

# **Collaborative Database Development in SAP HANA Cloud, SAP HANA Database**

**Preparation Reader**

**SAP Data and Analytics  
Virtual Forum:**  
Accelerating Outcomes

# GET STARTED

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<https://community.sap.com/topics/hana-cloud>

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# WELCOME

Join the SAP HANA Cloud Workshop series to learn from experts and follow along live using your own SAP HANA Cloud (trial) account.

Learn in this workshop how database development in SAP HANA Cloud and SAP Business Application Studio can be done collaboratively. You will get to know basic HDI concepts, ways to develop applications and to automate their deployment as well as creating template projects that others in your organization can easily use and modify.

Here is what you need to prepare before the workshop starts to be able to follow along:

1. [Sign up](#) for the free SAP HANA Cloud trial.
2. Provision an instance of SAP HANA Cloud, SAP HANA database and make sure it is running.
3. Subscribe to the free SAP Business Application Studio trial.
4. Subscribe to the CI/CD service in BTP cockpit.
5. Create a free account on [www.github.com](https://www.github.com) to use the required sample data.

The steps needed to prepare are all covered in this reader.

If you do, however, have any issues, please ask a question in the [SAP Community](#) using the tag SAP HANA Cloud or refer to the [SAP HANA Cloud Technical Documentation](#).

# 1. SIGN UP FOR TRIAL

Please begin by registering for the SAP HANA Cloud trial.

## Basic Information about the SAP HANA Cloud trial

To create your trial instance of SAP HANA Cloud, you need to follow these steps:

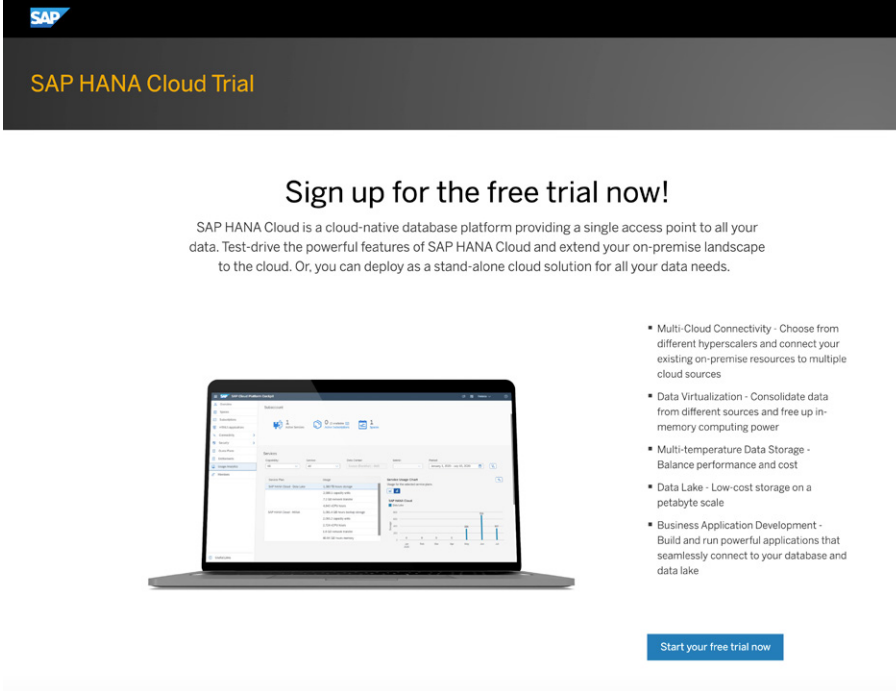
- You can use your free trial account to test the components SAP HANA Cloud, SAP HANA database and SAP HANA Cloud, data lake. In this workshop, we will focus on SAP HANA Cloud, SAP HANA database.
- If your trial account remains inactive, you will be asked to extend your trial every 30 days. If you regularly log in to your trial account, it will be automatically extended. If you do not log in for 30 days, you have to extend it manually.
- If you already use other services in SAP Business Technology Platform, those will not be affected or limited in any way by your participation in the SAP HANA Cloud Trial.
- Trial instances will be stopped every day at midnight in the time zone of the server location you selected. Each time you start working with your trial instance, you need to restart it.
- If you do not restart your instances within 60 days, they will be deleted. Your trial account, however, will continue to exist and you can easily provision an instance again, if you wish to do so.
- The configuration of your trial instance of SAP HANA Cloud is 30GB of memory, 2vCPUs, and 120GB of storage.
- The ScriptServer that enables machine learning capabilities is not available on a trial account as it requires larger instances that cannot be configured in a trial account. The ScriptServer, however, will not be needed for this workshop.

## Sign up for a new trial account

In this step, you can learn how to sign up for the free trial of SAP HANA Cloud. There are two options how to do so:

- If you do not have an SAP BTP trial account yet, follow the steps in this section.
- If you already have an SAP BTP trial account, follow the steps in the section [Add SAP HANA Cloud to existing BTP trial](#)

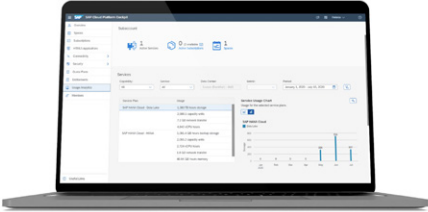
1. Click on [this link](#) to get to the sign-up page. Don't forget to come back here after you signed up. Once you received your confirmation email, you can continue with the next step here.



**SAP HANA Cloud Trial**

## Sign up for the free trial now!

SAP HANA Cloud is a cloud-native database platform providing a single access point to all your data. Test-drive the powerful features of SAP HANA Cloud and extend your on-premise landscape to the cloud. Or, you can deploy as a stand-alone cloud solution for all your data needs.



- Multi-Cloud Connectivity - Choose from different hyperscalers and connect your existing on-premise resources to multiple cloud sources
- Data Virtualization - Consolidate data from different sources and free up in-memory computing power
- Multi-temperature Data Storage - Balance performance and cost
- Data Lake - Low-cost storage on a petabyte scale
- Business Application Development - Build and run powerful applications that seamlessly connect to your database and data lake

[Start your free trial now](#)





2. Click on **Start your free trial now** and enter your sign-up information.

1 Register

2 Verify your e-mail

3 Access all resources

## Register once for full access

 Try software for free
  Read analyst reports and white papers
  SAP Community
  Join virtual events

### Tell us about yourself

Business e-mail address \*
  First name \*

Last name \*
  Company \*

Country/Region  
United States

Phone  
+1.000.000.0000

Department \*
  Relationship to SAP \*

Create password \*
  Confirm password \*

Must have at least 8 characters.

☐ I have read and understood the [Terms and Conditions of SAP.com](#).

SAP will use any of the data provided hereunder in accordance with the [Privacy Statement](#).

