Understanding and Preparing for Oracle DBA Certification Exams

Written by
Joel Goodman
Julia Johnson
Oracle University Certification Team
July 8th 2008

Agenda

- Introduction to Certification Levels
- Evolution of Certification Footprints
- Evolution of DBA Certification
- Benefits of Certification
  - Employee
  - Employer
- Customer Testimonials
- Customer Certification Survey
- Theory Style Exam Item Types and Design
- Theory Style Exam Preparation
- Performance Style Exam Item Types and Design
- Performance Style Exam Preparation
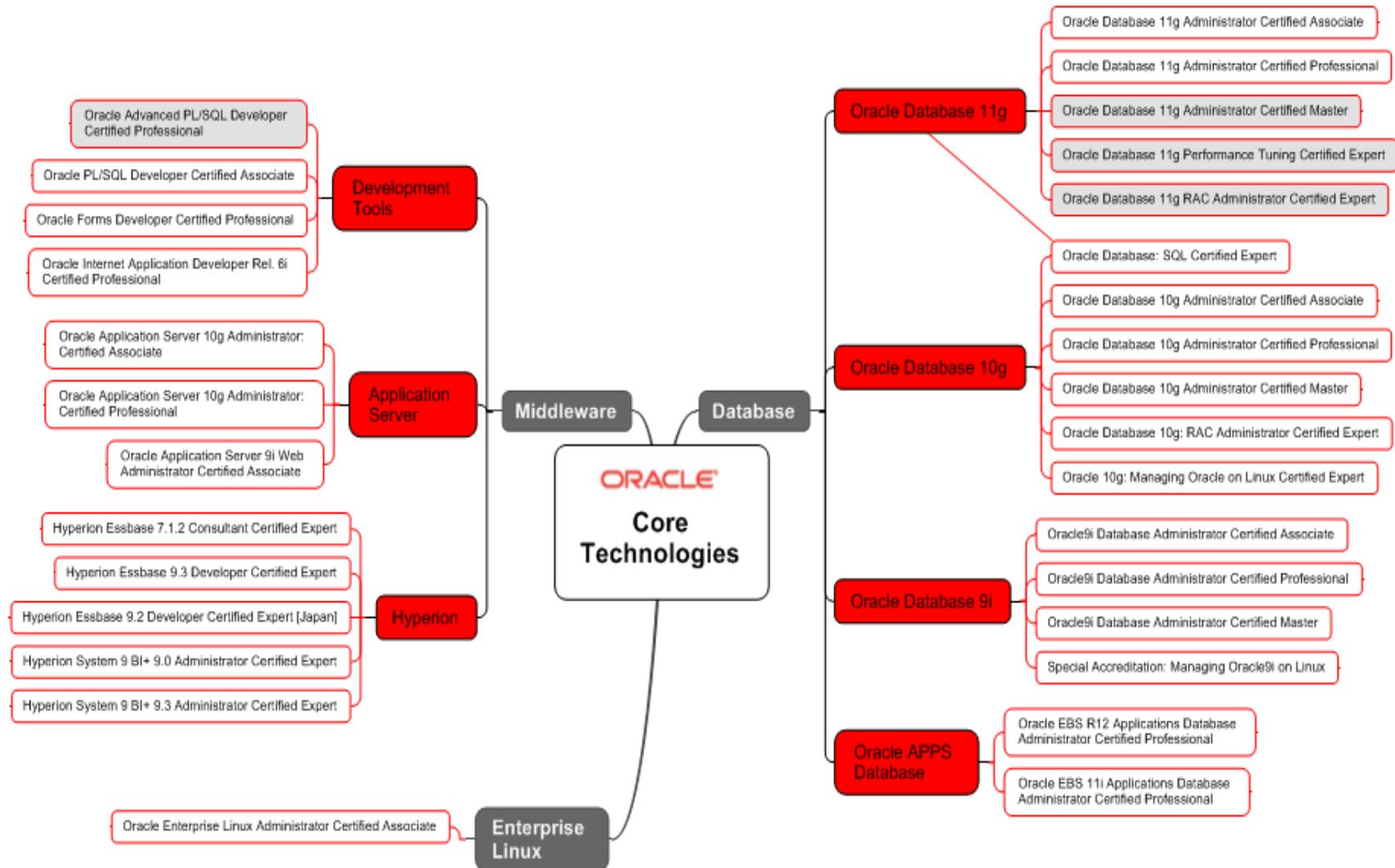- Q and A

