

BW430

SAP BW/4HANA Data Modeling

COURSE OUTLINE

Course Version: 22

Course Duration:

SAP Copyrights, Trademarks and Disclaimers

© 2024 SAP SE or an SAP affiliate company. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP SE or an SAP affiliate company.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. Please see <https://www.sap.com/corporate/en/legal/copyright.html> for additional trademark information and notices.

Some software products marketed by SAP SE and its distributors contain proprietary software components of other software vendors.

National product specifications may vary.

These materials may have been machine translated and may contain grammatical errors or inaccuracies.

These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP SE or its affiliated companies shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP SE or SAP affiliate company products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

In particular, SAP SE or its affiliated companies have no obligation to pursue any course of business outlined in this document or any related presentation, or to develop or release any functionality mentioned therein. This document, or any related presentation, and SAP SE's or its affiliated companies' strategy and possible future developments, products, and/or platform directions and functionality are all subject to change and may be changed by SAP SE or its affiliated companies at any time for any reason without notice. The information in this document is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates, and they should not be relied upon in making purchasing decisions.

Typographic Conventions

American English is the standard used in this handbook.

The following typographic conventions are also used.

This information is displayed in the instructor's presentation



Demonstration



Procedure



Warning or Caution



Hint



Related or Additional Information



Facilitated Discussion



User interface control

Example text

Window title

Example text

Contents

vii Course Overview

1 Unit 1: Challenges for Data Modeling

- | | |
|---|---------------------------------------|
| 1 | Lesson: Introducing Data Modeling |
| 1 | Lesson: Solving Requirement Conflicts |

3 Unit 2: Overview of the Business Case

- | | |
|---|----------------------------------------------------|
| 3 | Lesson: Getting to Know the ItelO Case Study |
| 3 | Lesson: Understanding the Source System Data Model |

5 Unit 3: SAP Data Warehouse Solutions

- | | |
|---|----------------------------------------------------------------------------|
| 5 | Lesson: SAP Data Warehousing Options |
| 5 | Lesson: Key Aspects of SAP HANA Modeling |
| 5 | Lesson: Key Aspects of SAP BW/4HANA Modeling |
| 5 | Lesson: Comparing SAP BW/4HANA Focus, SAP HANA Focus, and Mixed Strategies |
| 5 | Lesson: SAP Datasphere and Interaction with SAP BW/4HANA |
| 5 | Lesson: Key Aspects of S/4HANA Embedded Analytics |

7 Unit 4: Best Practice Standards in SAP BW/4HANA Modeling

- | | |
|---|-------------------------------------------------------------------------|
| 7 | Lesson: Understanding Object Changeability in System Landscape |
| 7 | Lesson: Separating Master Data and Transactional Data |
| 7 | Lesson: Tracking History |
| 7 | Lesson: Mapping and Transforming Data |
| 7 | Lesson: Designing an SAP BW/4HANA Layered Scalable Architecture (LSA++) |
| 7 | Lesson: Understanding Physical and Logical Partitioning |

9 Unit 5: Process of Modeling

- | | |
|---|--------------------------------------------------------|
| 9 | Lesson: Defining the Sequence of SAP BW/4HANA Projects |
| 9 | Lesson: Planning the Phases of an SAP BW/4HANA Project |
| 9 | Lesson: Developing an SAP BW/4HANA Data Model |

11 Unit 6: SAP BW/4HANA Content Add-On

- | | |
|----|-------------------------------------------------------------|
| 11 | Lesson: Working with SAP Business Content |
| 11 | Lesson: Introducing ABAP CDS Views provided by SAP BW/4HANA |

13 Unit 7: Implementing SAP BW/4HANA Field-Based Models

- | | |
|----|---------------------------------------------------------------|
| 13 | Lesson: Implementing Field-Based Modeling with Open ODS Views |
| 13 | Lesson: Understanding Snapshot and Corporate Memory Models |