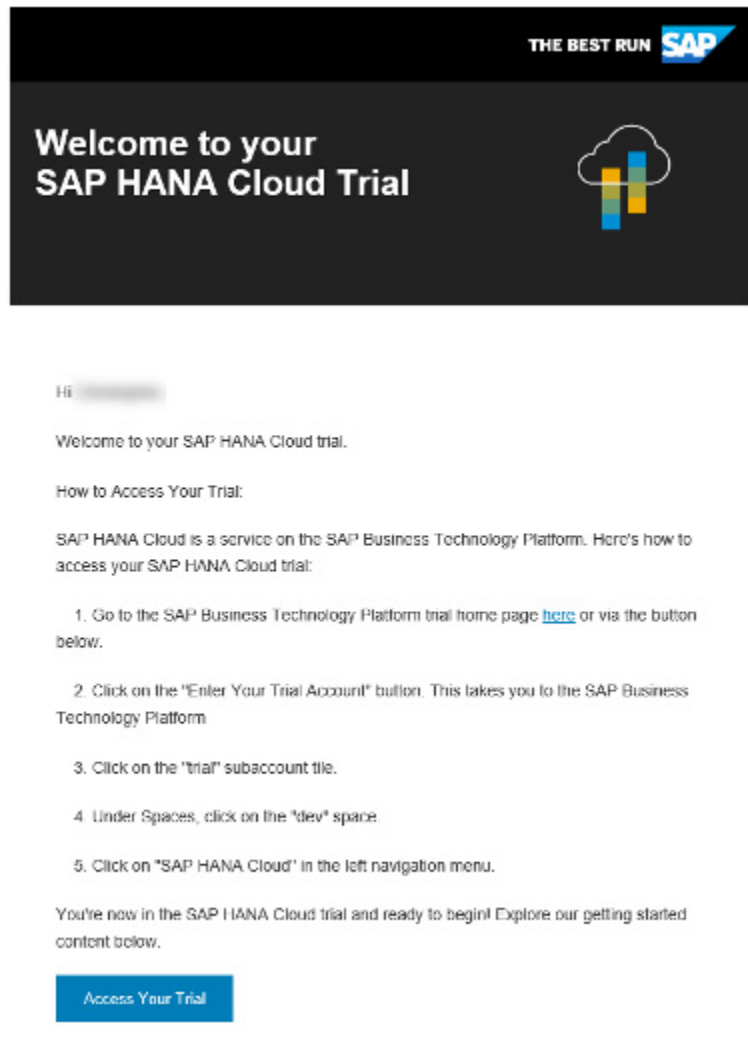
This site is protected by reCAPTCHA and the Google [Privacy Policy](#) and [Terms of Service](#) apply.

[Submit](#)

### Already registered?

[Log in](#)

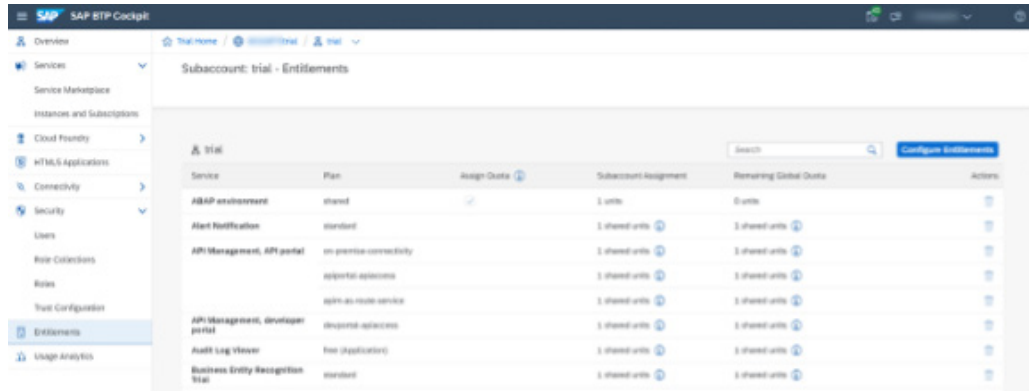
3. Once you click submit, you will be asked to verify your email address. Check your email inbox and click on the link provided.
4. You will then receive a confirmation email with a link to access your trial. Click on the button that says **Access your trial** and make sure to bookmark this page for easy access later.



You can then immediately access your trial and create the first instance of SAP HANA Cloud, SAP HANA database. Continue your preparation in the next step "[Get to know SAP BTP cockpit](#)".

## Add SAP HANA Cloud to an existing BTP trial account

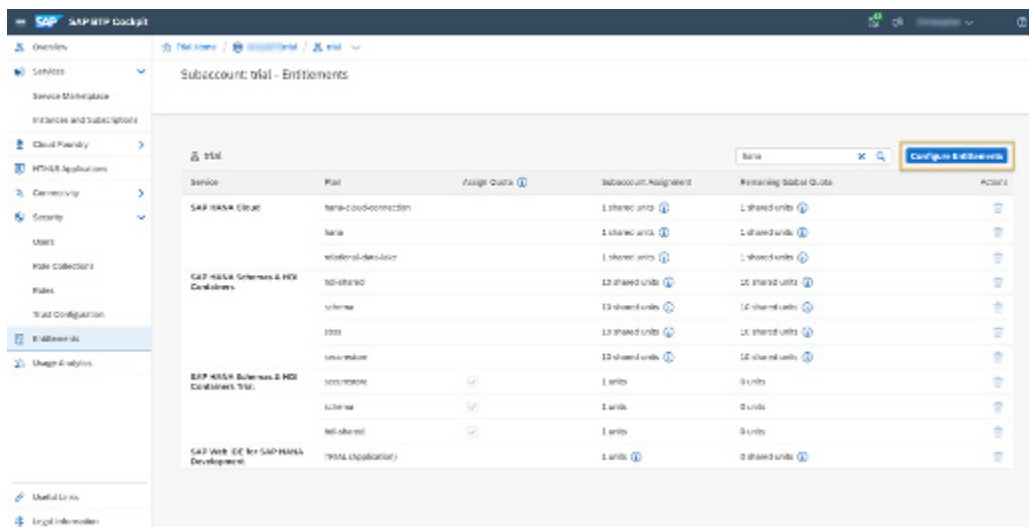
1. In the SAP BTP cockpit, click on your subaccount.
2. Then click on Entitlements on the left-hand side menu.



3. Make sure you have entitlements for the services (and service plans) listed here:
  - a. SAP HANA Cloud: hana, hana-cloud-connection, and relational-data-lake
  - b. SAP HANA Schemas & HDI Containers: hdi-shared, schema, and securestore

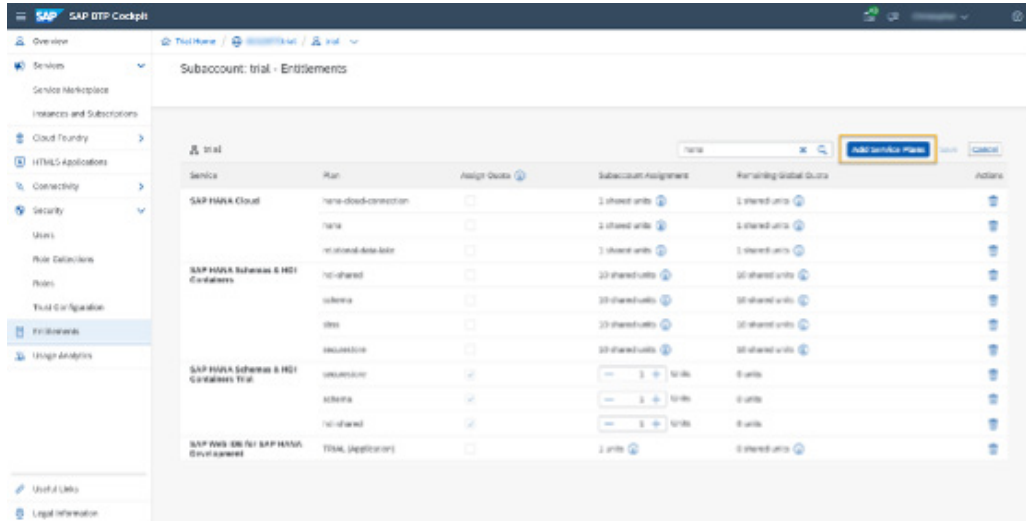
You will see two options in the list related to Schemas and HDI containers. Please make sure to select the one that does not say “(trial)”, as you can see on the screenshot below. The reason not to select the SAP HANA Schemas & HDI Containers (trial) entitlement is that it is made for a trial of SAP HANA Service, not SAP HANA Cloud.

