

ACCIÓN FORMATIVA : ADMINISTRACIÓN DE ORACLE 10G**HORAS LECTIVAS : 80 horas****OBJETIVOS DE LA ACCIÓN FORMATIVA**

- Formar y preparar a los alumnos para la adecuada administración de base de datos en la plataforma Oracle 10g y la consecución de la certificación OCA.
- El primero modulo consistirá en una introducción al SQL de ORACLE 9i (1Z0-007)
- El segundo revisará los fundamentos básicos que permitan instalar, configurar y administrar una base de datos ORACLE 10g (1Z0-042)

CONTENIDOS**INTRODUCTION TO ORACLE9I SQL®****Writing a Basic SQL Statement**

- List the capabilities of SQL SELECT statements
- Execute a basic SELECT statement
- Differentiate between SQL statements and iSQL*Plus commands

Restricting and Sorting Data

- Limit the rows retrieved by a query
- Sort the rows retrieved by a query

Single Row Functions

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

Displaying Data from Multiple Tables

- Write SELECT statements to access data from more than one table using equality and nonequality joins
- View data that generally does not meet a join condition by using outer joins
- Join a table to itself using a self-join

Aggregating Data Using Group Functions

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

Subqueries

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

Producing Readable Output with iSQL*Plus

- Produce queries that require a substitution variable
- Produce more readable output
- Create and execute script files

Manipulating Data

- Describe each DML statement
- Insert rows into a table
- Update rows in a table
- Delete rows from a table
- Merge rows in a table
- Control transactions

Creating and Managing Tables

- Describe the main database objects
- Create tables
- Describe the datatypes that can be used when specifying column definition
- Alter table definitions
- Drop, rename and truncate tables

Including Constraints

- Describing Constraints
- Create and maintain constraints

Creating Views

- Create, maintain and use sequences
- Create and maintain indexes
- Create private and public synonyms

ORACLE DATABASE 10G: ADMINISTRATION I

Architecture

- Outline the Oracle Architecture and its main Components

- Explain the Oracle instance architecture

Installing the Oracle Database Software

- Identify common database administrative tools available to a DBA
- Use optimal flexible architecture
- Install software with Oracle Universal Installer
- Identify and configure commonly used environment variables
- Use Installer Log
- Plan an Oracle installation
- Use optimal flexible architecture
- Install software with the Oracle Universal Installer (OUI)

Creating an Oracle Database

- Use DBCA to Create a database
- Use DBCA to Delete a database
- Use DBCA to manage templates

Managing the Oracle Instance

- Use Enterprise Manager
- Use SQL*Plus and iSQL*Plus to access the Oracle Database
- Modify database initialization parameters
- Describe the stages of database startup

- Describe the database shutdown options
- View the database alert log
- Use dynamic performance views

Managing Database Storage Structures

- Describe how table row data is stored in blocas
- Define the purpose of tablespaces and data files
- Explain space management in tablespaces
- Create tablespaces
- Manage tablespaces: alter, drop, take offline, put online, add data files, make read-only or read-write, generate DDL
- Obtain tablespace information
- Explain key features and benefits of ASM

Administering User Security

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

Managing Schema Objects

- Create and modify tables
- Define constraints and states of constraints
- Dropping and truncating tables

- Create and use B-Tree and Bitmap indexes
- Create Views
- Create sequences
- Use data dictionary

Managing Data and Concurrency

- Manipulate data through the use of SQL
- Identify and administer PL/SQL objects
- Describe triggers and triggering events
- Define levels of locking
- List possible causes of lock conflict
- Monitor and resolve lock conflicts

Managing Undo Data

- Monitor and administer undo
- Configure undo retention
- Describe the relationship between undo and transactions
- Size the undo tablespace

Implementing Oracle Database Security

- Apply the principle of least privilege
- Audit database activity
- Implement Fine-Grained Auditing

Configuring the Oracle Network Environment

- Use Database Control to Create additional listeners
- Use Database Control to Create Oracle Net service aliases
- Control Oracle Net Listeners
- Identify when to use shared servers versus dedicated servers

Proactive Maintenance

- Gather optimizer statistics
- Manage the Automatic Workload Repository
- Use the Automatic Database Diagnostic Monitor (ADDM)
- Set warning and critical alert thresholds
- React to performance issues

Performance Management

- Use enterprise manager to view performance
- Tune SQL by using SQL tuning advisor
- Tune SQL by using SQL access advisor
- Use automatic shared memory management
- Use the memory advisor to size memory buffer

Backup and Recovery Concepts

- Describe the types of failure that may occur in an Oracle Database

- Identify the importance of checkpoints, redo log files, and archived log files
- Tuning instance recovery
- Configure a database for recoverability
- Configure ARCHIVELOG mode

Performing Database Backups

- Create consistent database backups
- Back your database up without shutting it down
- Create incremental backups
- Automate database backups
- Backup a control file to trace
- Monitor the flash recovery area

Performing Database Recovery

- Recover from loss of a control file
- Recover from loss of a redo log file
- Recover from loss of a system-critical data file
- Recover from loss of a non system-critical data file

Performing Flashback

- Describe Flashback database
- Resotore the table contents to a specific point in time
- Recover from a dropped table
- Use Flashback Query to view the contents of the database as of any single point of time
- View transaction history or row with flashback transaction query

Moving Data

- Describe the general architecture of Data Pump
- Use Data Pump export and import to move data between Oracle databases
- Load data with SQL Loader
- Use external tables to move data

CONTENIDOS PRÁCTICOS:

Alternando con los contenidos teóricos se realizarán diferentes prácticas para la perfecta consecución de los contenidos del curso.