
Oracle Database 11g DBA Training

Mode: Classroom

Duration: 40 hours

Pre-requisite:

- Basic of Oracle Database concepts

Audience

- Database Administrators
- Java Developer
- Support Engineer
- Technical Administrator
- Technical Consultant

Suggested Prerequisites

- Taken Oracle Introduction to SQL course or equivalent experience
- Taken Oracle PL/SQL course or equivalent experience
- Oracle Database: Introduction to SQL

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 and shutdown
- 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 and 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 and 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
- 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
- Loss of a Control and Redo Log File
- Data Recovery Advisor and its views
- Data Failures
- Listing Data Failures

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