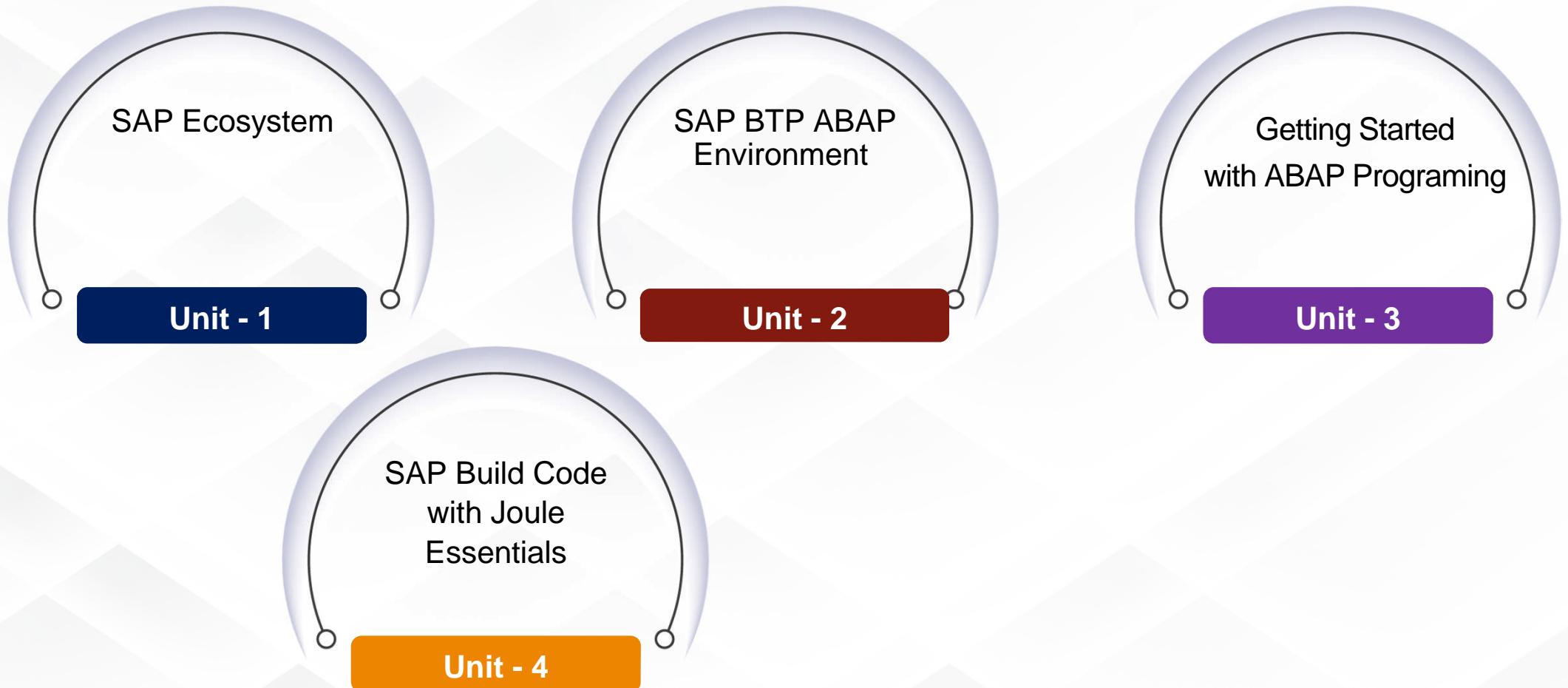


Module - 4

Foundations of SAP ABAP and Build Code with Joule



Units for Discussion





DISCLAIMER

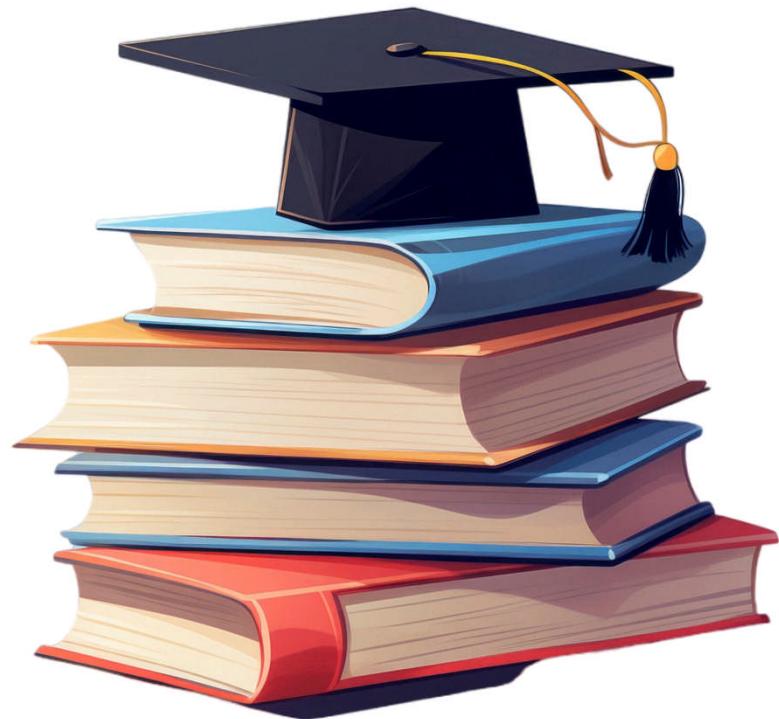
The content is curated from online/offline resources
and used for educational purpose only.

Unit - 2

SAP BTP ABAP Environment

Learning Objectives

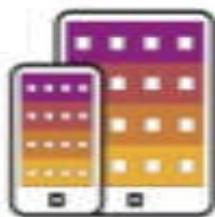
- Introduction to SAP Business Technology Platform
- ABAP on SAP Business Technology Platform
- ABAP Overview
- Prep1
- Eclipse Platform



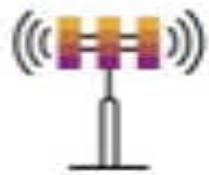
Source :



