

Set up connection between on premise SAP (ABAP) system with SAP BTP using cloud connector

In this blog, the following point is going to be discussed: -

- We will learn how to set up connection between on premise SAP system with SAP BTP using cloud connector.

Environment pre-requisite: -

1. SAP ABAP system
2. SAP BTP
3. SAP Cloud connector

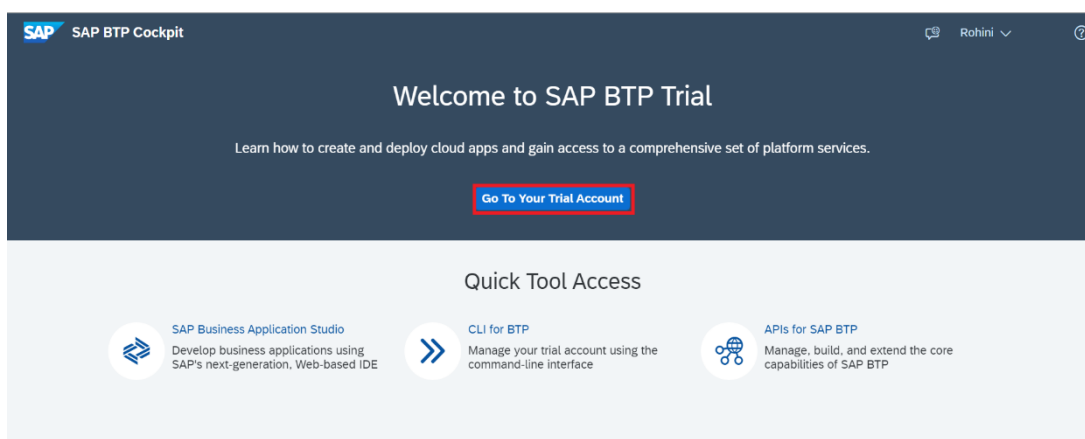
System readiness: -

1. Creation of **SAP BTP** Account
2. Installation of cloud connector
3. Configuration of **SAP BTP** account on cloud connector
4. Configuration of on premise SAP System
5. Creation of Destination for on premise SAP system on **SAP BTP**

Let's see this points step-by-step:-

➤ Creation of SAP BTP Account:

1. In your browser, open [SAP Business Technology Platform | Trial](#). Register yourself on BTP.
2. Navigate to the trial global account by clicking **Enter Your Trial Account**.



3. If this is your first time accessing your trial account, then you need to configure your account by choosing a region. Please select US East(VA) as a region. Your profile will

be set up automatically. Wait till your account is set up and ready to go. Your global account, subaccount, organization, and your space are launched. This may take a couple of minutes.

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

4. From your global account page, choose boosters.

SAP

SAP BTP Cockpit

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Rohini

Account Explorer

Resource Providers

Boosters

System Landscape

Entitlements

Usage Analytics

Trial Home

b91f66a9trial

Global Account: b91f66a9trial - Account Explorer

Create

Switch Global Account

All: 0 directories, 1 subaccounts | Subdomain: b91f66a9trial-ga

Search

All Regions

Directories and Subaccounts

Subaccounts (1)

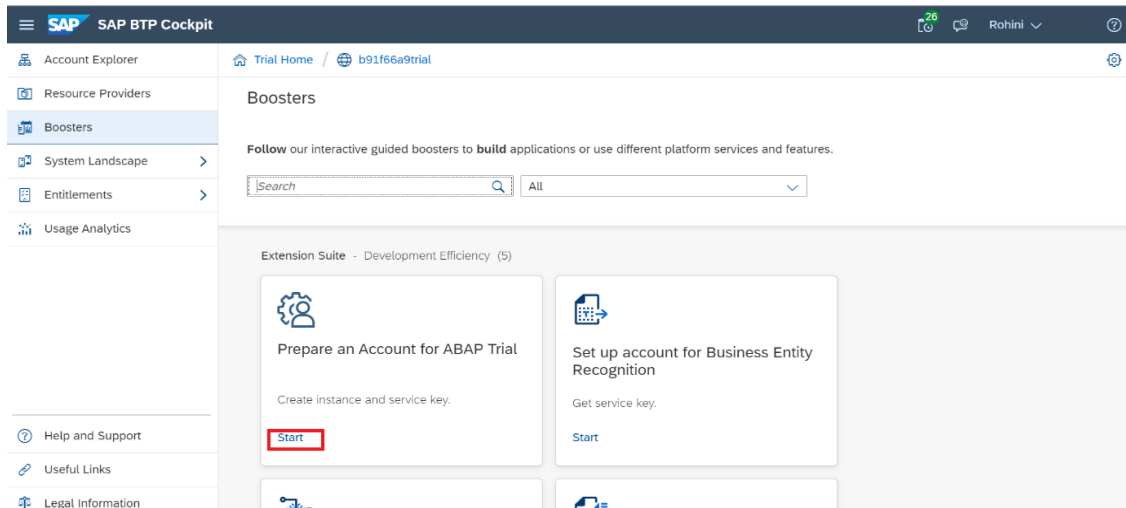
Name	Environment	Provider	Region	Changed On
trial	Multi-Environment	Amazon Web Services (AWS)	US East (VA)	14 Dec 2021, 11:5

