



## Oracle Database: Performance Management and Tuning

- Use the Oracle tuning methodology
- Use Oracle-supplied tools for monitoring and diagnosing SQL and instance tuning issues
- Use database advisors to proactively correct performance problems
- Identify problem SQL statements
- Tune SQL performance problems
- Monitor instance performance by using Enterprise Manager
- Tune instance components by primarily using instance parameters

### Prerequisites

#### Suggested Prerequisite

- Oracle Database 12c R2: Install and Upgrade Workshop Ed 2
- Familiarity with Oracle Database installation
- Familiarity with Oracle Database configuration concepts

#### Required Prerequisite

- Oracle Database 18c: Administration Workshop Ed 1
- Basic knowledge of Linux operating system
- A working knowledge of SQL and PL/SQL packages
- Basic understanding of Oracle Database architecture
- Familiarity with basic database monitoring procedures

### Audience

- Administrator
- Database Administrator

## Objectives

- Use the Oracle Database tuning methodology appropriate to the available tools
- Utilize database advisors to proactively tune an Oracle Database Instance
- Use the tools based on the Automatic Workload Repository to tune the database
- Diagnose and tune common SQL related performance problems
- Diagnose and tune common Instance related performance problems
- Use Enterprise Manager performance-related pages to monitor an Oracle Database

## Topics

- Introduction
- Basic Tuning Diagnostics
- Using Automatic Workload Repository
- Defining the Scope of Performance Issues
- Using Metrics and Alerts
- Using Baselines
- Using AWR-Based Tools
- Real-Time Database Operation Monitoring
- Monitoring Applications
- Identifying Problem SQL Statements
- Influencing the Optimizer
- Reducing the Cost of SQL Operations
- Using SQL Performance Analyzer
- SQL Performance Management
- Using Database Replay
- Tuning the Shared Pool
- Tuning the Buffer Cache
- Tuning PGA and Temporary Space
- Automatic Memory
- Performance Tuning Summary with Waits