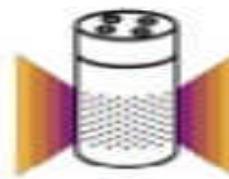
SAP Business Technology Platform



Applications



Internet
of
Things



Natural
Language
Interfaces

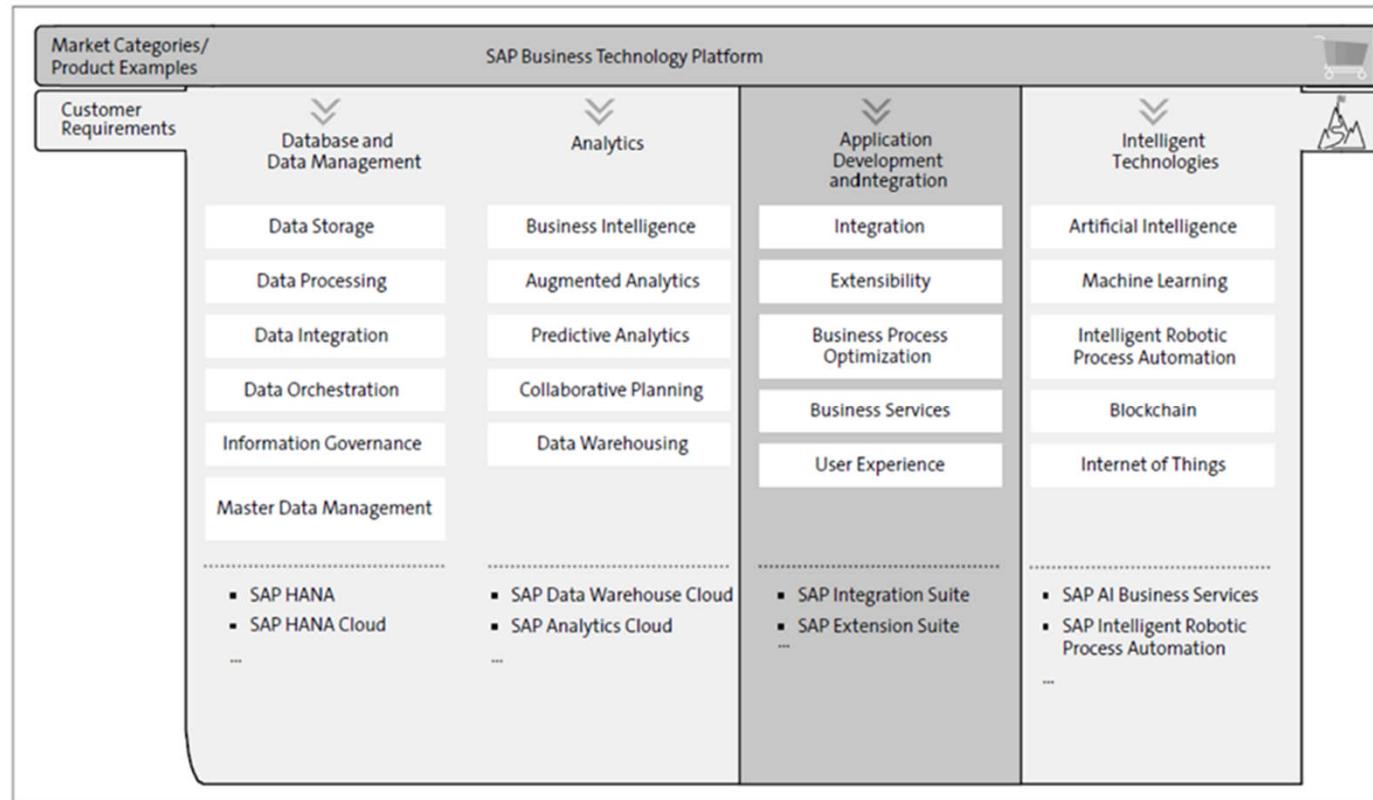


Machine
Learning



Integration
Suite

Introduction to SAP Business Technology Platform



Source :

<https://blog.sap-press.com/what-does-sap-btp-do>

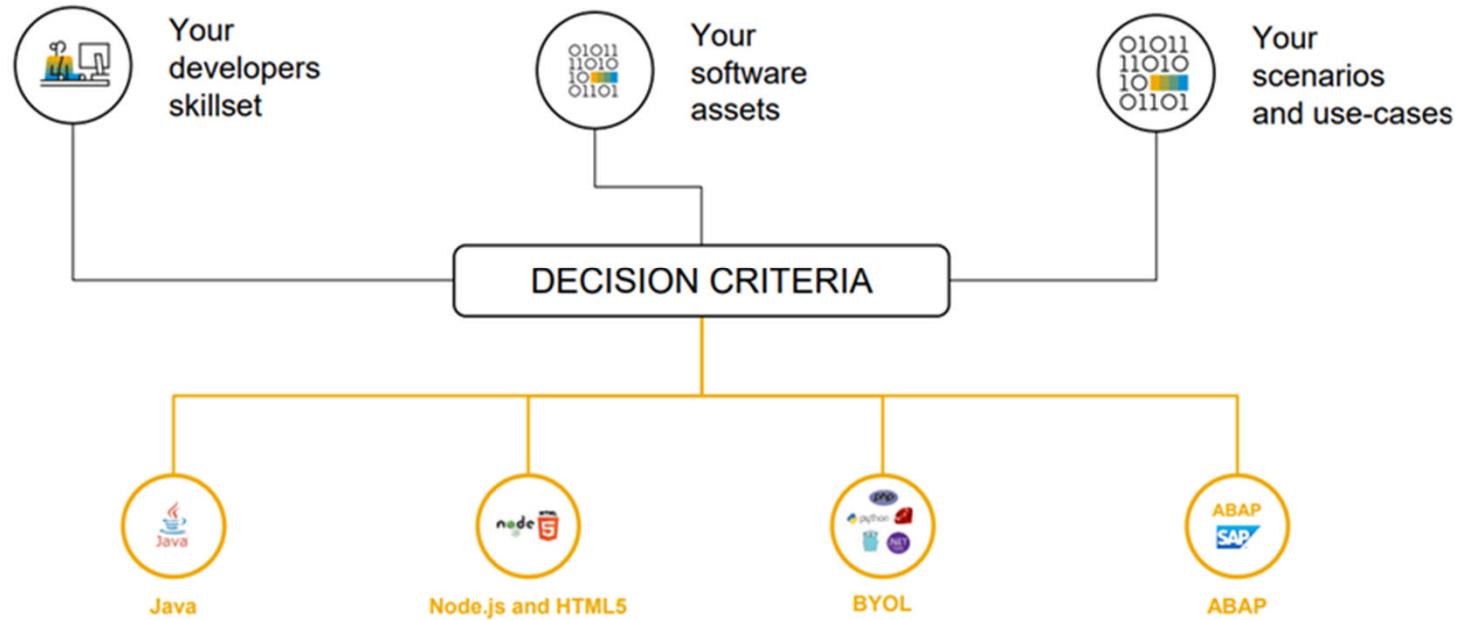
SAP Business Technology Platform - Applications

Personalize experiences for SAP applications

Innovate faster with business context

Run on a trusted enterprise-grade platform

When to use What?