Help and Support

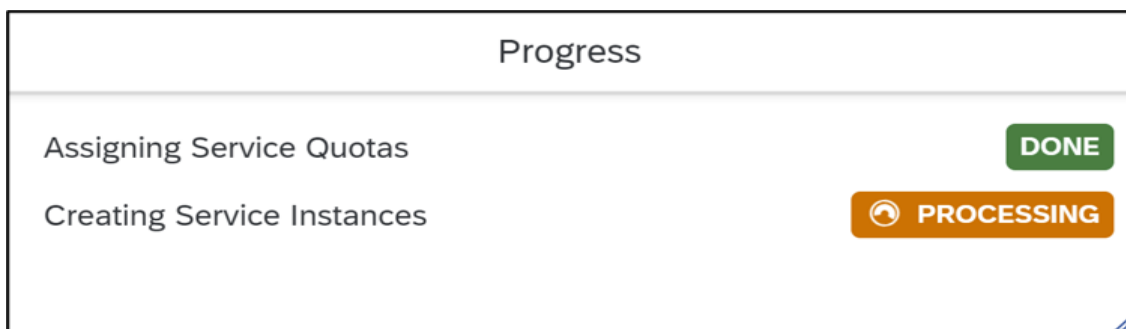
Useful Links

Legal Information

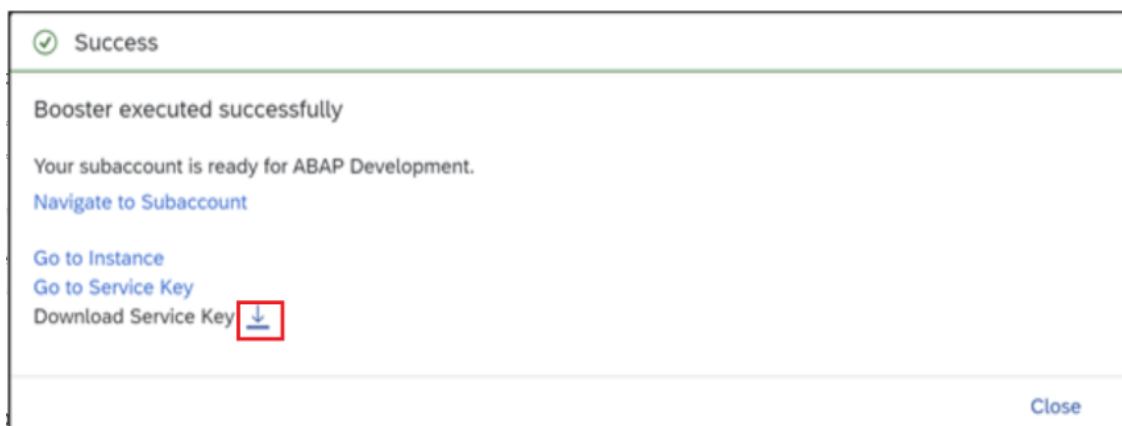
5. In search tab, search for **Prepare an Account for ABAP Trial** tile and click **Start** to start your booster.



6. 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.



7. The booster is now executed successfully. Download service key for future use.



➤ Installation of cloud connector:

1. Download the msi installer from the link <https://tools.hana.ondemand.com/#cloud>
2. Click on cloud.

HOME	ABAP	BW	CLOUD	CLOUD INTEGRATION	HANA	IDM	ML FOUNDATION	MOBILE	SAPUI5
Mac OS X (x64)					2.24.0			5.5 MB	btp-cli-darwin-amd64-2.24.0.tar.gz (sha1)
Windows (x64)					2.24.0			5.7 MB	btp-cli-windows-amd64-2.24.0.tar.gz (sha1)

Cloud Connector

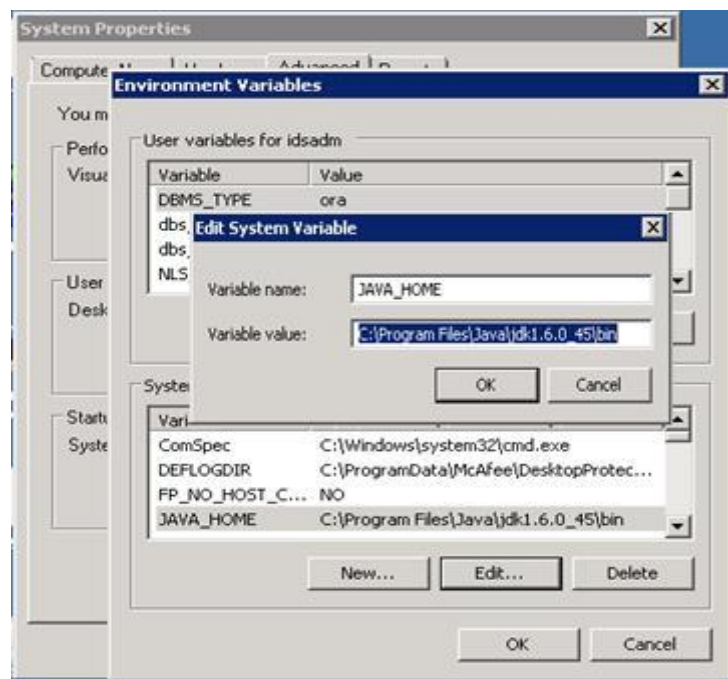
The Cloud Connector is an optional on-premise component that is needed to integrate on-demand applications with customer backend services and is the counterpart of SAP Connectivity service.
For more information, see the Cloud Connector [documentation](#).

Note: The Portable archives for Cloud Connector are meant for non-productive scenarios only. They can be used even if you don't have administrator permissions on the machine, on which you like to use the Cloud Connector. However, those variants do not support upgrades from previous versions.

