SAP TechEd

Build SAP Fiori apps with ABAP Cloud on SAP BTP ABAP environment – AD260

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SAP

Agenda

INTRODUCTION

TODAY'S SCENARIO – OVERVIEW

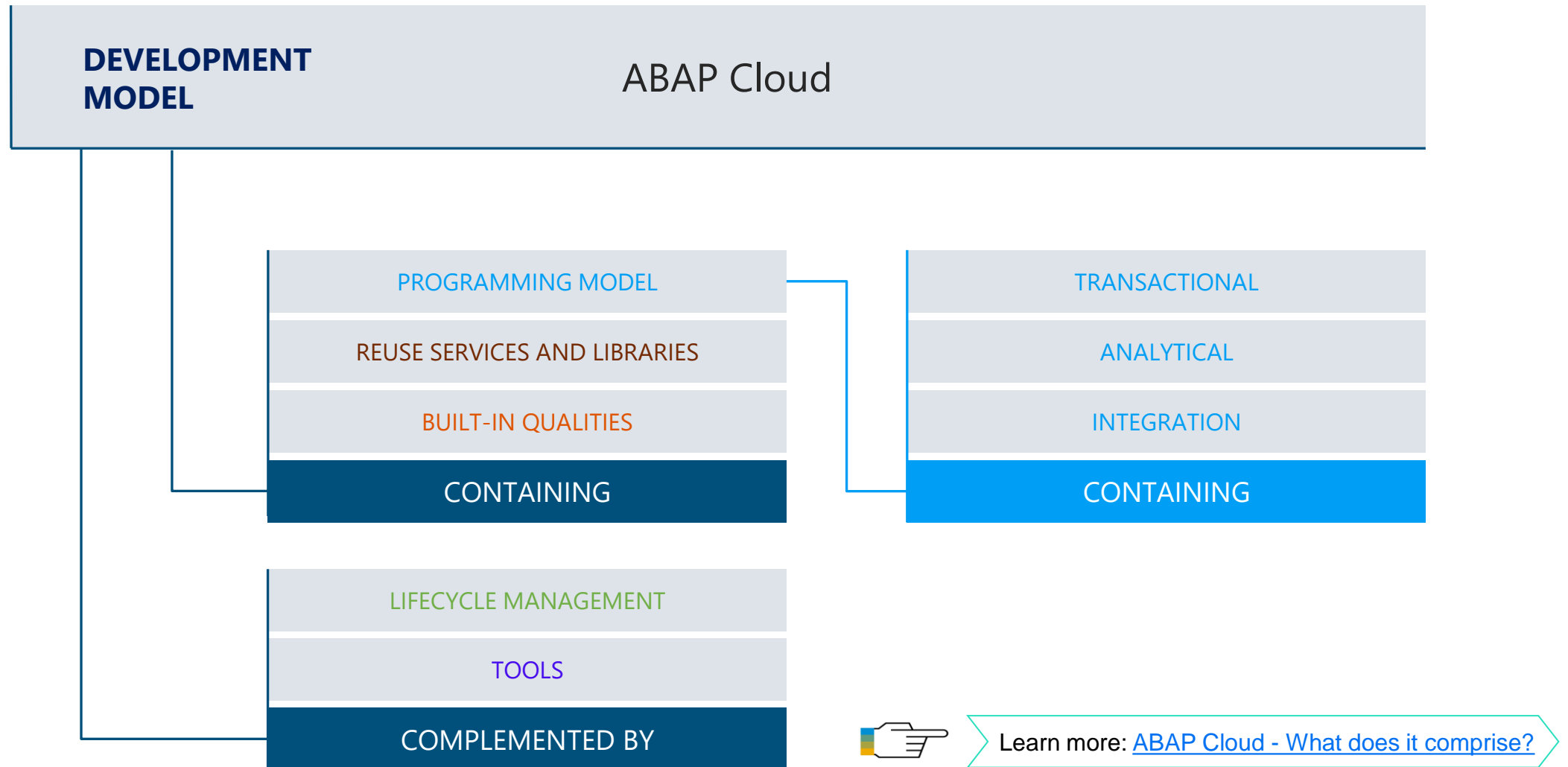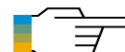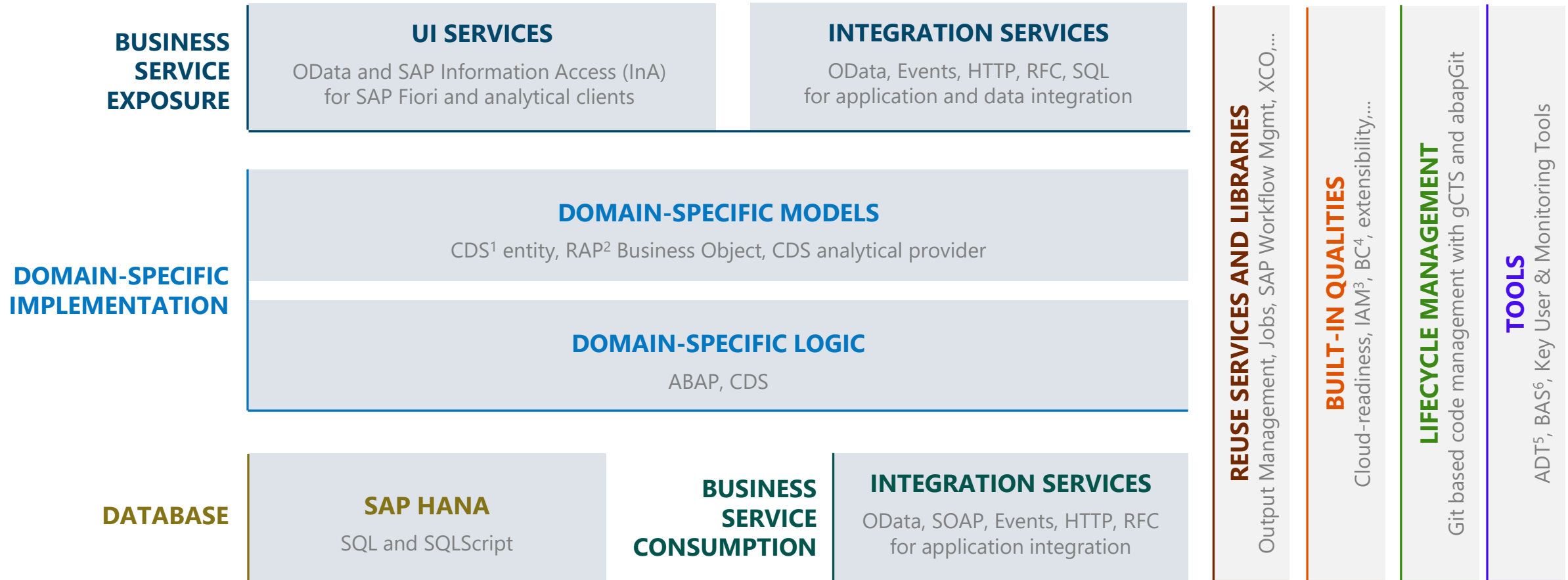TODAY'S SCENARIO – EXERCISES

