Oracle Database 11g Administration

Length: 5 Days

What you will learn: This course is your first step towards success as an Oracle professional, designed to give you a firm foundation in basic database administration. In this class, you'll learn how to install and maintain an Oracle database. You will gain a conceptual understanding of the Oracle database architecture and how its components work and interact with one another. You will also learn how to create an operational database and properly manage the various structures in an effective and efficient manner including performance monitoring, database security, user management, and backup/recovery techniques. The lesson topics are reinforced with structured hands-on practices. This course is designed to prepare you for the corresponding Oracle Certified Associate exam.

Learn To:

- Install Oracle Grid Infrastructure
- Create and manage users
- Install and Configure Oracle Database
- Create and manage storage structures
- Administer the Oracle Database
- Backup and Recovery

Prerequisites: Taken Oracle Introduction to SQL course or equivalent experience

Suggested Prerequisites: Taken Oracle PL/SQL course or equivalent experience

Course Objectives:

- Install Oracle Grid Infrastructure
- Install and configure Oracle Database 11g
- Configure Oracle Net services
- Monitor and administer undo data
- Manage the database storage structures
- Create and administer user accounts
- Perform basic backup and recovery of a database
- Manage data concurrency
- Monitor performance
- Describe Oracle Database Architecture

COURSE CONTENT

1. Exploring the Oracle Database Architecture
2. Oracle Database Architecture Overview
3. Oracle ASM Architecture Overview
4. Process Architecture
5. Memory structrues
6. Logical and physical storage structures
7. ASM storage components
8. Installing your Oracle Software
9. Tasks of an Oracle Database Administrator
10. Tools Used to Administer an Oracle Database
11. Installation: System Requirements
12. Oracle Universal Installer (OUI)
13. Installing Oracle Grid Infrastructure
14. Installing Oracle Database Software
15. Silent Install
16. Creating an Oracle Database
17. Planning the Database
18. Using the DBCA to Create a Database
19. Password Management
20. Creating a Database Design Template
21. Using the DBCA to Delete a Database

22. Managing the Oracle Database Instance
23. Start and stop the Oracle database and components
24. Use Oracle Enterprise Manager
25. Access a database with SQLPlus
26. Modify database installation parameters
27. Describe the stages of database startup
28. Describe database shutdown options
29. View the alert log
30. Access dynamic performance views
31. Manage the ASM Instance
32. Set up initialization parameter files for ASM instance
33. Start up and shut down ASM instances
34. Administer ASM disk groups
35. Configuring the Oracle Network Environment
36. Use Enterprise Manager to create and configure the Listener
37. Enable Oracle Restart to monitor the listener
38. Use tnsping to test Oracle Net connectivity
39. Identify when to use shared servers and when to use dedicated servers
40. Managing Database Storage Structures
41. Storage Structures
42. How Table Data Is Stored
43. Anatomy of a Database Block
44. Space Management in Tablespaces
45. Tablespaces in the Preconfigured Database
46. Actions with Tablespaces
47. Oracle Managed Files (OMF)
48. Administering User Security
49. Database User Accounts
50. Predefined Administrative Accounts
51. Benefits of Roles
52. Predefined Roles
53. Implementing Profiles
54. Managing Data Concurrency
55. Data Concurrency
56. Enqueue Mechanism
57. Resolving Lock Conflicts
58. Deadlocks
59. Managing Undo Data
60. Data Manipulation
61. Transactions and Undo Data
62. Undo Data Versus Redo Data
63. Configuring Undo Retention
64. Implementing Oracle Database Auditing
65. Describe DBA responsibilities for security
66. Enable standard database auditing
67. Specify audit options
68. Review audit information
69. Maintain the audit trail
70. Database Maintenance
71. Manage optimizer statistics
72. Manage the Automatic Workload Repository (AWR)
73. Use the Automatic Database Diagnostic Monitor (ADDM)
74. Describe and use the advisory framework
75. Set alert thresholds
76. Use server-generated alerts
77. Use automated tasks
78. Performance Management
79. Performance Monitoring
80. Managing Memory Components
81. Enabling Automatic Memory Management (AMM)
82. Automatic Shared Memory Advisor
83. Using Memory Advisors
84. Dynamic Performance Statistics
85. Troubleshooting and Tuning Views
86. Invalid and Unusable Objects
87. Backup and Recovery Concepts
88. Part of Your Job
89. Statement Failure
90. User Error
91. Understanding Instance Recovery
92. Phases of Instance Recovery
93. Using the MTTR Advisor
94. Media Failure
95. Archive Log Files
96. Performing Database Backups
97. Backup Solutions: Overview
98. Oracle Secure Backup
99. User-Managed Backup
100. Terminology
101. Recovery Manager (RMAN)
102. Configuring Backup Settings
103. Backing Up the Control File to a Trace File
104. Monitoring the Flash Recovery Area
105. Performing Database Recovery
106. Opening a Database
107. Data Recovery Advisor
108. Loss of a Control File
109. Loss of a Redo Log File
110. Data Recovery Advisor
111. Data Failures
112. Listing Data Failures
113. Data Recovery Advisor Views

114. Moving Data
115. Describe ways to move data
116. Create and use directory objects
117. Use SQL*Loader to move data
118. Use external tables to move data
119. General architecture of Oracle Data Pump
120. Use Data Pump export and import to move data
121. Working with Support
122. Use the Enterprise Manager Support Workbench
123. Work with Oracle Support
124. Log service requests (SR)
125. Manage patches