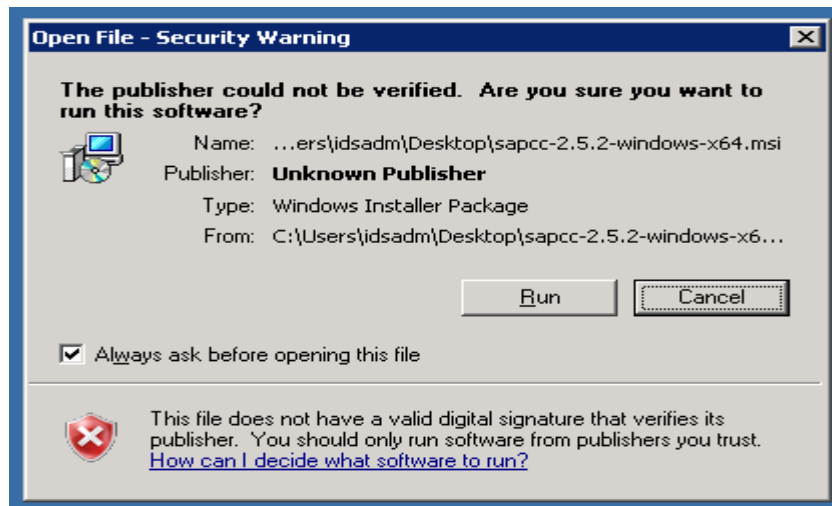
Available Cloud Connectors

Operating System	Architecture	Version	File Size	Download
Linux	ppc64le	2.14.2	73.5 MB	sapcc-2.14.2-linux-ppc64le.zip (sha1)
Linux	x86_64	2.14.2	71.9 MB	sapcc-2.14.2-linux-x64.zip (sha1)
Linux (Portable)	ppc64le	2.14.2	76.6 MB	sapcc-2.14.2-linux-ppc64le.tar.gz (sha1)
Linux (Portable)	x86_64	2.14.2	74.3 MB	sapcc-2.14.2-linux-x64.tar.gz (sha1)
Mac OS X (Portable)	x86_64	2.14.2	74.2 MB	sapcc-2.14.2-macosx-x64.tar.gz (sha1)
Windows	x86_64	2.14.2	75.8 MB	sapcc-2.14.2-windows-x64.msi (sha1)
Windows (Portable)	x86_64	2.14.2	73.6 MB	sapcc-2.14.2-windows-x64.zip (sha1)

3. Create Environment Variable JAVA_HOME and update the directory path.
Go to Control panel->environment variable and add JAVA_HOME variable.



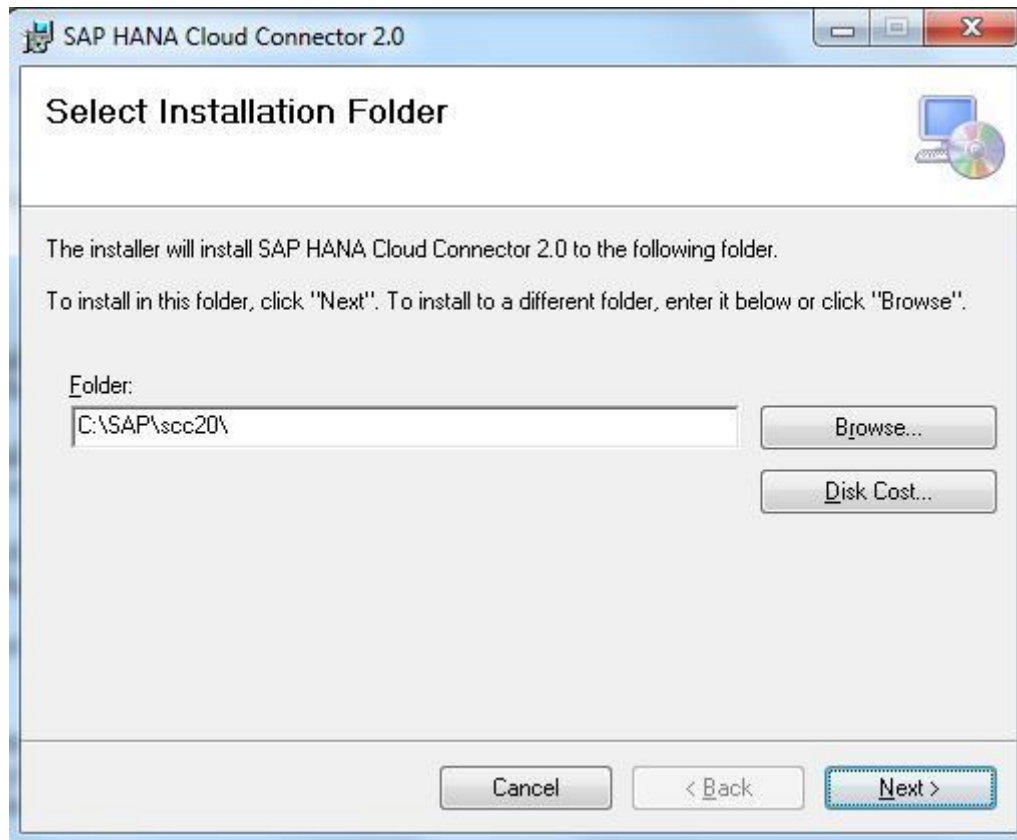
4. After downloading double click on <sapcc-<version>-windows-x64.msi> installer file and run the software.



