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SAP Teched 2023
IN262 - Unlocking B2B Excellence: Efficiently Onboard and Manage Trading Partners

Exercise

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0 INTRODUCTION

In this session, you will learn how to onboard a new Trading Partner by using the following capabilities of the Integration Suite:

- Integration Advisor
- Trading Partner Management
- Cloud Integration

To make this session a successful one for all attendees, we recommend a good understanding of data structures (e. g. IDoc, SOAP, X12 or EDIFACT) along with some understanding of SAP Integration Suite capability Cloud Integration. The business process that we will simulate in this exercise depicts the transfer of an Order using IDoc as a message format over Cloud Integration to a (simulated)Trading Partner withan X12 850 message(Purchase Order). To minimize the additional effort for you, the IDoc order is already prepared and will be directly sent to Cloud Integration as soon as you deploy your integration flow. The output will not be sent to a real Trading Partner system for this exercise but to the mail address you specify during the exercise.
Usually, when onboarding business partners you need to define interfaces/messages – for each of them. Once defined, you can proceed modelling the mappings in need and document all pieces. Afterwards, you build an integration flow where you have to verify the incoming structure, implement the mapping and execute further checks on the outbound structure. This step, you are obliged to do repeatedly for each of your business partners. Last, but not least, you need to configure the outbound connection for each of your integration flows in your sending system.
With the usage of the Integration Advisor, developing and documenting of the structures needed will become much easier and faster than before as the Integration Advisor is using a machine learning approach on top of the knowledge base, which contains the knowledge of already implemented integrations . In this first part of the exercise, the creation of the interface/message structures and mappings in the Integration Advisor is already done. In exercise 2 you also have to work on the MIG structure (interface) and on the MAG (mapping).

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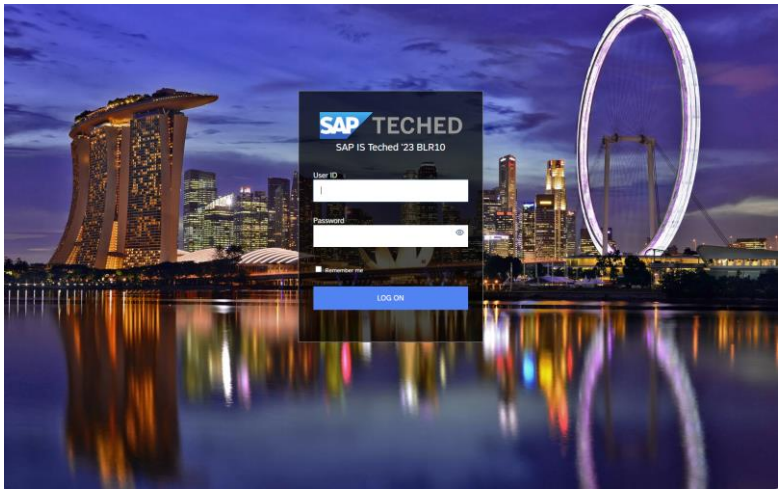
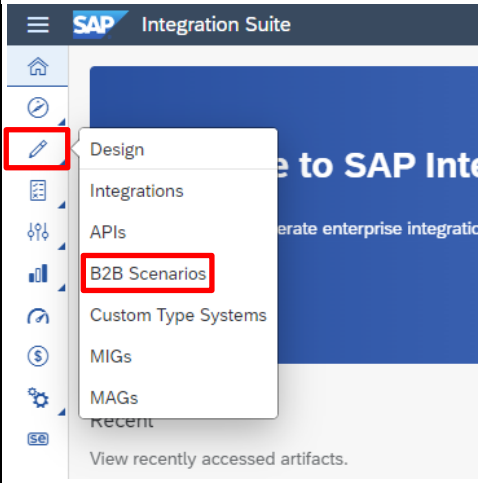
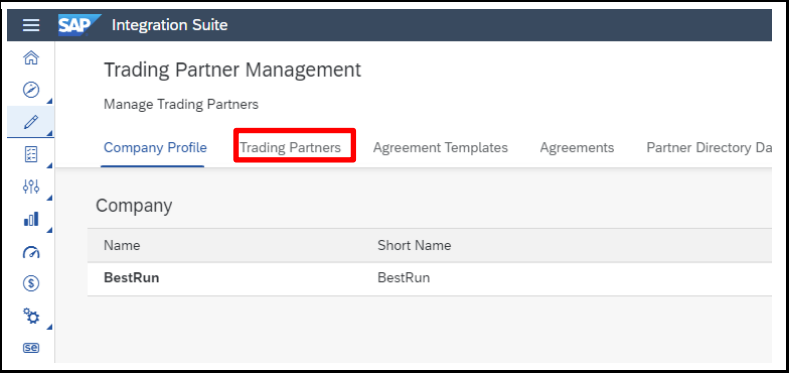
1 EXERCISE 1

1.1 Create new Trading Partner

We have two tenants for this exercise. For the Groups 1-30 please use Tenant 1 and for the Groups 31-60 please use Tenant 2
Tenant 1: https://teched23blr09.integrationsuite.cfapps.ap11.hana.ondemand.com/
Tenant 2: https://teched23blr10.integrationsuite.cfapps.in30.hana.ondemand.com/

Explanation	Screenshot
1. Log on to the Integration Suite tenant with your system details provided to you by the instructors.	
2. Navigate to *Design* and select *B2B Scenarios*.	
3. As you want to onboard a new Trading Partner switch to the tab *Trading Partners*.	

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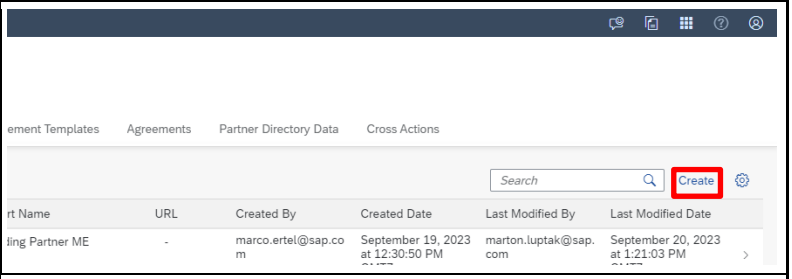
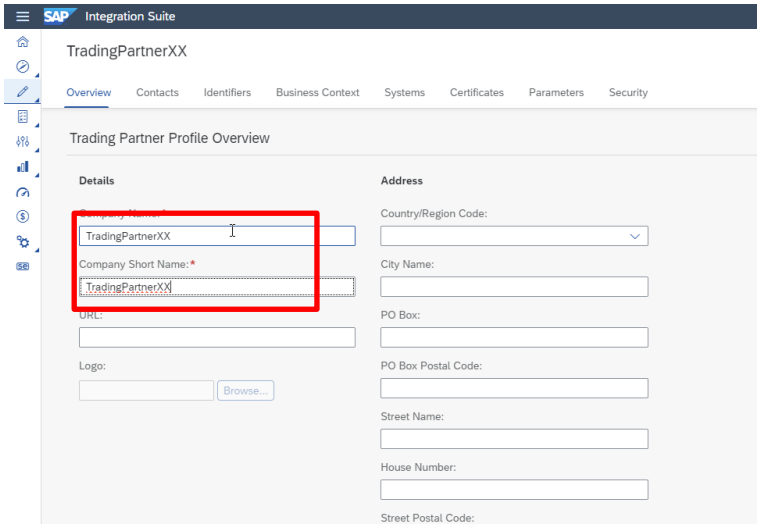
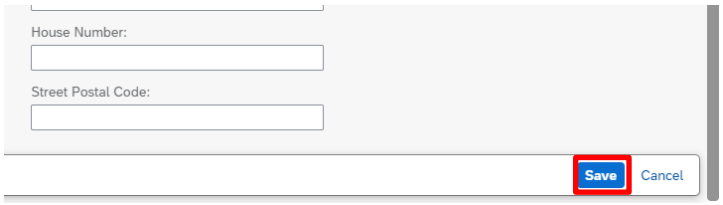
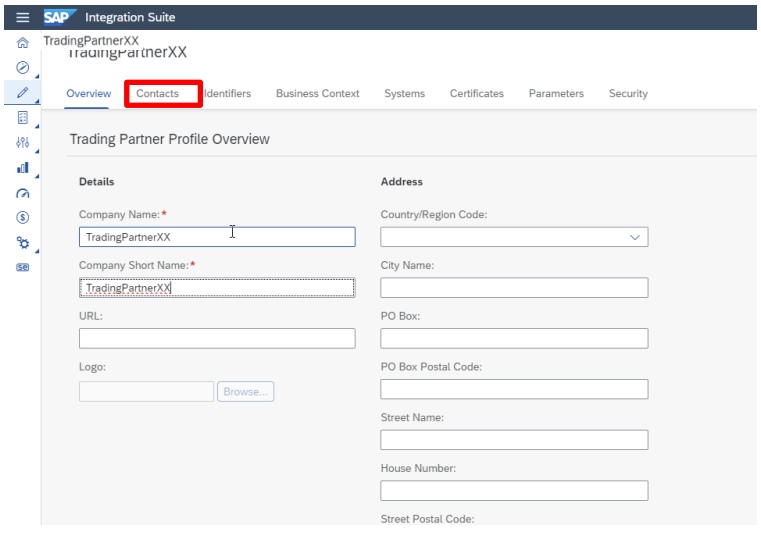
Explanation	Screenshot
4. Select *Create* to create a new Trading Partner.	
5. On the following screen, you need to maintain general data for the new trading partner as follows: Company Name: *TradingPartnerXX* (with *XX* your group number) Company Short Name: *TradingPartnerXX* (with *XX* your group number) All the other fields are optional.	
Please save the newly created Trading Partner.	
6. Switch to the *Contacts* tab and select *Create Contact*.	

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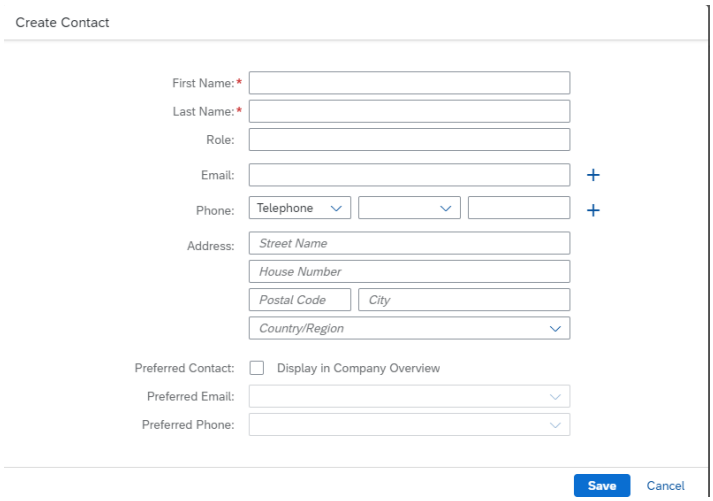
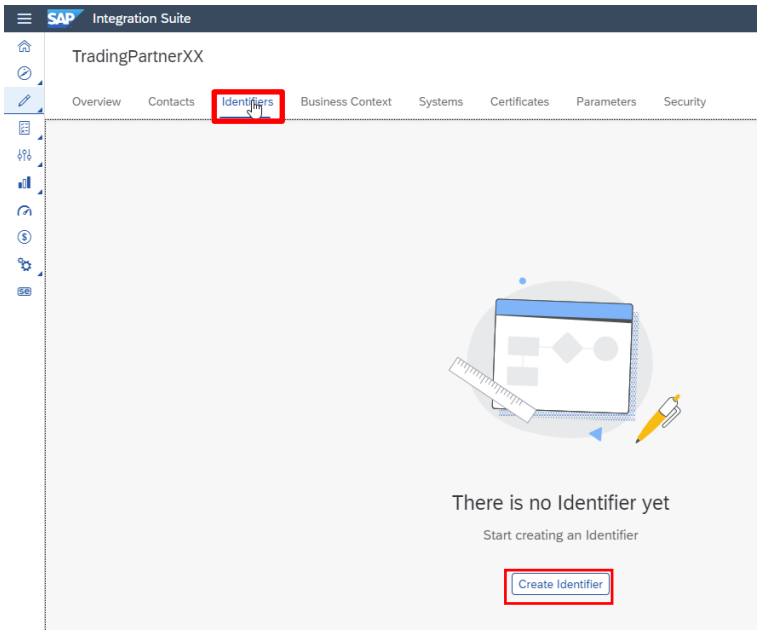
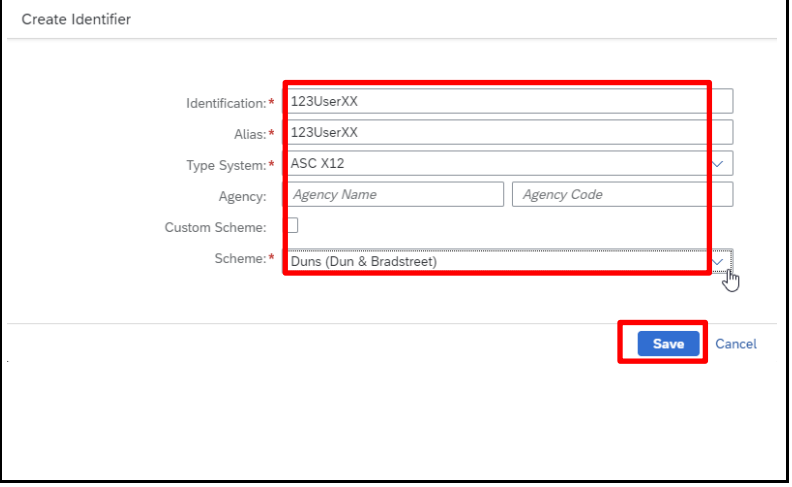
Explanation	Screenshot
7. On the *Contacts* tab, you can optionally add names and details of persons who are responsible at the Trading Partner side.	
8. Navigate to the tab *Identifier* and select *Create Identifier*.	
9. Every Trading Partner needs at least two identifiers, one which is used in the X12 exchange and a second which is used in the S/4 System. Maintain the first identifier as follows: Use Identification *123UserXX* (with *XX* your group number), 123UserXX also for the Alias(with *XX* your group number), select Type System *ASC X12*, and Scheme *Duns (Dun & Bradstreet)*, then save the new identifier.	

