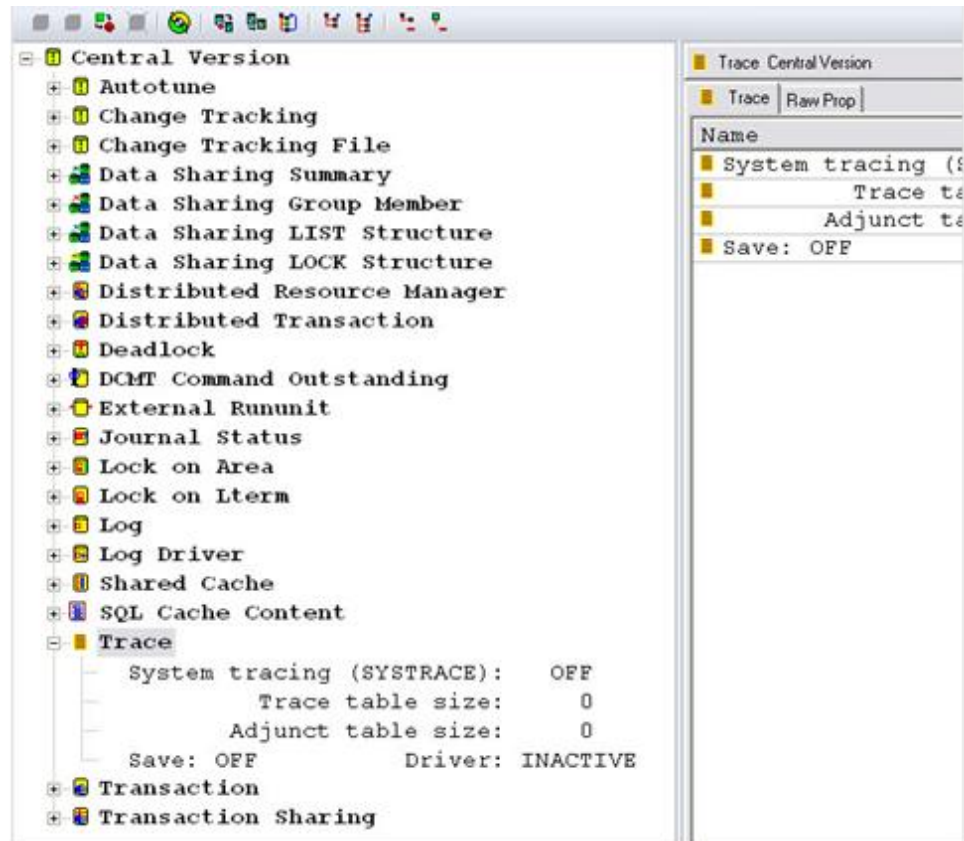
Trace System Object

The Alter Trace System dialog has been modified to disable the modification of maximum number of the entries thus it is controlled by Alter Trace dialog.

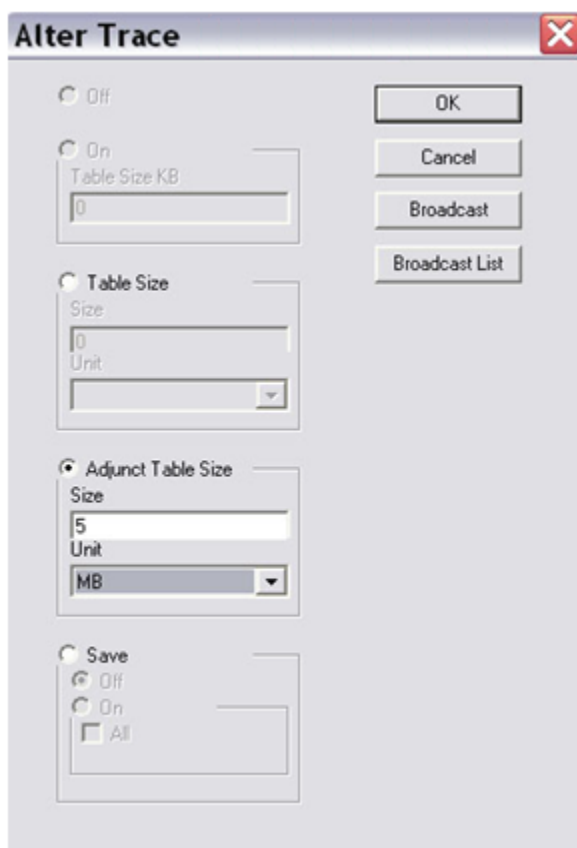


Trace DB Object

The object was renamed from Trace DB to simply Trace.



