

## Oracle BI Suite EE 10g R3: Build Repositories - LVC

**Duration:** 5 Days

### What you will learn

This course provides step-by-step procedures for building and verifying the three layers of an Oracle BI repository. Students begin by using the Oracle BI Server Administration Tool to construct a simple repository to address a fictitious company's business requirements. Students import schemas, design and build logical business models, and expose business models to users in Oracle BI Answers. In the process of constructing the repository, students learn how to build physical and logical joins, simple measures, and calculation measures. Students also learn how to validate their work by building queries and verifying query results using Oracle BI Answers and the query log.

Students then extend the initial repository and learn how to model more complex business requirements, such as dimension hierarchies, multiple logical table sources, aggregate tables, partitions, and time series data. Students also learn how to implement OracleBI Server security, manage OracleBI Server cache, set up a multi-user development environment, and use Administration Tool wizards and utilities to manage, maintain, and enhance repositories. Finally, students are exposed to more advanced topics, such as implicit fact columns, bridge and helper tables, usage tracking, optimizing query performance, and multilingual environments.

### Learn To:

Use the Oracle BI Administration Tool to build, manage, and maintain an Oracle BI repository

Build a dimensional business model to address business intelligence requirements

Use Oracle BI Answers to build and execute queries to test and verify a dimensional business model

Use the Oracle BI Administration Tool to administer Oracle BI Server

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### Audience

Application Developers

Business Analysts

Business Intelligence Developer

Data Modelers

Data Warehouse Administrator

Data Warehouse Analyst

Data Warehouse Developer

Reports Developer

### Prerequisites

*Required Prerequisites*

### *Suggested Prerequisites*

Dimensional modeling  
Basic SQL  
Data warehouse design  
Database design

### **Course Objectives**

Use time series functions to support historical time comparison analyses  
Build the Physical, Business Model and Mapping, and Presentation layers of a repository  
Use Oracle BI Answers to run queries to test and validate a repository  
Build simple and calculated measures for a fact table  
Create dimension hierarchies and level-based measures  
Model aggregate tables to speed query processing  
Model partitions and fragments to improve application performance and usability  
Use variables to streamline administrative tasks and modify metadata content dynamically  
Set up security to authenticate users and assign appropriate permissions and privileges  
Apply cache management techniques to maintain and enhance query performance  
Set up query logging for testing and debugging  
Set up a multi-user development environment  
Use Administration Tool wizards and utilities to manage, maintain, and enhance repositories  
Enable usage tracking to track queries and database usage, and improve query performance  
Connect third-party reporting tools to Oracle BI Server  
Configure Oracle BI to support multilingual environments

### **Course Topics**

#### **Repository Basics**

Oracle BI architecture components  
Repository structure, features, and functions  
Using the OracleBI Administration Tool  
Creating a repository  
Loading a repository into Oracle BI Server memory

#### **Building the Physical Layer of a Repository**

Importing data sources  
Setting up connection pool properties  
Defining keys and joins  
Examining physical layer object properties  
Creating alias and select tables

#### **Building the Business Model and Mapping Layer of a Repository**

Building a business model  
Building logical tables, columns, and sources  
Defining logical joins  
Building measures  
Examining business model object properties

## **Building the Presentation Layer of a Repository**

- Exploring Presentation layer objects
- Creating Presentation layer objects
- Modifying Presentation layer objects
- Examining Presentation layer object properties

## **Testing and Validating a Repository**

- Checking repository consistency
- Turning on logging
- Defining a repository in the initialization file
- Testing a repository using Oracle BI Answers
- Inspecting the query log

## **Adding Multiple Logical Table Sources**

- Adding multiple logical table sources to a logical table
- Specifying logical content

## **Adding Calculations to a Fact Table**

- Creating new calculation measures based on existing logical columns
- Creating new calculation measures based on physical columns
- Creating new calculation measures using the Calculation Wizard

## **Creating Dimension Hierarchies and Level-Based Measures**

- Creating dimension hierarchies
- Creating level-based measures
- Creating share measures
- Creating rank measures

## **Using Aggregates**

- Purpose of aggregate tables in dimensional modeling
- Modeling aggregate tables to improve query performance
- Testing aggregate navigation
- Using the Aggregate Persistence Wizard

## **Using Partitions and Fragments**

- Purpose for segmenting data into partitions and fragments
- Partition types
- Modeling partitions in an Oracle BI repository

## **Using Repository Variables**

- Session variables
- Repository variables
- Initialization blocks
- Using the Variable Manager
- Using dynamic repository variables as filters

## **Modeling Time Series Data**

- Using time comparisons in business analysis
- Using Oracle BI time series functions to model time series data

## **Modeling Many-to-Many Relationships**

- Using bridge tables to resolve many-to-many relationships between dimension tables and fact tables

Using helper tables to model many-to-many relationships for team-based hierarchies in a dimension

## **Configuring Oracle Business Intelligence data and metadata to support multilingual environments**

### **Setting an Implicit Fact Column**

Adding fact columns automatically to dimension-only queries

Ensuring the expected results for dimension-only queries

Selecting a predetermined fact table source

Specifying a default join path between dimension tables

## **Integrating Third-Party Reporting Tools with Oracle BI Server**

### **Creating Repositories Using Multidimensional Data Sources**

Adding a multidimensional data source an Oracle BI repository

Displaying data from multidimensional sources in Oracle BI Answers requests and Oracle BI Interactive Dashboards

### **Security**

Creating users and groups

Setting permissions for users and groups

Authenticating using a external database

Authenticating using database authentication

Setting query limits and timing restrictions

Setting filters to personalize information

### **Cache Management**

Restricting tables as non-cacheable

Using Cache Manager

Inspecting cache reports

Purging cache entries

Modifying cache parameters and options

Seeding the cache

### **Setting Up and Administering Usage Tracking**

Tracking and storing Oracle BI Server usage at the detailed query level

Using usage tracking statistics to optimize query performance and aggregation strategies

Analyzing usage results using Oracle BI Answers and other reporting tools

### **Multi-user Development**

Setting up a multi-user development environment

Developing a repository using multiple developers

Tracking development project history

## **Using Administration Tool wizards and utilities to manage, maintain, and enhance repositories**

Employing techniques to optimize Oracle BI query performance

Applying Oracle BI repository design principles