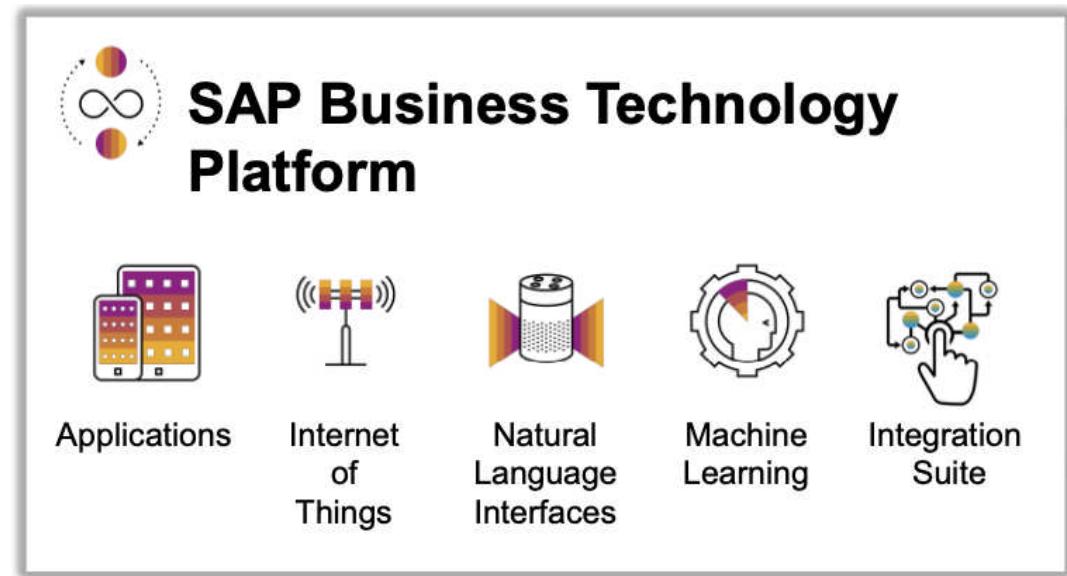


Source :

<https://archlynk.com/blog/sap-business-technology-platform-future-of-business-transformation-planning#popup>

ABAP on SAP Business Technology Platform

- SAP BTP ABAP Environment is the SAP Platform-as-a-Service (PaaS).
- Offers ABAP development that enables developers to leverage their traditional on-premise ABAP and run ABAP applications.
- Exercised in the SAP Business Technology Platform, either as extension to SAP software or as standalone applications.



Source :

<https://archlynk.com/blog/sap-business-technology-platform-future-of-business-transformation-planning#popup>

Motivation



Customer Base



Enterprise Readiness



Transition to Cloud

Huge **customer and partner base** running ABAP based solutions with custom code

ABAP as proven environment for **enterprise ready** business applications with competitive cost of development

Growing market adoption of **SAP S/4HANA Cloud** with tailored extensibility for customers and partners

Source :

<https://archlynk.com/blog/sap-business-technology-platform-future-of-business-transformation-planning#popup>

Value of SAP BTP ABAP Environment

▶ Cloud ERP

Transform your existing ABAP assets **to the cloud**

▶ Innovation Platform

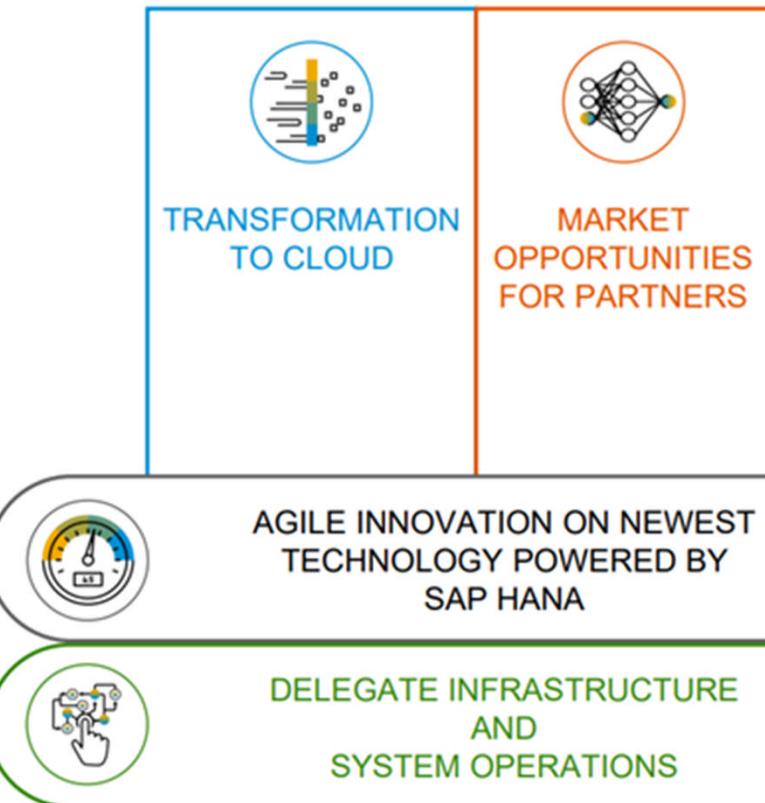
Develop and **run** innovative ABAP apps **on a PaaS in the Cloud**

- ▶ use always the newest version of the ABAP Platform
- ▶ use always the newest version of SAP HANA
- ▶ use always the newest SAP BTP services
- ▶ Delegate the operation of the ABAP PaaS to SAP

▶ Clean Core

Decouple from your **core business system**

- ▶ Delegate cloud integration scenarios to a cloud hub
- ▶ Reduce upgrade costs with decoupled cloud extensions
- ▶ Delegate non ERP user roles like consumer to a cloud solution