WRAP UP

INTRODUCTION

ABAP Cloud

… is the ABAP **development model** to build cloud-ready business apps, services, and extensions

… comes with SAP Business Technology Platform (SAP BTP) and SAP S/4HANA

… works with public or private cloud, and even on-premise

ABAP Cloud – What's in it?

DEVELOPMENT MODEL	ABAP Cloud

PROGRAMMING MODEL	TRANSACTIONAL
REUSE SERVICES AND LIBRARIES	ANALYTICAL
BUILT-IN QUALITIES	INTEGRATION
CONTAINING	**CONTAINING**

LIFECYCLE MANAGEMENT
TOOLS
COMPLEMENTED BY

Learn more: ABAP Cloud - What does it comprise?

ABAP Cloud map

BUSINESS SERVICE EXPOSURE

UI SERVICES
OData and SAP Information Access (InA) for SAP Fiori and analytical clients

INTEGRATION SERVICES
OData, Events, HTTP, RFC, SQL for application and data integration

DOMAIN-SPECIFIC IMPLEMENTATION

DOMAIN-SPECIFIC MODELS
CDS[1] entity, RAP[2] Business Object, CDS analytical provider

DOMAIN-SPECIFIC LOGIC
ABAP, CDS

DATABASE

SAP HANA
SQL and SQLScript

BUSINESS SERVICE CONSUMPTION

INTEGRATION SERVICES
OData, SOAP, Events, HTTP, RFC for application integration

REUSE SERVICES AND LIBRARIES
Output Management, Jobs, SAP Workflow Mgmt, XCO,...

BUILT-IN QUALITIES
Cloud-readiness, IAM[3], BC[4], extensibility,...

LIFECYCLE MANAGEMENT
Git based code management with gCTS and abapGit

TOOLS
ADT[5], BAS[6], Key User & Monitoring Tools

Related sessions: AD103v, AD107v, DT187v, DT182v, DT103v, DT200v

[1] Core Data Services
[2] ABAP RESTful application programming model
[3] Identity & Access Management
[4] Business Configuration
[5] ABAP Development Tools
[6] SAP Business Application Studio

6

ABAP Cloud – Transactional scenarios
The ABAP RESTful application programming model (RAP)

BUSINESS SERVICE EXPOSURE

UI SERVICES

UI services for SAP Fiori based on OData

INTEGRATION SERVICES

OData Web APIs, Business Events

SERVICE BINDING

Service Projection, Service Definition, Event Binding

DOMAIN MODEL & IMPLEMENTATION

DOMAIN-SPECIFIC DATA MODELING

CDS[1] Entity, RAP[2] Business Object

DOMAIN-SPECIFIC PROGRAMMING

ABAP, CDS

DATA ACCESS

SAP HANA

SQL and SQLScript

BUSINESS SERVICE CONSUMPTION

APPLICATION INTEGRATION

HTTP / REST, WebSocket RFC, Business Events, OData, SOAP

[1] Core Data Services
[2] ABAP RESTful application programming model

TODAY'S SCENARIO – OVERVIEW

Building transactional SAP Fiori apps with RAP
Underlying simplified Flight data model

A **Travel entity** defines general travel data, such as the agency ID or customer ID, the overall status of the travel booking, and the total price of the travel.

A **Booking entity** comprises general flight and booking data, the customer ID for whom the flight is booked as well as the travel ID to which the booking belongs.

A **Customer entity** provides a detailed description of a flight customer, or passenger, such as the name, the address, and contact data.

An **Agency entity** defines travel agency data, such as the address and contact data.

A **Flight entity** defines the general flight data for each connection.

Main business entities in current scenario

Secondary business entities in current scenario

Building transactional SAP Fiori apps with RAP
with search, filter, and draft capabilities

Some of the used RAP features:
- ❖ OData Stream
- ❖ Virtual elements
- ❖ Late numbering
- ❖ Internal and determine instance actions
- ❖ Static (default) factory action
- ❖ Side effects
- ❖ Functions
- ❖ Business events
- ❖ etc.

Building transactional SAP Fiori apps with RAP
Travel list report app >> Object page

TODAY'S SCENARIO – EXERCISES

The AD260 hands-on exercises

01 Access to the exercises:
https://github.com/SAP-samples/teched2023-AD260

02 Set up your development environment.
1. Install and set up your ABAP Development Tools for Eclipse
2. Onboarding to the SAP BTP ABAP environment Trial