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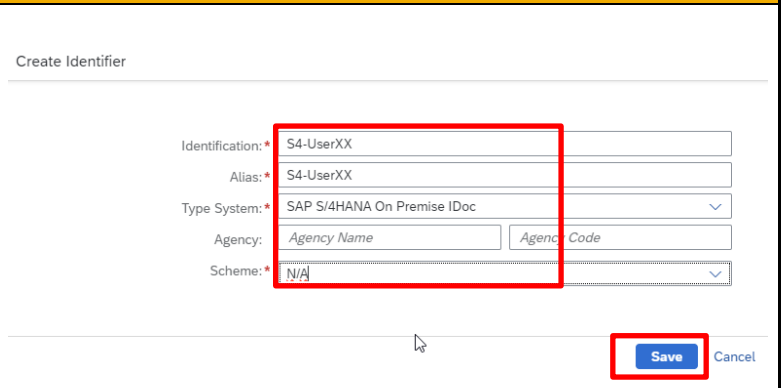
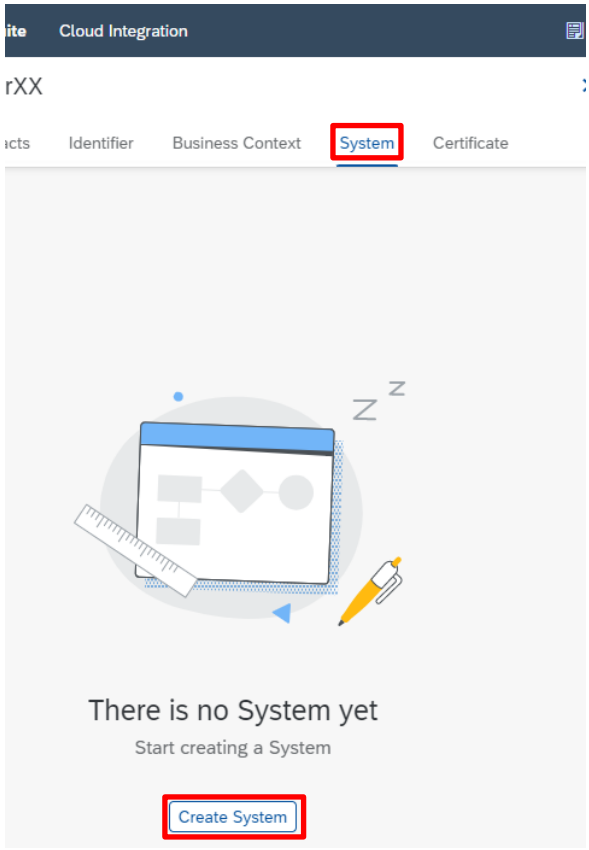
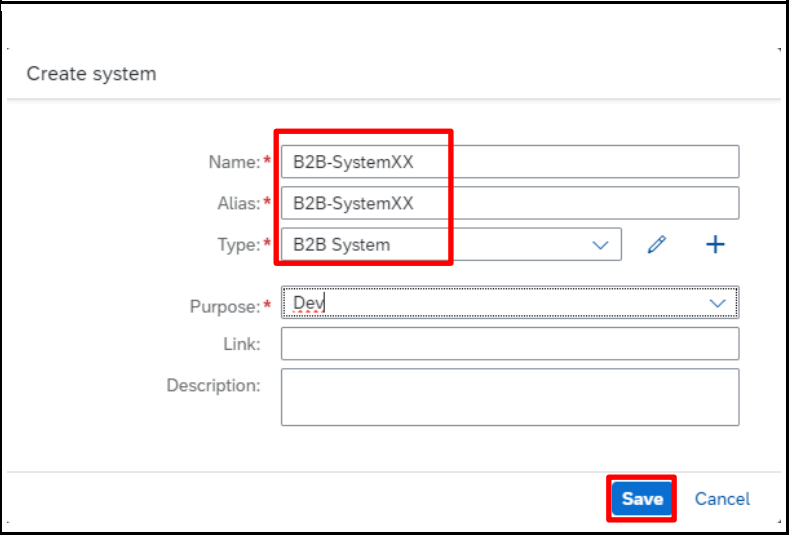
Explanation	Screenshot
Maintain the second identifier as follows: Use Identification *S4-UserXX* (with *XX* your group number), *S4-UserXX* (with *XX* your group number) as Alias, select Type *System SAP S/4HANA on Premise IDoc*, and Scheme *N/A*, then save the new identifier.	
10. The Business Context is at the moment optional, but we need to create a system where the supported type system and communication details have to be maintained. Navigate to the tab *System* and select *Create System*.	
11. Please add the following Details: Name *B2B-SystemXX* (with *XX* your group number), *B2B-SystemXX* (with *XX* your group number) as Alias, Type *B2B System*, Purpose *Dev* and save the new system.	

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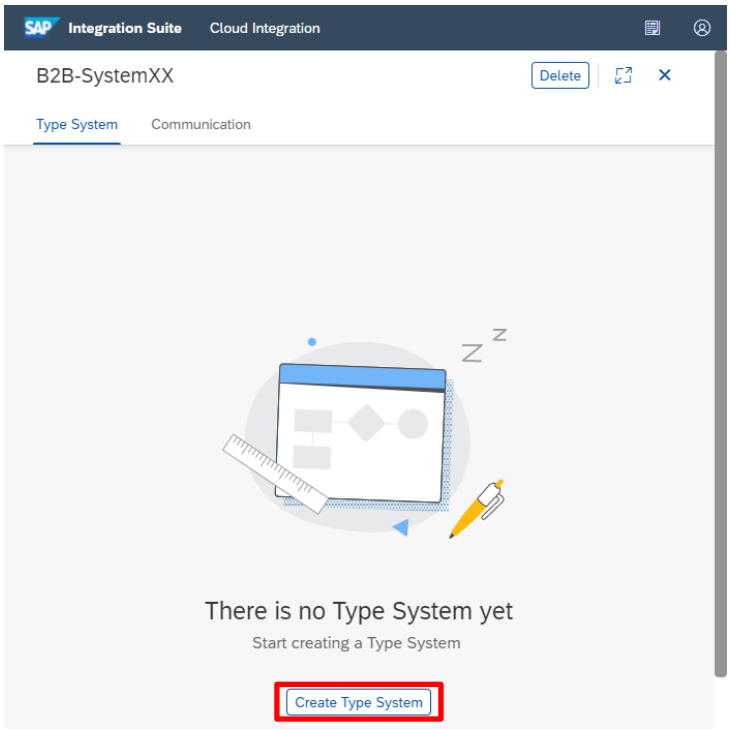
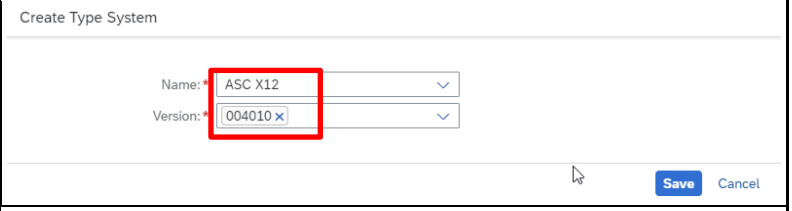
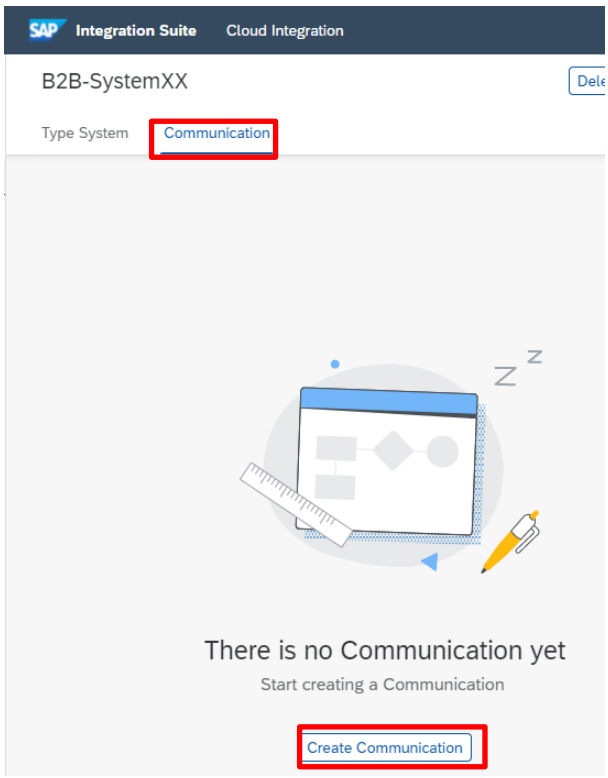
Explanation	Screenshot
12. Select the beforehand created system to create the supported Type System. On tab *Type System*, select *Create Type System*.	
13. Use *ASC X12* and Version 00*4010*, then save the new Type System.	
14. Next, you need to maintain the communication details. Switch to tab *Communication* and select *Create Communication*.	

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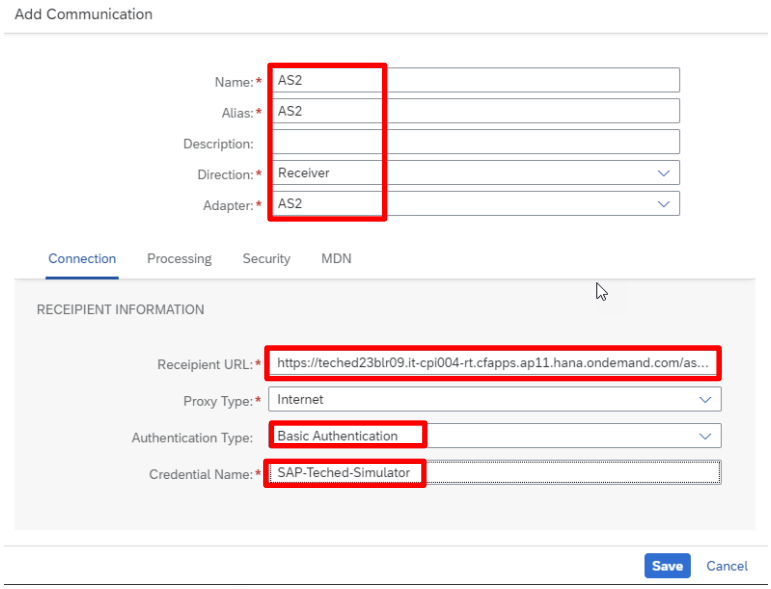
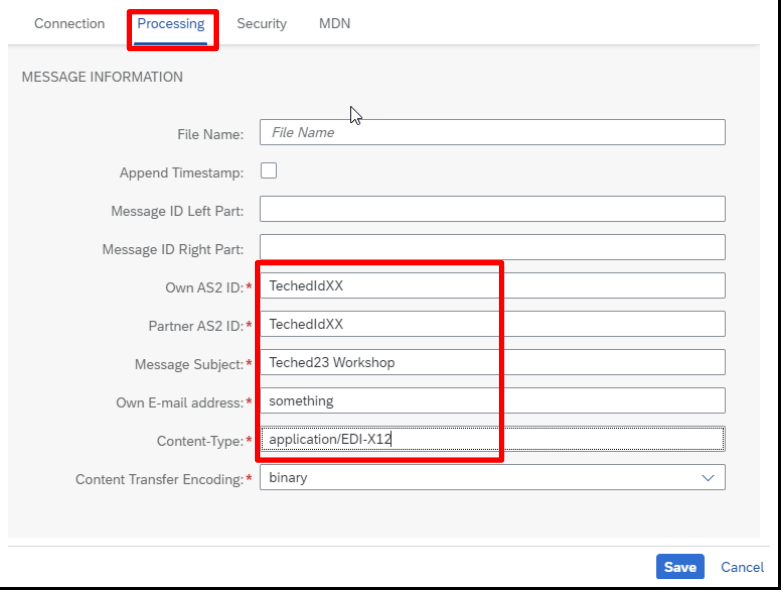
Explanation	Screenshot
15. As this Trading Partner will receive (a) Purchase Order(s) with the AS2 protocol, you need to create an AS2 Receiver. As you have to authenticate at the AS2 Receiver you need here a credential (*SAP-Teched-Simulator)* and the Endpoint of that Trading Partner (if you are on BLR09 (Group 01-30) please use: https://teched23blr09.it-cpi004-rt.cfapps.ap11.hana.ondemand.com/as2/as2 (take care not to have spaces or linebreaks in that url) if you are on BLR10 (Group 31-60) please use https://teched23blr10.it-cpi021-rt.cfapps.in30.hana.ondemand.com/as2/as2 *)*	
16. AS2 needs additional information which you have to maintain on the Tab *Processing*. The IDs (Own and Partner) must start with *TechedId*. You can of course add something after that string. For the mail address you can in this exercise use any text. For the Content-Type use *application/EDI-X12*	

