SAP TechEd

Data and Analytics

DA180 | Explore SAP Datasphere and SAP Analytics Cloud end to end

Klaus-Peter Sauer, Product Management SAP Datasphere
Nikola Cornelia Braukmueller, SAP Data & Analytics

Agenda

01

What is this exercise about?

02

What are the requirements and where to find the materials?

03

Exercise overview and short demo

01 What is this exercise about?

The Business Scenario

Retail transactions sample data from a number of outlet stores for beverages located in the United States. The transaction details include the store, the sold product, the sales manager, and measures on revenue, cost, discount, and profit.

The sales department is looking for a few analytics they need:

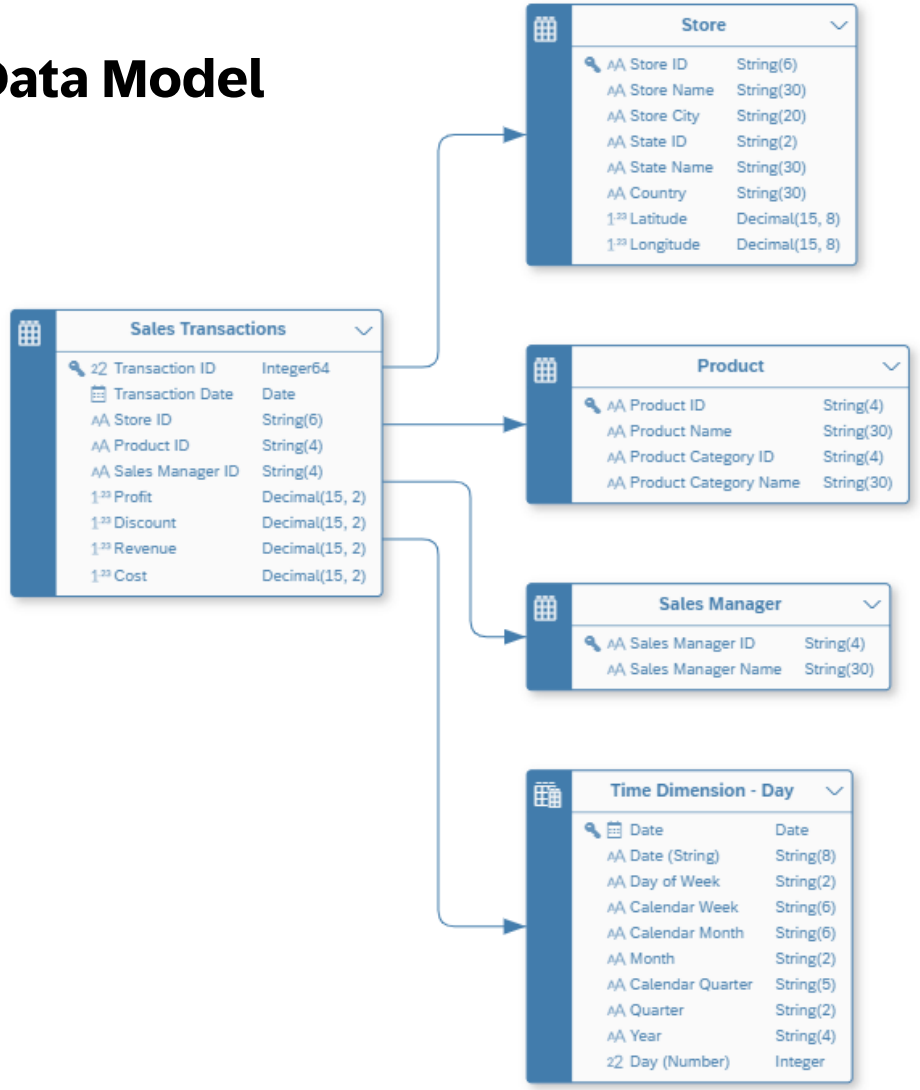
- Year-over-Year Sales Comparison (#8)
- Sales Per Region (#9)
- Top Sales Manager (optional #20)

The exercises will walk you through the steps using SAP Datasphere and SAP Analytics Cloud to answer those open questions.

The following tables are being used and the data is provided on GitHub:

Table Name	Description	Model Type
Sales Transactions	Daily retail transactions per store	Relational Dataset
Store	Details per Store Outlet	Dimension
Sales Manager	Details on all Sales Manager	Dimension
Product	Details on the products being sold	Dimension

