

نام دوره : متخصص حرفه ای بانک های اطلاعاتی

**Oracle Certified Professional**

مشخصات دوره	تعداد ساعت : ۱۲۰	پیش نیاز : گذراندن دوره Oracle Certified Associate	تعداد ترم : ۳
<b>مخاطبین دوره</b>	متخصصین بانک های اطلاعاتی و طراحان پایگاه داده		
<b>شرح دوره</b>	دوره متخصص حرفه ای بانک های اطلاعاتی یا OCP شما را با نحوه نگهداری بانک های اطلاعاتی بزرگ و راهکارهای توزیع شده بانک اطلاعاتی و همچنین توانایی های بانک آشنا خواهد ساخت .		
<b>آنچه در این دوره می آموزیم:</b>	معماری بانک اطلاعاتی و ASM مدیریت و تنظیم RMAN استفاده از RMAN برای بازیابی استفاده از RMAN برای نسخه پشتیبان استفاده از RMAN برای بازیابی اطلاعات Monitoring and Tuning RMAN مدیریت زمانبندی		
<b>ترم های دوره</b>	1Z0-051 : Oracle Database 11g: SQL Fundamentals 1Z0-052 : Oracle Database 11g: Administration I 1Z0-053 : Oracle Database 11g: Administration II		

## 1Z0-051 : Oracle Database 11g: SQL Fundamentals

### Retrieving Data Using the SQL SELECT Statement

- List the capabilities of SQL SELECT statements
- Execute a basic SELECT statement

### Restricting and Sorting Data

- Limit the rows that are retrieved by a query
- Sort the rows that are retrieved by a query
- Use ampersand substitution to restrict and sort output at runtime

### Using Single-Row Functions to Customize Output

- Describe various types of functions available in SQL
- Use character, number, and date functions in SELECT statements

### Using Conversion Functions and Conditional Expressions

- Describe various types of conversion functions that are available in SQL
- Use the TO\_CHAR, TO\_NUMBER, and TO\_DATE conversion functions
- Apply conditional expressions in a SELECT statement

### Reporting Aggregated Data Using the Group Functions

- Identify the available group functions
- Describe the use of group functions
- Group data by using the GROUP BY clause
- Include or exclude grouped rows by using the HAVING clause

### Displaying Data from Multiple Tables

- Write SELECT statements to access data from more than one table using equijoins and nonequijoins
- Join a table to itself by using a self-join
- View data that generally does not meet a join condition by using outer joins
- Generate a Cartesian product of all rows from two or more tables

### Using Subqueries to Solve Queries

- Define subqueries
- Describe the types of problems that the subqueries can solve
- List the types of subqueries
- Write single-row and multiple-row subqueries

### Using the Set Operators

- Describe set operators
- Use a set operator to combine multiple queries into a single query
- Control the order of rows returned

#### Manipulating Data

- Describe each data manipulation language (DML) statement
- Insert rows into a table
- Update rows in a table
- Delete rows from a table
- Control transactions

#### Using DDL Statements to Create and Manage Tables

- Categorize the main database objects
- Review the table structure
- List the data types that are available for columns
- Create a simple table
- Explain how constraints are created at the time of table creation
- Describe how schema objects work

#### Creating Other Schema Objects

- Create simple and complex views
- Retrieve data from views
- Create, maintain, and use sequences
- Create and maintain indexes
- Create private and public synonyms

### 1Z0-052 : Oracle Database 11g: Administration I

#### Exploring the Oracle Database Architecture

- Explain the Memory Structures
- Describe the Process Structures
- Overview of Storage Structures

#### Preparing the Database Environment

- Identify the tools for Administering an Oracle Database
- Plan an Oracle Database installation
- Install the Oracle software by using Oracle Universal Installer (OUI)

#### Creating an Oracle Database

- Create a database by using the Database Configuration Assistant (DBCA)

#### Managing the Oracle Instance

- Setting database initialization parameters
- Describe the stages of database startup and shutdown
- Using alert log and trace files
- Using data dictionary and dynamic performance views

#### Configuring the Oracle Network Environment

- Configure and Manage the Oracle Network
- Using the Oracle Shared Server architecture

#### Managing Database Storage Structures

- Overview of tablespace and datafiles
- Create and manage tablespaces
- Space management in tablespaces

#### Administering User Security

- Create and manage database user accounts
- Grant and revoke privileges
- Create and manage roles
- Create and manage profiles

#### Managing Data and Concurrency

- Monitor and resolve locking conflicts

#### Managing Undo Data

- Overview of Undo
- Transactions and undo data
- Managing undo

#### Implementing Oracle Database Security

- Database Security and Principle of Least Privilege
- Work with Standard Database Auditing

