+33 (0)1 48 10 09 46
formation@ambient-it.net
140 Avenue Jean Lolive 93500 Pantin - France

Updated on 23/07/2025

Sign up

Cognos Data Modeling Training

2 days (14 hours)

Presentation

This 2-day training course plunges you into the heart of Cognos Data Modeling, with a dual objective: to build a high-performance, governed model via Framework Manager, and to master self-service modeling via the Data Modules integrated into Cognos Analytics.

You will first study relational and dimensional modeling via FM, with package publication and constraint management. You'll then learn about the agile, pre-set approach of Data Modules: file import, calculations, security, navigation, ideal for rapid business needs.

Practical workshops punctuate the modules.

Adaptable to both face-to-face and distance learning, the interactive format alternates lectures, guided demonstrations, hands-on exercises and discussions to anchor knowledge.

Objectives

- Understand the architecture and value of the Cognos semantic layer
- Create and optimize a relational or dimensional model with FM
- Master package publication and business consumption
- Design self-service Data Modules including calculations, filters and security
- Apply best practices in modeling, performance and governance

Target audience

- Data Analysts, BI Developers, Data Engineers
- Anyone familiar with the basics of SQL and data schemas, and new to Cognos.

Prerequisites

- Knowledge of data/formal databases (tables, joins, cardinalities)
- Notions of BI/reporting or use of Cognos tools (Author Reports)

Cognos Data Modeling training program

Introduction to Cognos and semantic modeling

- Context and challenges of data modeling in Cognos Analytics
- Differences between Framework Manager, Data Modules and dynamic cubes
- Semantic layer architecture and the role of the model in BI
- Business vs. technical terminology: Query Subjects, Relationships, Dimensions
- Publication: FM package vs. web data module
- Discovering the Cognos environment (connection, navigation, model exploration)

Framework Manager: relational model creation

- Creating an FM project and connecting to data sources
- Importing tables and organizing the physical layer
- Defining joins, cardinalities and join filters
- Notion of Query Subjects: physical, logical, presentation
- Creating simple calculations and static filters
- Publishing an FM package
- Building a relational mini-model, creating joins and publishing

Framework Manager: dimensional modeling

- Concepts of facts and dimensions, typical star schema
- Creating DMR (Dimensionally Modeled Relational) models
- Implementing temporal dimensions and hierarchies
- Detecting and resolving pitfalls: strange cardinalities, double counting
- Use of determinants and column dependencies
- Consolidation into presentation layers
- Publishing and testing with a simple report

Introduction to Data Modules (self-service)

- Why Data Modules? Complementing FM for agile use
- Web module creation: import Excel files, DB sources
- Automatic or manual definition of relationships
- Renaming, masking and organizing objects

- Simple calculations, filters and groups
- Module publication and exploitation via reporting

Advanced functions in Data Modules

- Advanced relationships, cardinality and Null-safe joins
- Measure creation, custom sorting and calculated classes
- Navigation paths and groups
- Row-level security
- Optimization: caching, summarization, performance
- Complex joins, security, navigation paths

Summary, comparison and best practices

- Comparison: Framework Manager vs. Data Modules
- When to use which tool? Complexity, performance, maintenance
- Governance, updating and version management
- Security: filters, roles, secure publication
- Optimization tips: aggregates, modeling design accelerator, caching
- Business/IT exchanges and recommendations

Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced IT technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical training: 60% hands-on, 40% theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Certification

A certificate will be awarded to each trainee who has completed the entire course.