03 Move at your own speed!
▶ Use the provided 💡 boosters if you are already familiar with a particular topic
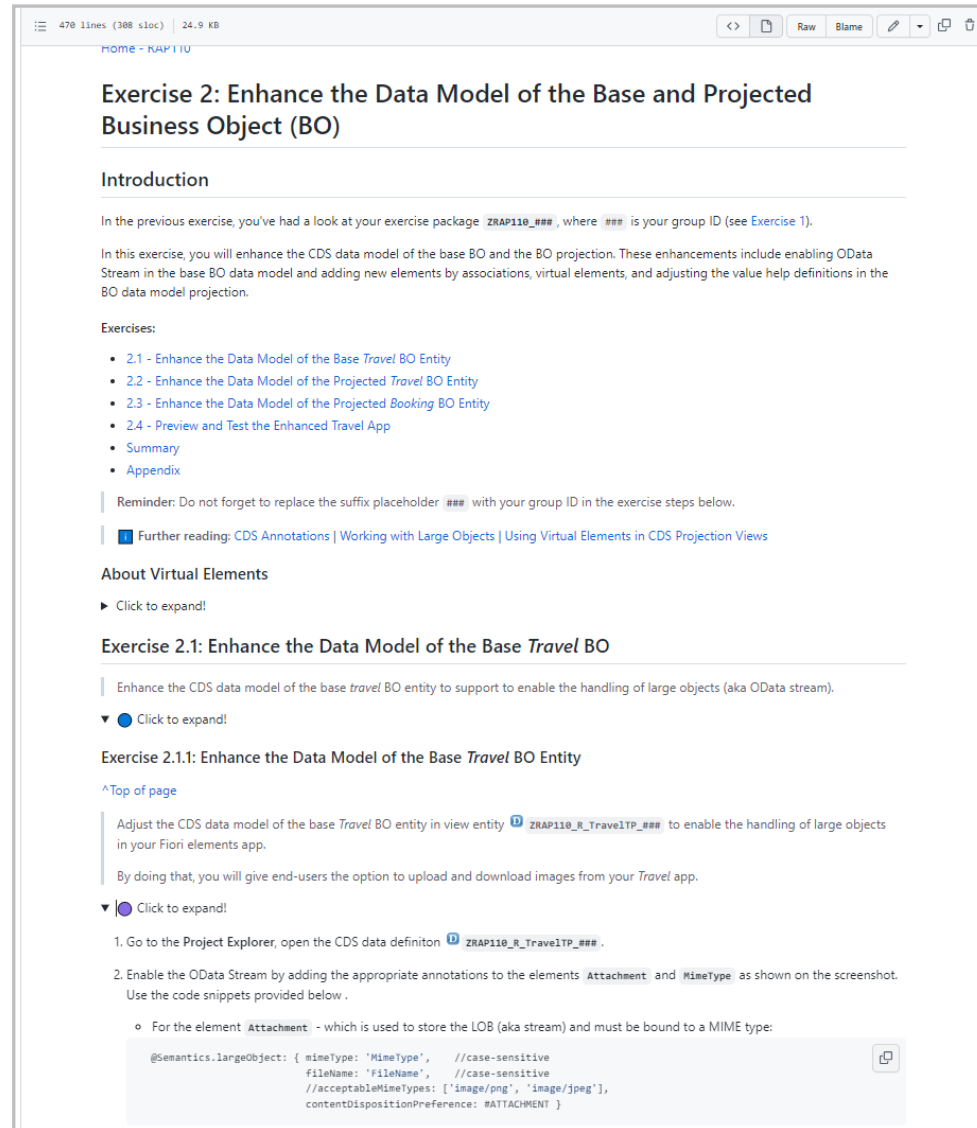
04 Feel free to ask questions

The AD260 hands-on exercises – Working on GitHub (1)

Follow the step-by-step instructions
provided on GitHub.

