CONFIGURING, DEPLOYING AND MONITORING WEBUI BASED SCENARIO USING SAP CLOUD PLATFORM INTEGRATION

Exercise07: SAP Cloud Platform Integration Components Used:

- SOAP Sender Adapter
- Data Store
- Groovy Script
- Integration process with Transaction Handling

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INTEGRATION SCENARIO

Retail customer has an offline warehouse data which need to be persisted to multiple data stores enabled with transaction management

Use Case:

This Integration flow basically showcases simple scenario with 3 use cases:

1. **Transaction handling enabled, Script doesn't throw exception:**

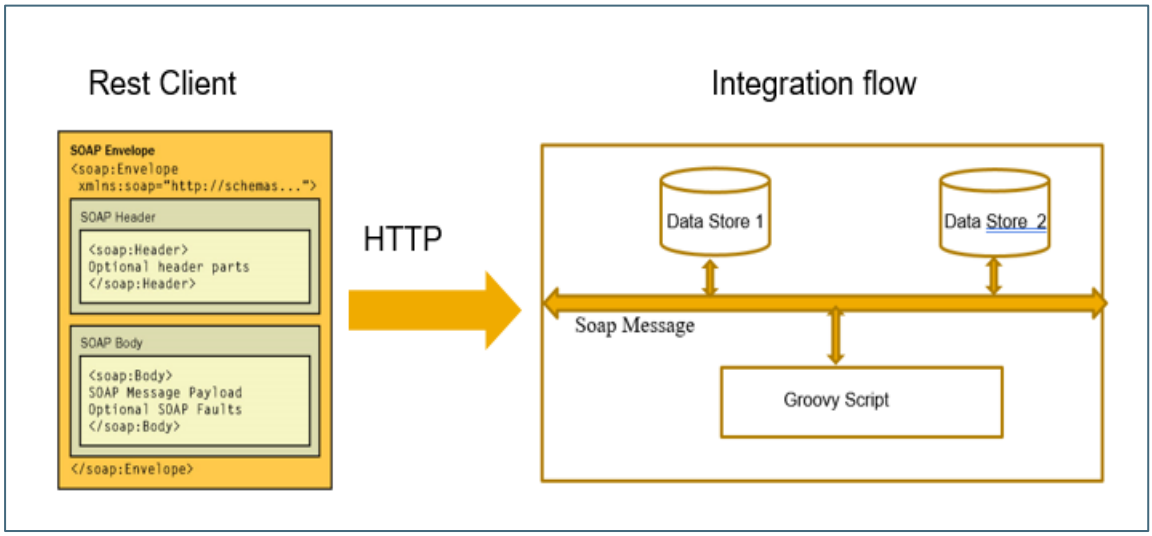
   When user sends soap message, it will write to first data store, then since script don't throws exception, it will also be written to the second data store.

2. **Transaction handling enabled, Script throws exception:**

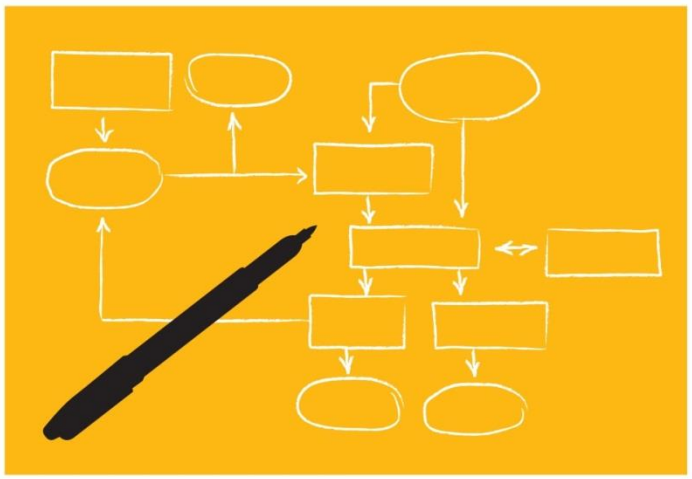
   When user sends soap message, it will write to first data store, then since script throws the exception, it will not be written to the second data store and it will be rolled back from the first data store due to entire transaction getting rolled back.

3. **Transaction handling not enabled, Script throws exception:**

   When user sends soap message, it will write to first data store, then since script throws the exception, it will not be written to the second data store.



Welcome to the Integration Flow challenge!



In this exercise, your aim is to create an integration flow that solves a challenge *(described in the Integration scenario)*.

And when you work your way through the exercise, our aim is that you learn:

1. How to access and work with the Cloud Platform Integration Web tooling
2. How to speed up your integration project by leveraging reference integration flows
3. How to customize a reference integration flow by configuring its connectivity and flow steps
4. Basic monitoring of an integration flow
5. Using Open-source tools to test your integration flow

