

# SQL School™

## Quality Training Assured

### Oracle DBA & Cloud Course

Complete Practical & Real-time Training

#### Training Highlights

- |                       |                             |
|-----------------------|-----------------------------|
| ➤ Job Support         | ➤ Placement Support         |
| ➤ Complete Practical  | ➤ Support Certification     |
| ➤ Real-Time Scenarios | ➤ Interview Preparation     |
| ➤ Resume Preparation  | ➤ Material, Practice Labs   |
| ➤ Lab Access          | ➤ 100% Placement Assistance |

**Trainer:** Mr. Shekar Having 15+ years of experience Primary as an Oracle DBA and Secondary MS SQL Server DBA providing support on Test, Development and Production environments.

**For Free Demo: Call us on**

**INDIA: +91 9666 44 0801, USA: +1 510 400 4845**

Revision, Mock Interviews, Interview & Resume Classes Every Saturday

# Oracle DBA Course Content

## Modules -1- Linux/UNIX Installation & Commands

### Chapter 1- Getting Started with UNIX

What is UNIX? \* UNIX Architecture [Hardware, Kernel, Shell, Command & Utilities] \* How to Login & Logout in UNIX? \* Changing the Password of Logged in User \* Listing the Files & Directories \* List out the logged in Users \* Modes of Shutdown the Linux/Unix OS

### Chapter 2- UNIX File Management & the UNIX VI Editor

List the files & Hidden files \* Meta characters [\* and?] \* Creating the files using various commands \* Display the Content of the files \* Editing the Files using vi Editor \* Counting the Lines, Words and Characters in a file \* Copy, Rename and Delete a file

### Chapter 3- UNIX Directories Management

Home Directory \* Absolute & Relative Pathnames \* Create Directories & Creating Parent Directories \* Copying and Renaming Directories \* Removing Directories \* Changing Directories \* The directories (. dot) and (.. dot dot)

### Chapter 4- UNIX File & Directory Permission Setup

The Permission Indicators \* File Access Modes [Read r, Write w, Execute x] \* Directory Access Modes [Read r, Write w, Execute x] \* Changing the Permissions Using chmod with Symbolic Permissions \* Changing the Permissions Using chmod with Absolute Permissions \* Changing the Ownership of File & Directory [chown command] \* Changing the Group Ownership of File & Directory [chgrp command]

### Chapter 5- UNIX User & Group Creation & Set the Environment

How to create Group? \* How to create User? \* How to modify User? \* The .profile or .bash\_profile file \* Setting the Path

## Module - 2 ORACLE SQL COMMANDS

### Chapter 6- Introduction to SQL Statements

SQL Fundamentals [Types of SQL Commands (DML, DDL, TCL, DCL) & Description] \* Oracle Data Types & Limitation of Data Types \* Using the SELECT Statement \* Column Alias Name \* Use of DISTINCT Keyword \* Use of DUAL Table \* Use of WHERE clause with Comparison Operators [=, !=, <, <=, >, >=] \* Use of Logical Operators [AND, OR, NOT]\* Use of Other Operators [IN, NOT IN, BETWEEN, EXISTS, IS NULL, IS NOT NULL, LIKE] \* Sorting Rows by using ORDER BY clause \* HAVING Clause \* The CASE Expression \* Using Ampersand Substitution Variables

### Chapter 7- Single Row Function

Single Row Function Fundamental \* Using Single Row Character Function \* Using Single Row Numeric Function \* Using Single Row Date Function \* Using Single Row Conversion Function \* Using GROUP function

## **Chapter 8- Using Join & Sub Queries**

Inner Join (Simple Inner Join) \* Using Table Alias \* Natural Join \* Left Outer Join \* Right Outer Join \* Full Outer Join \* SELF Join \* Single Row Sub Queries \* Multiple-Row Sub Queries

## **Chapter 9- Using DML Operation & Understanding Transaction Control**

Insert New Records \* Update Existing Records \* Delete Records & TRUNCATE the Table \* Commit \* Rollback \* SAVEPOINT \* Rollback to Save-point

## **Chapter 10- Creating Table and Constraints**

Database Object Overview \* Creating Tables \* Modifying Table [Adding Column, Dropping Column and Hiding Column] \* Types of Constraints \* Creating Constraint \* Enabling & Disabling Constraint \* Validating Constraints \* Dropping Constraint \* Renaming Table \* Making Table READ ONLY \* Dropping Table

## **Module - 3 ORACLE DATABASE ARCHITECTURE & INSTALLATION**

### **Chapter 11- Introduction Database & Oracle DBA**

What is Database? \* Why do we need of Database? \* List of major Databases and Database vendors \* Tasks of Database Administrator (DBA) \* Database related tools and utilities.

