

**4 Days**

## Oracle Database 11g: RAC Administration Release 2

This Oracle Database 11g: RAC Administration Release 2 training course has been designed for database and technical administrators to equip them with RAC database administration in the Oracle Grid Infrastructure environment. The course being led by Oracle Approved Trainers, will help you to develop the skills to administer cluster databases by deploying Enterprise Manager and command-line utilities such as SRVCTL, CRSCTL, and SQL\*Plus.

Completion of this training course will enable candidates in:

- Installing Oracle Clusterware and Real Application Clusters.
- Administering a RAC Database.
- Administering database services in an RAC environment.
- Administering Oracle Clusterware.
- Adding/Removing a node to/from a cluster.
- Patching Oracle Clusterware and RAC software.
- Upgrading Oracle RAC databases.
- Studying the new connection architecture and how to make those connections highly available.

### Course Benefits:

Attaining certification of this course helps individuals to deliver fast, reliable, secure and easy to manage performance. Teachings of this course will help participants to optimize database workloads, at lower IT costs and deliver higher quality service by empowering smooth and rapid consolidation within the Datacenter.

## Course Details

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### Course Outline

#### 1. Grid Infrastructure: Overview

- Oracle Grid Infrastructure
- Define Cluster
- Define Clusterware
- Define Oracle Clusterware
- Describe Oracle Clusterware Architecture and Services
- Describe the goals for Oracle Clusterware
- Describe Oracle Clusterware Networking

- [Oracle Grid Infrastructure for a Cluster](#)

## **2. RAC Concepts**

- [Oracle RAC overview](#)
- [Benefits of Using RAC](#)
- [Oracle RAC One Node and Oracle Clusterware](#)
- [RAC One Node Single-Instance High Availability](#)
- [Cluster-Aware Storage Solutions](#)
- [Oracle Cluster File System](#)
- [Clusters and Scalability](#)

## **3. Installing and Configuring Oracle RAC**

- [Install the Oracle Database Software](#)
- [Create the Cluster Database](#)
- [Cluster Database Management Options](#)
- [Database Type Selection](#)
- [Database Identification](#)
- [Passwords for Database Schema Owners](#)
- [Database File Locations](#)
- [Recovery Configuration](#)

## **4. Oracle RAC Administration**

- [Oracle RAC Administration](#)
- [Cluster Database Instance Home Page](#)
- [Cluster Home Page](#)
- [Topology Viewer](#)
- [Enterprise Manager Metrics and RAC](#)
- [Enterprise Manager Alerts and RAC](#)
- [Enterprise Manager Alert History and RAC](#)

## **5. Managing Backup and Recovery for RAC**

- [Instance Recovery and RAC](#)
- [RAC and Instance Recovery](#)
- [Instance Recovery and Database Availability](#)
- [Protecting Against Media Failure](#)
- [Parallel Recovery in RAC](#)
- [Media Recovery in Oracle RAC](#)

- Archived Log File Configurations
- RAC and the Fast Recovery Area

## **6. Global Resource Management Concepts**

- Need for Global Concurrency Control
- Global Resource Directory (GRD)
- Global Resource Management, Remastering & Recovery
- Global Resource Background Processes
- Global Resource Access Coordination

## **7. RAC Database Monitoring and Tuning**

- CPU and Wait Time Tuning Dimensions
- Analyzing Cache Fusion Impact in RAC
- Typical Latencies for RAC Operations
- RAC-Specific Tuning
- Wait Events for RAC
- Global Enqueue Waits
- Global Cache Wait Events

## **8. Managing High Availability of Services**

- Services for Policy- and Administrator-Managed Databases
- Default Service Connections
- Create Service with Enterprise Manager
- Create Services with SRVCTL
- Manage Services with Enterprise Manager
- Manage Services with EM
- Manage Services with SRV CTL

## **9. High Availability of Connections**

- Types of Workload Distribution
- Client-Side Connect-Time Load Balancing
- Client-Side Connect-Time Failover
- Server-Side Connect-Time Load Balancing
- Fast Application Notification: Overview & Benefits
- FAN-Supported Event Types
- FAN Event Status

## **10. Upgrading and Patching Oracle RAC**

- Patch Properties
- Types of Patches
- Setting Up Patching
- Downloading Patches
- Rolling Patches
- Configuring the Software Library
- Obtaining Oracle RAC Patches
- Reduced Down-Time Patching for Cluster Environments

## **11. Oracle RAC One Node**

- Verify an Existing RAC One Node Database
- Oracle RAC One Node Online Migration
- Online Migration Considerations
- Perform an Online Migration
- Online Migration Illustration
- Online Maintenance: Rolling Patches
- Add an Oracle RAC One Node Database to an Existing Cluster
- Convert an RAC One Node Database to RAC

## **12. Quality of Service Management**

- QoS Management Overview
- QoS Management Background
- QoS Management and Exadata Database Machine
- QoS Management Benefits
- QoS Management Focus
- QoS Management Functional Overview
- QoS Management Policy Sets
- Server Pools

## **13. Design for High Availability**

- Causes of Planned Down Time
- Causes of Unplanned Down Time
- Oracle's Solution to Down Time
- RAC and Data Guard Complementarity
- Maximum Availability Architecture
- RAC and Data Guard Architecture
- RAC and Data Guard Topologies
- Data Guard Broker (DGB) and Oracle Clusterware (OC) Integration

## Who Should Attend

This Oracle RAC Administration R2 training is ideal for those working with the profiles of:

- Database Administrators
- Support Engineer
- Technical Administrator
- Data Warehouse Administrator

## Pre Requisite

### Required:

- General understanding of database administration
- Certification of Oracle Grid Infrastructure 11g: Manage Clusterware and ASM - Release 2

### Suggested Prerequisites:

The person should complete any of the following courses before taking this course:

- Oracle Database 11g: Administration Workshop I Release 2
- Oracle Database 11g: New Features for Administrators DBA Release 2

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