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## Oracle Database 12c: Admin, Install and Upgrade Accelerated

**Duration: 5 Days    Course Code: D79027GC10**

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### Overview:

This Oracle Database 12c: Admin, Install and Upgrade Accelerated course covers 7 days worth of content in only 5 days. It consists of the Oracle Database 12c: Administration Workshop Ed 1 course (5 days) and the Oracle Database 12c: Install and Upgrade Workshop Ed 1 course (2 days). This course 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.

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### Target Audience:

Database Designers Support Engineer Technical Administrator Database Administrators Data Warehouse Administrator

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### Objectives:

#### ■ 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 12c Introduction
- Oracle Database Architecture: Overview
- 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)

#### ■ 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
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- 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**

- **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

- 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

- 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
- **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

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## Content:

Manage Oracle Database Storage structures

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## Additional Information:

### Benefits To You

Discover how you can effectively install and manage an Oracle Database instance. Create a container database and provision pluggable databases to support your business needs. Benefit from learning how to configure the Oracle Network Environment to perform database maintenance.

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### Further Information:

For More information, or to book your course, please call us on 00 971 4 446 4987

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