ROJO INTEGRATIONS

SAP S/4HANA Integration with Zycus Configuration Guide

For SAP Integration Suite

Version 1.0

1 Introduction

This document gives an overview of the SAP S/4HANA Integration with Zycus for the SAP Integration Suite. The document discusses the common configuration steps needed before deploying the Integration Flows within the package.

1.1 Coding Samples

Any software coding and/or code lines/strings ("Code") included in this documentation are only examples and are not intended to be used in a productive system environment. The Code is only intended to better explain and visualize the syntax and phrasing rules of certain coding. We do not warrant the correctness and completeness of the Code given herein.

1.2 Internet Hyperlinks

The documentation may contain hyperlinks to the Internet. These hyperlinks are intended to serve as a hint about where to find related information. We do not warrant the availability and the correctness of this related information or the ability of this information to serve a particular purpose.

1.3 Overview

The integration of SAP S/4HANA and Zycus processes can be customized as per your business requirements. The different components that can be adjusted are like:

- Externalized parameters of an integration flow.
- The Zycus setup.
- The mapping step to enhance functional logic and reflect the possible custom properties in Zycus.
- Exception handling

If changes are made to the standard objects in Zycus to include custom fields, an updated XSD from Zycus should be requested. These XSDs must be uploaded to the Integration Flow and the mapping must be adjusted accordingly.

2 Integration Preparation

2.1 Prerequisites

To configure the integration content, you must have below access and authorization:

Access required:

- SAP S/4HANA Tenant Details
- SAP Integration Suite Tenant Details.
- Zycus Tenant Details

Authorization required:

- SAP S/4HANA On Cloud:
  - Appropriate authorizations for the technical user that will be used to connect to the SAP S/4HANA System.
  - This key user needs to have the administrator business user that contains the business catalog SAP_CORE_BC_COM (Communication Management). For example, the business role SAP_BR_ADMINISTRATOR (Administrator).
  - Access to create a user and assign roles.
  - Access to Cost Centres, Company Codes etc. Objects which are being used in the integration
- SAP Integration Suite Tenant:
  - Auth Group.
  - Integration Developer.
- Zycus Tenant:
  - Appropriate authorizations for the technical user that will be used to connect to the Zycus Tenant.

2.1.1 Adapter Installation

Adapter component is required to run the Integration Content. For the adapter installation, in a future phase, refer to the *Zycus Adapter and Plug-in Installation Guide* that will be included as part of the Zycus adapter package.

2.1.2 Plug-in Installation

Currently XSD definitions are to be requested from Zycus. These XSDs must be uploaded to the Integration Flow and the mapping must be adjusted accordingly.

3 Configuration

SAP S/4HANA, Zycus, and SAP Integration Suite must be configured before the integration content package can be configured and deployed.

3.1.1 Configuration in SAP S/4HANA Cloud

This section describes the configurations for the SAP S/4HANA Cloud.

The SAP S/4HANA Cloud System URL is included in the SAP S/4HANA Cloud provisioning email (email sender: SAP s4scc) and includes system access and administrative information. Make a note of the system access URL for business users.

3.1.1.1 Create Communication User

The communication user defined in the SAP S/4HANA Cloud system is used for inbound communication, and for processing messages in the system. Technically, the user is used to call OData Services in SAP S/4HANA Cloud from SAP Cloud Integration. Follow the below steps to create a communication user in SAP S/4HANA

Procedure:

1. Access the SAP S/4HANA Cloud system and log in as an Administrator.

2. Open the Maintain Communication Users app.

3. Choose New.

4. On the next screen, create the following settings and choose Create:

    - User Name: <user name> , for example, ODATAUSER
    - Description: <S4HANA Communication User>
    - Password: Enter a password

3.1.1.2 Creating Communication System for Integration

A communication system is a specification of a system that represents a communication partner and all the necessary technical information needed for the communication, such as hostname/IP-Address, identity, user information, certificates. The communication system will later be used to establish communication arrangements for different communication scenarios. You can use the existing communication system if it has been created already.

Procedure:

1. Log on to the SAP Fiori launchpad in your SAP S/4HANA Cloud system.

2. Under Communication Management, choose Communication Systems.

3. Choose New to create a system.

4. Enter a system ID as required (e.g.: CI_INSTANCE) and be descriptive in the System Name field. Click on Create.

5. In the opened page, in the Host Name field, enter the SAP Cloud Platform Integration Runtime URL

6. Enter a name in the Logical System ID field (e.g.: CI)

7. Enter a name in the Business System ID field (e.g.: CI).

8. In the User for Inbound Communication section, choose the + button, enter the technical communication user you created previously, and save.

