

Oracle Database 11g: RAC Administration Release 2 NEW

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 Clusterware and ASM Release 2 NEW

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