Performance Tuning Oracle and RAC on Linux & UNIX

Course Summary

Description
Students will become proficient in all aspects of Oracle database performance tuning; this includes database and instance tuning, and SQL tuning. The hardware and software interactions that affect Oracle database performance are also covered in this course and include tuning the operating system, Oracle I/O and storage area networks. Hands-on lab exercises will be used to reinforce key Oracle performance tuning concepts.

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

- Identify performance bottlenecks at the hardware, OS, database, instance, and application levels
- Monitor database performance using Oracle Enterprise Manager or Statspack
- Diagnose performance problems with Oracle tools
- Perform tuning tasks with Oracle Enterprise Manager and the command line
- Configure the Linux or UNIX OS kernel parameters for optimum performance
- Identify and resolve I/O, data storage and database configuration problems
- Control resource usage with Resource Manager
- Use the diagnostic tools to gather information about SQL statement processing

Topics

- Overview of Oracle Database Performance Tuning
- Defining an Effective Tuning Strategy
- Linux or UNIX Configuration and Tuning for Oracle
- Tuning SAN I/O for Oracle
- Diagnostic and Tuning Tools
- Tuning the Shared Pool and Buffer Cache
- Dynamic Instance Resizing and sizing SGA Structures
- Tuning the Oracle Shared Server
- Optimizing Sort Operations
- Managing Statistics and using Resource Manager
- SQL Statement tuning, index tuning and optimizer operations
- Application Tuning
- Using Oracle blocks and data storage structures efficiently
- Using Materialized Views
- Monitoring and Detecting Lock Contention
- Introduction to Oracle RAC
- Oracle RAC Performance Tuning
- Using the Oracle Parallel Query Option

Audience
This class is designed for the DBA, system administrator, developer, or technical consultant who wishes to learn how to tune Oracle databases on the Linux or UNIX operating systems for maximum performance.

Prerequisites
Students should have successfully completed an Oracle Administration class and previous Oracle SQL training is recommended.

Duration
Fours days

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