Oracle Database 11g Administration Workshop I

Course information

Days : 5
Total lessons : 18
Suggested Prerequisites :
- Oracle Database 11g: 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
- 81,000 baht(THB) : Medium Class : 11 – 15 people

All prices exclude VAT 7 %

Course details

Day 1
Introduction
Lesson 1 : Exploring the Oracle Database Architecture
Lesson 2 : Installing your Oracle Software
Lesson 3 : Creating an Oracle Database Using DBCA
Lesson 4 : Managing the Database Instance

Day 2
Lesson 5 : Managing the ASM Instance
Lesson 6 : Configuring the Oracle Network Environment
Lesson 7 : Managing Database Storage Structures
Lesson 8 : Administering User Security

Day 3
Lesson 9 : Managing Data Concurrency
Lesson 10 : Managing Undo Data
Lesson 11 : Implementing Oracle Database Auditing

Day 4
Lesson 12 : Database Maintenance
Lesson 13 : Performance Management
Lesson 14 : Backup and Recovery Concepts

Day 5
Lesson 15 : Performing Database Backups
Lesson 16 : Performing Database Recovery
Lesson 17 : Moving Data
Lesson 18 : Working with Support

Lesson details
Lesson 1 : Exploring the Oracle Database Architecture
- List the major architectural components of Oracle Database
- Explain the memory structures
- Describe the background processes
- Correlate the logical and physical storage structures
- Describe ASM storage components

Lesson 2 : Preparing the Database Environment
- Describe your role as a database administrator (DBA) and explain typical tasks and tools
- Plan an Oracle software installation
- Install Oracle Grid Infrastructure for a standalone server
- Install the Oracle database software

Lesson 3 : Creating an Oracle Database
- Create a database by using the Database Configuration Assistant (DBCA)
- Generate database creation scripts with the DBCA
- Manage database design templates with the DBCA
- Perform additional tasks with the DBCA

Lesson 4 : Managing the Oracle Instance
- Start and stop the Oracle database and components
- Use Oracle Enterprise Manager
- Access a database with SQL*Plus
- Modify database initialization parameters
- Describe the stages of database startup
- Describe database shutdown options
- View the alert log
- Access dynamic performance views

Lesson 5 : Managing the ASM Instance
- Describe the benefits of using ASM
- Manage the ASM instance
- Create and drop ASM disk groups
- Extend ASM disk groups
- Retrieve ASM metadata by using various utilities

Lesson 6 : 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 and when to use dedicated servers

Lesson 7 : Managing Database Storage Structures
- Describe the storage of table row data in blocks
- Create and manage tablespaces
- Obtain tablespace information

Lesson 8 : 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 9 : Managing Data and Concurrency
- Describe the locking mechanism and how Oracle manages data concurrency
- Monitor and resolve locking conflicts

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Lesson 10 : 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 11 : Implementing Oracle Database Security
- Describe 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 12 : Database Maintenance
- Manage optimizer statistics
- Manage the Automatic Workload Repository (AWR)
- Use the Automatic Database Diagnostic Monitor (ADDM)
- Describe and use the advisory framework
- Set alert thresholds
- Use server-generated alerts
- Use automated tasks

Lesson 13 : Performance Management
- Use Enterprise Manager to monitor performance
- Use Automatic Memory Management (AMM)
- 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 can occur in an Oracle database
- Describe ways to tune instance recovery
- Identify the importance of checkpoints, redo log files, and archive log files
- Configure the flash recovery area
- 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
- Manage backups and view backup reports
- Monitor the flash recovery area

Lesson 16 : Performing Database Recovery
- Determine the need for performing recovery
- Access different interfaces (such as Enterprise Manager and command line)
- Describe and use available options, such as Recovery Manager (RMAN) and the Data Recovery Advisor
- Perform recovery:
  - Control file
  - Redo log file
  - Data file

Lesson 17 : Moving Data
- Describe ways to move data
- Create and use directory objects
- Use SQL*Loader to load data from a non-Oracle database (or user files)
- Use external tables to move data via platform-independent files
- Explain the general architecture of Oracle Data Pump
- Use Data Pump Export and Import to move data between Oracle databases

Lesson 18 : Working with Support
- After completing this lesson, you should be able to:
- Use the Enterprise Manager Support Workbench
- Work with My Oracle Support
- Search My Oracle Support
- Log service requests (SR)
- Manage patches
  - Apply a patch
  - Stage a patch