4. If you do not have any of the entitlements above, you need to add them to your account. To do that, click on Configure Entitlements on the top right-hand corner of the screen.

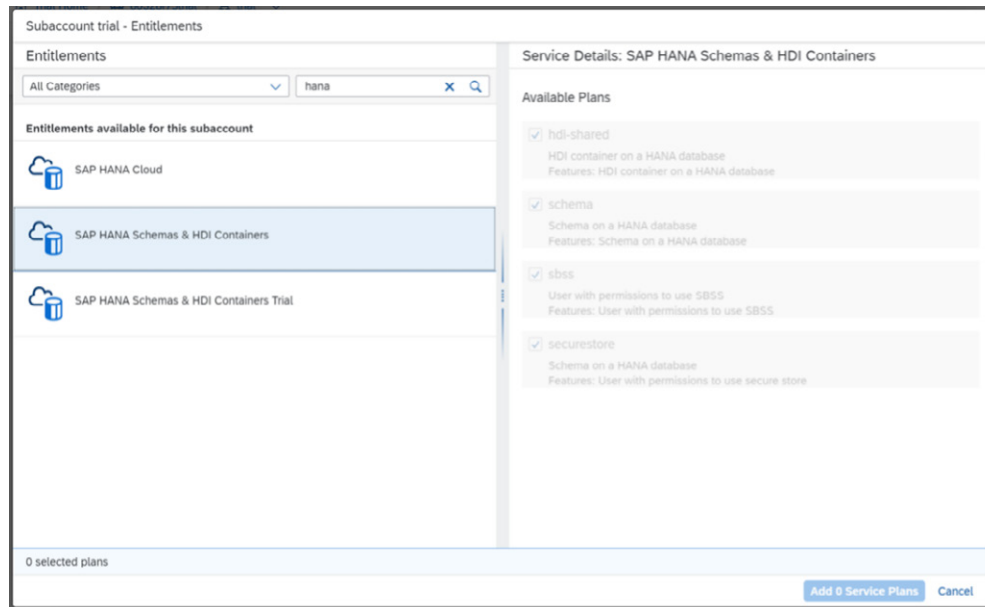




- Click on Add Service Plans in the same area of the screen



- In the pop-up that opens, type HANA in the search box to see all relevant entitlements.



- Select the missing entitlements by checking the boxes.
- Click on Add the X services, where X is the amount of services you want to add.
- On the top right-hand side of the screen, make sure to click on Save.

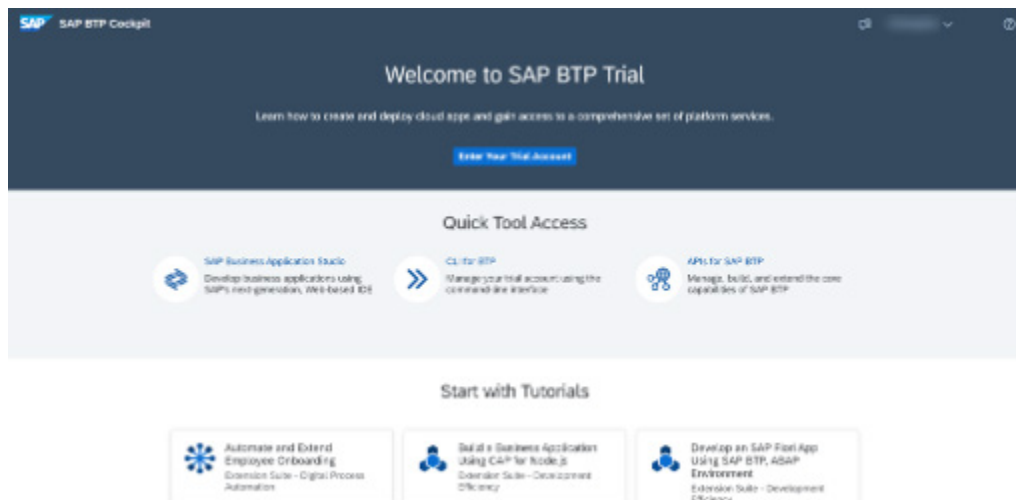
Congratulations, you have added the SAP HANA Cloud entitlement to your existing trial account on SAP BTP and can now immediately create your trial instance of SAP HANA Cloud and start your journey.



## Get to know SAP BTP cockpit

In this step, you can learn how to sign up for the free trial of SAP HANA Cloud. There are two options how to do so:

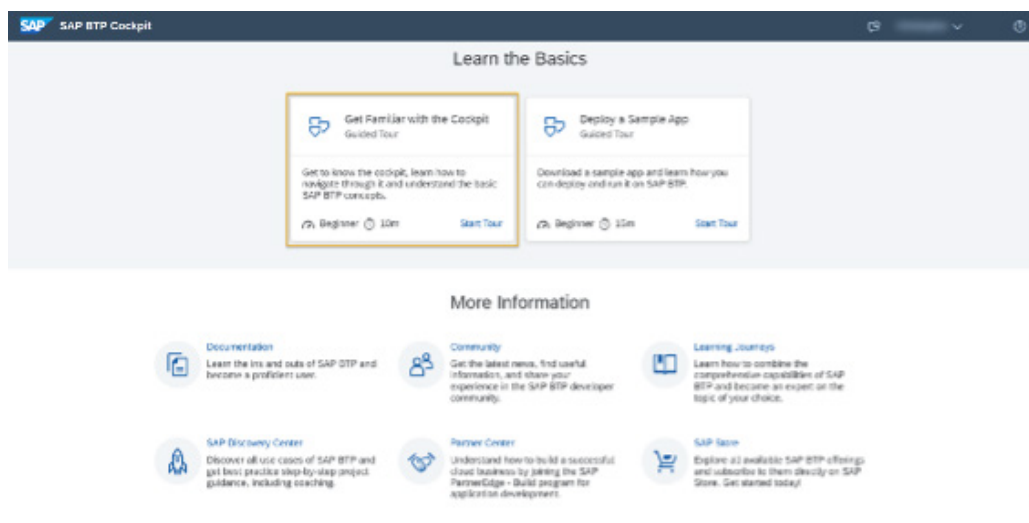
In this section, you can familiarize yourself with SAP BTP cockpit. If you already feel comfortable using it, you can skip this section and go directly to [Step 2: Provisioning an instance of SAP HANA Cloud, SAP HANA database](#).



When you first access your trial account, you will see the Trial Home Page. Note that if you use a production environment, you do not see the Trial Home Page.

This is where you can enter your account but also find helpful resources to get to know the SAP BTP cockpit in detail:

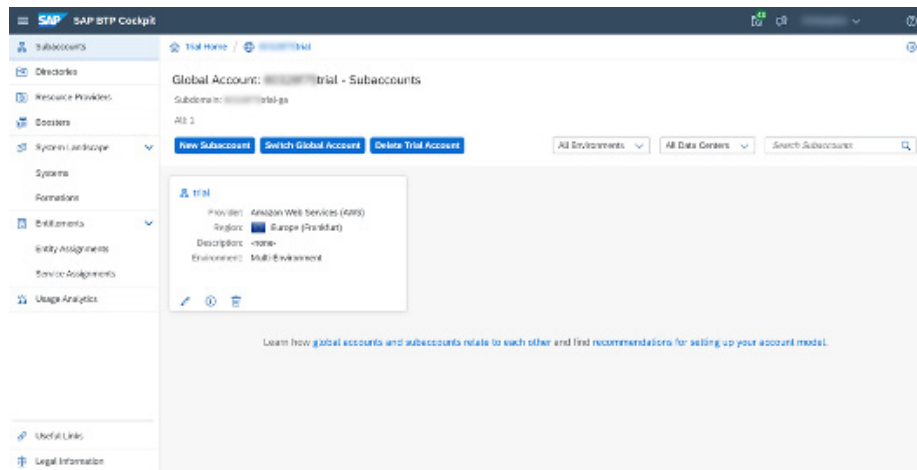
- Take the virtual tour once you start your trial for the first time.



