ORACLE
APPLICATION DEVELOPMENT FRAMEWORK

Practical ADF Application Deployment for Fusion Middleware Administrators

Simon Haslam   **Veriton** BUSINESS SYSTEMS INTEGRATION

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Conference and Exhibition
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Simon Haslam / Veriton

Specialised consultant & Oracle Partner, established 12 years

Demanding **web** & **call-centre** applications

Architecture & development strategy; health-checks; disaster recovery; tuning

Oracle Application Server & WebLogic (clusters, J2EE, ADF, SSO, OID, Reports, etc)

Database & related technologies (Solaris/Linux, load balancers, firewalls, …)

intellect

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business partner
hp   ProCurve

CISCO PARTNER   f5

Sun   Partner Advantage

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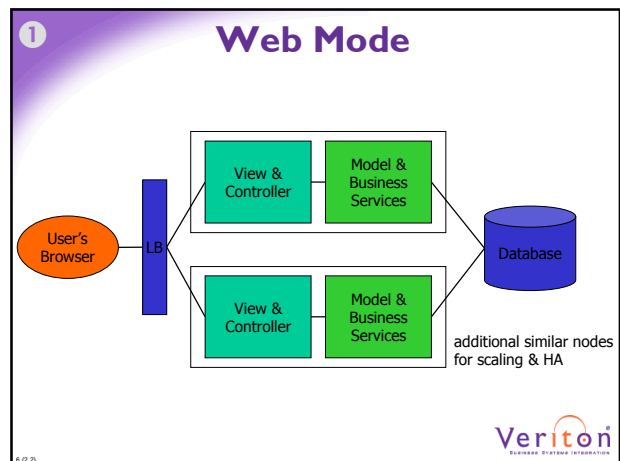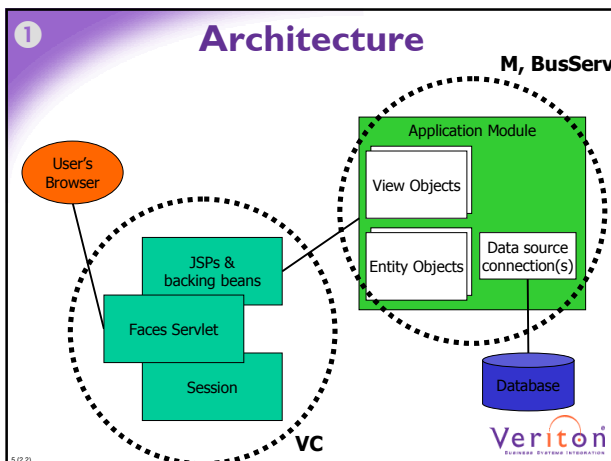# JDeveloper-free* Zone!

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* terms and conditions apply

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Agenda

- Architecture
- Database Access & Security
- Deployment
- ADF BC Monitoring

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❶ Architecture

M, BusServ

Application Module

View Objects

Entity Objects   Data source connection(s)

User's Browser

JSPs & backing beans

Faces Servlet

Session

Database

VC

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❶ Web Mode

User's Browser

LB

View & Controller   Model & Business Services

View & Controller   Model & Business Services

Database

additional similar nodes for scaling & HA
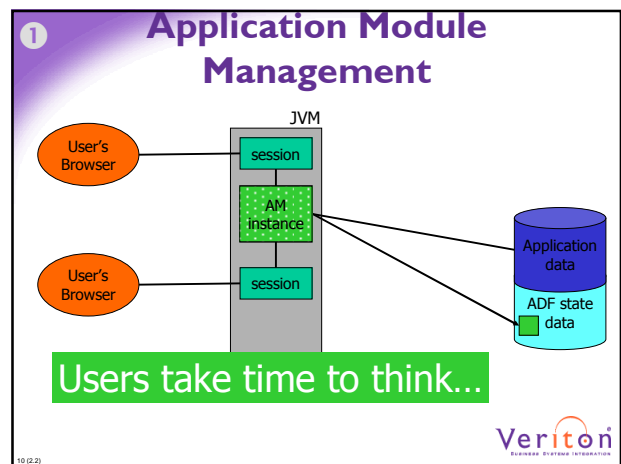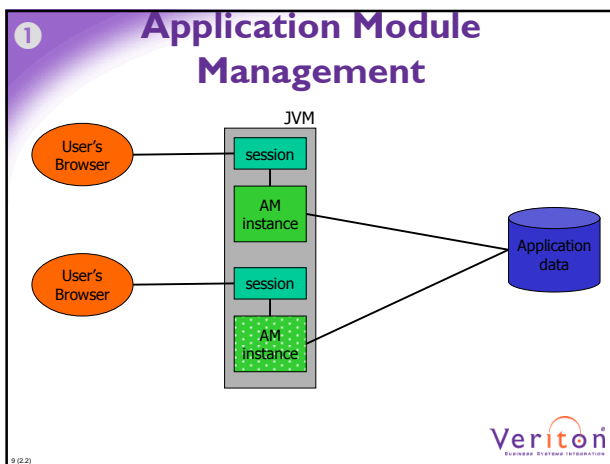
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EJB Mode

AM State

- AM instance holds all the state information for the user, e.g.
  - EO data changes
  - VO rowsets retrieved from db
  - etc, etc
- This state must be maintained *somewhere* between every page request from the user

Application Module Management

Application Module Management

Users take time to think...