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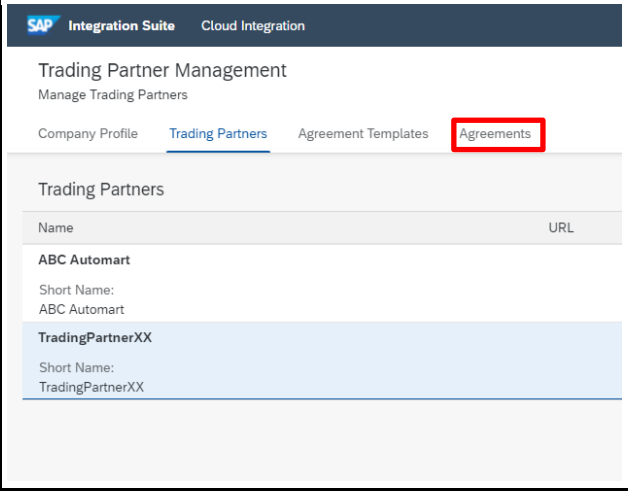
1.2 Use Agreement Template to create an agreement

With the Agreement, you instantiate the agreement template where you need to fill out the details of the trading partners. TPM differentiates between Identifiers which will be used in the system of the company and Identifiers which are used in our example in the IDoc message. Let's have a look at the relevant part of our IDoc Payload:

```
<ORDERS05 xmlns="urn:sap-com:document:sap:idoc:soap:messages">
  <IDOC BEGIN="1">
    <EDI_DC40 SEGMENT="1">
      <TABNAM>EDI_DC40</TABNAM>
      <DOCNUM>0000000000000002</DOCNUM>
     <DOCREL>1809_FPS02</DOCREL>
      <DIRECT>2</DIRECT>
      <OUTMOD>3</OUTMOD>
      <IDOCTYP>ORDERS05</IDOCTYP>
      <MESTYP>ORDERS</MESTYP>
      <MESCOD>EX</MESCOD>
      <MESFCT>A48</MESFCT>
      <STD></STD>
      <STDVRS>4010</STDVRS>
      <STDMES>850</STDMES>
      <SNDPOR>SUBSYSTEM</SNDPOR>
      <SNDPRT>KU</SNDPRT>
      <SNDPRN>GPR_020</SNDPRN>
      <RCVPOR>SAPMAT</RCVPOR>
      <RCVPRT>LS</RCVPRT>
      <RCVPRN>S4-UserXX</RCVPRN>
      <CREDAT>20221007</CREDAT>
      <CRETIM>071312</CRETIM>
      <REFINT>004301228</REFINT>
      <REFGRP>4301367</REFGRP>
      <REFMES>ORDERS05</REFMES>
    <SERIAL>20221007071312</SERIAL>
```

GPR_020 is the Identifier which you can find in the My Company Details.
S4-UserXX can be found in the Details of the Trading Partner under "Identifier as Company" (as usual the XX will then be your group number).

Explanation	Screenshot
1. Navigate back to *Design → B2B Scenarios*, and switch to the tab *Agreements*.	

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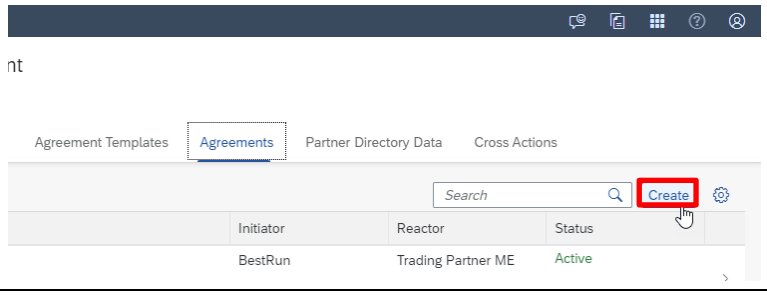
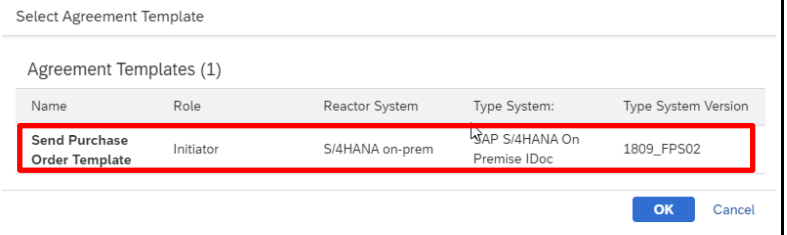
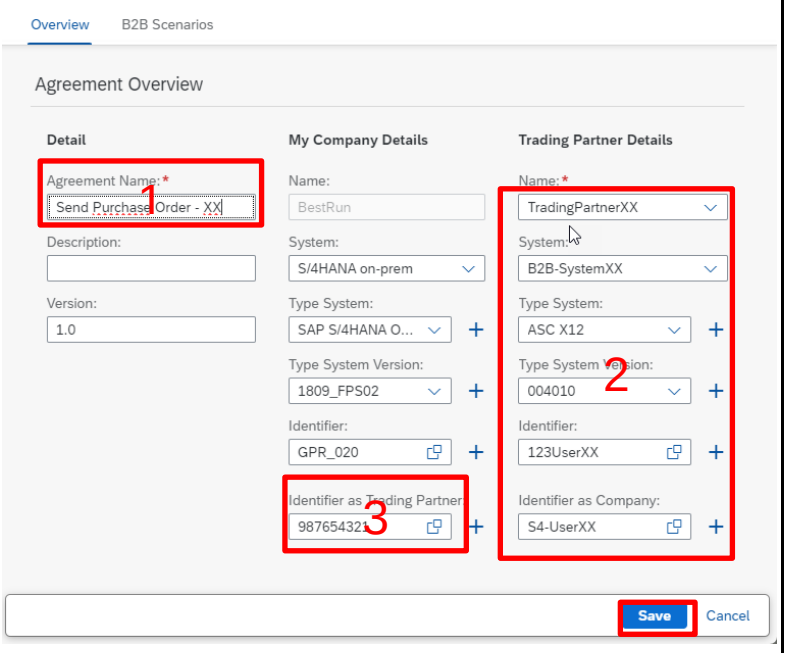
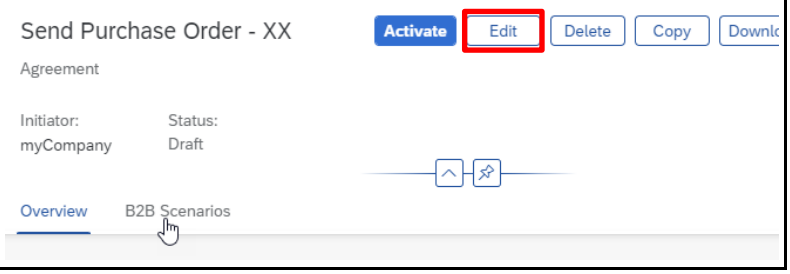
Explanation	Screenshot
2. On the *Agreements* tab, create a new Agreement.	
3. In the upcoming dialog, select the existing Agreement Template *Send Purchase Order Template* and select *OK*.	
4. Please start with renaming the Agreement to *Send Purchase Order – XX* and change the Description. Now you need to specify with which Trading Partner you want to communicate by entering the following details in the following order (with *XX* your group number): Maintain the Trading Partner Details with Name *TradingPartnerXX*, System *B2B-SystemXX*, Type System *ASC X12*, Type System Version *4010*, Identifier *123UserXX*, and Identifier as Company *S4XX*. Finally, select the Identifier as Trading Partner *987654321* from the drop-down. Hint: use the drop-down help but start with the Trading Partner Details and select the Identifier as Trading Partner as the last one. When done, save your settings.	
5. For the newly created agreement, switch to the *Edit* Mode	