9. Optionally you could create a new Communication User from here.

3.1.1.3 Create Communication Arrangement

The communication arrangement needs to be activated in the SAP S/4HANA Cloud system for communication with Web Services. The communication scenarios used in this scope are as follows:

- SAP_COM_0179 (Cost Center)

Prerequisite:

Administrator has the catalog role ID SAP_CORE_BC_COM assigned in the SAP S/4HANA Cloud system

The communication arrangement in the SAP S/4HANA Cloud system defines all relevant information for communication with SAP Business Technology Platform (SAP BTP). For example, it contains the communication system, inbound and outbound authentication. The communication arrangement in S/4HANA Cloud defines all relevant information for the interface. It contains the communication system, outbound, and inbound authentication. Communication arrangements need to be activated in SAP S/4HANA Cloud for communication with OData APIs.

Procedure:

1. Log on to the SAP Fiori launchpad in your SAP S/4HANA Cloud system with the required authorization.

2. Under Communication Management, choose Communication Arrangements.

3. Search for a scenario (E.g.: SAP_COM_0179), if it does not exist, choose new.

4. Search for the scenario again and click Create.

5. Click Communication System and choose the Communication System that you created in the previous step.

6. Under Inbound Communication, in the Username field, select the user you created and choose Save.

7. To Activate the SOAP Outbound service-

- Within the communication arrangement, scroll to the SOAP Services section.
- Check the list of available SOAP services and ensure that ones related to the Cost Centre is activated
- After configuring the Service URL as https://<CI_Host_Name>:443/cxf/CostCenterMasterDataReplicationBulkRequest_Out, save the communication arrangement. This effectively activates the SOAP services for Cost Centre data.

Reference: https://help.sap.com/viewer/60055cf8f72644eb82a6f3bdc9be6e2b/1.0/en-US/4aad735c66c5495e9299d10231874bfd.html

3.1.2 Configuration in Zycus

User credentials can be requested via your Zycus contact to allow Basis authentication with the Zycus API's.

Please refer to: https://iconsole-staging.zycus.com/iConsole/developer/security-doc.htm

This integration package can be configured using Basic Authentication for Zycus. Create a Security Artefact for User Credentials for Zycus Basis Authentication. Here the Username and Password of the Zycus Basic Authentication credentials should be added. These will be reference via the reference name in the IFlow(s). Find the steps in SAP Integration Suite in the Appendix:

Deploying User Credentials in SAP Cloud Integration

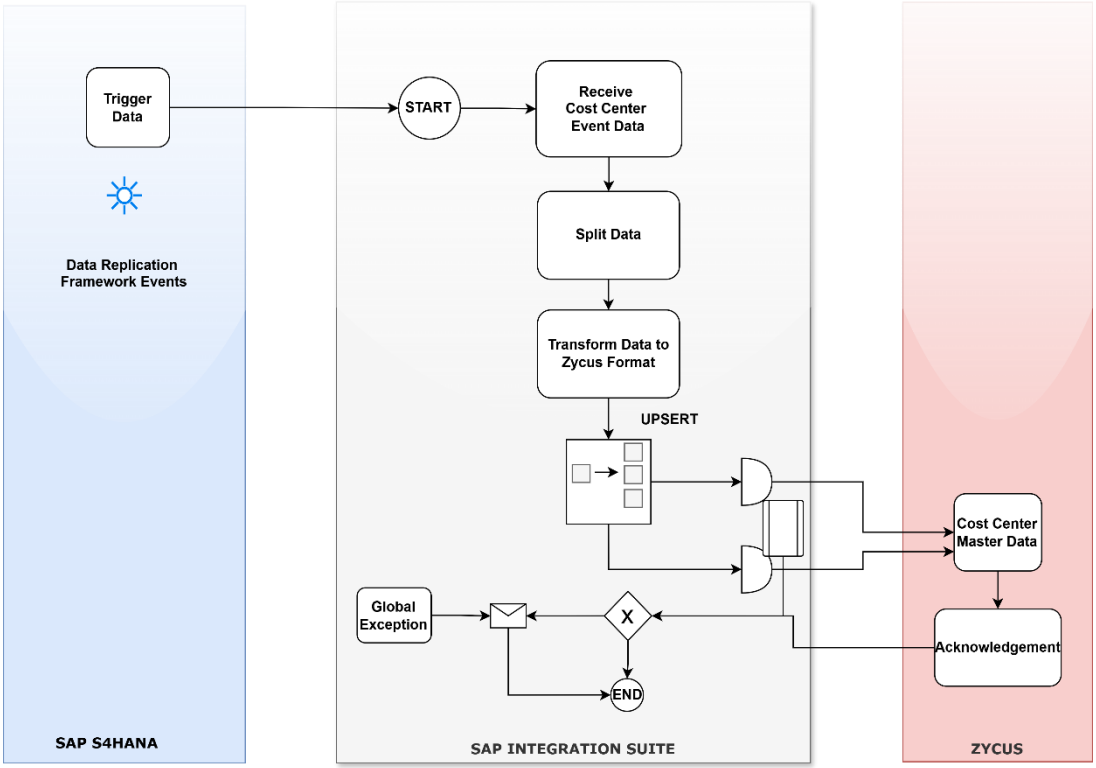
Note: configure your application ID in Application ID Alias input of Zycus Adaptor Connection. Contact Zycus Integration team for getting the values of application ID for each environment and note that application ID varies for each environment. It is recommended to use a different application ID for each interface.

