



Oracle Database 12c: Administration Workshop

Course ID#: 0380-174-12-w

35 hrs

Course Content

Course Description:

The overall objective of this course is threefold. First, this course instructs one in many of the day-to-day administration tasks required of an Oracle database administrator. Second, it is one of the 4 courses that assist in preparation for certification as an Oracle Certified Associated (OCA) database administrator. Finally, it introduces one to many of the administration sub-specialties that one might next pursue. It is increasingly rare for a single database administrator to fulfill all the required responsibilities necessary for management of an enterprise-scale Oracle database installation. Therefore, one may eventually specialize into backup and recovery strategies, database performance tuning, security administration and the like. So this course introduces the many powerful capabilities of the Oracle database and references the applicable courses within the Oracle database administration series that one might next consult.

Whenever appropriate this course demonstrates how an Oracle database installation integrates with its host environment, most commonly a Linux, Unix or MS Windows operating system platform. Extensive examples, workshop exercises and solutions are provided using the SQL command-line, the Enterprise Manager Database Express and the Enterprise Manager Cloud Control interfaces.

Prerequisites:

Oracle Database 12c: SQL Fundamentals (Levels I & II)

Oracle Database 12c: Install & Upgrade Workshop

Oracle Database 12c: Architecture & Internals

Audience:

The target audience for this textbook is all Oracle professionals. Among the specific groups for whom this textbook will be helpful are:

Database administrators

Application designers and developers

Web server administrators

System administrators

Implementation specialists

Data center support engineers

Chief Information Officers (CIO) and other information technology (IT) management professionals

Topics:

Managing The Database Instance

- The Database Management Tools
- EM Database Express
- EM Cloud Control
- SQL Developer
- Database Administration Duties

Database Architecture Review

- Database Instance Configurations
- Memory Structures
- Process Structures
- Storage Architecture



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Starting & Stopping Database Services

- Start & Stop The Database Listener
- About Database Startup/Shutdown
- SYSOPER
- SYSDBA
- Database State & Stages
- Startup With EM Cloud Control
- Startup With SQL*Plus
- Shutdown With EM Cloud Control
- Shutdown With SQL*Plus
- Using Ms Windows Services

Oracle Network Environment

- Oracle Net Services Architecture
- Oracle Net Configuration Assistant
- Oracle Net Manager
- Using EM Cloud Control
- Advanced Network Compression
- Troubleshooting Network Problems

Diagnostics & Oracle Support

- About Database Diagnostics
- Fault Diagnosability Infrastructure
- Database Instance Health Snapshot
- The Support Workbench
- Proactive Database Health Checks
- Package Diagnostic Data
- Working With The Knowledge Base

Storage: Tablespace Management

- Starter Tablespaces
- Create Tablespace With EM CC
- Create Tablespace With SQL
- Manage Tablespaces With EM CC
- Manage Tablespaces With EM DE
- Manage Tablespaces With SQL
- Drop Tablespace
- Alter Tablespace

Storage: Advanced Tablespace Management

- Managing Temporary Tablespaces
- Temp Tablespace Groups With EM
- Temp Tablespace Groups With SQL
- Default Permanent Tablespaces

- Bigfile Tablespaces
- Managing The SYSAUX Tablespace

Storage: Data Files & Temp Files Management

- Manage Data Files With EM
- Access Metadata With SQL
- Manage Data Files With SQL
- Manage Temp Files
- Oracle-Managed Files (OMF)

Storage: Undo Data & Undo Tablespaces

- About Undo Space Management
- Configure Undo Management
- Guarantee Undo Retention
- Monitor Undo Space With SQL
- Use The EM Undo Advisor

Security & Schemas: Security Overview & Database Privileges

- Database Security Principles
- Database System Privileges
- Database Object Privileges
- Super Administrator Roles
- Privilege Analysis

Security & Schemas: User Security

- Create & Manage User Accounts
- Manage Users With EM
- Manage Users With SQL
- Create User
- Alter User
- Drop User
- Grant & Revoke Privileges
- Resource Limits Via Profiles
- Alter Profile
- Drop Profile
- Password Management Via Profiles
- Role-Based Security Management
- Alter User...Default Role
- Set Role
- Delegating Privilege Authorization
- With Admin Option & System Privileges
- With Grant Option & Object Privileges
- Principle Of Least Privilege Checklist



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Security & Schemas: Database Auditing

- Auditing Database Activity
- Traditional Auditing
- Unified Auditing
- Create Audit Policy

Security & Schemas: SQL Loader

- Loader Concepts
- Loader From The Command Line
- Control File Options
- Load Methods
- Loader Express Mode
- Loader From EM

Security & Schemas: Export & Import

- Manage Directory Objects
- The Data Pump Architecture
- Data Pump Export
- Data Pump Import
- Data Pump Dictionary Views
- Using The EM CC Interface

Performance & Availability: Managing

Performance & SQL Tuning

- Management Advisory Framework
- Performance Monitoring & AWR
- The SQL Tuning Advisor
- Monitoring Exceptions With Metrics

Performance & Availability: Data Concurrency

- About System & User Locks
- Monitor & Manage User Locks
- Monitor Locks With Data Dictionary
- Manage Locks With EM

Performance & Availability: Backup & Recovery Concepts

- Backup & Recovery Structures
- Managing Redo Data
- Configuring For Recoverability
- Instance Recovery
- Recoverability Checklist