# BW450

## **SAP BW/4HANA - Data Acquisition**

#### **COURSE OUTLINE**

Course Version: 20 Course Duration:

## **SAP Copyrights, Trademarks and Disclaimers**

© 2022 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 <a href="https://www.sap.com/corporate/en/legal/copyright.html">https://www.sap.com/corporate/en/legal/copyright.html</a> 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	<b>-</b>
Demonstration	-
Procedure	2 3
Warning or Caution	A
Hint	<b>Q</b>
Related or Additional Information	<b>&gt;&gt;</b>
Facilitated Discussion	,
User interface control	Example text
Window title	Example text

#### **Contents**

#### **Course Overview** ix 1 Unit 1: SAP BW/4HANA Strategy and Overview 1 Lesson: Describing the New SAP BW/4HANA Features that Affect **Data Acquisition** Lesson: Explaining the Strategy for SAP BW/4HANA 1 1 Lesson: Introducing Integration Options with Cloud Sources 1 Lesson: Using Modeling Tools 1 Lesson: Outlining the Course Landscape 3 Unit 2: Data Acquisition into SAP BW/4HANA with Flat File Source System (FILE) 3 Lesson: Positioning the Flat File DataSource in SAP BW/4HANA 5 Unit 3: Data Acquisition into SAP BW/4HANA with Operational Data Provisioning (ODP\_SAP) 5 Lesson: Describing Data Acquisition with Operational Data Provisioning (ODP) 5 Lesson: Explaining ODP\_SAP Source Systems 5 Lesson: Debugging an SAP ECC DataSource 5 Lesson: Analyzing the Operational Delta Queue (ODQ) for ODP -SAP 5 Lesson: Loading Hierarchies from SAP ECC 7 Unit 4: Operational Data Provisioning Delta Management (ODP\_SAP) 7 Lesson: Explaining Terms and Basic Processes of Delta Enabled DataSources 7 Lesson: Configuring the Logistics Data Extraction (LO Cockpit) 7 Lesson: Appending BI Content DataSources 7 Lesson: Managing the Delta Data Transfer Processes (DTPs) 7 Lesson: Discussing the New General Ledger Data Extraction 8 Lesson: Configuring Generic Delta DataSources



9	Unit 5:	SAP BW/4HANA Data Extraction from SAP S/4HANA (ODP_CDS)
9		Lesson: Introducing SAP S/4HANA
9		Lesson: Describing the SAP S/4HANA Architecture
9		Lesson: Understanding the Positioning of SAP BW/4HANA with SAP S/4HANA
9		Lesson: Describing ABAP CDS Views in an SAP BW or BW/4HANA Context
9		Lesson: Understanding Challenges/Opportunities After Updating to SAP S/4HANA from SAP ECC
11	Unit 6:	Other Contexts of Operational Data Provisioning in SAP BW/4HANA (ODP_SLT, ODP_BW, ODP_HANA)
11		Lesson: Data Provisioning with ODP - SLT
11		Lesson: Connecting BW Data Marts with ODP - BW
11		Lesson: Extracting from ODP - SAP HANA Information Views (Optional)
13	Unit 7:	Data Acquisition into SAP HANA and Data Access with SAP HANA Local Database Schema (HANA_LOCAL)
13		Lesson: Explaining Data Provisioning into SAP HANA
13		Lesson: Explaining Data Provisioning into SAP HANA via Flat Files
13		Lesson: Replicating Data to SAP HANA via SLT
13		Lesson: Explaining Virtual Data Provisioning into SAP HANA with
		Smart Data Access (SDA)
13		Lesson: Explaining Data Provisioning into SAP HANA via Smart Data Integration (SDI)
15	Unit 8:	Data Acquisition into SAP BW/4HANA with the SAP HANA Smart Data Access (HANA_SDA)
15		Lesson: Introducing the HANA_SDA Source System
17	Unit 9:	Manage and Optimize Data Flow Components in SAP BW/ 4HANA
17		Lesson: Streaming Data into SAP BW4/HANA
17		Lesson: Working with Enhanced Master Data Update
17		Lesson: Working with SAP HANA Optimized Transformations
17		Lesson: Positioning InfoSources
17		Lesson: Investigating Data Transfer
19	Unit 10:	Big Data Acquisition to SAP BW/4HANA
19		Lesson: Introducing the SAP HANA Big Data Source System and SAP Vora
19		Lesson: Comparing SAP BW/4HANA Data Acquisition Options