3.1.3 Configuration in SAP Integration Suite

In this section, the settings of the Integration Flows are discussed. The section also details the prerequisites, parameters of the Sender and Receiver systems, and all the other settings specific to each Integration Flow.

3.1.3.1 Replicate Cost Centers from SAP S/4Hana to Zycus

This integration flow enables the replication of the cost centre master data from SAP S/4HANA to Zycus. The integration is triggered as per the Data Replication Framework (DRF) configuration in SAP S/4HANA.



3.1.3.2 Technical Design

Replicate Cost Centers from S4HANA to Zycus

Push from SAP via SOAP Webservice

The trigger would be done for the below kind of data payloads:

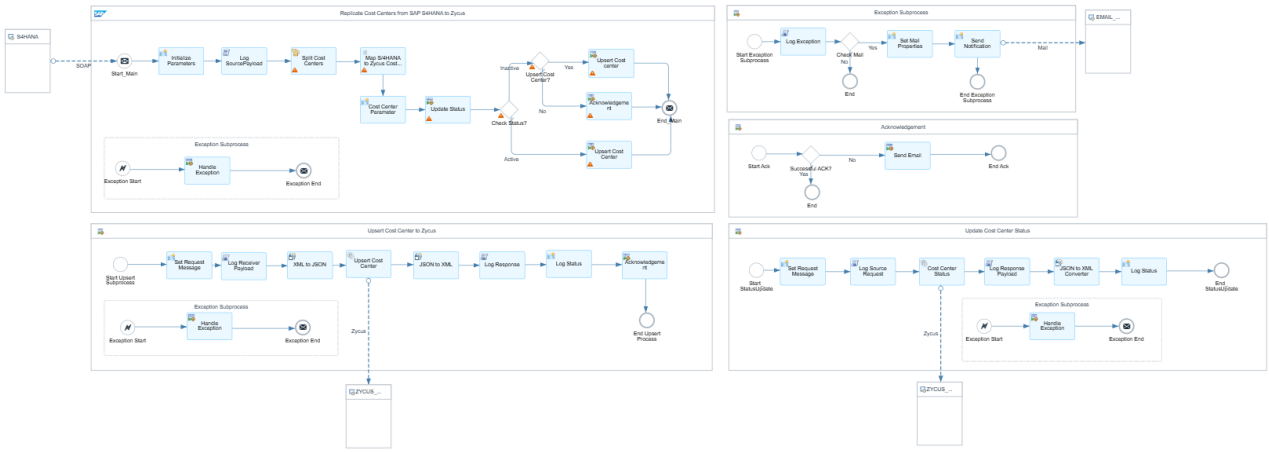
Initial Load: Trigger via SAP Job or DRFOUT, for the creation of all the Cost Centers from S4HANA to Zycus
Delta Load: Automatically triggered from Data Replication Framework, whenever there is a change in SAP Cost Centers.

Design Steps:

- Receive Cost Centers in XML format via SOAP Webservice.
- Log Source Payload step.
- Initialize all global parameters.
- Split the payload into individual Cost Centers
- Transform S4HANA Cost Center message format to Zycus format as per REST API
- Upsert –
    - Cost Center Data:
        - Log Receiver Payload step.
        - REST API POST call to upsert.
        - Email alert on Exception.
    - Cost Center Status:
        - Log Receiver Payload step.
        - REST API POST call to update status.
        - Email alert on Exception.