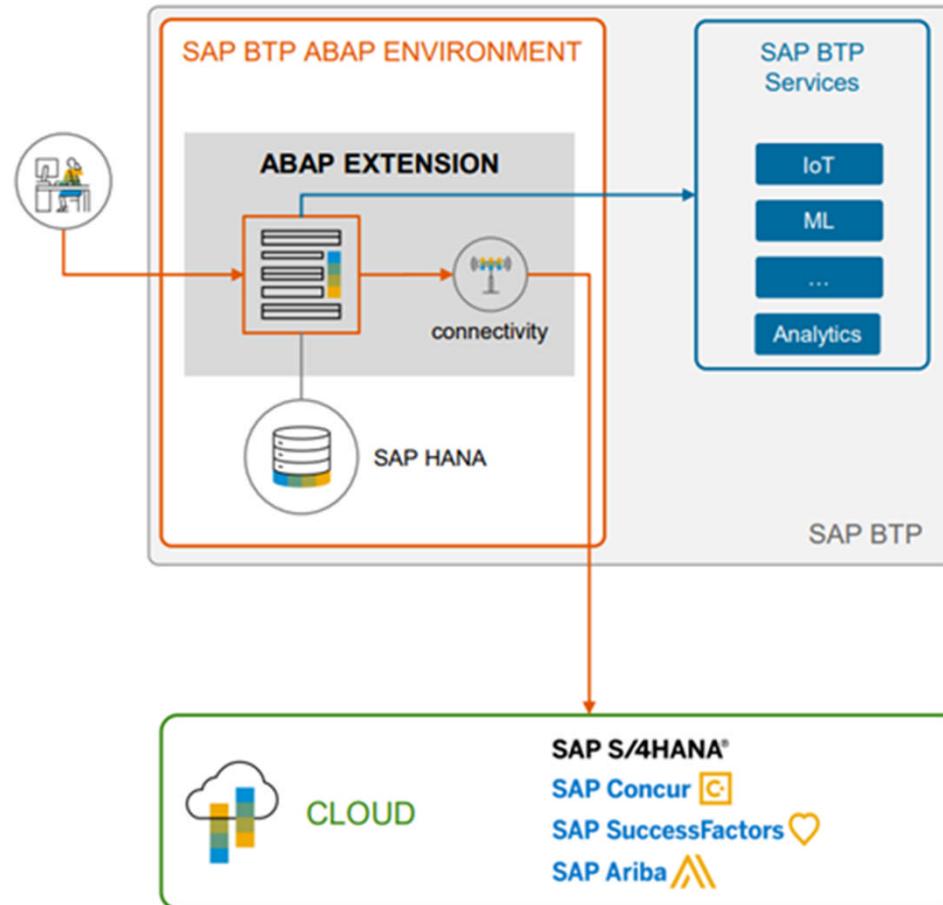
Scenarios of ABAP on SAP BTP

Extension scenario : Cloud ERP

Extend SAP S/4HANA Cloud or other SAP cloud offerings with cloud extensions

Use SAP BTP ABAP Environment to extend SAP S/4HANA Cloud or other

- SAP cloud solutions SAP Cloud solutions like SAP S/4HANA Cloud provide in-app extensibility to extend SAP apps and processes, but there is no support for classic custom ABAP development on top of SAP S/4HANA Cloud
- SAP BTP is the foundation to develop and run custom cloud extensions and the ABAP environment shall be used for ABAP based cloud extensions



Source :

<https://www.camelot-mc.com/blog/migration-to-sap-business-technology-platform-multi-cloud-an-example/>

ABAP Overview:

- ABAP programs are executed on the SAP Application Server, which communicates with the database and other components of the SAP system.
- SAP provides various development tools for ABAP programming, including ABAP Workbench, Eclipse IDE with ABAP Development Tools (ADT), and SAP GUI (SAP GUI is being phased out in favor of Eclipse IDE).
- Eclipse IDE with ADT is the recommended tool for ABAP development and offers features like code editor, debugger, and repository browser.

LAB- 1

Creating a BTP ABAP Environment

Prep 1 Creating a BTP ABAP Environment

Create an SAP BTP ABAP Environment Trial User

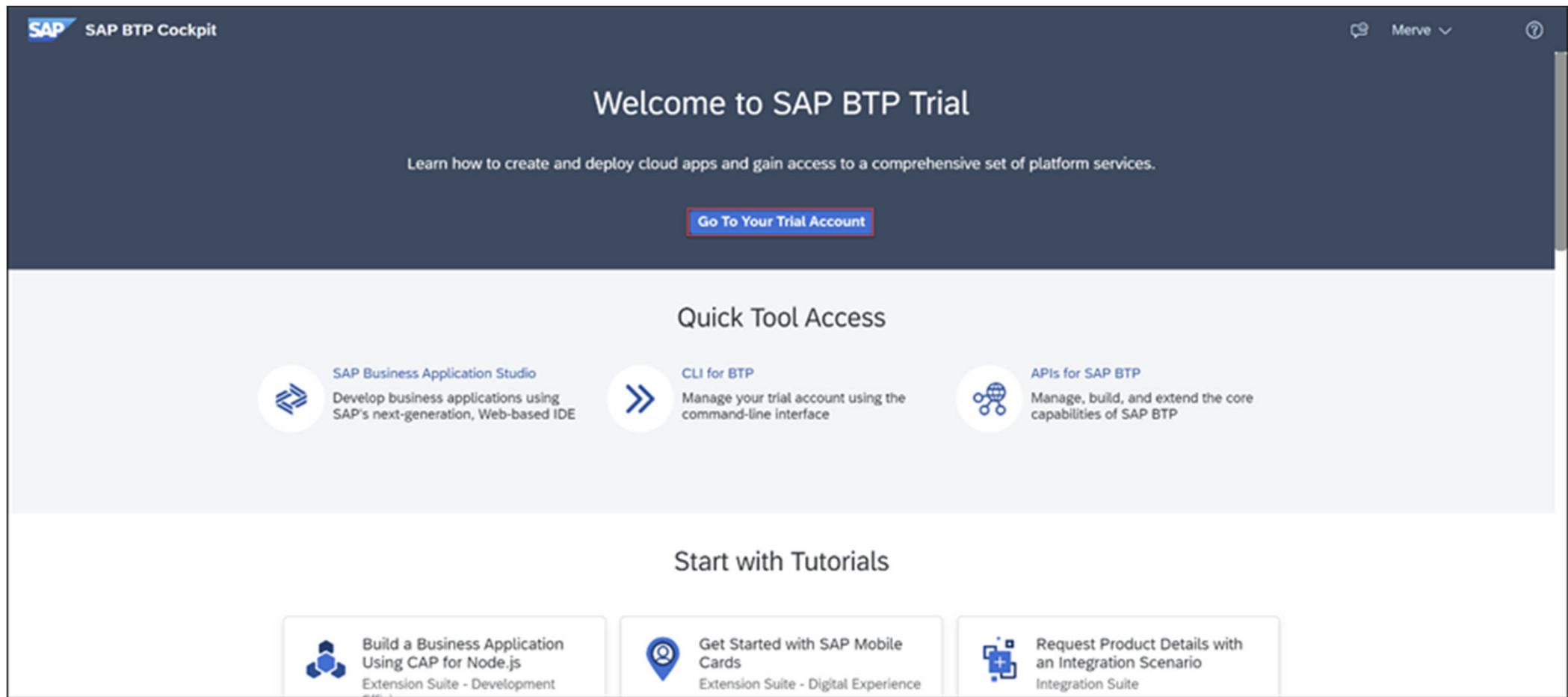
Step-1

In your web browser, open the

<https://cockpit.hanatrial.ondemand.com/.>

Navigate to the trial global account by clicking Go to Your Trial Account.

Prep 1 Creating a BTP ABAP Environment



The screenshot shows the SAP BTP Cockpit Trial interface. At the top, there's a header with the SAP logo, "SAP BTP Cockpit", a user profile for "Merve", and a help icon. The main title "Welcome to SAP BTP Trial" is centered above a subtext: "Learn how to create and deploy cloud apps and gain access to a comprehensive set of platform services." Below this is a prominent blue button labeled "Go To Your Trial Account".