The **AD260** hands-on exercises – Working on GitHub (2)

Use provided booster exercises to speed of the steps of familiar exercises

- 3.1 - How to handle this exercise 💡
- 3.2 - Define the Late Numbering and the Static Field Control
- 3.3 - Define the Validations
- 3.4 - Define the Actions
- 3.5 - Define the Determinations

Make use of Copy raw contents button to easily copy code snippets

```
@Semantics.largeObject: { mimeType: 'MimeType',    //case-sensitive
                          fileName: 'FileName',    //case-sensitive
                          //acceptableMimeTypes: ['image/png', 'image/jpeg'],
                          contentDispositionPreference: #ATTACHMENT }
```

The AD260 hands-on exercises – Working on GitHub (3)

###

Always replace all occurrences of ### with your assigned suffix

ABAP Console

```
RAP110 exercise generator
----------------------------------------
Use transport D23K901012
Info: Suffix "810" will be used.
The following package got created for you and includes everythi
In the "Project Explorer" right click on "Favorite Packages" ar
Enter "ZRAP110_810" and click OK.
```

SUMMARY

ABAP Cloud – One development model for SAP S/4HANA and SAP BTP

SAP S/4HANA any premise[1]	SAP S/4HANA Cloud, private edition[1]	SAP S/4HANA Cloud, public edition[2]	SAP BTP, ABAP Environment
ABAP Cloud development model to build cloud-ready business apps, services, and extensions			
Classic ABAP development model			
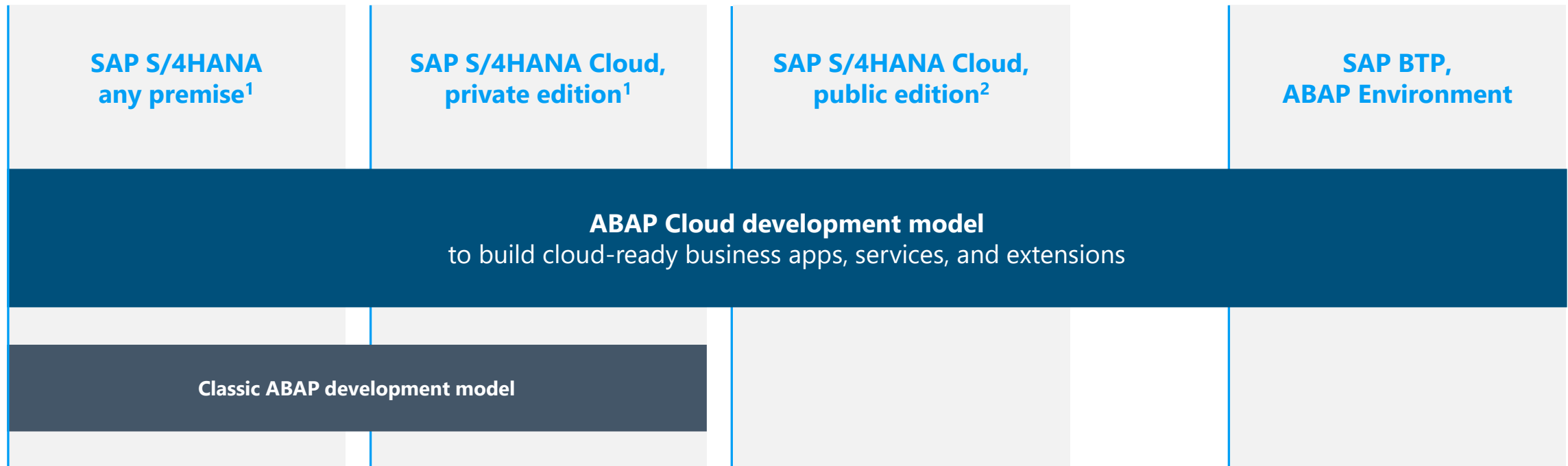
[1] SAP S/4HANA any premise or SAP S/4HANA Cloud, private edition release ≥ 2022
[2] SAP S/4HANA Cloud, public edition release ≥ 2208, 3-system landscape required

Key takeaways

ABAP Cloud is the development model provided to build cloud-ready enterprise services, apps, and extensions on SAP BTP ABAP environment and all editions[1] of SAP S/4HANA, in the cloud and on-premises .

The **ABAP RESTful application programming model** (RAP) is the **centerpiece of ABAP Cloud** for building efficiently **transactional** OData-based services and SAP Fiori apps with built-in cloud qualities.

RAP best support **SAP HANA** and **SAP Fiori elements**.

RAP is available on **SAP BTP ABAP Environment**, **SAP S/4HANA Cloud**, and **SAP S/4HANA** as of edition 1909.

