

Configuration Instructions SAP S/4HANA Integration with SAP Business Network Material Traceability enhanced for Catena-X

1. Version Restrictions

This project is developed and tested with the following software Versions:

- Catena-X Release 23.09 (3.2)
- Business Network Material Traceability Q3 2023
- Eclipse Dataspace Connector 0.5.0

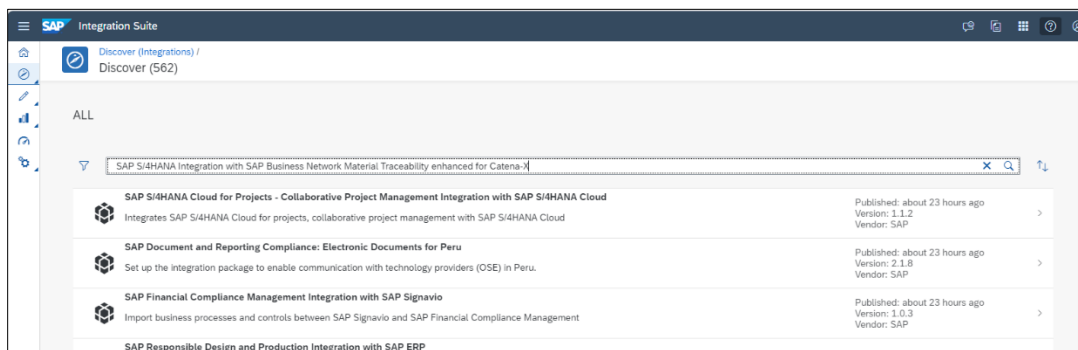
2. Create a Package in SAP Integration Suite

Discover prepackaged integration content.

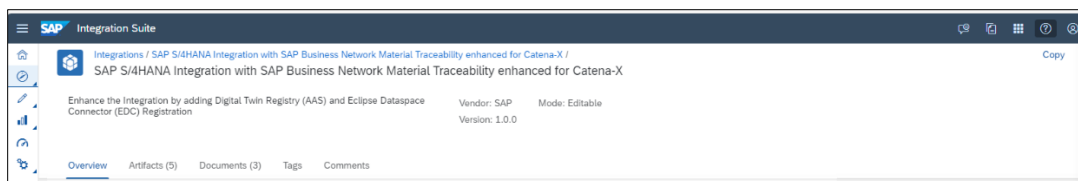
You are currently viewing all predefined integration packages provided by SAP.

Each integration package contains a set of integration flows, value mappings, and other integration artifacts that cover a specific integration scenario.

Search for “SAP S/4HANA Integration with SAP Business Network Material Traceability enhanced for Catena-X” package.



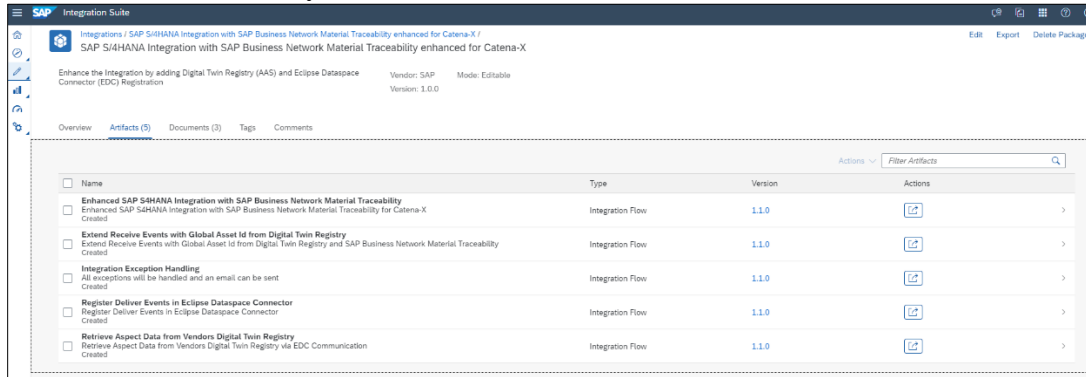
Select the package and press Copy button at top right to add it to your Design workspace.



3. Open Project “SAP S/4HANA Integration with SAP Business Network Material Traceability enhanced for Catena-X”

You can find information to this project under the different tabs.

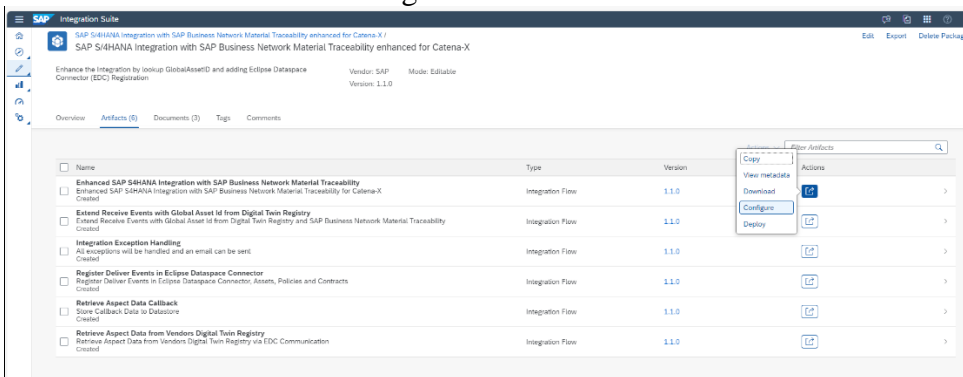
Make you familiar with the Overview tab to get a short description.
Under the Artifacts tab you will find the iFlows.



A description how to setup the iFlow Configuration is provided under the Documentation tab.