AM Pooling

- State management is vital consideration
- AM pooling is mechanism to:
  - support more users by sharing resources
  - preserve state

AM State Management

- Very important to consider number of AM instances you need
- Activation/Passivation
- HA & Failover
- Database/File state persistence
- Future thoughts

- See:
  - Fusion Dev's Guide for ADF 11g: chapter 36
  - Stefan Mehl-Ludvigsen's presentation

② **Database Access**

- Database connections:
  - Pooled by ADF BC, or,
  - Pooled by Java Server ⇐ recommended
- Each App Module instance has:
  - connection to app schema
  - intermittent connection to 'internal' schema (when using database persistence store)
- If db-backed then separate out into two separate data sources (AM instance is constant*, state is transient)
  ⇧ recommended

  * depending on configuration

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②

- See my ODTUG paper for suggestions for database schemas for DEV/TEST/PROD etc
  - Note: pre-WebLogic / ADF 11g prod

http://www.veriton.co.uk/download/
Practical%20ADF%20Application%20Deployment.pdf

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② **Security Options**

- Developer testing
  - **jazn-data.xml**
- Small scale
  - use tables in database
    (e.g. **DBTableOraDataSourceLoginModule**)
- Integrated
  - OID
  - OID and SSO
- Note: proxy users now available for database tracability
- …WebLogic

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③ **Deployment**

- WAR & EAR files
- Specify data sources & security
- Deployment plan
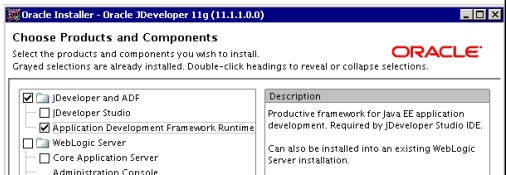- Dependencies
  - ADF libraries

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③ **Deploying to Oracle App Server**

- JDev/ADF 10.1.3.4
- OAS 10gR3 (e.g. 10.1.3.4)
- ADF Installer ⇐ recommended
- Typically deploy EAR file(s) from dev team
- Set up a deployment profile for security and data sources (e.g. between test, pre-prod, prod) ⇐ recommended
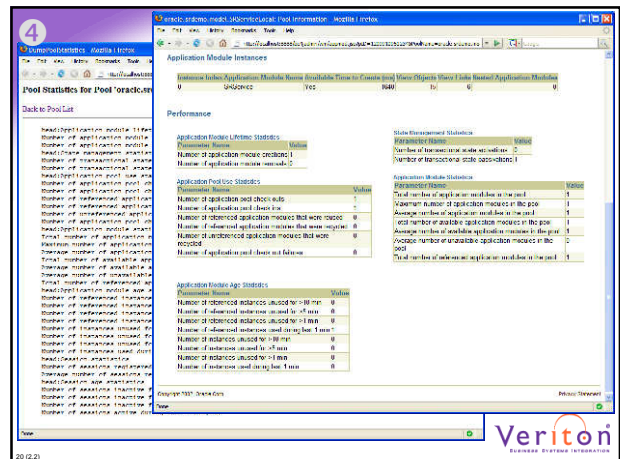
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③ **Deploying to WebLogic**

- JDeveloper/ADF 11
- WebLogic Server 10gR3 (10.3)
  - Only possible to JEE5 (no OC4J 11g)
- ADF libraries - use JDev installer

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④ ADF BC Monitoring

- EM Grid Control 10g R4
- old BC4J Admin Tool
  `JDEV_HOME/BC4J/redist/bc4j.ear`
- Steve Meunch's
  `DumpPoolStatisticsServlet`

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General

- State of flux
  - JDev/ADF 10.1.3 ⇨ 11g
  - HTML pages ⇨ Rich Client / AJAX
  - OC4J ⇨ WLS
- …but for a green field project:
  - Use JDev 11g, and,
  - Oracle WebLogic Server 10.3
- Expect the OFM 11g platform to 'solidify'

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Summary

- ADF is standard J(2)EE app
- 'Engineered approach' with headroom

- Use data sources for pooling; size alongside application modules
- Separate application/internal db connections
- Balance AM instances and db pooled connections
- Deploy via EAR/WAR files
- Use deployment profiles, e.g. for security providers

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Thank You for Listening!

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OFM admin blog: http://SimonHaslam.co.uk

☺ **UKOUG App. Server & Middleware SIG** ☺
Wednesday 4th March 2009 – Slough
(Combined day with Apps DBA for OEBS SIG)
Corporate UKOUG members get one free place

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