Quick Tool Access

-  SAP Business Application Studio
Develop business applications using SAP's next-generation, Web-based IDE
-  CLI for BTP
Manage your trial account using the command-line interface
-  APIs for SAP BTP
Manage, build, and extend the core capabilities of SAP BTP

Start with Tutorials

-  Build a Business Application Using CAP for Node.js
Extension Suite - Development
-  Get Started with SAP Mobile Cards
Extension Suite - Digital Experience
-  Request Product Details with an Integration Scenario
Integration Suite

Prep 1 Creating a BTP ABAP Environment

Choose Continue.

Welcome to Your Personal Trial

We will now set up your account. This process can take a minute.

Region: US East (VA) - AWS

Global Account: GlobalAccount1

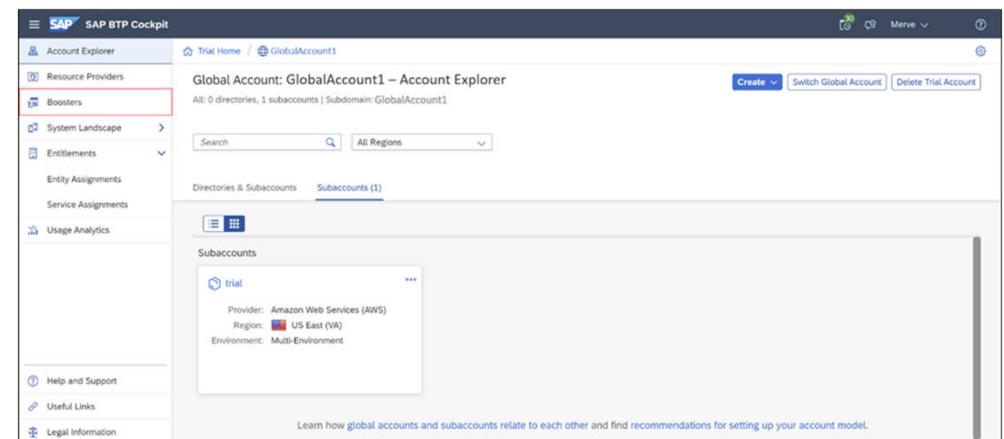
Subaccount: trial

Org: GlobalAccount1

Space: dev

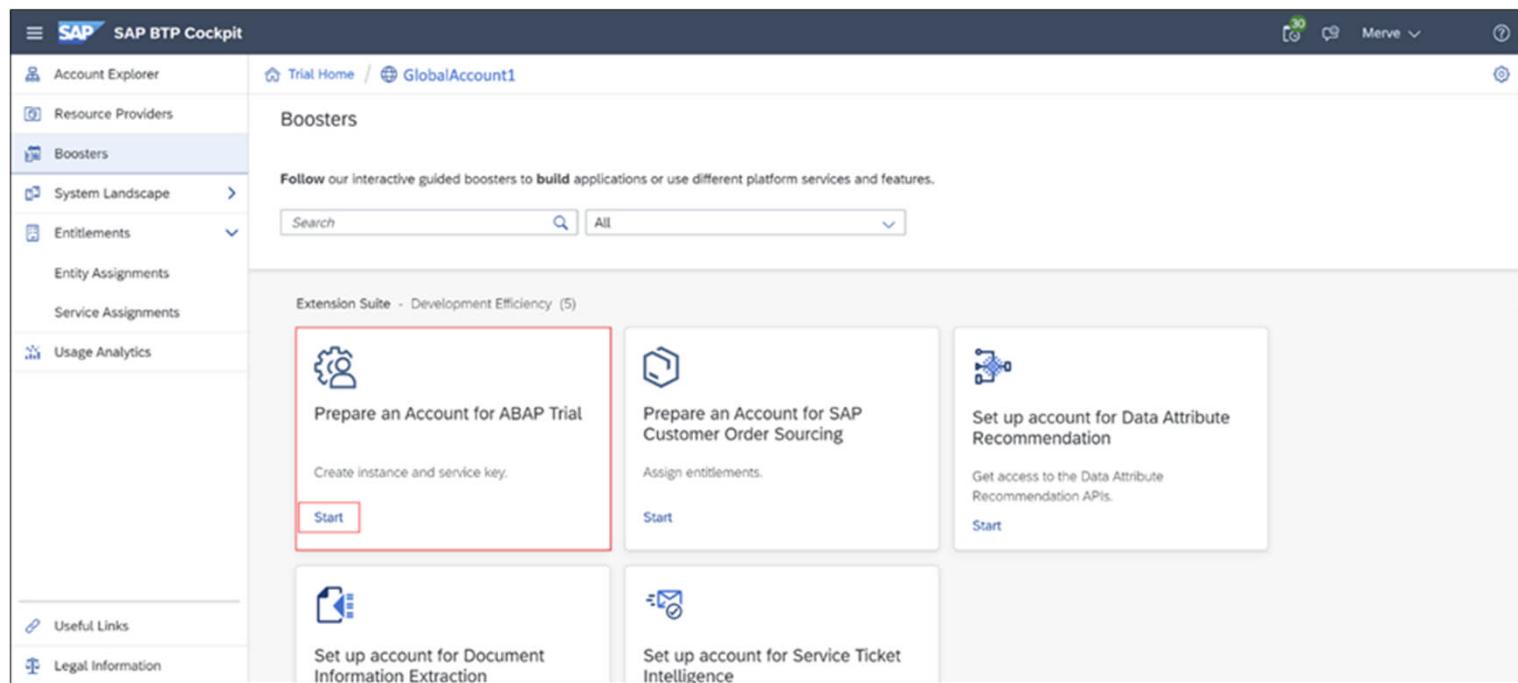
Continue

From your global account page, choose Boosters on the left side.



Prep 1 Creating a BTP ABAP Environment

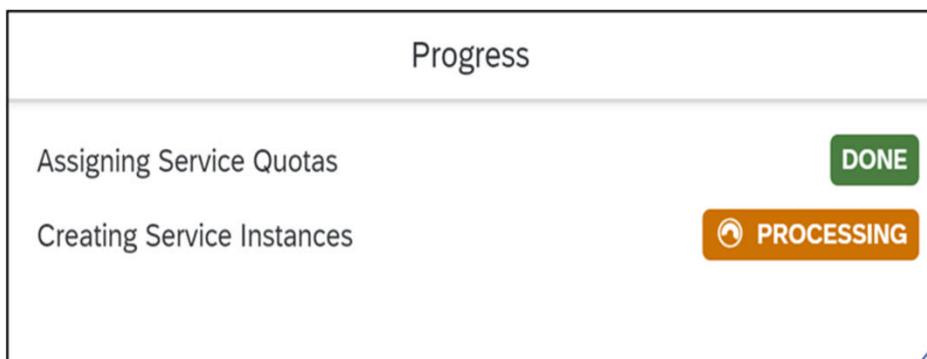
Search the Prepare an Account for ABAP Trial tile and press Start to start your booster. If you already created a service instance and service key, then please skip this step and move on with Step 2. Only one service instance can be created at a time.