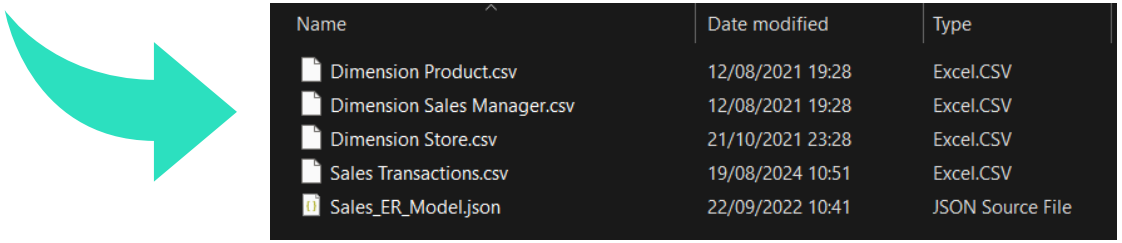
The Data Model

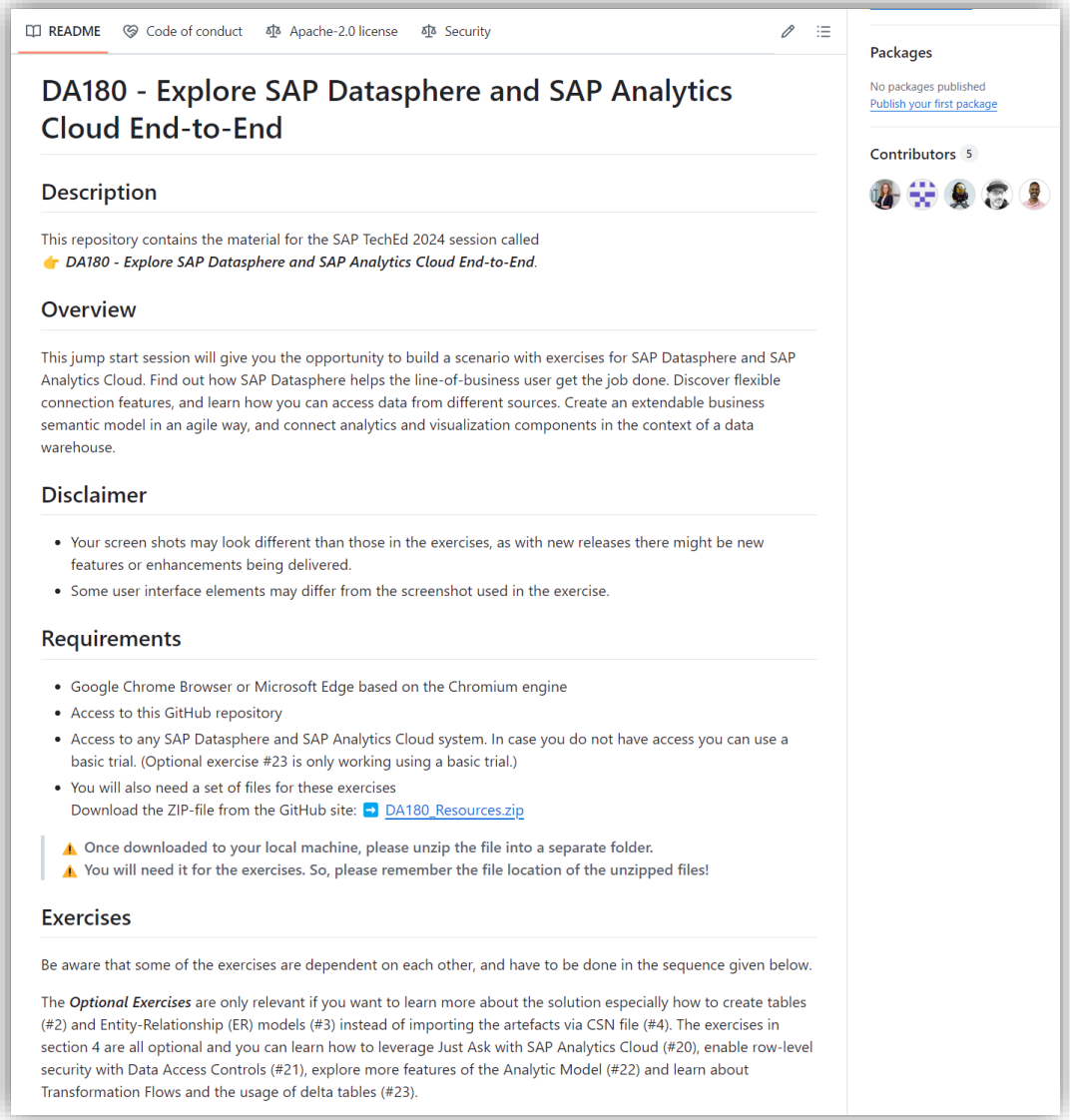


02 What are the requirements and where to find the materials?

Requirements

- Google Chrome or Microsoft Edge Browser
- Access to the GitHub Repository for the script & files: https://github.com/SAP-samples/teched2024-DA180
- Access to any SAP Datasphere and SAP Analytics Cloud system. In case you do not have access you can use a basic trial system
- You will also need a set of files for these exercises. Download the ZIP-file from the GitHub site:
  ➡️ DA180_Resources.zip




README Code of conduct Apache-2.0 license Security

DA180 - Explore SAP Datasphere and SAP Analytics Cloud End-to-End

Description

This repository contains the material for the SAP TechEd 2024 session called
👉 *DA180 - Explore SAP Datasphere and SAP Analytics Cloud End-to-End.*

Overview

This jump start session will give you the opportunity to build a scenario with exercises for SAP Datasphere and SAP Analytics Cloud. Find out how SAP Datasphere helps the line-of-business user get the job done. Discover flexible connection features, and learn how you can access data from different sources. Create an extendable business semantic model in an agile way, and connect analytics and visualization components in the context of a data warehouse.

Disclaimer

- Your screen shots may look different than those in the exercises, as with new releases there might be new features or enhancements being delivered.
- Some user interface elements may differ from the screenshot used in the exercise.

Requirements

- Google Chrome Browser or Microsoft Edge based on the Chromium engine
- Access to this GitHub repository
- Access to any SAP Datasphere and SAP Analytics Cloud system. In case you do not have access you can use a basic trial. (Optional exercise #23 is only working using a basic trial.)
- You will also need a set of files for these exercises
  Download the ZIP-file from the GitHub site: ➡️ DA180_Resources.zip

⚠️ Once downloaded to your local machine, please unzip the file into a separate folder.
⚠️ You will need it for the exercises. So, please remember the file location of the unzipped files!

Exercises

Be aware that some of the exercises are dependent on each other, and have to be done in the sequence given below.

The ***Optional Exercises*** are only relevant if you want to learn more about the solution especially how to create tables (#2) and Entity-Relationship (ER) models (#3) instead of importing the artefacts via CSN file (#4). The exercises in section 4 are all optional and you can learn how to leverage Just Ask with SAP Analytics Cloud (#20), enable row-level security with Data Access Controls (#21), explore more features of the Analytic Model (#22) and learn about Transformation Flows and the usage of delta tables (#23).

Packages

No packages published
Publish your first package

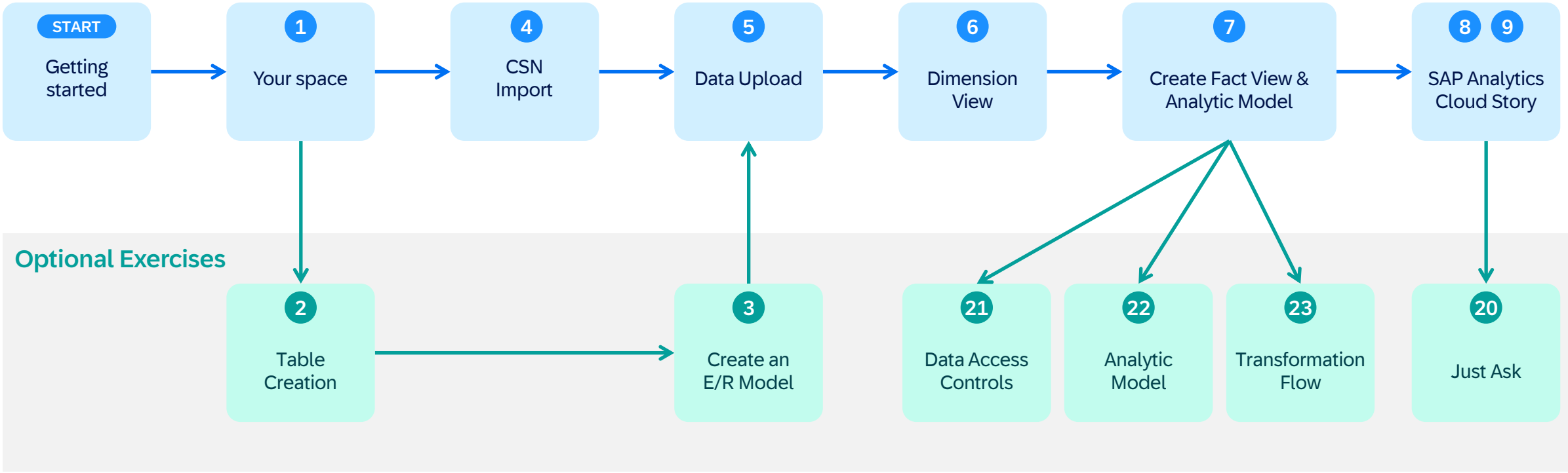
Contributors 5

Demo

03 Exercises and optional exercises

We structured the overall exercise the following way:

- Use the blue path to finish early and enjoy exploring the system on your own
- You can learn more and use the **Optional Exercises** for deep dives on different topics



03 Part 1 – Getting Started

In this area you get an **overview about the business scenario & the data model** used throughout the exercises.

We also give you guidance **how to get your basic trial access** in case you do not have access to a SAP Datasphere system already.

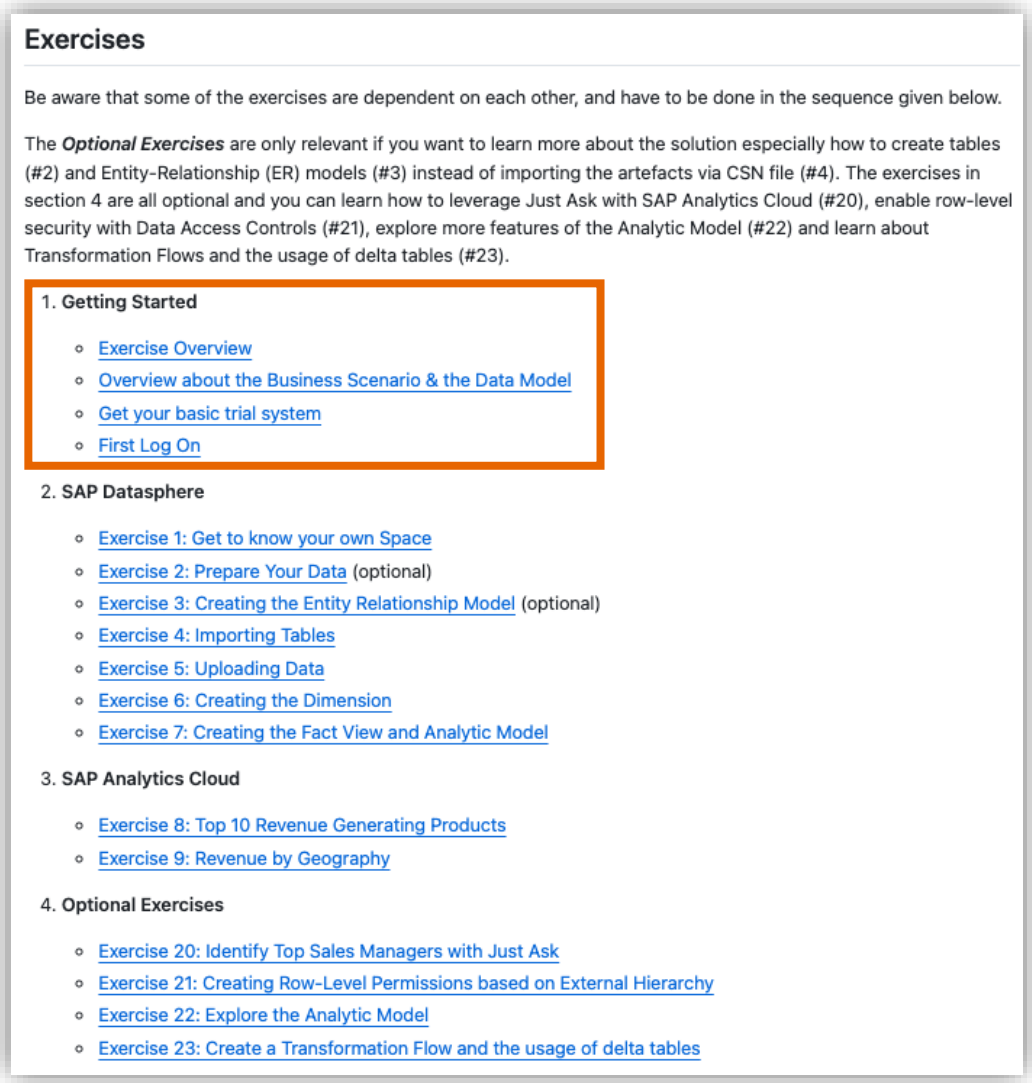
When using a basic trial system for this hands-on training, a predefined Space is already there for you named: **GE123456**

The number will be different for everyone!

You already have predefined connections and shared artifacts in your Space.

⚠️ In case you use your own system, we recommend you use a new and empty Space. Optional exercise #23 is only working using a basic trial, as we share the replicated data with your space.

You also get an overview about **your first log on** and **how you navigate in the system** in case you have never used SAP Datasphere before.



Exercises

Be aware that some of the exercises are dependent on each other, and have to be done in the sequence given below.

The ***Optional Exercises*** are only relevant if you want to learn more about the solution especially how to create tables (#2) and Entity-Relationship (ER) models (#3) instead of importing the artefacts via CSN file (#4). The exercises in section 4 are all optional and you can learn how to leverage Just Ask with SAP Analytics Cloud (#20), enable row-level security with Data Access Controls (#21), explore more features of the Analytic Model (#22) and learn about Transformation Flows and the usage of delta tables (#23).