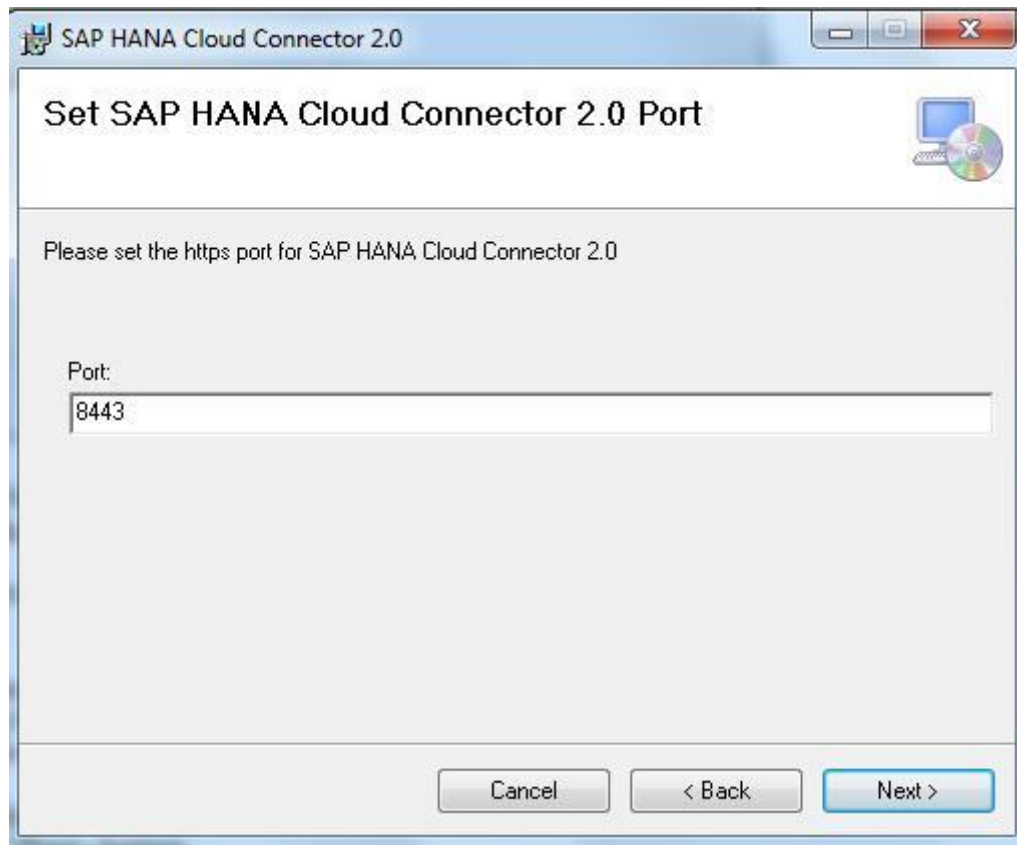
5. Afterwards it will be welcome by the installer.



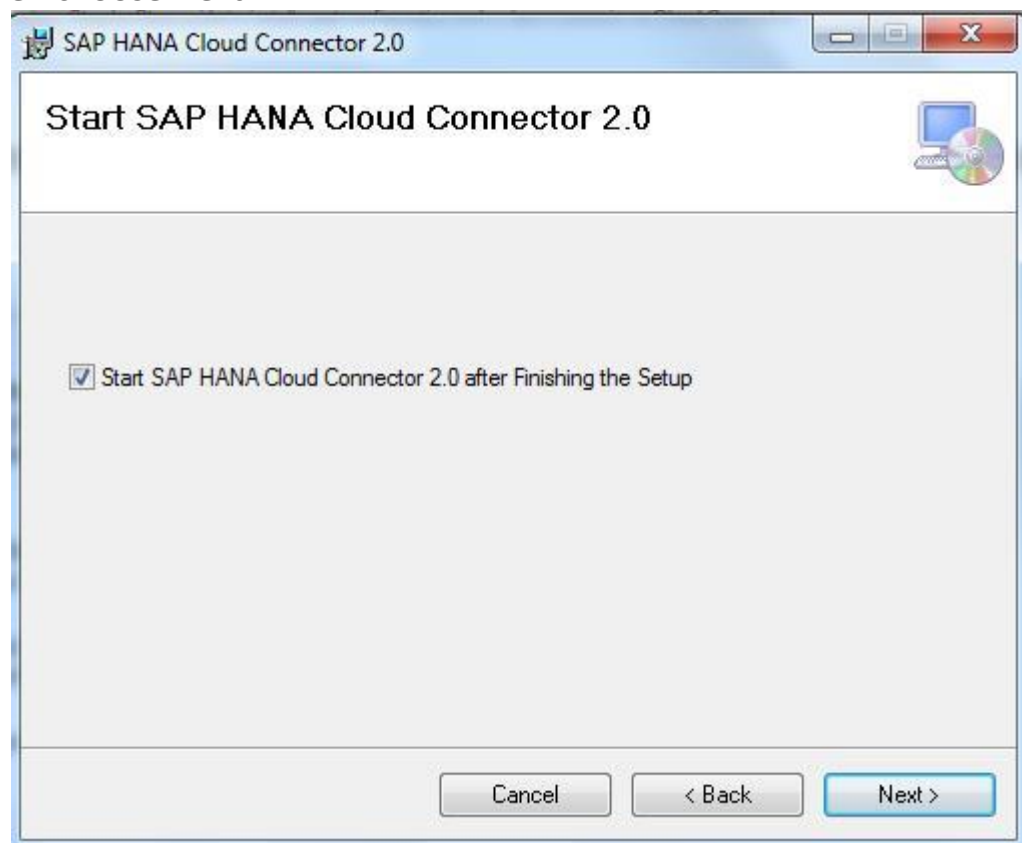
6. Navigate to the installation directory for the SAP HANA Cloud connector and Choose next.