ORACLE

About Me

- Application Development and Support 1976 to 1982

- Software Development and Consultancy 1983 to 1986

- IT Training Mainframe Technology 1986 to 1993

- Oracle Support 1994 to 1996

- Oracle University 1997 to Present

- OCP DBA 1997 to Present - Releases 7.3 to 10g

- Oracle 9i OCM DBA from 2002 10g from 2006

- DBA Curriculum Delivery: Basic, Advanced, DSI

- Technical Head of DBA OCP/OCM Development Team

- Member DBA Curriculum Quality Review Team

- Member Oak Table Network
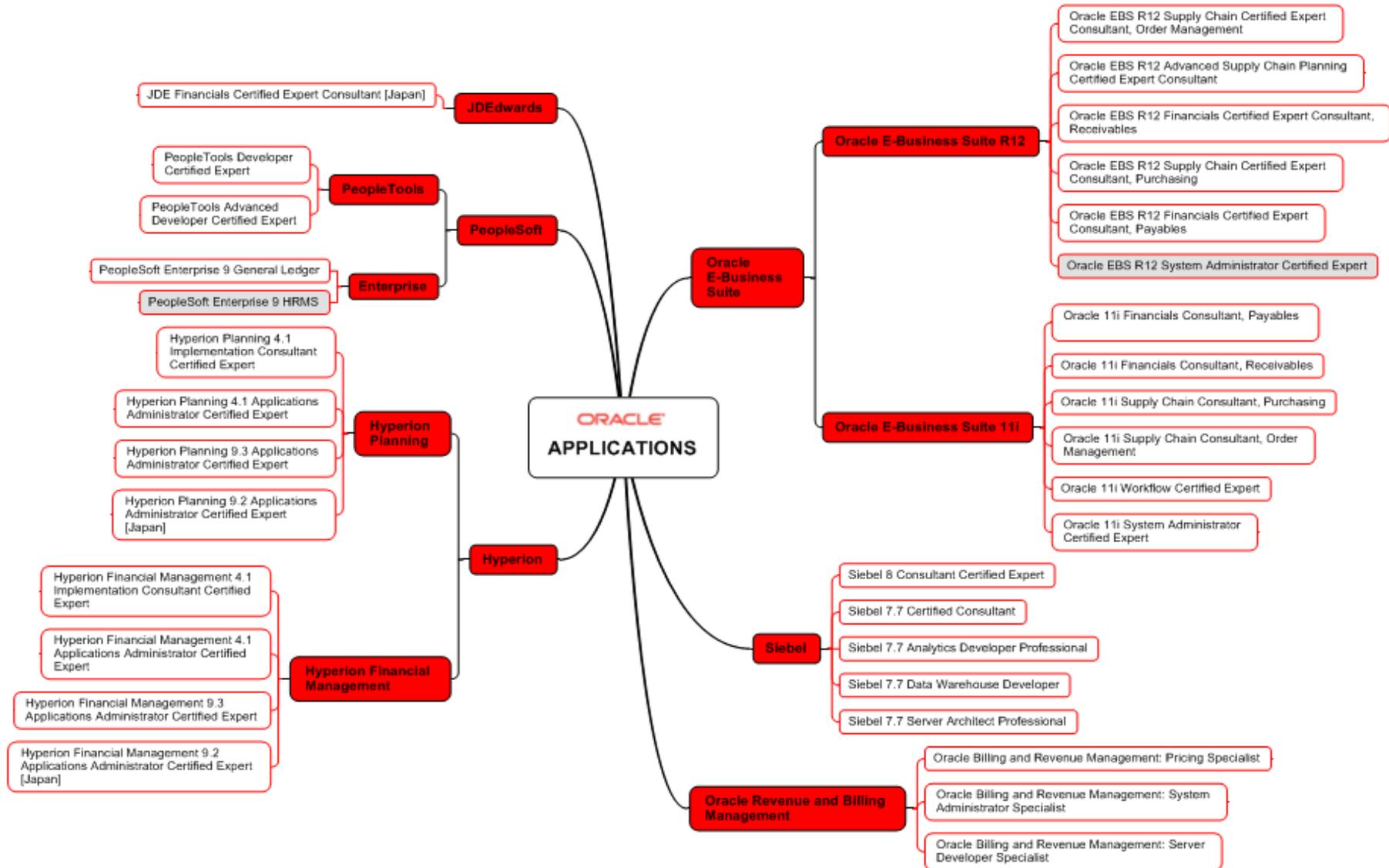
- Joel.Goodman@oracle.com