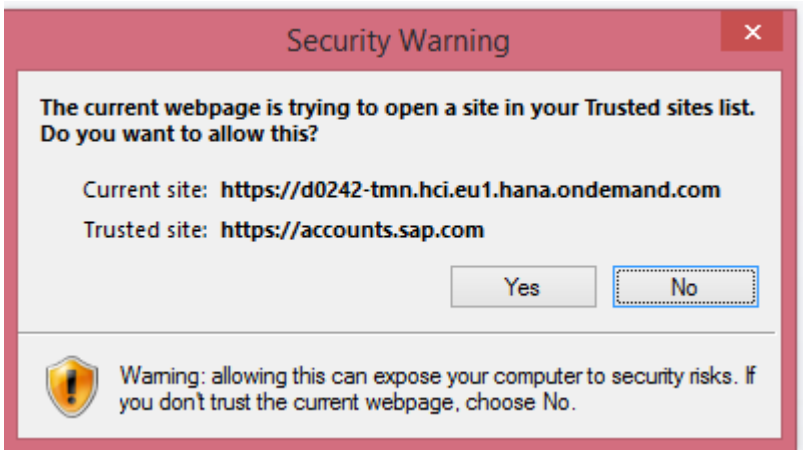
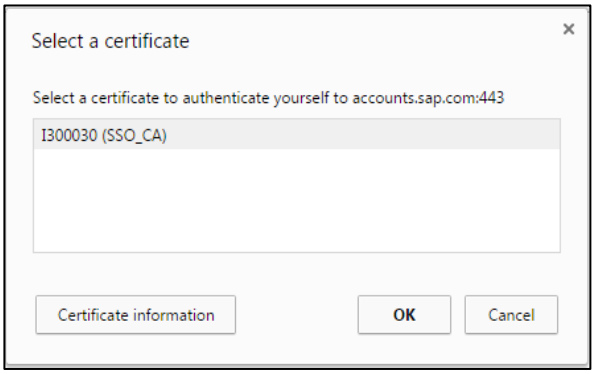
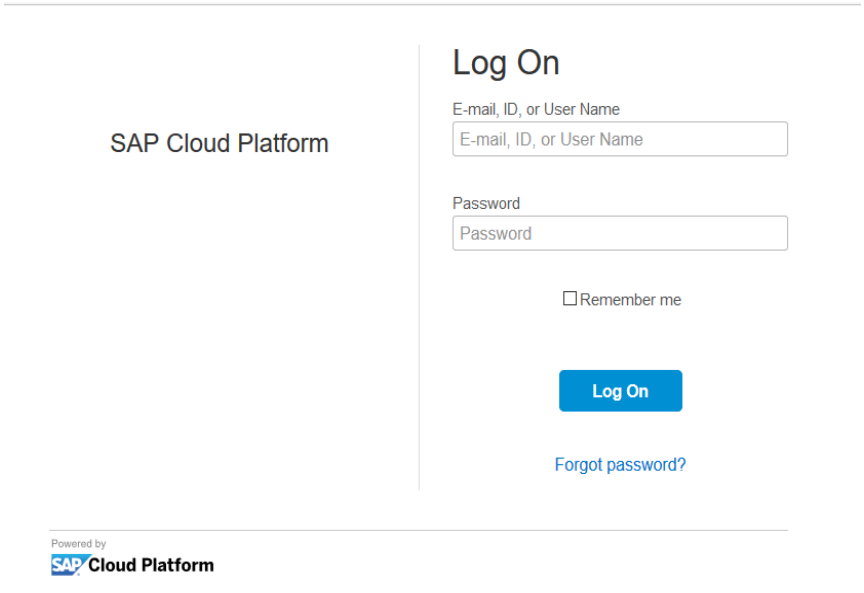
Exercise Files

Exercise Files are provided by the session moderator. Download and Extract them into one of your local folders for use later in your exercises and setup:

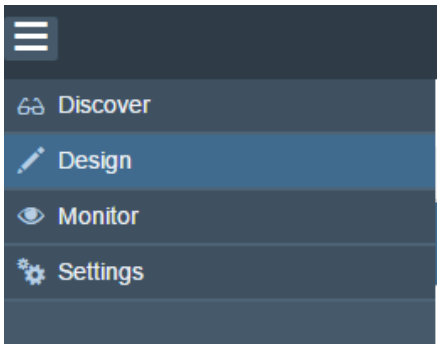
Note

1. In the exercise, we have used the notation XX to refer to the content created by you or your group uniquely. The session moderator shall assist you with assigning you/group the unique ID that you can use to replace XX.
2. In the exercise, we have used ***d0242/d0243*** as the example tenants. The final tenant details shall be provided by the session moderator.
3. Please note that colours and other visual appearance might differ slightly from the screenshot screens, as the CPI editor might have received feature upgrades since production of this content.

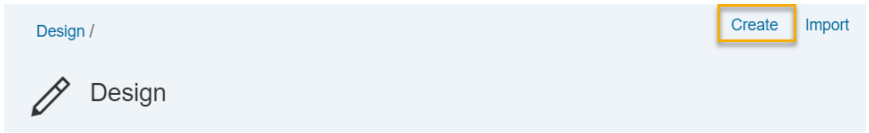
EXERCISE 07

Explanation	Screenshot
Follow these steps for integration flow creation in Web UI.	
1) Access the Web application using Google Chrome (or IE10 Browser) a. Open Google Chrome b. Copy the application URL or **The URL that you can use will be assigned to you by the instructor.** c. You will get a security warning if you want to open this site in your trusted sites list. Accept it with 'Yes'.	
2) If you get displayed your Certificate List, click on 'Cancel'	
3) You will now see the log-on screen for the SAP ID Service/SAP Cloud Platform. Enter the following credentials: *User:* <Provided by instructor> *Password*: <Provided by instructor>	

4) Now you will have access to the Web application. Familiarize yourself with the environment and choose the “Design” area.
Here, you will create an Integration Package to store your iFlows for different Exercises



Click on **Create**



Enter Details

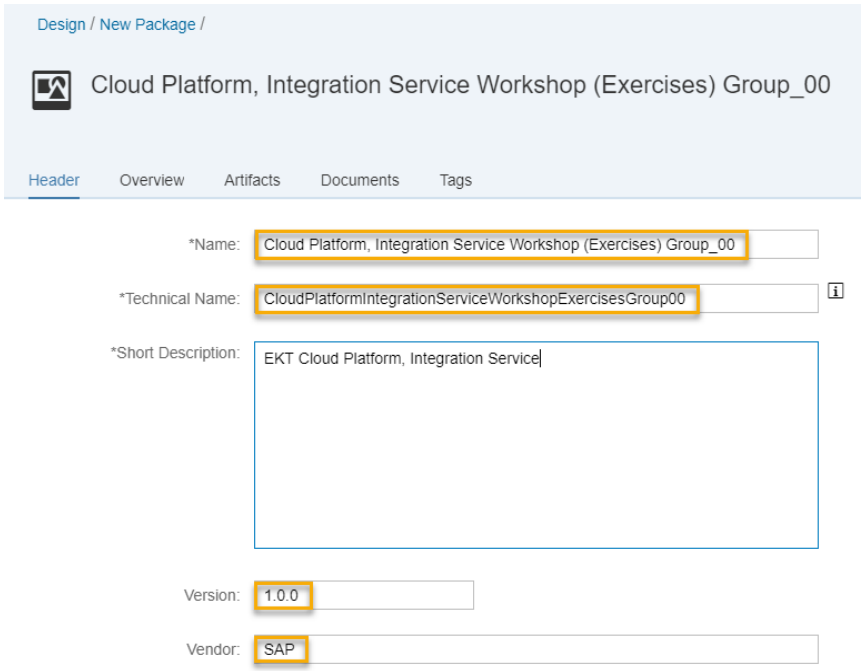
a) **Name**: Cloud Platform, Integration Service Workshop (Exercises) Group_XX