- Back to main process- Main process exception - Email alert on Exception.

The SAP Cloud Integration implementation of the process is shown in below Figure.



3.1.3.2.1 Prerequisites

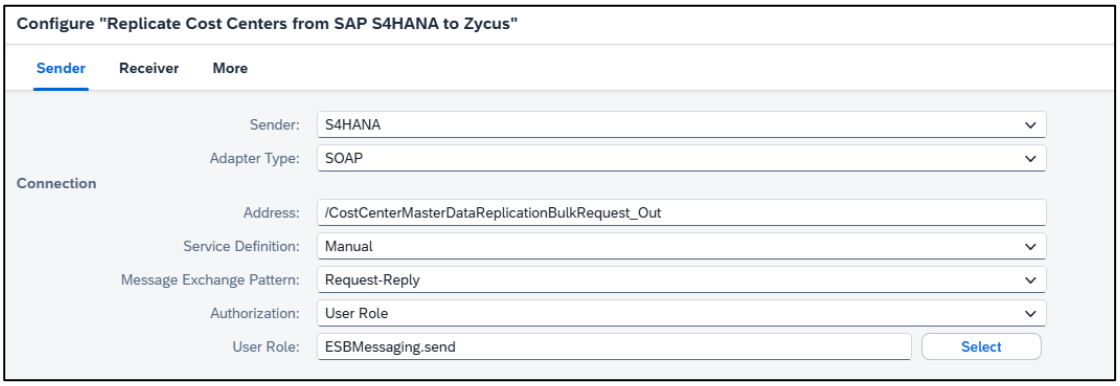
Following are the prerequisites:

- Deploy the security artifacts which will be required during the configuration of the integration flow.
- Configure SAP to push Cost Center DRF events to SAP Cloud Integration Endpoint

3.1.3.2.2 Configuration

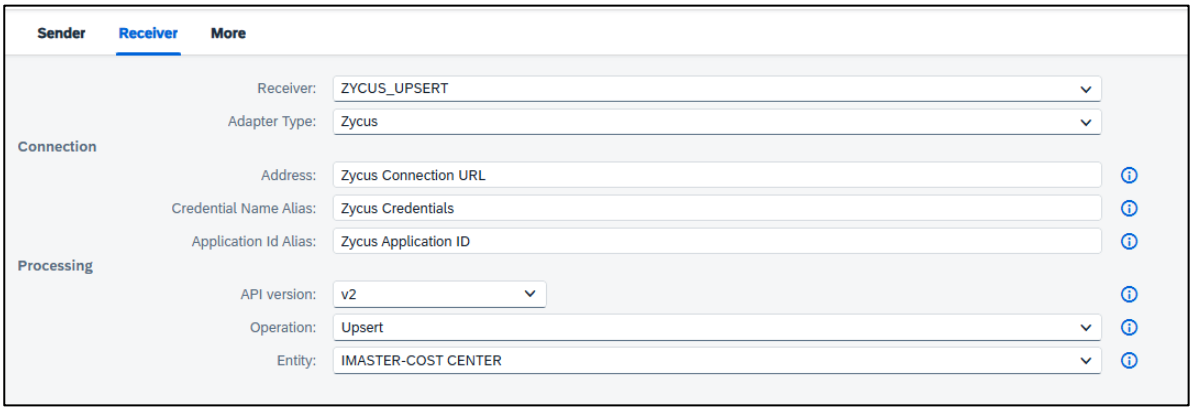
Follow the steps below to configure the integration iflow:

1. Open the integration flow **Replicate Cost Centers from SAP S4HANA to Zycus**.
2. Click **Configure**.
3. Configure **Sender** and provide an endpoint to the I-flow as per the organization's naming standards.

