Oracle Database 11g: Administration Workshop I Release 2

Duration: 5 Days

What you will learn

This Oracle Database 11g: Administration Workshop I Release 2 course explores the fundamentals of basic database administration. Expert Oracle University instructors will reinforce topics with structured hands-on practices that will prepare you for the corresponding Oracle Certified Associate exam.

Learn To:

Install Oracle Grid Infrastructure.
Create and manage users.
Install and configure an Oracle Database.
Create and manage storage structures.
Administer the Oracle Database.
Understand the Oracle database architecture and how its components work and interact with one another.
Perform backup and recovery.

Benefits to You

Ensure fast, reliable, secure and easy to manage performance. Optimize database workloads, lower IT costs and deliver a higher quality of service by enabling smooth and rapid consolidation within your Datacenter.

Create an Operational Database

You will also learn how to create an operational database and properly manage the various structures in an effective and efficient manner. This includes performance monitoring, database security, user management and backup/recovery techniques.

Training Requirements

This Oracle Database 11g: Administration Workshop I Release 2 course fulfills the training requirement for an Oracle Certification Path. Only instructor-led online (LVC, LWC), in-class (ILT) or Training On Demand courses fulfill the requirement. Please note that Self-Study Courses and Knowledge Center courses do not fulfill the training requirement.

Audience

Database Administrators
Java Developer
Support Engineer
Technical Administrator
Technical Consultant

Related Training

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Required Prerequisites

Taken Oracle Introduction to SQL course or equivalent experience

Suggested Prerequisites
Oracle Database: PL/SQL Fundamentals

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 Topics

Exploring the Oracle Database Architecture
Oracle Database Architecture Overview
Oracle ASM Architecture Overview
Process Architecture
Memory structrues
Logical and physical storage structures
ASM storage components

Installing your Oracle Software
Tasks of an Oracle Database Administrator
Tools Used to Administer an Oracle Database
Installation: System Requirements
Oracle Universal Installer (OUI)
Installing Oracle Grid Infrastructure
Installing Oracle Database Software
Silent Install

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Creating an Oracle Database
Planning the Database
Using the DBCA to Create a Database
Password Management
Creating a Database Design Template
Using the DBCA to Delete a Database

Managing the Oracle Database Instance
Start and stop the Oracle database and components
Use Oracle Enterprise Manager
Access a database with SQLPlus
Modify database installation parameters
Describe the stages of database startup
Describe database shutdown options
View the alert log
Access dynamic performance views

Manage the ASM Instance
Set up initialization parameter files for ASM instance
Start up and shut down ASM instances
Administer ASM disk groups

Configuring the Oracle Network Environment
Use Enterprise Manager to create and configure the Listener
Enable Oracle Restart to monitor the listener
Use tnsping to test Oracle Net connectivity
Identify when to use shared servers and when to use dedicated servers

Managing Database Storage Structures
Storage Structures
How Table Data Is Stored
Anatomy of a Database Block
Space Management in Tablespaces
Tablespaces in the Preconfigured Database
Actions with Tablespaces
Oracle Managed Files (OMF)

Administering User Security
Database User Accounts
Predefined Administrative Accounts
Benefits of Roles
Predefined Roles
Implementing Profiles

Managing Data Concurrency
Data Concurrency
Enqueue Mechanism
Resolving Lock Conflicts
Deadlocks

Managing Undo Data
Data Manipulation

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Transactions and Undo Data
Undo Data Versus Redo Data
Configuring Undo Retention

Implementing Oracle Database Auditing
Describe DBA responsibilities for security
Enable standard database auditing
Specify audit options
Review audit information
Maintain the audit trail

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

Performance Management
Performance Monitoring
Managing Memory Components
Enabling Automatic Memory Management (AMM)
Automatic Shared Memory Advisor
Using Memory Advisors
Dynamic Performance Statistics
Troubleshooting and Tuning Views
Invalid and Unusable Objects

Backup and Recovery Concepts
Part of Your Job
Statement Failure
User Error
Understanding Instance Recovery
Phases of Instance Recovery
Using the MTTR Advisor
Media Failure
Archive Log Files

Performing Database Backups
Backup Solutions: Overview
Oracle Secure Backup
User-Managed Backup
Terminology
Recovery Manager (RMAN)
Configuring Backup Settings
Backing Up the Control File to a Trace File
Monitoring the Flash Recovery Area

Performing Database Recovery
Opening a Database

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Data Recovery Advisor
Loss of a Control File
Loss of a Redo Log File
Data Recovery Advisor
Data Failures
Listing Data Failures
Data Recovery Advisor Views

Moving Data
Describe ways to move data
Create and use directory objects
Use SQL*Loader to move data
Use external tables to move data
General architecture of Oracle Data Pump
Use Data Pump export and import to move data

Working with Support
Use the Enterprise Manager Support Workbench
Work with Oracle Support
Log service requests (SR)
Manage patches

Related Courses

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