

# CA ADS™ Application Performance: Global Considerations

Cal Domingue

maymainframemadness 2012



## abstract

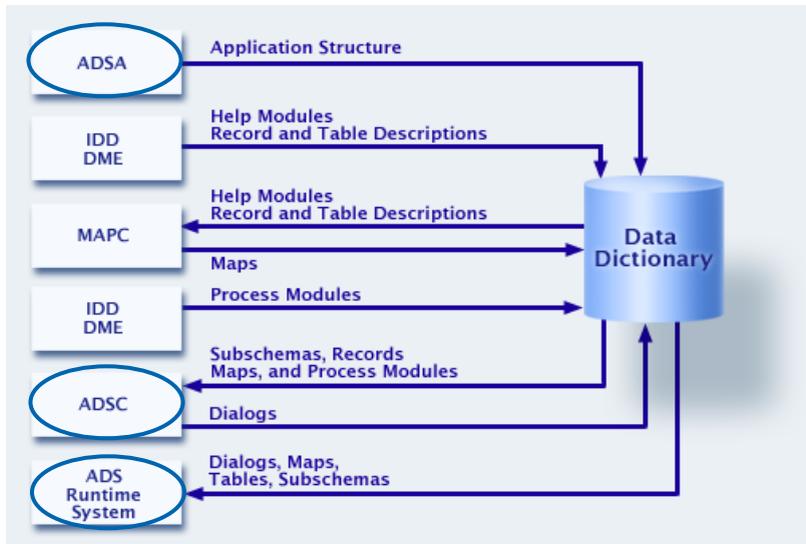
- The CA ADS™ family of tools is a powerful and fast way to create runtime applications. Efficiency and performance are important considerations in a production environment. This webcast will discuss global factors that effect the response time and throughput of runtime performance.

maymainframemadness 2012

CA ADS Application Performance: Global Considerations Copyright © 2012 CA



## CA ADS family of tools



maymainframemadness 2012

CA ADS Application Performance: Global Considerations Copyright © 2012 CA



## global considerations

- No “run fast” switch
- Everything impacts performance
- Everything has trade-offs
- Evaluate choices to determine true impact
- Tuning is best when done during initial application design
  - Much CA ADS programming is now modification
  - Tune existing application if performance is bad or when maintenance is done
- Coordinate CA ADS updates with DBA to avoid possible problems
  - Re-examine storage allocation, add a new index to an existing record, etc.
- Use extra caution when modifying existing applications

maymainframemadness 2012

CA ADS Application Performance: Global Considerations Copyright © 2012 CA



## size matters

- Applies to
  - Applications (more detail later)
  - Dialogs ( more detail later)
  - Maps
  - Subschemas
- Smaller is faster
- Too small is inefficient also
- As with many things, a balance is best

## how to reduce size

- Limit scope of work
- Reduce redundancy
- Eliminate unnecessary pieces
  - Unneeded elements in global records
    - Changing global records requires recompile of all components using them
  - Global subschemas
  - Overly large components
  - Dialog code that can be handled automatically (more later)
- No large-scale entities, multiple small ones

## subschemata size

- Affects storage for:
  - IB50, VB50 (Subschema control blocks)
  - \$\*\$CURCY (Currency block)
  - FDB (SSAN Table)
  - RAT (Ready Area table) – each occurrence
- Best: semi-tailored application-specific

### Global Subschemas

- Easier to Maintain
- Demand More Space
- Ready All Areas

### Tailored Subschemas

- More Maintenance
- Reduced Storage needs
- Ready Fewer Areas

## ready area table (RAT)

- One for each dialog process in application thread
- Less storage needed for tailored subschemas
- ‘Ready All’ flag: Ready All, Noready
- Mode: Explicit, ss default, shared retrieval default
- Flag shows area ready mode (last command for area)