Oracle Certification Levels

- **OCA – Oracle Certified Associate**

  – Entry level qualification

  – EG 1 to 2 year DBA who may work under supervision

- **OCP – Oracle Certified Professional**

  – EG experienced DBA who can do most tasks unsupervised

- **OCE – Oracle Certified Expert**

  – Niche expertise

  – May build on OCA or OCP

- **OCM – Oracle Certified Master**

  – Highest level Certification

  – Performance based practical exam

Oracle Core Certification Tracks

ORACLE

Oracle Applications Certification Tracks

ORACLE

Oracle Database Certification Footprint

- **Oracle Database 11g**
  - Oracle Database 11g Administrator Certified Associate
  - Oracle Database 11g Administrator Certified Professional
  - Oracle Database 11g Administrator Certified Master
  - Oracle Database 11g Performance Tuning Certified Expert
  - Oracle Database 11g RAC Administrator Certified Expert

ORACLE

Oracle Database Certification Footprint

- **Oracle Database 10g**
  - Oracle Database 10g Administrator Certified Associate
  - Oracle Database 10g Administrator Certified Professional
  - Oracle Database 10g Administrator Certified Master
  - Oracle Database 10g: Administering Real Application Clusters Certified Expert
  - Oracle Database: SQL Certified Expert
  - Oracle 10g: Managing Oracle on Linux Certified Expert

ORACLE

Oracle Database Certification Footprint

- **Oracle Database 9i**
  - Oracle9i Database Administrator Certified Associate
  - Oracle9i Database Administrator Certified Professional
  - Oracle9i Database Administrator Certified Master
  - Special Accreditation: Managing Oracle9i on Linux

ORACLE

Oracle Middleware Certification Footprint

- **Oracle Languages and Tools**
  - Oracle PL/SQL Developer Certified Associate
  - Oracle Advanced PL/SQL Developer Certified Professsional
  - Oracle Forms Developer Certified Professional
  - Oracle Internet Application Developer Rel. 6i Certified Professional

ORACLE

Oracle Middleware Certification Footprint

- **Oracle Application Server**
  - Oracle Application Server 10g Administrator: Certified Associate
  - Oracle Application Server 10g Administrator: Certified Professional
  - Oracle Application Server 9i Web Administrator Certified Associate

ORACLE

Oracle Middleware Certification Footprint

- **Hyperion**

  - Hyperion Essbase 7.1.2 Consultant Certified Expert
  - Hyperion Essbase 9.3 Developer Certified Expert
  - Hyperion System 9 BI+ 9.0 Administrator Certified Expert
  - Hyperion System 9 BI+ 9.3 Administrator Certified Expert

Oracle Applications Certification Footprint

- **Technical App Server**
  - Oracle EBS R12 Applications Database Administrator Certified Professional
  - Oracle EBS 11i Applications Database Administrator Certified Professional

ORACLE

Oracle LINUX Certification Footprint

- **Oracle Enterprise Linux**
  - Oracle Enterprise Linux Administrator Certified Associate
  - Oracle 10g: Managing Oracle on Linux Certified Expert
  - Oracle 10g: Managing Oracle on Linux Certified Expert
  - Managing Oracle9i on Linux

ORACLE

Oracle Applications Certification Footprint

- **E-Business R12**
  - Financials
  - Supply Chain Management
- **E-Business 11*i***
  - Financials
  - Supply Chain Management
- **Peoplesoft**
  - Peoplesoft Tools
- **Hyperion**
  - Hyperion Planning
  - Hyperion Financial Management
- **Siebel**
- **Oracle Revenue and Billing**