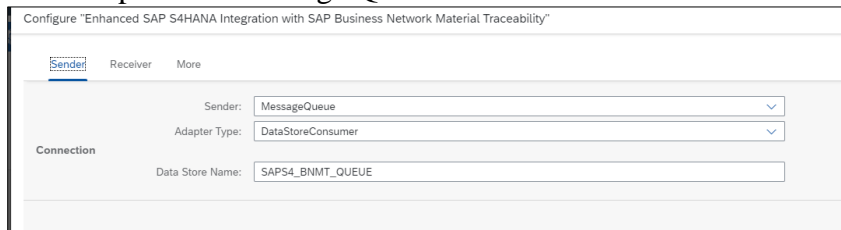
4. Adjust Configuration for "Enhanced SAP S4HANA Integration with SAP Business Network Material Traceability"

Select "Configure" from the Drop-Down under the "Action" button for the Integration Flow "Enhanced SAP S4HANA Integration with SAP Business Network Material Traceability"

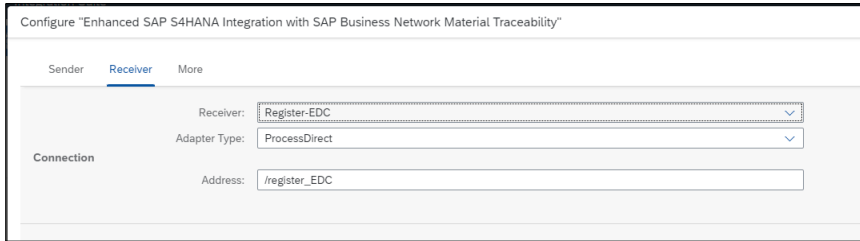


On "Sender" tab you can find:

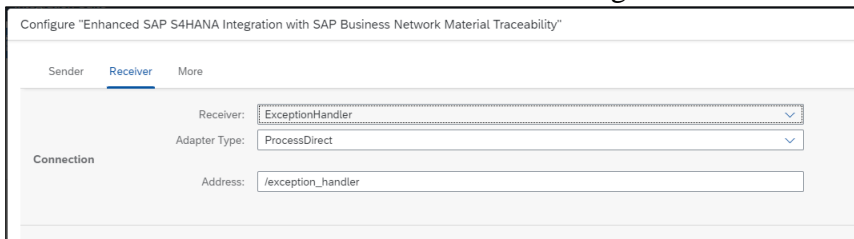
The Setup for the Message Queue used



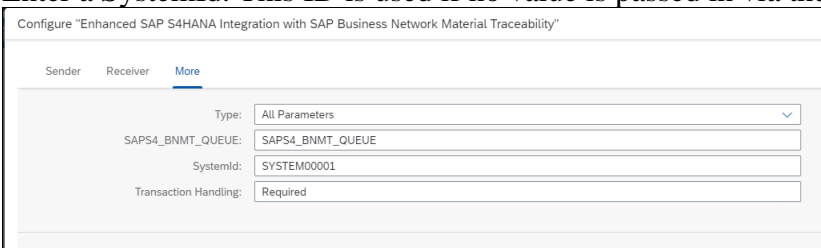
The Connection setup for S/4HANA. Leave it as it is.



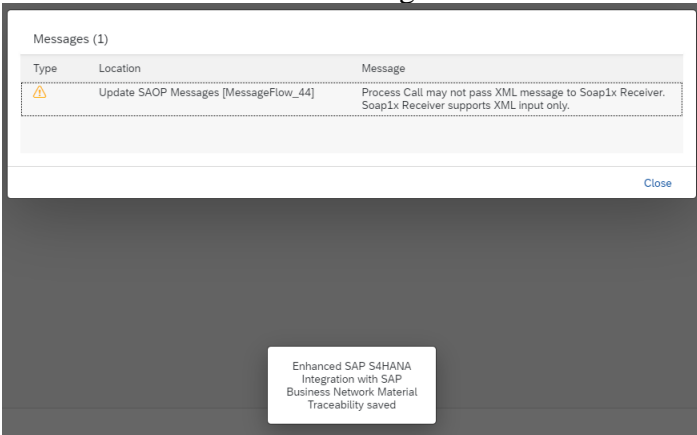
On "Receiver" tab select first the Receiver "ExceptionHandler".
 Enter the Path of the Integration Flow "Integration Exception Handling".
 Leave it as it is. Could be used to extend the Logic



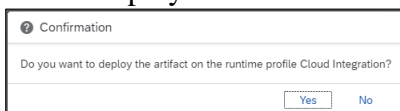
On "Receiver" tab you see the SAPS4_BNMT_QUEUE name defined. Leave it as it is.
 Enter a SystemId. This ID is used if no value is passed in via the SOAP Message Body.



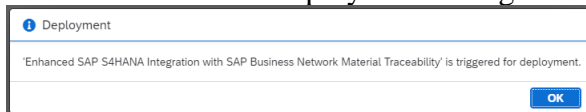
Press "Save" and some Warnings are shown. Press Close to confirm



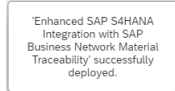
Press "Deploy" to activate changes. Confirm by pressing "Yes"



