

## Oracle Database 11g: RAC Administration

### What you will learn:

This course offers students an introduction to the general features and capabilities of Oracle Database 11g Release 1 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 toward the Hands-on course requirement for the following certifications

- Oracle Database 11g Administrator Certification
- Oracle Database 10g: Real Application Clusters Administrator Certified Expert

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.

This is appropriate for a 10g audience too. There are few minor changes between 10g and 11g features.

### 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

### Audience:

Data Warehouse Administrator  
Database Administrators  
Support Engineer  
Technical Administrator

### Suggested Prerequisites:

General understanding of database administration

## Prerequisites:

### Required Prerequisites:

Oracle Database 11g: New Features for Administrators  
Oracle Database 11g: Administration Workshop I

## Course Topics:

### Oracle Clusterware Installation

Oracle RAC 11g Installation  
Cluster Setup Tasks  
Using Raw Partitions  
Cluster Configuration

### Database Creation

Management Agent Installation  
Storage Options for Database Files  
Create the Database  
Single Instance to RAC Conversion

### RAC DB Administration

Cluster Database Instance Administration  
Topology Viewer  
Automatic Undo Management and RAC  
Quiescing RAC Databases  
Transparent Data Encryption and Wallets in RAC  
ASM Instance and Crash Recovery in RAC

### Backup and Recover a RAC DB

Protecting Against Media Failure  
Oracle Recovery Manager

### RAC DB Monitoring and Tuning

CPU and Wait Time Tuning Dimensions  
Dynamic Reconfiguration  
ADDM Analysis

### Services

Workload Dispatching  
High Availability of Services in RAC  
Services and Resource Manager with EM  
Change Service Thresholds  
Using Distributed Transactions with RAC

## 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

### RAC Installation

Installing Automatic Storage Management  
Configure ASM Storage  
Install the Database Software

### High Availability of Connections

Fast Application Notification  
Load Balancing Advisory  
Transparent Application Failover

### Oracle Clusterware Administration

Controlling the Oracle Clusterware Stack  
Back Up and Recover Your Voting Disks  
Back Up and Recover Oracle Cluster Registry  
Prevent Automatic Instance Restarts

### Diagnosing the Oracle Clusterware components

Oracle Clusterware Main Log Files  
RAC Diagnostic Infrastructure

### Node Addition/Removal

Add and Delete Nodes and Instances  
Clone Oracle Clusterware

### Design for High Availability

Maximum Availability Architecture  
RAC and Data Guard Topologies  
Extended RAC Connectivity  
Extended RAC disk mirroring  
Patch your RAC system in a rolling fashion

### Workshop

Extend your cluster using Grid Control  
Patch Oracle Clusterware