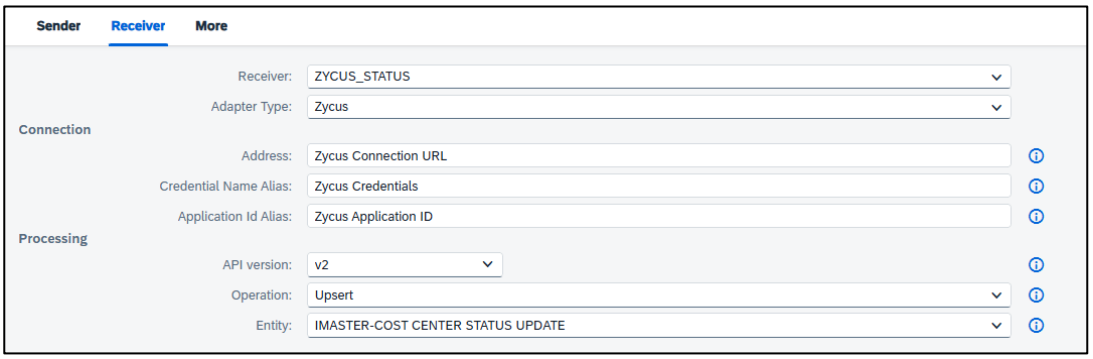


Parameter	Description
Address	Specify the address being used for SOAP channel

4. Go to **Receiver** and for connector named **ZYCUS_UPSERT,** configure the details as shown in the image below.

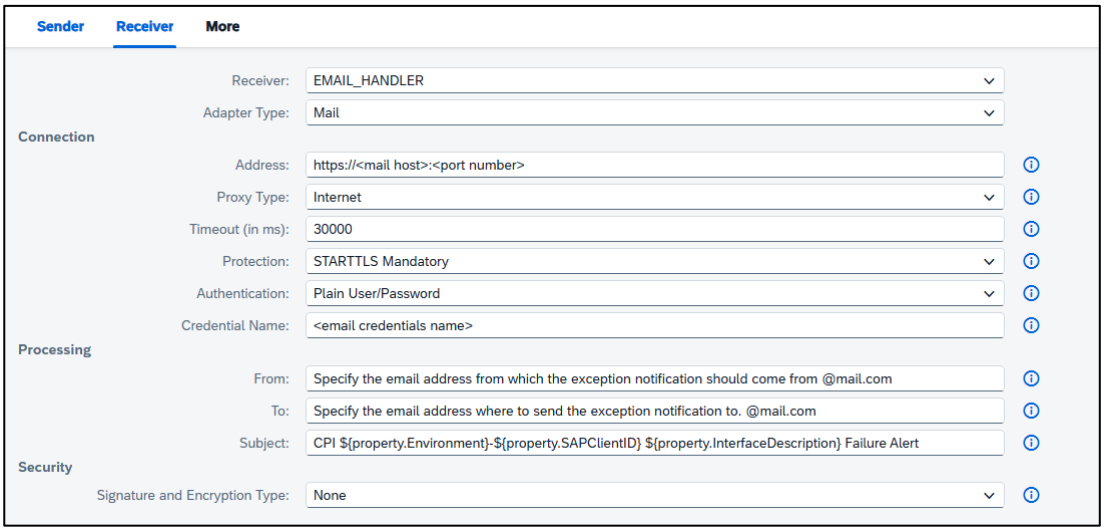


5. Go to **Receiver** and for connector named **ZYCUS_STATUS,** configure the details as shown in the image below.



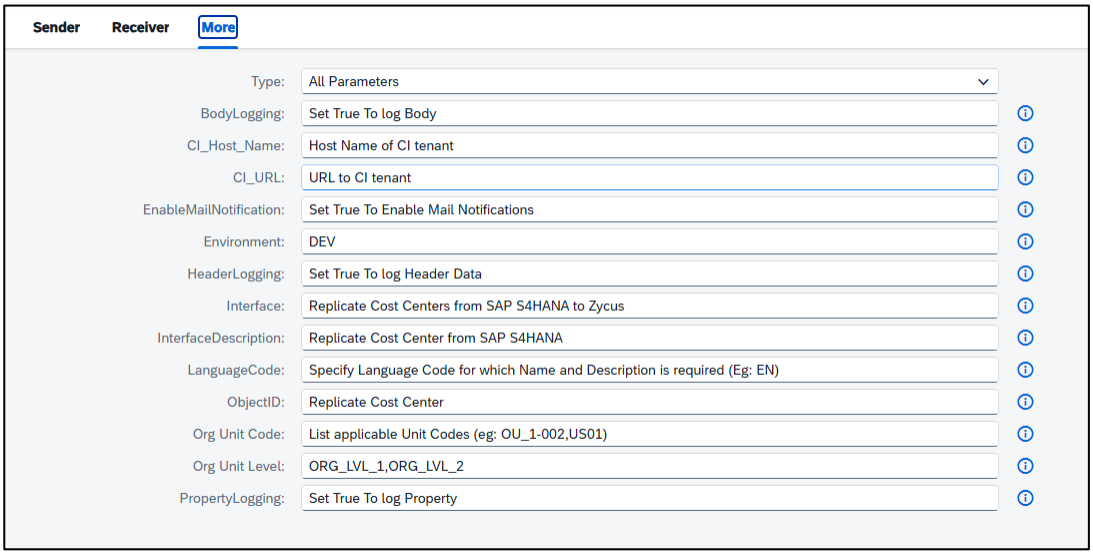
Parameter	Description
Address	This is by default set to the appropriate ZYCUS API URL.
Credential Name Alias	Specify the name of the Security Material you have deployed in ZYCUS.
Application Id Alias	Specify the application ID for Zycus

