ODAT-17 - ORACLE DATABASE 19C: PERFORMANCE MANAGEMENT AND TUNING

Categoria: **Database**

INFORMAZIONI SUL CORSO

Durata:	Categoria:	Qualifica Istruttore:	Dedicato a:	Produttore:
5 Giorni	Database	Oracle Certified Professional	Professionista IT	Oracle

OBIETTIVI

-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

PREREQUISITI

Suggested Prerequisites

-Familiarity with Oracle Database installation
-Familiarity with Oracle Database configuration concepts

Required Prerequisites

-Oracle Database Administration
-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

CONTENUTI

1: Overview

-Overview
-Practice 1-1: Preparing the Databases

2: Defining the Scope of Performance Issues

-Defining the Scope of Performance Issues Objectives
-Tuning Life Cycle Phases
-Practice 2-1: Using Enterprise Manager to Identify OS Issues

3: Using the Time Model to Diagnose Performance Issues

- -Using the Time Model to Diagnose Performance Issues
- -Practice 3-1: Viewing the Top Wait Events and the Time Model

4: Using Statistics and Wait Events to Diagnose Performance Issues

- -Using Statistics and Wait Events to Diagnose Performance Issues
- -Instance Activity and Wait Event Statistics
- -Practice 4-1: Viewing System Statistics and Wait Events

5: Using Log and Trace Files to Monitor Performance

- -Using Log and Trace Files to Monitor Performance
- -Practice 5-1: Viewing Performance Information in the Alert Log

6: Using Enterprise Manager Cloud Control and SQL Developer to Monitor Performance

- -Using Enterprise Manager Cloud Control and SQL Developer to Monitor Performance
- -Practice 6-1: Using Enterprise Manager to Monitor Performance
- -Practice 6-2: Using SQL Developer to Monitor Performance Part 1
- -Practice 6-2: Using SQL Developer to Monitor Performance Part 2

7: Using Statspack to View Performance Data

- -Using Statspack to View Performance Data
- -Practice 7-1: Installing Statspack
- -Practice 7-2: Creating Snapshots
- -Practice 7-3: Generating Statspack Reports
- -Practice 7-4: Using Statspack to Examine Segment Statistics (Optional)

8: Using Automatic Workload Repository

- -Using Automatic Workload Repository
- -Managing AWR Data in a Multitenant Environment
- -Practice 1-1: Creating and Managing AWR Snapshots
- -Practice 1-2: Generating and Viewing an AWR Report
- -Practice 1-3: Generating and Viewing a Compare Periods Report

9: Using Metrics and Alerts

- -Using Metrics and Alerts
- -Practice 2-1: Setting Up and Viewing Server-Generated Alerts

10: Using Baselines

- -Using Baselines

11: Managing Automated Maintenance Tasks

- -Managing Automated Maintenance Tasks
- -Practice 1-1: Configuring Automatic Maintenance Tasks (Part 1)
- -Practice 1-1: Configuring Automatic Maintenance Tasks (Part 2)

12: Using ADDM to Analyze Performance

- -Using ADDM to Analyze Performance
- -Compare Periods ADDM: Analysis
- -Practice 2-1: Using AWR-Based Tools to Identify Performance Issues

-Practice 2-2: Performing an ADDM Analysis of a PDB

13: Using Active Session History Data for First Fault System Analysis

-Using Active Session History Data for First Fault System Analysis
-Practice 3-1: Generating and Reviewing an ASH Report to Identify Performance Issues

14: Using Emergency Monitoring and Real-Time ADDM to Analyze Performance Issues

-Using Emergency Monitoring and Real-Time ADDM to Analyze Performance

15: Overview of SQL Statement Processing

-Overview
-Processing a DML Statement

16: Maintaining Indexes

-Maintaining Indexes
-Automatic Indexing Task
-Practice 2-1: Coalescing an Index

17: Maintaining Tables

-Maintaining Tables
-Block Space Management with Free Lists
-Shrinking Segments: Overview
-Advanced Index Compression
-Practice 3-1: Analyzing the Impact of Excess Blocks

18: Introduction to Query Optimizer

-Introduction
-Using Initialization Parameters to Control Optimizer Behavior

19: Understanding Execution Plans

-Understanding Execution Plans
-SQL*Plus AUTOTRACE
-Practice 2-1: Using AUTOTRACE and EXPLAIN PLAN

