

**OD-19c-PMT: Oracle Database 19c:
Performance Management and Tuning**

Course Code: OD-19c-PMT

Duration: 5 days

Instructor-led Training (ILT) | Virtual Instructor-
led Training (VILT)**OVERVIEW**

This course Build the Skills Needed to Monitor and Tune an Oracle Database. In this course you will learn how to use targeted query tuning and methodology to identify tuning problems in an Oracle database to take corrective action, how to identify and tune a common database, troubleshoot performance issues, and how to use advisors inside the database in order to understand in advance what settings need to be made and how to use the various tools provided by Oracle to configure the database.

SKILLS COVERED

After completing this course, you will be able to:

- Describe Performance Management
- Use AWR Performance Statistics
- Use AWR Based Tools
- Improve SQL Statement Performance
- Influence the Optimizer
- Use Tuning Analyzers and Advisors
- Monitor Operations and applications
- Manage Memory
- Manage Database Memory
- Use In-Memory Column Store Feature

WHO SHOULD ATTEND?

This course intended for Database administrators and technical support staff.

PREREQUISITES

- Working knowledge of using SQL and administering an Oracle database 19c.
- Basic knowledge of Linux / UNIX is recommended but not essential.

COURSE CONTENTS

Lesson 01: Overview

Lesson 02: Defining the Scope of Performance
Issues

- Defining the Scope of Performance
Issues Objectives
- Tuning Life Cycle Phases

Lesson 03: Using the Time Model to Diagnose
Performance IssuesLesson 04: Using Statistics and Wait Events to
Diagnose Performance Issues

- Using Statistics and Wait Events to
Diagnose Performance Issues
- Instance Activity and Wait Event
Statistics

Lesson 05: Using Log and Trace Files to Monitor
PerformanceLesson 06: Using Enterprise Manager Cloud
Control and SQL Developer to Monitor
PerformanceLesson 07: Using Statspack to View
Performance DataLesson 08: Using Automatic Workload
Repository

- Using Automatic Workload Repository
- Managing AWR Data in a Multitenant
Environment

Lesson 09: Using Metrics and Alerts

Lesson 10: Using Baselines

Lesson 11: Managing Automated Maintenance
Tasks

Lesson 12: Using ADDM to Analyze Performance

- Using ADDM to Analyze Performance

- Compare Periods ADDM: Analysis

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

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

Lesson 15: Overview of SQL Statement Processing

- Overview
- Processing a DML Statement

Lesson 16: Maintaining Indexes

- Maintaining Indexes
- Automatic Indexing Task

Lesson 17: Maintaining Tables

- Maintaining Tables
- Block Space Management with Free Lists
- Shrinking Segments: Overview
- Advanced Index Compression

Lesson 18: Introduction to Query Optimizer

- Introduction
- Using Initialization Parameters to Control Optimizer Behavior

Lesson 19: Understanding Execution Plans

- Understanding Execution Plans
- SQL*Plus AUTOTRACE

Lesson 20: Viewing Execution Plans by Using SQL Trace and TKPROF

Lesson 21: Managing Optimizer Statistics

- Managing Optimizer Statistics
- Extended Statistics

Lesson 22: Using Automatic SQL Tuning

Lesson 23: Using the SQL Plan Management

Feature

Lesson 24: Overview of the SQL Advisors

Lesson 25: Using the SQL Tuning Advisor

Lesson 26: Using the SQL Access Advisor

Lesson 27: Overview of Real Application Testing Components

Lesson 28: Using SQL Performance Analyzer to Determine the Impact of Changes

Lesson 29: Using Database Replay to Test System Performance

- Using Database Replay to Test System Performance
- Database Replay Packages

Lesson 30: Implementing Real-Time Database Operation Monitoring

Lesson 31: Using Services to Monitor Applications

- Using Services to Monitor Applications
- Creating Services
- Service Aggregation Configuration

Lesson 32: Overview of Memory Structures

Lesson 33: Managing Shared Pool Performance

- Managing Shared Pool Performance
- Avoid Hard Parses
- Sizing the Shared Pool

Lesson 34: Managing Buffer Cache Performance

- Managing Buffer Cache Performance
- Buffer Cache Hit Ratio
- Caching Tables
- Multiple Block Sizes

Lesson 35: Managing PGA and Temporary Space Performance

- Managing PGA and Temporary Space Performance
- Monitoring SQL Memory Usage

Lesson 36: Configuring the Large Pool

Lesson 37: Using Automatic Shared Memory Management

- Using Automatic Shared Memory Management
- Using the V\$SYSTEM_PARAMETER View

Lesson 38: Introduction to In-Memory Column Store

Lesson 39: Configuring the In-Memory Column Store Feature

Lesson 40: Using In-Memory Column Store with Oracle Database Features

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