ORACLE

Early DBA Certification Tracks

- **DBA OCP Track for Oracle 7.3 released in 1997**

  – SQL and PL/SQL Exam

  – Administration Exam

  – Backup and Recovery Exam

  – Performance and Tuning Exam

- **DBA OCP Track for Oracle8 released in 1999**

  – Same 4 exams as 7.3

  – Plus a Network Admin Exam

- **DBA OCP Track for Oracle8i released in 2000**

  – Same 5 exams as 8.0 based on 8i courses

ORACLE

The 9i DBA Certification Track

- **DBA Tracks for Oracle 9i released in 2002**
  - Introduction of Certification Levels:
    - OCA
    - OCP
    - OCM
  - Introduction of "Hands On" Course Requirement
    - Protects Investment in Certification Credentials
    - Eliminates "Paper DBAs"
  - SQL and PL/SQL Exam now Open Book
  - OCA based on 9i SQL Exam and 9i Fundamentals I Exam
  - OCP based on 9i Fundamentals II and Tuning Exams
  - OCM Exam for 9i introduced in 2002

ORACLE

The 10g DBA Certification Track

- **DBA Tracks for Oracle 10g released in 2004**
  - Major Curriculum Redesign
  - OCA Based on 10g Admin Workshop I course
    - May require SQL Language course again
  - OCP Based on 10g Admin Workshop II course
  - OCM Exam for 10g released in 2006
  - OCE Introduced in 2007
    - SQL Expert for SQL users based on SQL Fundamentals I + II
    - RAC Expert based on RAC 10gR2 Administration
    - Oracle on Linux Expert based on Managing Oracle on Linux

ORACLE

The 11g DBA Certification Track

- **DBA Tracks for Oracle 11g released in 2007/2008**
  - OCA Based on 11g Admin Workshop Ⅰ, SQL Fundamentals Ⅰ
  - OCP Based on 11g Admin Workshop Ⅱ
  - OCM Exam for 11g Available in Development
    - OCM Release will include 1 Day OCM Upgrade for 9i and 10g
  - OCE offerings for 11g still in Development
    - SQL Expert same as for 10g
    - Advanced PL/SQL Expert in development
    - Expert offerings in RAC and Performance Tuning

ORACLE

Applications DBA Certification Tracks

- **Add APPS exam to 9i, 10g or 11g DBA OCP**

- Earn APPS DBA OCP credential

- Based on DB version upon which APPS family depends

  - 11i APPS DBA

    - Based on 9i DBA OCP

    - Plus 11i Install, Patch and Maintain Oracle Applications

  - R12 APPS DBA

    - Based 10g or 11g DBA OCP

    - Plus R12 Install, Patch and Maintain Oracle Applications

ORACLE

DBA Upgrade Exams

- **DBA Upgrade Exams**
  - Based on the New Features for DBAs Curriculum
  - Produced for new versions of Oracle Server
  - 1 exam for moving up from prior version
    - E.G. 10g to 11g
  - 1 exam for moving up directly from 2nd prior version
    - E.G. 9i to 11g

ORACLE

Oracle Certification Tracks URL

- **For Details of DBA Tracks:**
  - **http://education.oracle.com/pls/web_prod-plq-dad/db_pages.getpage?page_id=39**

ORACLE

Benefits of DBA Certification to Employees

- Testing against an agreed standard
- To improve skills for current or future role
- Job requirement in current or future role
- Promotion prospects in current role
- Improved credibility
- Better communication of requirements with developers
- Better understanding of technology stack
- Improved customer service
- Increased earnings

Customer Testimonials

- "Earning OCP has increased my knowledge, giving me an upper edge over my co-workers, and my chances for getting a promotion have also increased." - *Certified Professional: Murtaza Ali*

- "Oracle Certification is an objective assessment of my technical skills and is an asset when I work with my clients who are all very knowledgeable on Oracle Technology." - *Takao Hoshino, Associate Consultant*