The alter dialog for the object was modified to allow the setting of the new options.



Note: For more information, see the *CA IDMS Version 18.0 Release Notes*.

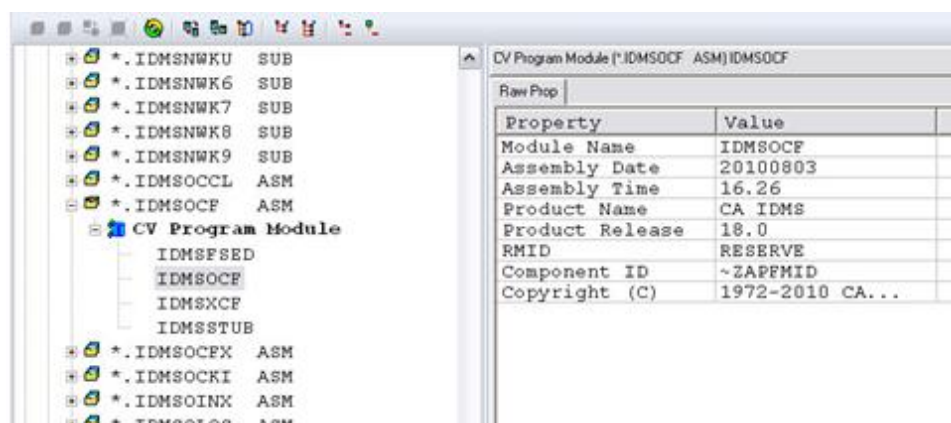
Enhanced Module Identification

To comply with the Mainframe 2.0 serviceability standards, most assembler modules distributed by CA Technologies now contain the following identification and state information:

- Module release level
- Date and time of assembly
- Function identifier (FMID) with which the module is associated
- Required maintenance identifier (RMID) indicating the maintenance level of the module

CV Program Module Object

The new object displays identifying information for components of one or more programs.



Note: For more information, see the *CA IDMS Version 18.0 Release Notes*.

Administrative and Operational Enhancements

The following sections describe the administrative and operational enhancements that enable CA IDMS Visual DBA to support continuous operations:

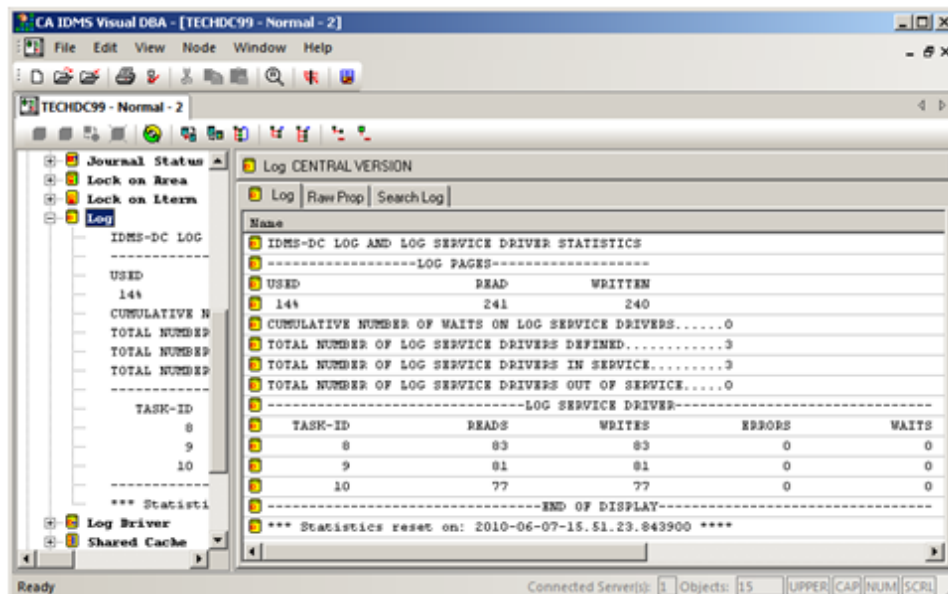
- Display Log Enhancement
- Automatic tuning
- Autotune object
- SYSLOCKS High Water Mark
- zIIP CPU Time Reporting
- Type qualifier on vary program
- PRINT SPACE page reserve reporting
- Display All Queues
- System definition enhancements

Display Log Enhancement

An enhanced CA IDMS capability can indicate when log statistics were last reset. This additional information is only displayed when the read count overflows.