- Use the Help button at the top right-hand corner of the screen once you are logged in.
- Consult our [documentation material here](#).

SAP BTP cockpit is a web-based interface used to manage SAP cloud applications, such as SAP HANA Cloud. This is where you can manage your SAP Business Technology Platform account and users as well as create new instances whenever necessary.

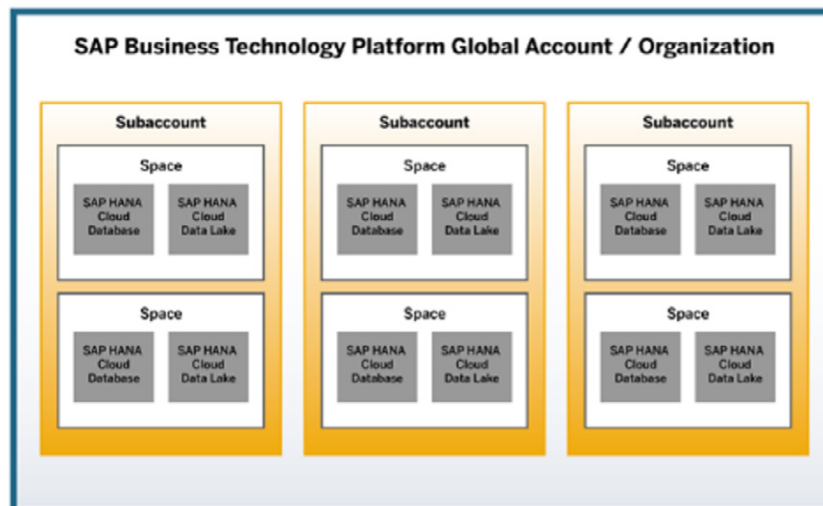
Your account on SAP Business Technology Platform is called a global account. As the administrator, you will have full control of your global account and be able to create subaccounts, spaces, and instances.



Subaccounts are a smaller part of your global account. For example: if your global account is your whole organization, your subaccounts could be either your geographical regions or specific departments, depending on what your internal structure requires.

Under subaccounts are spaces. These can be, for example, lines of business, such as product management, development, or operations. In the context of SAP HANA Cloud, this means that each space within each subaccount will have their own SAP HANA Cloud area.

Within your space, you can create and access instances of SAP HANA Cloud, HANA database, SAP ASE, SAP ASE Replication and data lake instances. In this example, the image only shows SAP HANA Cloud, SAP HANA database and data lake instances for simplicity. Nevertheless, instances of all four components could be in each of these spaces.

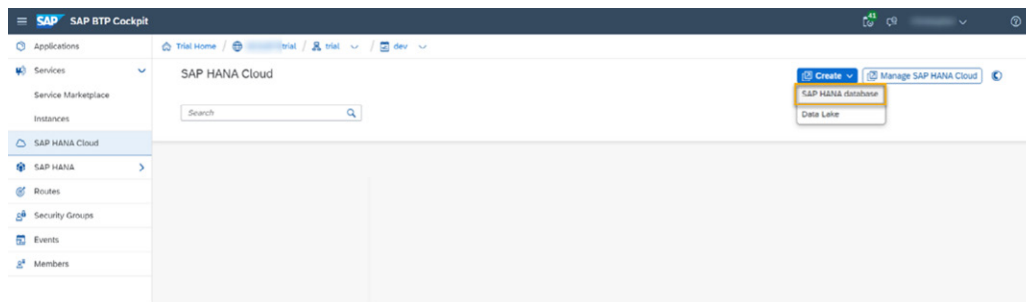


## 2. PROVISIONING

### Provisioning your instance

To create your trial instance of SAP HANA Cloud, you need to follow these steps:

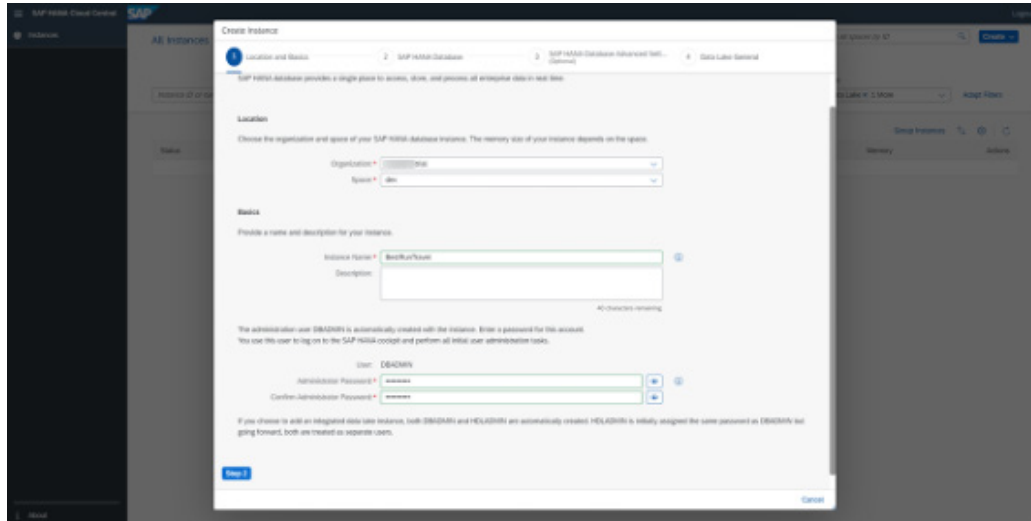
1. In SAP BTP cockpit, enter your global account, subaccount and space.
2. On the menu on left-side of the screen, click on SAP HANA Cloud.
3. Click on Create.
4. Then, click on SAP HANA database.



5. A new tab will open in SAP HANA Cloud Central, and you will see the database provisioning wizard.
6. You can see that your Organization and Space have been preselected. If you are part of multiple organizations or spaces, you can select others in the drop-down menu.
7. In the section Basics, enter a name for your instance in the field Instance Name. Note that this field does not allow any spaces in the name.
8. You can optionally insert a description of this instance on the Description field.
9. Then insert a password in the Administrator Password field and confirm it by typing it again on the Confirm Administrator Password field.

Note: Once the instance is created, this super-user password cannot be recovered in a trial account. So, make sure to remember it.

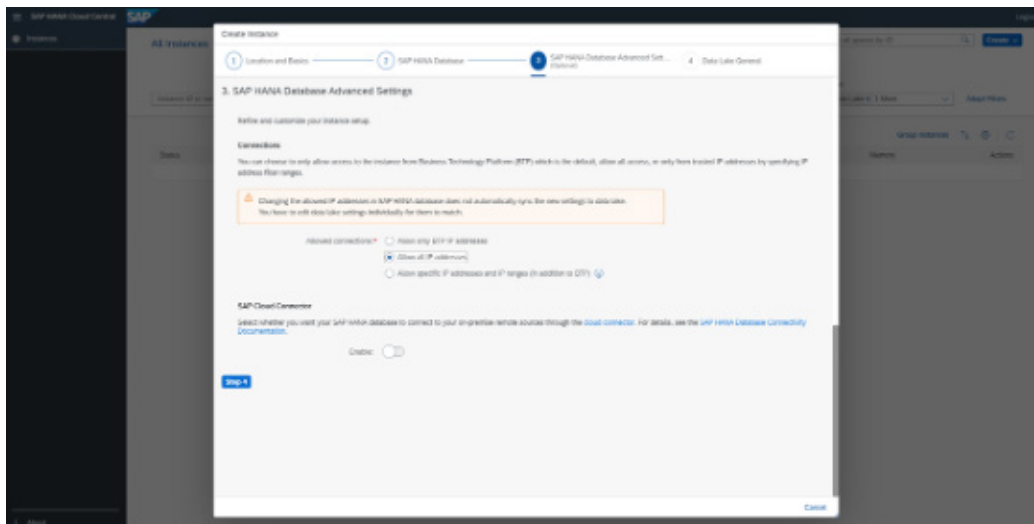
10. Now the Step 2 button will appear on the left-hand side of the wizard. Click on it to continue.



