IBM Cognos Framework Manager Design Metadata Models (V10.2)

Information

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| **Length:** | 5.0 Days |
| __**Ref:** | B5252G |
| **Delivery method:** | Classroom |
| **Price:** | EUR |

Overview

Course materials for this course are available in:

- English
- French
- German
- Spanish (Spain)
- Spanish (Latin America)
- Portuguese (Brazil)

The course image is available in English only.

IBM Cognos Framework Manager: Design Metadata Models (V10.2) is a five-day, instructor-led course that provides participants with introductory to advanced knowledge of metadata modeling concepts, and how to model metadata for predictable reporting and analysis results using Framework Manager. Participants will learn the full scope of the metadata modeling process, from initial project creation, to publishing of metadata to the Web, enabling end users to easily author reports and analyze data.

Public

This course is intended for Developers.

Prerequisits

This advanced offering is intended for developers who design metadata models for use in IBM Cognos.

Objective

Please refer to Course Overview for description information.

Topics

**Overview of IBM Cognos BI**

- Discuss IBM Cognos and Performance Management
- Describe IBM Cognos components
- Describe IBM Cognos architecture at a high level
- Define IBM Cognos groups and roles
- Explain how to extend IBM Cognos

**Identify Common Data Structures**

- Examine the characteristics of operational databases and databases designed for reporting
- Examine relationships and cardinality
- Identify different data traps
- Examine dimensional data sources

**Gather Requirements**

- Examine key modeling recommendations
- Define reporting requirements
- Explore data sources to identify data access strategies

**Create a Baseline Project**

- Examine the IBM Cognos BI and Framework Manager workflow processes
- Define a project and its structure
- Describe the Framework Manager environment
- Create a baseline project
- Enhance the model with additional metadata

**Prepare Reusable Metadata**

- Identify facts and dimensions
- Examine relationships, and data traps
- Verify relationships and query item properties
- Ensure efficient filters by configuring prompt properties

**Model for Predictable Results: Identify Reporting Issues**

- Describe multi-fact queries and when full outer joins are appropriate
- Describe how IBM Cognos BI uses cardinality
- Identify reporting traps
- Use tools to analyze the model

**Model for Predictable Results: Virtual Star Schemas**

- Identify the advantages of modeling metadata as a star schema
- Model in layers
- Create aliases to avoid ambiguous joins
- Merge query subjects to create as view behavior

## Model for Predictable Results: Consolidate Metadata

- Create virtual facts to simplify writing queries
- Create virtual dimensions to resolve fact-to-fact joins
- Create a consolidated modeling layer for presentation purposes
- Consolidate snowflake dimensions with model query subjects
- Simplify facts by hiding unnecessary codes

## Calculations and Filters

- Use calculations to create commonly-needed query items for authors
- Use static filters to reduce the data returned
- Use macros and parameters in calculations and filters to dynamically control the data returned

## Implement a Time Dimension

- Make time-based queries simple to author by implementing a time dimension
- Resolve confusion caused by multiple relationships between a time dimension and another table

## Specify Determinants

- Use determinants to specify multiple levels of granularity and prevent double-counting

## Create the Presentation View

- Identify the dimensions associated with a fact table
- Identify conformed vs. non-conformed dimensions
- Create star schema groupings to provide authors with logical groupings of query subjects
- Rapidly create a model using the Model Design Accelerator

## Work with Different Query Subject Types

- Identify key differences and recommendations for using data source, model, and stored procedure query subjects
- Identify the effects on generated SQL when modifying query subjects, SQL settings and relationships

## Set Security in Framework Manager

- Examine the IBM Cognos BI security environment

- Restrict access to packages
- Create and apply security filters
- Restrict access to objects in the model

## Create Analysis Objects

- Apply dimensional information to relational Metadata to enable OLAP-style queries
- Define members and member unique names
- Identify changes that impact a MUN
- Sort members for presentation and predictability

## Manage OLAP Data Sources

- Connect to an OLAP data source (cube) in a Framework Manager project
- Publish an OLAP model
- Publish a model with multiple OLAP data sources
- Publish a model with an OLAP data source and a relational data source

## Advanced Generated SQL Concepts and Complex Queries

- Governors that affect SQL generation
- Stitch query SQL
- Conformed and non-conformed dimensions in generated SQL
- Multi-fact/multi-grain stitch query SQL
- Variances in Report Studio generated SQL
- Dimensionally modeled relational SQL generation
- Cross join SQL
- Various results sets for multi-fact queries

## Use Advanced Parameterization Techniques in Framework Manger

- Identify environment and model session parameters
- Leverage session, model, and custom parameters
- Create prompt macros
- Leverage macro functions associated with security

## Model Maintenance and Extensibility

- Perform basic maintenance and management on a model
- Remap metadata to another source
- Import and link a second data source
- Run scripts to automate or update a model
- Create a model report

**Optimize and Tune Framework Manager Models**

- Identify and implement techniques to optimize and tune your Framework Manager models
- Use Dynamic Query Mode in Framework Manager

**Work in a Multi-Modeler Environment**

- Segment and link a project
- Branch a project and merge results

**Manage Framework Manager Packages**

- Specify package languages and function sets
- Control model versioning
- Nest packages

**Appendix A: Employ Additional Modeling Techniques**

- Leverage a user defined function
- Set the order of operations in a model calculation
- Externalize query subjects
- Prepare IBM Cognos 10 content for use as a data source in Transformer
- Create query sets
- Use external source control through Windows Explorer

**Appendix B: Model Multilingual Metadata**

- Customize metadata for a multilingual audience

**Appendix C: Additional Resources**

- Links to sites where the customer can find more information about course-related material.