1. **Getting Started**
   - Exercise Overview
   - Overview about the Business Scenario & the Data Model
   - Get your basic trial system
   - First Log On
2. **SAP Datasphere**
   - Exercise 1: Get to know your own Space
   - Exercise 2: Prepare Your Data (optional)
   - Exercise 3: Creating the Entity Relationship Model (optional)
   - Exercise 4: Importing Tables
   - Exercise 5: Uploading Data
   - Exercise 6: Creating the Dimension
   - Exercise 7: Creating the Fact View and Analytic Model
3. **SAP Analytics Cloud**
   - Exercise 8: Top 10 Revenue Generating Products
   - Exercise 9: Revenue by Geography
4. **Optional Exercises**
   - Exercise 20: Identify Top Sales Managers with Just Ask
   - Exercise 21: Creating Row-Level Permissions based on External Hierarchy
   - Exercise 22: Explore the Analytic Model
   - Exercise 23: Create a Transformation Flow and the usage of delta tables

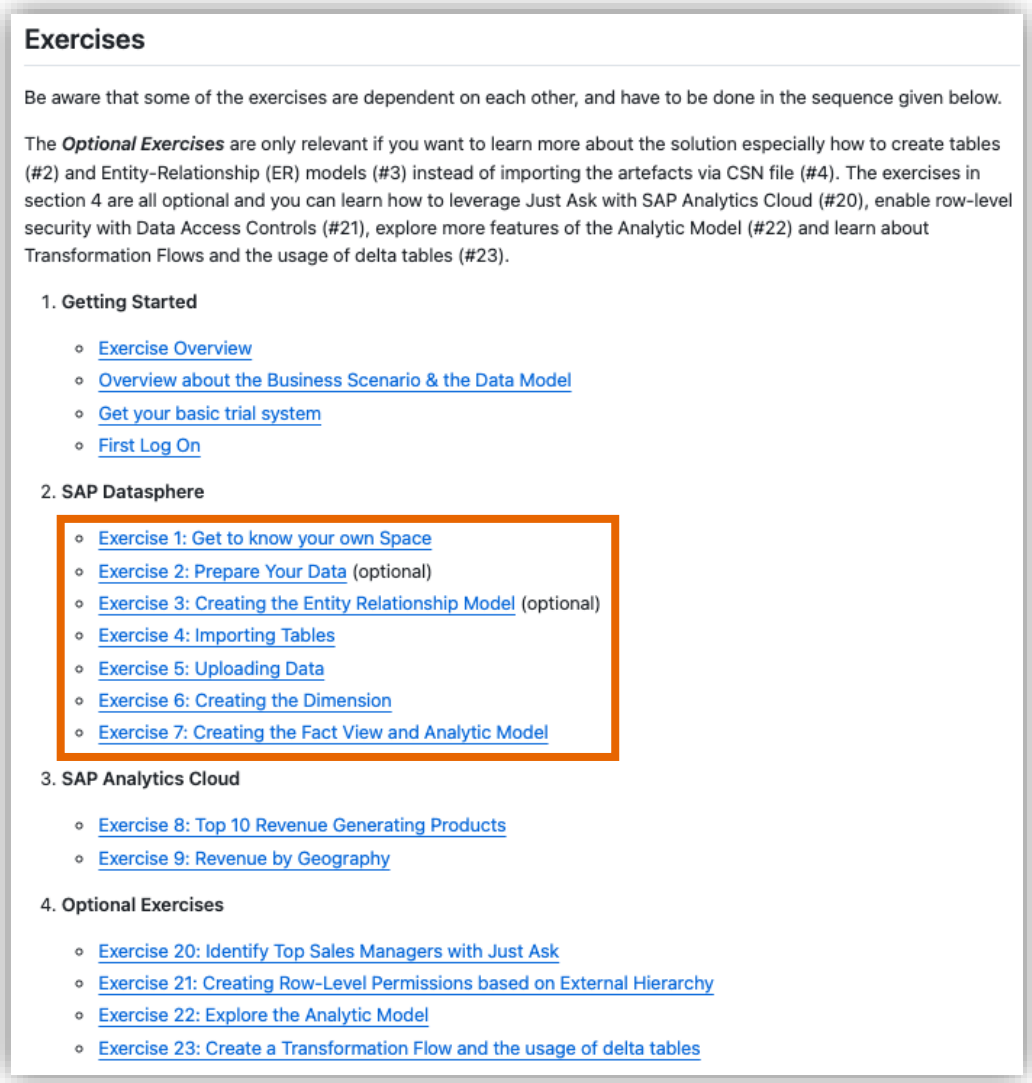
03 Part 2 – SAP Datasphere Data Builder

This section covers the **core part of the modeling exercises** where you prepare tables, views and an analytic model to build the foundation for the stories in SAP Analytics Cloud.

In the first exercise **Get to know your own Space** (#1) you learn more about Spaces and the Time Dimension required for your modeling in later parts of the exercise.

You can manually create the tables (#2 - optional) and the entity relationship model (#3 - optional), or directly generate the tables and E/R model by using the **import of the tables** (#4) provided with the CSN file called *Sales_ER_Model.json*.

After the table creation you populate the tables with data by **uploading data files** (#5) using the CSV files from the ZIP-file. Based on these tables you then **create a dimension** (#6), **a fact view** (#7) as well as an **analytic model** (#7).



Exercises

Be aware that some of the exercises are dependent on each other, and have to be done in the sequence given below.

