Oracle Database 11g RAC for Administrators

Course Summary

Description

This course provides an introduction to the features of Oracle Real Application Clusters (RAC) as well as the tasks necessary to properly install, configure and maintain an Oracle RAC cluster. Students will learn how Oracle RAC works, the components necessary to create the RAC cluster and how to administer it. This will include how to configure Cluster Ready Services (CRS), the Oracle Database instances, and Oracle Net in a RAC environment.

Objectives

At the end of this course, students will be able to:

- Plan, configure and administer Oracle RAC for performance and high availability
- Learn the skills necessary to configure and maximize the performance of their Oracle RAC database system.

Topics

- Prerequisites for creating an Oracle RAC
- Configuring hardware and OS for RAC.
- Install Oracle Clusterware and Oracle RAC databases.
- Administering the Oracle Cluster using Grid Control.
- Administering the Oracle Cluster using Command Line Utilities.
- Adding and removing nodes from the cluster.
- Patching the Oracle cluster.

Audience

This course is designed for database administrators.

Prerequisites

The student must be familiar with Oracle 9i, 10g, or 11g database.

Duration

Five days

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Course Outline

I. RAC Architecture and Theory
- A. Intro to the class
- B. Oracle RAC introduction.
- C. Overview of Cluster Ready Services and Cache Fusion.
- D. Global Resources.
- E. Architecting an Oracle RAC database.

II. Storage, Hardware and OS
- A. RAC hardware prerequisites.
- B. Configuring the hardware for RAC.
- C. Configuring the OS for RAC.

III. Installing Oracle RAC
- A. Performing pre-installation tasks.
- B. Installing and upgrading Cluster Ready Services.
- C. Install and configure ASM.
- D. Installing and upgrading the Oracle Database Server in a RAC environment.
- E. Create the Oracle RAC database.
- F. Install the Grid Control Agent.

IV. Oracle Administration
- A. Administer the Oracle RAC cluster with Grid Control.
- B. Start and stop the RAC instances with Grid Control and manually.
- C. Modify Oracle parameters for all RAC instances and individually.
- D. Add a node to the RAC cluster.
- E. Remove a node from the RAC cluster.

V. RAC Administration
- A. View the status of the cluster (manually).
- B. View the RAC configuration.
- C. Reconfigure the RAC cluster.
- D. Change VIP and interconnect addresses.
- E. Patch a node in the cluster.

VI. Oracle Service and Workload Management
- A. Configure and manage Oracle Services.
- B. Set performance metric thresholds on services.
- C. Configure service aggregations.
- D. Configure load balancing.
- E. Use the Load Balancing Advisor.
- F. Configure ONS and TAF.

VII. Backup and Recovery
- A. Configure RMAN with RAC.
- B. Configure the flash recovery area.
- C. Design a backup strategy for a RAC database.
- D. Backup the OCR and voting disks.
- E. Configure the voting disk for redundancy.

VIII. Troubleshooting
- A. Identify critical database log files.
- B. Identify critical RAC cluster log files.
- C. Review procedures for debugging a RAC cluster.

IX. Best Practices and Tuning
- A. Review RAC best practices.
- B. Design a Maximum Availability Architecture configuration.
- C. Review ASM configurations and best practices.

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