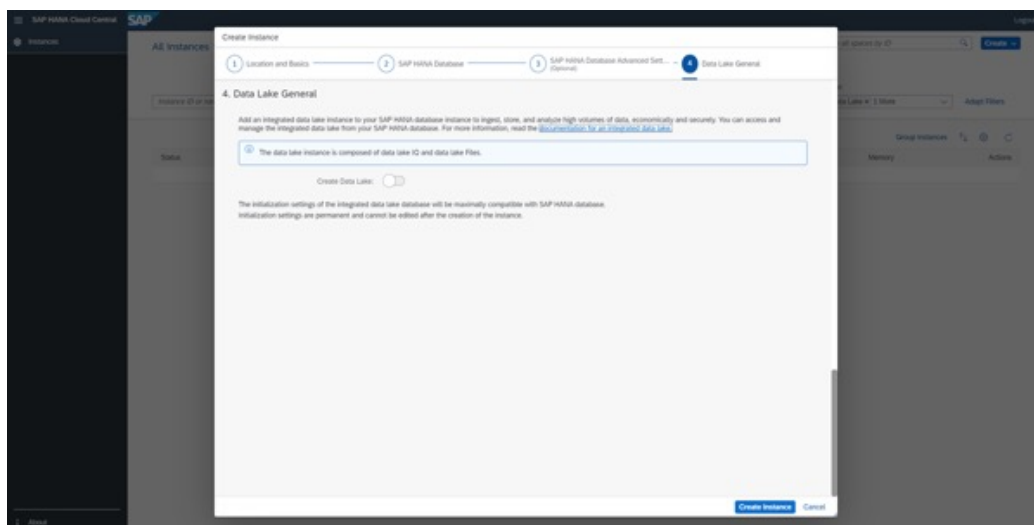
11. In Step 2 of the provisioning wizard, in a production environment, you would be able to scale your instance up or down. If you are using a trial instance, you can't change your configuration here. The preset configurations of a trial account will be enough for the purpose of this workshop.
12. Additionally, you can select in this step if you want to create a replica of your instance to increase your system availability. These **replicas** are exact duplicates of your instance that will be managed in the background and automatically synchronized. In case of issues, you can take over a replica of your instance to ensure minimal interruption. This option is not mandatory for the workshop.
13. Click on Step 3 to continue.

All configurations you specify during provisioning can be changed at a later point. So, feel free to adjust your instance after the workshop to try out all capabilities that interest you.

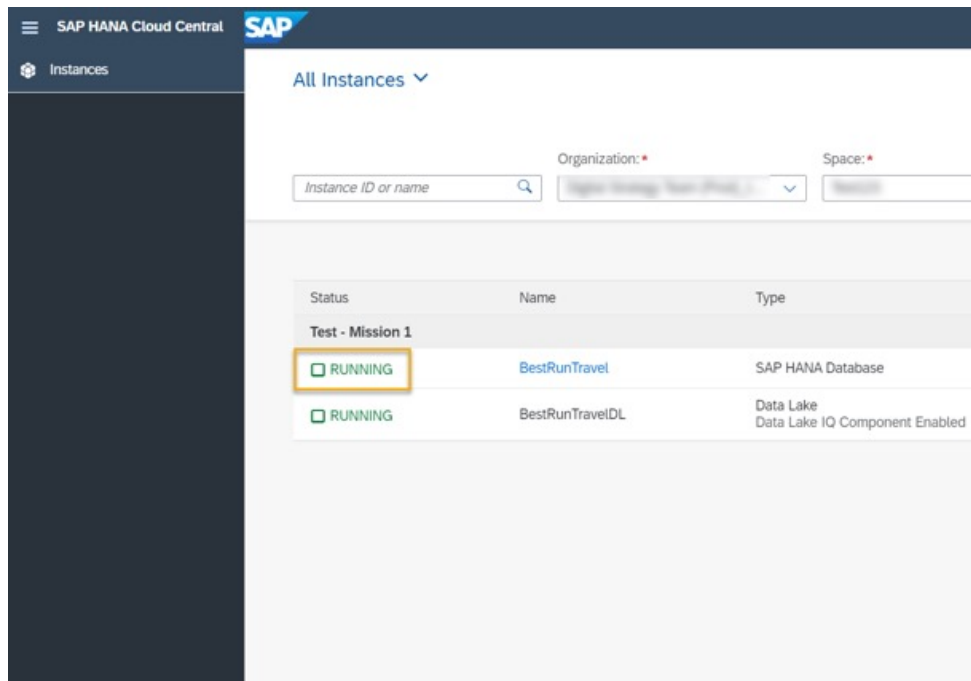
14. Now you can configure the Advanced Settings by managing the allowed connections for your SAP HANA Cloud instance. That means choosing if you allow access to your SAP HANA Cloud, SAP HANA database instance from outside of SAP BTP. You can either limit it to SAP BTP by denying all IP addresses, or allow specific applications to access it by inserting one or more specific IP addresses. Finally, you can allow all connections from all IP addresses.
15. For this workshop, choose to allow all connections.
16. Here, you can also choose to enable the SAP Cloud Connector, which makes it easier to connect this SAP HANA database instance to an SAP HANA on-premise database. **This option is not mandatory for the workshop.**
17. Next is where you would be able to choose to enable the Script Server and the JSON Document Store in a production environment. The trial instance standard size does not allow the ScriptServer to run. **This option is not mandatory for the workshop.**



18. Click on Step 4 in the bottom left corner to continue.
19. In the last step of the provisioning wizard, you have the option of also provisioning a managed data lake. If you enable the data lake in this step, this data lake will have maximum compatibility with SAP HANA and a remote connection between your SAP HANA database and the data lake will be created automatically during provisioning.
20. A data lake instance is not needed for the purpose of this workshop. So, you can skip this step by clicking on Create Instance.



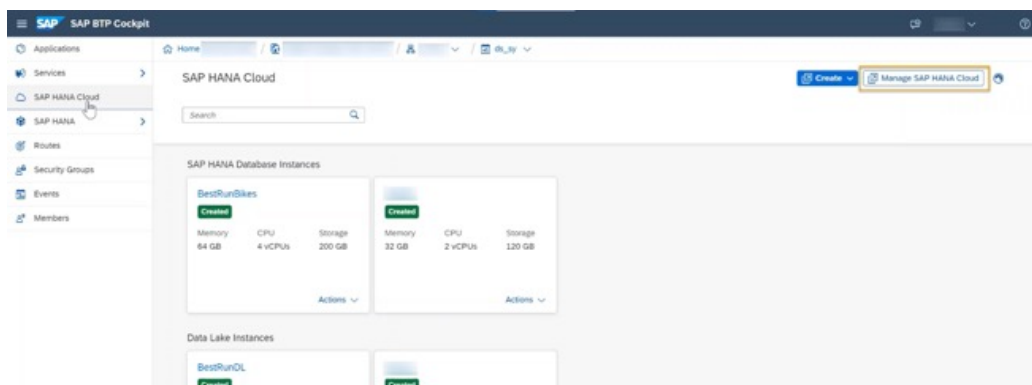
21. You are done! Your first SAP HANA Cloud, SAP HANA database instance will be created, and you can monitor its status to see when it is ready to be used.
22. Once you see the status RUNNING in SAP HANA Cloud Central, your instance is ready to use. This process usually takes a few minutes.