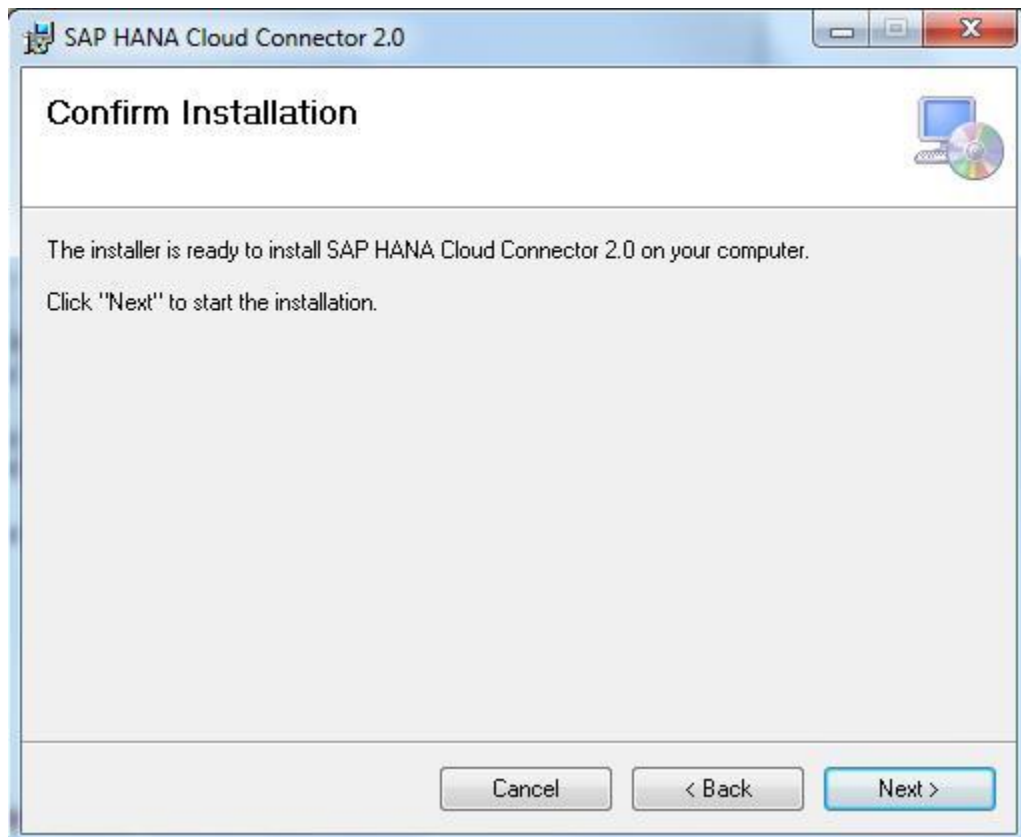
7. Port can be chosen on which the administration UI is reachable. Either leave the default 8443 or choose a different port if needed. Then choose Next.



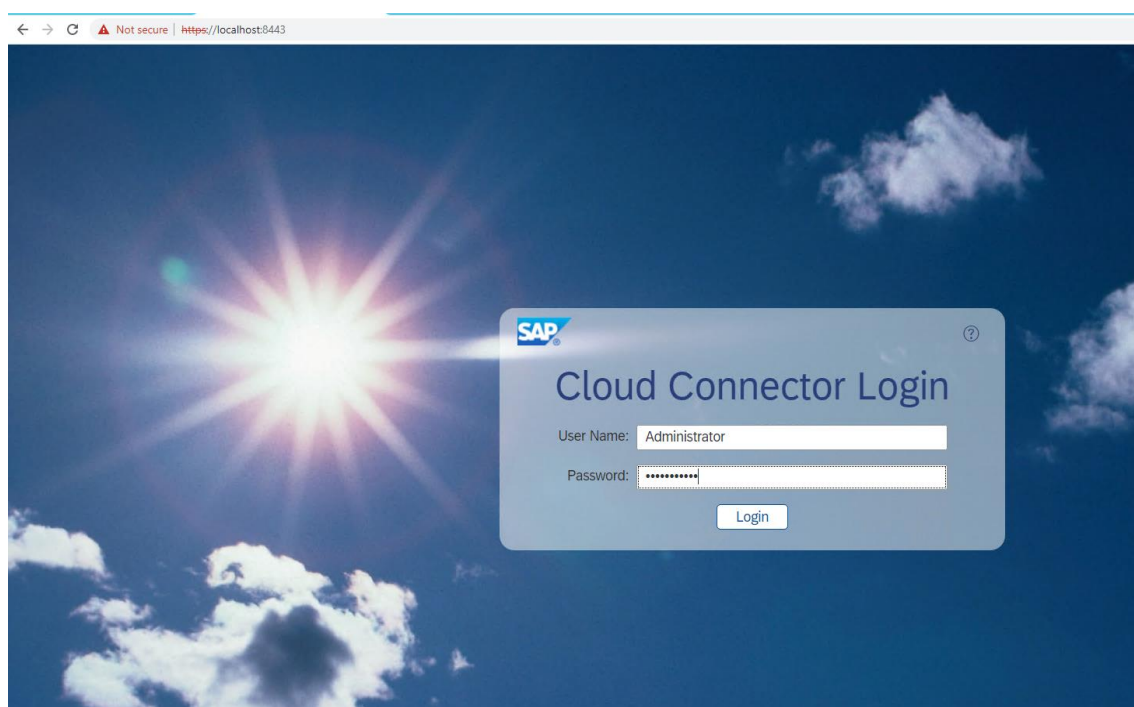
8. On this step, decide whether the Cloud connector should be started immediately after finishing the setup. If this is not required now, remove the check from the checkbox. Then choose Next.



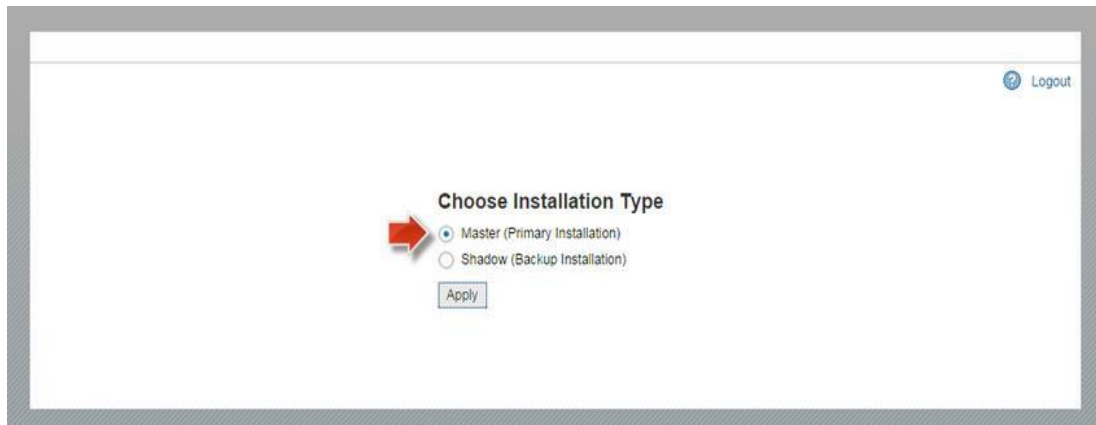
9. After all installation options have been fulfilled, to start the install, press again the Next button.



