

Module1:Database Architecture

- Describe course objectives
- Explore the Oracle 10g database architecture

Module2:Installing the Oracle Database Software

- Explain core DBA tasks and tools
- Plan an Oracle installation
- Use optimal flexible architecture
- Install software with the Oracle Universal Installer (OUI)

Module3:Creating an Oracle Database

- Create a database with the Database Configuration Assistant (DBCA)
- Create a database design template with the DBCA
- Generate database creation scripts with the DBCA

Module4:Managing the Oracle Instance

- Start and stop the Oracle database and components
- Use Enterprise Manager (EM)
- Access a database with SQL*Plus and iSQL*Plus
- Modify database initialization parameters
- Understand the stages of database startup
- View the Alert log
- Use the Data Dictionary

Module 5: Managing Database Storage Structures

- Describe table data storage (in blocks)
- Define the purpose of tablespaces and data files
- Understand and utilize Oracle Managed Files (OMF)
- Create and manage tablespaces
- Obtain tablespace information
- Describe the main concepts and functionality of Automatic Storage Management (ASM)

Module 6: Administering User Security

- Create and manage database user accounts
- Authenticate users
- Assign default storage areas (tablespaces)
- Grant and revoke privileges
- Create and manage roles
- Create and manage profiles
- Implement standard password security features
- Control resource usage by users

Module 7: Managing Schema Objects

- Define schema objects and data types
- Create and modify tables
- Define constraints
- View the columns and contents of a table

- Create indexes, views and sequences
- Explain the use of temporary tables
- Use the Data Dictionary
- Manage data through SQL
- Monitor and resolve locking conflicts

Module 8:Managing Undo Data

- Explain DML and undo data generation
- Monitor and administer undo
- Describe the difference between undo and redo data
- Configure undo retention
- Guarantee undo retention
- Use the undo advisor

Module 9:Implementing Oracle Database Security

- Describe DBA responsibilities for security
- Apply the principal of least privilege
- Enable standard database auditing
- Specify audit options
- Review audit information
- Maintain the audit trail

Module 10:Configuring the Oracle Network Environment

- Create additional listeners
- Create Net Service aliases
- Configure connect-time failover
- Control the Oracle Net Listener
- Test Oracle Net connectivity
- Identify when to use shared versus dedicated servers

Module 11:Backup and Recovery Concepts

- Identify the types of failure that may occur in an Oracle Database
- Describe ways to tune instance recovery
- Identify the importance of checkpoints, redo log files, and archived log files
- Configure ARCHIVELOG mode

Module 12: Performing Database Backups

- Create consistent database backups
- Back your database up without shutting it down
- Create incremental backups
- Automate database backups
- Monitor the flash recovery area

Module 13: Performing Database Recovery

- Recover from loss of a control file
- Recover from loss of a redo log file
- Perform complete recovery following the loss of a data file

Module 14: Performing Flashback

- Describe Flashback database
- Restore the table content to a specific point in the past with Flashback Table
- Recover from a dropped table
- View the contents of the database as of any single point in time with Flashback Query
- See versions of a row over time with Flashback Versions Query
- View the transaction history of a row with the Flashback Transaction Query.

Module 15: Moving Data

- Describe available ways for moving data Create and use directory objects
- Use SQL*Loader to load data from a non-Oracle database (or user files)
- Explain the general architecture of Data Pump
- Use Data Pump Export and Import to move data between Oracle databases
- Use external tables to move data via platform-independent files.

Module 16: Configuring Recovery Manager

- Recovery Manager Features and Components
- Using a Flash Recovery Area with RMAN

- **Configuring RMAN**
- **Control File Auto backups**
- **Retention Policies and Channel Allocation**
- **Using Recovery Manager to connect to a target database in default NOCATALOG mode**
- **Displaying the current RMAN configuration settings**
- **Altering the backup retention policy for a database**

Module 17: Using Recovery Manager

- **RMAN Command Overview**
- **Parallelization of Backup Sets**
- **Compressed Backups**
- **Image Copy**
- **Whole Database and Incremental Backups**
- **LIST and REPORT commands**
- **Enable ARCHIVELOG mode for the database**
- **Use Recovery Manager**

Module 18: Recovering from Non-critical Losses

- **Recovery of Non-Critical Files**
- **Creating New Temporary Tablespace**
- **Recreating Redo Log Files, Index Tablespaces, and Indexes**
- **Read-Only Tablespace Recovery**
- **Authentication Methods for Database Administrators**

- Loss of Password Authentication File
- Creating a new temporary tablespace
- Altering the default temporary tablespace for a database

Module 19: Incomplete Recovery

- Recovery Steps
- Server and User Managed Recovery commands
- Recovering a Control File Autobackup
- Creating a New Control File
- Incomplete Recovery Overview
- Incomplete Recovery Best Practices
- Simplified Recovery Through RESETLOGS
- Point-in-time recovery using RMAN

Module 20: Flashback

- Flashback Database Architecture
- Configuring and Monitoring Flashback Database
- Backing Up the Flash Recovery Area
- Using V\$FLASH_RECOVERY_AREA_USAGE
- Flashback Database Considerations
- Using the Flashback Database RMAN interface
- Using Flashback Database EM Interface

- **Managing and monitoring Flashback Database operations**

Module 21: Dealing with Database Corruption

- **Block Corruption Symptoms: ORA-1578**
- **DBVERIFY Utility and the ANALYZE command**
- **Initialization parameter DB_BLOCK_CHECKING**
- **Segment Metadata Dump and Verification**
- **Using Flashback for Logical Corruption and using DBMS_REPAIR**
- **Block Media Recovery**
- **RMAN BMR Interface**
- **Dumping and Verifying Segment Metadata**
- **Monitoring and Managing Storage I**
- **Database Storage Structures**
- **Space Management Overview**
- **Oracle-Managed Files (OMF)**
- **Row Chaining and Migrating**
- **Proactive Tablespace Monitoring**
- **Managing Resumable Space Allocation**
- **SYSAUX Tablespace**
- **Monitoring table and index space usage**

Module 22: Monitoring and Managing Storage II

- **Automatic Undo Management**
- **Redo Log Files**

- **Table Types**
- **Partitioned Tables**
- **Index-Organized Tables (IOT)**
- **Managing index space with SQL**
- **Configure optimal redo log file size**

Module 23: VLDB Support

- **Creating Bigfile Tablespaces**
- **Packages and data dictionary changes to support VLDB**
- **Creating and maintaining temporary tablespace groups (TTG)**
- **Partitioning and Partitioned Indexes**
- **Skipping unusable indexes**
- **DML Error Logging**
- **Interpreting Bigfile ROWIDs**

Module 24: Automating Tasks with the Scheduler

- **Scheduler Concepts**
- **Creating a Job Class and a Window**
- **Managing Jobs, Programs, Chains, Events, Schedules, priority**
- **Viewing and Purging Job Logs**
- **Creating a program and a schedule**
- **Creating a job that uses a program and a schedule**
- **Altering the program and schedule for the job and observing the behavior change of the job**
- **Monitoring job runs**