

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

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