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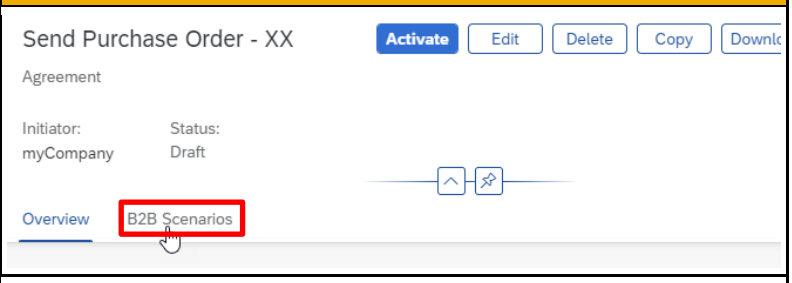
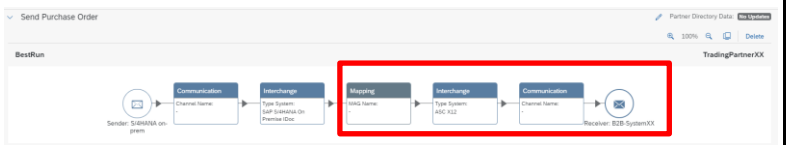
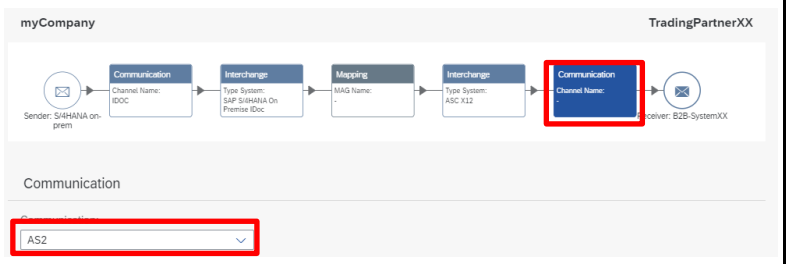
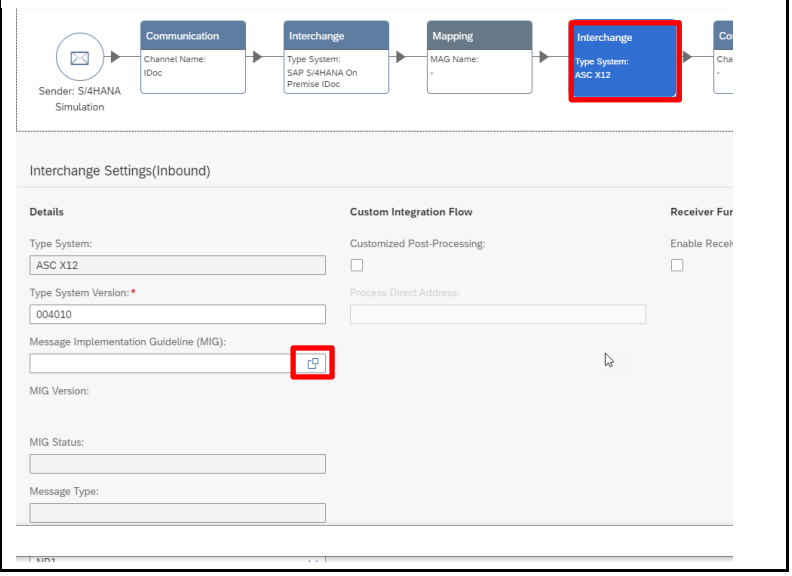
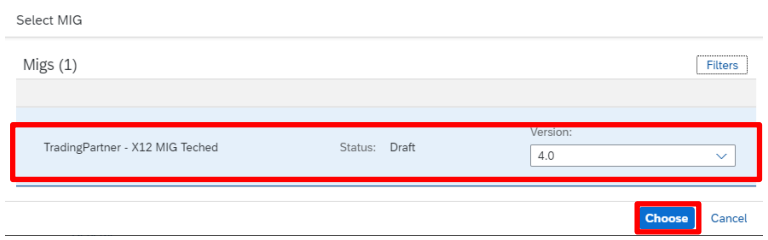
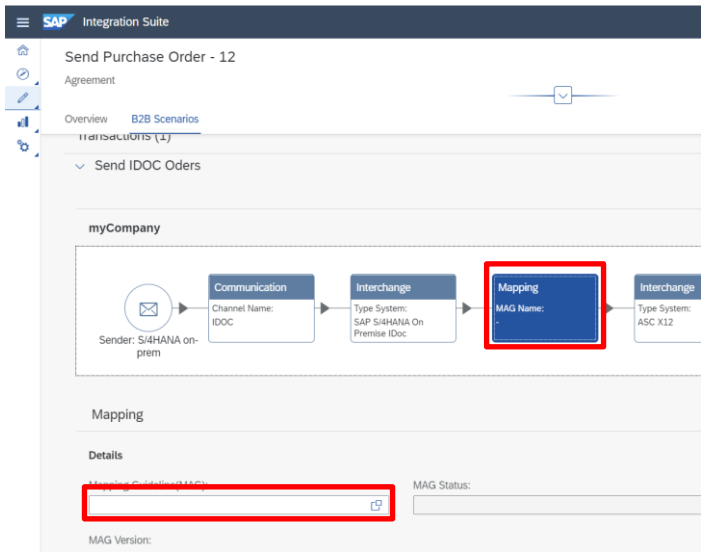
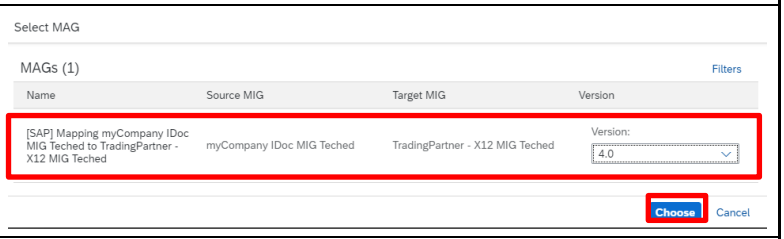
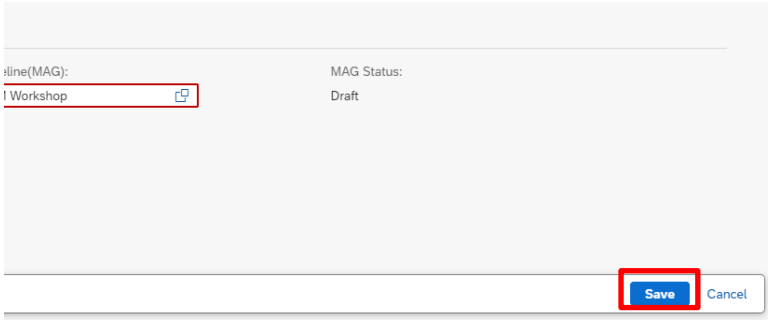
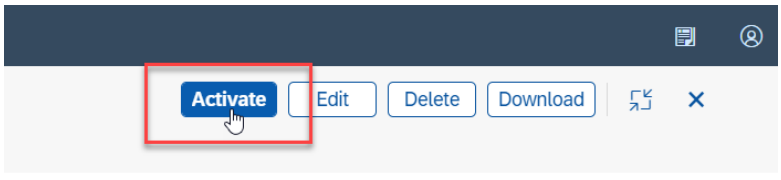
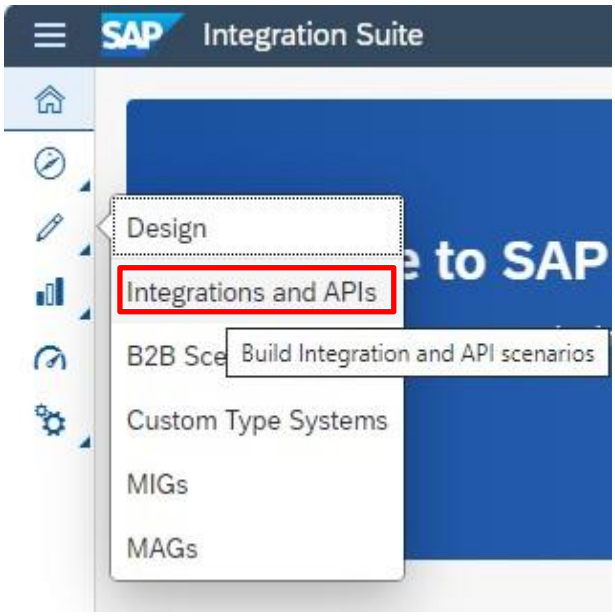
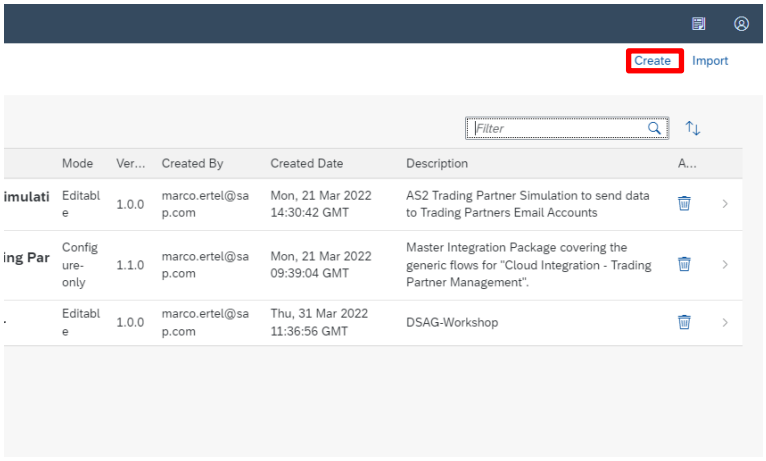
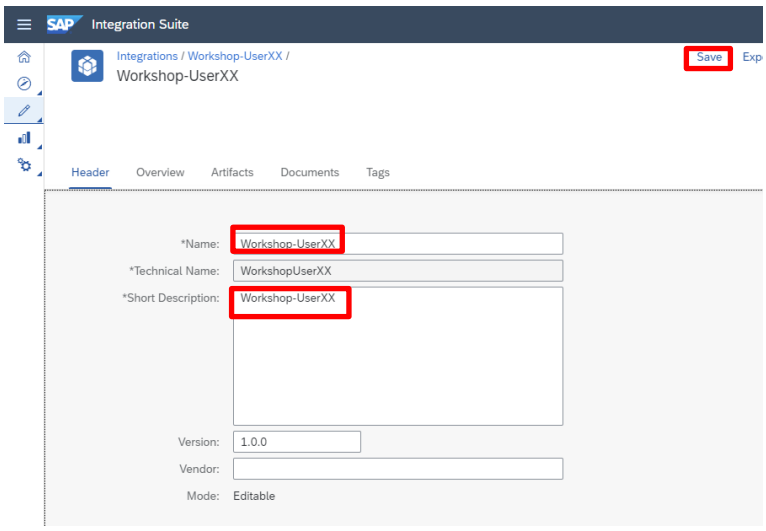
Explanation	Screenshot
6. Navigate to the tab *B2B Scenarios*.	
7. There you see the transactions for the scenario. In our exercise, it is only one transaction (one-way). In general, it could be several and those could also be two-way transactions. The first two elements within the flow (note, flow goes from left to right) Communication and Interchange are pre-filled from the Agreement Template, but the others have to be filled out now.	
8. Please start on the right by clicking on the first *Communication* box within the flow and select *AS2* for Communication.	
9. Please click now on the *Interchange* box to define the Message Implementation Guideline. Select the drop-down list. Note: The Message Implementation Guideline have been already prepared by using the Integration Advisor capability of SAP Integration Suite.	

Public

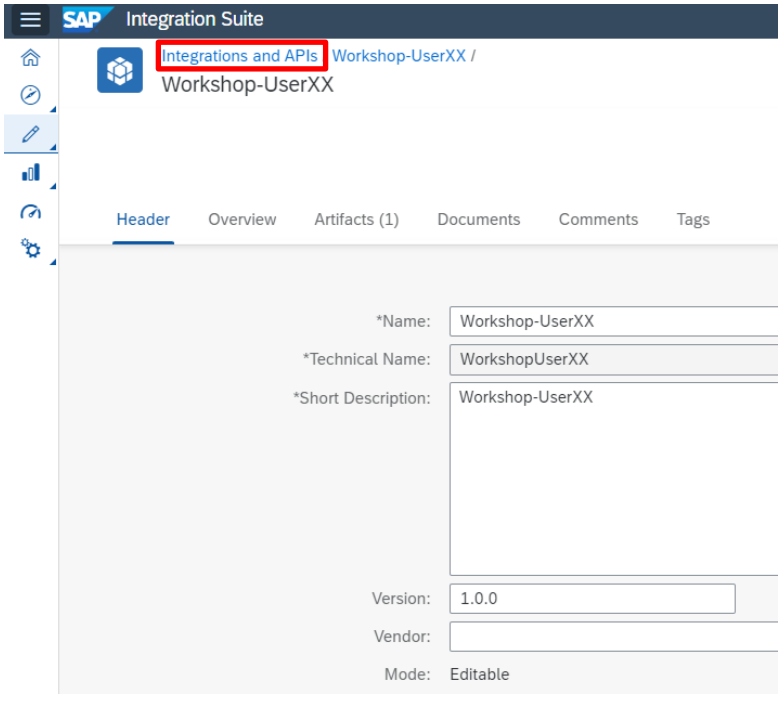
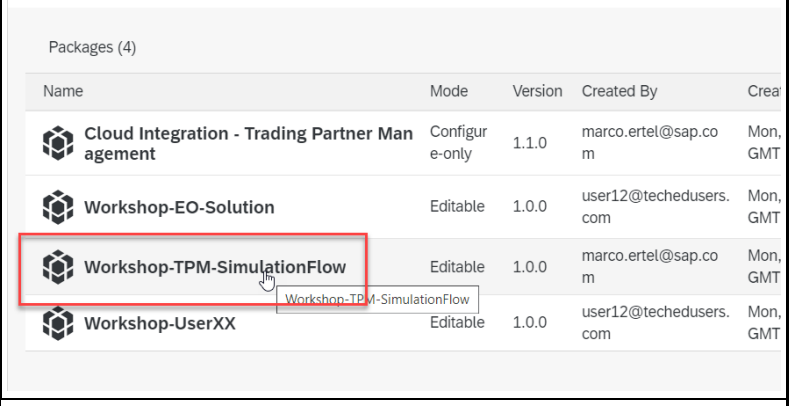
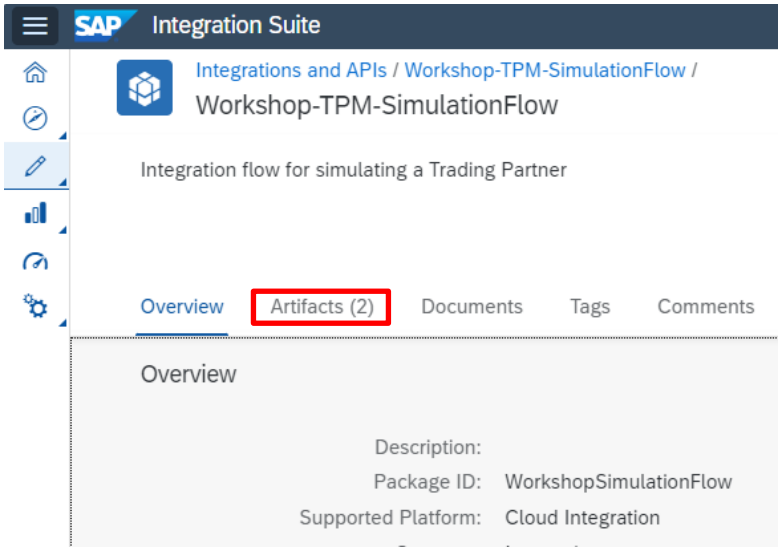
Explanation	Screenshot
10. In the pop up select *TradingPartner – X12 MIG Teched* and switch to the highest version. Then select *Choose*.	
11. Last step for the definition of the Agreement is to select the *Mapping* box (which is also prepared by using the Integration Advisor). Select the drop-down list.	
12. In the pop up select *[SAP] Mapping myCompany IDoc MIG Teched to TradingPartner - X12 MIG Teched* and switch to the highest version. Then select *Choose*.	
13. Please save now the Agreement.	
14. Activate the Agreement to publish all necessary data to the Partner Directory of Cloud Integration. With this, the Status will change from *Draft* to *Active*.	