NOTE: Replace XX with the group number provided by the instructor

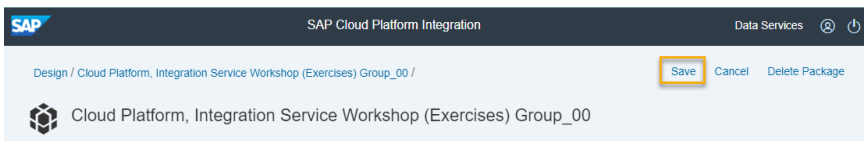
b) **Short Description**: EKT Cloud Platform, Integration Service

c) **Version:** 1.0.0

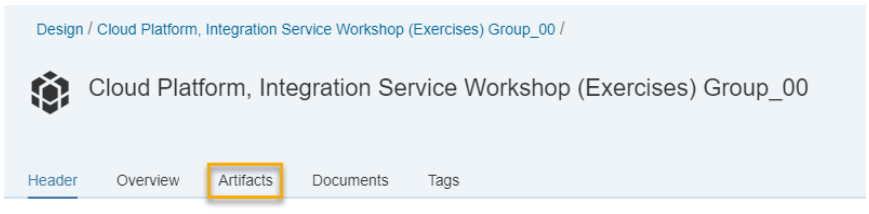
d) **Vendor:** SAP

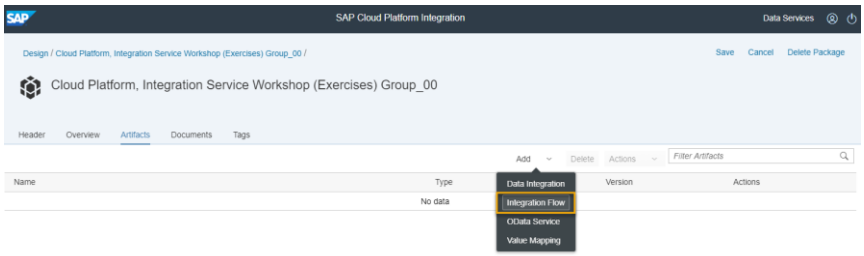
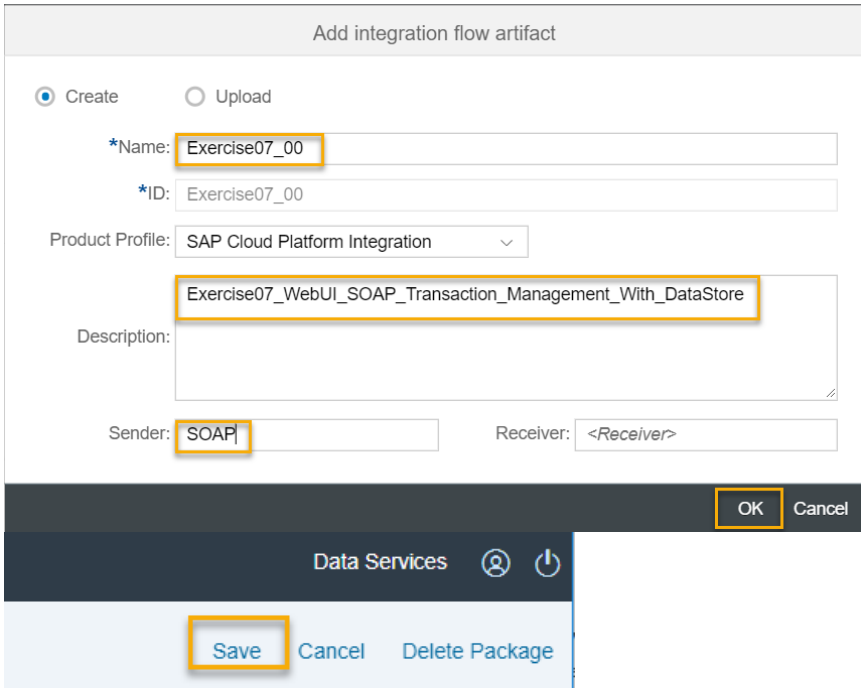
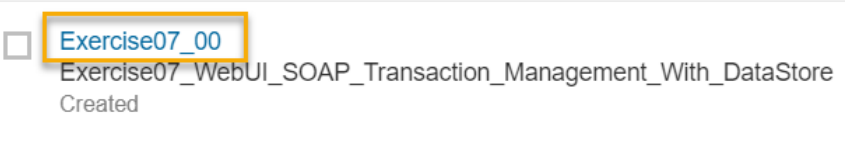
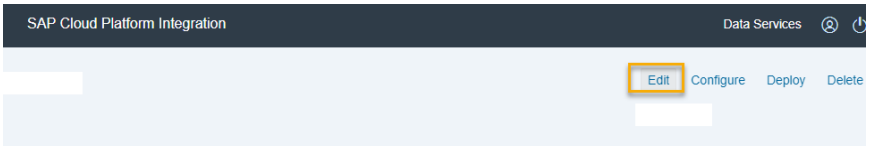
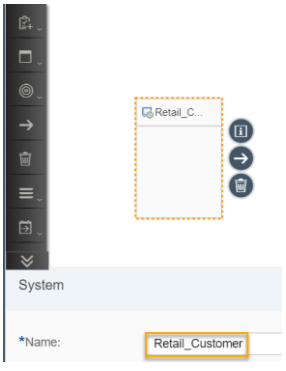