Log Object

Log output contains a timestamp when log statistics were last reset.



Automatic Tuning

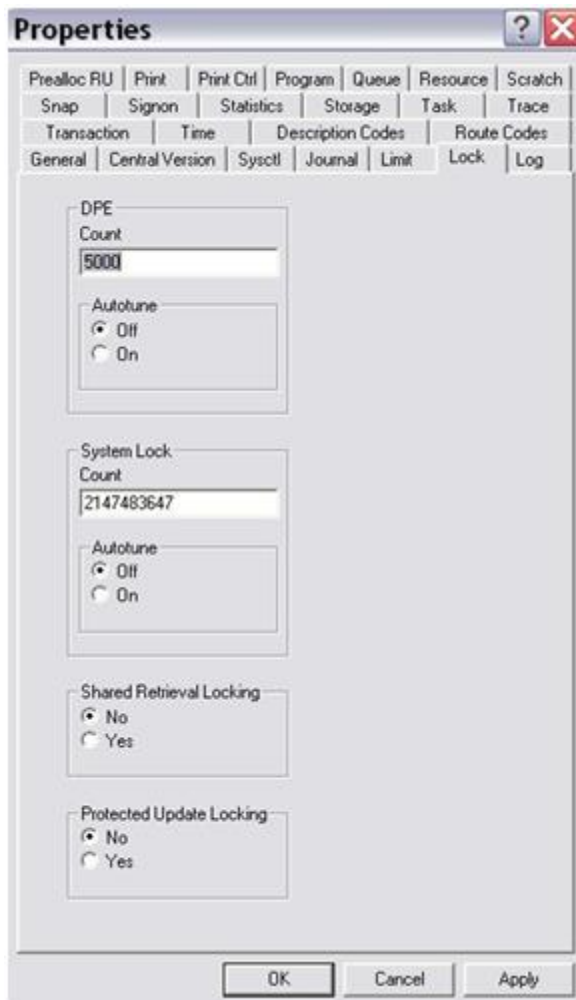
A new Auto-tuning capability lets CA IDMS set the startup values for certain DC/UCF system configuration parameters based on historical information. The values are automatically adjusted over time in response to changes in workload. Auto-tuning relieves the DBA from having to monitor and adjust the parameter values manually.

The following system definition parameters are eligible for automatic tuning:

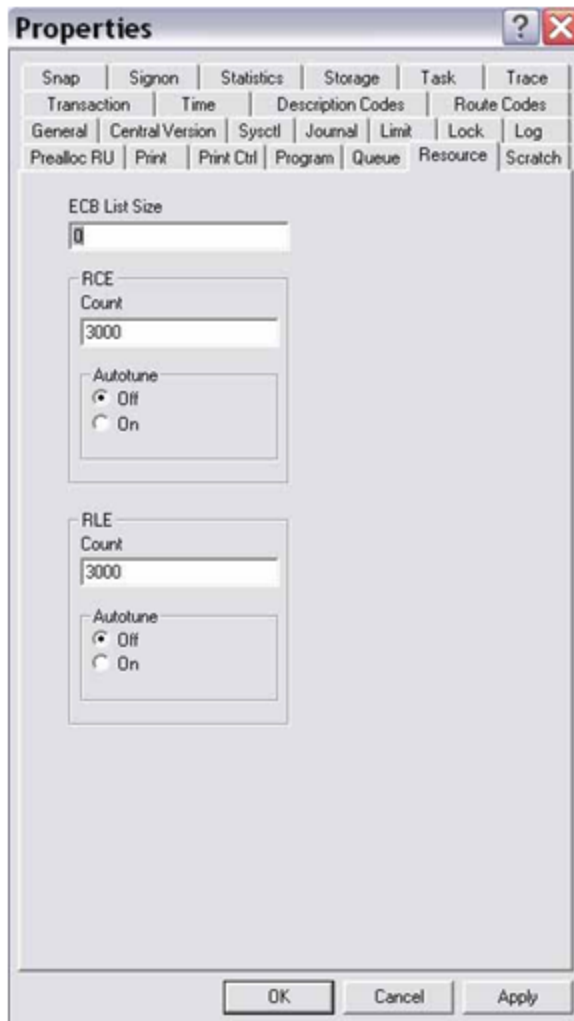
- RLE count
- RCE count
- DPE count
- SYSLOCKS

System Object

The Lock tab of the system properties window (under the Dictionary object on the DOM tree) was updated to reflect the new AUTOTUNE option, for both the DPE and SYSLOCKS parameters. The updated dialog is shown next.