Press "OK" to close Deployment dialog

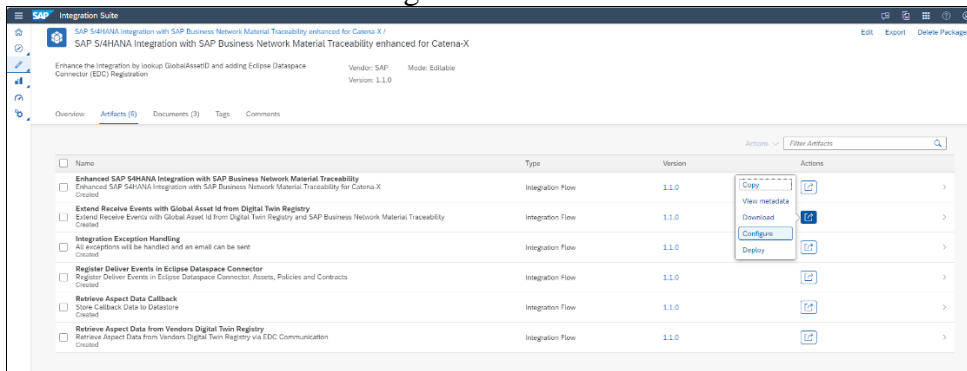


Deployment is confirmed

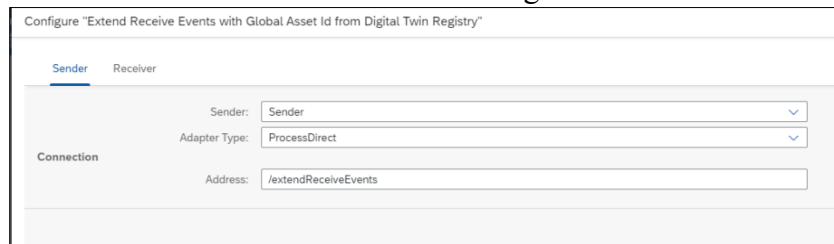


5. Adjust Configuration for "Extend Receive Events with Global Asset Id from Digital Twin Registry"

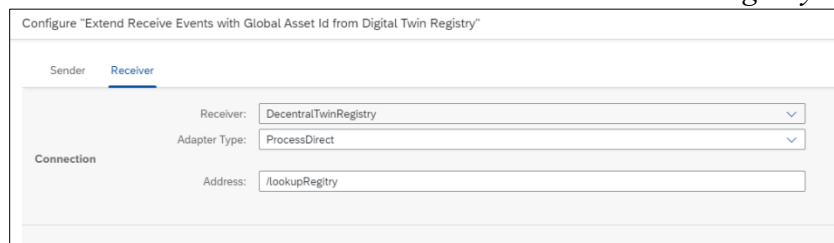
Select "Configure" from the Drop-Down under the "Action" button for the Integration Flow "Enhanced SAP S4HANA Integration with SAP Business Network Material Traceability"



On "Sender" tab the Address of this Integration Flow could be adjusted. Leave it as it is.



On "Receiver" tab select the Receiver "DecentralTwinRegistry". Leave it as it is.



On "Receiver" tab select first the Receiver "ExceptionHandler". Leave it as it is. Could be used to extend the Logic

Configure "Extend Receive Events with Global Asset Id from Digital Twin Registry"

Sender Receiver

Receiver: ExceptionHandler

Adapter Type: ProcessDirect

Connection Address: /exception_handler

Press "Save" and some Warnings are shown. Press Close to confirm

Messages (1)

| Type | Location | Message |
|------|------------------------------|---|
| ⚠ | Splitter [CallActivity_8019] | Splitter may behave differently in a local process than in the main process. For more information, see the documentation. |

Close

Extend Receive Events with Global Asset Id from Digital Twin Registry saved

Press "Deploy" to activate changes. Confirm by pressing "Yes"

Confirmation

Do you want to deploy the artifact on the runtime profile Cloud Integration?

Yes No

Press "OK" to close Deployment dialog

Deployment

'Extend Receive Events with Global Asset Id from Digital Twin Registry' is triggered for deployment.

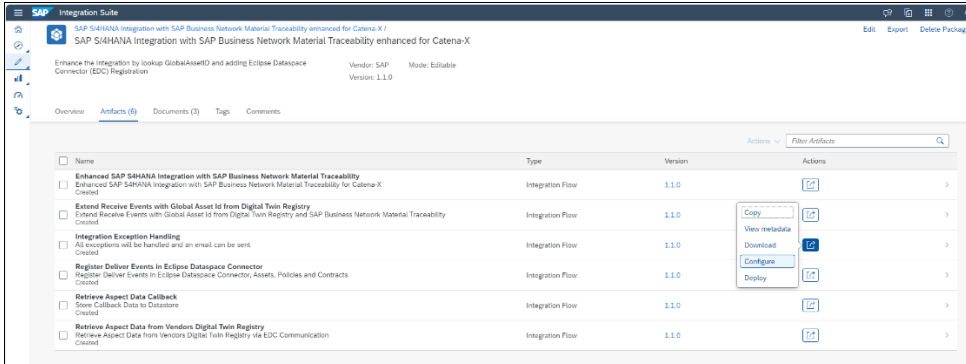
OK

Deployment is confirmed

'Extend Receive Events with Global Asset Id from Digital Twin Registry' successfully deployed.

6. Adjust Configuration for "Integration Exception Handling"

Select "Configure" from the Drop-Down under the "Action" button for the Integration Flow "Integration Exception Handling"



On "Receiver" tab select the Receiver "Email_Server".
 Enter the Email Server configuration:
 Address, Credential Name, From and To Address.
 The Subject is prefilled and can be adjusted as needed.

Configure "Integration Exception Handling"

Receiver

Receiver: Email_Server

Adapter Type: Mail

Address: smtp.dummy.nodomain

Proxy Type: Internet

Timeout (in ms): 30000

Protection: STARTTLS Mandatory

Authentication: Plain User/Password

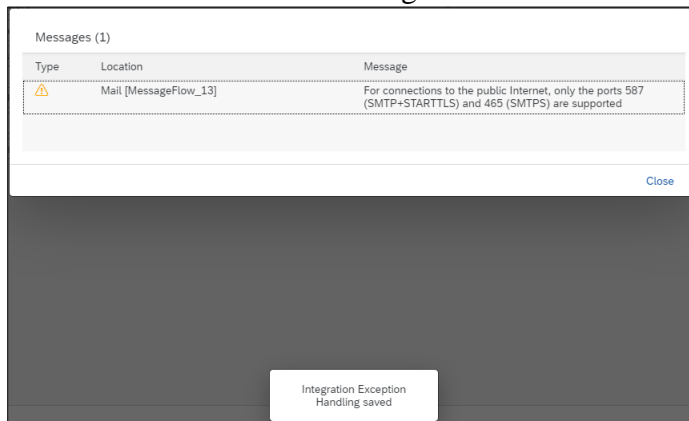
Credential Name: gmail_credentials

From: ren...@gmail.com

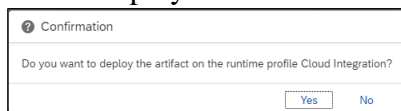
To: ren...@p.com

Subject: Exception in Enhanced SAP S4HANA Integration with SAP Business Network Material Traceability for Cate...

