HA300
SAP HANA Implementation and Modeling

COURSE OUTLINE

Course Version: 10
Course Duration: 5 Day(s)
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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 |
| Window title |

Example text

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TARGET AUDIENCE
This course is intended for the following audiences:

- Application Consultant
- Data Consultant/Manager
- Database Administrator
Lesson 1: Connecting Tables

Lesson Objectives
After completing this lesson, you will be able to:

- Explain differences between the SAP HANA join types
- Know when to use which type of join when connecting tables
- Explain how to use union on datasets and union with constant values

Lesson 2: Introducing Information Views

Lesson Objectives
After completing this lesson, you will be able to:

- Describe the different types of information views
- Explain how to model a Star Schema-like view with Analytic Views and Attribute Views
- Decide whether to use a Calculation View

Lesson 3: Creating Attribute Views and Analytic Views

Lesson Objectives
After completing this lesson, you will be able to:

- Create Attribute Views
- Create derived attribute views
- Define calculated attributes
- Create time-based attribute views
- Create stand alone text tables
- Use base table aliases
- Define label columns and hide attributes in an attribute view

Lesson 4: Creating Graphical Calculation Views

Lesson Objectives
After completing this lesson, you will be able to:

- Describe the different types of Calculation Views
- Explain the benefits of each type of node in calculation views
- Create and combine nodes in Calculation views in the most relevant way
- Use Calculation Views specific features to enhance the flexibility of this type of view
Lesson 1: Using Hierarchies

Lesson Objectives
After completing this lesson, you will be able to:

- Implement level hierarchies
- Create parent-child hierarchies

Lesson 2: Creating Restricted and Calculated Columns

Lesson Objectives
After completing this lesson, you will be able to:

- Describe the benefits of Restricted Columns and Calculated Columns
- Create Restricted Columns
- Create Calculated Columns

Lesson 3: Filtering Data

Lesson Objectives
After completing this lesson, you will be able to:

- Describe the difference between Filters and WHERE clauses
- Create client dependent views
- Restrict data when modeling using domain fix values

Lesson 4: Using Variables and Input Parameters

Lesson Objectives
After completing this lesson, you will be able to:

- Explain the difference between variables and input parameters
- Create variables and use them to filter data
- Create input parameters
Lesson 5: Implementing Currency Conversion

Lesson Objectives
After completing this lesson, you will be able to:

- Describe Currency Conversion in SAP HANA
- Apply Currency Conversion in Analytic Views
- Leverage Fixed Currencies
- Leverage Source Currency from Columns
- Create Target Currency Variables
- Use Currency Conversion in Calculation Views

Lesson 6: Creating Decision Tables

Lesson Objectives
After completing this lesson, you will be able to:

- Describe decision automation using Business Rules on SAP HANA
- Describe how Decision Tables can help driving business agility
- Create Decision Tables
- Consume Decision Tables in Calculation Views
Lesson 1: Introducing SAP HANA SQL

Lesson Objectives
After completing this lesson, you will be able to:

- Explain the language elements used in SAP HANA SQL statements

Lesson 2: Working with SQLScript

Lesson Objectives
After completing this lesson, you will be able to:

- Define SQLScript and SQLScript extensions
- Explain the SQLScript implementation logic
- Explain calculation engine and calculation model
- Describe the Calculation Engine plan operators

Lesson 3: Creating and Using Procedures

Lesson Objectives
After completing this lesson, you will be able to:

- Describe the benefits of procedures
- Create a procedure
- Call a procedure
Lesson 1: Getting Started with SAP HANA Live

Lesson Objectives
After completing this lesson, you will be able to:

• Describe SAP HANA Live

Lesson 2: Understanding the Virtual Data Model

Lesson Objectives
After completing this lesson, you will be able to:

• Describe the architecture of SAP HANA Live

Lesson 3: Discovering and Consuming SAP HANA Live Views

Lesson Objectives
After completing this lesson, you will be able to:

• Discover and consume SAP HANA Live views

Lesson 4: Modifying SAP HANA Live Models

Lesson Objectives
After completing this lesson, you will be able to:

• Modify SAP HANA Live views using standard SAP HANA studio tools and also the SAP HANA Live Extension Assistant
Lesson 1: Implementing Full Text Search and Text Analysis

Lesson Objectives
After completing this lesson, you will be able to:

● Explain the Full Text Search capabilities of SAP HANA
● Invoke the text search processes
● Create a Fuzzy Search
● Explain Text Analysis

Lesson 2: Defining Full Text Indexes

Lesson Objectives
After completing this lesson, you will be able to:

● Describe the concept of Full Text index
● Explain which data types can be indexed for Full Text Search
● Enable columns for Full Text Search in SAP HANA tables
● Implement Full Text search in SAP HANA Modesl with SAP HANA Studio

Lesson 3: Using Full Text Search

Lesson Objectives
After completing this lesson, you will be able to:

● Use Full Text Search
● Use Fuzzy Search
● Explain Fuzzy Search relevance scoring
● Use Freestyle Search

Lesson 4: Working with Geospatial Data

Lesson Objectives
After completing this lesson, you will be able to:
- Store geographical data in column tables
- Query geographical data using SQL

**Lesson 5: Developing Predictive Models**

**Lesson Objectives**
After completing this lesson, you will be able to:

- Develop a predictive model using SAP HANA PAL
Lesson 1: Processing and Analyzing Information Models

Lesson Objectives
After completing this lesson, you will be able to:

- Validate Information Models
- Compare different versions of an Information Model
- Check model references
- Generate auto documentation
- Execute a Performance Analysis of an Information Model

Lesson 2: Managing Modeling Content

Lesson Objectives
After completing this lesson, you will be able to:

- Manage schemas and define schema mapping
- Define package-specific schema mapping
- Transport information models between two systems
- Move and copy information models within a system
- Take over an information model edited by another user
- Translate metadata texts
Lesson 1: Understanding Roles and Privileges

Lesson Objectives
After completing this lesson, you will be able to:

- Define Roles and Privileges
- Explain how Users, Roles and Privileges are used to implement Objects and Data Access security in an SAP HANA system

Lesson 2: Defining Privileges

Lesson Objectives
After completing this lesson, you will be able to:

- Describe the different types of privileges
- Explain how to grant the relevant privileges to the Modeler and End-User

Lesson 3: Generating SAP HANA Live Privileges

Lesson Objectives
After completing this lesson, you will be able to:

- Generate SAP HANA Live privileges using the Analytics Authorization Assistant
Lesson 1: Applying Good Modeling Approaches

Lesson Objectives
After completing this lesson, you will be able to:

- Apply good modeling approaches to SAP HANA

Lesson 2: Understanding the Cost of SQL Statements

Lesson Objectives
After completing this lesson, you will be able to:

- Understand the cost of SQL Statements