20: Viewing Execution Plans by Using SQL Trace and TKPROF

-Viewing Execution Plans by Using SQL Trace and TKPROF
-Practice 3-1: Using SQL TRACE and the TKPROF Utility

21: Managing Optimizer Statistics

-Managing Optimizer Statistics
-Extended Statistics
-Practice 4-1: Capturing Extended Statistics
-Practice 4-2: Determining the Impact of Stale Statistics
-Practice 4-3: Using the Optimizer Statistics Advisor to Improve Statistics Collection Quality

22: Using Automatic SQL Tuning

-Using Automatic SQL Tuning

23: Using the SQL Plan Management Feature

-Using the SQL Plan Management Feature

-Practice 6-1: Using SQL Plan Management (Part 1)
-Practice 6-1: Using SQL Plan Management (Part 2)

24: Overview of the SQL Advisors
-Overview of the SQL Advisors

25: Using the SQL Tuning Advisor
-Using the SQL Tuning Advisor
-Practice 2-1: Using the SQL Tuning Advisor

26: Using the SQL Access Advisor
-Using the SQL Access Advisor
-Practice 3-1: Using the SQL Access Advisor to Improve SQL Performance

27: Overview of Real Application Testing Components
-Overview of Real Application Testing Components

28: Using SQL Performance Analyzer to Determine the Impact of Changes
-Using SQL Performance Analyzer to Determine the Impact of Changes
-Practice 2-1: Using SQL Performance Analyzer (Part 1)
-Practice 2-1: Using SQL Performance Analyzer (Part 2)
-Practice 2-2: Seeding SQL Plan Baselines from SQL Performance Analyzer

29: Using Database Replay to Test System Performance
-Using Database Replay to Test System Performance
-Database Replay Packages
-Practice 3-1: Configuring and Using Database Replay at the PDB Level

30: Implementing Real-Time Database Operation Monitoring
-Implementing Real-Time Database Operation Monitoring
-Practice 1-1: Monitoring a Composite Database Operation
-Practice 1-2: Monitoring a PL/SQL Operation

31: Using Services to Monitor Applications
-Using Services to Monitor Applications
-Creating Services
-Service Aggregation Configuration
-Practice 2-1: Using Services in a Single-Instance Oracle Database (Part 1)
-Practice 2-1: Using Services in a Single-Instance Oracle Database (Part 2)
-Practice 2-2: Tracing Services in a Single-Instance Environment

32: Overview of Memory Structures
-Overview
-Practices for Lesson 1: Overview

33: Managing Shared Pool Performance
-Managing Shared Pool Performance
-Avoid Hard Parses
-Sizing the Shared Pool
-Practice 2-1: Sizing the Shared Pool

-Practice 2-2: Tuning a Hard-Parse Workload
-Practice 2-3: Tuning a Soft-Parse Workload
-Practice 2-4: Keeping Objects in the Shared Pool

34: Managing Buffer Cache Performance
-Managing Buffer Cache Performance
-Buffer Cache Hit Ratio
-Caching Tables
-Multiple Block Sizes
-Practice 3-1: Sizing the Buffer Cache
-Practice 3-2: Using the Keep Pool
-Practice 3-3: Using Force Full Database Caching

35: Managing PGA and Temporary Space Performance
-Managing PGA and Temporary Space Performance
-Monitoring SQL Memory Usage
-Practice 4-1: Adjusting the Value of PGA_AGGREGATE_TARGET

36: Configuring the Large Pool
-Configuring the Large Pool

37: Using Automatic Shared Memory Management
-Using Automatic Shared Memory Management
-Using the V$SYSTEM_PARAMETER View
-Practice 6-1: Enabling Automatic Shared Memory Management

38: Introduction to In-Memory Column Store
-Introduction

39: Configuring the In-Memory Column Store Feature
-Configuring the In-Memory Column Store Feature
-Practice 2-1: Configuring In-Memory Column Store
-Practice 2-2: Configuring In-Memory Objects
-Practice 2-3: Querying In-Memory Objects and Viewing Execution Plans

40: Using In-Memory Column Store with Oracle Database Features
-Using In-Memory Column Store with Oracle Database Features
-Practice 4-1: Exporting and Importing In-Memory Objects

INFO

Materiale didattico: Materiale didattico ufficiale Oracle in formato digitale
Costo materiale didattico: incluso nel prezzo del corso a Calendario
Natura del corso: Operativo (previsti lab su PC)