

Oracle Database 11g: RAC Administration Release 2

Duration: 4 Days

What you will learn

This Oracle Database 11g: RAC Administration Release 2 NEW training explores RAC database administration in the Oracle Grid Infrastructure environment. Expert Oracle University instructors will help you develop the skills to administer cluster databases using Enterprise Manager and command-line utilities like SRVCTL, CRSCTL and SQL*Plus.

Learn to:

- Install Oracle Clusterware and Real Application Clusters.
- Administer a RAC Database.
- Administer database services in an RAC environment.
- Administer Oracle Clusterware.
- Add/Remove a node to/from a cluster.
- Patch Oracle Clusterware and RAC software.
- Upgrade and patch Oracle RAC databases.
- Study the new connection architecture and how to make those connections highly available.

Benefits to You

Ensure fast, reliable, secure and easy to manage performance. Optimize database workloads, lower IT costs and deliver a higher quality of service by enabling smooth and rapid consolidation within your Datacenter.

Backup and Recovery

You'll also study backup and recovery issues relative to cluster database environments. Explore Oracle RAC One Node, online migration and quality of service concepts. New materials and labs have been added to enhance the customer experience with the latest information.

Counts as Hands-On Certification Requirement

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

Please Note:

Only Classroom Training, Live Virtual Class or Training On Demand formats of this course will meet the certification hands-on requirement.

Audience

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

Related Training

Required Prerequisites

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

Suggested Prerequisites

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

Course Objectives

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
Identify Real Application Clusters components

Course Topics

Grid Infrastructure: Overview

Oracle Grid Infrastructure
What Is a Cluster?
What Is Clusterware?
Oracle Clusterware
Oracle Clusterware Architecture and Services
Goals for Oracle Clusterware
Oracle Clusterware Networking
Oracle Grid Infrastructure for a Cluster

RAC Concepts

Overview of Oracle RAC
RAC One Node Single-Instance High Availability
Oracle RAC One Node
Oracle RAC One Node and Oracle Clusterware
Cluster-Aware Storage Solutions
Oracle Cluster File System
Benefits of Using RAC
Clusters and Scalability

Installing and Configuring Oracle RAC

Installing the Oracle Database Software
Creating the Cluster Database
Database Type Selection
Database Identification
Cluster Database Management Options
Passwords for Database Schema Owners
Database File Locations
Recovery Configuration

Oracle RAC Administration

- Oracle RAC Administration
- Cluster Database Instance Home Page
- Cluster Home Page
- Configuration Section
- Topology Viewer
- Enterprise Manager Alerts and RAC
- Enterprise Manager Metrics and RAC
- Enterprise Manager Alert History and RAC

Managing Backup and Recovery for RAC

- RAC and Instance Recovery
- Instance Recovery and Database Availability
- Instance Recovery and RAC
- Protecting Against Media Failure
- Media Recovery in Oracle RAC
- Parallel Recovery in RAC
- Archived Log File Configurations
- RAC and the Fast Recovery Area

Global Resource Management Concepts

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

RAC Database Monitoring and Tuning

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

Managing High Availability of Services

- Oracle Services
- Services for Policy- and Administrator-Managed Databases
- Default Service Connections
- Creating Service with Enterprise Manager
- Creating Services with SRVCTL
- Managing Services with Enterprise Manager
- Managing Services with EM
- Managing Services with srvctl

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
- Fast Application Notification: Benefits
- FAN-Supported Event Types
- FAN Event Status

Upgrading and Patching Oracle RAC

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

Oracle RAC One Node

- Verifying an Existing RAC One Node Database
- Oracle RAC One Node Online Migration
- Online Migration Considerations
- Performing an Online Migration
- Online Migration Illustration
- Online Maintenance: Rolling Patches
- Adding an Oracle RAC One Node Database to an Existing Cluster
- Converting a RAC One Node Database to RAC

Quality of Service Management

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

Design for High Availability

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