



Oracle 12c: Database Administrator (DBA)

~~DURASI 5 hari~~

Deskripsi:

Training ini merupakan tahapan awal bagi profesional IT yang ingin berkarir sebagai Oracle Database Administrator (Oracle DBA), materi dirancang untuk memberikan kemampuan dalam melakukan manajemen database Oracle mulai dari tingkat dasar sampai lanjut. Dalam training ini peserta akan diajarkan mulai dari cara instalasi, manajemen, maintenance database sampai dengan cara mengamankan database dari kemungkinan-kemungkinan kerusakan yang ada. Peserta akan dituntun untuk memahami konsep arsitektur database dan bagaimana interaksi antar komponen database ketika database melakukan suatu proses.

Prasyarat:

Untuk memaksimalkan penyerapan materi training, peserta sebaiknya:

- Pernah mengikuti training “Oracle Introduction to SQL”
- Sudah memahami perintah dasar SQL (structure Query Language)

Tinjauan Materi:

Introduction

- Course Objectives
- Overview of Oracle Database 12c
- Overview of Oracle Cloud
- Overview of the HR Schema

Exploring the Oracle Database Architecture

- Oracle Database 12c Introduction
- Oracle Database Architecture: Overview
- Managing the Oracle Database Instance
- Oracle Database Instance Configurations
- Connecting to the Oracle Database Instance
- Oracle Database memory Structures (overview)
- Process Architecture (description)

- Process Structures
- Process Startup Sequence

Oracle Software Installation Basics

- Planning Your Installation
- Configuring Oracle Linux with Oracle RDBMS Pre-Install RPM
- Operating System Groups and Users
- Environment Variables
- Configuring the Oracle Software Owner Environment
- Using Oracle Universal Installer (OUI)

Installing Oracle Database Software

- System Requirements for Oracle Database
- Creating Operating System Groups and Users
- Types of Installations

Creating an Oracle Database by Using DBCA

- Planning the Database Storage Structure
- Types of Databases (based on workload)
- Choosing the Appropriate Character Set
- Understanding How Character Sets are Used
- Setting the NLS_LANG Initialization Parameter
- Using the Database Configuration Assistant (DBCA)

Oracle Database Management Tools

- Introducing Oracle Database Management Tools
- Using SQL*Plus
- Using SQL Developer
- Logging in to Oracle Enterprise Manager Database Express
- Using the Enterprise Manager Database Express Home Page
- Understanding the Enterprise Manager Cloud Control Framework
- Using Enterprise Manager Cloud Control

Managing the Database Instance

- Initialization Parameter Files
- Starting an Oracle Database Instance
- Shutting Down an Oracle Database Instance
- Viewing Log Files
- Using Trace Files
- Using the Dynamic Performance Views
- Data Dictionary

Configuring the Oracle Network Environment

- Oracle Net Services Overview
- Oracle Net Listener Overview
- Establishing Oracle Network Connections
- Connecting to a Server
- Tools for Configuring and Managing the Oracle Network
- Using the Listener Control Utility
- Using Oracle Net Configuration Assistant
- Using Oracle Net Manager

Administering User Security

- Database User Accounts (overview)
- Predefined Administrative Accounts
- Creating a User
- Authentication
- Unlocking a User Account and Resetting the Password
- Privileges
- Roles
- Profiles

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

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

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

Managing Data Concurrency

- Overview of Locks
- Locking Mechanism
- Data Concurrency
- DML Locks
- Enqueue Mechanism
- Lock Conflicts

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

Backup and Recovery Concepts

- Categories of Failures
- Flashback Technology
- Understanding Instance Recovery
- Phases of Instance Recovery
- Tuning Instance Recovery
- Using the MTTR Advisor
- Comparing Complete and Incomplete Recovery
- Oracle Data Protection Solutions

Backup and Recovery Configuration

- Configuring for Recoverability
- Configuring the Fast Recovery Area
- Multiplexing the Control File

- Online Redo Log File
- Multiplexing the Online Redo Log File
- Archived Redo Log Files
- Archiver Process
- Archived Redo Log File Naming and Destinations

Performing Database Backups

- Backup Solutions Overview
- Oracle Secure Backup (overview)
- User Managed Backup (overview)
- Backup Terminology and Types of Backups
- Using Recovery Manager (RMAN)
- Configuring Backup Settings
- Oracle-Suggested Backup
- Backing Up the Control File to a Trace File

Performing Database Recovery

- Data Recovery Advisor
- Loss of a Control File
- Loss of a Redo Log File
- Loss of a Datafile in NOARCHIVELOG Mode
- Loss of a Noncritical Datafile in ARCHIVELOG Mode
- Loss of a System-Critical Datafile in ARCHIVELOG Mode