| | | |
|-----------|-----------------|----------------------------------------------------------------------------------|
| 15 | Unit 8: | Implementing SAP BW/4HANA InfoObject Master Data Models |
| 15 | | Lesson: Modeling and Implementing SAP BW/4HANA Master Data |
| 15 | | Lesson: Modeling SAP BW/4HANA Hierarchies |
| 17 | Unit 9: | Implementing SAP BW/4HANA Transactional Data Models |
| 17 | | Lesson: Modeling and Implementing Advanced DataStore Objects (aDSOs) |
| 17 | | Lesson: Modeling and Implementing InfoSources and Conversions in Transformations |
| 17 | | Lesson: Modeling and Implementing CompositeProviders |
| 19 | Unit 10: | SAP BW/4HANA Data Lifecycle Management |
| 19 | | Lesson: Describing Multi-Temperature Data Management |
| 19 | | Lesson: Introducing SAP BW/4HANA Data Tiering Optimization (DTO) |
| 21 | Unit 11: | Further Modeling Topics in SAP BW/4HANA |
| 21 | | Lesson: Introducing the SAP HANA Analysis Process (HAP) |
| 21 | | Lesson: Defining Inventory Scenarios |
| 21 | | Lesson: Stock Coverage |
| 23 | Unit 12: | Implementing Native SAP HANA Views |
| 23 | | Lesson: Getting Started with SAP Web IDE for SAP HANA |
| 23 | | Lesson: Modeling Master Data in SAP HANA Views |
| 23 | | Lesson: Modeling Transactional Data in SAP HANA Views |
| 23 | | Lesson: Differences between SAP HANA 1.0 and SAP HANA 2.0 |
| 25 | Unit 13: | Implementing Mixed Scenarios |
| 25 | | Lesson: Explaining the Purpose of Mixed Scenarios |
| 25 | | Lesson: Consuming SAP HANA Calculation Views in SAP BW/4HANA |
| 25 | | Lesson: Generating External SAP HANA Views from SAP BW/4HANA Objects |
| 25 | | Lesson: Consuming Generated External SAP HANA Views |
| 27 | Unit 14: | Appendix |
| 27 | | Lesson: Implementing SAP BW/4HANA Workspaces |
| 27 | | Lesson: SAP BW/4HANA Lifecycle Management - Additional Information |
| 27 | | Lesson: Additional Sources of Information for SAP BW/4HANA |

Course Overview

TARGET AUDIENCE

This course is intended for the following audiences:

Lesson 1: Introducing Data Modeling

Lesson Objectives

After completing this lesson, you will be able to:

- Understand modeling issues

Lesson 2: Solving Requirement Conflicts

Lesson Objectives

After completing this lesson, you will be able to:

- Solve requirement conflicts

Lesson 1: Getting to Know the ItelO Case Study

Lesson Objectives

After completing this lesson, you will be able to:

- Get to know the ItelO case study

Lesson 2: Understanding the Source System Data Model

Lesson Objectives

After completing this lesson, you will be able to:

- Understand how the Source System Data Model separates data

Lesson 1: SAP Data Warehousing Options

Lesson Objectives

After completing this lesson, you will be able to:

- Understand the concepts of SAP Data Warehousing

Lesson 2: Key Aspects of SAP HANA Modeling

Lesson Objectives

After completing this lesson, you will be able to:

- Understand advantages and features of SAP HANA modeling

Lesson 3: Key Aspects of SAP BW/4HANA Modeling

Lesson Objectives

After completing this lesson, you will be able to:

- Understand advantages and features of SAP BW/4HANA modeling

Lesson 4: Comparing SAP BW/4HANA Focus, SAP HANA Focus, and Mixed Strategies

Lesson Objectives

After completing this lesson, you will be able to:

- Compare SAP BW/4HANA focus, SAP HANA focus, and mixed strategies

Lesson 5: SAP Datasphere and Interaction with SAP BW/4HANA

Lesson Objectives

After completing this lesson, you will be able to:

- Understand SAP Datasphere and interaction with SAP BW/4HANA

Lesson 6: Key Aspects of S/4HANA Embedded Analytics

Lesson Objectives

After completing this lesson, you will be able to:

- Understand S/4HANA Embedded Analytics

Lesson 1: Understanding Object Changeability in System Landscape

Lesson Objectives

After completing this lesson, you will be able to:

- Understand object changeability in System Landscape

Lesson 2: Separating Master Data and Transactional Data

Lesson Objectives

After completing this lesson, you will be able to:

- Separate master data and transactional data

Lesson 3: Tracking History

Lesson Objectives

After completing this lesson, you will be able to:

- Understand tracking history

Lesson 4: Mapping and Transforming Data

Lesson Objectives

After completing this lesson, you will be able to:

- Map and transform data

Lesson 5: Designing an SAP BW/4HANA Layered Scalable Architecture (LSA++)

Lesson Objectives

After completing this lesson, you will be able to:

- Design a Layered Scalable Architecture

Lesson 6: Understanding Physical and Logical Partitioning

Lesson Objectives

After completing this lesson, you will be able to:

- Understand physical and logical partitioning

Lesson 1: Defining the Sequence of SAP BW/4HANA Projects

Lesson Objectives

After completing this lesson, you will be able to:

- Define a sequence of SAP BW projects

Lesson 2: Planning the Phases of an SAP BW/4HANA Project

Lesson Objectives

After completing this lesson, you will be able to:

- List the five phases of an SAP BW project
- Understand the preparation phase
- Understand the business blueprint phase
- Understand the realization phase
- Understand the final preparation phase
- Understand the go live and support phase

Lesson 3: Developing an SAP BW/4HANA Data Model

Lesson Objectives

After completing this lesson, you will be able to:

- Structure the process of data model creation in the business blueprint phase
- Perform a requirement analysis
- Create an architecture overview
- Create a logical data model
- Develop an SAP BW/4HANA data model