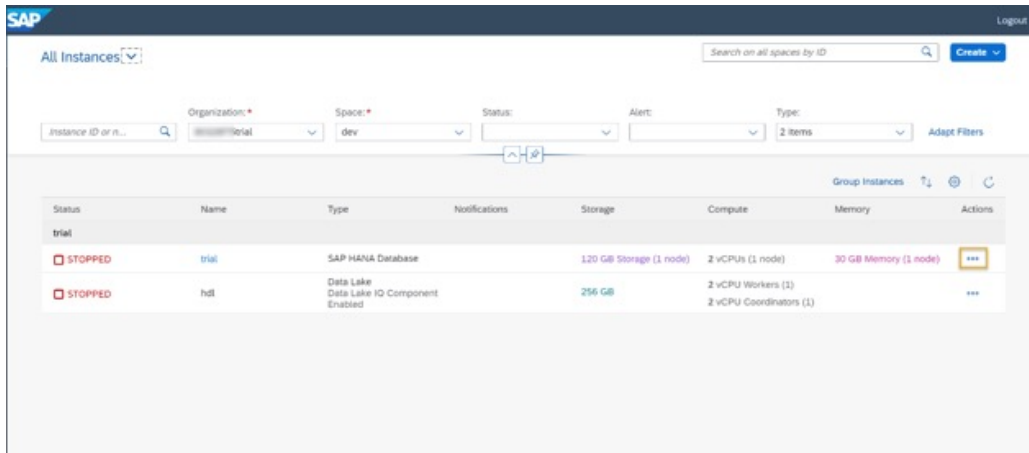
## Starting your instance

If you are using a trial account, your instances will be stopped automatically at midnight of your server region time zone. That means for each day of the workshop, you will need to restart your instance. Here's how you do that in a few clicks:

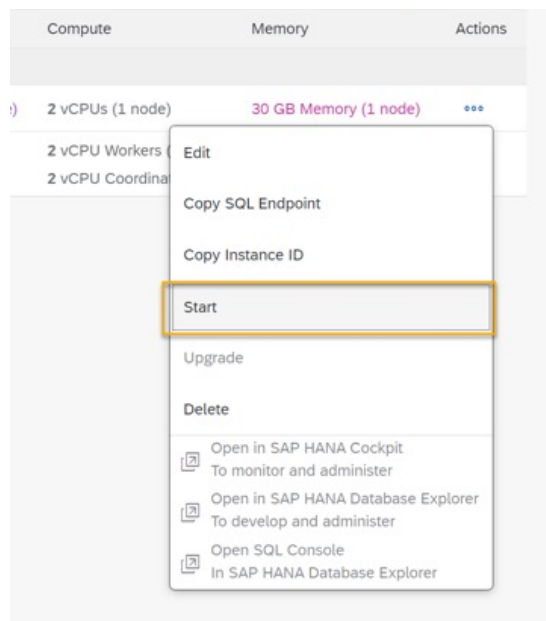
1. From SAP BTP cockpit, open your instance in SAP HANA Cloud Central by clicking on Manage SAP HANA Cloud in the SAP HANA Cloud area of your space. You can also bookmark the SAP HANA Cloud Central page for easy access.



2. In SAP HANA Cloud Central, find your instance in the list. Different filtering options can help you find your instance quickly if you have multiple ones.



3. To start an instance that has the status STOPPED, click on the three dots on the right in the column Actions.



4. Then, click on Start and your instance will be restarted. This process takes a few minutes, but you can see the status of your instance to know more. You can also click the refresh button at the top right corner to update the status of your instance.

Please perform these steps before each workshop session to make sure that your instance is running since it takes a moment to restart.

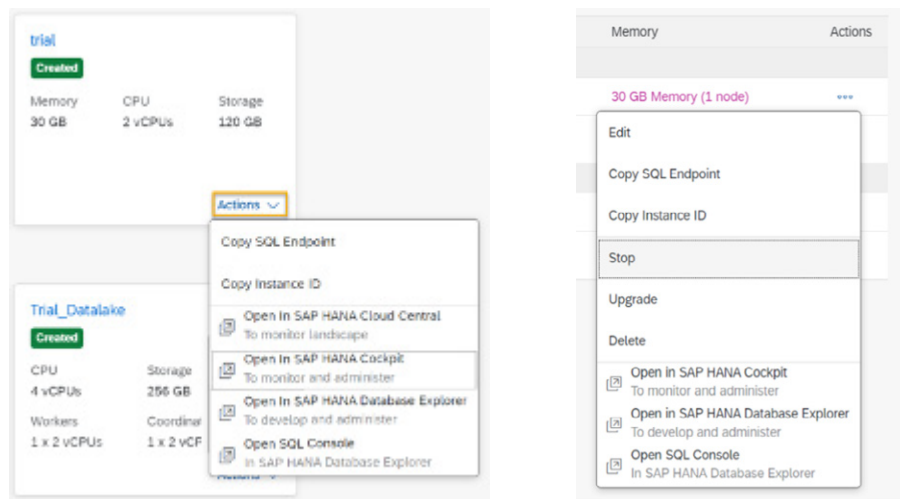


## Accessing tools to work with SAP HANA Cloud, HANA database

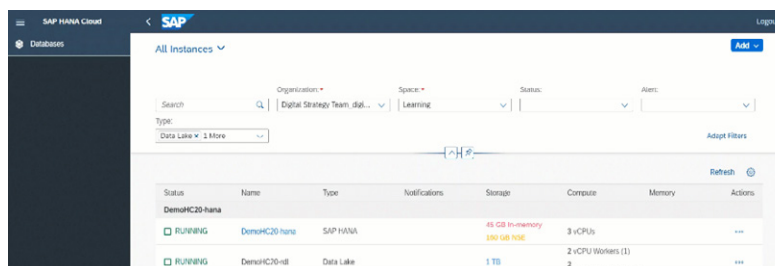
Once your instance is created, you can access all tools you need to work with your instance:

- SAP HANA Cloud Central
- SAP HANA Cockpit
- SAP HANA Database Explorer

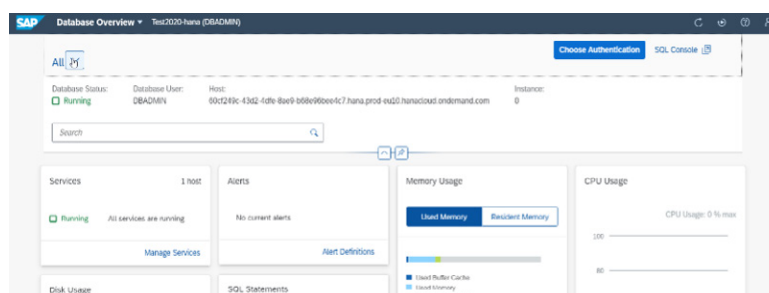
1. You can access the tools you need either from the SAP HANA Cloud area in SAP BTP cockpit by clicking on Actions in the bottom right corner of an instance tile or from SAP HANA Cloud Central, by clicking on the three dots in the line of an instance.