Retrieval	X'25'
Update	X'24'
Protected Retrieval	X'27'
Exclusive Retrieval	X'28'
Protected Update	X'26'
Exclusive Update	X'29'

## SCRATCH records

- Alternative to repeated database I/O
- Data transfer among dialogs (global records)
  - Uses only necessary space
  - Avoids over-allocation when data varies
  - Efficient
- For temporary storage, avoid using for long-term
- Storage pool use, no nucleus calls (I/O)
- Can be put into XA storage
- Requires coding effort

## dialog load module (FDB) components

- A record description element (RDE)
  - Dialog work & internal records
  - Map records
  - Database records
  - Internal Records
    - Literal pool
    - OTB symbol table
    - OWA ssctrl
    - VDB date, time
    - SQL
    - IRA compute
    - VRE error-status of record

## dialog load module (FDB) components (cont.)

- An autostatus record (ASR)
- A map
- A Subschema Area Name table (SSAN)
  - Contains every area in the subschema
- A literal pool ‘literals’, numbers, dope vectors, etc.
- A premap process element (PME)
- One or more Response Elements (RSEs)
  - One for each response process
  - Contains header, name, Pfkey, etc. code

## dialog load module (FDB) components (cont.)

- Ready Area Table (RAT) for each process that accesses the data base
- Executable code or Command Element (CME) for each command
- A diagnostic table (if indicated)
- A symbol table (if indicated)

## application run-time variable storage

- OTB
  - Session parameters
  - One per application
- OTBX
  - ADSA-defined application variables
  - One per application
- OWA
  - Only when running
  - One per application

## application run-time variable storage (cont.)

- Dialog Variable Storage (VDB)
  - One per active dialog
- Subschema Variable Storage (VB50)
  - Only when running
- RBBs
  - One for each work, map, or subschema record
  - One set per application
- Currency Save Control Block
  - One per active DB dialog
  - Only when not running

## session summary

- Database tuning is imperative
- Smaller = faster: map, subschema, dialog, application
- Tailor when possible: subschema, work records
- Share when possible: reduce redundancies
- No strict coding rules, maximize trade-offs
- Consider efficiency during design and coding, also when modifying
  - The CA IDMS™/DC environment
  - The business in which an application runs

maymainframemadness 2012

CA ADS Application Performance: Global Considerations Copyright © 2012 CA



## Questions

<http://Support.ca.com>

(856)273-3411

maymainframemadness 2012



thank you

maymainframemadness 2012



## legal notice

© Copyright CA 2012. All rights reserved. All trademarks, trade names, service marks and logos referenced herein belong to their respective companies. No unauthorized use, copying or distribution permitted.

THIS PRESENTATION IS FOR YOUR INFORMATIONAL PURPOSES ONLY. CA assumes no responsibility for the accuracy or completeness of the information. TO THE EXTENT PERMITTED BY APPLICABLE LAW, CA PROVIDES THIS DOCUMENT "AS IS" WITHOUT WARRANTY OF ANY KIND, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT. In no event will CA be liable for any loss or damage, direct or indirect, in connection with this presentation, including, without limitation, lost profits, lost investment, business interruption, goodwill, or lost data, even if CA is expressly advised of the possibility of such damages.

Certain information in this presentation may outline CA's general product direction. This presentation shall not serve to (i) affect the rights and/or obligations of CA or its licensees under any existing or future written license agreement or services agreement relating to any CA software product; or (ii) amend any product documentation or specifications for any CA software product. The development, release and timing of any features or functionality described in this presentation remain at CA's sole discretion.

Notwithstanding anything in this presentation to the contrary, upon the general availability of any future CA product release referenced in this presentation, CA may make such release available (i) for sale to new licensees of such product; and (ii) in the form of a regularly scheduled major product release. Such releases may be made available to current licensees of such product who are current subscribers to CA maintenance and support on a when and if-available basis.

maymainframemadness 2012

CA ADS Application Performance: Global Considerations Copyright © 2012 CA