The **RAP feature set** is enhanced **quarterly** in SAP BTP ABAP environment, **twice a year** in SAP S/4HANA Cloud ABAP environment, and **every two years** in SAP S/4HANA.

What's New: SAP BTP ABAP environment | SAP S/4HANA | SAP S/4HANA Cloud

What's Next: ABAP Platform Roadmap Information for all products

[1] - SAP S/4HANA any premise or SAP S/4HANA Cloud, private edition release ≥ 2022
- SAP S/4HANA Cloud, public edition release ≥ 2208, 3-system landscape required
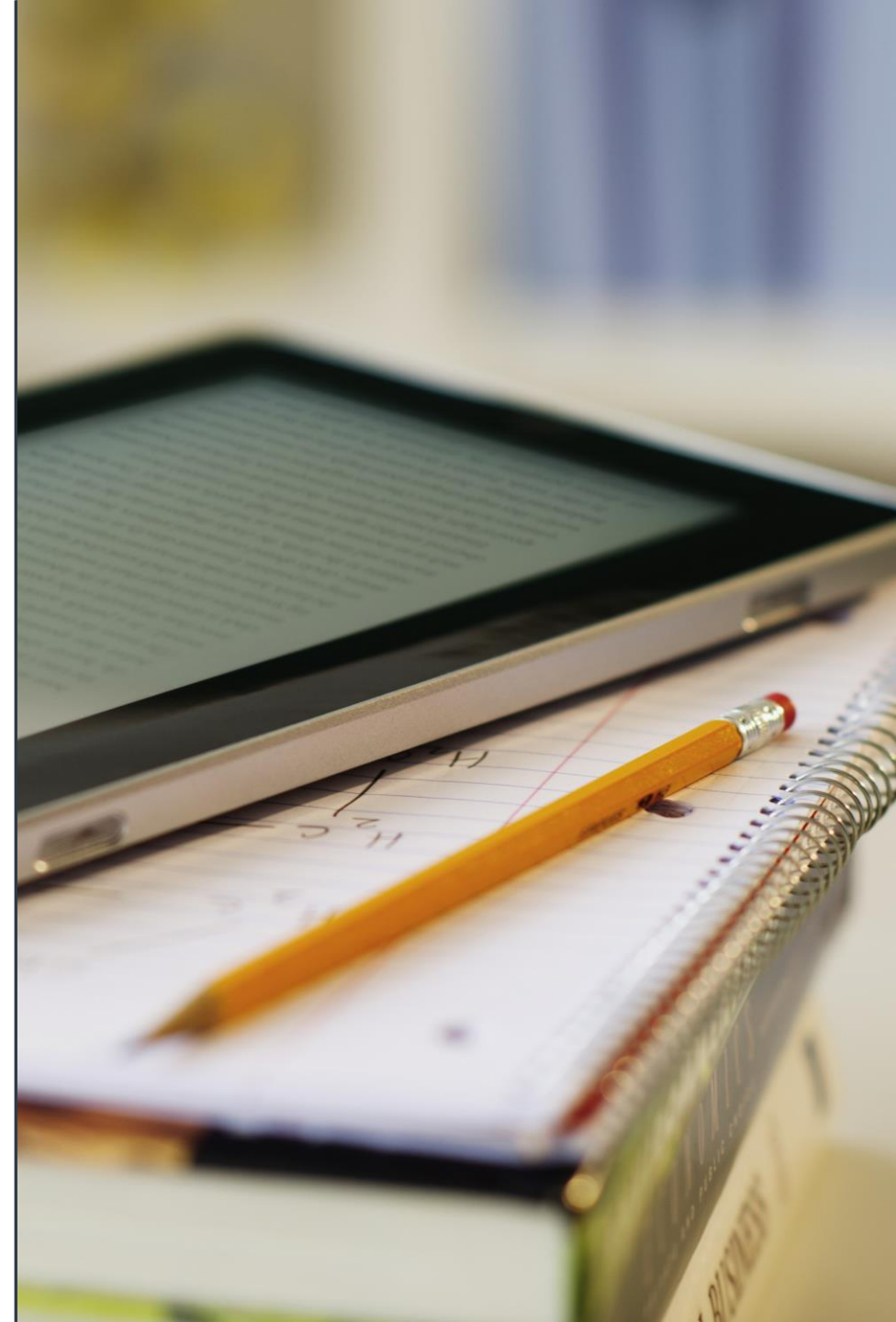
More information on ABAP Cloud
