Oracle Real Application Clusters 11g Essentials
Exam Study Guide

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Objective & Audience

Objective
Help you prepare to take the Oracle Real Application Clusters 11g Essentials exam by providing pointers to resources that you can use in your preparation.

Targeted Audience
• Implementation Specialists
• Technical Consultants who can install and configure Grid Infrastructure and that are skilled in Real Application Cluster database installation, configuration, performance management, backup and recovery, and database services configuration.
• Up-to-date training and field experience are recommended.
Exam Topics
The Oracle Real Application Clusters 11g Essentials exam consists of 17 topics:
1. Overview of Oracle Grid Infrastructure and RAC
2. Planning your cluster installation
3. Preparing the cluster servers
4. Preparing the administrator environment
5. Preparing the storage
6. Preparing the installation directories
7. Preparing the network
8. Installing Oracle Clusterware 11g
9. Installing the Oracle Database 11g software with RAC
10. Using the Server Control utility (SRVCTL)
11. Using the Oracle Clusterware Control utility (CRSCTL)
12. Using the Oracle Interface Configuration tool (OIFCFG)
13. Using the Oracle Cluster Registry Configuration utility (OCRCONFIG)
14. Using the OCRCHECK and OCRDUMP utilities
15. Using the Oracle ASM Configuration Assistant (ASMCA)
16. Using the ASM Command tool (ASMCMD)
17. Using the Oracle Cluster Health Monitor (IPD/OS)

Exam Objectives
The exam objectives are defined by learner or practitioner level of knowledge:
- **Learner-level:** questions require the candidate to recall information to determine the correct answer. Example: Describe the Oracle Clusterware architecture.
- **Practitioner-level:** questions require the candidate to derive the correct answer from the application of their knowledge, which can only be attained by extensive experience with the product. Example: Configure ASM with the Database Configuration Assistant (DBCA).
Training Options

For each exam topic there have been identified alternative training options that are available at Oracle. The training options are divided into two categories:

- **Boot Camps**
  The boot camps are designed as a "jump start" training to enhance your skills by providing role-based training on industry-leading Oracle solutions and services. The boot camps are built as concise, intensive, and real-time training to give partners a competitive advantage as they prepare to build powerful solutions for their own customer base. Partners can choose to attend these boot camps in class or in a live virtual class format to maximize the effectiveness and the time allocated to training. Partners can take any publicly-scheduled Oracle University courses at steep discounts. Benefit from hands on experience to gain real working skill and work toward Oracle certifications.

- **Online Training**
  Oracle partners are entitled free access to the Oracle Knowledge Center, a vast library of recorded product courses. New courses are regularly added to the library, providing partners with the latest information and training to master new products or to increase proficiency on the new releases.
Topic 1: Overview of Oracle Grid Infrastructure and RAC

Objectives

• Describe the Oracle Clusterware architecture                     Level: Learner
• Describe the Automatic Storage Management (ASM) architecture    Level: Learner
• Describe the Real Application Clusters (RAC) services and Sever Pools Level: Learner
• Describe the tools used for Grid Infrastructure and RAC          Level: Learner

Training Options

• Boot Camp
  – Oracle Real Application Clusters 11g Implementation Boot Camp

• Online Training
  – Oracle Real Application Clusters 11g PreSales Boot Camp - Overview (Part 1)
  – Oracle Real Application Clusters 11g PreSales Boot Camp - Overview (Part 2)
  – Oracle Real Application Clusters 11g PreSales Boot Camp - Overview (Part 3)
  – Oracle Real Application Clusters 11g PreSales Boot Camp - Overview (Part 4)
# Topic 2: Planning your cluster installation

## Objectives
- Use the Cluster Verification Utility (CVU)
- Review and backup an existing Oracle environment

## Training Options
- **Boot Camp**
  - Oracle Real Application Clusters 11g Implementation Boot Camp
- **Online Training**
  - Oracle Real Application Clusters 11g Implementation Boot Camp - Preparation (Part 1)
Topic 3: Preparing the cluster servers