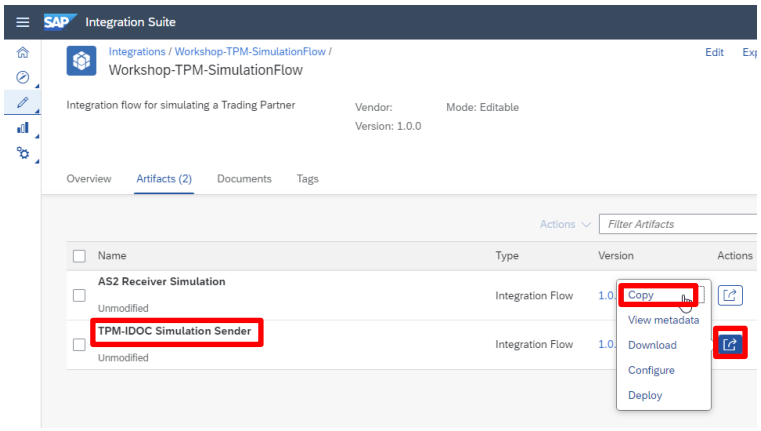
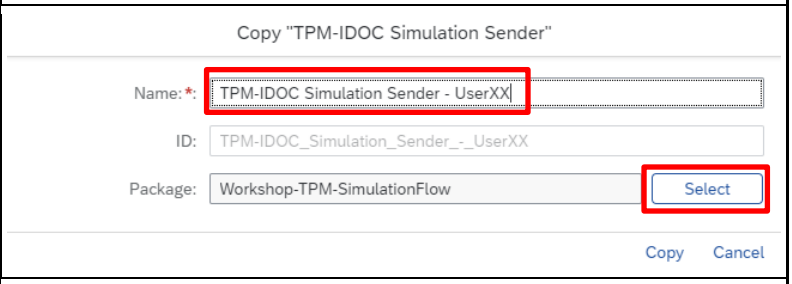
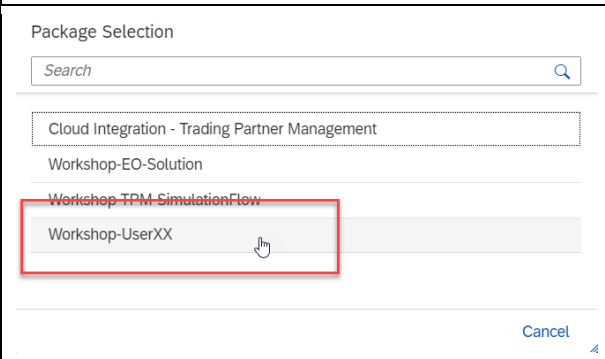
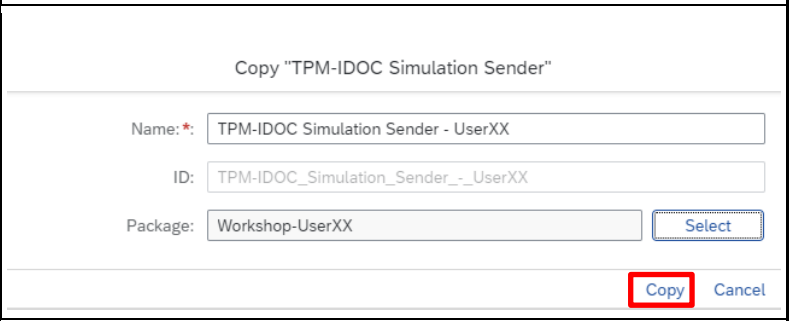
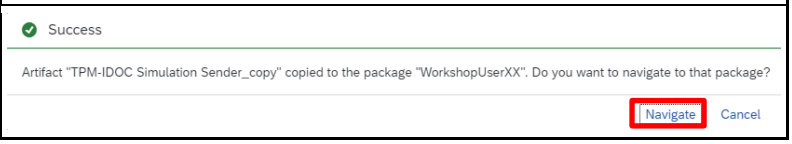
1.3 Prepare Simulation Flow and send a message

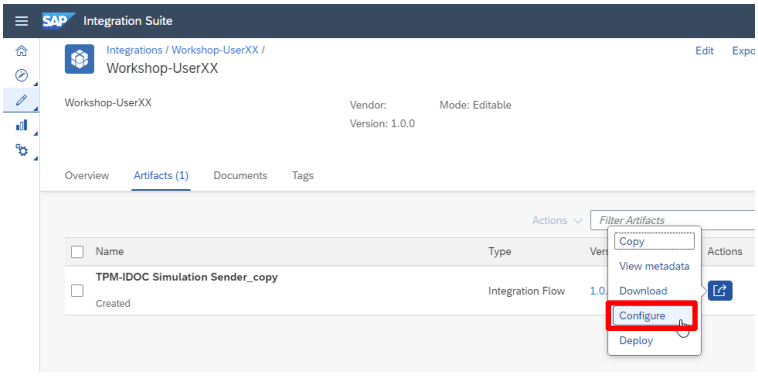
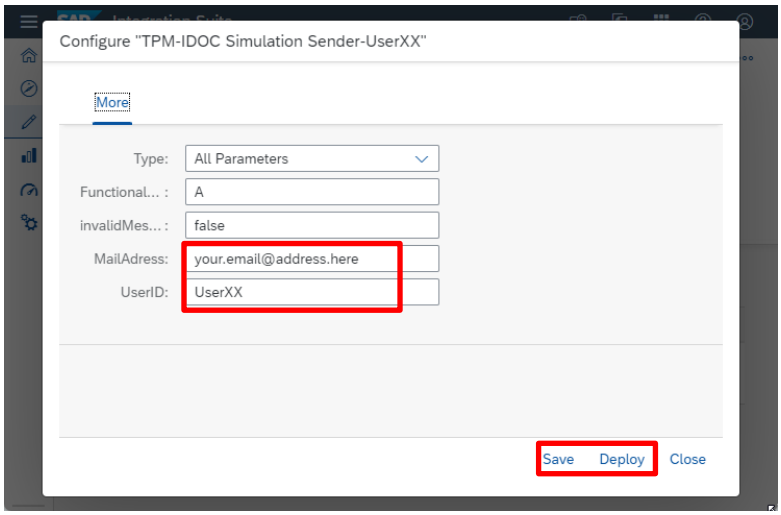
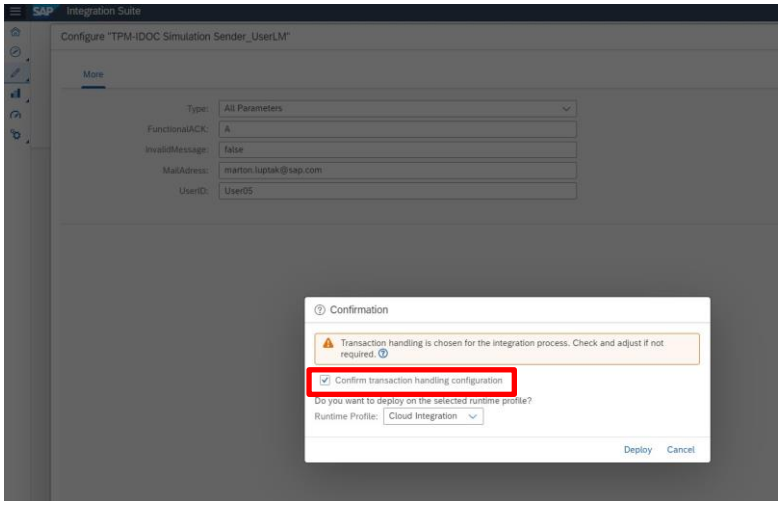
As we have defined that our Company will send an IDoc Order using the IDOC Protocol we need to simulate this sender. For this we have built an integration flow which you have to copy to a new package, configure and deploy. The IDoc message is sent as soon as the integration flow is deployed.

Explanation	Screenshot
1. Navigate to *Design -> Integrations and APIs*.	
2. If you haven't done so before, create a new Package by clicking *Create*.	
3. Use *Workshop-UserXX* for Name and Short Description with *XX* your user Id and *save* the package.	

Public

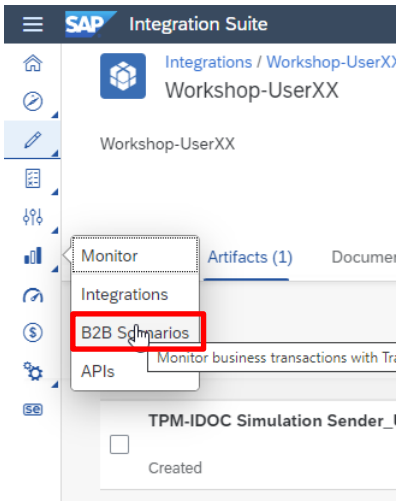
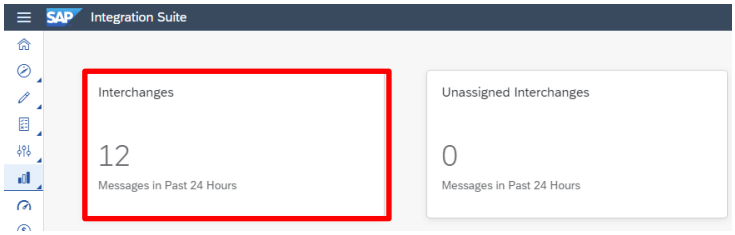
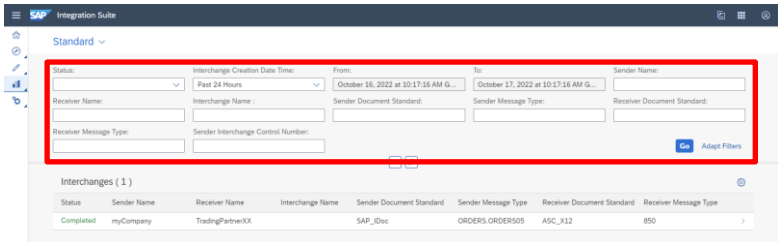
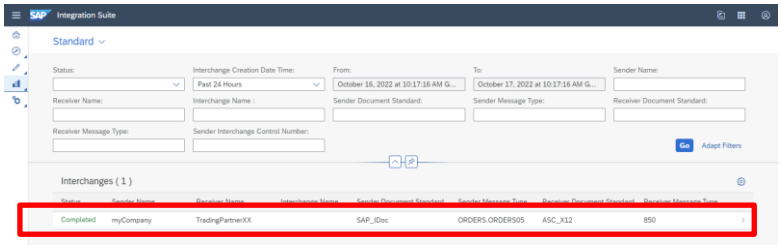
Explanation	Screenshot
4. Navigate back to the list of existing packages by clicking *Integrations and APIs*.	
5. Open the package *Workshop-TPM-SimulationFlow*.	
6. In the package, switch to tab *Artifacts*.	

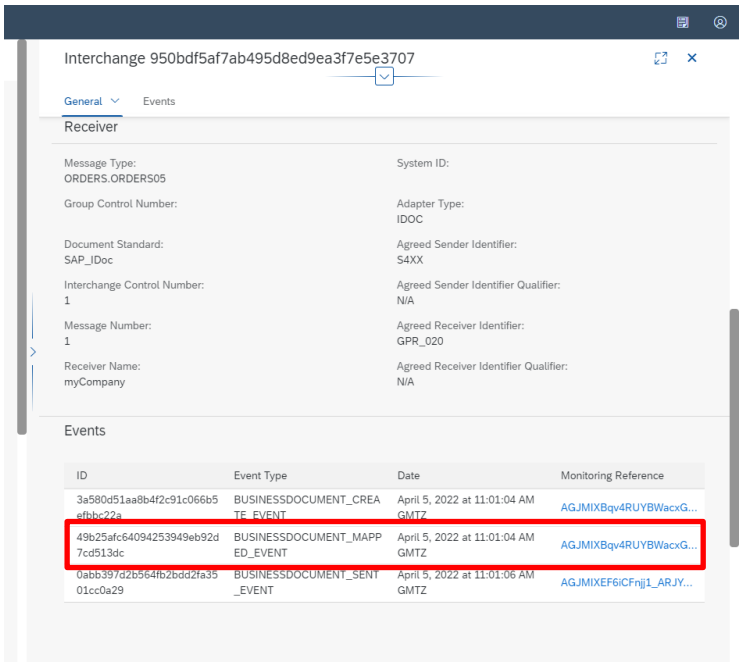
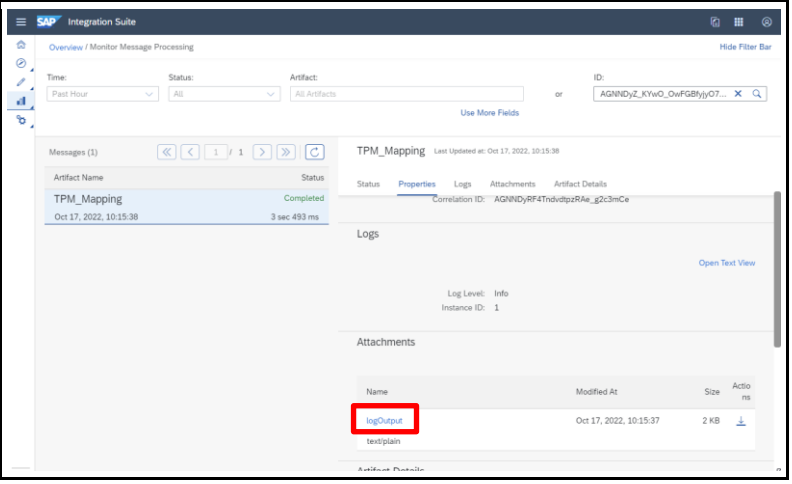
Explanation	Screenshot
7. Copy the integration flow *TPM-IDOC Simulation Sender* to your own package. Select *Copy* from the *Actions* menu of the *TPM-IDOC Simulation Sender* integration flow.	
8. In the popup, change the name to *TPM-IDOC Simulation Sender - UserXX* (with *UserXX* using your ID). Then select *Select* to change the target package.	
9. In the upcoming package selection screen, select your package *Workshop-UserXX*.	
10. Next, select *Copy*.	
11. On the next dialog, select *Navigate* to open your package.	

Explanation	Screenshot
12. You now have to *Configure* the integration flow. Select *Configure* from the *Actions* menu of the *TPM-IDOC Simulation Sender - UserXX* integration flow.	
13. Please configure the integration flow with your mail address and UserID *UserXX*. The transformed message will be sent to this Mail adress. Then select *Save* and *Deploy*. Once the integration flow is successfully deployed, the message is sent and should appear in your mailbox a few seconds later. In case a warning message pop-up about IDOC[MessageFlow…] please close the warning message	
14. Please select the Confirmation message about transaction handling by selecting the checkmark. The runtime profile is preselected as Cloud Integration and select deploy!	