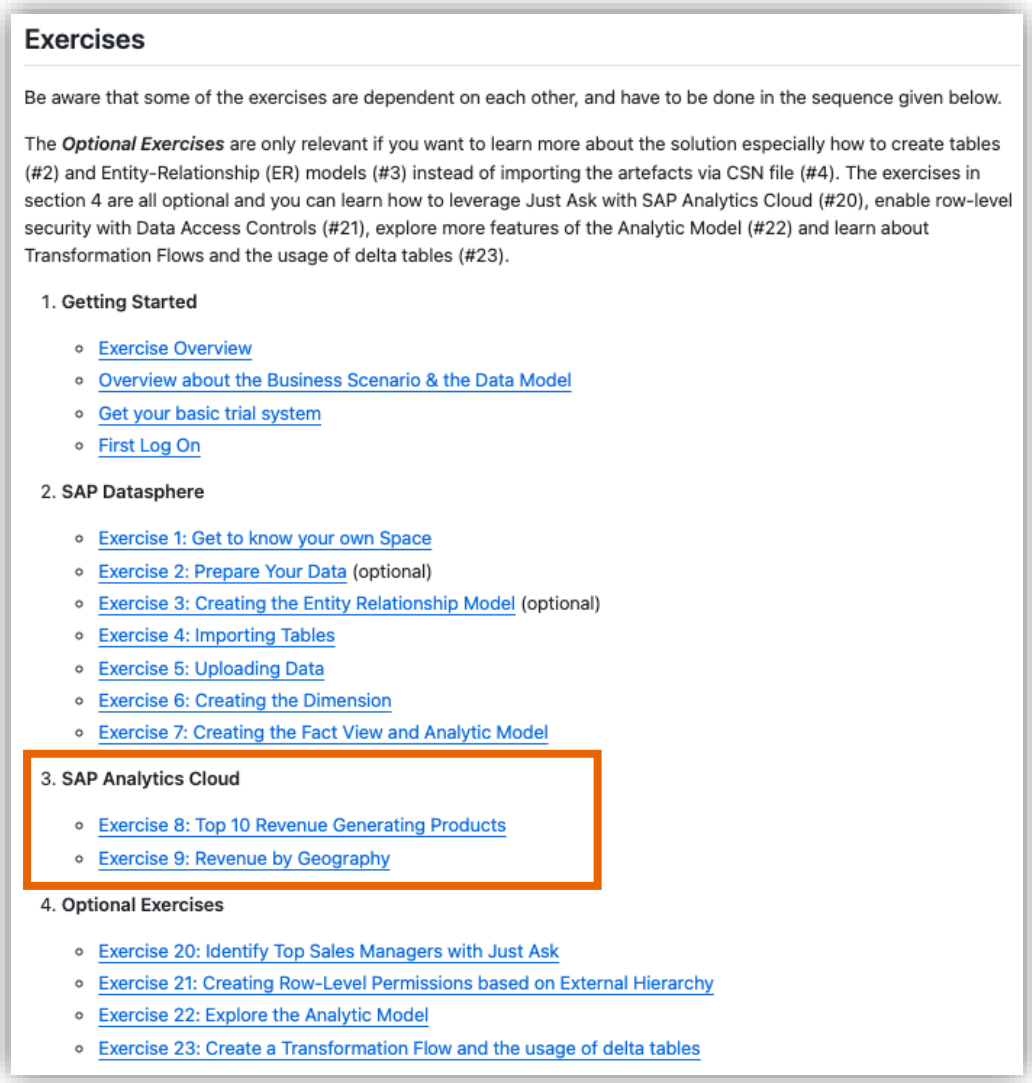
The ***Optional Exercises*** are only relevant if you want to learn more about the solution especially how to create tables (#2) and Entity-Relationship (ER) models (#3) instead of importing the artefacts via CSN file (#4). The exercises in section 4 are all optional and you can learn how to leverage Just Ask with SAP Analytics Cloud (#20), enable row-level security with Data Access Controls (#21), explore more features of the Analytic Model (#22) and learn about Transformation Flows and the usage of delta tables (#23).

1. **Getting Started**
   - Exercise Overview
   - Overview about the Business Scenario & the Data Model
   - Get your basic trial system
   - First Log On
2. **SAP Datasphere**
   - Exercise 1: Get to know your own Space
   - Exercise 2: Prepare Your Data (optional)
   - Exercise 3: Creating the Entity Relationship Model (optional)
   - Exercise 4: Importing Tables
   - Exercise 5: Uploading Data
   - Exercise 6: Creating the Dimension
   - Exercise 7: Creating the Fact View and Analytic Model
3. **SAP Analytics Cloud**
   - Exercise 8: Top 10 Revenue Generating Products
   - Exercise 9: Revenue by Geography
4. **Optional Exercises**
   - Exercise 20: Identify Top Sales Managers with Just Ask
   - Exercise 21: Creating Row-Level Permissions based on External Hierarchy
   - Exercise 22: Explore the Analytic Model
   - Exercise 23: Create a Transformation Flow and the usage of delta tables

03 Part 3 – SAP Analytics Cloud

In this part you will **create simple stories in SAP Analytics Cloud** to learn how to visualize your data based on a live connection to SAP Datasphere.

- The first story shows a year over year comparison (#8).
- The second story shows the revenue by geography (#9).



Exercises

Be aware that some of the exercises are dependent on each other, and have to be done in the sequence given below.

The ***Optional Exercises*** are only relevant if you want to learn more about the solution especially how to create tables (#2) and Entity-Relationship (ER) models (#3) instead of importing the artefacts via CSN file (#4). The exercises in section 4 are all optional and you can learn how to leverage Just Ask with SAP Analytics Cloud (#20), enable row-level security with Data Access Controls (#21), explore more features of the Analytic Model (#22) and learn about Transformation Flows and the usage of delta tables (#23).

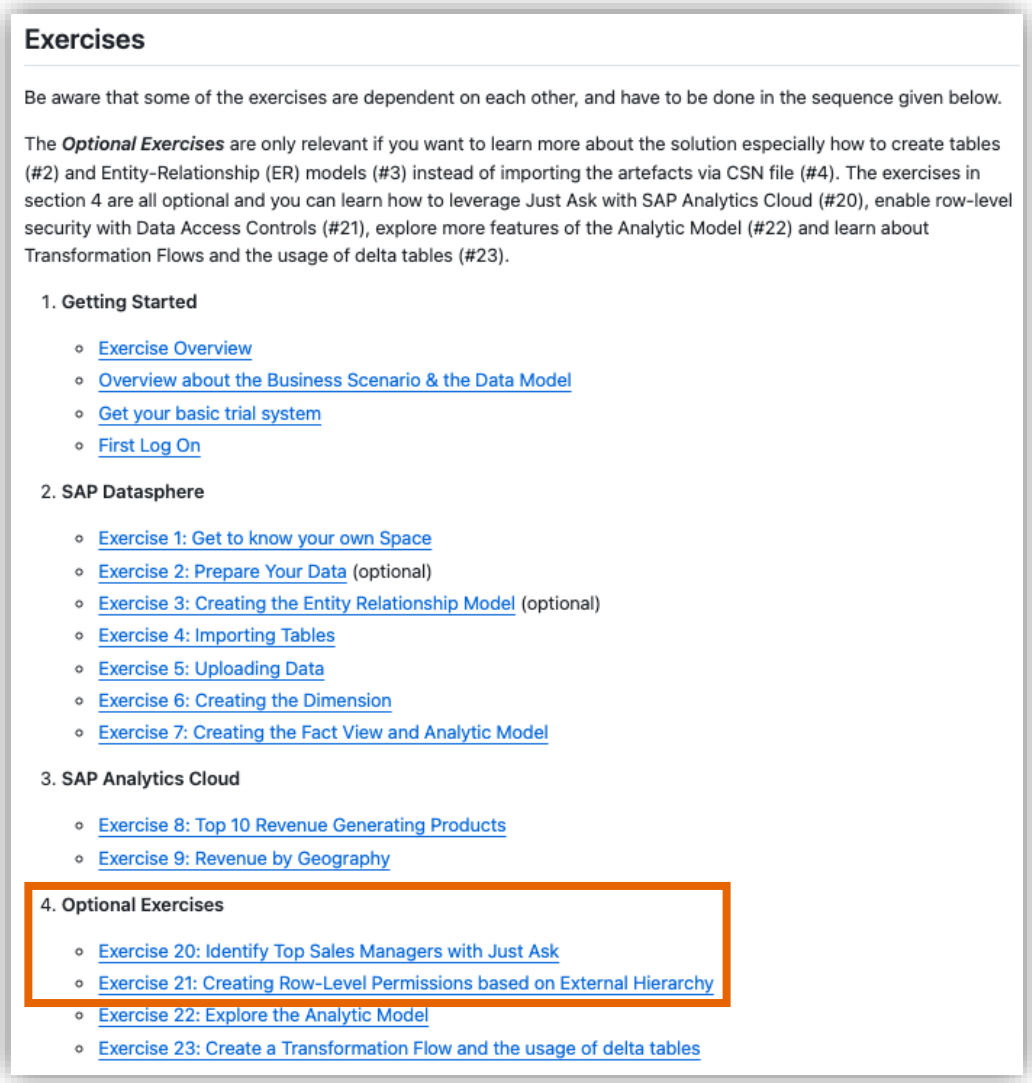
1. **Getting Started**
   - Exercise Overview
   - Overview about the Business Scenario & the Data Model
   - Get your basic trial system
   - First Log On
2. **SAP Datasphere**
   - Exercise 1: Get to know your own Space
   - Exercise 2: Prepare Your Data (optional)
   - Exercise 3: Creating the Entity Relationship Model (optional)
   - Exercise 4: Importing Tables
   - Exercise 5: Uploading Data
   - Exercise 6: Creating the Dimension
   - Exercise 7: Creating the Fact View and Analytic Model
3. **SAP Analytics Cloud**
   - Exercise 8: Top 10 Revenue Generating Products
   - Exercise 9: Revenue by Geography
4. **Optional Exercises**
   - Exercise 20: Identify Top Sales Managers with Just Ask
   - Exercise 21: Creating Row-Level Permissions based on External Hierarchy
   - Exercise 22: Explore the Analytic Model
   - Exercise 23: Create a Transformation Flow and the usage of delta tables