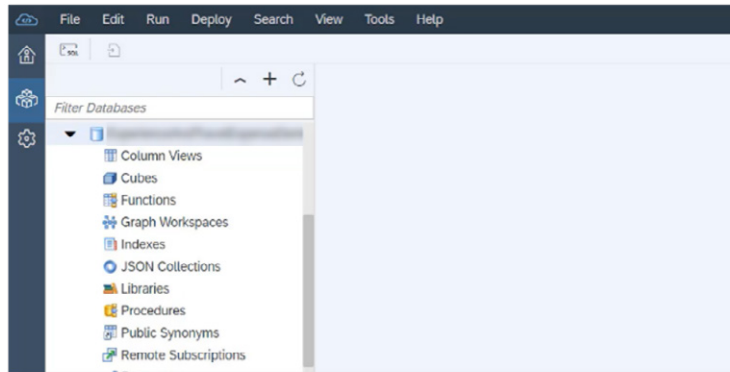
2. Open in SAP HANA Cloud Central (or clicking on Manage SAP HANA Cloud) will open the SAP HANA Cloud Central that you are already familiar with from provisioning. Here, you can restart and stop your instances.



3. Open in SAP HANA Cockpit will open the SAP HANA Cockpit in a new tab. There, you can monitor your databases, create users and assign roles as well as set up replication services.



4. Open in SAP HANA Database Explorer and Open SQL Console will open the SAP HANA Database Explorer. There, you can access your data and interact with your databases.



We recommend bookmarking each of these tools for quick and easy access.

In addition to these tools to work with SAP HANA Cloud, there are two more services you will need throughout the workshop: **SAP Business Application Studio** and **Continuous Integration & Delivery**. In the next sections, you will learn how to add these services to your trial account and how to access them.

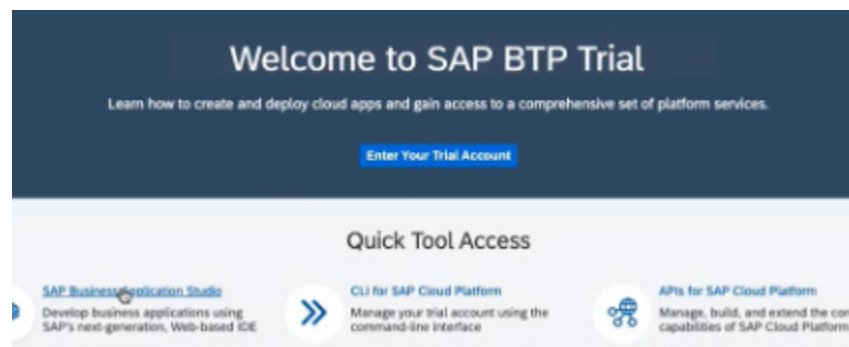
# 3. SUBSCRIBE TO SAP BUSINESS APPLICATION STUDIO

## Accessing SAP Business Application Studio

For this workshop, you will also need SAP Business Application Studio for creating database objects and developing applications. You can use it for free with your SAP HANA Cloud trial. To add a subscription to SAP Business Application Studio, you have two options.

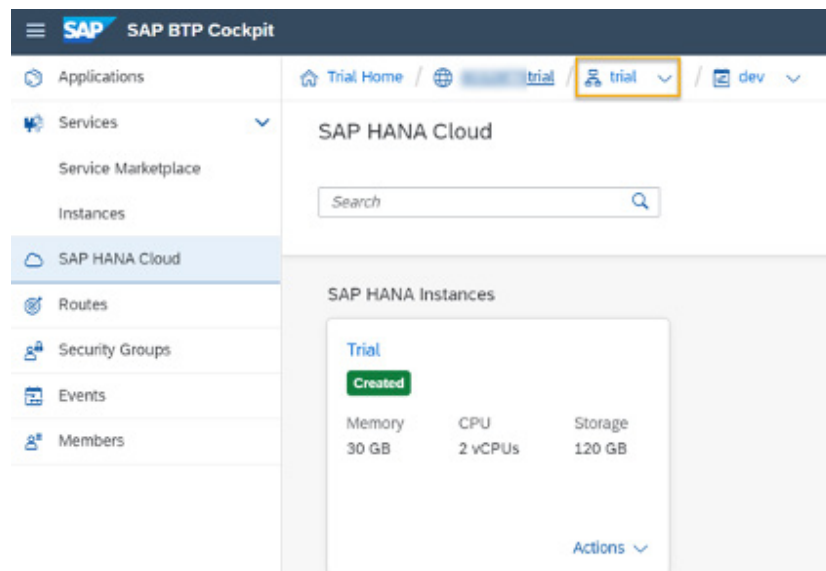
### Option 1: From the Trial Home Page (only available in SAP HANA Cloud trial)

1. Go to your trial account in SAP BTP cockpit.
2. You can find the link to Business Application Studio directly on the trial home page under quick tool access.

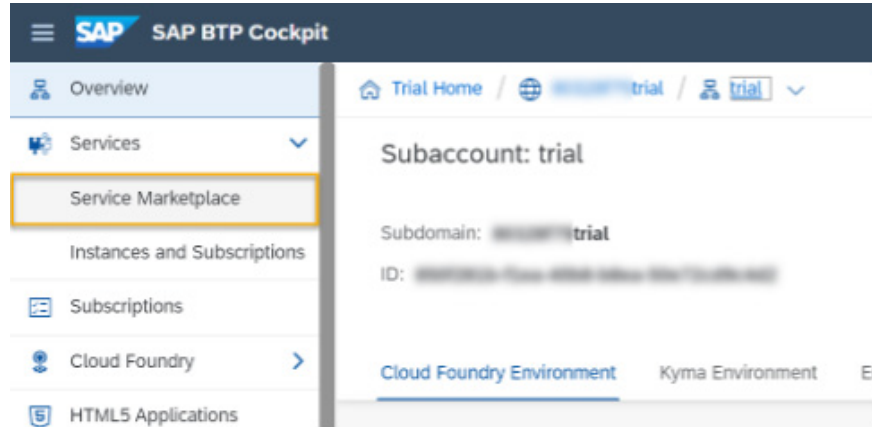


### Option 2: Add subscription manually (for production environment)

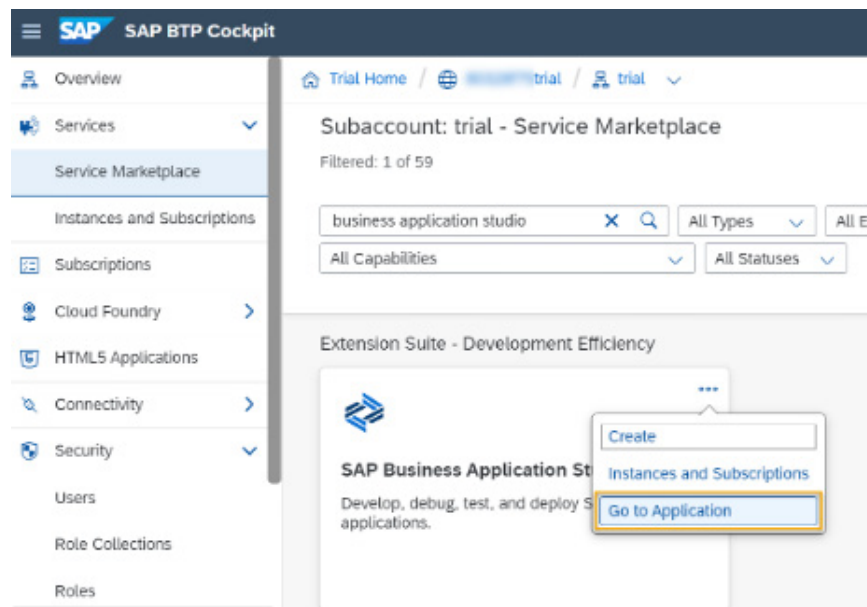
3. In SAP BTP cockpit, enter your subaccount by clicking on the name of your subaccount in the top navigation bar.