1.4 Monitor the Scenario

As the sent IDoc message is now sent to the generic integration flow and from there via the AS2 Adapter to other (already prepared) integration flow you should get an email in your inbox with the payload as an X12 850 message. To monitor B2B Scenarios let's have a look at the B2B Monitoring.

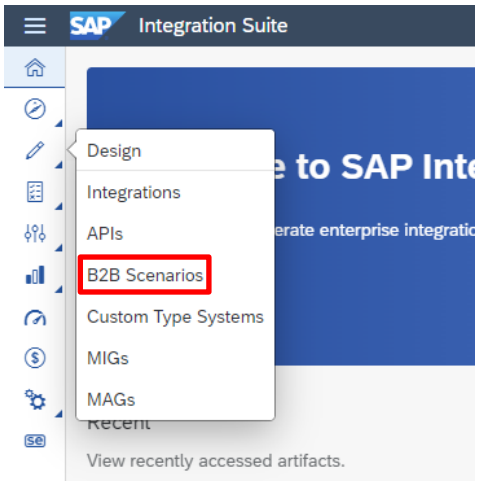
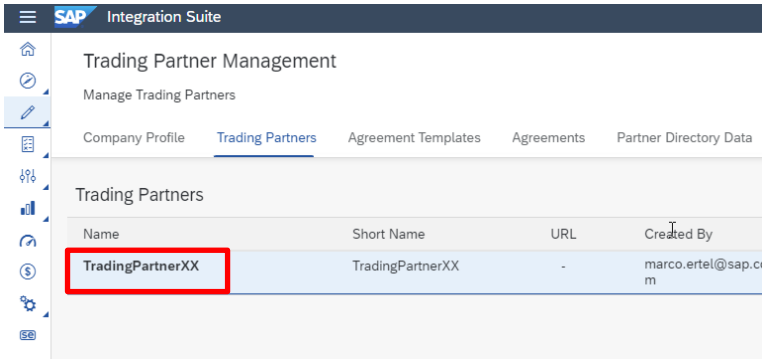
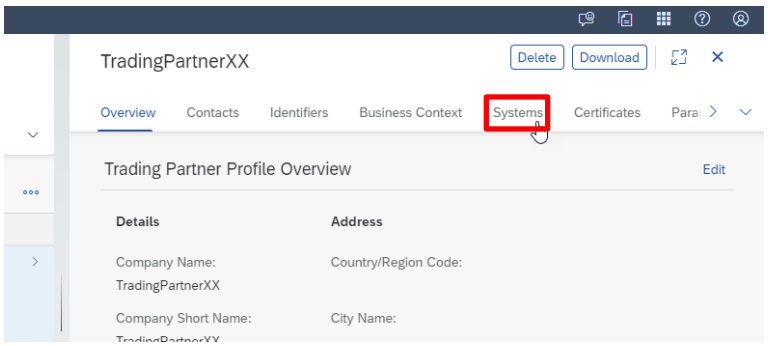
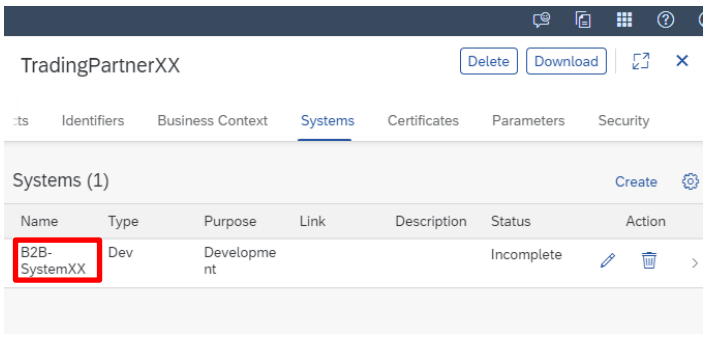
Explanation	Screenshot
1. Navigate to the B2B Monitoring by selecting *Monitor → B2B Scenarios*.	
2. On the tiles you see how many interchanges had been processed in the last 24 hours. Click on the left tile.	
3. Now you see all messages from the last 24 hours. You can restrict them by using the filters.	
4. Click on one of your *Completed* interchanges.	

Explanation	Screenshot
5. On this page, you see more details like Sender Name, Adapter Type, … and you can also jump to the technical monitoring if this is necessary and you are also able to see the payload of the source and target message.	
6. Depending on the Event you've selected, you see here more details on a technical level to solve issues if necessary.	

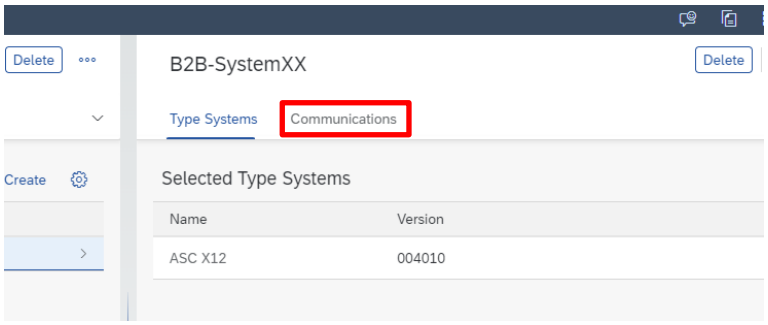
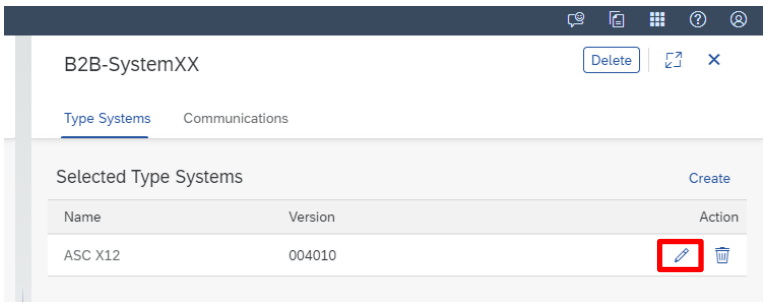
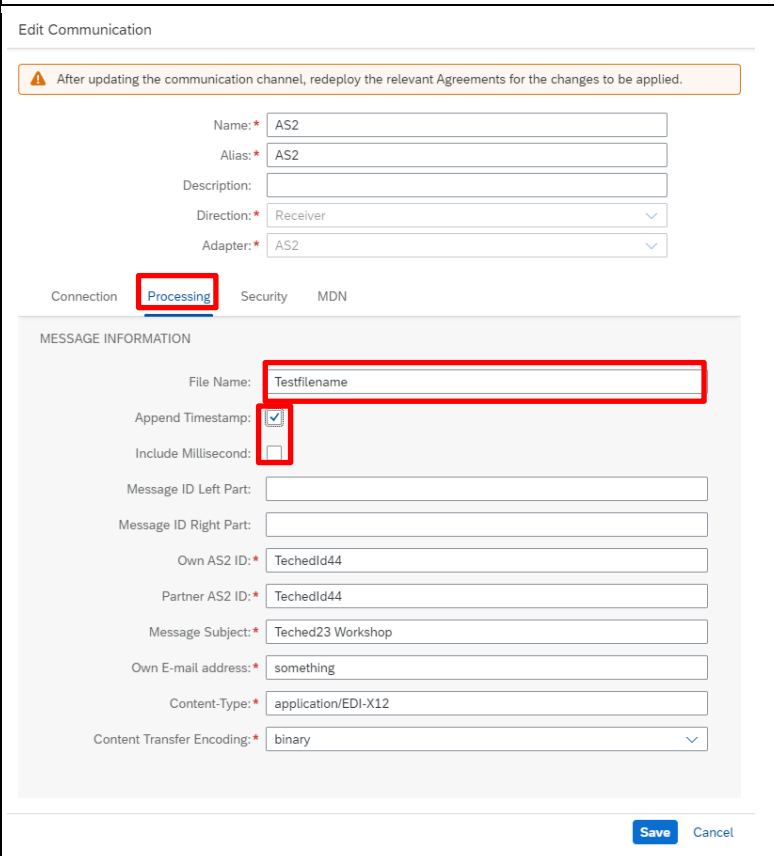
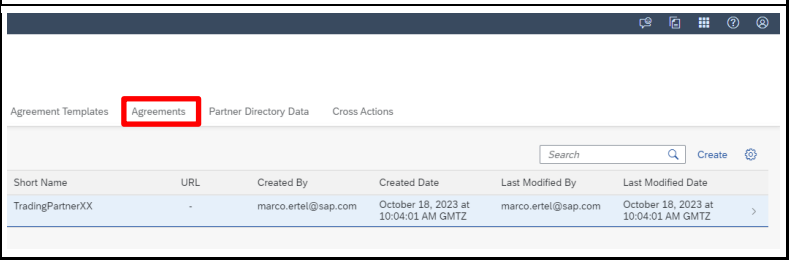
Congrats, you have successfully completed the first exercise.

2 OPTIONAL: EXERCISE 2- FILENAME

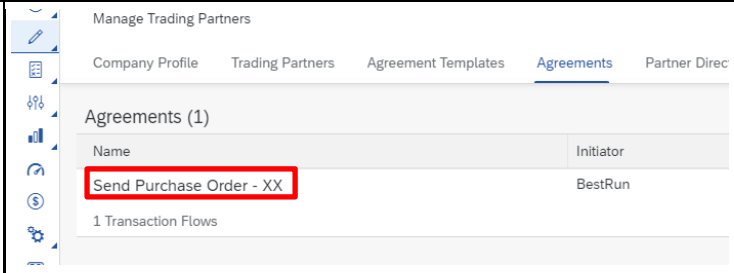
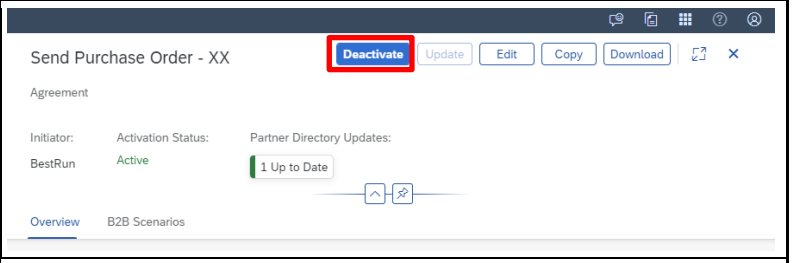
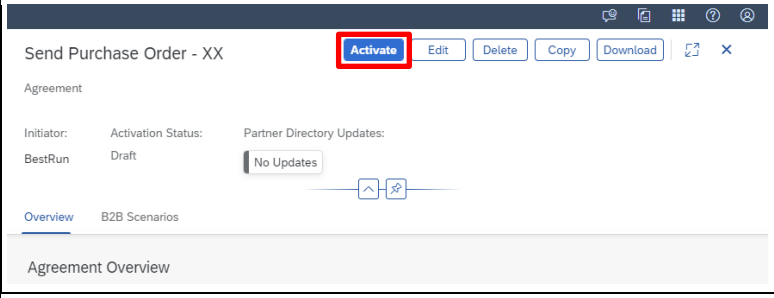
In the next step you will modify the filename and append a timestamp to the AS2 sent message as many B2B Systems expect that. This filename is also shown in the message you get via mail.

Explanation	Screenshot
1. Navigate to *Design* and select *B2B Scenarios*.	
2. Navigate to the Trading Partner you've created in Exercise 1 (TradingPartnerXX with XX your group number)	
3. In the Trading Partner navigate to the Systems	
4. Open the System	

Public

Explanation	Screenshot
5. Switch to the tab Communications	
6. Modify now the Communication	
7. Switch to the Tab Processing and add a filename and mark the *Append Timestamp* optionally also the Millisecond	
8. As the communication has changed the Agreement has to be deactivated and activated again. Please navigate to agreement	