- "Certification has helped my career, simply because I have more perspectives, more possibilities, and I'm looked upon by my peers as someone who has the knowledge and skills to do the job right." - *Sergey Demidenko*

ORACLE

Customer Testimonials Continued

- "I was able to enrich my knowledge and skill through preparation for the OCP exams and also found that the exams were reflective of the skill level needed to succeed in today's intense marketplace." - *Ivan Chan*

- "I decided to become OCP certified because I wanted it to make my career better, and expected that it will be beneficial in future. My employer has a policy to encourage people for OCP. My advice is to GO for certification as it will be very beneficial for the people who want to make a career as an Oracle DBA or Developer." - Certified Professional: Rajesh Kapoor

Benefits of DBA Certification to Employers

- Improved staff retention

- Improved job satisfaction

- Better job performance

- Better systems performance

- Increased productivity

- Increased credibility with customers

ORACLE

Employer Testimonials

- "NEC encourages its employees to become Oracle Certified Professionals. Additionally, new employees at NEC must complete Oracle University's Introduction to Oracle/SQL class." - *Kiichi Tomono, Assistant Manager*

- "Certification gives Quovera a competitive edge with our clients and allows individuals to expand their horizons. It allows them to focus on particular technologies and become experts." - *Peter Koletzke, Technical Director*

OCP Customer Employee Survey

- **Survey of more than 3000 Customers:**
  - 89% of OCPs agree that being an Oracle Certified Professional has improved their job productivity
  - 89 % of OCPs agree that they are able to provide a higher level of customer service because they are Oracle trained and certified
  - 89 % of OCPs agree that they are better qualified to manage more complex issues and projects because they are Oracle trained and certified
  - 91% of OCPs agree that being an OCP has enhanced their professional credibility
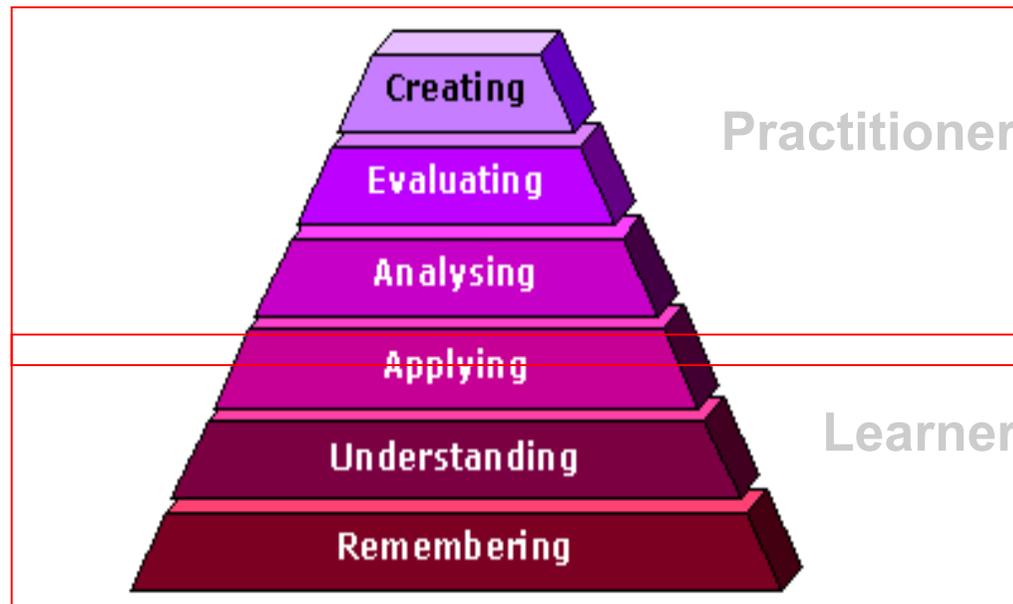
ORACLE

OCP Customer Employee Survey Continued

- **Survey of more than 3000 Customers:**
  - 82 % of OCPs agree that their earning power has improved after being Oracle trained and certified
  - 90%+ of OCPs agree that Oracle training and certification has improved their job prospects
  - 42% of OCPs say that if their employer paid for their certification they would be more inclined to stay with that employer
  - 50% of OCPs say that if their employer paid for their certification it would make no difference in their decision stay or leave that employer
  - Fewer than 7% of candidates say that they would be more likely to leave that employer

