

Oracle Database 12c: Administration Workshop Ed 2

Duration: 5 Days

What you will learn

The Oracle Database 12c: Administration Workshop will teach you about the Oracle Database architecture. You will discover how to effectively manage an Oracle Database instance, configure the Oracle Network Environment and perform database maintenance.

Learn To:

Create and manage an Oracle Database Instance.

Create and manage Storage Structures.

Configure the Oracle Network Environment.

Create and manage users.

Monitor the database and manage performance.

Learn basic information on backup and recovery techniques.

Use the Oracle Support Workbench and My Oracle Support to update your Oracle Database software.

Benefits to You

Ensure fast, reliable, secure and easy to manage performance. Optimize database workloads, lower IT costs and deliver a higher quality of service by enabling consolidation onto database clouds.

Participate in Hands-On Practices and Demonstrations

Expert instruction and hands-on demonstrations will provide you with real world experience. By engaging in hands-on exercises to reinforce your learning, you'll develop in demand skills to effectively manage an Oracle Database.

Audience

Data Warehouse Administrator

Database Administrators

Database Designers

Support Engineer

Technical Administrator

Related Training

Required Prerequisites

Working knowledge of SQL and use of PL/SQL packages

Suggested Prerequisites

Basic knowledge of Linux operating system

Course Objectives

Monitor the Database

Manage Database Performance

Implement Database Auditing

Configure the Database Instance Such That Resources Are Appropriately Allocated Among Sessions and Tasks

Schedule Jobs to Run Inside or Outside of the Database

Configure Oracle Net Services

Configure your Database For Backup and Recovery Operations

Describe Oracle Database Architecture

Manage the Oracle Database Instance

Manage Oracle Database Storage structures

Create and Administer User Accounts

Course Topics

Introduction

Course Objectives

Course Schedule

Overview of Oracle Database 12c

Overview of Oracle Cloud

Overview of the HR Schema

Exploring the Oracle Database Architecture

Oracle Database Architecture: Overview

Oracle Database Instance Configurations

Connecting to the Oracle Database Instance

Oracle Database Memory Structures

Process Architecture

Process Structures

Process Startup Sequence

Database Storage Architecture

Managing the Database Instance

Introducing Oracle Database Management Tools

Understanding the Enterprise Manager Management Framework

Logging in to Oracle Enterprise Manager Database Express

Using the Enterprise Manager Database Express Home Page

Using Enterprise Manager Cloud Control

Using SQL*Plus

Using SQL Developer

Initialization Parameter Files

Configuring the Oracle Network Environment

Oracle Net Services Overview

Oracle Net Listener Overview

Establishing Oracle Network Connections

Tools for Configuring and Managing the Oracle Network

Using the Listener Control Utility

Using Oracle Net Configuration Assistant

Using Oracle Net Manager

Using Enterprise Manager Cloud Control

Managing Database Storage Structures

Understanding Storage of Data

Database Block Contents

Exploring the Storage Structure

Creating a New Tablespace

Overview of Tablespaces Created by Default

Managing Tablespaces

Viewing Tablespace Information

Using Oracle Managed Files

Administering User Security

Database User Accounts

Predefined Administrative Accounts

Creating a User

Authentication

Unlocking a User Account and Resetting the Password

Privileges

Roles

Profiles

Managing Data Concurrency

Overview of Locks

Locking Mechanism

Data Concurrency

DML Locks

Enqueue Mechanism

Lock Conflicts

Managing Undo Data

Undo Data Overview

Transactions and Undo Data

Storing Undo Information

Comparing Undo Data and Redo Data

Managing Undo

Configuring Undo Retention

Guaranteeing Undo Retention

Changing an Undo Tablespace to a Fixed Size

Implementing Oracle Database Auditing

Separation of Responsibilities

- Database Security
- Monitoring for Compliance
- Standard Database Auditing
- Unified Audit Data Trail
- Separation of Duties for Audit Administration (AUDIT_ADMIN and AUDIT_VIEWER roles)
- Configuring the Audit trail
- Specifying Audit Options

Performing Database Maintenance

- Database Maintenance
- Viewing the Alert History
- Terminology
- Automatic Workload Repository (AWR)
- Statistic Levels
- Automatic Database Diagnostic Monitor (ADDM)
- Advisory Framework
- Enterprise Manager and Advisors

Managing Performance

- Performance Monitoring
- Tuning Activities
- Performance Planning
- Instance Tuning
- Performance Tuning Methodology
- Performance Tuning Data
- Monitoring Performance
- Managing Memory

Managing Performance: SQL Tuning

- SQL Tuning
- Oracle Optimizer
- SQL Plan Directives
- Adaptive Execution Plans
- SQL Advisors
- Automatic SQL Tuning Results
- Implement Automatic Tuning Recommendations
- SQL Tuning Advisor

Managing Resources by Using Database Resource Manager

- Database Resource Manager Overview
- Database Resource Manager Concepts
- Using the Resource Manager
- Default Maintenance Resource Manager Plan
- Default Plan Example
- Resource Manager Workflow
- Specifying Resource Plan Directives
- Resource Allocation Methods for Resource Plans

Automating Tasks by Using Oracle Scheduler

- Simplifying Management Tasks
- Understanding a Simple Job
- Core Components

- Basic Work Flow
- Persistent Lightweight Jobs
- Using a Time-Based or Event-Based Schedule
- Creating a Time-Based Job
- Creating an Event-Based Schedule

Managing Space

- Space Management Overview
- Block Space Management
- Row Chaining and Migration
- Free Space Management Within Segments
- Types of Segments
- Allocating Extents
- Allocating Space
- Creating Tables Without Segments

Backup and Recovery Concepts

- Categories of Failures
- Flashback Technology
- Understanding Instance Recovery
- Phases of Instance Recovery
- Tuning Instance Recovery
- Using the MTTR Advisor
- Media Failure
- Configuring for Recoverability

Moving Data

- Moving Data: General Architecture
- Oracle Data Pump
- SQL*Loader
- External Tables

Working with Oracle Support

- Using the Support Workbench
- Using Enterprise Manager
- Working with Oracle Support
- My Oracle Support Integration
- Researching an Issue
- Logging Service Requests
- Managing Patches
- Applying a Patch Release