Demo

03 Part 4 – Optional exercises

#20 Just Ask in SAP Analytics Cloud
Learn how to use Just Ask in SAP Analytics Cloud to identify top-performing sales managers.

#21 Data Access Controls
Learn how to create row-level permissions based on an external hierarchy using data access controls.



Exercises

Be aware that some of the exercises are dependent on each other, and have to be done in the sequence given below.

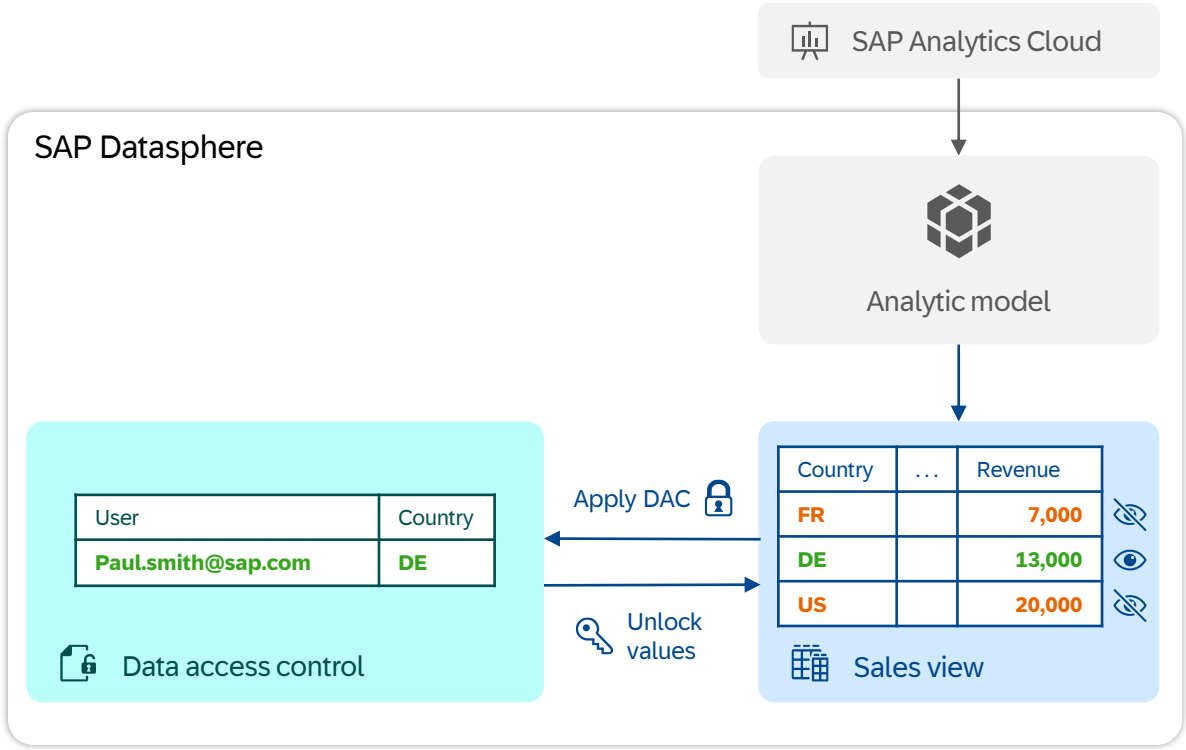
The ***Optional Exercises*** are only relevant if you want to learn more about the solution especially how to create tables (#2) and Entity-Relationship (ER) models (#3) instead of importing the artefacts via CSN file (#4). The exercises in section 4 are all optional and you can learn how to leverage Just Ask with SAP Analytics Cloud (#20), enable row-level security with Data Access Controls (#21), explore more features of the Analytic Model (#22) and learn about Transformation Flows and the usage of delta tables (#23).