Objectives

- Check the hardware and software requirements
- Perform platform-specific configuration tasks
- Check the kernel parameters with the Oracle Universal Installer (OUI)

Level

Practitioner

Training Options

- Boot Camp
  - Oracle Real Application Clusters 11g Implementation Boot Camp
- Online Training
  - Oracle Real Application Clusters 11g Implementation Boot Camp - Preparation (Part 1)
Topic 4: Preparing the administrator environment

Objectives

- Configure the operating system environment  
  Level: Practitioner
- Configure the operating system users and groups  
  Level: Practitioner
- Configure the secure shell (SSH)  
  Level: Practitioner
- Configure SSH user equivalency  
  Level: Practitioner

Training Options

- Boot Camp
  - Oracle Real Application Clusters 11g Implementation Boot Camp
- Online Training
  - Oracle Real Application Clusters 11g Implementation Boot Camp - Preparation (Part 2)
Topic 5: Preparing the storage

Objectives

- Check storage hardware requirements
- Describe the supported storage options
- Implement a storage option
- Explain the file requirements for Oracle Clusterware
- Configure the Oracle Cluster Registry (OCR)
- Manage the Oracle Local Registry (OLR)
- Create ASM instances, ASM Disk Groups and ASM Files
- Explain Multipathing
- Describe ASMLIB

Level
- Practitioner
- Learner
- Practitioner
- Learner
- Practitioner
- Learner
- Learner

Training Options

- Boot Camp
  - Oracle Real Application Clusters 11g Implementation Boot Camp
- Online Training
  - Oracle Real Application Clusters 11g Implementation Boot Camp - Preparation (Part 2)
Topic 6: Preparing the installation directories

Objectives
- Set the Oracle Inventory directory
- Set the Oracle Grid Infrastructure Home directory
- Set the Oracle Base directory
- Set the Oracle Home directory

Level
- Practitioner

Training Options
- Boot Camp
  - Oracle Real Application Clusters 11g Implementation Boot Camp
- Online Training
  - Oracle Real Application Clusters 11g Implementation Boot Camp - Preparation (Part 3)
Topic 7: Preparing the network

Objectives

- Identify the network requirements
- Describe the IP address types
- Explain the Single Client Access Name feature (SCAN)
- Implement cluster interconnect best practices

Level

Practitioner

Learner

Training Options

- Boot Camp
  - Oracle Real Application Clusters 11g Implementation Boot Camp
- Online Training
  - Oracle Real Application Clusters 11g Implementation Boot Camp - Preparation (Part 4)
Topic 8: Installing Oracle Clusterware 11g

Objectives

- Install Oracle Clusterware
- Verify the installation

Level

Practitioner

Training Options

- Boot Camp
  - Oracle Real Application Clusters 11g Implementation Boot Camp
- Online Training
  - Oracle Real Application Clusters 11g Implementation Boot Camp - Installation (Part 1)
Topic 9: Installing the Oracle Database 11g software with RAC

Objectives

- Install the Oracle Database software
- Configure ASM with the Database Configuration Assistant (DBCA)
- Create a cluster database
- Set the initializations parameters

Level

- Practitioner

Training Options

- Boot Camp
  - Oracle Real Application Clusters 11g Implementation Boot Camp
- Online Training
  - Oracle Real Application Clusters 11g Implementation Boot Camp - Installation (Part 2)
  - Oracle Real Application Clusters 11g Implementation Boot Camp - Installation (Part 3)
Topic 10: Using the Server Control utility (SRVCTL)

Objectives
- Start or stop nodeapps, databases, instances, listeners and services
- Add, move or delete instances and services
- Manage configuration information with SRVCTL

Level
- Practitioner

Training Options
- Boot Camp
  - Oracle Real Application Clusters 11g Implementation Boot Camp
- Online Training
  - Oracle Real Application Clusters 11g Implementation Boot Camp - Tools (Part 1)
Topic 11: Using the Oracle Clusterware Control utility (CRSCTL)