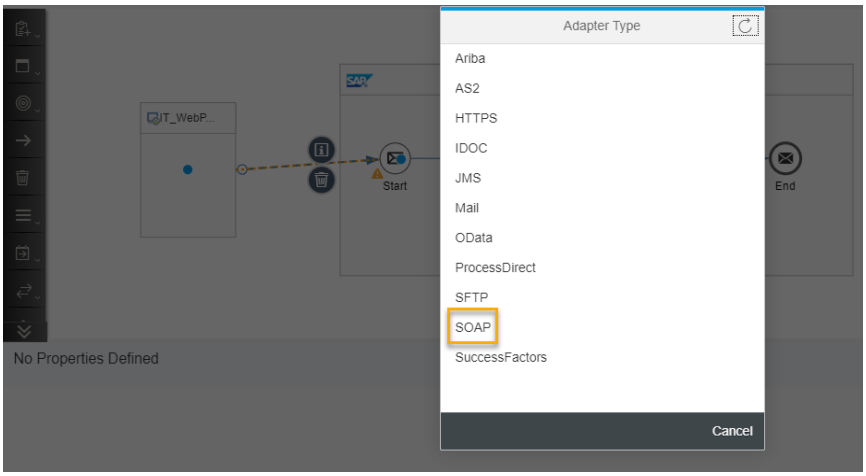
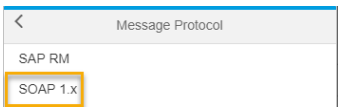
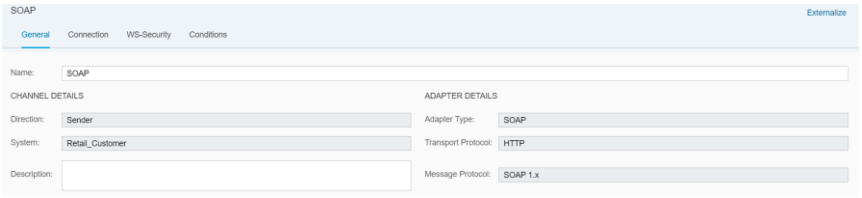
5) Click on Save



6) Navigate to **Artifacts** Tab



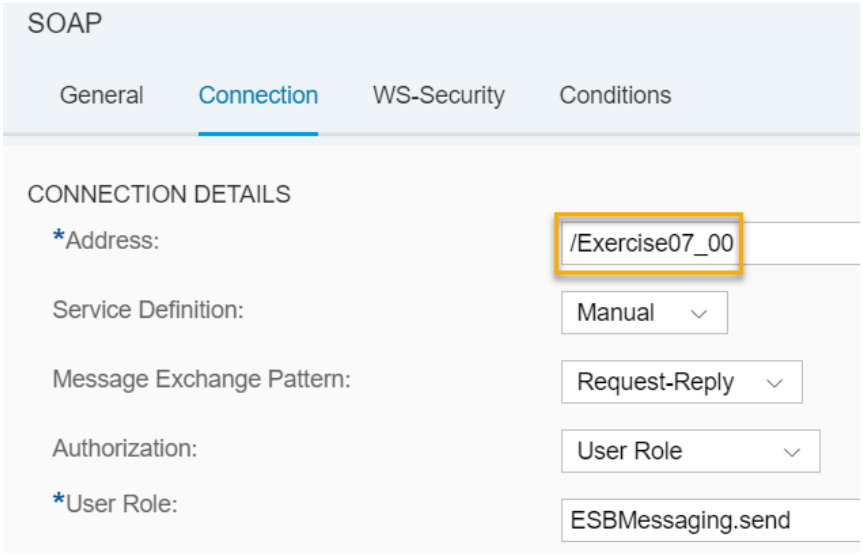
7) Click on ***Add-> Integration Flow***	
8) Select ***Create*** and enter the following details: *a.* Name: ***Exercise07_XX*** *b.* Description: ***Exercise07_WebUI_SOAP_Transaction_Management_With_DataStore*** *c.* Sender: ***SOAP*** d. Click on ***OK*** **Note:** Please remember to save after every action	
9) Click on ***Exercise07_XX***	
Define and edit integration flow	**Follow steps to edit the integration flow**
10) Click on ***Edit*** button on the upper corner on right hand side.	
11) Click on Sender system and set Name as ***Retail_Customer***	

12) Click on Receiver system and click the ***Delete*** icon to delete the system.	
13) Click on ***Retail_Customer*** sender system, select ***Connector*** and drag it to ***Start*** message step. This would open the sender adapter list. Select ***SOAP*** adapter	 
Select ***SOAP 1.x*** as Message protocol	 

14) Switch to ***Connection*** tab, enter the following details:

a. Address: ***/Exercise07_XX*** (make sure this address is unique on tenant)

Keep rest of the parameters as it is and Save

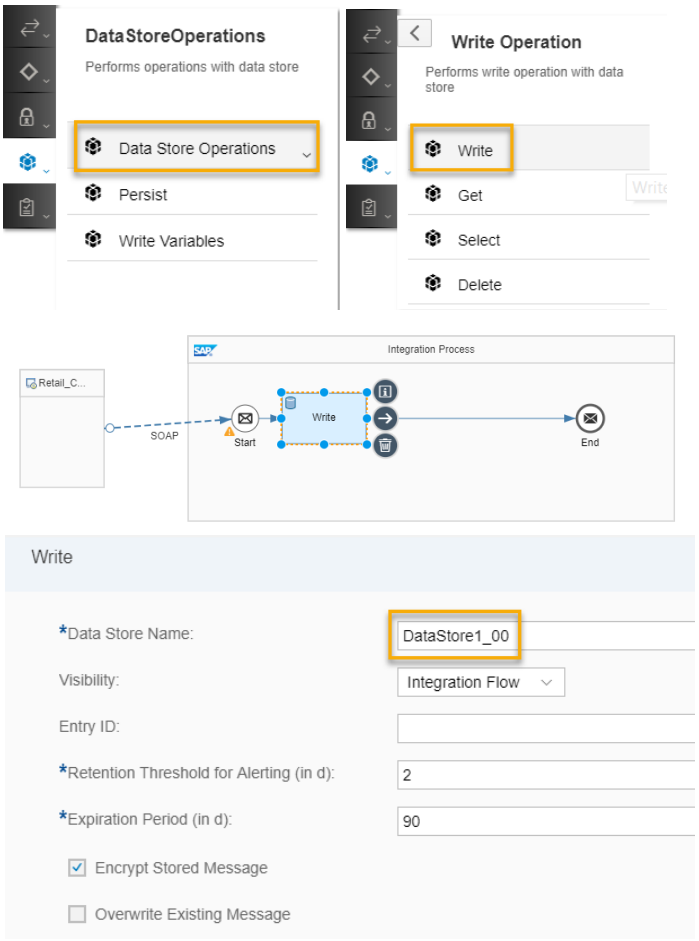


15) From the palette, select ***Persistence -> Data Store Operations -> Write*** and drop it on the connection between ***Start*** message and ***End*** message in the Integration flow.

