

Oracle Database 11g: Administration Workshop I Release 2

Duration: 5 Days

What you will learn

This Oracle Database 11g: Administration Workshop I Release 2 course explores the fundamentals of basic database administration. Expert Oracle University instructors will reinforce topics with structured hands-on practices that will prepare you for the corresponding Oracle Certified Associate exam.

Learn To:

Install Oracle Grid Infrastructure.

Create and manage users.

Install and configure an Oracle Database.

Create and manage storage structures.

Administer the Oracle Database.

Understand the Oracle database architecture and how its components work and interact with one another.

Perform backup and recovery.

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 smooth and rapid consolidation within your Datacenter.

Create an Operational Database

You will also learn how to create an operational database and properly manage the various structures in an effective and efficient manner. This includes performance monitoring, database security, user management and backup/recovery techniques.

Training Requirements

This Oracle Database 11g: Administration Workshop I Release 2 course fulfills the training requirement for an Oracle Certification Path. Only instructor-led online (LVC, LWC), in-class (ILT) or Training On Demand courses fulfill the requirement. Please note that Self-Study Courses and Knowledge Center courses do not fulfill the training requirement.

Database Administrators

Java Developer

Support Engineer

Technical Administrator

Technical Consultant

Related Training

Required Prerequisites

Taken Oracle Introduction to SQL course or equivalent experience

Oracle Database: Introduction to SQL

Suggested Prerequisites

Taken Oracle PL/SQL course or equivalent experience

Course Objectives

Install Oracle Grid Infrastructure

Install and configure Oracle Database 11g

Configure Oracle Net services

Monitor and administer undo data

Manage the database storage structures

Create and administer user accounts

Perform basic backup and recovery of a database

Manage data concurrency

Monitor performance

Describe Oracle Database Architecture

Course Topics

Exploring the Oracle Database Architecture

Oracle Database Architecture Overview

Oracle ASM Architecture Overview

Process Architecture

Memory structures

Logical and physical storage structures

ASM storage components

Installing your Oracle Software

Tasks of an Oracle Database Administrator

Tools Used to Administer an Oracle Database

Installation: System Requirements

Oracle Universal Installer (OUI)

Installing Oracle Grid Infrastructure

Installing Oracle Database Software

Silent Install

Creating an Oracle Database

- Planning the Database
- Using the DBCA to Create a Database
- Password Management
- Creating a Database Design Template
- Using the DBCA to Delete a Database

Managing the Oracle Database Instance

- Start and stop the Oracle database and components
- Use Oracle Enterprise Manager
- Access a database with SQLPlus
- Modify database installation parameters
- Describe the stages of database startup
- Describe database shutdown options
- View the alert log
- Access dynamic performance views

Manage the ASM Instance

- Set up initialization parameter files for ASM instance
- Start up and shut down ASM instances
- Administer ASM disk groups

Configuring the Oracle Network Environment

- Use Enterprise Manager to create and configure the Listener
- Enable Oracle Restart to monitor the listener
- Use tnsping to test Oracle Net connectivity
- Identify when to use shared servers and when to use dedicated servers

Managing Database Storage Structures

- Storage Structures
- How Table Data Is Stored
- Anatomy of a Database Block
- Space Management in Tablespaces
- Tablespaces in the Preconfigured Database
- Actions with Tablespaces
- Oracle Managed Files (OMF)

Administering User Security

- Database User Accounts
- Predefined Administrative Accounts
- Benefits of Roles
- Predefined Roles
- Implementing Profiles

Managing Data Concurrency

- Data Concurrency
- Enqueue Mechanism
- Resolving Lock Conflicts
- Deadlocks

Managing Undo Data

- Data Manipulation
- Transactions and Undo Data

Undo Data Versus Redo Data
Configuring Undo Retention

Implementing Oracle Database Auditing

Describe DBA responsibilities for security
Enable standard database auditing
Specify audit options
Review audit information
Maintain the audit trail

Database Maintenance

Manage optimizer statistics
Manage the Automatic Workload Repository (AWR)
Use the Automatic Database Diagnostic Monitor (ADDM)
Describe and use the advisory framework
Set alert thresholds
Use server-generated alerts
Use automated tasks

Performance Management

Performance Monitoring
Managing Memory Components
Enabling Automatic Memory Management (AMM)
Automatic Shared Memory Advisor
Using Memory Advisors
Dynamic Performance Statistics
Troubleshooting and Tuning Views
Invalid and Unusable Objects

Backup and Recovery Concepts

Part of Your Job
Statement Failure
User Error
Understanding Instance Recovery
Phases of Instance Recovery
Using the MTTR Advisor
Media Failure
Archive Log Files

Performing Database Backups

Backup Solutions: Overview
Oracle Secure Backup
User-Managed Backup
Terminology
Recovery Manager (RMAN)
Configuring Backup Settings
Backing Up the Control File to a Trace File
Monitoring the Flash Recovery Area

Performing Database Recovery

Opening a Database
Data Recovery Advisor

- Loss of a Control File
- Loss of a Redo Log File
- Data Recovery Advisor
- Data Failures
- Listing Data Failures
- Data Recovery Advisor Views

Moving Data

- Describe ways to move data
- Create and use directory objects
- Use SQL*Loader to move data
- Use external tables to move data
- General architecture of Oracle Data Pump
- Use Data Pump export and import to move data

Working with Support

- Use the Enterprise Manager Support Workbench
- Work with Oracle Support
- Log service requests (SR)
- Manage patches

Related Courses

- Oracle Database 11g: Administration Workshop I Release 2