

Oracle Database 11g: Administration Workshop-I

Duration: 40 hrs

Audience:

- Database Administrators
- Sales Consultants
- Support Engineer
- Project Manager
- Database Designers
- Technical Consultant

Suggested Prerequisites:

- Working knowledge of SQL

Course Objectives:

- Install Oracle Database 11g and configure a database
- Manage the Oracle instance
- Manage the Database storage structures
- Create and administer user accounts
- Perform backup and recovery of a database
- Monitor, troubleshoot, and maintain a database
- Configure Oracle Net services
- Move data between databases and files

Contents:

1. Installing the Oracle Database Software

- Explain core DBA tasks and tools
- Plan an Oracle installation
- Use optimal flexible architecture
- Install software with Oracle Universal Installer (OUI)

2. 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

3. Managing the Oracle Instance

- Start and stop the Oracle database & components
- Use Enterprise Manager (EM)

9. Implementing Oracle Database Security

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

10. Configuring the Oracle Network Environment

- Use Enterprise Manager for configuring the Oracle network environment
- Create additional listeners
- Create Net Service aliases
- Configure connect-time failover
- Control the Oracle Net Listener

- Access database with SQL*Plus & iSQL*Plus
- Modify database initialization parameters

- Understand the stages of database startup
- View the Alert log
- Use the Data Dictionary

4. Managing Database Storage Structures

- Describe table data storage (in blocks)
- Define the purpose of tablespaces & data files
- Understand & utilize Oracle Managed Files (OMF)
- Create and manage tablespaces
- Obtain tablespace information
- Describe the main concepts and functionality of Automatic Storage Management (ASM)

5. 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

6. 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, views and sequences

- Explain the use of temporary tables
- Use the Data Dictionary

7. Managing Data and Concurrency

- Manage data through SQL

- Test Oracle Net connectivity
- Identify when to use shared vs dedicated servers

11. Proactive Maintenance

- Use statistics
- Manage Automatic Workload Repository (AWR)
- Use Automatic Database Diagnostic Monitor (ADDM)
- Describe advisory framework
- Set alert thresholds

- Use server-generated alerts

- Use automated tasks

12. Performance Management

- Use Enterprise Manager pages to monitor performance
- Use the SQL Tuning Advisor
- Use the SQL Access Advisor
- Use Automatic Shared Memory Management
- Use the Memory Advisor to size memory buffers
- Use performance related dynamic views
- Troubleshoot invalid or unusable objects

13. 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 archived log files
- Configure ARCHIVELOG mode

14. Performing Database Backups

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

15. Performing Database Recovery

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| <ul style="list-style-type: none"> ➤ Identify and administer PL/SQL Objects ➤ Describe triggers and triggering events ➤ Monitor and resolve locking conflicts <p>8. Managing Undo Data</p> <ul style="list-style-type: none"> ➤ Explain DML and undo data generation ➤ Monitor and administer undo
 ➤ Describe the difference between undo & redo data ➤ Configure undo retention
 ➤ Guarantee undo retention
 ➤ Use the undo advisor | <ul style="list-style-type: none"> ➤ Recover from loss of a control file ➤ Recover from loss of a redo log file ➤ Perform complete recovery following the loss of a data file <p>16. Performing Flashback</p> <ul style="list-style-type: none"> ➤ 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 the transaction history of a row with Flashback Transaction Query |
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Certification Information:

Oracle 11g DBA OCA /OCP

3-Exams:

- Oracle Database 11g: [Introduction to SQL \(exam code 1z0-051\)](#)
- Oracle Database 11g: [Administration –I \(exam code 1z0-052\)](#)
- Oracle Database 11g: [Administration –II \(exam code 1z0-053\)](#)

3-Certifications:

- Oracle Database SQL Expert,
- Oracle Database 11g Administrator Certified Associate,
- Oracle Database 11g Administrator Certified Professional

120-051	Oracle Database SQL expert	70 Questions Objectives	120 minutes	Passing at 66%	SCE		
1z0-052	Oracle Database 11g Administration –I	84 Questions Objectives	120 minutes	Passing at 68%		OCA	OCP
120-053	Oracle Database 11g Administration –II	92 Questions Objectives	90 minutes	Passing at 70%			

Follow on Training:

1. **Oracle Database 11g: Administration Workshop-II**