6. Configure the **Receiver** connector named **Email_Handler** as shown on the image below.



Parameter	Description
Address	Specify the Address being used for the ProcessDirect channel.
Protection	Specify the method to establish an encrypted (secure) connection.
Authentication	Mechanism to be used to authenticate against the server.
Credential Name	Specify the credential name to authenticate against the server.
From	E-mail address that the message comes from.
To	E-mail address that the message is sent to.
Subject	Subject of the e-mail message.

7. Go to **More** and configure the details as shown in the image below.



Parameter	Description
BodyLogging	Specify *TRUE* to log the Message Body (Not recommended in a live environment). Default Value: *False*
CI_Host_Name	Specify the Host Name reference for the SAP Integration Suite tenant
CI_URL	Specify the Host URL for the SAP Integration Suite tenant
Environment	Specific the Environment reference (for example, DEV, TST, ACC, PRD)
HeaderLogging	Specify *TRUE* to log Message Headers. Default Value: *False*
PropertyLogging	Specify *True* to log Message properties (Not recommended in a live environment). Default Value: *False*
EnableMailNotification	In case the value is set to *True*, the integration Flows sends a notification to the email address specified in the **To** field of the Mail server.
Interface	Specify the Interface name of the IFlow
InterfaceDescription	Specify the Integration description of the IFlow
LanguageCode	Specify Language Code for which Name and Description is required (Eg: EN)
MailFrom	Specify the email address from which the exception notification should come.
MailTo	Specify the email address where to send the exception notification to.
ObjectId	Specify the Object ID Reference
Org Unit Level	Defaulted to ORG_LVL_1,ORG_LVL_2
Org Unit Code	List applicable Unit Codes (eg: OU_1-002)

8. **Save** and **deploy**.

3.1.3.2.3 Integration Message Mapping

If your organization uses custom fields in Zycus, you need to customize the provided integration flow and adapt it to your needs. Update the existing solution by requesting a new Zycus XSD, change this schema in the message mapping, and add custom logics as needed.

4 Appendix

4.1.1 Updated XSD-schema and replacing Standard Schema used in Integration Flow

Currently, the integration package uses standard fields and properties provided in Zycus. In case other custom fields are needed; a new XSD must be requested from the Zycus platform, the default XSD on mapping must be replaced by the created one, and these fields should also be mapped.

4.1.2 Deploying User Credentials in SAP Cloud Integration

To enable the Integration Flows to run, credentials for both Zycus and SAP S/4HANA must be deployed in the Cloud Integration Tenant. These are discussed in the next sections.

4.1.2.1 Deploying User Credentials for Zycus in SAP Cloud Integration

The most secure method to connect to Zycus is using OAuth 2.0. For the OAuth 2.0 setup for the Zycus adapter, refer to the Zycus adapter user guide. To deploy, follow the steps below:

1. In your SAP Cloud Integration tenant go to **Monitor**.
2. In **Manage Security,** click **Security Material**.
3. Click on the **Create dropdown** button and select **User Credentials**.
4. Specify the **name** and **description** of the Credentials.
5. Enter the OAuth2 client_id as **user** and client_secret as **password**, as generated in your Oauth server for OAuth Credentials.
6. Click **Deploy**.

4.1.2.2 Deploying User Credentials for SAP S/4HANA in SAP Cloud Integration

This is necessary to connect to SAP S/4HANA using basic Authentication (username and password). Follow the steps below:

1. In your SAP Cloud Integration tenant go to **Monitor**.
2. In Manage Security, **Click** Security Material.
3. Click **Add dropdown** and select User Credentials.
4. Specify the **name** and **description** of the User Credential.
5. Fill the username and password of your technical User.
6. Click Deploy.