Creating Web Services Applications With CA Ideal™

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Creating Web Services Applications With CA Ideal™

CA Ideal™ not only provides an outstanding application development environment for System z, it also has many features that help create Web applications.   In this session, Software Architect John West covers these features and previews some possible future enhancements.

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The n-tier Approach

— Database server

— Transaction server

— Presentation server

— End-user client

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Database Server

— Eliminates data redundancy

— Provides logging and recovery

— Supports multiple concurrent updates

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Transaction Server

— Ensures completion or rollback of a "unit of work"

— Ensures minimal duration of record locks

— Should process all "business logic"

— CICS Transaction Server running Ideal fits well

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Presentation Server

— Should not process "business logic"

— Can do basic validation of input

— Primary job is transformation of output

— May do session (state) management, too, if needed

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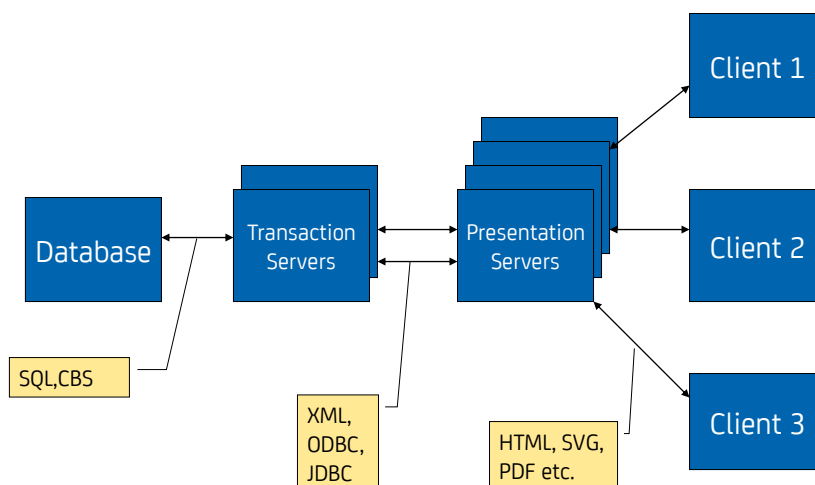Creating Web Services Applications with CA Ideal

End-user Client

— Generic? (e.g Web browser)

— Custom? (There's an app for that)

— May be merged with presentation server layer

— Maintenance issues

— Intranet, Internet or Cloud?

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N-tier formats

Database

Transaction Servers

Presentation Servers

Client 1

Client 2

Client 3

SQL,CBS

XML, ODBC, JDBC

HTML, SVG, PDF etc.

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Web services applications

— Extract parameters from request

— Retrieve or update database rows
  – Easily copied over from 3270 applications

— Build response document
  – Typically a composite from multiple tables
  – Shows current data after an update
  – If any error was detected, the error notification should be defined as an alternate element for the document

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CA Ideal Version 14

— Changed from CICS Web Interface to CICS Web Support

— More 31-bit code

— Control blocks above the line, too.

— Minor enhancements for web transaction startup etc.

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CA Ideal Version 14

— Typical web application code:

```
DO RECEIVE-REQUEST : calls @I$IPOST, uses $SUBSTR a lot
FOR FIRST CUSTOMER WHERE …
    SET WORK-FIELDS = CUSTOMER BY NAME
    SET RESPONSE-HEADER = $STRING(WORK-FIELDS)
    CALL @I$ABOVE … : to append to response
    FOR EACH ITEM …
        SET OTHER-FIELDS = ITEM BY NAME
        SET RESPONSE-DETAIL = $STRING(OTHER-FIELDS)
        CALL @I$ABOVE … : to append some more
    ENDFOR
    CALL @I$ABOVE : to complete outer element
ENDFOR
```

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CA Ideal *roadmap*

— Parse verb for improved request analysis

— Document entity to make response generation simpler
 – Like reports, declarative rather than procedural.

— Miscellaneous string-handling improvements
 – Search/replace
 – Url-encode/decode
 – Etc.

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6

CA Ideal *roadmap*

— Typical web code:

PARSE HTTP-REQUEST INTO WORK-AREA

    WHEN … : handle defaults or exceptions in-stream

ENDPARSE

FOR FIRST CUSTOMER WHERE …

    PRODUCE RESPONSE.OUTER : compound XML element

    FOR EACH ITEM …

        PRODUCE RESPONSE.INNER : another element within the above

    ENDFOR

ENDFOR

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for more information

— Check out all the other CA Datacom and CA Ideal information in the CA Datacom booth

— Be sure to see the CA Datacom 2012+ session, given by Kevin Shuma, available on-demand .

— Visit and join the CA Datacom (CADRE) Global User Community at http://ca.com/communities

14 maymainframemadness 2012

7

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thank you

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