21	Unit 11:	Appendix: Topics Not Covered in the Training Class
21		Lesson: Optional: Implementing Open Hub Destinations
21		Lesson: Optional: Introducing SAP Agile Data Preparation
21		Lesson: Optional: Introducing the Data Protection Workbench
21		Lesson: Optional: Migrating and Using Process Chains
21		Lesson: Introducing the SAP Data Intelligence
23	Unit 12:	Glossary
23		Lesson: Glossary



### **Course Overview**

#### TARGET AUDIENCE

This course is intended for the following audiences:

- Data Manager
- Systems Architect
- Project Manager
- Project Stakeholder
- Training Manager
- Application Consultant
- Development Consultant
- Technology Consultant
- Support Consultant
- Data Consultant
- Developer IT Adminstrator IT Support
- Database Administrator
- Solution Architect
- System Administrator
- Trainer

## **UNIT 1** SAP BW/4HANA Strategy and **Overview**

#### Lesson 1: Describing the New SAP BW/4HANA Features that Affect **Data Acquisition**

#### Lesson Objectives

After completing this lesson, you will be able to:

- Review the SAP BW/4HANA terminology
- Describe the new features for SAP BW/4HANA that affect data acquisition

#### Lesson 2: Explaining the Strategy for SAP BW/4HANA

#### **Lesson Objectives**

After completing this lesson, you will be able to:

Explain the strategy for SAP BW/4HANA

#### **Lesson 3: Introducing Integration Options with Cloud Sources**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

• Provide an overview of integration options with cloud applications

#### **Lesson 4: Using Modeling Tools**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

Review the Eclipse-based UI for SAP BW/4HANA modeling

#### **Lesson 5: Outlining the Course Landscape**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

• Get started in the course landscape



## **UNIT 2** Data Acquisition into SAP BW/ **4HANA with Flat File Source System (FILE)**

#### Lesson 1: Positioning the Flat File DataSource in SAP BW/4HANA

#### **Lesson Objectives**

After completing this lesson, you will be able to:

• Understand the Flat File DataSource in SAP BW/4HANA



## Data Acquisition into SAP BW/ 4HANA with Operational Data Provisioning (ODP\_SAP)

## Lesson 1: Describing Data Acquisition with Operational Data Provisioning (ODP)

#### **Lesson Objectives**

After completing this lesson, you will be able to:

· Describe the ODP functionality

#### **Lesson 2: Explaining ODP\_SAP Source Systems**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

- · Connect SAP source systems to SAP BW
- Describe the application component hierarchy
- Activate SAP ECC DataSources
- Manage ODP DataSources

#### **Lesson 3: Debugging an SAP ECC DataSource**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

- Debug an SAP ECC DataSource
- Debug the ODP

## Lesson 4: Analyzing the Operational Delta Queue (ODQ) for ODP - SAP

#### **Lesson Objectives**

After completing this lesson, you will be able to:

Analyze ODP/ODQ

#### **Lesson 5: Loading Hierarchies from SAP ECC**

**Lesson Objectives** 



After completing this lesson, you will be able to:

• Load a hierarchy from SAP ECC using a Delivered DataSource

# **Operational Data Provisioning Delta Management (ODP\_SAP)**

## Lesson 1: Explaining Terms and Basic Processes of Delta Enabled DataSources

#### **Lesson Objectives**

After completing this lesson, you will be able to:

• Explain the delta process

#### **Lesson 2: Configuring the Logistics Data Extraction (LO Cockpit)**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

Extract logistics data

#### **Lesson 3: Appending BI Content DataSources**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

Append BI Content DataSources

#### **Lesson 4: Managing the Delta Data Transfer Processes (DTPs)**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

- Manage ODP DTPs for Delta Load
- Manage the ODQ for Delta Load

#### Lesson 5: Discussing the New General Ledger Data Extraction

#### **Lesson Objectives**

After completing this lesson, you will be able to:

• Configure the new General Ledger data extraction

SAP

#### **Lesson 6: Configuring Generic Delta DataSources**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

• Analyze the use of Generic Delta Management

## UNIT 5 SAP BW/4HANA Data **Extraction from SAP S/4HANA** (ODP\_CDS)

#### **Lesson 1: Introducing SAP S/4HANA**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

Describe SAP S/4HANA and its key features

#### Lesson 2: Describing the SAP S/4HANA Architecture

#### **Lesson Objectives**

After completing this lesson, you will be able to:

• Explain virtual data models (VDM)

#### **Lesson 3: Understanding the Positioning of SAP BW/4HANA with** SAP S/4HANA

#### **Lesson Objectives**

After completing this lesson, you will be able to:

Describe where SAP BW fits with SAP S/4HANA

#### Lesson 4: Describing ABAP CDS Views in an SAP BW or BW/4HANA Context

#### **Lesson Objectives**

After completing this lesson, you will be able to:

Describe ABAP CDS View Usage in a BW Context

#### **Lesson 5: Understanding Challenges/Opportunities After Updating** to SAP S/4HANA from SAP ECC

#### **Lesson Objectives**

After completing this lesson, you will be able to:

Understand BW related challenges and opportunities after updating to SAP S/4HANA from SAP ECC

# Other Contexts of Operational Data Provisioning in SAP BW/4HANA (ODP\_SLT, ODP\_BW, ODP\_HANA)

#### **Lesson 1: Data Provisioning with ODP - SLT**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

- Replicate data to SAP BW4HANA SAP Landscape Transformation (ODP-SLT)
- · Stream data in real time with ODP SLT

#### **Lesson 2: Connecting BW Data Marts with ODP - BW**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

Describe ODP - BW Data Marts

## **Lesson 3: Extracting from ODP - SAP HANA Information Views** (Optional)

#### **Lesson Objectives**

After completing this lesson, you will be able to:

• Describe Extractions from ODP - SAP HANA Information Views



# Data Acquisition into SAP HANA and Data Access with SAP HANA Local Database Schema (HANA\_LOCAL)

#### **Lesson 1: Explaining Data Provisioning into SAP HANA**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

· Explain how to deliver data into the SAP HANA database

#### **Lesson 2: Explaining Data Provisioning into SAP HANA via Flat Files**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

- Load SAP HANA with the Flat File Wizard
- Load SAP HANA with the Flat File Bulk Loader

#### Lesson 3: Replicating Data to SAP HANA via SLT

#### **Lesson Objectives**

After completing this lesson, you will be able to:

• Describe SAP Landscape Transformation Replication

## Lesson 4: Explaining Virtual Data Provisioning into SAP HANA with Smart Data Access (SDA)

#### **Lesson Objectives**

After completing this lesson, you will be able to:

Leverage virtual tables in SAP HANA

## Lesson 5: Explaining Data Provisioning into SAP HANA via Smart Data Integration (SDI)

#### **Lesson Objectives**

After completing this lesson, you will be able to:

Describe SDI data loads into SAP HANA

SAP®

## Data Acquisition into SAP BW/ 4HANA with the SAP HANA Smart Data Access (HANA\_SDA)

#### **Lesson 1: Introducing the HANA\_SDA Source System**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

• Review SAP HANA SDI and SDQ / Focus on BW Integration



# Manage and Optimize Data Flow Components in SAP BW/4HANA

#### **Lesson 1: Streaming Data into SAP BW4/HANA**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

· Stream data with SDI: Set up the data flow

#### **Lesson 2: Working with Enhanced Master Data Update**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

· Work with Enhanced Master Data Update

#### **Lesson 3: Working with SAP HANA Optimized Transformations**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

Describe how transformation rules in SAP BW/4HANA can be SAP HANA-optimized

#### **Lesson 4: Positioning InfoSources**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

· Position InfoSources

#### **Lesson 5: Investigating Data Transfer**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

Investigate the data transfer via DTP

SAP®

# Big Data Acquisition to SAP BW/4HANA

## Lesson 1: Introducing the SAP HANA Big Data Source System and SAP Vora

#### **Lesson Objectives**

After completing this lesson, you will be able to:

Describe SAP Vora and the Big Data Source System

#### Lesson 2: Comparing SAP BW/4HANA Data Acquisition Options

#### **Lesson Objectives**

After completing this lesson, you will be able to:

• Compare SAP BW data acquisition options



# **Appendix: Topics Not Covered in the Training Class**

#### **Lesson 1: Optional: Implementing Open Hub Destinations**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

• Distribute SAP BW Data using Open Hub destinations

#### **Lesson 2: Optional: Introducing SAP Agile Data Preparation**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

• Describe SAP Agile Data Preparation

#### **Lesson 3: Optional: Introducing the Data Protection Workbench**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

• Understand the use case and handling of the Data Protection Workbench

#### **Lesson 4: Optional: Migrating and Using Process Chains**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

· Leverage process chains in SAP BW/4HANA

#### **Lesson 5: Introducing the SAP Data Intelligence**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

Describe SAP Data Intelligence



## **UNIT 12 Glossary**

#### **Lesson 1: Glossary**

#### **Lesson Objectives**

After completing this lesson, you will be able to:

• Provide an overview of the most important terms in this class