Updated on 05/08/2025

Sign up

SAP BO Universe Design Training
3 days (21 hours)

Presentation

Master the design of SAP BO universes with this expert training course, designed to structure your data efficiently and offer business users a clear, secure, high-performance semantic layer.

The course starts with the basics: the role of universes in SAP BO, the differences between UDTs and IDTs, connections to relational sources, and modeling principles. You'll discover how to lay a solid foundation for your future universes.

You'll then get to grips with the Information Design Tool to build a complete universe step by step: creating joins, managing traps, designing the business layer, hierarchies, calculated objects and dynamic prompts.

Advanced modules cover multi-source universes, security, performance, as well as best practices for maintenance and migration to UNX. You'll be able to design universes that are scalable, secure and documented.

As with all our training courses, this one will be presented with the latest SAP BO updates.

Objectives

- Understand SAP BO architecture, the strategic role of universes and the differences between UDT and IDT
- Know how to connect, model and link relational sources in an optimized optimized
- Master the creation of UNX universes with IDT: business objects, joins, contexts, hierarchies, prompts and filters
- Be able to secure universes, improve performance and model multi-source multi-source universes

- Industrialize the lifecycle of an SAP BO universe: versioning, deployment, maintenance, UNV?UNX migration and complete business documentation

Target audience

- Developers
- Data analysts

Prerequisites

- Basic knowledge of SAP BusinessObjects operation

SAP BO Universe Design training program

Introduction to SAP BusinessObjects and universe modeling

- Role of universes in BO architecture (semantic layer)
- Concepts of data source, presentation layer, metadata
- Available design tools
- Universe Design Tool (UDT): former tool (UNV)
- Information Design Tool (IDT): modern tool (UNX)
- UNV vs. UNX comparison
- Universe life cycle
- Needs analysis
- Design, modeling, testing
- Publication and maintenance

Technical requirements and organization of data sources

- Connecting to data sources
- Connection types (relational, OLAP)
- Connection security
- Creating connections (local vs. secure)
- Database structures
- Understanding relations, joins, primary/foreign keys
- Reading ERD (Entity-Relationship Diagram) schemas

Creating a universe with IDT (UNX)

- Project architecture (.dfx, .cnx, .blx files)
- Resource and object browser

- Defining connections
- Relational connections
- Connection security
- Connection testing
- Data foundation creation
- Table import
- Creating joins
- Solving join pitfalls
- Aliases and contexts
- Creating the business layer
- Simple objects Complex objects
- Hierarchies and drill-down navigation
- Universe publication
- Compilation and validation
- Export to BO repository (CMS)
- Testing in Web Intelligence

Advanced use of the semantic layer

- Trap detection and management
- Loops: using contexts
- Fan Trap: correct aggregation
- Chasm Trap: fact isolation strategies
- Advanced modeling techniques
- Calculated objects (in-layer calculations)
- Table dependencies
- Objects linked to subqueries
- Use of parameters and prompts
- Creating user prompts
- Lists of values (LOV)
- Filters with dynamic prompts
- Security at universe level
- Security profiles
- Data restrictions (Data Security)
- Masking of sensitive columns

Designing multi-source universes

- Principle of multi-source universes
- Using multiple connections
- Creating a multi-source foundation
- Limitations and best practices
- Synchronization and conflict resolution
- Data type mapping
- Joins between heterogeneous sources
- Performance and tuning
- Indexing and filtering
- Optimization of generated queries

Testing, validation and deployment

- Functional testing of the universe
- Object verification
- Using WebI to test business cases
- Error handling
- SQL error analysis
- Debugging and IDT logs
- Production deployment
- Versioning universes
- Documentation of business objects

Maintenance and evolution of universes

- Updating existing universes
- Adding or deleting tables
- Impact of modifications
- Change management
- Best practices in versioning
- Team collaboration
- Reuse and sharing
- Shared repository
- Reusable universes between projects

IDT vs. UDT

- Specific features of UDT
- Creation in Universe Design Tool
- Limitations
- UNV to UNX migration
- Conversion tools (UNV to UNX)
- Precautions and post-migration tests

Companies concerned

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

Positioning at training start

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 with regard to 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

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.