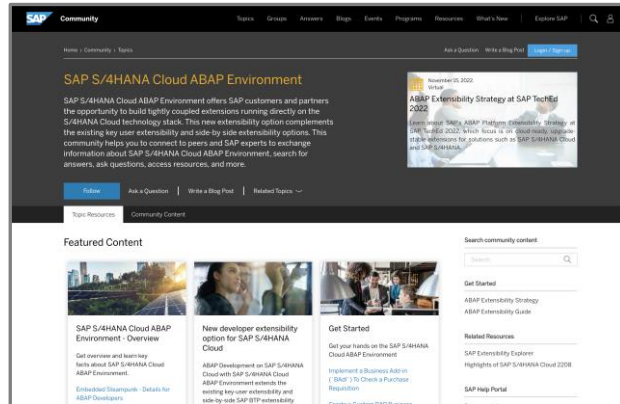
[SAP Community](#)
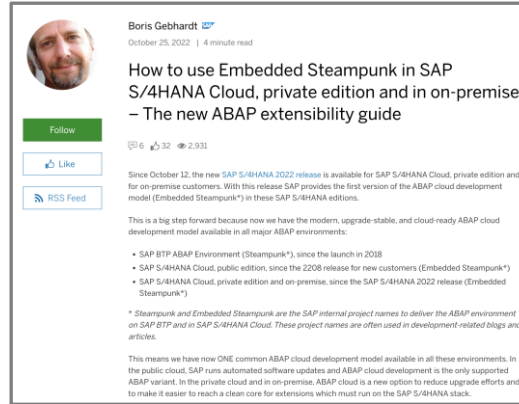
[How to use Embedded Steampunk in SAP S/4HANA Cloud, private edition and in on-premise – The new ABAP extensibility guide | SAP Blogs](#)
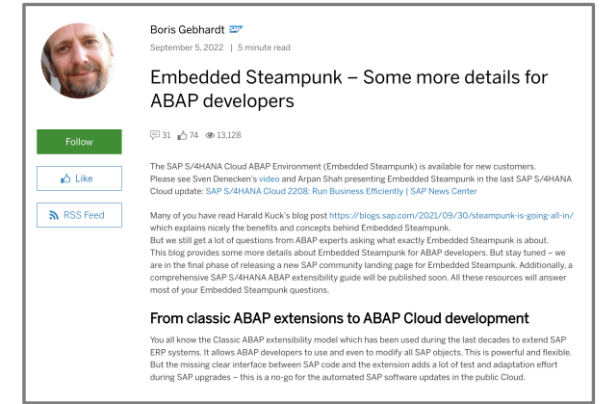
[Embedded Steampunk – Some more details for ABAP developers | SAP Blogs](#)
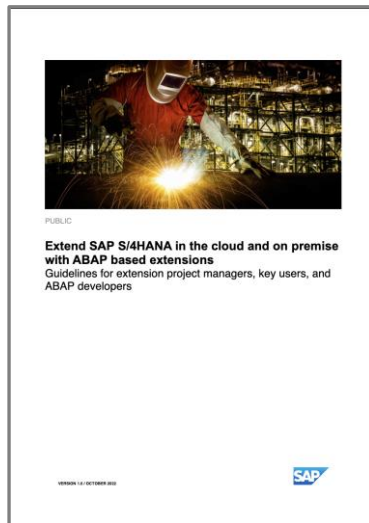
[The new ABAP extensibility guide](#)
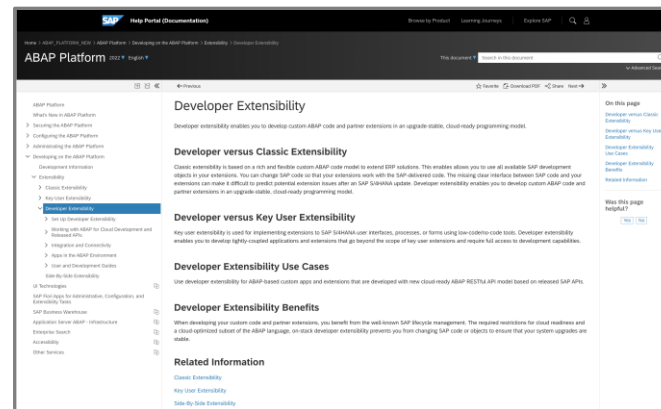
[SAP documentation](#)
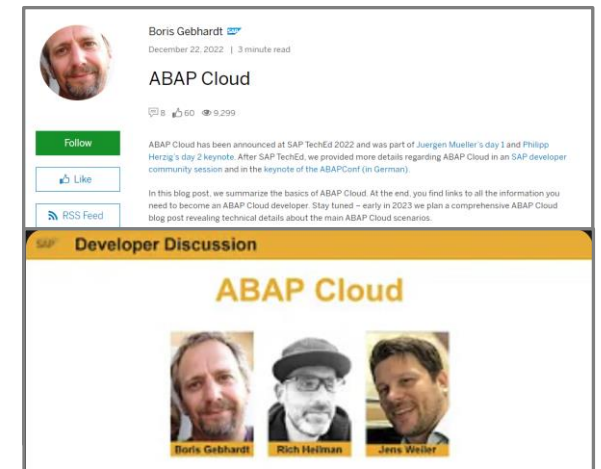
[ABAP Cloud | SAP Blogs](#)