DBA Theory Exam Development Process

- **Development of OCA/OCP/OCE exam items based on**
  - Blueprint structure maps to OU course to which exam relates
  - Skills obtained from Oracle Documentation which may be referred to in course notes or in labs
  - Theoretical knowledge expected of someone with this level of experience IE theory and architecture
  - Practical skills expected of someone with this level of experience IE implementation
  - Two types of Items are developed:
    - Learner
    - Practitioner

ORACLE

Learner v Practitioner

Revised taxonomy of the cognitive domain
following Anderson and Krathwohl (2001)

ORACLE

DBA Theory Exam Development Process

- **Exam Development**
    - Blueprint for requirements
    - Item writing
    - Subject Matter Expert (SME) Review
    - Item revision
    - Beta exam
    - Production exam

- **Placeholder for development process graphic**

OCA/OCP/OCE Learner Style Exam Items

- **These are base knowledge items**
  - Generally based on "What is done" or "How it is Done"
  - Which tool or package or view to use
  - In what order are actions are to be performed
  - What process or memory structure is used in which situations
  - What effects are caused by setting or not setting certain parameters

- **These items are restricted to skills and knowledge within an OU course lesson or related Oracle documentation**

- **OCA exam contain a higher percentage of these style items**

ORACLE

OCA/OCP/OCE Practitioner Style Items

- **These are Meta-Knowledge style items**
  - Generally based on "Why it is done" or "Which is the best way to meet objectives"
  - Best strategy for a set of requirements
  - Recommendations for tuning
  - Diagnosing a problem based on exhibit output
  - Conversion of requirements into specific recommendations
- **These items require candidates to apply what they know correctly to realistic scenarios**
- **OCP exams contain a higher percentage of these style items**
- **OCE exam has many such items**

ORACLE

OCA/OCP/OCE Simulation Items

- **Simulation style items**
  - Based on knowledge of Enterprise Manager
  - Candidate must convert a very specific requirement into actions performed by navigating to the correct EM screen and performing the appropriate bit of functionality in an appropriate sequence

- **Based on Flash technology**

- **Time permitted will distinguish candidates knowledge of this technology**

- **Currently voluntary and experimental (July??)**

- **Comparable in complexity to the common multiple choice items in the exam**

- **Limited number of such items in any exam**

Learner Style Sample Item

Which statements regarding Oracle 11g clusterware are true (Choose 2)

A. Oracle clusterware is installed as a Linux RPM

B. Installation of Oracle clusterware prevents the use of vendor supplied clusterware

C. Oracle 11g clusterware must be installed in its own home directory

D. `ORA_CRS_HOME` defines the path to the clusterware home directory

E. The voting disk and OCR files used by the clusterware may be stored in an ASM Disk Group

Correct Answers: C,D

ORACLE

Practitioner Style Sample Item

Your Company has a High Availability requirement which can be addressed by using RAC 11g. You decide to do an impact analysis on the effects on your applications of migrating from a "single instance" database to a "RAC" Database.

Which areas would impact your applications either for performance or functionality of both (choose all that apply)

A. Applications using cached sequences

B. Applications using global context variables

C. Client-server applications doing short OLTP queries

D. Batch processes that only run connected to one instance which do full table scans

E. DSS queries that are rewritten to a summary implemented using materialized views.

Correct Answer: A,B,D,E

Preparing for DBA Theory Style Exams

- **Oracle University ILT**
  - Recommended by OU Certification programme
- **Other preparation methods**
  - Follow the certification tracks on the website
  - OU Self-study CD where available
  - Oracle Knowledge Centre
  - Mentoring
  - Oracle Technology Network Downloads
- **To Use it is to know it**
- **Practice and play with the system**

Preparing for DBA Theory Style Exams

- **Books**
    - Oracle Press
        - Technology books
        - Exam preparation books
    - O'Reilly Press
- **Practice exams**
    - Oracle authorised practice exam vendors
        - Self Test
        - Transcender
    - Other 3rd party vendors

