

High School Technology Services
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Certification Courses

Oracle Associate Level in 40 hour training

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a. Oracle Database 12c: SQL Fundamentals 1Z0-061

With Oracle Database 12c: SQL Fundamentals, you experience the benefits of an Oracle Database that is re-engineered for Cloud computing. Multitenant architecture brings enterprises unprecedented hardware and software efficiencies, performance and manageability benefits, and fast and efficient Cloud provisioning. Oracle Database 12c: SQL Fundamentals certifications emphasize the full set of skills that DBAs need in today's competitive marketplace.

Candidates will be tested on the following objectives:

- Retrieving data using the SQL SELECT statement
- Restricting and sorting data
- Using single-row functions to customize output
- Reporting aggregated data using the group functions
- Displaying data from multiple tables
- Using subqueries to solve queries
- Managing Tables using DML statements
- Introduction to Data Definition Language

Lesson 1: Introducing Oracle Database 12c RDBMS Oracle Database 12c:

- Relational Database Management Systems
- The Oracle Database 12c
- Becoming Familiar with SQL*Plus
- Summary
- Exam Essentials

Lesson 2: Introducing SQL

- SQL Fundamentals
- Writing Simple Queries
- Accepting Values at Runtime
- Summary
- Exam Essentials

Lesson 3: Using Single-Row Functions

- Single-Row Function Fundamentals
- Using Single-Row Character Functions

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- Using Single-Row Numeric Functions
- Using Single-Row Date Functions
- Using Single-Row Conversion Functions
- Using Other Single-Row Functions
- Summary
- Exam Essentials

Lesson 4: Using Group Functions

- Group Function Fundamentals
- Utilizing Aggregate Functions
- Summary
- Exam Essentials

Lesson 5: Using Joins and Subqueries

- Writing Multiple-Table Queries
- Using Set Operators
- Using Subqueries
- Summary
- Exam Essentials

Lesson 6: Manipulating Data

- Using DML Statements
- Understanding Transaction Control
- Summary
- Exam Essentials

Lesson 7: Creating Tables and Constraints

- Database Objects Overview
- Built-in Datatypes
- Creating Tables
- Modifying Tables
- Managing Constraints
- Summary
- Exam Essentials

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b. Oracle Database 11g - Administration I

This Oracle 11g training course will allow the student to gain the skills necessary for day-to-day administration of an Oracle database.

The primary audiences for this course are: Database administrators Web server administrators System administrators Implementation specialists Data center support engineers Senior application designers and developers

Course Objectives

Major tasks to be considered within this course are:

- Configuration of the Linux and MS Windows operating systems in anticipation of a database installation
- Server Class installation of the Oracle 11g R2 Enterprise Edition database
- Verification of a valid database installation
- Database administrator interface options, including the use of Enterprise Manager, command-line SQL*Plus, and terminal console SSH
- Database deinstallation
- Online software patching
- Startup and shutdown of database services and related software components
- Super administrator authentication options
- An in-depth exploration of the database architecture, including memory, process and data structures, and the management of those structures.
- Management of database files.
- Specialized facilities intended to maximize performance of enterprise-scale transactional applications, such as the shared SQL and PL/SQL cache, the Result Cache, the database buffer cache, and other similar components.
- Management of security policies and procedures, including administration of user accounts, roles, privileges and profiles.
- Utilization of advanced self-tuning and self-management capabilities, including the use of Oracle-Managed Files, database Advisors and other components of the Management Framework.
- Performance monitoring, problem troubleshooting, and resolving lock and conflict issues.
- Using the Oracle Enterprise Manager and SQL interfaces for administration tasks.
- Control over database support services, including the Database Control, Oracle Net and others.
- A primer on backup and recovery structures and strategies.

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- Operating system-specific considerations for various platforms, especially Linux and MS Windows Server.

Course Outline

1 - Installation and Upgrade Part

- Configuring the Server for Installation
- Enterprise Edition Installation
- Verify the Installation
- Upgrade, Deinstallation and Patching

2 – Part A

- Manually Starting & Stopping Database Services
- Exploring the Oracle Database Architecture: General
- Exploring the Oracle Database Architecture: Instance Memory
- Exploring the Oracle Database Architecture: Instance Processes
- Creating an Oracle Database
- Enabling Transparent Data Encryption
- Manage Databases Storage Structures: TableSpaces
- Manage Database Storage Structures: Advanced TableSpaces
- Manage Database Storage Structures: Data Files & Temp Files
- Managing Undo Data

3 – Part B

- Network Environment: Oracle Net Services
- Network Environment: Oracle Shared Servers
- Security: Implementing Database Security
- Security: Administering User Security
- Moving Data: SQL Loader
- Moving Data: Export & Import
- Database Maintenance & Performance Monitoring
- Managing Concurrency & Locks
- Backup and Recovery Concepts and Configuration