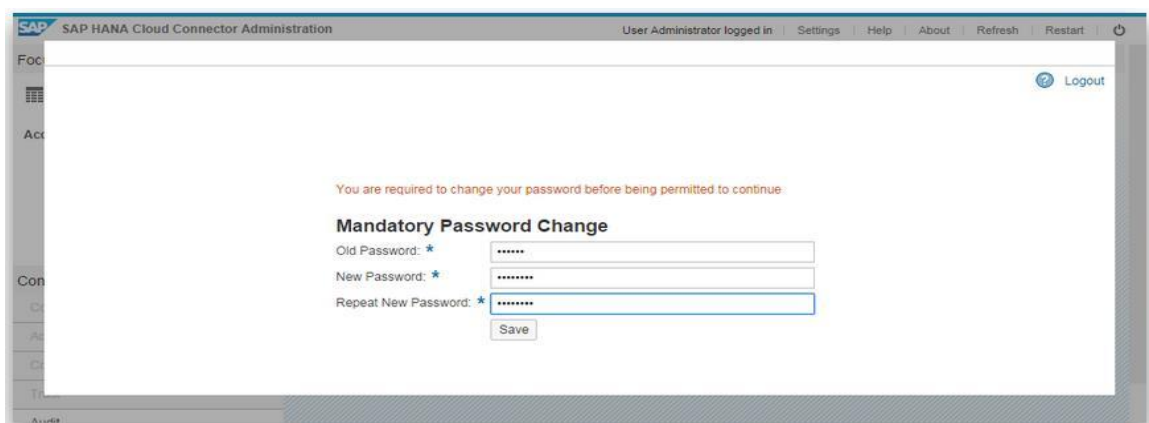
10. After installation Logon to the cloud connector administration UI by invoking the URL <https://localhost:8443> in a Web browser. The cloud connector logon screen then is shown in the browser. As user and password, use the pre-defined user Administrator and password manage.



11.As first step, select Master as the installation type.



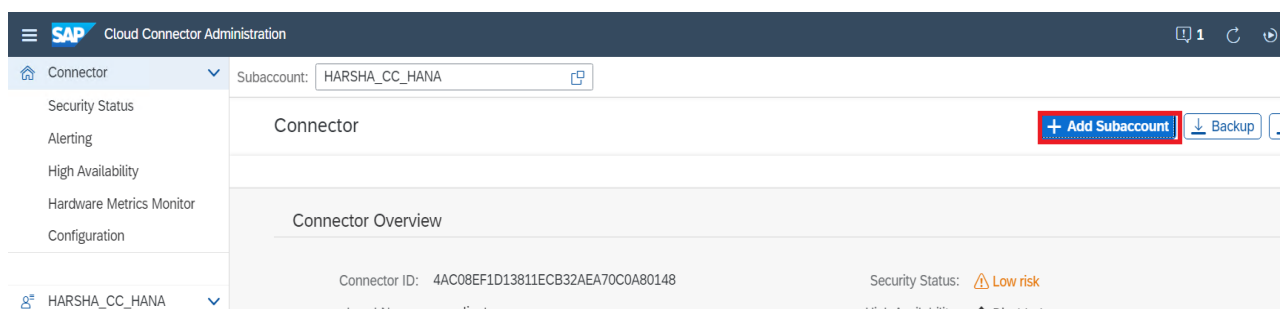
12.After the first login, change the initial password.



13.You have successfully login to the cloud connector.

➤ Configuration of SAP BTP account on cloud connector:

1. On the Connector Overview Page, click Add Subaccount to add your SAP BTP trial account.



2. On the Define subaccount page, you can directly start entering the details of your SAP BTP trial account.

Cloud Connector Administration

Administrator

Connector

- Security Status
- Alerting
- High Availability
- Hardware Metrics Monitor
- Configuration

Define Subaccount

Save

Cloud Connector is not configured and remains inoperative unless you provide the following settings

First Subaccount

*Region:

*Subaccount:

Display Name:

*Subaccount User:

*Password:

Location ID:

Description:

HTTPS Proxy







Host:

Port:

User:

Pas...

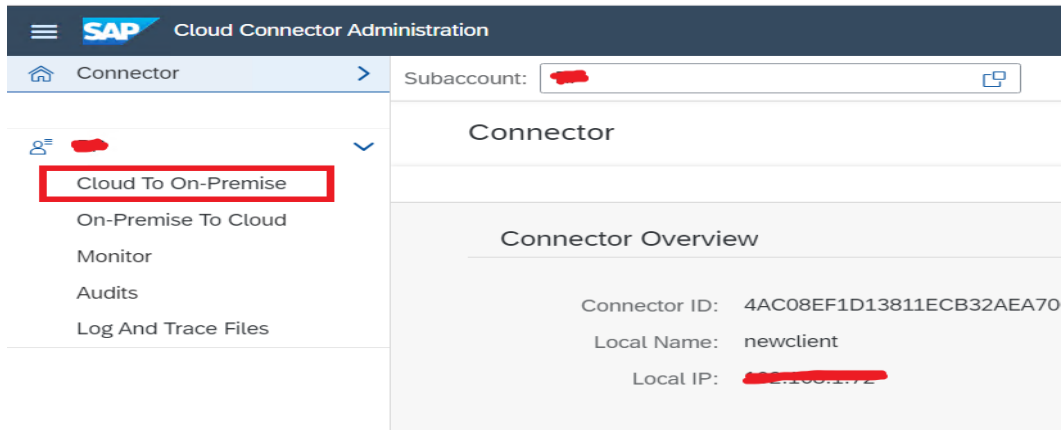
3. Enter the all required information and click on save.
4. You have connected your trial subaccount and can now see it in the subaccount dashboard. The status is still yellow, as backend access has not been configured yet.