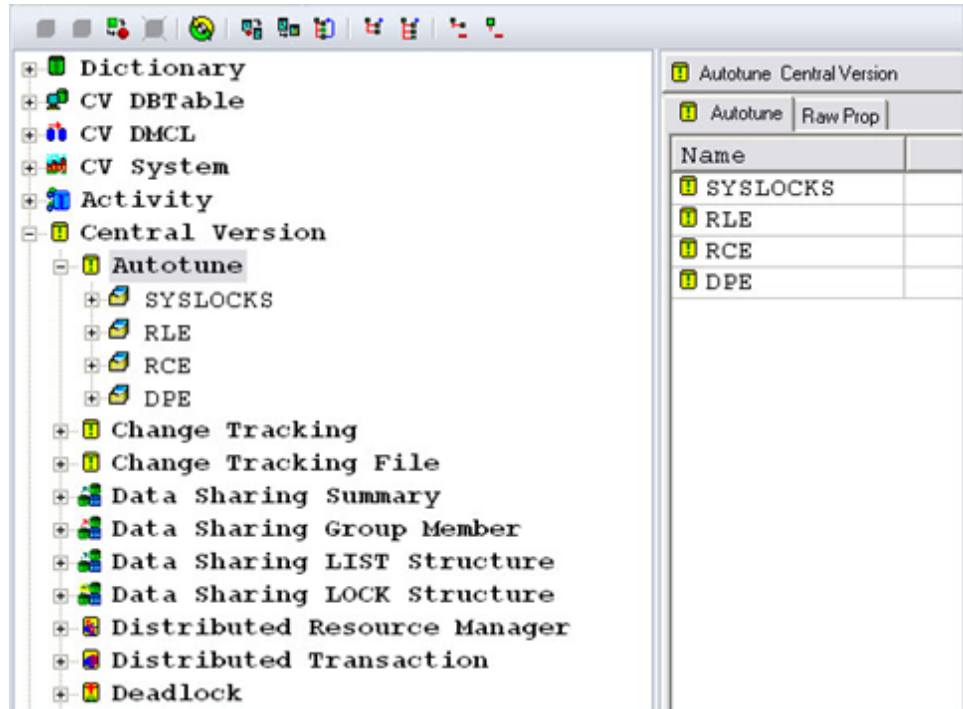


The same changes were done for RCE and RLE parameters of Resource tab of the system properties window (under the Dictionary object on the DOM tree). The following is the current version of the window.

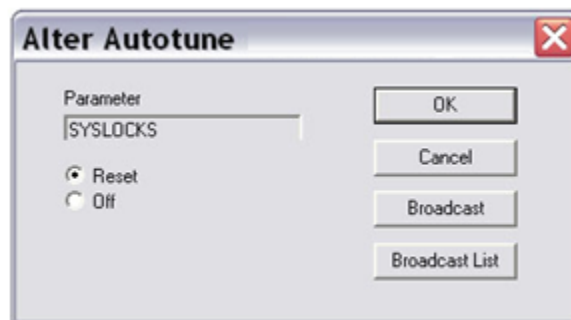


Autotune Object

A new Autotune object was added to the central version.



A new Alter dialog was implemented to disable automatic tuning for a parameter or all of them or to clear the statistics.



Note: For more information, see the *CA IDMS Version 18.0 Release Notes*.

SYSLOCKS High Water Mark

CA IDMS now tracks and displays a high-water mark for the SYSLOCKS parameter.

Statistics Lock Object

SYSLOCKS is an estimate of the maximum number of database locks that can be held at one time. It is used to determine the amount of storage that the lock manager should initially allocate. Because the amount of storage required to represent a lock is not a fixed value, the high-water mark for SYSLOCKS is a calculated value based on the high-water mark of lock storage in use. This value is included in the Statistics Lock object output in Statistics object.