#### Database Maintenance

- Use and manage optimizer statistics
- Use and manage Automatic Workload Repository (AWR)
- Use advisory framework
- Manage Alerts and Thresholds

#### Performance Management

- Use Automatic Memory Management
- Use Memory Advisors
- Troubleshoot invalid and unusable objects

#### Intelligent Infrastructure Enhancements

- Use the Enterprise Manager Support Workbench
- Managing Patches

#### Backup and Recovery Concepts

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

### Performing Database Backups

- Create consistent database backups
- Back up your database without shutting it down
- Create incremental backups
- Automate database backups
- Manage backups, view backup reports and monitor the flash recovery area

### Performing Database Recovery

- Overview of Data Recovery Advisor
- Use Data Recovery Advisor to Perform recovery (Control file, Redo log file and Data file)

### Moving Data

- Describe and use methods to move data (Directory objects, SQL\*Loader, External Tables)
- Explain the general architecture of Oracle Data Pump
- Use Data Pump Export and Import to move data between Oracle databases

## 1Z0-053 : Oracle Database 11g: Administration II

### Database Architecture and ASM

- Describe Automatic Storage Management (ASM)
- Set up initialization parameter files for ASM and database instances
- Start up and shut down ASM instances
- Administer ASM disk groups

### Configuring for Recoverability

- Configure multiple archive log file destinations to increase availability
- Define, apply and use a retention policy
- Configure the Flash Recovery Area
- Use Flash Recovery Area

### Using the RMAN Recovery Catalog

- Identify situations that require RMAN recovery catalog
- Create and configure a recovery catalog
- Synchronize the recovery catalog
- Create and Use RMAN stored scripts
- Back up the recovery catalog
- Create and use a virtual private catalog

### Configuring Backup Specifications

- Configure backup settings
- Allocate channels to use in backing up
- Configure backup optimization

#### Using RMAN to Create Backups

- Create image file backups
- Create a whole database backup
- Enable fast incremental backup
- Create duplex backup and back up backup sets
- Create an archival backup for long-term retention
- Create a multisection, compressed and encrypted backup
- Report on and maintain backups

#### Performing User-Managed Backup and Recovery

- Recover from a lost TEMP file
- Recover from a lost redo log group
- Recover from the loss of password file
- Perform user-managed complete database recovery
- Perform user-managed incomplete database recovery
- Perform user-managed and server managed backups
- Identify the need of backup mode
- Back up and recover a control file

#### Using RMAN to Perform Recovery

- Perform complete recovery from a critical or noncritical data file loss using RMAN
- Perform incomplete recovery using RMAN
- Recover using incrementally updated backups
- Switch to image copies for fast recovery
- Restore a database onto a new host
- Recover using a backup control file
- Perform Disaster recovery

#### Using RMAN to Duplicate a Database

- Creating a duplicate database
- Using a duplicate database

#### Performing Tablespace Point-in-Time Recovery

- Identify the situations that require TSPITR
- Perform automated TSPITR

#### Monitoring and Tuning RMAN

- Monitoring RMAN sessions and jobs
- Tuning RMAN
- Configure RMAN for Asynchronous I/O

### Using Flashback Technology

- Restore dropped tables from the recycle bin
- Perform Flashback Query
- Use Flashback Transaction

### Additional Flashback Operations

- Perform Flashback Table operations
- Configure, Monitor Flashback Database and Perform Flashback Database operations
- Set up and use a Flashback Data Archive

### Diagnosing the Database

- Set up Automatic Diagnostic Repository
- Using Support Workbench
- Perform Block Media Recovery

### Managing Memory

- Implement Automatic Memory Management
- Manually configure SGA parameters
- Configure automatic PGA memory management

### Managing Database Performance

- Use the SQL Tuning Advisor
- Use the SQL Access Advisor to tune a workload
- Understand Database Replay

### Space Management

- Manage resumable space allocation
- Describe the concepts of transportable tablespaces and databases
- Reclaim wasted space from tables and indexes by using the segment shrink functionality

### Managing Resources

- Understand the database resource manager
- Create and use Database Resource Manager Components

### Automating Tasks with the Scheduler

- Create a job, program, and schedule
- Use a time-based or event-based schedule for executing Scheduler jobs
- Create lightweight jobs
- Use job chains to perform a series of related tasks

### Administering the Scheduler

- Create Windows and Job Classes
- Use advanced Scheduler concepts to prioritize jobs