Status	Subaccount	Display Name	Location ID	Region	Actions
				US East (VA) - AWS	  

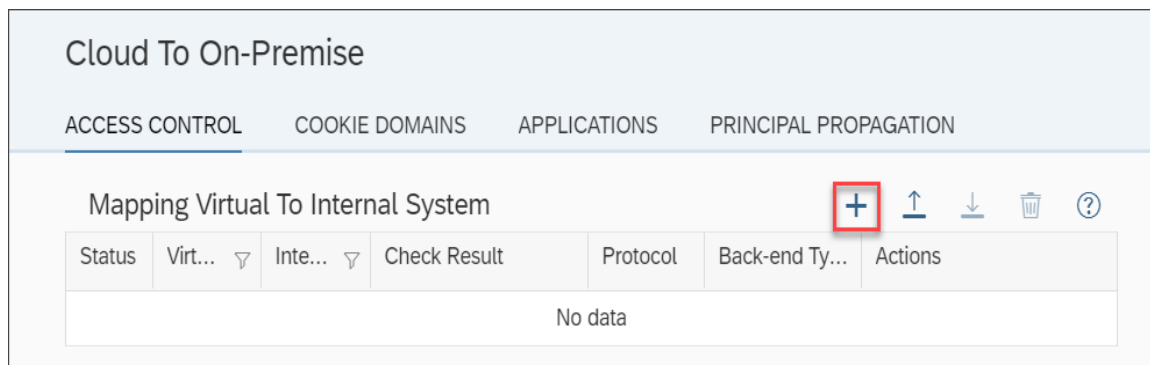
You have successfully configure your SAP BTP account to cloud connector.

➤ Configuration of on premise SAP System to cloud connector:

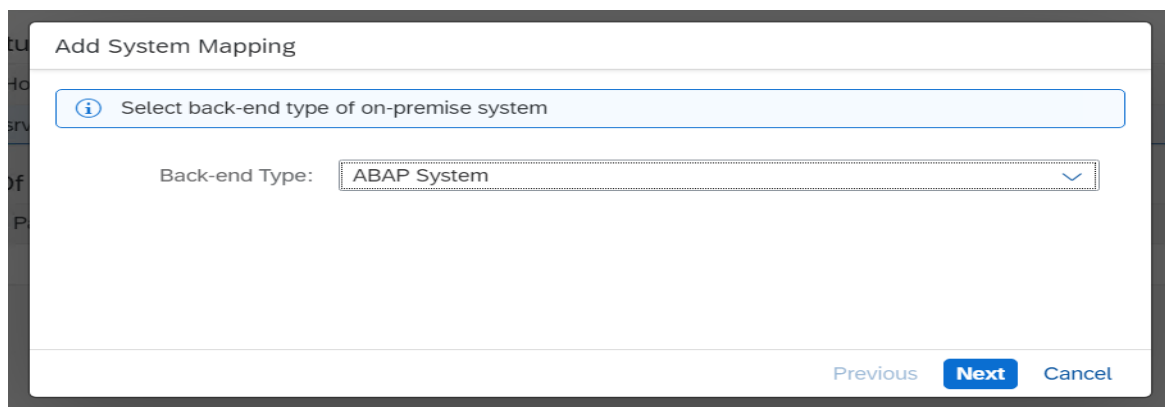
1. You can see that the newly connected subaccount is already selected. Click Cloud to On-Premise in the menu on the left side of the screen.



2. Click the plus icon to add your on-premise system.



3. Keep the default ABAP System and click Next.



4. Select HTTPS as protocol for communication with yours on premise system and click Next.

The screenshot shows the 'Add System Mapping' dialog box. At the top, there is a title bar 'Add System Mapping'. Below it, a light blue box contains an information icon and the text 'Select protocol for communication with on-premise system'. Underneath, the label 'Protocol:' is followed by a dropdown menu showing 'HTTPS'. At the bottom right, there are three buttons: 'Previous', 'Next' (highlighted in blue), and 'Cancel'.

5. Enter the internal host name of your SAP S/4HANA system and the internal port. You can find out internal host and internal port of your SAP S/4HANA system in SICF tcode.

The screenshot shows the 'Add System Mapping' dialog box. At the top, there is a title bar 'Add System Mapping'. Below it, a light blue box contains an information icon and the text 'Enter internal (on-premise) host and port'. Underneath, there are two input fields: 'Internal Host:*' and 'Internal Port:*'. At the bottom right, there are three buttons: 'Previous', 'Next' (highlighted in blue), and 'Cancel'.

6. Enter the virtual host and virtual port (You can choose any virtual host and virtual port here or you can give virtual host and port same as the internal host and port).

The screenshot shows the 'Add System Mapping' dialog box. At the top, there is a title bar 'Add System Mapping'. Below it, a light blue box contains an information icon and the text 'It is recommended to use a virtual (cloud-side) name that is different from internal name'. Underneath, there are two input fields: 'Virtual Host:*' and 'Virtual Port:*'. At the bottom right, there are three buttons: 'Previous', 'Next' (highlighted in blue), and 'Cancel'.