Name	Value	# Times Ovfl
*** Transaction		
Local Trans		
Lock Requests	979	
Locks Held	17	
Notify		
Notify		
Acquired	0	
Held	0	
Storage		
SYSLOCKS value:	1200	
SYSLOCKS HWM:	36	
# Times Ovfl		
Overall:	0	
Session:	0	
Class:	0	
Resource:	0	
XES Reqs:	0	
Proxy:	0	
Micro		
Upgrade Reqs:	0	In Pl
Cleanup Calls:	0	Compr

zIIP CPU Time Reporting

As the speed of modern computers increases, capturing CPU times with a precision of 10000th of a second as in prior releases no longer provides sufficient accuracy for many purposes. To address this issue, CPU times are now captured and recorded in Time Of Day (TOD) format. System mode CPU time is now separated into the following categories:

- Time spent on CP
- Time spent on zIIP
- Time spent on CP because zIIP is unavailable

Subtask Object

The Subtask object (under the DC object on the DOM tree) was updated to reflect the new and expanded fields.

SubTask 1	
Raw Prop	
Property	Value
Number	01
Name	MAINTASK
Status	IDLE
Work type	IDMS
Count wakeups	1,390
Count task d...	1,459
User mode CP...	00:00:00.000000
System mode ...	00:00:00.826808
CPU effectiv...	15
Count times ...	06
Count times ...	00
Count found ...	1,401
Count found ...	58
Count times ...	1,390
zIIP time	00:00:00.019651
zIIP on CP time	00:00:00.000062
CPU effectiv...	57
Count swap a...	3,289
Count actual...	3,289

Type Qualifier on Vary Program

While more than one program can exist with the same name and version, each program has a different type. By specifying the program type when altering, you can fully identify the program to be varied.

CV Program Object

The Alter CV Program object (under the CV system object on the DOM tree) was updated to provide support for the type specification, whenever the alter action is chosen. The updated dialog is shown next.

The screenshot shows the 'Alter CV Program' dialog box with the following settings:

- Name: ADAFFNM1
- Original Type: PROGRAM
- Type: Program
- Concurrency: Concurrent
- ISA Size: 0
- Saveareas: No
- New Copy Request: Default
- New Copy: Enabled
- Storage Protect: Protect
- Reusability: Reusable
- State: Enable
- Mainline: No
- MP Mode: System
- Language: Assembler
- Program Check Threshold: 5
- Dump Threshold: 0
- Overlapable: Yes
- Reentrancy: Reentrant
- Multiple Enclave: On
- ADSO Statistics: On
- Snap Limit (0 - 999): 0
- System Photo: Unchecked
- Task Photo: Unchecked
- Task Photo: Unchecked

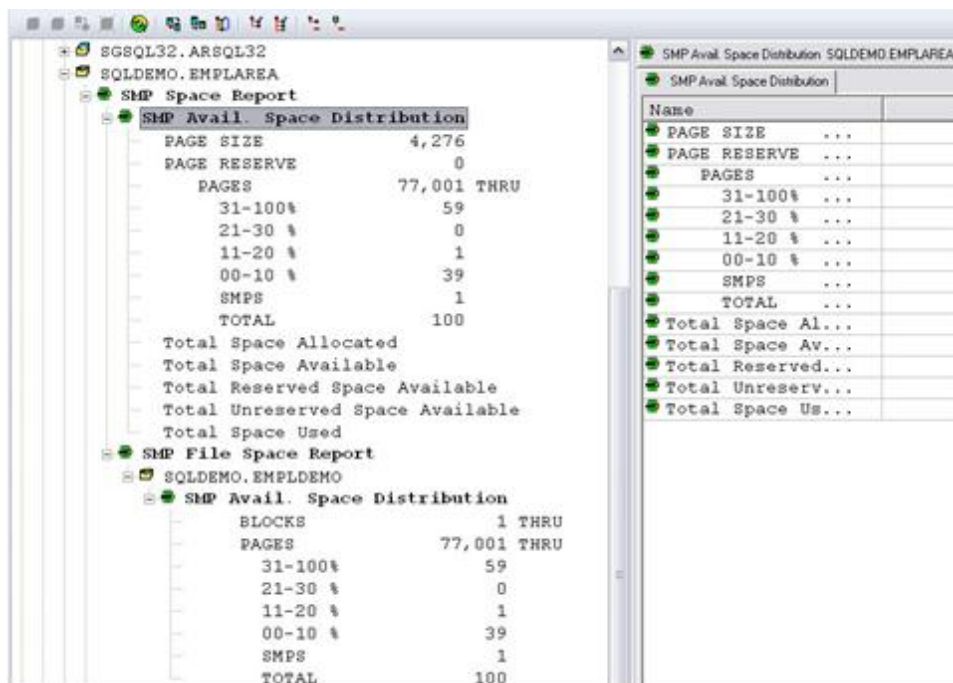
Note: For more information, see the *CA IDMS Version 18.0 Release Notes*.