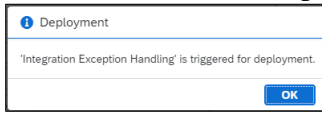
Press "Save" and some Warnings are shown. Press Close to confirm



Press "Deploy" to activate changes. Confirm by pressing "Yes"



Press "OK" to close Deployment dialog

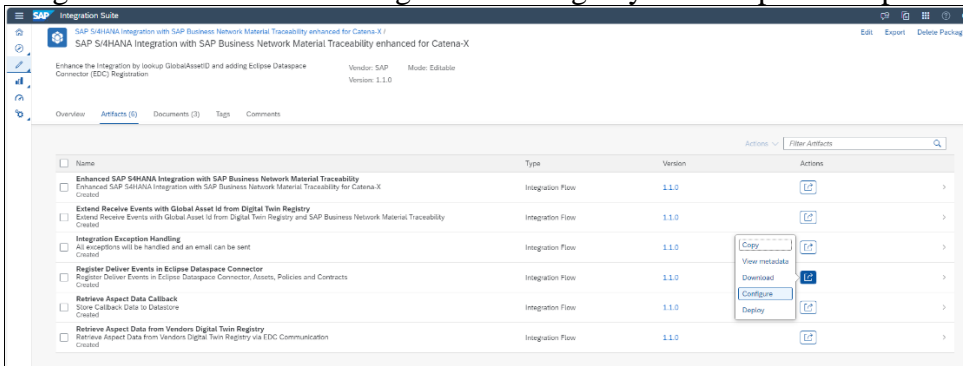


Deployment is confirmed

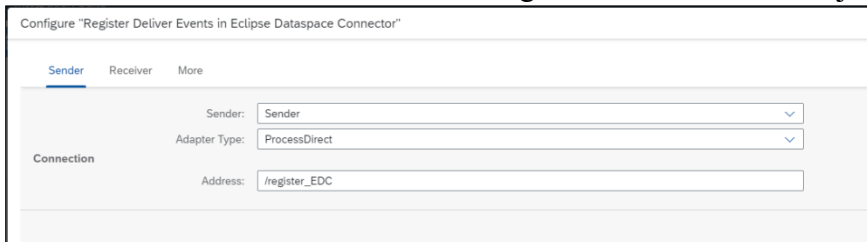


7. Adjust Configuration for "Register Delivery Events in Eclipse Dataspace Connector"

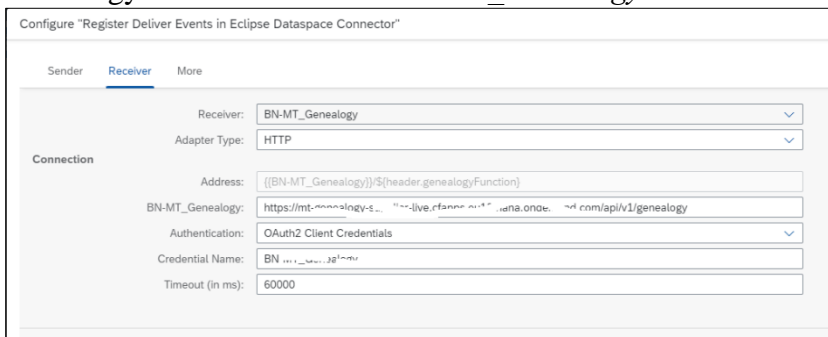
Select "Configure" from the Drop-Down under the "Action" button for the Integration Flow "Register Deliver Events in Digital Twin Registry and Eclipse Dataspace Connector"



On "Sender" tab the Address of this Integration Flow could be adjusted. Leave it as it is.



On "Receiver" tab select "BN-MT_Genealogy" from the drop-down list and enter the Genealogy-Server name into "BN-MT_Genealogy" and "Credential Name"



Select “*EDC_Policy*” from the drop-down list and enter the EDC Enpoint for Policy into “*Address*” and “*Credential Name*”

Select “*EDC_Contract*” from the drop-down list and enter the EDC Enpoint for Contract into “*Address*” and “*Credential Name*”

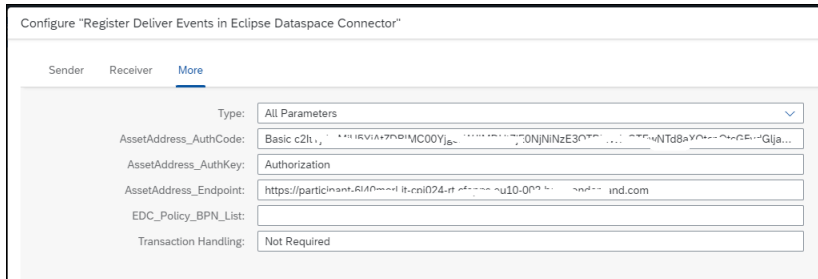
Select “*EDC_Asset*” from the drop-down list and enter the EDC Enpoint for Asset into “*Address*” and “*Credential Name*”

On “Receiver” tab select first the Receiver “*ExceptionHandler*”. Leave it as it is. Could be used to extend the Logic

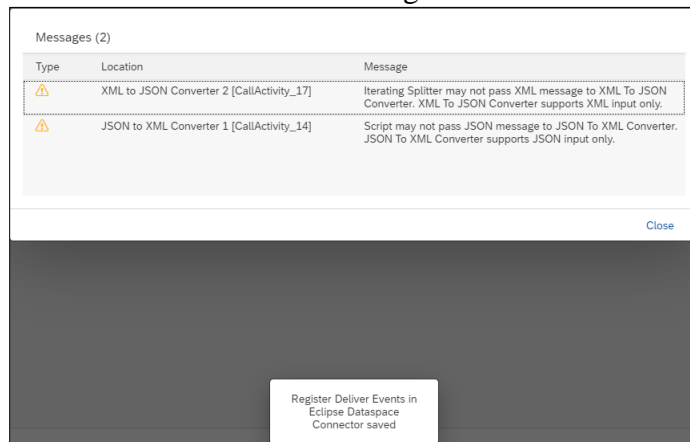
Change to “More” tab and set the following values:

- Eclipse Data Connector (EDC) Administrator should provide the following:

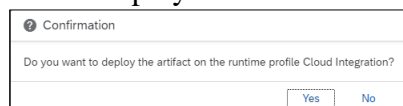
AssetAddress_Endpoint: Endpoint for End-to-End Communication
 AssetAddress_AuthKey: This is a constant "Authorization"
 AssetAddress_AuthCode: Bearer token for Basic authentication
 Optional - Enter Business Partner Numbers to be filtered in EDC-Policies into
 EDC_Policy_BPN_List



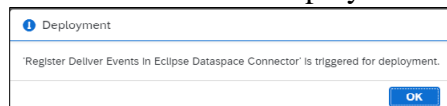
Press "Save" and some Warnings are shown. Press Close to confirm




Press "Deploy" to activate changes. Confirm by pressing "Yes"



Press "OK" to close Deployment dialog



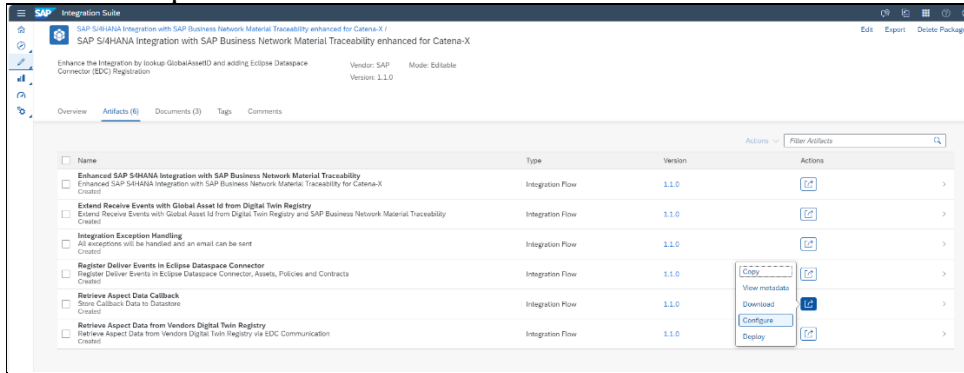
Deployment is confirmed



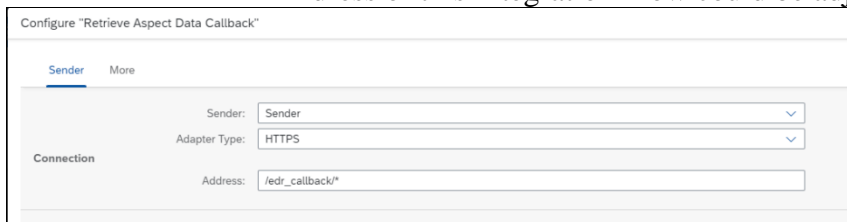
8. Adjust Configuration for "Retrieve Aspect Data Callback"

Select "Configure" from the Drop-Down under the "Action" button for the Integration Flow

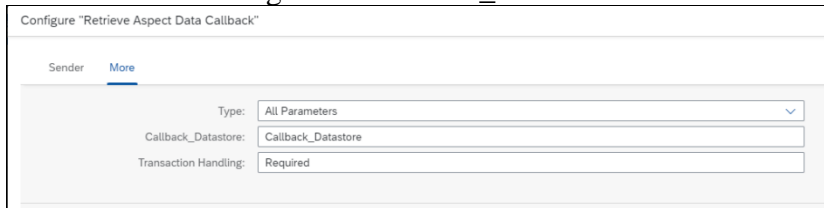
"Retrieve Aspect Data Callback"



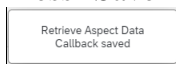
On "Sender" tab the Address of this Integration Flow could be adjusted. Leave it as it is.



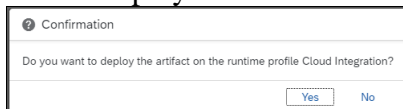
On "More" tab change the "Callback_Datastore" name if needed. Leave it as it is.



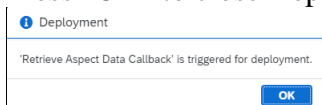
Press "Save"



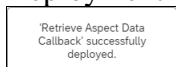
Press "Deploy" to activate changes. Confirm by pressing "Yes"