Lesson 1: Working with SAP Business Content

Lesson Objectives

After completing this lesson, you will be able to:

- Work with SAP Business Content

Lesson 2: Introducing ABAP CDS Views provided by SAP BW/4HANA

Lesson Objectives

After completing this lesson, you will be able to:

- Introduce ABAP CDS Views provided by SAP BW/4HANA

Lesson 1: Implementing Field-Based Modeling with Open ODS Views

Lesson Objectives

After completing this lesson, you will be able to:

- Understand the purpose of field-based modeling with Open ODS Views

Lesson 2: Understanding Snapshot and Corporate Memory Models

Lesson Objectives

After completing this lesson, you will be able to:

- Understand snapshot and corporate memory

Lesson 1: Modeling and Implementing SAP BW/4HANA Master Data

Lesson Objectives

After completing this lesson, you will be able to:

- List the tables in the SAP BW/4HANA data model
- Implement SAP BW/4HANA Master Data

Lesson 2: Modeling SAP BW/4HANA Hierarchies

Lesson Objectives

After completing this lesson, you will be able to:

- Model and Use SAP BW/4HANA Hierarchies

Lesson 1: Modeling and Implementing Advanced DataStore Objects (aDSOs)

Lesson Objectives

After completing this lesson, you will be able to:

- Model and Implement Advanced DataStore Objects (aDSOs)

Lesson 2: Modeling and Implementing InfoSources and Conversions in Transformations

Lesson Objectives

After completing this lesson, you will be able to:

- Model and implement InfoSources
- Decide how to derive keyfigures
- Convert currencies
- Convert units of measurement

Lesson 3: Modeling and Implementing CompositeProviders

Lesson Objectives

After completing this lesson, you will be able to:

- Model and Implement CompositeProviders

Lesson 1: Describing Multi-Temperature Data Management

Lesson Objectives

After completing this lesson, you will be able to:

- Explain multi-temperature data management in SAP BW/4HANA

Lesson 2: Introducing SAP BW/4HANA Data Tiering Optimization (DTO)

Lesson Objectives

After completing this lesson, you will be able to:

- Explain the SAP BW/4HANA concept of Data Tiering Optimization

Lesson 1: Introducing the SAP HANA Analysis Process (HAP)

Lesson Objectives

After completing this lesson, you will be able to:

- Introduce the SAP HANA Analysis Process (HAP)

Lesson 2: Defining Inventory Scenarios

Lesson Objectives

After completing this lesson, you will be able to:

- Create Key Figures for Non-Cumulatives
- Define Inventory Scenarios Using DataStore Objects (Advanced)

Lesson 3: Stock Coverage

Lesson Objectives

After completing this lesson, you will be able to:

- Discuss stock coverage

Lesson 1: Getting Started with SAP Web IDE for SAP HANA

Lesson Objectives

After completing this lesson, you will be able to:

- Explore SAP Web IDE for SAP HANA

Lesson 2: Modeling Master Data in SAP HANA Views

Lesson Objectives

After completing this lesson, you will be able to:

- Create SAP HANA views with hierarchies

Lesson 3: Modeling Transactional Data in SAP HANA Views

Lesson Objectives

After completing this lesson, you will be able to:

- Create SAP HANA Views with Measures

Lesson 4: Differences between SAP HANA 1.0 and SAP HANA 2.0

Lesson Objectives

After completing this lesson, you will be able to:

- Explain Differences between SAP HANA 1.0 and SAP HANA 2.0

Lesson 1: Explaining the Purpose of Mixed Scenarios

Lesson Objectives

After completing this lesson, you will be able to:

- Explain the purpose of Mixed Scenarios

Lesson 2: Consuming SAP HANA Calculation Views in SAP BW/4HANA

Lesson Objectives

After completing this lesson, you will be able to:

- Consume SAP HANA Calculation Views in SAP BW/4HANA

Lesson 3: Generating External SAP HANA Views from SAP BW/4HANA Objects

Lesson Objectives

After completing this lesson, you will be able to:

- Generate External SAP HANA Views from SAP BW/4HANA Objects

Lesson 4: Consuming Generated External SAP HANA Views

Lesson Objectives

After completing this lesson, you will be able to:

- Consume Generated External SAP HANA Views

Lesson 1: Implementing SAP BW/4HANA Workspaces

Lesson Objectives

After completing this lesson, you will be able to:

- Get started with SAP BW Workspaces

Lesson 2: SAP BW/4HANA Lifecycle Management - Additional Information

Lesson Objectives

After completing this lesson, you will be able to:

- Provide additional information regarding SAP BW/4HANA Lifecycle Management

Lesson 3: Additional Sources of Information for SAP BW/4HANA

Lesson Objectives

After completing this lesson, you will be able to:

- Provide additional sources of information regarding SAP BW/4HANA