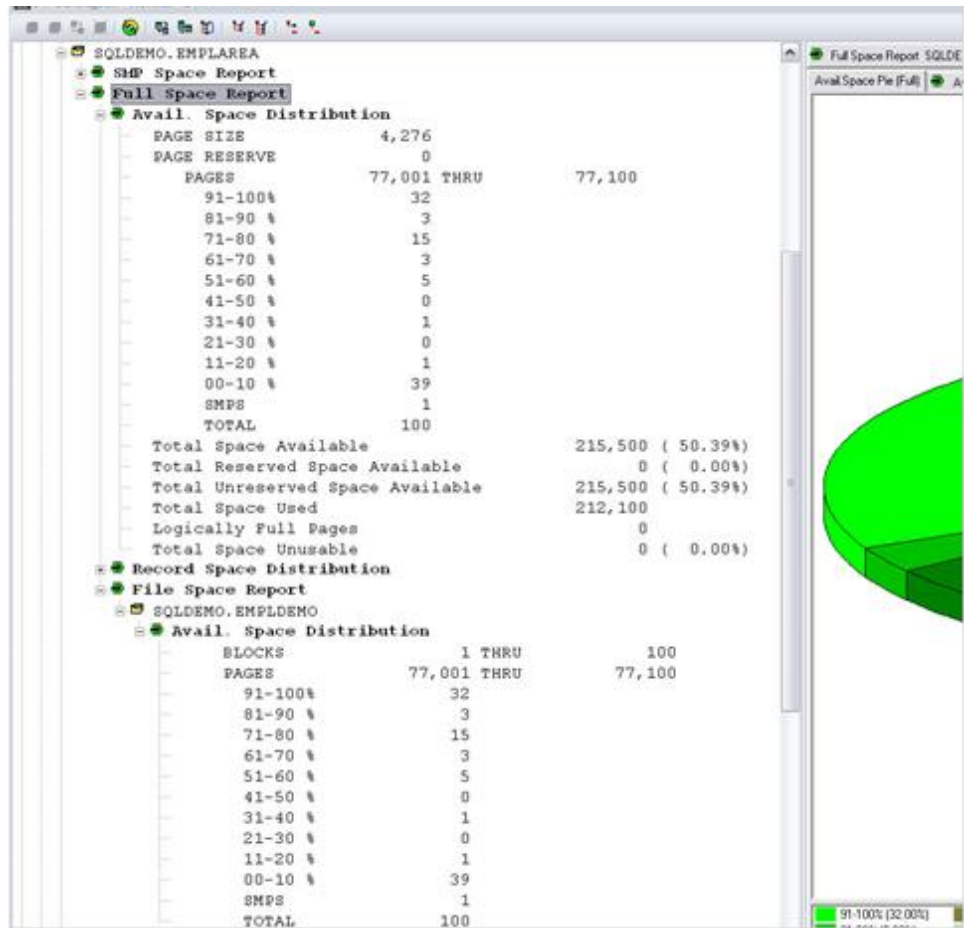
PRINT SPACE Page Reserve Reporting

For Version 18.0, the PRINT SPACE utility was enhanced to report on the amount of available space reserved for the expansion of variable-length records. This information is useful when you are planning for database expansions and reorganizations.

CV Area Object and its Child

The SMP space report, SMP Avail. Space Distribution, and SMP File Space Report outputs were enhanced to show the same data that is available on mainframe. The layout was improved too.