The screenshot shows the SAP BTP Cockpit interface. The left sidebar includes links for Account Explorer, Resource Providers, Boosters (which is selected), System Landscape, Entitlements, Entity Assignments, Service Assignments, and Usage Analytics. The main content area is titled 'Booster' and contains a sub-section 'Extension Suite - Development Efficiency (5)'. It lists five tiles: 'Prepare an Account for ABAP Trial' (highlighted with a red border and a 'Start' button), 'Prepare an Account for SAP Customer Order Sourcing' (with a 'Start' button), 'Set up account for Data Attribute Recommendation' (with a 'Start' button), 'Set up account for Document Information Extraction' (without a 'Start' button), and 'Set up account for Service Ticket Intelligence' (without a 'Start' button). The top right corner of the screen shows a yellow vertical bar.

Prep 1 Creating a BTP ABAP Environment

Now the service instance and service key will be created for the ABAP trial user. The service key can be found inside the service instance.



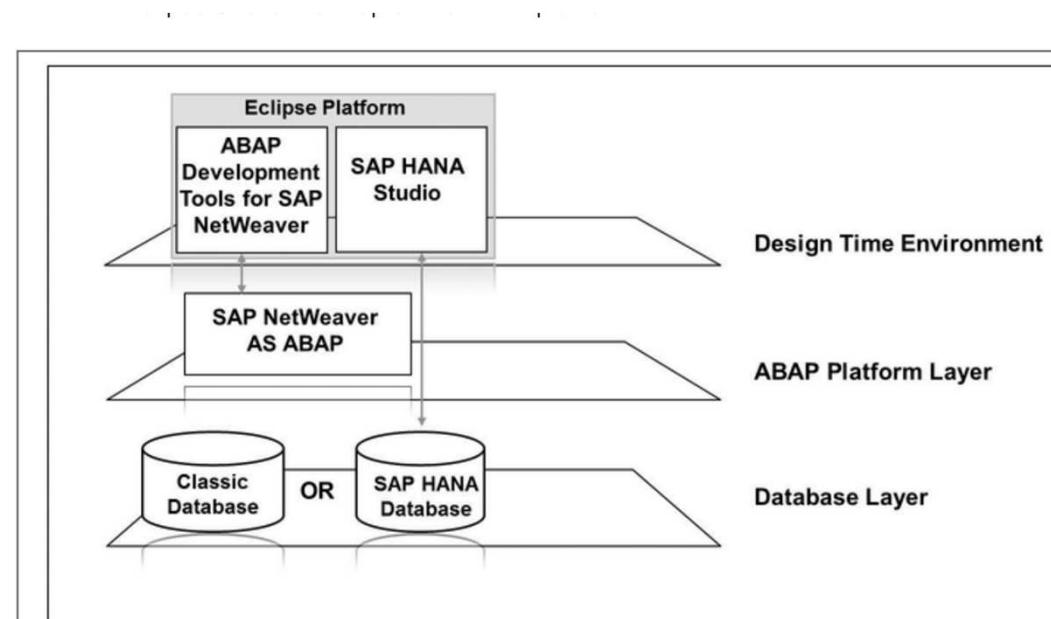
The booster is now executed successfully. Download your service key for later use.



Eclipse Platform

Benefits of Eclipse

- With ABAP Development Tools in Eclipse Eclipse's usability, speed, and flexibility , you can capitalize on Eclipse's usability, speed, and flexibility of Eclipse while also benefitting from proven ABAP Workbench features.
- It's the best of both worlds. ADT improves developer productivity by offering better refactoring functionality, code completion, auto-insertion, and code templates.
- It also includes an invaluable Quick Fix feature and is highly navigable.



LAB- 2

Setting up the eclipse for ABAP

Prep 2: Setting up the eclipse

Step 2

Open ABAP Development Tools

Open Eclipse. Make sure you have installed ADT in your Eclipse.

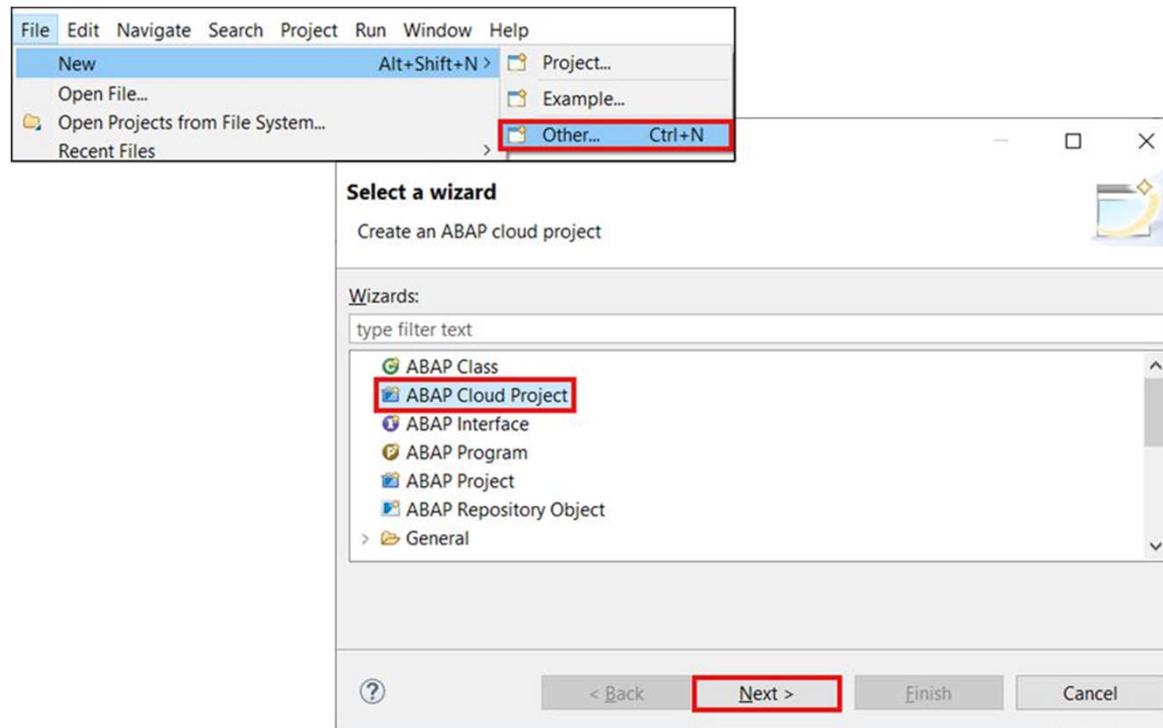
To install the front-end component of ADT, proceed as follows:

- Get an installation of Eclipse 2022-09 (x86_64) (Eclipse IDE for Java Developers)
- In Eclipse, choose in the menu bar Help > Install New Software...
- Enter the URL <https://tools.hana.ondemand.com/latest>
- Press Enter to display the available features.
- Select ABAP Development Tools and choose next.
- On the next wizard page, you get an overview of the features to be installed. Choose Next.
- Confirm the license agreements and choose Finish to start the installation.