Press "OK" to close Deployment dialog

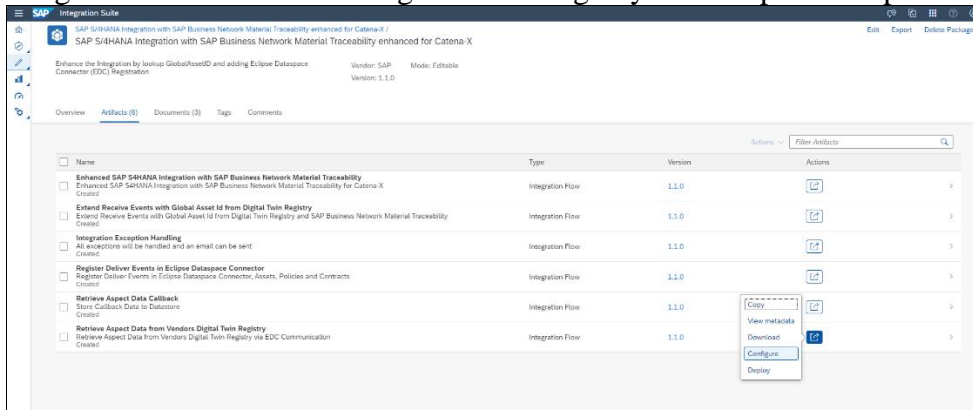


Deployment is confirmed

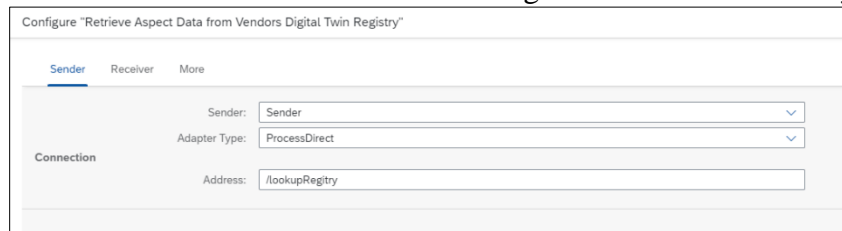


9. Adjust Configuration for "Retrieve Aspect Data from Vendors Digital Twin Registry"

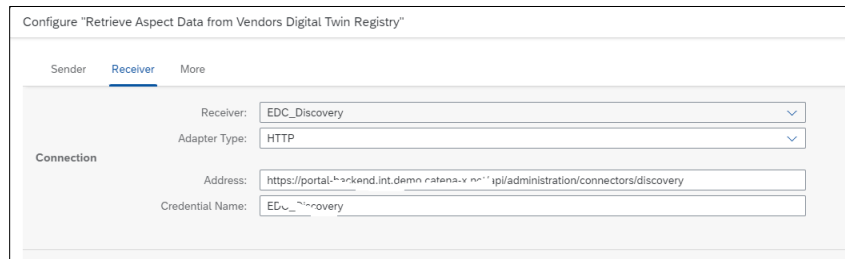
Select "Configure" from the Drop-Down under the "Action" button for the Integration Flow "Register Deliver Events in Digital Twin Registry and Eclipse Dataspace Connector"



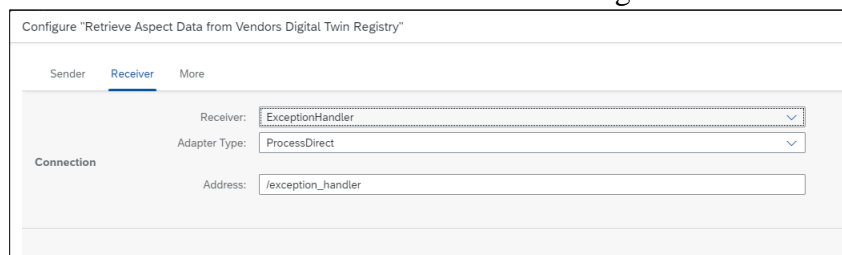
On "Sender" tab the Address of this Integration Flow could be adjusted. Leave it as it is.



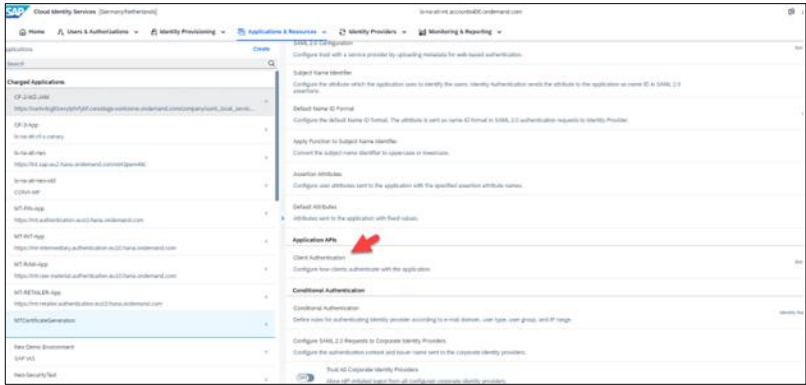
On "Receiver" tab select "EDC_Discovery" from the drop-down list and enter the Portal Service into "Address" and "Credential Name"



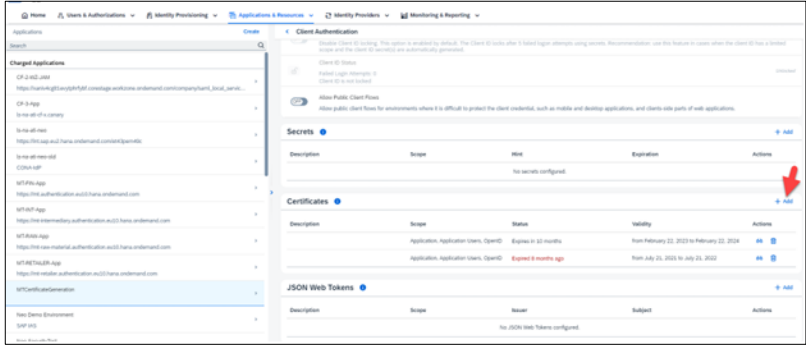
On "Receiver" tab select first the Receiver "ExceptionHandler". Leave it as it is. Could be used to extend the Logic



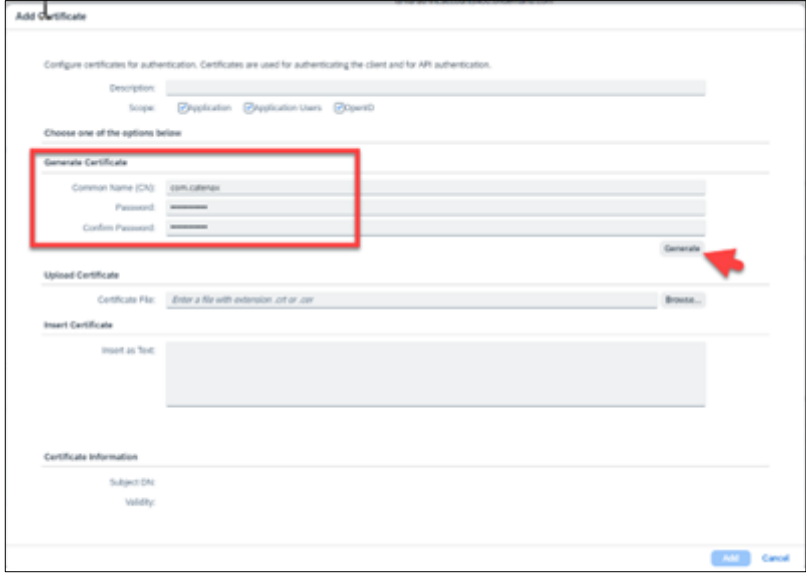
On "More" tab enter the EDC_ControlPlane Server name where the registration of the EDC assets takes place.