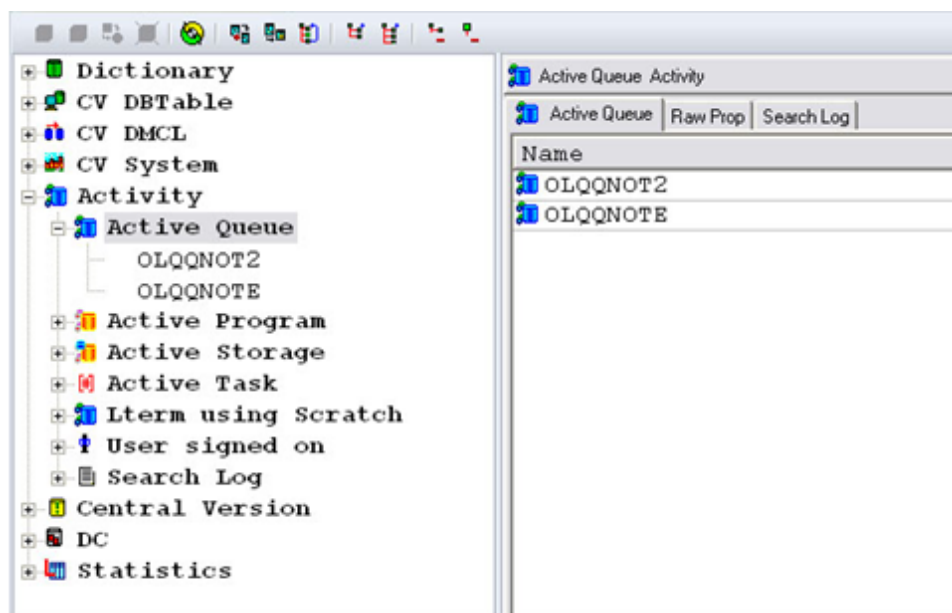
Note: For more information, see the *CA IDMS Version 18.0 Release Notes*.

Display All Queues

A new CA IDMS capability lets you display all of the queues in the DC/UCF system, including dynamically defined queues. Providing complete information makes it easier to monitor queue activity.

Active Queue Object

To display information about all queues known to the system, a new Active Queue object was added to Activity object. When expanded, it shows queues defined at system generation time and queues defined dynamically.



System Definition Enhancements

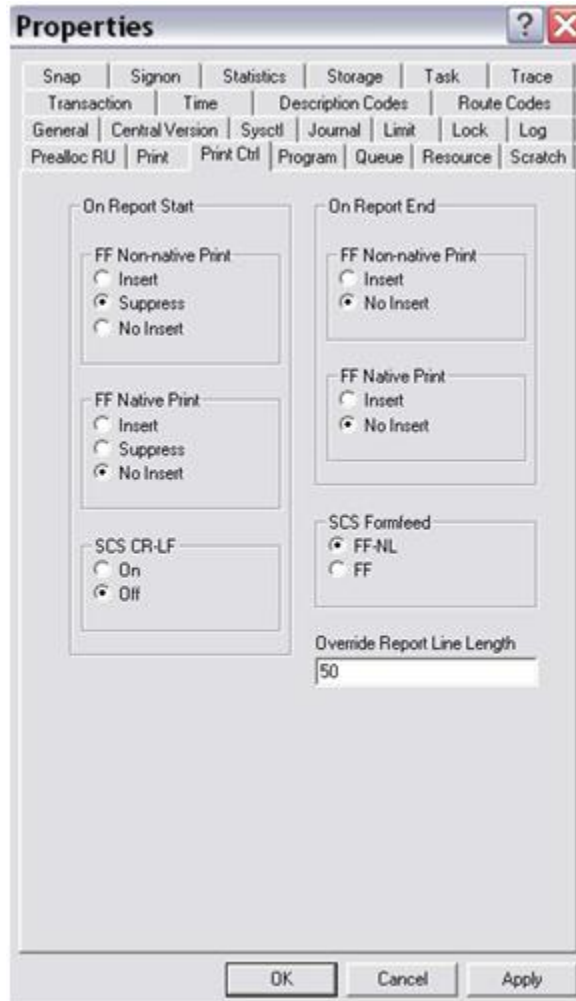
The system definition parameters were added to give you control over more system attributes. You can now perform the following actions:

- Specify default values for queue and message retention periods
- Override the line length for all printers in your system
- Control the number of message buffers used by the debugger
- Specify date evaluation options

These changes facilitate tailoring a DC/UCF system to meet your operational needs.

