

## Oracle BI 12c: Build Repositories

**Duration:** 5 Days

### What you will learn

This Oracle BI 12c: Build Repositories training teaches you how to build and verify the three layers of an Oracle Business Intelligence (BI) repository, step-by-step. Expert Oracle University instructors will begin by teaching you how to use the Oracle BI Administration Tool to construct a simple repository.

### Learn To:

Construct the repository.

Import schemas.

Design and build logical business models.

Expose business models to users in the Oracle BI user interface.

Build physical and logical joins, simple measures, and calculation measures.

Validate your work by creating and running analyses.

Verify query results using the query log.

Implement Oracle BI Server security.

Manage the Oracle BI Server cache.

Set up a multi-user development environment.

### Benefits to You

By taking this course, you'll walk away with the ability to extend the initial repository and model more complex business requirements, including: logical dimension hierarchies, multiple logical table sources, aggregate tables, partitions, and time series data. You will have developed the experience to use Administration Tool wizards and utilities to manage, maintain, and enhance repositories. Finally, you'll be exposed to more advanced topics, like implicit fact columns, bridge tables, usage tracking, patch merge, and managing service instances.

### Course Objectives

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

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

Use Business Application Archive (BAR) files to move Oracle BI between environments

Build the Physical

Business Model and Mapping

and Presentation layers of a repository

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

## 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

### 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

### **Managing Metadata and Working with Service Instances**

Using BI Application Archive (BAR) files to export and import service instances

Managing BAR files using WebLogic Scripting Tool (WLST) commands

Managing service instances using WLST commands

### **Using Administration Tool Utilities**

Using the various Administration Tool utilities

Using BI Server XML API to create XML representation of repository metadata

### **Multuser Development**

Setting up a multuser 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