

## Oracle BI 11g R1: Build Repositories

**Duration:** 5 Days

### What you will learn

This Oracle BI 11g R1: Build Repositories training is based on OBI EE release 11.1.1.7. Expert Oracle University instructors will teach you step-by-step procedures for building and verifying the three layers of an Oracle BI repository; you'll begin by using the Oracle BI Administration Tool to construct a simple repository to address a fictitious company's business requirements.

### Learn To:

Build and execute analyses to test and verify a dimensional business model.

Use the Oracle BI Administration Tool to administer Oracle BI Server.

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.

Validate your work by creating and running analyses, and verifying query results using the query log.

### Benefits to You

By taking this course, you'll walk away with the ability to transform your organization's data into intelligence, which will improve your day-to-day decision making. This new knowledge will help you provide time-critical, relevant and accurate insights. Furthermore, you'll develop skills that will help you become more efficient at building repositories.

### Build Logical Business Models

This course will also teach you how to import schemas, design and build logical business models and expose business models to users in the Oracle BI user interface. While constructing the repository, you'll learn how to build physical and logical joins, simple measures and calculation measures.

### Model Logical Dimension Hierarchies

You'll then extend the initial repository and learn how to model more complex business requirements. This includes logical dimension hierarchies, multiple logical table sources, aggregate tables, partitions and time series data.

### Implement Oracle BI Server Security

Oracle University instructors will also walk you through implementing the Oracle BI Server security and managing the Oracle BI Server cache. You'll learn how to set up a multi-user development environment and use Administration Tool wizards and utilities to manage, maintain and enhance repositories.

### Advanced Course Topics

Finally, investing in this course will give you a chance to explore more advanced topics, like implicit fact columns, bridge tables, usage tracking, multilingual environments, write back and patch merge. An appendix is included, which covers architecture and the benefits of the Oracle Exalytics BI Machine.

### **Audience**

Application Developers  
Business Analysts  
Business Intelligence Developer  
Data Modelers  
Data Warehouse Administrator  
Data Warehouse Analyst  
Reports Developer  
Technical Consultant

### **Related Training**

#### *Required Prerequisites*

Knowledge on Basic SQL

Knowledge on Data warehouse design

Knowledge on Dimensional modeling

#### *Suggested Prerequisites*

Oracle BI 11g R1: Create Analyses and Dashboards

### **Course Objectives**

Build and run analyses to test and validate a repository

Build simple and calculated measures for a fact table

Create logical dimension hierarchies and level-based measures

Check the model and then 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

Use time series functions to support historical time comparison analyses

Set up security to authenticate users and assign appropriate permissions and privileges

Build the Physical, Business Model and Mapping, and Presentation layers of a repository

Apply cache management techniques to maintain and enhance query performance

Set up query logging for testing and debugging

Set up a multiuser development environment

Use the Administration Tool wizards and utilities to manage, maintain, and enhance repositories

Enable usage tracking to track queries and database usage, and improve query performance

Perform a patch merge in a development-to-production scenario

Describe Exalytics machine and the Summary Advisor tool used in the machine

## Course Topics

### Repository Basics

Exploring Oracle BI architecture components

Exploring a repository's structure, features, and functions

Using the Oracle BI Administration Tool

Creating a repository

Loading a repository into Oracle BI Server

Installing the BI Client software

Overview of Exalytics Machine

### 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 tables

Printing the physical layer diagram

### 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

Printing the business model and mapping layer diagram

### Building the Presentation Layer of a Repository

Exploring presentation layer objects

Creating presentation layer objects

Modifying presentation layer objects

Examining presentation layer object properties

Nesting presentation tables

Controlling presentation layer object visibility

### Testing and Validating a Repository

Checking repository consistency

Turning on logging

- Uploading the repository through Enterprise Manager
- Executing analyses to test the repository
- Inspecting the query log

### **Managing Logical Table Sources**

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

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

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

### **Working with Logical Dimensions**

- Creating logical dimension hierarchies
- Creating level-based measures
- Creating share measures
- Creating dimension-specific aggregation rules
- Creating presentation hierarchies
- Creating parent-child hierarchies
- Creating ragged and skipped-level hierarchies

### **Enabling Usage Tracking**

- Creating the usage tracking tables
- Setting up the sample usage tracking repository
- Tracking and storing Oracle BI Server usage at the detailed query level
- Using usage tracking statistics to optimize query performance and aggregation strategies

### **Using Model Checker and Aggregates**

- Using Model Check Manager
- Modeling aggregate tables to improve query performance
- Using the Aggregate Persistence Wizard
- Testing aggregate navigation
- Setting the number of elements in a hierarchy

### **Using Partitions and Fragments**

- Exploring partition types
- Modeling partitions in an Oracle BI repository

### **Using Repository Variables**

- Creating session variables
- Creating repository variables
- Creating 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

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

- Ensuring the correct results for dimension-only queries
- Selecting a predetermined fact table source
- Specifying a default join path between dimension tables

### **Importing Metadata from Multidimensional Data Sources**

- Importing a multidimensional data source into a repository
- Incorporating horizontal federation into a business model
- Incorporating vertical federation into a business model
- Adding Essbase measures to a relational model
- Displaying data from multidimensional sources in Oracle BI analyses and dashboards

### **Security**

- Exploring Oracle BI default security settings
- Creating users and groups
- Creating application roles
- Setting up object permissions
- Setting row-level security (data filters)
- Setting query limits and timing restrictions

### **Cache Management**

- Restricting tables as non-cacheable
- Using Cache Manager
- Inspecting cache reports
- Purging cache entries
- Modifying cache parameters and options
- Seeding the cache

### **Exploring the Summary Advisor Tool**

- Setting up Summary Advisor
- Running the Summary Advisor wizard to create the aggregate script
- Running the aggregate script to create the aggregates

### **Using Administration Tool Utilities**

- Using the various Administration Tool utilities
- Using BI Server XML API to create XML representation of repository metadata

### **Multiuser Development**

- Setting up a multiuser development environment
- Developing a repository using multiple developers
- Tracking development project history

### **Performing a Patch Merge**

- Comparing repositories
- Equalizing objects
- Creating a patch
- Applying a patch
- Making merge decisions