### **Chapter 12- Oracle Database Instance Architecture & Storage Structure**

What is Oracle Database 11g & 12c? \* What is Database Instance? \* Oracle Database Instance Memory Architecture (SGA & PGA) \* Subcomponents of Shared/System Global Area (SGA) \* Oracle Database Process Architecture [PMON (CLMN), SMON, LREG, CKPT, DBWn, LGWR, MMON...] \* Oracle Database Storage Structure \* Oracle DB Logical Storage Structure [OS Block, Oracle Data block, Extents, Segment, Table-space] \* Oracle DB Physical Storage Structure [Control file, Data files, Online Redo log files, Parameter files] \* Oracle Database 12c Multitenant Architecture \* Oracle Database 12c Container Database [CDB\$ROOT] & Non Container Database \* Oracle Database 12c SEED Database [PDB\$SEED] \* Oracle Database 12c Pluggable database [Application Container Database]

### **Chapter 13- Oracle Software Installation & Database Creation**

Understand prerequisites for a successful Oracle RDBMS software installation. \* Installation of Oracle 12cR1 database software with the latest patch set. \* Installation of Oracle 12cR2 database software \* Planning for Oracle Database Creation \* Database Creation using DBCA (Database Configuration Assistance) GUI \* Database Creation using script manually with CREATE DATABASE statement \* Exploring the Database components Logical & Physically

### **Chapter 14- Oracle Database Start & Stop and Parameter**

Oracle Database Startup modes [STARTUP, STARTUP NOMOUNT, STARTUP MOUNT, OPEN, FORCE] \* Oracle Database Open Read Only & Restricted Modes \* Oracle Database Shutdown modes [SHUTDOWN NORMAL, TRANSACTIONL, IMMEDIATE, ABORT]----  
Parameters ---- \* Initialization Parameters \* Static & Dynamic Parameters \* System & Session Level Parameters \* Parameter files (Initialization Parameter & Server Parameter files) \* Changing the Parameter Value----Data Dictionary---- \* Understanding Data Dictionary \* Static & Dynamic Performance Views [V\$,X\$,DBA\_, ALL\_, USER\_] \* Using Data Dictionary Views [ DICT, V\$FIXED\_TABLE]

## **Chapter 15- User Management & Database Security**

What is Oracle Database Users? \* Types of Database Users on the basis of Authentication [Database & External (OS) User] \* Database 12c Common (C##Username) User & Local User \* Create the Database Common User & Local User \* Alter the Database Common User & Local User \* Types of Privileges [System Level & Object Level Privileges] & Roles \* Grant and Revoke the Privileges from Database Users \* What is profile? \* Assign the Profile to Database User \* Create & Alter the Profile \* Killing the Session of the Connected User

### **Module – 4 ORACLE DATABASE ADMINISTRATIONS**

## **Chapter 16- Table-space Administration & Data file Administration**

Create, Alter & Drop the Permanent Table-space \* Add & Resize the data files \* Understand Segment space management \* Understand the Extent Management \* Create Big File Table-space \* Table-space Quotas \* Configuring the Multi-block Table-space support \* Table-space related views [DBA\_Tablespaces, DBA\_data\_files, V\$Tablespace, V\$Datafile]

## **Chapter 17- Undo Table-space**

Create Undo Table-space and add data file to undo Table-space \* Change the Undo Table-space on the Database level \* Managing the Transaction & Undo Data \* Configuring the Undo Table-space

## **Chapter 18- Temporary Table-space**

Create Temporary Table-space \* Adding and Resize the temporary file \* Temporary Table-space Group \* Temporary Table-space views [DBA\_temp\_files, V\$tempfile]

## **Chapter 19- Managing the Control File**

Understanding Control Files \* Multiplexing Control Files \* Backing up Control Files \* Control file related view (V\$controlfile)

## **Chapter 20- Managing Online Redo log files**

Redo Log Files & Archiving \* Online & Archived Redo Log Files \* Managing Online Redo Log Files \* Fast Recovery Area (FRA) \* Configuring Database Archive mode \* Views related Log [V\$LOG, V\$LOG\_FILE, V\$LOGSTDBY, V\$LOG\_HISTORY, V\$RECOVERY\_LOG, V\$STANDBY\_LOG]