Provide the following properties:

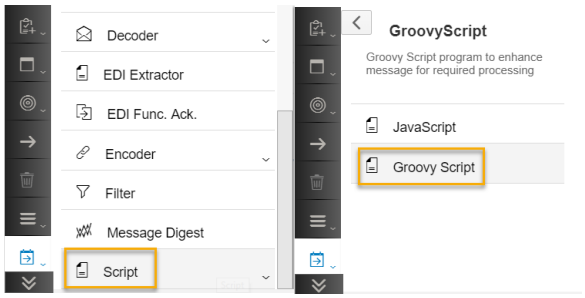
a. Data Store Name: ***DataStore1_XX***

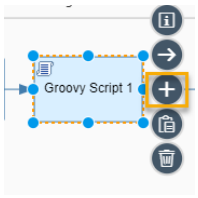
Keep rest of the parameters as it is and Save



16) A groovy script is needed to throw an exception. This is used to demonstrate the transaction management capability. Add the groovy script after ***Write*** data store flow step in iFlow using the following steps:

a. From the palette, select **Message Transformers** -> **Script** -> **Groovy Script** and drop it on the connection between ***Write*** data store flow step and ***End*** message in the integration flow.





b. Click on ***Create*** icon ⊕

c. Replace the script default code with the following code:

```
import
com.sap.gateway.ip.core.customdev.u
til.Message;
import java.util.HashMap;

def Message processData(Message
message)
{
    //throw new Exception("Exception
for JDBC flow");
    return message;
}
```

d. Click on ***OK***

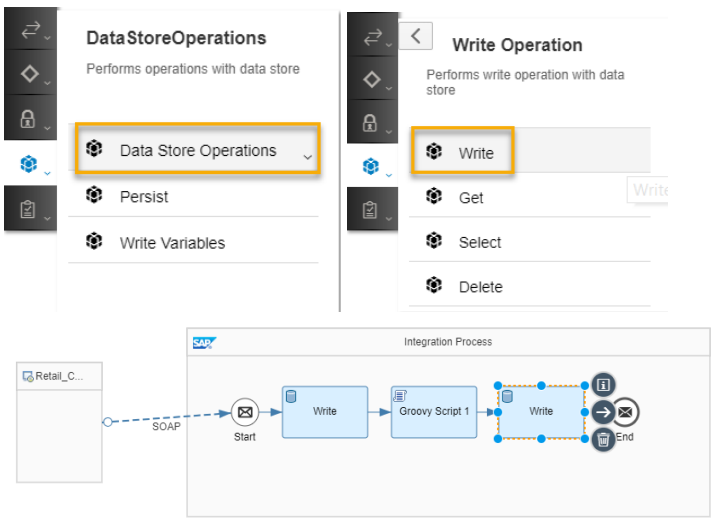
Save

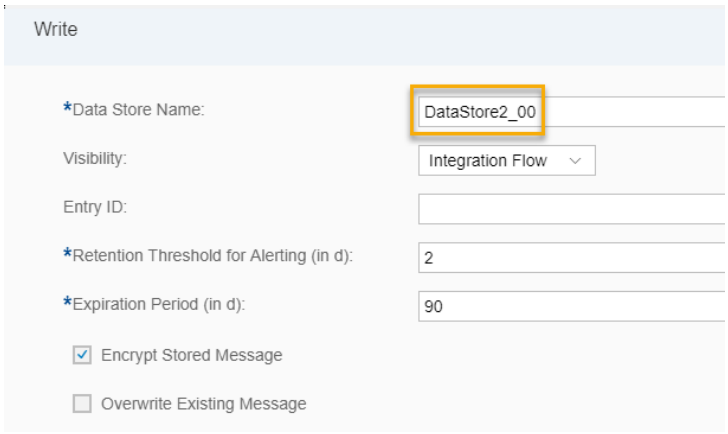
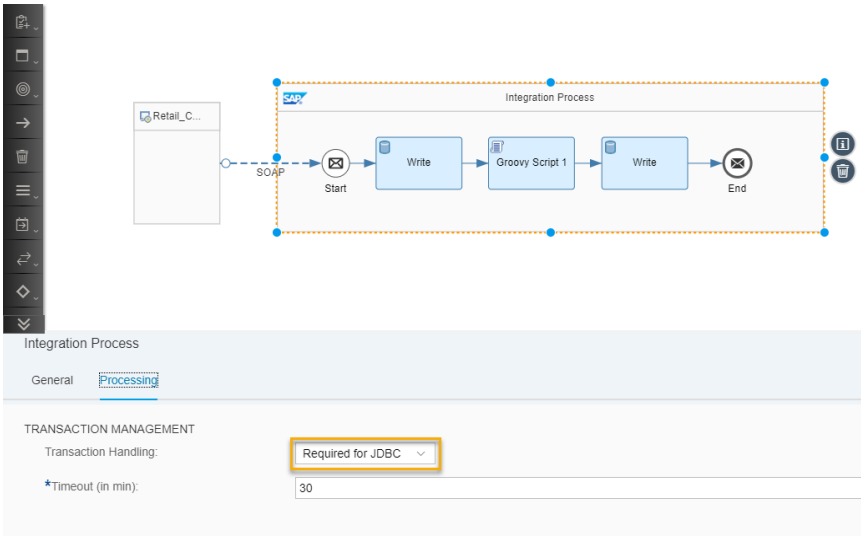
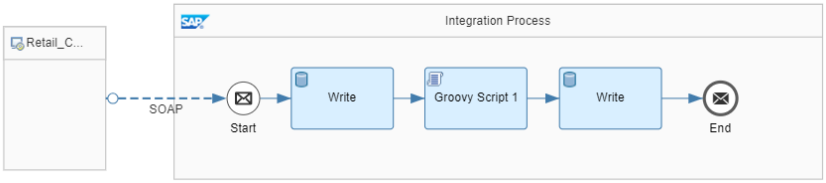
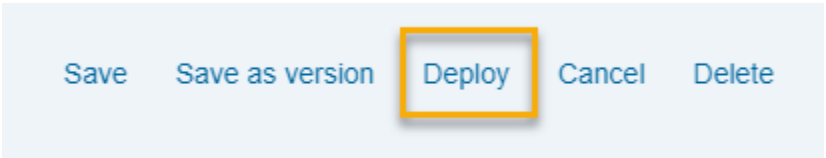
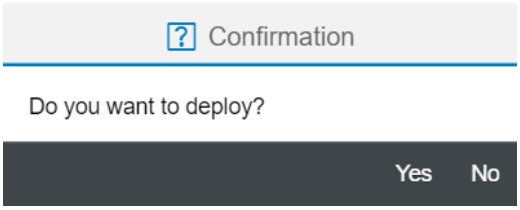
17) From the palette, select ***Persistence -> Data Store Operations -> Write*** and drop it on the connection between ***Groovy Script*** message and ***End*** message in the Integration flow.