[Developer Discussion: ABAP Cloud](#)

More information on RAP

Further information

[State-of-the-Art ABAP Development with the ABAP RESTful Application Programming Model (RAP)](#) | SAP Community

[Modernization with RAP](#) | SAP Blogs

[Acquire Core ABAP Skills](#) | [Practicing Clean Core Extensibility for SAP S/4HANA Cloud](#) | SAP Learning Journey

📺 [ABAP Cloud at SAP's Devtoberfest in 2023](#) | 📺 [ABAP Cloud sessions at SAP TechEd 2023](#)

[SAP Fiori elements Feature Showcase App with RAP](#)

What's New in RAP: [SAP BTP ABAP Environment](#) | [SAP S/4HANA](#) | [SAP S/4HANA Cloud](#)

Outlook: [ABAP Platform Roadmap Information](#) | [SAP BTP ABAP Environment@interactive SAP Road Map Explorer](#)

Public SAP Web sites

ABAP Development Community: www.sap.com/community/topic/abap.html

SAP BTP ABAP Environment Community: https://community.sap.com/topics/btp-abap-environment

SAP S/4HANA Cloud ABAP Environment Community: https://community.sap.com/topics/s4hana-cloud-abap-environment

ABAP Testing and Analysis Community: https://community.sap.com/topics/abap-testing-analysis

SAP products: www.sap.com/products

SAP training and certification opportunities

www.sap.com/education – e.g. trainings S4D437, S4D430, HA400, and S4D400

learning.sap.com/learning-journey – e.g., search for ABAP or ABAP Cloud

Learn more about ABAP Cloud at SAP TechEd 2023

Check the virtual Session Catalog: [SAP TechEd Virtual in 2023](#)

Join us for these insightful virtual sessions to learn more about accelerating development with pro-code tools:
[AD103v](#), [AD107v](#), [DT187v](#), [DT182v](#), [DT103v](#), [DT200v](#)

☞ See blog post [ABAP Cloud at SAP TechEd 2023](#)

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37% Of IT certification candidates received salary increases after earning a certification*

92% Are more confident in their abilities*

*"2023 Value of IT Certification Candidate Report," Pearson VUE, 2023.

Thank you

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