

Oracle Database: SQL Tuning for Developers Ed 2

Introduction

- Workshops, Demo Scripts, and Code Example Scripts
- SQL Environments Available in the Course
- Course Objectives, Course Agenda and Appendixes Used in this Course
- Sample Schemas Used in the Course
- Class Account Information
- Appendices in the Course
- Audience and Prerequisites

Introduction to SQL Tuning

- SQLTXPLAIN (SQLT) Diagnostic Tool
- Development Environments: Overview
- SQL Tuning Session
- SQL Tuning Strategies

Using Application Tracing Tools

- Using the SQL Trace Facility: Overview
- The trcsess Utility
- Formatting SQL Trace Files: Overview
- Available Tracing Tools: Overview
- Steps Needed Before Tracing

Understanding Basic Tuning Techniques

- Developing Efficient SQL statement
- Index Usage
- Data Type Mismatch
- Table Design
- Scripts Used in This Lesson
- Transformed Index
- Tune the ORDER BY Clause
- NULL usage

Optimizer Fundamentals

- Why Do You Need an Optimizer?
- Query Transformer
- SQL Statement Processing
- Optimizer Features and Oracle Database Releases
- Cost-Based Optimizer
- SQL Statement Representation

- Components of the Optimizer
- Adaptive Query Optimization

Generating and Displaying Execution Plans

- DBML_SQL_MONITOR
- V\$SQL_PLAN View
- AUTOTRACE
- The EXPLAIN PLAN Command
- Plan Table
- Execution Plan?
- SQL Monitoring
- Automatic Workload Repository

Interpreting Execution Plans and Enhancements

- Optimizer: Table and Index Access Paths
- Full Table Scan
- Common Observations
- Row Source Operations
- Indexes
- Adaptive Optimizations
- Main Structures and Access Paths
- Interpreting a Serial Execution Plan

Optimizer Join Operations

- Join Methods
- Join Types

Other Optimizer Operators

- SQL operators
- Result Cache operators
- Other N-Array Operations

Introduction to Optimizer Statistics Concepts

- Gather and Manage Optimizer Statistics: Overview
- Optimizer Statistics
- Types of Optimizer Statistics

Using Bind Variables

- Cursor Sharing and Bind Variables
- Cursor Sharing and Different Literal Values

SQL Plan Management

- Maintaining SQL Performance
- SQL Plan Management

Workshops

- Workshop 9
- Workshop 2
- Workshop 4
- Workshop 8
- Workshop 5
- Workshop 6 & 7
- Workshop 1
- Workshop 3