## **Chapter 21- Oracle Net Service Architecture**

Overview of Oracle Net Services & It's component \* How Oracle Net Service works? \* The Oracle Net Listener \* Types of Listener & Oracle Listener configuration [Dynamic and Static Listeners] \* Oracle netca (Network Configuration Assistant) utility to Create Listener \* Oracle netmgr (Network Manager) utility to Create & Configure the Listener \* Oracle Dedicated Server Architecture \* Oracle Shared Server Architecture \* Oracle Listener Administration and TNS\_ADMIN environment variable

## **Chapter 22- Oracle Database Link**

Overview about Oracle Database Link \* Type of Database Link [Private & Public Database link] \* How to create Oracle Database Link \* How to Drop the Oracle Database Link

## **Module –5 Database Backup Concept (Logical & Physical Backup)**

### **Chapter 23- Oracle Database Logical Backup (Oracle Data Pump)**

Oracle Database Data Movement Utilities: \* Data Pump Export (Export) expdp & exp \* Data Pump Import (Import) impdp & imp \* Oracle Data Pump Components DBMS\_DATAPUMP & DBMS\_METADATA Package \* Export & Import Table, Schema, Table-space, Database

### **Chapter 24- Backup, Restore & Recovery using RMAN**

Introduction Backup and Recovery \* Introduction to RMAN (Recovery Manager) Architecture \* Configuring the RMAN Environment \* RMAN Backup Concepts like Backup Sets & Image Copy Backup \* RMAN Control file & Parameter file backup \* RMAN full database & Incremental Backup \* RMAN Backup Retention Policy \* List out the Archive log backup & Database Backups \* RMAN related Views \* Concept of Repository Catalog Database \* Benefit & Use of Repository Database \* RMAN backup CDB & PDB Databases [Backup database root; Backup pluggable database hr\_appcont;]

### **Chapter 25- Oracle Database Flashback & Restore Point**

Overview of Flashback Database, Restore Points and Guaranteed Restore Points \* About Logging for Flashback Database and Guaranteed Restore Points \* Prerequisites for Flashback Database and Guaranteed Restore Points \* Using Normal and Guaranteed Restore Points \* Using Flashback Database, Table-space, Table

### **Chapter 26- Oracle Database RMAN Duplicate Cloning**

Cloning Concept & Consideration \* Cloning Technologies \* Cloning Oracle Home \* RMAN Duplicate Database Cloning

### **Chapter 27- Oracle Database Disaster Setup (Standby Database/ Data Guard)**

Introduction Oracle Data Guard \* Types of Standby Databases & Data Guard Services \* Difference between Physical, Logical & Snapshot Standby databases \* Oracle Data Guard Architecture \* Processes related to Primary & Standby Databases \* Creating Physical Standby Database using SQL & RMAN Duplicate command \* Open The Physical Standby database to Real Time Apply \* Oracle Data Guard Overview

### **Chapter 28- Oracle Database Performance Tuning**

How to handle performance issues in the real world \* V\$ dynamic views for performance monitoring and analysis \* How to define size of Oracle database memory structures for optimal performance \* Oracle database wait events \* Explain Oracle temporary space internals and sizing. \* How to trace database sessions using DBMS\_MONITOR and DBMS\_SESSION packages \* How to format SQL trace files using the tkprof utility \* Index Monitoring and internals of index maintenance by Oracle \* Statistics data collection for Oracle database optimizer \* What is Oracle automatic workload repository (AWR) and how to obtain AWR reports

### **Chapter 29- Oracle Database Patching**

Introduction to Oracle versions and how to understand a version \* How to upgrade from one patch-set to another patch-set within the same maintenance release \* What are Oracle interim patches? \* How to apply SPU patches (Security Patch Updates). \* How to apply a Patch Set Update (PSU) \* Learn about Oracle Interim Patch Installer (OPATCH)

### **Real world life of an Oracle DBA**

Type of Oracle errors & valid errors and internal exceptions (ORA-00600 & ORA-07445 errors) \* How to work with Oracle Support <https://support.oracle.com> to create Service Requests \* Parlance and terminology used by Oracle DBAs \* Productivity tools required when you join the work place. \* Scheduling JOBS and scripts through UNIX/LINUX crontab utility \* Oracle DBAAS (Database as a Service) \* Navigate with My Services Dashboard. \* Oracle 12c ASM (Automatic Storage Management) \* Oracle 12c Database High Availability (RAC, Data Guard)

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