Prep 2 Setting up the eclipse

Step 3 Create ABAP cloud project

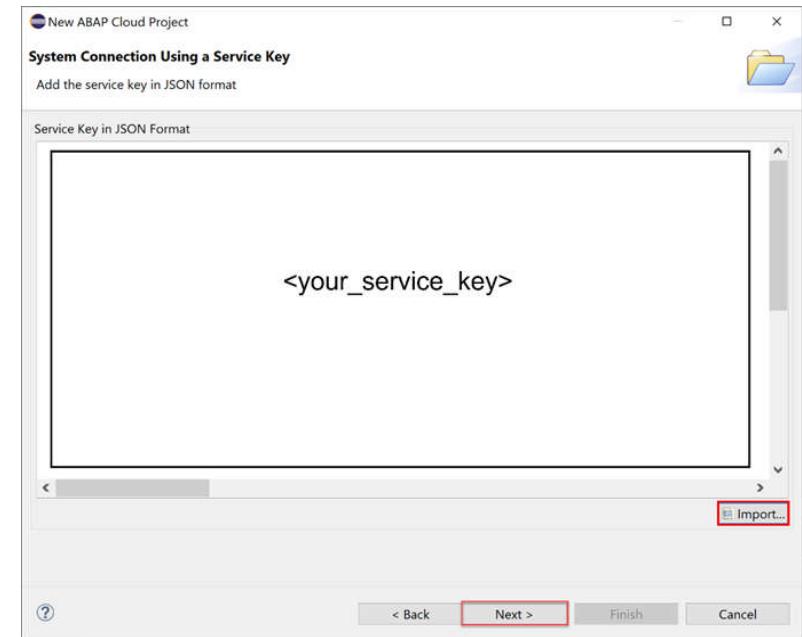
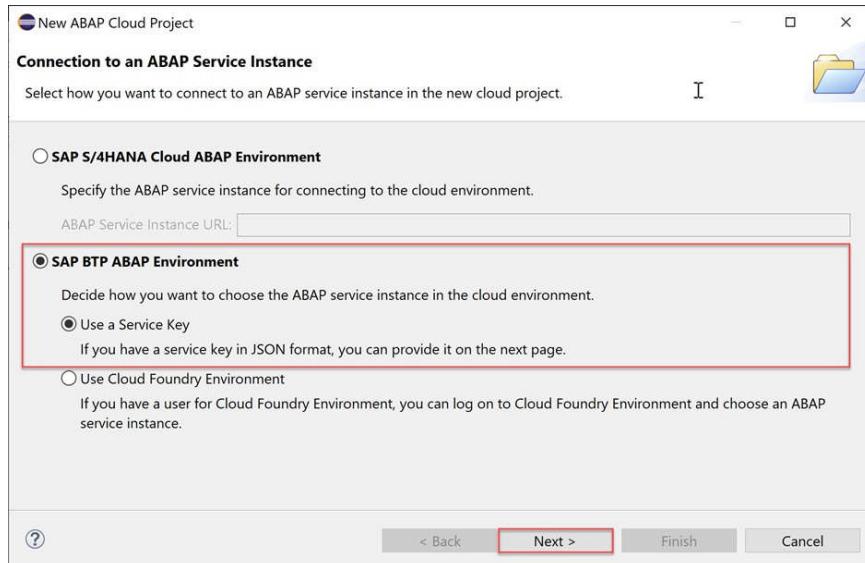
Select File > New > Other > ABAP Cloud Project and click Next >.



Prep 2 Setting up the eclipse

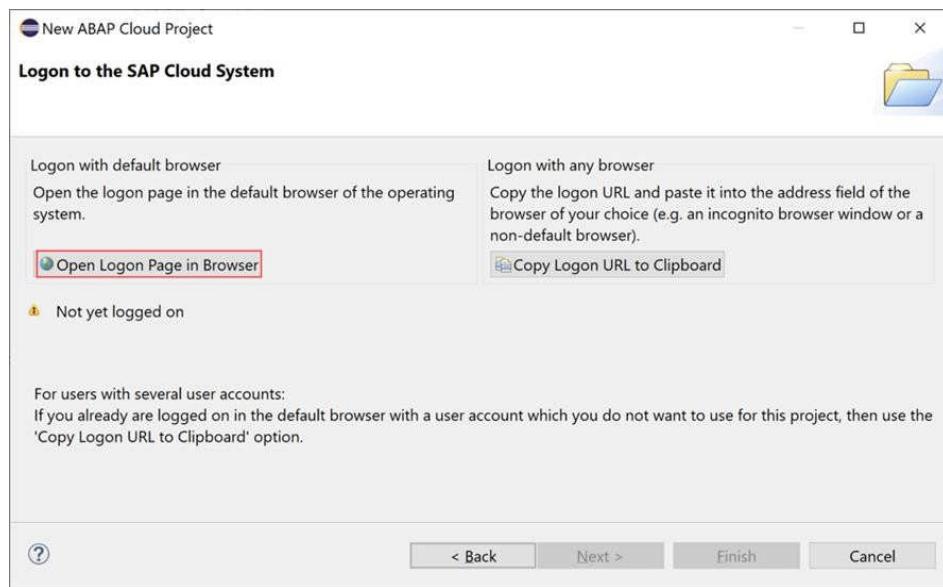
2. Select SAP BTP ABAP Environment >
Use a Service Key and click Next >.