7. In next screen, click next.

Add System Mapping

i Select principal type

Principal Type:

Previous **Next** Cancel

8. Click next.

Add System Mapping

i Select host for request header field HOST

Host In Request Header:

Previous **Next** Cancel

9. If you want, add description and click next.

10. In next screen check the Check Internal Host checkbox and click finish.

Add System Mapping

i Summary

Protocol: HTTPS (None)

Internal: ~~shandev.miclouds.com:8015~~

Virtual: ~~shandev.miclouds.com:8015~~

Check Internal Host: ☒

Previous **Finish** Cancel

11. You now see a new entry in the mappings table. The icon in the Check Result column should be green, but the status is still grey, as no accessible resources have been defined yet.

Mapping Virtual To Internal System (2)						
Status	Virtual Host	Internal Host	Check Result	Protocol	Back-end Type	Actions
	s4hanasrv.nrcclouds.com:1515	s4hanasrv.nrcclouds.com:1515	Reachable	HTTPS	SAP HANA	

12. To add resource, click on plus icon in the resource table.

Resources Of s4hanasrv.nrcclouds.com:1515 (0)			
Status	URL Path	Access Policy	Actions
No data			

13. Add the URL path as **/sap/** and choose the radio button **Path and All Sub-Paths**. Click on save.

Add Resource

URL Path: *

/sap/

Active:

☒

WebSocket:

☐

Access Policy:

☐ Path Only (Sub-Paths Are Excluded)
 ☒ Path And All Sub-Paths

Description:

Save

Cancel

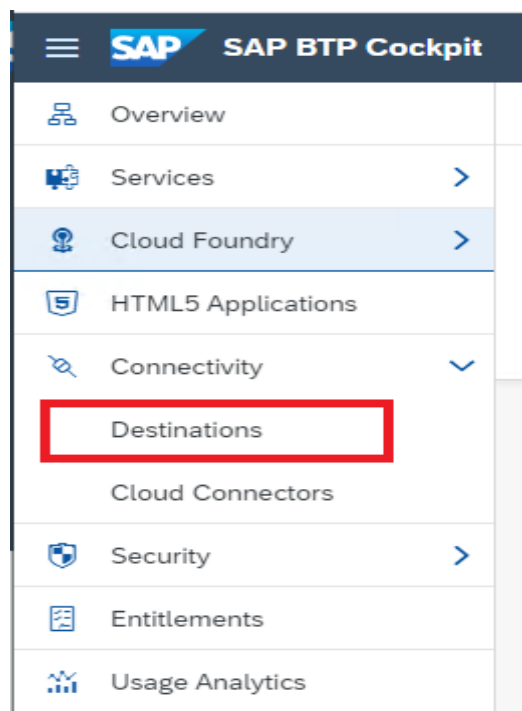
14. You have successfully add resource to resource table.

Resources Of s4hanasrv.nrcclouds.com:1515 (1)			
Status	URL Path	Access Policy	Actions
	/sap/	Path And All Sub-Paths	

You successfully configured the SAP on premise system to cloud connector.

- **Creation of Destination for on premise SAP system on SAP BTP:**
Create destination to fetch content from system during design time.

1. Logon to your SAP BTP account.
2. On SAP BTP account, please click on Destinations under connectivity:



3. Add new destination for sap system which we added in cloud connector. Click on New destination, you will get the below window.

Destination Configuration [Blank Template](#) [Service Instance](#)

⚠ Please note that you should never set your own personal credentials in the User and Password fields. Always use a technical user instead

Name: *

Type: HTTP

Description:

URL: *

Proxy Type: OnPremise

Authentication: BasicAuthentication

Location ID:

User: *

Password:

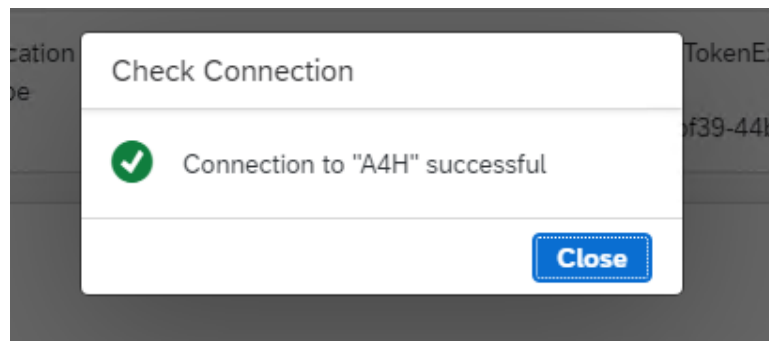
Additional Properties

4. Provide details which we configured in cloud connector and add properties on this destination as below:

Additional Properties

HTML5.Dynam...	▼	true	🗑️
sap-client	▼	800	🗑️
WebIDEEnabled	▼	true	🗑️
WebIDESystem	▼	A4H	🗑️
WebIDEUsage	▼	odata_abap, dev_abap	🗑️

5. After providing all the details click on save and test the destination connection by clicking on check connection.



6. Also check the cloud connector status in BTP.

The screenshot shows the SAP BTP Cockpit interface. The left sidebar has a menu with "Cloud Connectors" selected. The main area shows "Subaccount: trial - Cloud Connectors" with a green "Connected" status. Below this, the "Master Instance (BTP_RP)" details are displayed:

- Connector ID: 4AC08EF1D13811ECB32AEA70C0A80148
- Connected since: 20.09.2022 18:29:27
- Initiated by: [redacted]
- Version: 2.13.1
- Java Version: 1.8.0_201 (Oracle Corporation)
- High Availability: inactive

Below the details is a table titled "Exposed Back-End Systems":

Host	Protocol	Back-End Type
[redacted]	HTTP	SAP HANA

Conclusion: You have successfully set up the connection between on premise SAP (ABAP) system with SAP BTP using cloud connector.

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