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 path 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.

Related Training

Required Prerequisites

General understanding of database administration

Oracle Grid Infrastructure 11g: Manage Clusterware and ASM - Release 2

Suggested Prerequisites
Oracle Database 11g: Administration Workshop I Release 2

Oracle Database 11g: New Features for Administrators

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