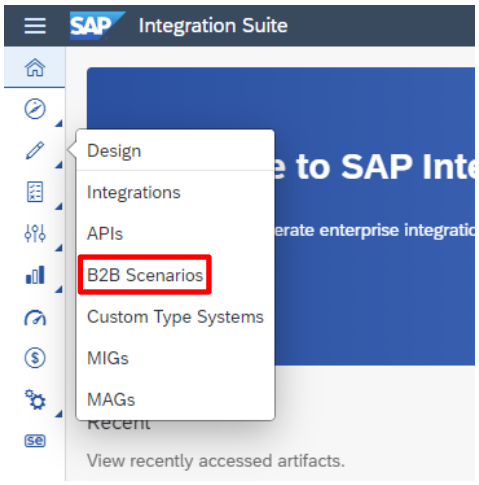
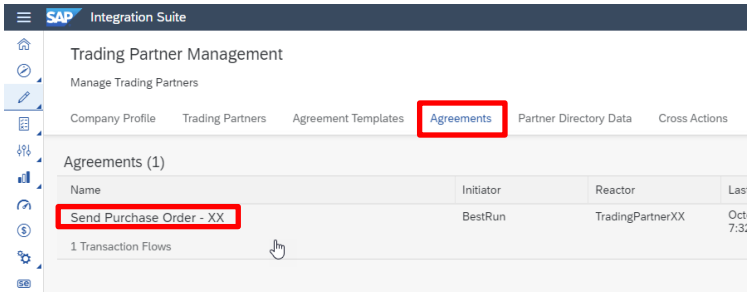
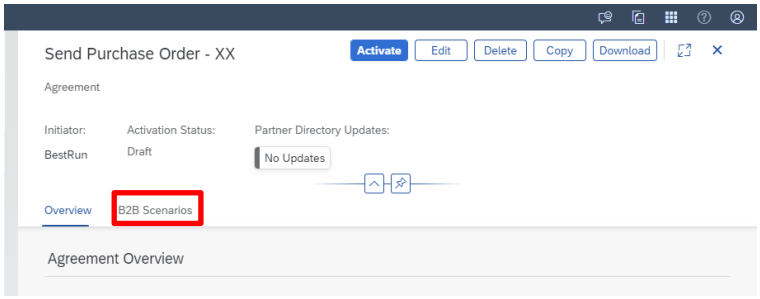
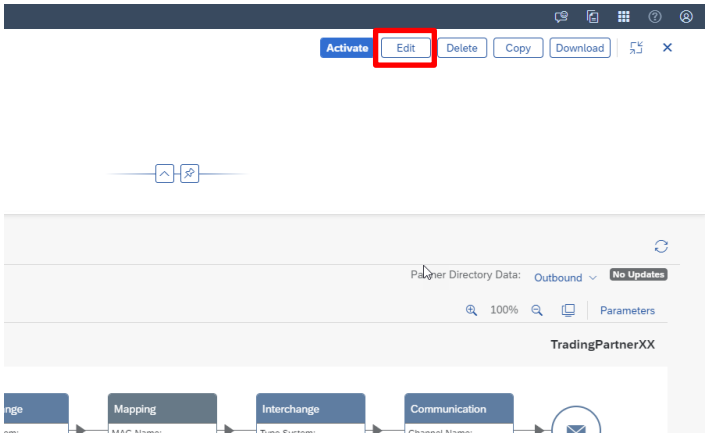
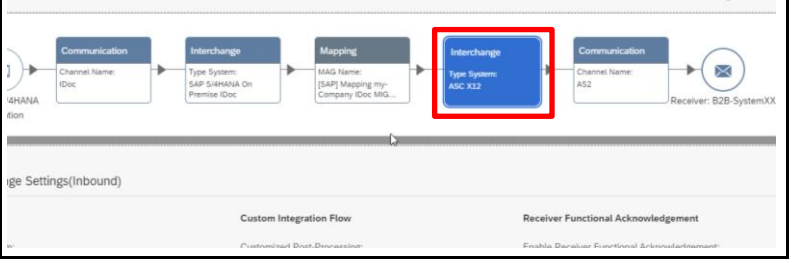
Public

Explanation	Screenshot
9. Open your Agreement (Send Purchase Order - XX with XX your group number)	
10. Deactivate your agreement	
11. Activate the Agreement again	
12. Now you can send a test message with your iflow you've copied in exercise 1.3. (go to the integration package you've created and deploy the iflow.) Then check your inbox how the output has changed	

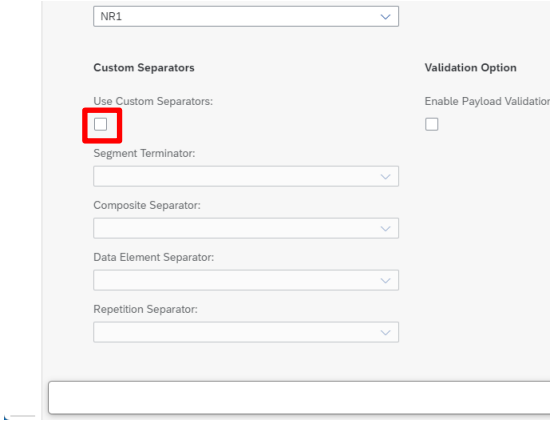
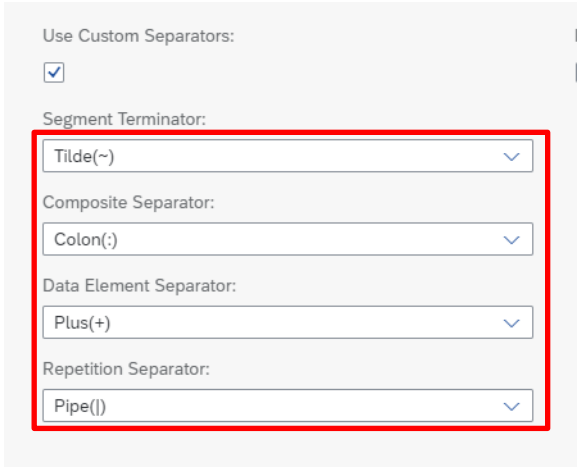
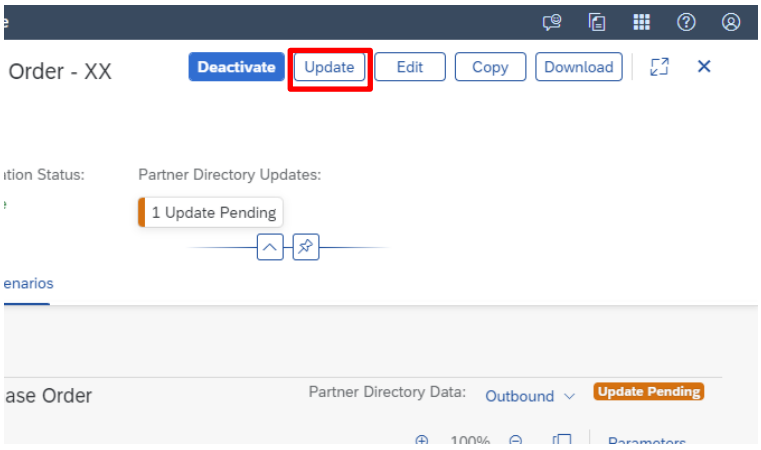
3 OPTIONAL: EXERCISE 3- SEPARATORS

Here you change the separators of the X12 message as different systems might need different separators.

Public

Explanation	Screenshot
1. Navigate to *Design* and select *B2B Scenarios*.	
2. Navigate to your agreement (TradingPartnerXX with XX your group number) and open it	
3. Switch to the Tab B2B Scenarios	
4. Go into the edit mode	
5. Select the X12 Interchange	

Public

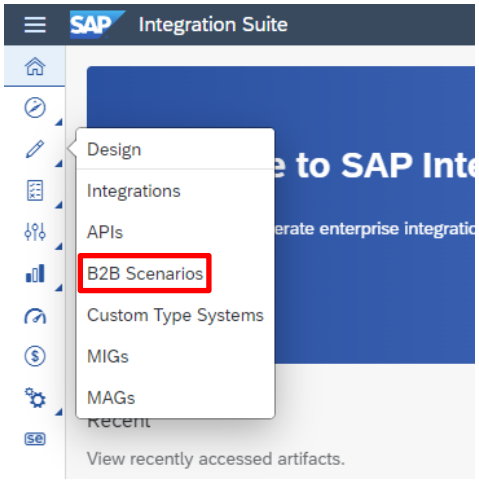
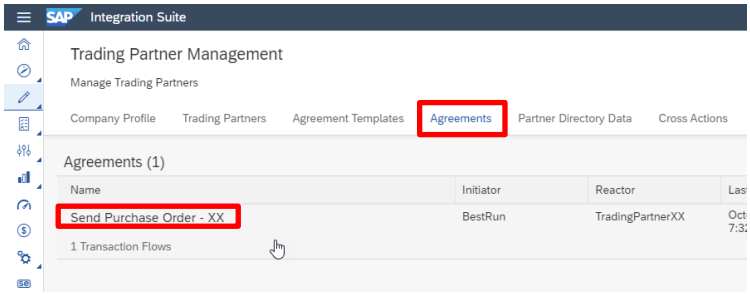
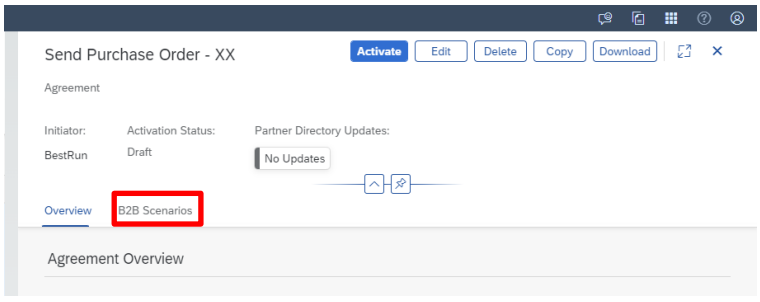
Explanation	Screenshot
6. Scroll down to the Separator Settings and check the box *Use Custom Separators*	
7. Change the custom separators.	
8. Save the changed Agreement and update the content in the Partner Directory Database	
9. Now you can send a test message with your iflow you've copied in exercise 1.3. (go to the integration package you've created and deploy the iflow.) Then check your inbox how the output has changed or look in the B2B Monitoring where you also have access to the payload	

Public

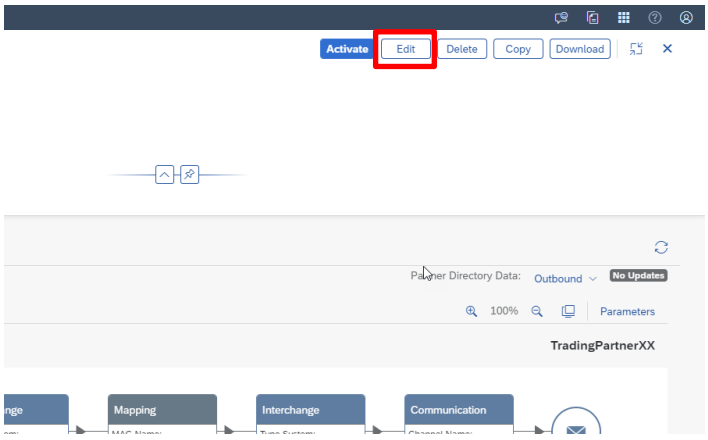
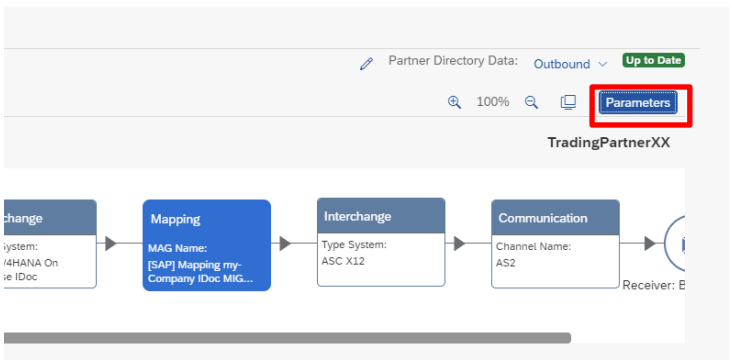
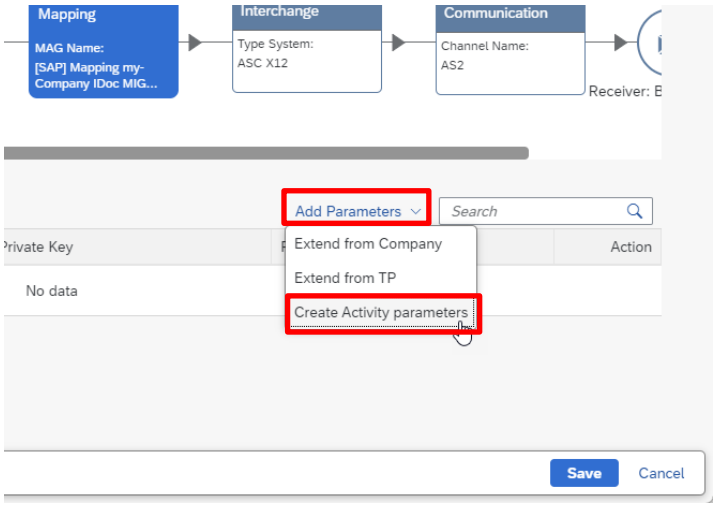
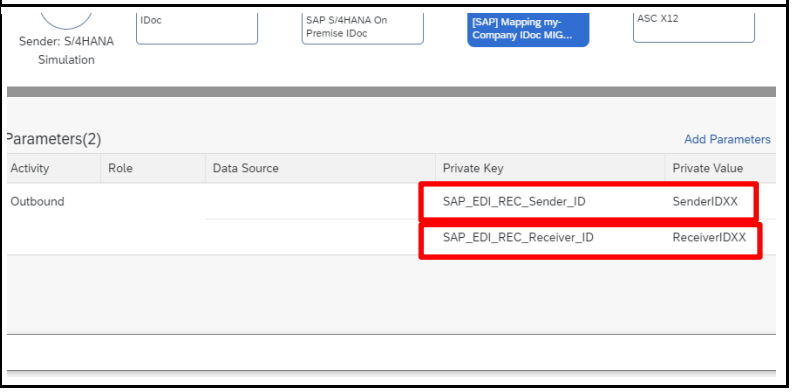
4 OPTIONAL: EXERCISE 4 - CHANGE ENVELOPE

In this exercise you can see how to influence the envelope of an X12 message. Such an envelope contains the following elements (this envelope does not reflect the values in our payload and is only an example):

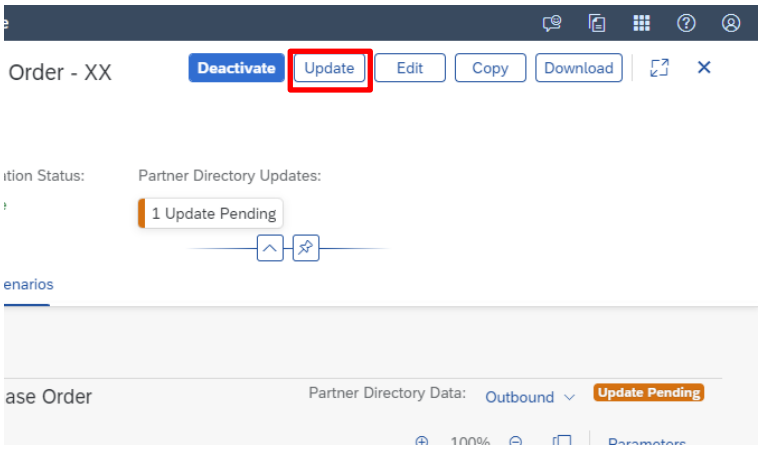
In this exercise we will change 6 and 8 which are the *Interchange Sender ID* and the *Interchange Receiver ID*.
This is done via the parameters on agreement level.