ORACLE

Theory Style Exam Objectives

- **Go to OU website and find exam**

  - http://education.oracle.com/certification

  - Click on "Certification Paths"

  - Click on "Database"

  - Click on Appropriate certification level

  - Click on the Exam of Interest

- **Click on exam topics for content list**

- **Compare topics to your current knowledge and experience**

- **Create skills gap list**

- **Revise on the least familiar skills**

ORACLE

Training Methods for Exam Preparation

- **Instructor Led Training**
  - Click on "Recommended training and preparation" from the exam page
  - Examine the list of courses
- **OU Self-Study CDs**
  - http://education.oracle.com/pls/web_prod-plq-dad/db_pages.getpage?page_id=35
- **Oracle Knowledge Centre**
  - http://education.oracle.com/pls/web_prod-plq-dad/db_pages.getpage?page_id=160
  - Purchase individual courses
  - Purchase "passports"
  - Access "Knowledge Centre"

ORACLE

Certification Preparation Books

- **Books**
  - **Oracle Press**
    - http://www.mhprofessional.com/category/?cat=4223
  - **O'reilly**
    - http://www.oreilly.com/pub/topic/oracle
  - **3rd Party DBA exam certification tutorials**
    - http://www.certificationtutorials.com/Oracle/OCP-10g-certification-training.htm
    - http://www.oraclecertification.net/

ORACLE

Certification Practice Exams

- **Practice Exams**
  - Oracle University web site
    - http://education.oracle.com/pls/web_prod-plq-dad/db_pages.getpage?page_id=208
  - SelfTest
    - http://www.selftestsoftware.com/dept.aspx?dept%5Fid=6000
  - Transcender
    - http://www.transcender.com/dept.aspx?dept%5Fid=130000
  - SelfExamEngines – 3rd party
    - http://selfexamengines.com/oracle-certification-training.htm

OCM Exam Development Process

- **Blueprint defining required skills for exam**

- **Blueprint defining "Tasks" to be performed for each skill set:**

  - General DBA skills

  - Grid Control

  - RAC

  - Data Guard

  - Data Warehouse DBA

  - Streams

- **Skills obtained from Oracle documentation which may be referred to in course notes or in labs**

- **Knowledge and skill appropriate for master level accreditation**

ORACLE

OCM Exam Development Process

- **OCM Exam Development**
  - Creation or enhancement of bespoke performance exam administration application
  - Creation of "setup" scripts for start of each section
  - Creation of "scoring" scripts for use at end of each section
  - Creation of "testing" scripts for use in load and performance testing of new or revised exam
  - Alpha test
  - Beta test
  - Weighting
  - Standard Setting
  - Production test

ORACLE

OCM Exam Learner Style Tasks

- **Task list states specific task to be performed**
    - Create a tablespace with specific attributes
    - Create a table with specific attributes
    - Set certain parameters
- **Candidate is told what to do but not how to do it**
- **Requires candidate to know how to do certain things**
- **Order may be important**
- **Documentation is available**
- **Time is a constraint**

ORACLE

OCM Exam Practitioner Style Tasks

- **Task list states business or technical requirement**

- **Candidate must work out what needs to be done**
  - Improve performance in certain situation
  - Configure storage management appropriate to a specific situation
  - Configure extent management appropriate to a specific situation

- **Requires candidate to convert requirements into actions and to know how to perform those actions**

- **Order may be important**

- **Documentation available but no so helpful here**

ORACLE

Preparing for OCM Performance Style Exams

- **Understand exam objectives**

- **Go To OCM Exam Topics**

  - http://education.oracle.com/pls/web_prod-plq-dad/db_pages.getpage?page_id=41&p_exam_id=10gOCM#3

- **Create skills gap analysis to identify weaknesses**

- **Enroll on OU advanced curriculum course(s) if time and training budget allow**

- **Use mentoring programme if available**

- **Learn to work under time pressure**

- **Exam is designed to distinguish a candidate who can perform certain tasks more quickly than another even when both candidates are correct.**

- **Practice using sandbox environment**

ORACLE

QUESTIONS & ANSWERS

ORACLE

TGIO

Thank You

Please Email any questions to:
Joel.Goodman@Oracle.com