

Oracle Database 11g: Administration Workshop I

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:

Required 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
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2. Oracle Database Architecture Overview
 3. Oracle ASM Architecture Overview
 4. Process Architecture
 5. Memory structures
 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
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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
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