Objectives
- Enable or disable Oracle Clusterware daemons
- Enable or disable debugging
- Add, move or delete voting disks dynamically
- Diagnose cluster issues

Level
- Practitioner

Training Options
- Boot Camp
  - Oracle Real Application Clusters 11g Implementation Boot Camp
- Online Training
  - Oracle Real Application Clusters 11g Implementation Boot Camp - Tools (Part 1)
Topic 12: Using the Oracle Interface Configuration tool (OIFCFG)

Objectives
• Allocate or deallocate network interfaces and components
• Retrieve component configuration information

Level
Practitioner

Training Options
• Boot Camp
  – Oracle Real Application Clusters 11g Implementation Boot Camp
• Online Training
  – Oracle Real Application Clusters 11g Implementation Boot Camp - Tools (Part 2)
Topic 13: Using the Oracle Cluster Registry Configuration utility (OCRCONFIG)

Objectives
• Add, replace, repair or remove an OCR
• Manage backups and restore the OCR

Level
Practitioner

Training Options
• Boot Camp
  – Oracle Real Application Clusters 11g Implementation Boot Camp
• Online Training
  – Oracle Real Application Clusters 11g Implementation Boot Camp - Tools (Part 2)
Topic 14: Using the OCRCHECK and OCRDUMP utilities

Objectives

- Check the status of an OCR file with OCRCHECK
- View OCR and OLR content with OCRDUMP

Level

Practitioner

Training Options

- Boot Camp
  - Oracle Real Application Clusters 11g Implementation Boot Camp
- Online Training
  - Oracle Real Application Clusters 11g Implementation Boot Camp - Tools (Part 3)
Topic 15: Using the Oracle ASM Configuration Assistant (ASMCA)

Objectives
• Manage ASM instances and disk groups with ASMCA
• Manage Oracle ASM Dynamic Volume Manager volumes (ADVM)
• Manage Oracle ASM Cluster File Systems (ACFS)

Level
Practitioner

Training Options
• Boot Camp
  – Oracle Real Application Clusters 11g Implementation Boot Camp
• Online Training
  – Oracle Real Application Clusters 11g Implementation Boot Camp - Tools (Part 3)
Topic 16: Using the ASM Command tool (ASMCMD)

Objectives

• Manage ASM instances and disk groups with ASMCMD  
  Level: Practitioner
• Manage file access control for disk groups  
  Level: Practitioner
• Manage files and directories within disk groups  
  Level: Practitioner
• Manage templates for disk groups and volumes  
  Level: Practitioner

Training Options

• Boot Camp
  – Oracle Real Application Clusters 11g Implementation Boot Camp
• Online Training
  – Oracle Real Application Clusters 11g Implementation Boot Camp - Tools (Part 3)
Topic 17: Using the Oracle Cluster Health Monitor (IPD/OS)

Objectives

- Check the Oracle Clusterware and RAC clusters for problems

Level

Practitioner

Training Options

- Boot Camp
  - Oracle Real Application Clusters 11g Implementation Boot Camp
- Online Training
  - Oracle Real Application Clusters 11g Implementation Boot Camp - Tools (Part 3)
Exam Registration

• **How to register for the exam?**
  You can register for all Oracle certification exams with Pearson VUE. Before a registration can be submitted, a Pearson VUE profile must be created using your Company ID. Your Company ID can be obtained by contacting your local Oracle Partner Business Center or by signing in to your OPN account. Your Company ID is located in the section on the right under "Company information".

Please follow [these instructions](#) in order to properly set-up your Pearson VUE account for the first time.

• **Have you completed an Oracle Certification Exam in the past?**
  Due to systems enhancements, each partner who has completed an Oracle Certification Exam will need to update their Pearson VUE profile in order to receive credit and for those records to appear in the [OPN Competency Center](#).

• **How to get full recognition as Certified Implementation Specialist?**
  To get full recognition as a Certified Implementation Specialist you need to:
  A. Update your Pearson VUE profile with your Company ID
  B. Activate your Certview Account

Please follow [these instructions](#) and your records will be properly recorded.