Oracle DBA – Data Base Administrator- 11g

Duration: 60 Hours
Prerequisites
- Candidate should have good hand on Oracle SQL

Module I:

1. **Oracle 11g Installation**
   - Pre-Installation Tasks
     - Logging In to the System as root
     - Checking Hardware Requirement
     - Checking Software Requirement
     - Checking Network Setup
     - Creating Operating System Groups and Users
     - Configuring kernel parameters
     - Identifying Required Software Directories
     - Identifying or Creating ORACLE_BASE directory
     - Installation screens
2. **Oracle Database Architect**
   - System Global Area (SGA)
     - Shared Pool, Database Buffer Cache
     - The Redo Log Buffer
     - Java Pool, Large pool, Stream Pool
   - Fixed SGA
     - Automatic Shared Memory Management
     - The Oracle Background Process
3. **Oracle Data Block Management**
   - Data block Overview
     - Header (Common and Variable)
     - Table Directory, Row Directory
     - Overhead, Row Data
     - Free Space
   - Free Space Management
     - Availability and Optimization of Free Space in a Data Block
     - Row Chaining and Migrating
     - PCTFREE, PCTUSED, and Row Chaining
     - The PCTFREE & PCTUSED Parameter
     - How PCTFREE and PCTUSED Work Together
   - Extent Overview
     - When Extents Are Allocated
     - Determine the Number and Size of Extents
     - How Extents Are Allocated
     - When Extents Are Deallocated
     - Extents in Nonclustered Tables
     - Extents in Clustered Tables
     - Extents in Materialized Views and Their Logs
     - Extents in Indexes,in Temporary Segments & in Rollback Segments
   - Segment Overview
     - Introduction to Data Segments
     - Introduction to Index Segments
     - Introduction to Temporary Segments
     - Operations that Require Temporary Segments
     - Segments in Temporary Tables and Their Indexes
     - How Temporary Segments Are Allocated
     - Allocation of Temporary Segments for Queries
     - Allocation of Temporary Segments for Temporary Tables and Indexes
   - Undo Management
     - Undo Quota
     - Automatic Undo Retention
     - External Views
4. **Managing Tablespaces**
   - Using Multiple Tablespaces
   - Creating Tablespaces
   - Locally Managed Tablespace
     - Creating a Locally Managed Tablespace
     - Segment Space management in locally managed tablespace
   - Big File tablespace
     - Creating big file Tablespace
     - Altering a Bigfile Tablespace
     - Identifying a Bigfile Tablespace
   - Dictionary Managed Tablespace
     - Creating Dictionary Managed Tablespace
     - Specifying Tablespace Default Storage Parameters
     - Specifying Tablespace Default Storage Parameters
     - Coalescing Free Space in Dictionary-Managed Tablespaces
     - Manually Coalescing Free Space
5. **Managing User Privileges And Roles**
   - Understanding User Privileges and Roles
     - System Privileges
     - Accessing Objects in the SYS Schema
     - Object Privileges
     - User Roles,Creating Role
   - Granting Privileges and Roles
   - Grant With Admin Option

Module II

1. **Oracle Data Pump**
   - Data Pump Component
   - Data Pump New Features
   - How Does Data Pump Access Data?
     - Direct Path Loads and Unloads
     - Situations in Which Direct Path Load / Unload Is Not Used
     - External Tables
   - Accessing Data Over a Database Link
   - What Happens During Execution of a Data Pump Job?
     - Coordination of a Job
     - Tracking Progress within a Job
     - Filtering Data & Metadata During Job
     - Transforming Metadata during a Job
     - Maximizing Job Performance
     - Loading and Unloading of Data
     - Monitoring Job Status
     - Monitoring the Progress of Executing Jobs
   - File Allocation
     - Specifying Files and Adding Additional Dump Files
     - Default Locations for Dump, Log, and SQL Files
   - Moving Data Between Different Database Versions
   - Original Export and Import Versus Data Pump Export and Import
   - How Data Pump Export Parameters Map to Those of the Original Export Utility
   - How Data Pump Import Parameters Map to Those of the Original Import Utility

2. **RMAN Concepts**
   - Configuring the Environment for RMAN Backups
     - Showing and Clearing Persistent RMAN Configurations
     - Configuring the Default Device for Backups: Disk or SBT
     - Configuring the Default Type for Backups: Backup Sets or Copies
     - Configuring Channels
     - Configuring Control File and Server Parameter File Autobackups
     - Configuring RMAN to Make Backups to a Media Manager
     - Configuring the Backup Retention Policy
     - Configuring Backup Optimization
     - Configuring Oracle Flashback Database and Restore Points
   - About RMAN Channels
     - Channel Control Options for Manual and Automatic Channels
     - Channel Failover

   - About RMAN Backups
     - About Image Copies
   - RMAN Backup Types
     - Incremental Backups
     - RMAN Backup Errors
     - Tests and Integrity Checks for Backups
     - Detecting Physical and Logical Block Corruption
     - Backup Validation with RMAN
   - Restoring Files with RMAN
     - Mechanics of Restore Operations
     - File Selection in Restore Operations
     - Datafile Media Recovery with RMAN
     - Mechanics of Recovery: Incremental Backups and Redo Logs
     - Incomplete Recovery
     - Tablespace Point-in-Time Recovery
     - Block Media Recovery with RMAN
   - Database Duplication with RMAN (CLONING)

3. **User-Managed Backups**
   - Cold Backup (consistent Backup)
     - Take details of database Files& proceed with backup
   - Cold Backup (inconsistent Backup)
     - Querying V$ Views to Obtain Backup Information
     - Listing Database Files Before a Backup
     - Determining Datafile Status for Online Tablespace Backups
     - Making User-Managed Backups of the Whole Database
     - Backing Up the Control File to a Binary File
     - Backing Up the Control File to a Trace File
   - Running the DBVERIFY Utility