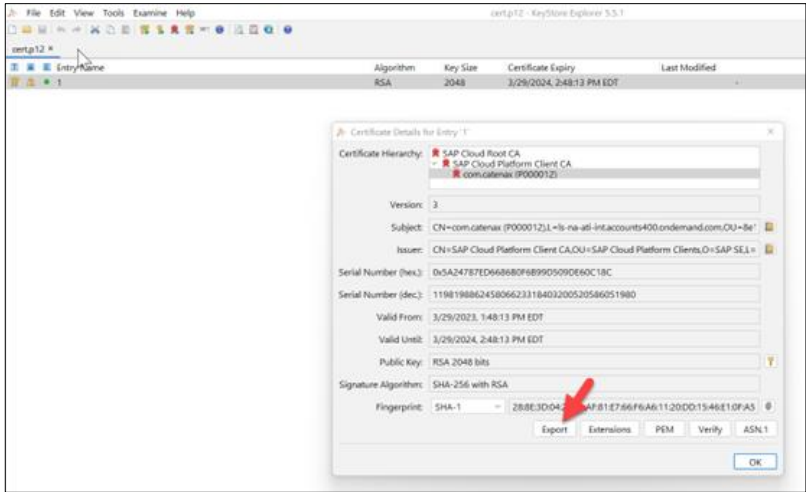


On Client Authentication screen -> Certificates section, click on Add button:

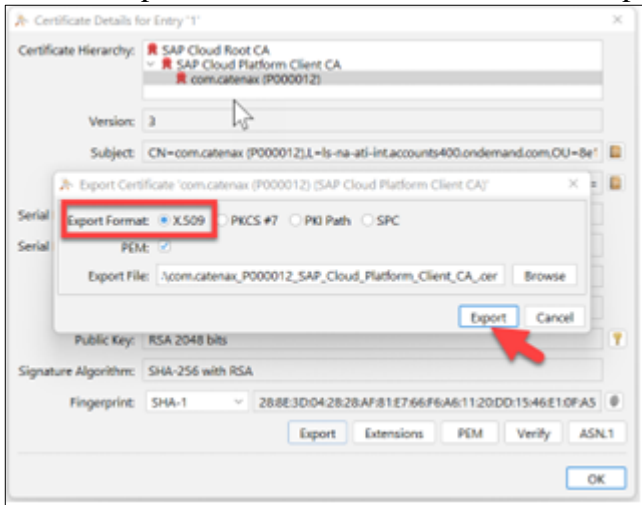


Enter the **Common Name**, **Password**, and **Confirmed Password** and click on **Generate**. The browser downloads the certificate to your local system

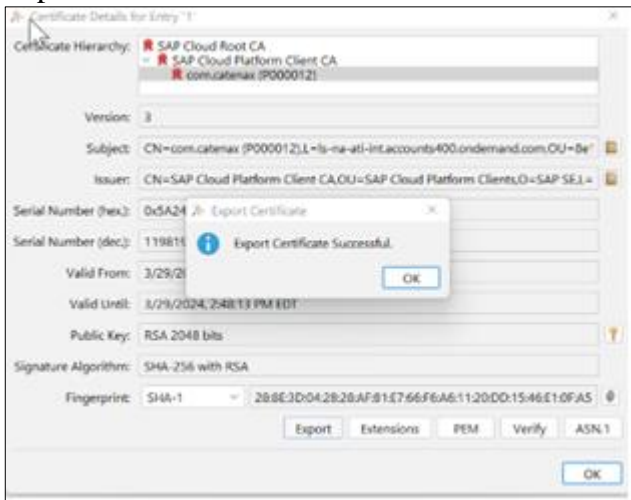




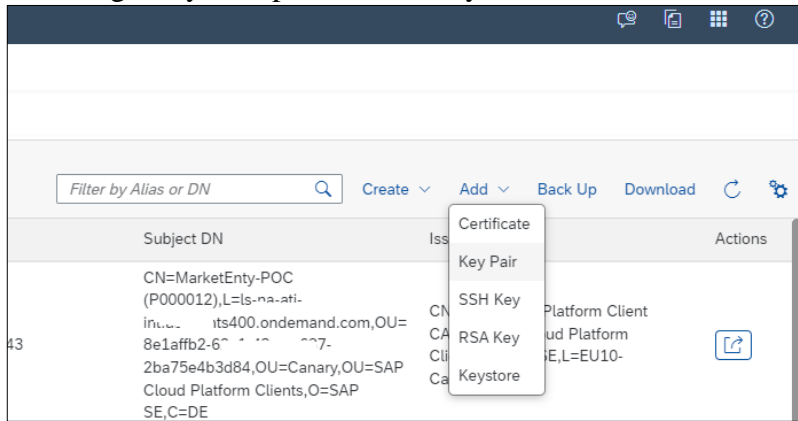
Choose Export Format as X.509 and click on Export