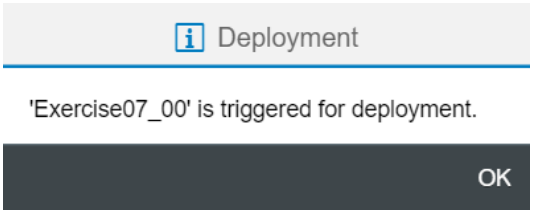
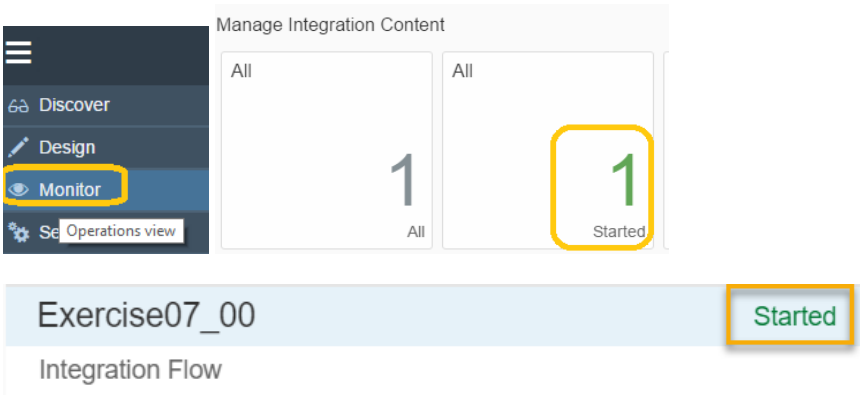
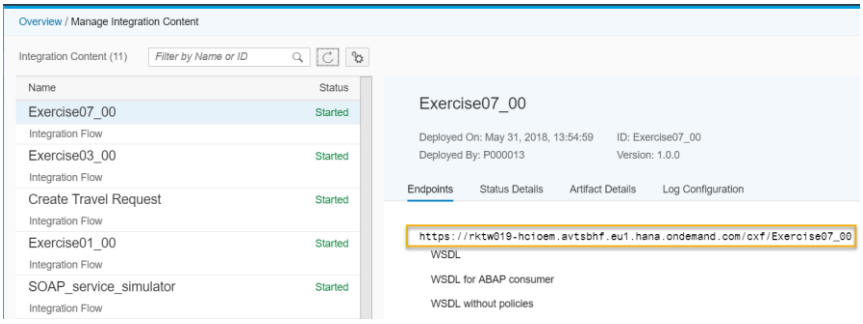
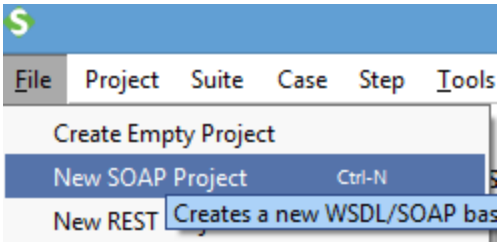
Provide the following properties:

b. Data Store Name: ***DataStore2_XX***

Keep rest of the parameters as it is and Save



	
18) Now click on the ***Integration Process***, go to the **Processing** tab in the properties sheet. Set the **Transaction Handling** drop box to **Required for JDBC.** Click on Save to save the changes	
19) Your integration flow should look like this.	
Deploy Integration Project on tenant:	**Follow this step to deploy Integration Project on tenant.**
20) Press **Deploy** in the Integration Flow Task Bar.	
21) You will receive a confirmation. Click on ***Yes***. Once the deployment is completed successfully you will receive a 2nd notification.	

