



## **Oracle Database 10g: RAC for Administrators Release 2**

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### **What you will learn**

This course offers students an introduction to the general features and capabilities of Oracle Database 10g Release 2 for Oracle Real Application Clusters (RAC). Students learn how to install and administer Oracle Clusterware, Real Application Clusters, and Automatic Storage Management. Students also learn how to administer their Database in a Real Application Clusters environment using Enterprise Manager Grid Control. Increase your efficiency by learning how to configure and use database services as well as the Load Balancing Advisory in a RAC environment. Learn how to add and remove nodes in clusters and how to patch both Oracle Clusterware and Real Application Clusters software in a rolling fashion.

This course counts towards the Hands-on course requirement for the Oracle Database 10g Administrator Certification and the Oracle Database 10g: RAC Administer Certified Expert Certification. Only instructor-led inclass or instructor-led online formats of this course will meet the Certification Hands-on Requirement. Self Study CD-Rom and Knowledge Center courses are excellent study and reference tools but DO NOT meet the Hands-on Requirement for certification.

### **Learn To:**

- Install Oracle Clusterware and Real Application Clusters
- Administer a RAC Database
- Administer Database Services in a RAC environment
- Administer Oracle Clusterware
- Add/Remove a node to/from a cluster
- Patch Oracle Clusterware and RAC software in a rolling fashion

### **Audience**

- Data Warehouse Administrator
- Database Administrators
- Database Designers
- Project Manager
- Support Engineer

System Analysts  
Technical Administrator  
Technical Consultant

## **Prerequisites**

**Single-instance Oracle Database 10g Architecture and Experience**  
**Oracle Database 10g: Administration Workshop I Release 2**  
**Oracle Enterprise Manager 10g Grid Control Release 2**  
**Oracle Database 10g: Administration Workshop II Release 2**

## **Course Objectives:**

Identify Real Application Clusters components  
Install, create, administer, and monitor a Real Application Clusters database  
Use configuration and management tools for Real Application Clusters databases  
Setup services for workloads management, and applications high availability  
Develop a backup and recovery strategy for Real Application Clusters databases  
Configure and monitor Oracle Clusterware resources  
Review high availability best practices

## **Course Topics**

Identify Real Application Clusters components  
Understand Real Application Clusters  
Clusters Scalability and High Availability  
The Necessity of Global Resources  
Parallel Execution with RAC  
RAC Software and Database Principles  
RAC and Shared Storage Technologies  
Understand VIPs  
Describe the benefits of Fast Application Notification

Install, create, administer, and monitor a Real Application Clusters database  
Describe the installation of Oracle RAC 10g  
Perform RAC pre-installation tasks  
Perform cluster setup tasks  
Install Oracle Clusterware  
Install and configure Automatic Storage Management (ASM)  
Install the Oracle database software  
Create a cluster database  
Install the Enterprise Manager agent on each cluster node

Use configuration and management tools for Real Application Clusters databases  
Use Enterprise Manager cluster database pages

- Define redo log files in a RAC environment
- Define undo tablespaces in a RAC environment
- Start and stop RAC databases and instances
- Modify initialization parameters in a RAC environment
- Manage ASM instances in a RAC environment
- Determine RAC-specific wait events, global enqueues, and system statistics
- Implement the most common RAC tuning tips

- Setup services for workloads management, and applications high availability
- Configure and manage services in a RAC environment
- Set performance-metric thresholds on services
- Configure services aggregation and tracing
- Configure server-side connect-time load balancing
- Use the Load Balancing Advisory
- Configure server-side callouts
- Configure the server- and client-side ONS
- Configure Transparent Application Failover (TAF)

- Develop a backup and recovery strategy for Real Application Clusters databases
- Configure the RAC database to use ARCHIVELOG mode and the flash recovery area
- Configure RMAN for the RAC environment

- Configure and monitor Oracle Clusterware resources
- Manually control the Oracle Clusterware stack
- Change voting disk and OCR configuration
- Back up or recover your voting disks and OCR files
- Change VIP addresses
- Use the CRS framework
- Collect Oracle Clusterware diagnostic files
- Enable Oracle Clusterware debugging

- Review high availability best practices
- Add a new node to your cluster database
- Remove a node from your cluster database
- Design a Maximum Availability Architecture in your environment
- Decide on the best ASM configuration to use
- Patch your RAC system in a rolling fashion

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