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. In this course, you will be introduced to Oracle Database Cloud Service.

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.

Gain an understanding of the Oracle Database Cloud Service.

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
Technical Administrator

Related Training

Required Prerequisites

Working knowledge of SQL and use of PL/SQL packages

Suggested Prerequisites
Basic knowledge of Linux operating system

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

Monitor the Database

Manage Database Performance

Implement Database Auditing

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

Gain an understanding of the Oracle Database Cloud Service

Schedule Jobs to Run Inside or Outside of the Database

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 for 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

Oracle Database Cloud Service: Overview
Database as a Service Architecture, Features and Tooling
Software Editions: Included Database Options and Management Packs
Automated Database Provisioning
Managing the Compute Node Associated With a Database Deployment
Enabling Access to a Compute Node Port
Scaling a Database Deployment & Patching Database as a Service
Using the Oracle Database Cloud Service Console to Manage Patches