Export successful

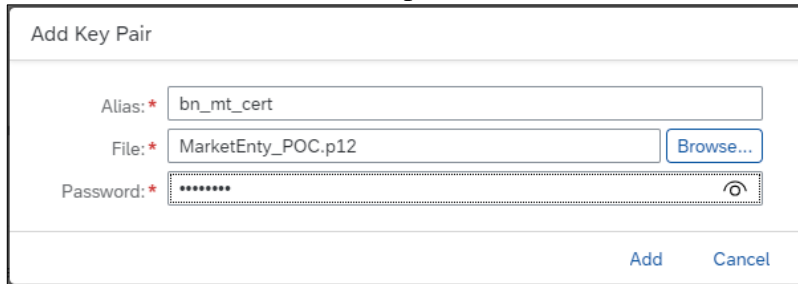


In Manage Keystore press Add - KeyPair



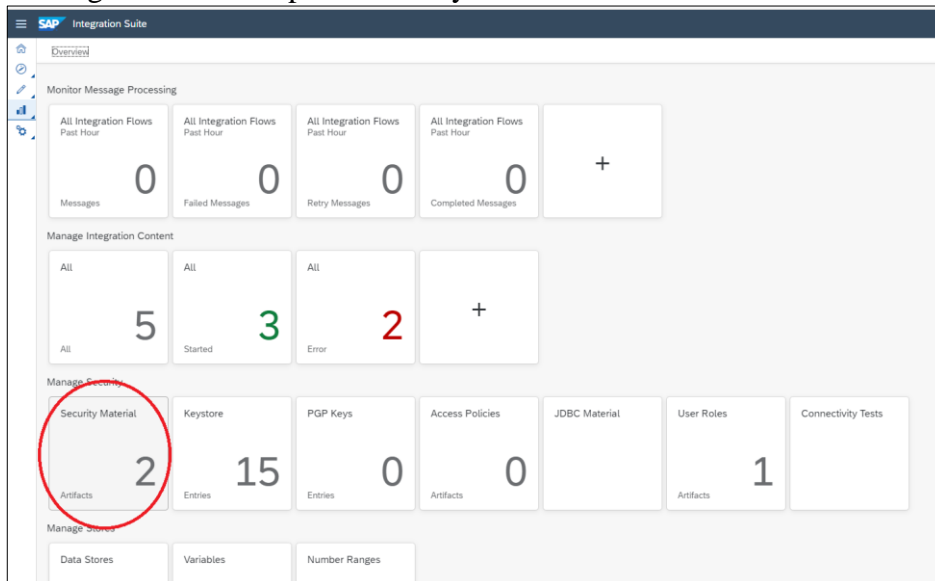
Enter "bn_mt_cert" as Alias for example. This will be referenced in Integration Flow "Enhanced SAP S4HANA Integration with SAP Business Network Material Traceability"

Browse for the certificate (cert.p12) created in section 6.2 and enter the password



10.4. Configure Security Material

In Integrations Suite open "Security Material" Tile on the Overview

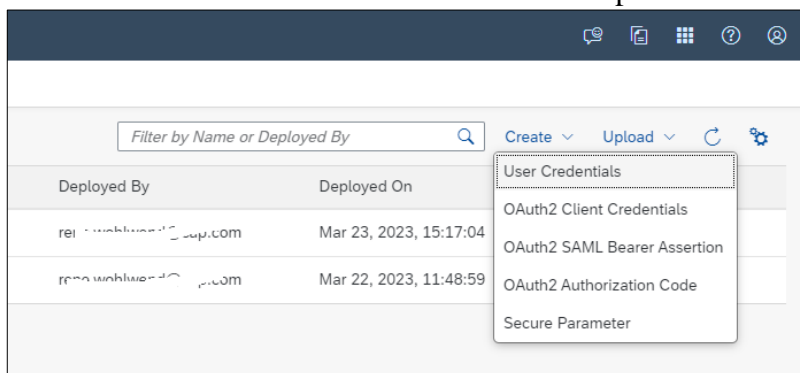


10.5. Define User Credentials for Business Network Material Traceability for retrieve a valid token.

This is used in the Integration Flows

"Retrieve Assembly Part Relation from SAP Business Network Material Traceability"
and "Retrieve Serial Part Typization from SAP Business Network Material Traceability"

Select "User Credentials" from the "Create" drop-down



Enter "**BN-MT_Basic**" as Name, because this is referenced in the Integration Flows
"Retrieve Assembly Part Relation from SAP Business Network Material Traceability"
and "Retrieve Serial Part Typization from SAP Business Network Material Traceability".

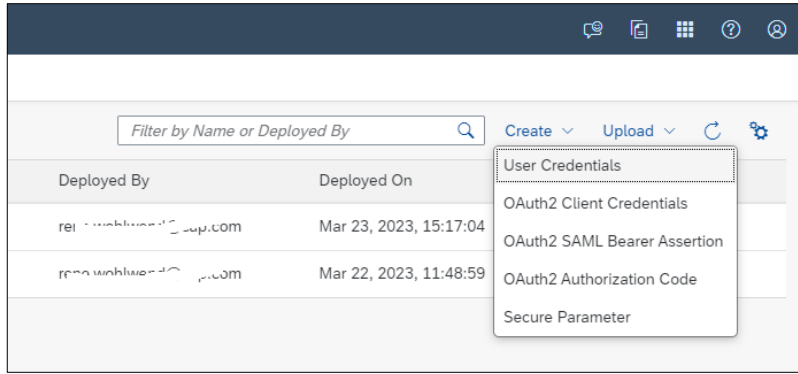
Enter the User (Client ID) and Password (Client Secret) provided by BN-MT Administrator and Press "Deploy"

The screenshot shows the 'Create User Credentials' form. The 'Name' field is filled with 'BN-MT_Basic'. The 'Type' dropdown is set to 'User Credentials'. The 'User' field contains a client ID. The 'Password' and 'Repeat Password' fields are masked with dots. The 'Deploy' and 'Cancel' buttons are at the bottom right.

10.6. Define User Credentials for your Email Server.

This is used in the Integration Flow "Integration Exception Handling"

Select "User Credentials" from the "Create" drop-down



Enter the User (Client ID) and Password (Client Secret) for your Email Account and Press "Deploy"

The screenshot shows a form titled 'Create User Credentials'. The form has the following fields:

- Name: * email_credentials
- Description: (empty)
- Type: * User Credentials (dropdown menu)
- User: * a...@...com
- Password: (masked with dots)
- Repeat Password: (masked with dots, with a toggle icon)

 At the bottom right of the form are two buttons: 'Deploy' and 'Cancel'.

11. Testing

11.1. Endpoint called by S/4 GBTRINT 100 extension

SOAP Endpoint provided by the Integration Flow "Enhanced SAP S4HANA Integration with SAP Business Network Material Traceability":

https://<CPI_Server>/catenax/s4/bnmt/soap/v1