Explanation	Screenshot
1. Navigate to *Design* and select *B2B Scenarios*.	
2. Navigate to your agreement (TradingPartnerXX with XX your group number) and open it	
3. Switch to the Tab B2B Scenarios	

Public

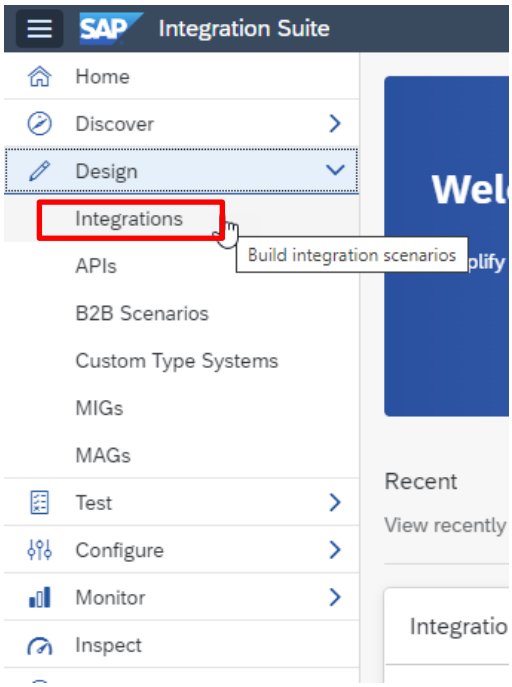
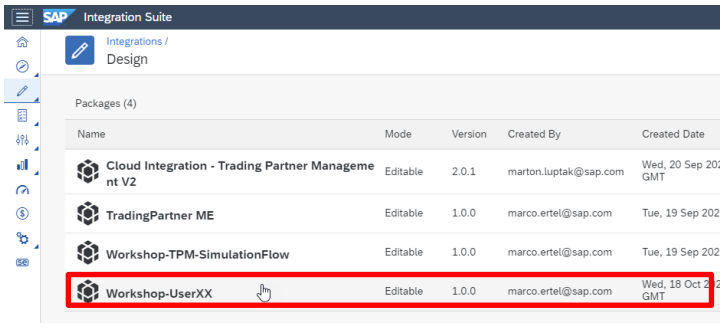
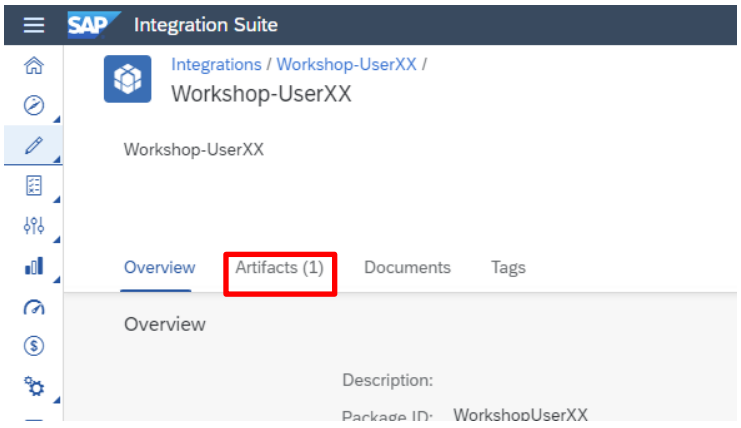
Explanation	Screenshot
4. Go into the edit mode	
5. Select the parameters	
6. Parameters can be inherited from the company profile, from the Trading Partner Profile or manually created. Click on *Add Parameters* followed by *Create Activity parameters*	
7. Add two parameters: *SAP_EDI_REC_Sender_ID* with value SenderIDXX (XX as your group number) *SAP_EDI_REC_Receiver_ID* with value ReceiverIDXX (XX as your group number)	

Public

Explanation	Screenshot
8. Save the changed Agreement and update the content in the Partner Directory Database	
9. Now you can send a test message with your iflow you've copied in exercise 1.3. (go to the integration package you've created and deploy the iflow.) Then check your inbox how the output has changed or look in the B2B Monitoring where you also have access to the payload to see the different envelope values	

5 OPTIONAL: EXERCISE 5 – VALIDATION

In this exercise an erroneous message will be sent to show the capabilities of the payload validation.

Explanation	Screenshot
1. Navigate to Integrations	
2. Open your package (Workshop-UserXX with XX your group number)	
3. Navigate to the Artifacts	

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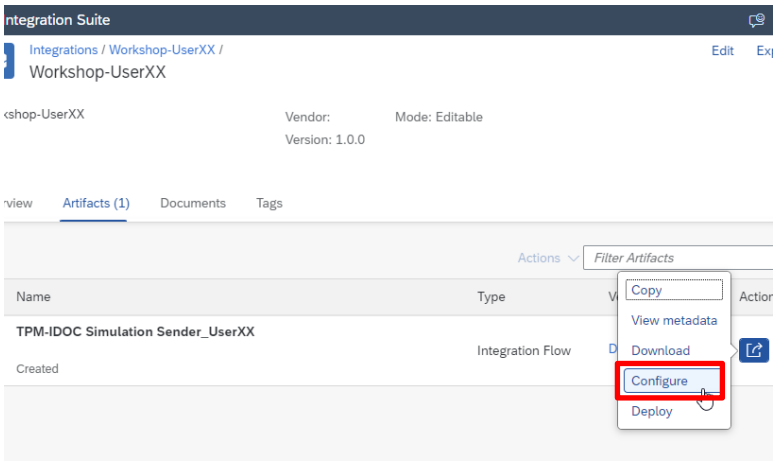
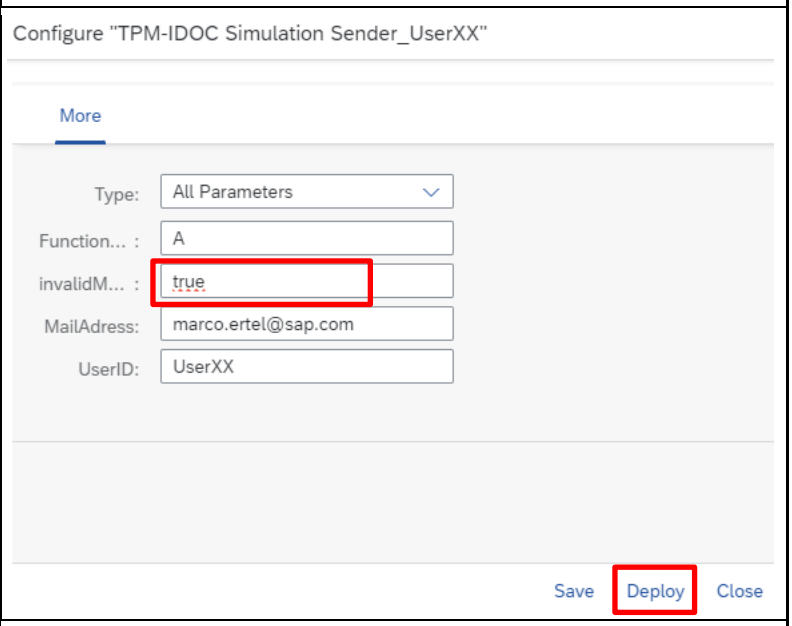
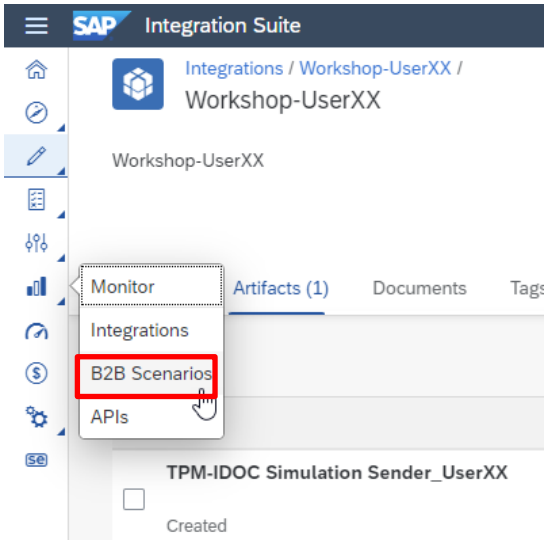
Explanation	Screenshot
4. Reconfigure your iflow	
5. Change the field *invalidMessage* from *false* to *true* and *deploy* the iflow.	
6. Open the B2B Monitor	

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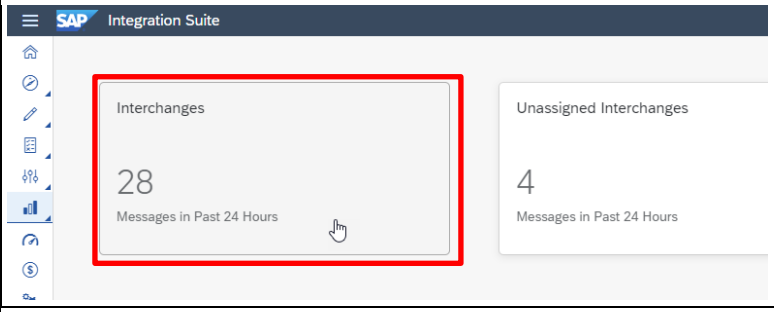
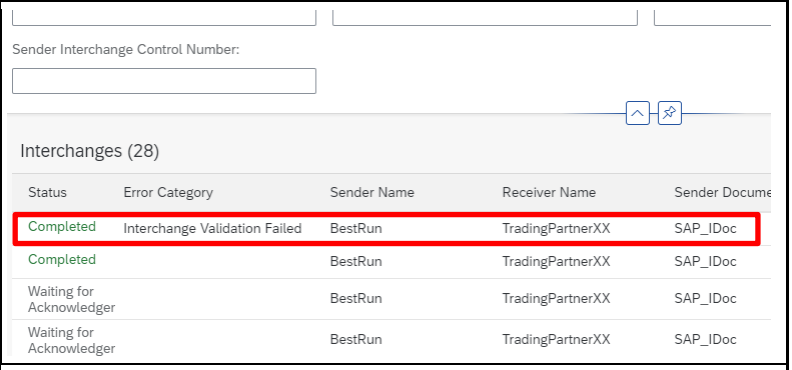
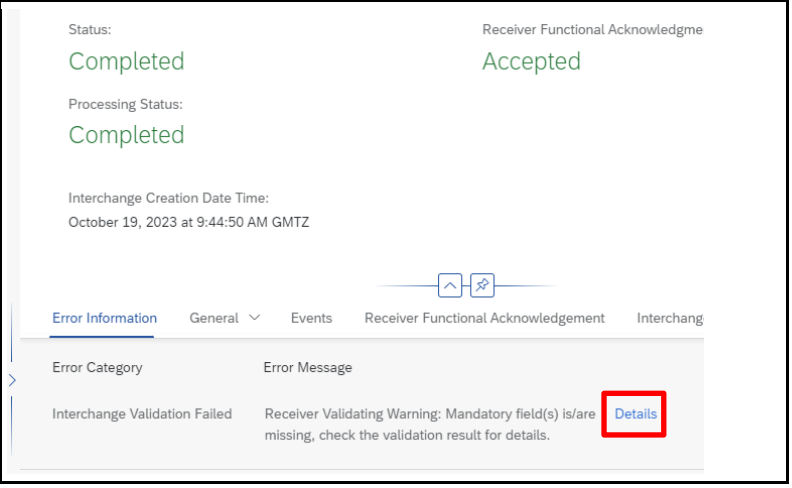
Explanation	Screenshot
7. Click on Interchanges	
8. Open your Interchange	
9. and look at the details of the error message	

Now you can find out, what error the source message contains. In real scenarios the next step would then to correct either the sending system or the mapping to get a correct message sent to your trading partner.
Thanks a lot for your interest in how to handle B2B scenarios with the SAP Integration Suite!
We hoped you like it. If you interested in more check the openSAP (https://open.sap.com/) page regularly as very soon a course specialized to B2B will be published there.

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