1. **Getting Started**
   - Exercise Overview
   - Overview about the Business Scenario & the Data Model
   - Get your basic trial system
   - First Log On
2. **SAP Datasphere**
   - Exercise 1: Get to know your own Space
   - Exercise 2: Prepare Your Data (optional)
   - Exercise 3: Creating the Entity Relationship Model (optional)
   - Exercise 4: Importing Tables
   - Exercise 5: Uploading Data
   - Exercise 6: Creating the Dimension
   - Exercise 7: Creating the Fact View and Analytic Model
3. **SAP Analytics Cloud**
   - Exercise 8: Top 10 Revenue Generating Products
   - Exercise 9: Revenue by Geography
4. **Optional Exercises**
   - Exercise 20: Identify Top Sales Managers with Just Ask
   - Exercise 21: Creating Row-Level Permissions based on External Hierarchy
   - Exercise 22: Explore the Analytic Model
   - Exercise 23: Create a Transformation Flow and the usage of delta tables

Authorizations using data access controls

Use data access controls to apply row-level security to your view

- When a data access control is applied to a data layer view or a business layer object, any user viewing its data will see only the rows for which they are authorized, based on the specified criteria
- The following types of criteria are supported:
  - **Single values:** each user can only see the records that match any of the single values they are authorized in the permissions entity
  - **Operator and values:** each user can only see the records that fulfill the operator-value pairs they are authorized for in the permissions entity
  - **Hierarchy:** each user can only see the records that match the hierarchy values they are authorized for in the permissions entity, along with any of their descendants
- Data access controls are defined once and can be applied to multiple artifacts in data layer, and cannot be overruled
- Use the “View as User” tool to review the effects of the data access controls you apply by checking the records that another user will be allowed to see



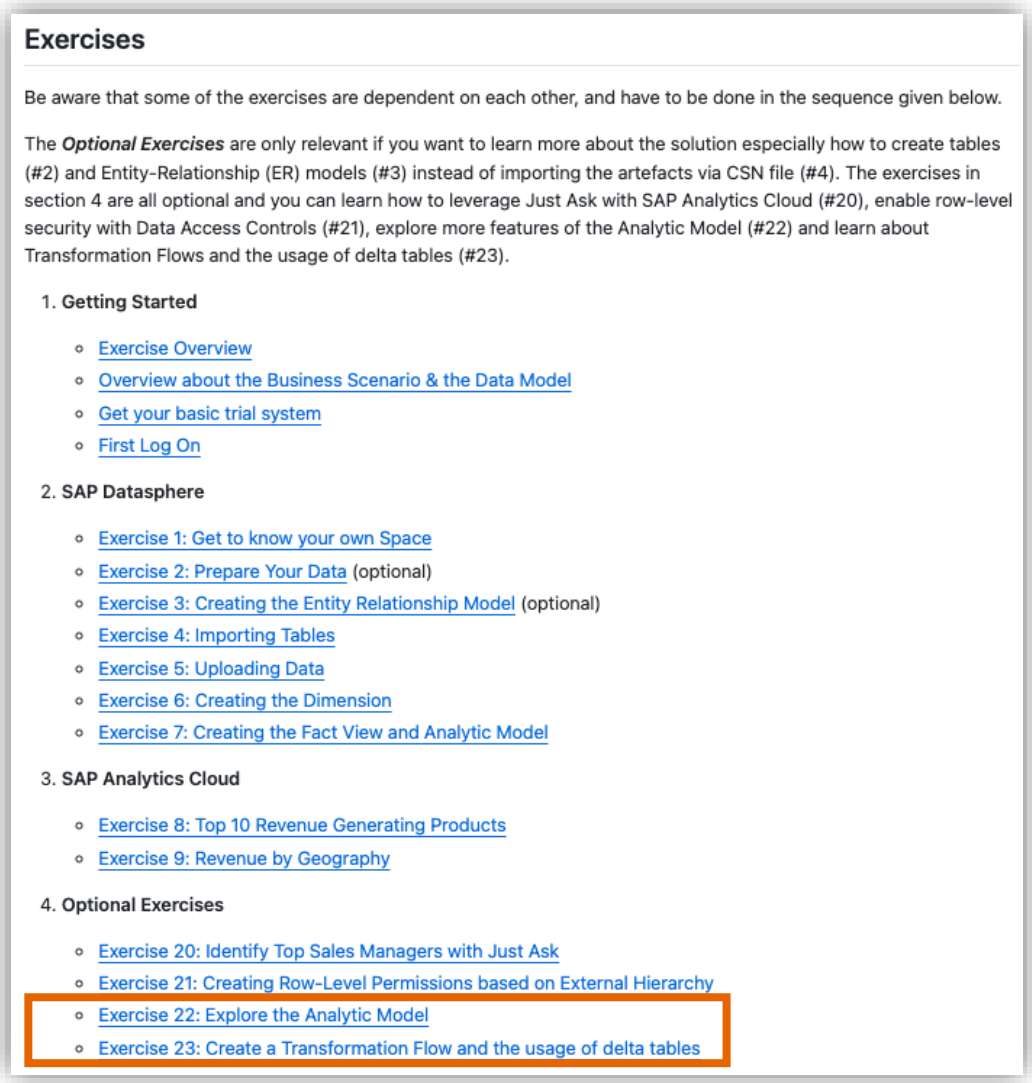

```
SELECT * FROM SALES_VIEW WHERE 'Country' == 'DE'
```

Demo

03 Part 4 – Optional exercises

#22 Extending the Analytic Model
Learn how to use the data preview of the Analytic Model and how to create different types of new measures to enhance the existing model.

#23 Transformation Flows
Learn how to create a transformation flow which captures delta records and loads it into a new table. You will create new models and replace that model inside your SAP Analytics Cloud story.



