

# Oracle Database 11g Administration Workshop II

## Course information

Days : 5

Total lessons : 20

Suggested Prerequisites :

- Oracle Database 11g: SQL Fundamentals I
- Oracle Database 11g: Administration Workshop I

Training includes :

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

Public price :

- 20,000 baht(THB) : 1 person

In-house price :

- 60,000 baht(THB) : Small Class : 1 - 5 people
- 75,000 baht(THB) : Small Class : 6 - 10 people
- 87,000 baht(THB) : Middle Class : 11 - 15 people

*All prices exclude VAT 7 %*

## Course details

### Day 1

Lesson 1 : Core Concepts and Tools of the Oracle Database

Lesson 2 : Configuring for Recoverability

Lesson 3 : Using the RMAN Recovery Catalog

Lesson 4 : Configuring Backup Settings

### Day 2

Lesson 5 : Creating Backups with RMAN

Lesson 6 : Restore and Recovery Task

Lesson 7 : Using RMAN to Perform Recovery

Lesson 8 : Monitoring and Tuning RMAN

### Day 3

Lesson 9 : Diagnosing the Database

Lesson 10 : Using Flashback Technology I

Lesson 11 : Using Flashback Technology II

Lesson 12 : Performing Flashback Database

### Day 4

Lesson 13 : Managing Memory

Lesson 14 : Managing Database Performance

Lesson 15 : Managing Performance by SQL Tuning

Lesson 16 : Managing Resources

### Day 5

Lesson 17 : Automating Tasks with the Scheduler

Lesson 18 : Managing Space

Lesson 19 : Managing Space for the Database

Lesson 20 : Duplicating a Database



## Lesson details

### Core Concepts and Tools of the Oracle Database

- The Oracle Database Architecture: Overview
- ASM Storage Concepts
- Connecting to the Database and the ASM Instance
- DBA Tools Overview

### Configuring for Recoverability

- Purpose of Backup and Recovery (B&R), Typical Tasks and Terminology
- Using the Recovery Manager (RMAN)
- Configuring your Database for B&R Operations
- Configuring Archivelog Mode
- Configuring Backup Retention
- Configuring and Using a Flash Recovery Area (FRA)

### Using the RMAN Recovery Catalog

- Tracking and Storing Backup Information
- Setting up a Recovery Catalog
- Recording Backups
- Using RMAN Stored Scripts
- Managing the Recovery Catalog (Backup, Export, Import, Upgrade, Drop and Virtual Private Catalog)

### Configuring Backup Settings

- Configuring and Managing Persistent Settings for RMAN
- Configuring Autobackup of Control File
- Backup optimization
- Advanced Configuration Settings: Compressing Backups
- Configuring Backup and Restore for Very Large Files (Multisection)

### Creating Backups with RMAN

- RMAN backup types
- Creating and Using the following:
  - - Backup Sets and Image Copies
  - - Whole Database Backup
  - - Fast Incremental Backup
  - - Configure Backup Destinations
  - - Duplexed Backup Sets
  - - Archival Backups



## **Restore and Recovery Task**

- Restoring and Recovering
- Causes of File Loss
- Automatic Tempfile Recovery
- Recovering from the Loss of a Redo Log Group
- Recovering from a Lost Index Tablespace
- Re-creating a Password Authentication File
- Complete and Incomplete Recovery
- Other Recovery Operations

## **Using RMAN to Perform Recovery**

- Complete Recovery after Loss of a Critical or Noncritical Data File
- Recovering Image Copies and Switching Files
- Restore and Recovery of a Database in NOARCHIVELOG Mode
- Incomplete Recovery
- Performing Recovery with a Backup Control File
- Restoring from Autobackup: Server Parameter File and Control File
- Restoring and Recovering the Database on a New Host

## **Monitoring and Tuning RMAN**

- Monitoring RMAN Jobs
- Balance Between Speed of Backup Versus Speed of Recovery
- RMAN Multiplexing
- Synchronous and Asynchronous I/O
- Explaining Performance Impact of MAXPIECESIZE, FILESPERSET, MAXOPENFILES and BACKUP DURATION

## **Diagnosing the Database**

- Data Recovery Advisor (DRA)
- Block Corruption
- Automatic Diagnostic Repository (ADR)
- Health Monitor
- The ADR Command-Line Tool, ADRCI

## **Using Flashback Technology I**

- Flashback Technology: Overview and Setup
- Using Flashback Technology to Query Data
- Flashback Table
- Flashback Transaction Query
- Performing Flashback Transaction Backout



## **Using Flashback Technology II**

- Oracle Total Recall
- Flashback Drop and the Recycle Bin

## **Performing Flashback Database**

- Configuring Flashback Database
- Performing Flashback Database Operations
- Monitoring Flashback Database

## **Managing Memory**

- Oracle Memory Structures
- Oracle Database Memory Parameters
- Using Automatic Memory Management
- Automatic Shared Memory Management
- Using Memory Advisors
- Using Data Dictionary Views

## **Managing Database Performance**

- Tuning Activities
- Using Statistic Preferences
- Optimizer Statistics Collection
- Monitor the Performance of Sessions and Services
- Automatic Workload Repository (AWR)
- Describing the Benefits of Database Replay

## **Managing Performance by SQL Tuning**

- SQL Tuning and SQL Advisors
- Using SQL Tuning Advisor
- SQL Access Advisor
- SQL Performance Analyzer Overview

## **Managing Resources**

- Database Resource Manager: Overview and Concepts
- Accessing and Creating Resource Plans
- Creating Consumer Group
- Specifying Resource Plan Directives, including:
  - - Limiting CPU Utilization at the Database Level
  - - Instance Caging
- Activating a Resource Plan
- Monitoring the Resource Manager



## **Automating Tasks with the Scheduler**

- Simplifying Management Tasks
- Creating a Job, Program, and Schedule
- Using Time-Based, Event-Based, and Complex Schedules
- Describing the Use of Windows, Window Groups, Job Classes, and Consumer Groups
- Multi-Destination Jobs

## **Managing Space in Blocks**

- Free Space Management
- Monitoring Space
- Compressing Data

## **Managing Space in Segments**

- Segment Creation on Demand
- Additional Automatic Space-Saving Functionalit
- Shrinking Segments
- Segment Advisor
- Managing Resumable Space Allocation

## **Managing Space for the Database**

- Using 4 KB-Sector Disks
- Transporting Tablespaces
- Transporting Databases

## **Duplicating a Database**

- Purpose and Methods of Cloning a Database
- Using RMAN to Create a Duplicate Database
- Cloning a Database from a Backup
- Duplicate a Database Based on a Running Instance
- Targetless Duplicating a Database

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