System Object

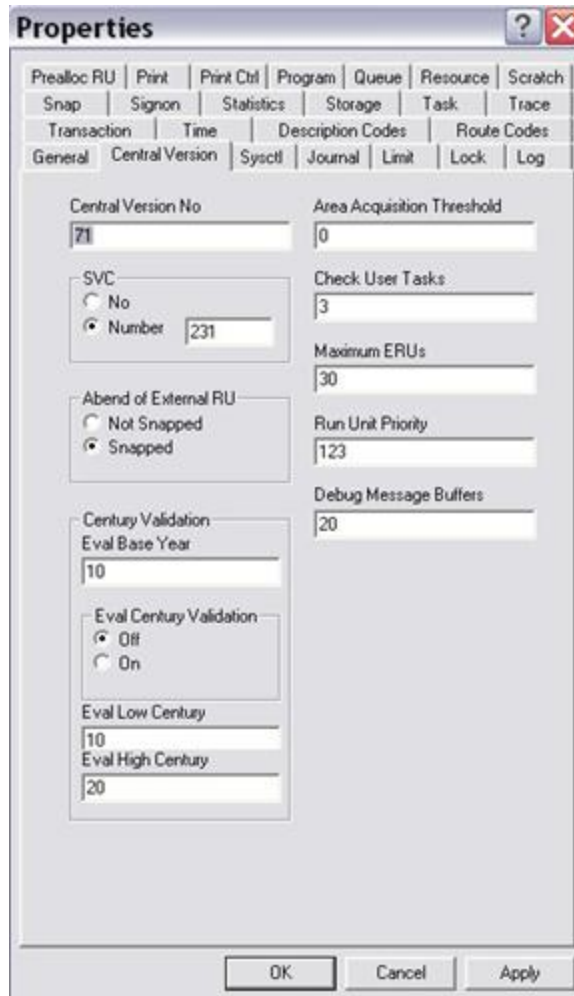
The Print Ctrl tab in the following illustration on the system object has been updated to include the override report line length parameter.



The Queue tab in the following illustration on the system object has been updated to include the Queue Retention and Message Retention parameters.



The Central Version tab in the following illustration on the system object has been updated to include the Debug Message Buffers parameter and Century Validation ones.



Note: For more information, see the *CA IDMS Version 18.0 Release Notes*.

Chapter 3: Enhancements to Existing Features

This section contains the following topics:

[Installation Guide](#) (see page 41)

[CA HTML Bookshelf](#) (see page 41)

[CA Mainframe Software Manager](#) (see page 42)

Installation Guide

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

- CA MSM

CA HTML Bookshelf

This release contains the CA HTML bookshelf, which is an HTML help system that provides access to all deliverables in the product documentation set in both HTML and PDF. HTML provides robust online viewing and search capabilities, while PDF provides a print-friendly option.

The HTML bookshelf features include:

- A single help screen that displays all documentation for this release.
- An all-in-one search tool that searches the entire documentation set and returns matches found in both the HTML and PDF formatted documentation, without the need for a specialized .PDX index file.
- Additional links for using the bookshelf, downloading Acrobat Reader, and contacting CA Technologies.

Note: You must have Adobe Reader 8 or above to view the PDF files in the bookshelf.

Search the Bookshelf

The bookshelf includes a search facility that helps you locate information throughout the set.

To search the bookshelf

1. Enter your search criteria in the Search field in the upper right corner of the bookshelf and press Enter.

The search returns HTML results listed by topic and PDF results listed by guide. The results are sorted by date so that the most recently updated topics or PDFs appear at the top of the list. To find a topic in a PDF, open the PDF and view the list of topics within the PDF that match the search criteria.

2. (Optional) Click Sort by Relevance.

The list is reordered so that the HTML topics or PDFs that contain the most matches appear at the top of the list.

CA Mainframe Software Manager

CA MSM is an application that simplifies and unifies the management of CA Technologies mainframe products on z/OS systems.

CA MSM provides services that make it easier for you to do the following:

- Acquire, install, and deploy products
- Automatically obtain and apply maintenance

These services enable you to easily manage your software based on industry accepted best practices. A web-based interface makes the look and feel of the environment friendly and familiar, enabling you to install and maintain your products faster and with less chance of error.

You can acquire CA MSM from the CA Support website.

Note: For more information, see your product's installation instructions and the CA Mainframe Software Manager online help.