Exercises

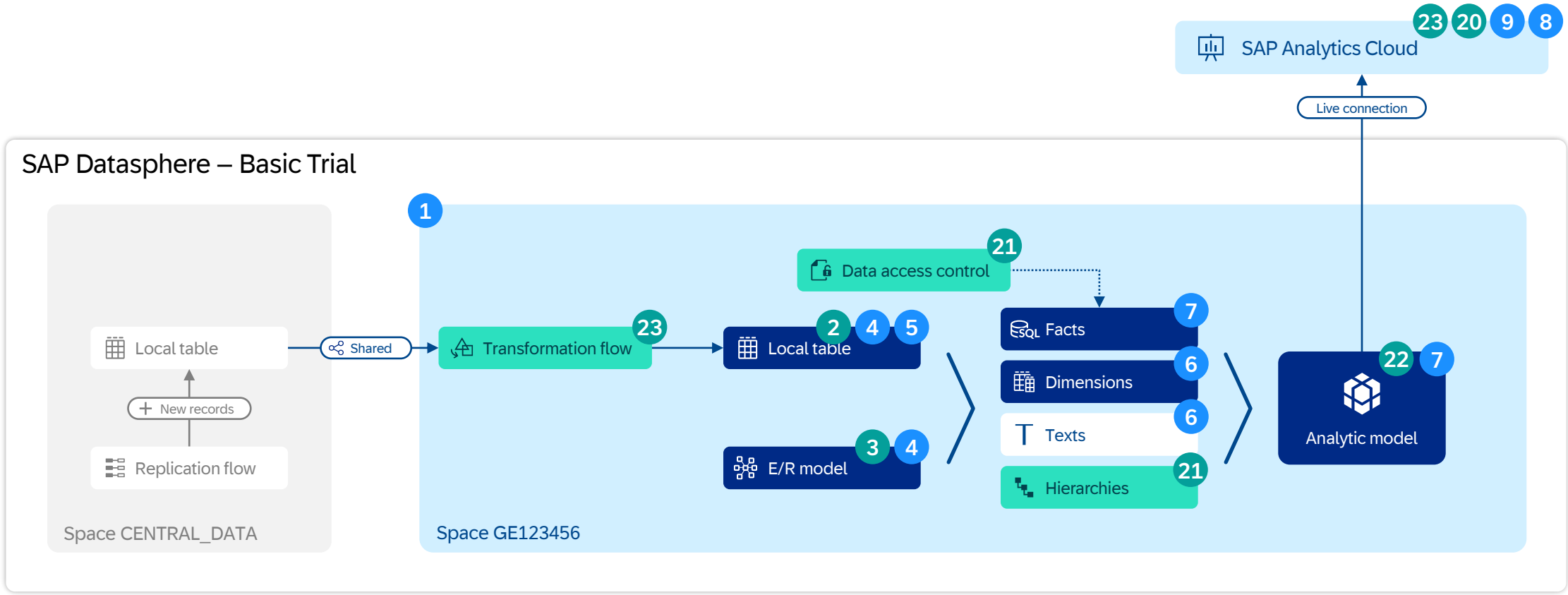
Be aware that some of the exercises are dependent on each other, and have to be done in the sequence given below.

The ***Optional Exercises*** are only relevant if you want to learn more about the solution especially how to create tables (#2) and Entity-Relationship (ER) models (#3) instead of importing the artefacts via CSN file (#4). The exercises in section 4 are all optional and you can learn how to leverage Just Ask with SAP Analytics Cloud (#20), enable row-level security with Data Access Controls (#21), explore more features of the Analytic Model (#22) and learn about Transformation Flows and the usage of delta tables (#23).

1. **Getting Started**
   - Exercise Overview
   - Overview about the Business Scenario & the Data Model
   - Get your basic trial system
   - First Log On
2. **SAP Datasphere**
   - Exercise 1: Get to know your own Space
   - Exercise 2: Prepare Your Data (optional)
   - Exercise 3: Creating the Entity Relationship Model (optional)
   - Exercise 4: Importing Tables
   - Exercise 5: Uploading Data
   - Exercise 6: Creating the Dimension
   - Exercise 7: Creating the Fact View and Analytic Model
3. **SAP Analytics Cloud**
   - Exercise 8: Top 10 Revenue Generating Products
   - Exercise 9: Revenue by Geography
4. **Optional Exercises**
   - Exercise 20: Identify Top Sales Managers with Just Ask
   - Exercise 21: Creating Row-Level Permissions based on External Hierarchy
   - Exercise 22: Explore the Analytic Model
   - Exercise 23: Create a Transformation Flow and the usage of delta tables

Demo

Data modeling and consuming with SAP Datasphere & SAP Analytics Cloud



X Exercise no. X

Y Optional exercise no. Y

More Sessions about SAP Datasphere & SAP Analytics Cloud at TechEd 2024

Track Overview

- DA100 – Data in the age of AI

Lectures

- DA105 – SAP Analytics Cloud: Recent innovations, road map and strategy
- DA106 – Integration of SAP Analytics Cloud and SAP Datasphere solutions
- DA109 – SAP Analytics Cloud: Deep-dive into new features
- DA107 – SAP Datasphere: Recent innovations, road map, and strategy
- DA110 – How to treat data as a product
- DA195 – DataRobot and SAP Datasphere
- DA200 – Best of SAP BW in SAP Datasphere
- DA201 – Zalando Payments' journey to unlock the value of information assets

Jump-Start

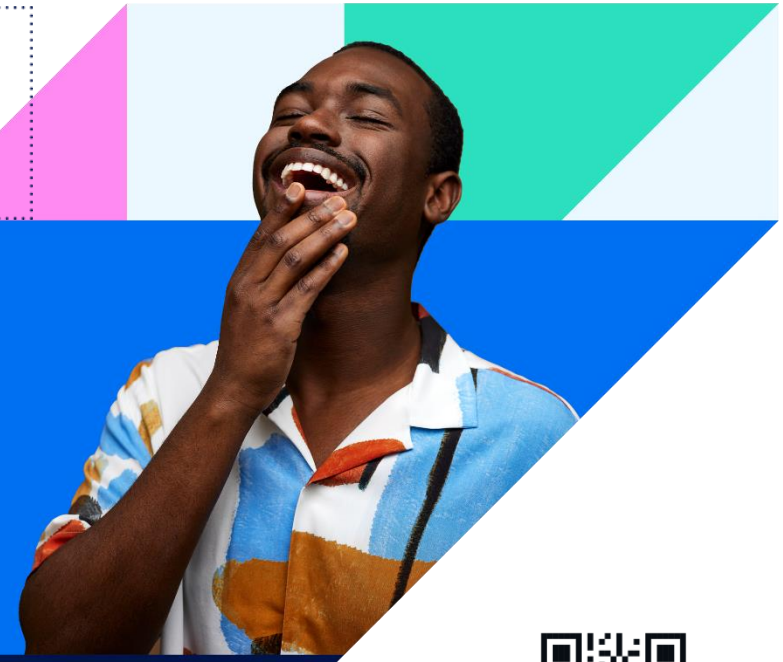
- DA180 – Explore SAP Datasphere and SAP Analytics Cloud end to end

Upskill for the future with SAP TechEd Virtual – Learning zone

Dive deeper into this year's hottest topics with tailored learning to optimize your skills. Access free self-paced learning journeys, demos, and trials, and get hands-on learning with use cases to upskill in the latest innovation areas.

Explore learning offerings for each SAP TechEd track

- Digital Transformation with Cloud ERP
- SAP Business Technology Platform
- Artificial Intelligence
- Application Development and Automation
- Data and Analytics
- Integration



Benefit from a 25% discount on SAP Learning Hub

Subscribe to our guided premium-learning offering, and get access to learning content and certification exam attempts, expert guidance in live digital sessions, and on-demand, hands-on practice systems.

Learn more

learning.sap.com/teched

/thank you

Contact information:

Klaus-Peter Sauer, Product Management SAP Datasphere
Nikola Cornelia Braukmueller, Cross Product Management Data & Analytics

SAP Bring out your best.