TechyEdz Solutions

Training | Consulting | Developement | Outsourcing

Oracle 12C DBA

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Oracle 12C DBA Certification Training

➕ Course Overview:

This course will will teach you about the Oracle Database architecture and you will discover how to effectively manage an Oracle Database instance. You will also be provided key information on how to install and administer Oracle Database 12c. It includes various concepts like Oracle DBA Architecture, database structures, memory and process architecture, security, schema objects, data backup and recovery. DBA's are responsible for the design, implementation, support and maintenance of computerized databases in today's organizations. They are also responsible for security, performance and availability of data to users and customers. Here we can learn how to operate the stored data and return meaningful results to analyze the data stored. You can also opt these courses to achieve Database administration certification.

➕ Course Outline:

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

Exploring the Oracle Database Architecture
- ➢ Oracle Database Architecture: Overview
- ➢ Oracle Database Instance Configurations
- ➢ Connecting to the Oracle Database Instance
- ➢ Oracle Database memory Structures (overview)
- ➢ Process Architecture
- ➢ Process Structures
- ➢ Process Startup Sequence
- ➢ Database Storage Architecture

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)
- ➢ Installation Option: Silent Mode

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

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

Performing Database Maintenance
- ➢ Database Maintenance (overview)
- ➢ 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

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

- ➢ Managing Network Access to Database as a Service
- ➢ 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

♣ Prerequisites:

- • Working knowledge of SQL and use of PL/SQL packages

♣ Who Can attend:

- • Database Administrators
- • Database Designers
- • Support Engineer
- • Technical Administrator

♣ Number of Hours: 40hrs

♣ Certification: OCA / OCP

♣ Key Features:

- ➢ One to One Training
- ➢ Online Training
- ➢ Fastrack & Normal Track
- ➢ Resume Modification
- ➢ Mock Interviews
- ➢ Video Tutorials
- ➢ Materials
- ➢ Real Time Projects
- ➢ Virtual Live Experience
- ➢ Preparing for Certification