- Click on Service Marketplace on the left side of the screen.



- Scroll down or use the search bar to find SAP Business Application Studio.
- On the SAP Business Application Studio tile, click on the three dots and select Create to add a subscription. If you see the option Go to Application, you are already subscribed and clicking on it will open SAP Business Application Studio.



- Follow the steps in the wizard if you need to create the service subscription.
- If this is your first time accessing SAP Business Application Studio, click on Ok to accept the privacy statement in the window that opens.

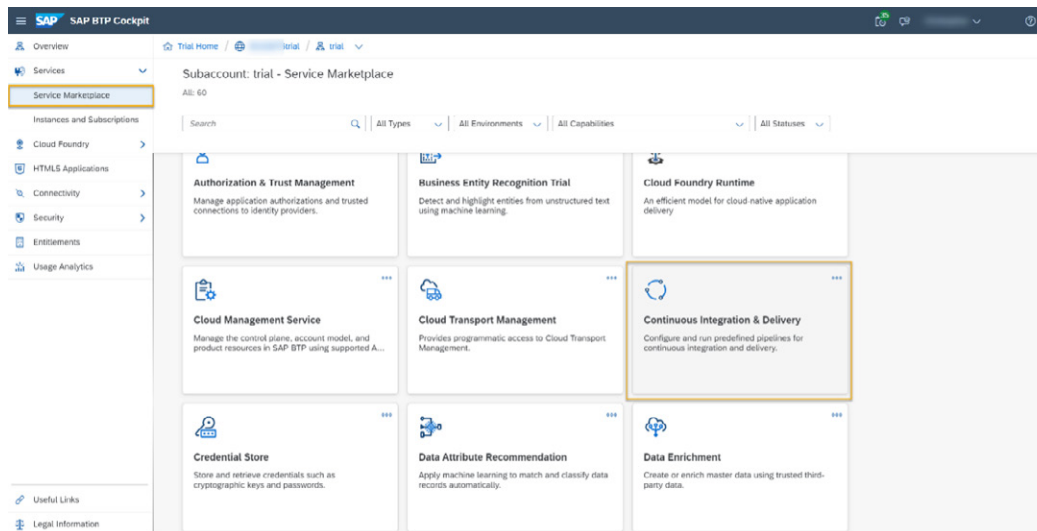
Please do not create a dev space just yet as we will need specific configurations that will be covered during the workshop. So, your preparation here is done for now. Bookmark this page so you can get to BAS quickly during the workshop.

You can stay in your subaccount area of SAP BTP cockpit as you will next need to add a subscription to another service: Continuous Integration & Delivery.

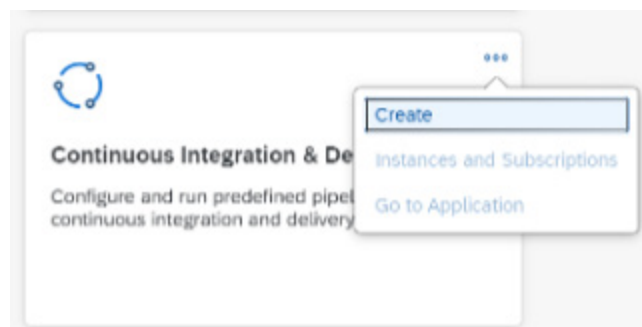
## 4. SUBSCRIBE TO THE CI/CD SERVICE

Continuous Integration & Delivery (CI/CD) allows you to automatically trigger deployment of your development projects. You can read more about CI/CD here.

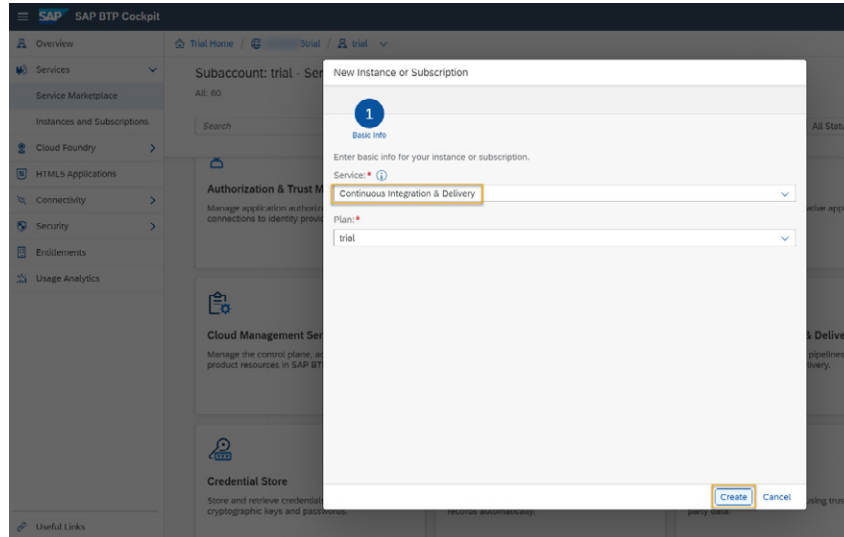
1. Navigate to your subaccount in SAP BTP cockpit.
2. Click on Service Marketplace on the left side of the screen.
3. Scroll down or use the search bar to find the Continuous Integration & Delivery tile.



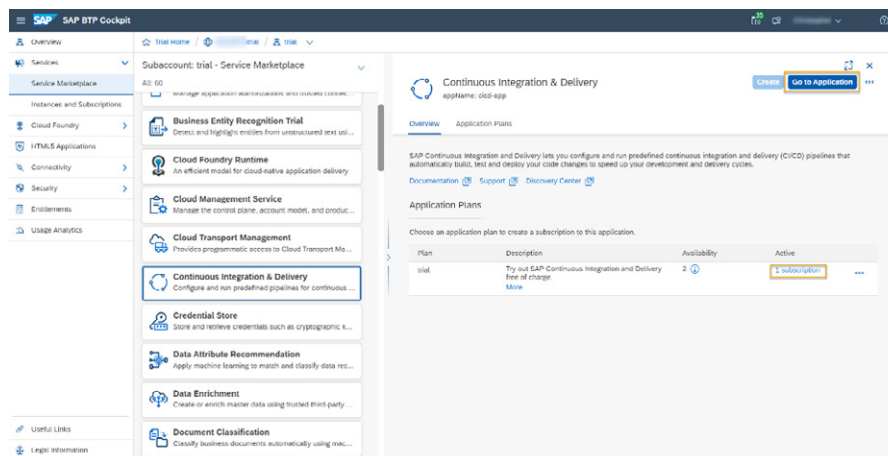
4. On the Continuous Integration & Delivery tile, click on the three dots and select Create to add a subscription.



- Click on Create in the wizard that opens



- Once you see the option Go to Application, you are successfully subscribed and clicking on it will open this service.



You are now subscribed to all services in SAP BTP cockpit that you need for this workshop. We recommend bookmarking them for easy access during the workshop sessions.

The last thing you need is an account on [github.com](https://github.com), so you can access the necessary sample data for this workshop.

## 5. CREATE A GITHUB ACCOUNT

During the workshop, we will provide you with sample data that you can download from a public github repository.

Additionally, we will show you how you can connect your development project in SAP Business Application Studio with your own github repository. For this, you will need your own github account.

Please visit [www.github.com](https://www.github.com) and create an account if you do not already have one.

Note down the email address you used for creating that github account as well as your username there as you will need this information to initialize github in the project you will build.

**And with that, your preparations for the workshop are complete!**

**Don't forget to restart your trial instance each day of the workshop.**

**We are looking forward to seeing you at the workshop!**