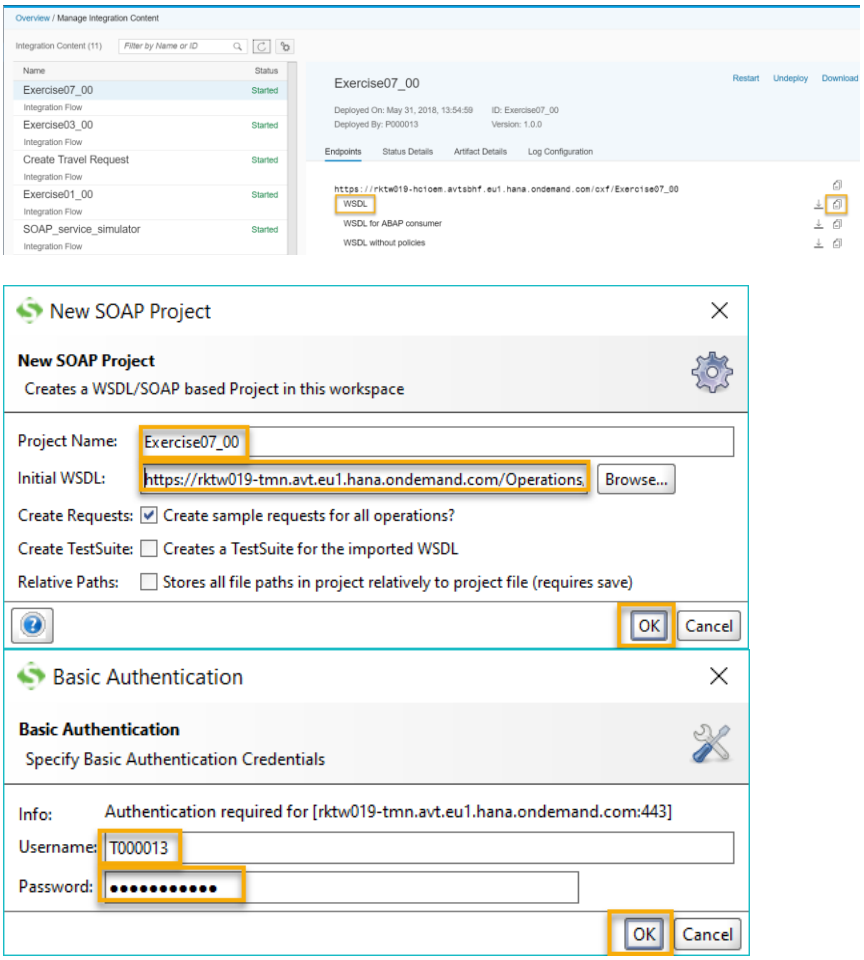
	
22) Verify if the deployment is successful: In the first level Menu Bar switch to Section ***Monitor*** and then click on ***All*** in ***Manage Integration Content***. You should see an entry with your integration flow. Check the 'status'. It should be in status ***Started***.	
Execute end to end scenario:	**Follow steps to execute end to end scenario.** **You need to configure and run the scenario end to end using SOAP UI which has been installed and configured as a pre-requisite of this training.**
23) Before we test the interface using SOAP UI, we need the End Point URL of the deployed integration flow.	
24) Select your deployed artifact. On the right side, endpoint details are available Copy the endpoint URL	
25) Open SOAP UI and create a new ***SOAP Project.***	

26) In the opened window:

a. Enter ***Exercise07_XX*** as Project Name

b. In Initial WSDL copy the WSDL link from the same place from where you copied the endpoint URL in step 24

c. Provide your CPI tenant username and password

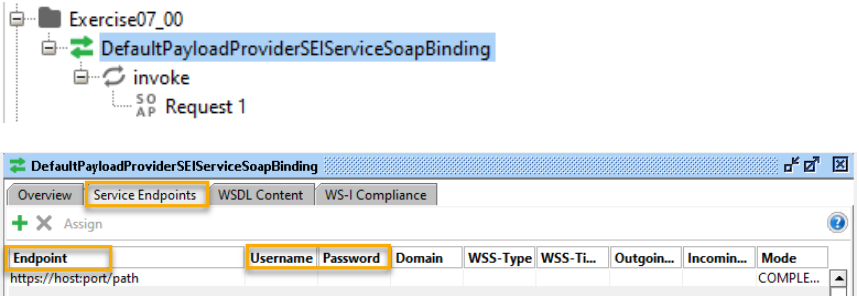


27) Navigate to the WSDL binding and maintain the following information in the ***Service Endpoints*** Tab

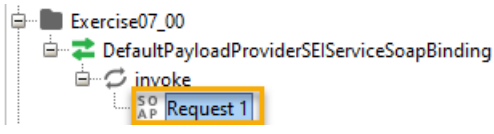
Endpoint:
<Deployed Integration Content Endpoint as described in step 24>

User:
<your CPI tenant logon User provided by the Instructor>

Password:
<your CPI tenant logon password provided by the Instructor>

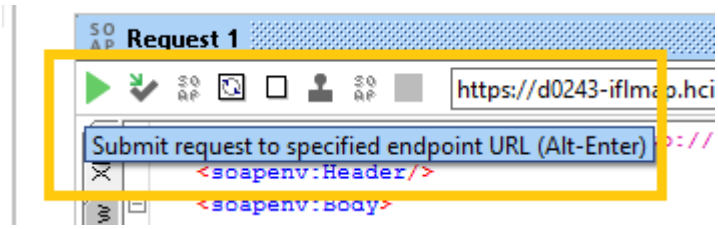


28) Double click the XML Request to open it

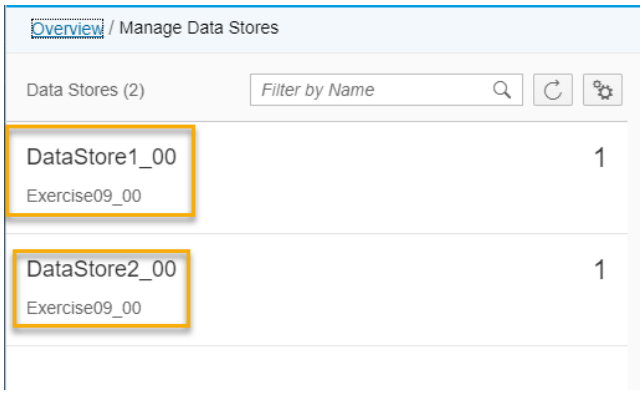


29) And click on icon  to send request to the server.

You should get response 200 OK

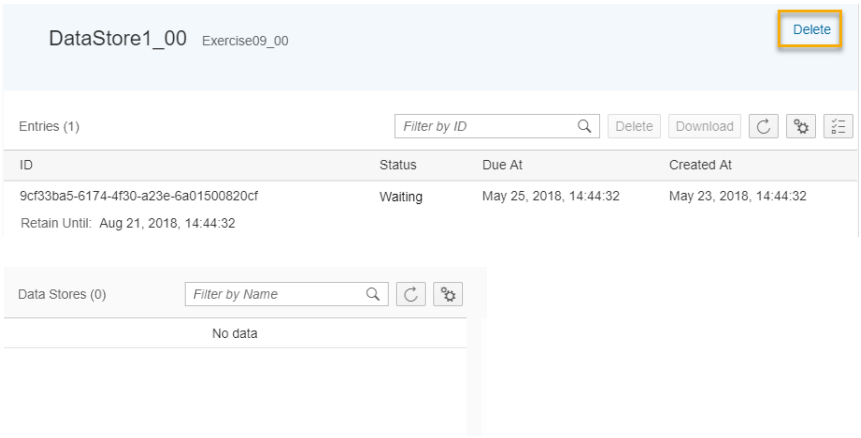


30) Now go to the ***Operations View → Manage Stores → Data Stores***. You can see 2 new data stores are created and each has one entry



