

# Oracle Database 10g Administration Workshop I

## Course information

Days : 5

Total lessons : 18

Suggested Prerequisites :

- Oracle Database 10g: SQL Fundamentals I

Training includes :

- Experienced trainer(s)
- Pre-test and Post-test
- Practices and solutions

Public price :

- 17,000 baht(THB) : 1 person

In-house price :

- 51,000 baht(THB) : Economic Class : 1 – 5 people
- 69,000 baht(THB) : Small Class : 6 - 10 people
- 83,000 baht(THB) : Middle Class : 11 - 20 people
- 97,000 baht(THB) : Large Class : 21 - 30 people

*All prices exclude VAT 7 %*

## Course details

### Day 1

Lesson 1 : Introduction

Lesson 2 : Installing the Oracle Database Software

Lesson 3 : Creating an Oracle Database

Lesson 4 : Managing the Oracle Instance

### Day 2

Lesson 5 : Managing Database Storage Structures

Lesson 6 : Administering User Security

Lesson 7 : Managing Schema Objects

Lesson 8 : Managing Data and Concurrency

### Day 3

Lesson 9 : Managing Undo Data

Lesson 10 : Implementing Oracle Database Security

Lesson 11 : Configuring the Oracle Network Environment

Lesson 12 : Proactive Maintenance

### Day 4

Lesson 13 : Performance Management

Lesson 14 : Backup and Recovery Concepts

Lesson 15 : Performing Database Backups

### Day 5

Lesson 16 : Performing Database Recovery

Lesson 17 : Performing Flashback

Lesson 18 : Moving Data

## Lesson details

### Lesson 1 : Introduction

- Install, create, and administer Oracle Database 10g
- Configure the database for an application
- Employ basic monitoring procedures
- Implement a backup and recovery strategy
- Move data between databases and files



## **Lesson 2 : Installing the Oracle Database Software**

- Describe your role as a database administrator (DBA), and explain typical tasks and tools
- Plan an Oracle database installation
- Use Optimal Flexible Architecture (OFA)
- Install the Oracle software by using Oracle Universal Installer (OUI)

## **Lesson 3 : 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

## **Lesson 4 : 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
- Describe the stages of database startup
- Describe the database shutdown options
- View the alert log
- Access dynamic performance views

## **Lesson 5 : Managing Database Storage Structures**

- Describe how table row data is stored in blocks
- Define the purpose of tablespaces and data files
- Create and manage tablespaces
- Obtain tablespace information
- Describe the main concepts and functionality of Automatic Storage Management (ASM)

## **Lesson 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

## **Lesson 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
- Create views
- Create sequences
- Explain the use of temporary tables
- Use the data dictionary

## **Lesson 8 : Managing Data and Concurrency**

- Manage data through the use of SQL
- Identify and administer PL/SQL objects
- Describe triggers and triggering events
- Monitor and resolve locking conflicts



### **Lesson 9 : Managing Undo Data**

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

### **Lesson 10 : Implementing Oracle Database Security**

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

### **Lesson 11 : Configuring the Oracle Network Environment**

- Use Enterprise Manager to:
- Create additional listeners
- Create Oracle Net Service aliases
- Configure connect-time failover
- Control the Oracle Net Listener
- Use tnsping to test Oracle Net connectivity
- Identify when to use shared servers versus dedicated servers

### **Lesson 12 : Proactive Maintenance**

- Use statistics
- Manage the Automatic Workload Repository (AWR)
- Use the Automatic Database Diagnostic Monitor (ADDM)
- Describe the advisory framework
- Set alert thresholds
- Use server-generated alerts
- Use automated tasks

### **Lesson 13 : Performance Management**

- Use Enterprise Manager to monitor performance
- Tune SQL by using the SQL Tuning Advisor
- Tune SQL by using the SQL Access Advisor
- Use Automatic Shared Memory Management (ASSM)
- Use the Memory Advisor to size memory buffers
- View performance-related dynamic views
- Troubleshoot invalid and unusable objects

### **Lesson 14 : 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 archive log files
- Configure ARCHIVELOG mode

### **Lesson 15 : Performing Database Backups**

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



## **Lesson 16 : Performing Database Recovery**

- recover from the loss of a:
  - Control file
  - Redo log file
  - Data file

## **Lesson 17 : 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 transaction history of a row with Flashback Transaction Query

## **Lesson 18 : 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

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