3. Import your service key and click Next >.

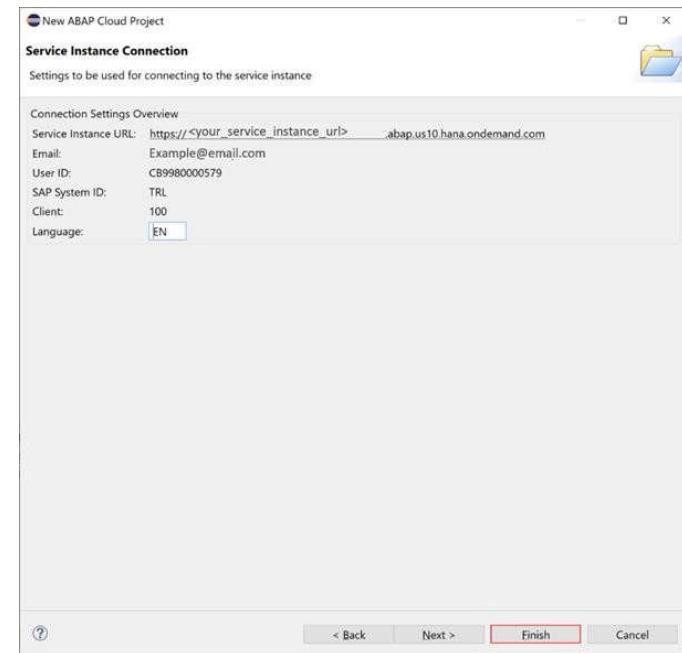


Prep 2 Setting up the eclipse

4. Click Open Logon Page in Browser.

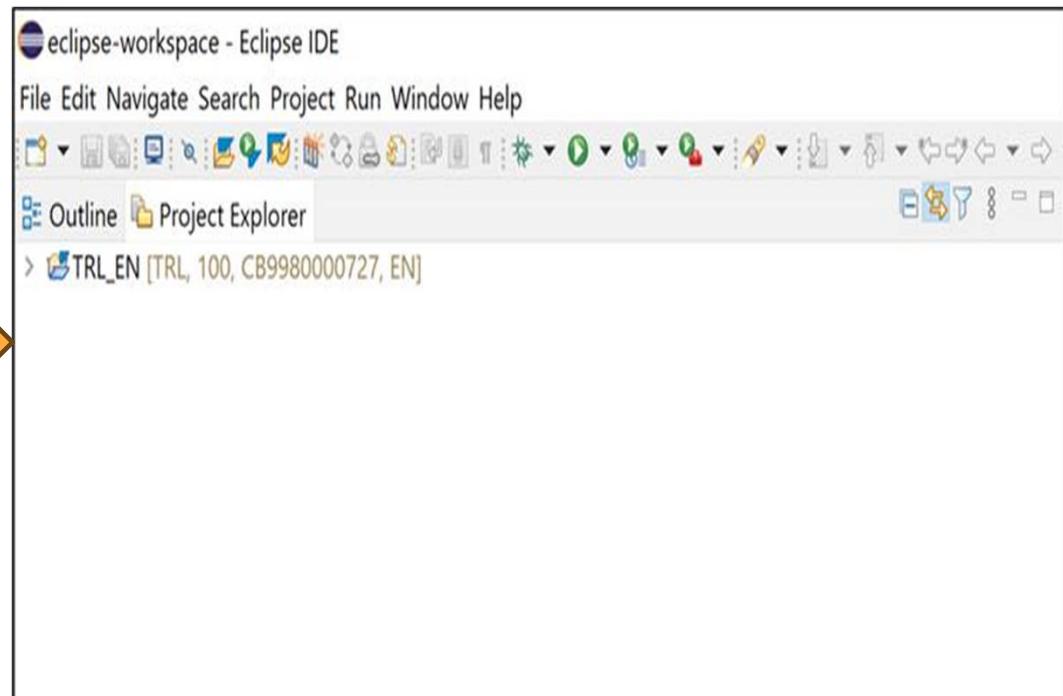
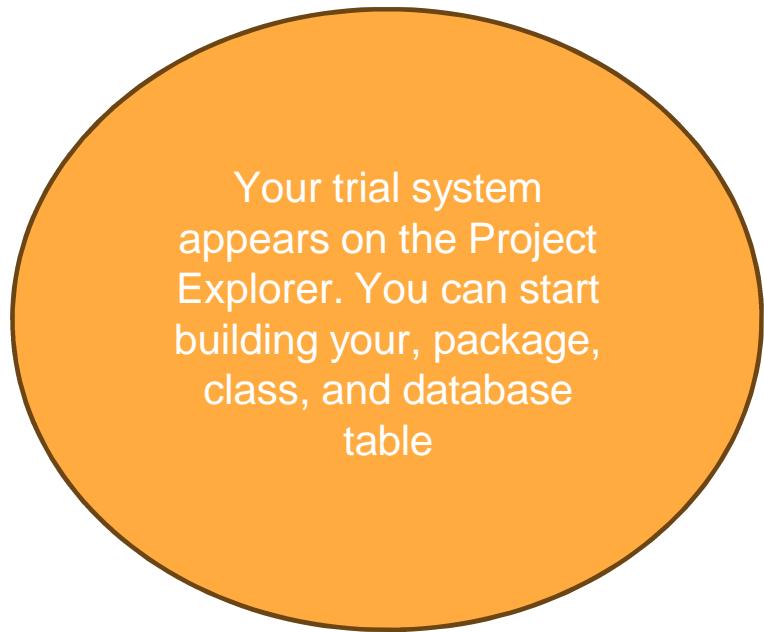


5. Now you've been authenticated automatically. Provide your credentials if requested. The credentials are the same you used to create your trial account on SAP BTP.



Prep 2 Setting up the eclipse

6. Your trial system appears on the project explorer.



Conclusion

- SAP ABAP (Advanced Business Application Programming) on the Business Technology Platform (BTP).
- It is a combination of SAP's programming language, ABAP, and the cloud-based platform, BTP.
- Allows developers to build, extend, and integrate applications using ABAP within a cloud environment.
- Using Eclipse as the development environment enhances the coding experience with features like syntax highlighting, code completion, and seamless integration with BTP services.
- Eclipse offers ABAP developers the opportunity to leverage cloud resources, modern development tools, and hybrid scenarios



Source :



Q&A

Let's Start

Quiz

Q-1) Which of the following several motivations offer by SAP BTP ?

- a) Customer Base
- b) Enterprise Readiness
- c) Transition to cloud
- d) All of the above



Answer: D

Quiz

Q-2) Which IDE is commonly used for developing ABAP applications on SAP BTP?

- a) Visual Studio Code
- b) NetBeans
- c) Eclipse with ABAP Development Tools (ADT)
- d) IntelliJ IDEA



Answer: C

Quiz

Q-3) What is the main advantage of using ABAP on SAP BTP?

- a) It provides a free development environment.
- b) It enables cloud-native development using ABAP.
- c) It only supports on-premises development.
- d) It doesn't require any prior programming knowledge.



Answer: B

Quiz

Q-4) What are some restrictions of the free plan of SAP Business Application Studio?

There are 2 correct answers to this question.

- a) A user can only have up to 2 dev spaces in the RUNNING state at a time.
- b) A user can only have 1 dev space in the RUNNING state at a time.
- c) A user can only have up to 2 dev spaces.
- d) The maximum size limit of a dev space is 10 GB.



Answer: B,C

Quiz

Q-5) After what period of time are process metrics no longer available in the SAP Cloud Platform cockpit?

Please choose the correct answer.

- a) 7 days
- b) 14 days
- c) 1 month
- d) 2 months



Answer: D

References

- https://learning.sap.com/learning-journey/get-started-with-abap-programming-on-sap-btp/understanding-the-basic-features-of-abap_c0e5346f-a136-4b9f-a167-903
- <https://www.sap.com/documents/2018/08/7a62516c-157d-0010-87a3-c30de2ffd8ff.html>
- <https://open.sap.com/courses/mm4h2>

Thank You...!