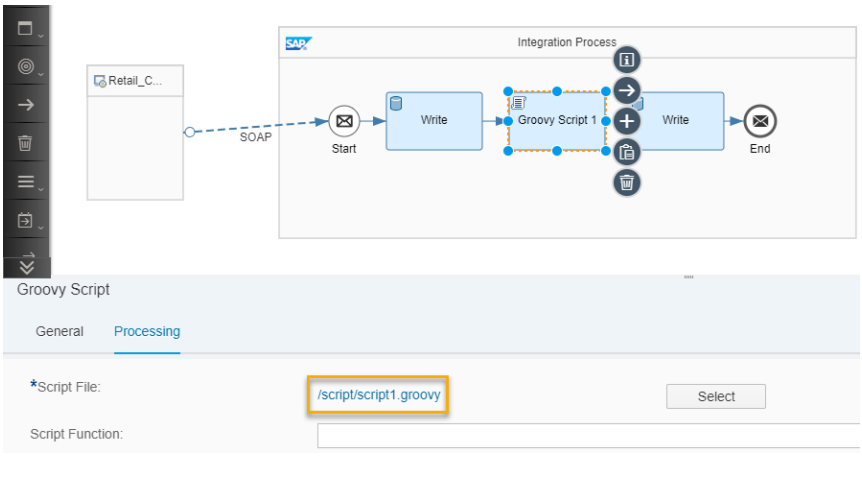
31) Now delete both the data stores from the system.
In order to do so, delete all the entries from it. Click **Delete** on the top right corner.

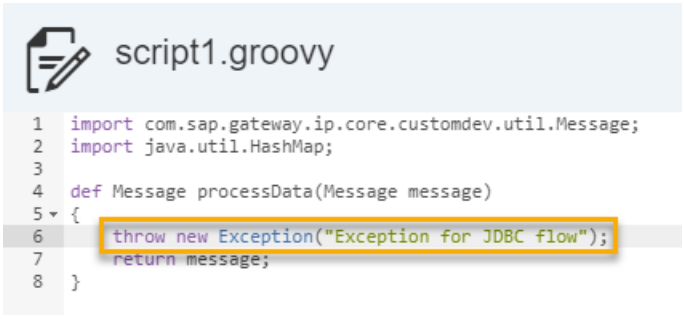
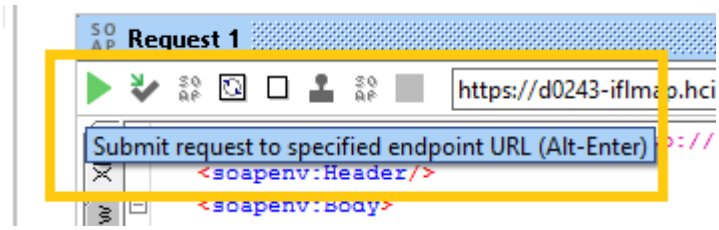
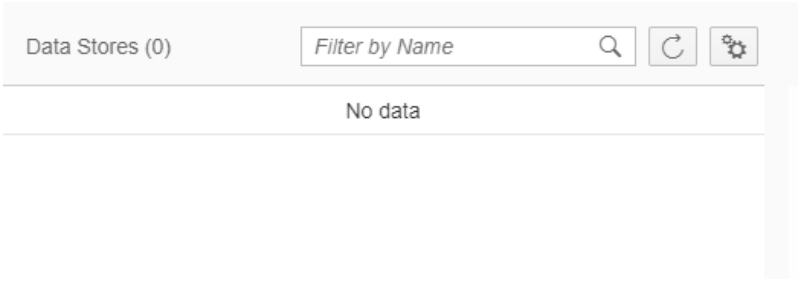
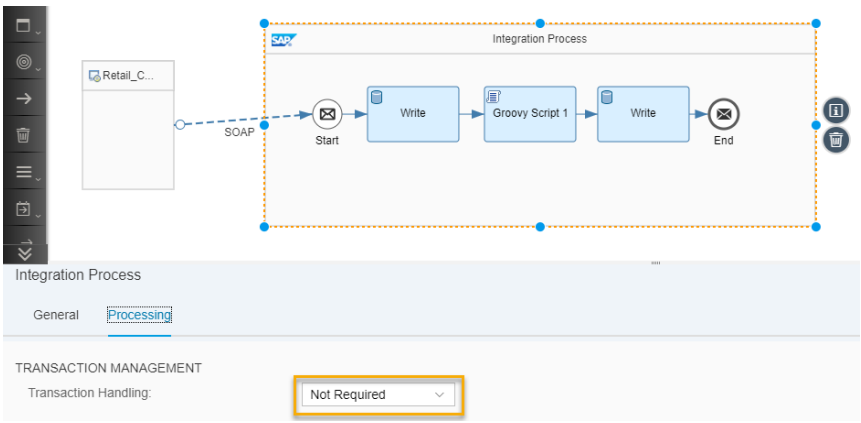
After deleting both, you should not see any data stores listed.

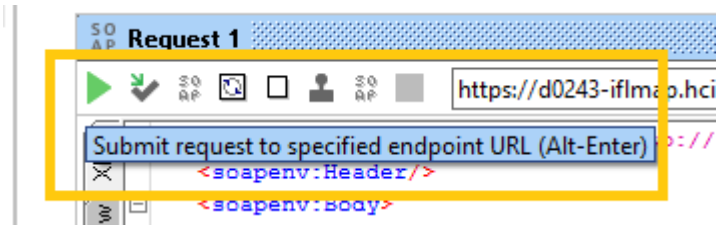


32) Now go back to the integration flow and **uncomment** the statement that throws an exception in the script process step.

This is for use case no. 2



	
33) **Save** and **Deploy** your integration flow by using the corresponding operations from the top right corner of your screen.	
34) Once the integration flow is started repeat step 28. You should get response 500 Internal Server Error as integration flow is throwing the exception	
35) Now go to the ***Operations View → Manage Stores → Data Stores***. As you can see, there are no entries. Since transaction handling is enabled and the exception was triggered after the first write, it was rolled back. The control anyway did not reach the second write.	
36) Now go back to the integration flow. Click on the ***Integration Process***, go to the ***Processing*** tab in the property sheet. Set the value of **Transaction Handling** to **Not Required.** This is for use case no. 3	
37) **Save** and **Deploy** your integration flow by using the corresponding operations from the top right corner of your screen.	

38) Once the integration flow is started repeat step 28. You should get response 500 Internal Server Error as integration flow is throwing the exception	
39) Now go to the ***Operations View → Manage Stores → Data Stores***. As you can see, only one data store gets populated i.e ***DataStore1_XX***. Since transaction handling is disabled, each data store operation was committed immediately. Since the exception occurred after the first write and transaction handling was disabled, the first write was not rolled back.