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IN263 - Onboard and Manage New Trading Partners Using SAP Integration Suite

Exercise

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1 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 the SAP Cloud Integration. The business process that we will simulate in this exercise depicts the transfer of an Order using Idoc as a format over Cloud Integration to a (simulated) Trading Partner as an X12 850 (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 here not send to a real Trading Partner system but to the mail address you specify during the exercise.

Usually, when onboarding business partners you need to define interfaces – 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 doublecheck 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, not least, you need to configure the outbound connection for each of your integration flows in your sending system.

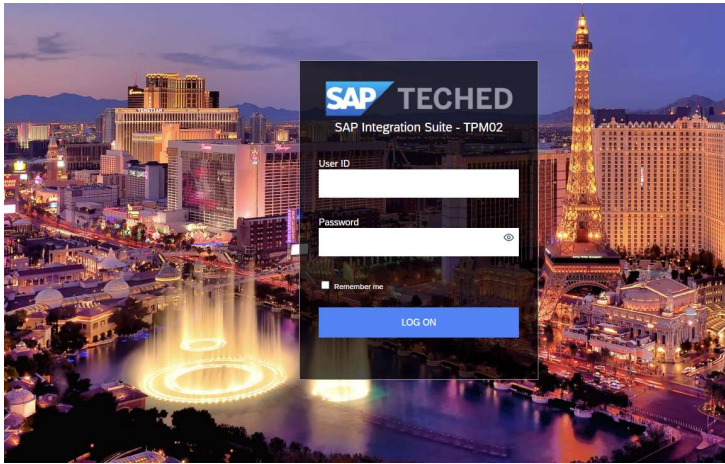
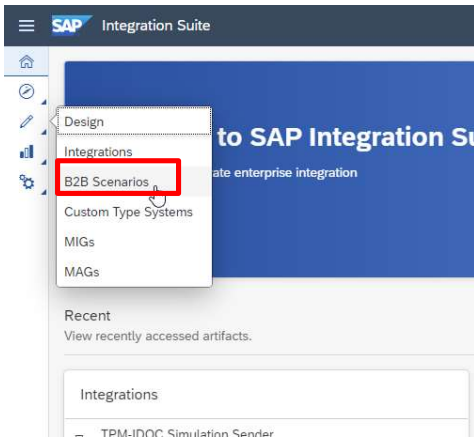
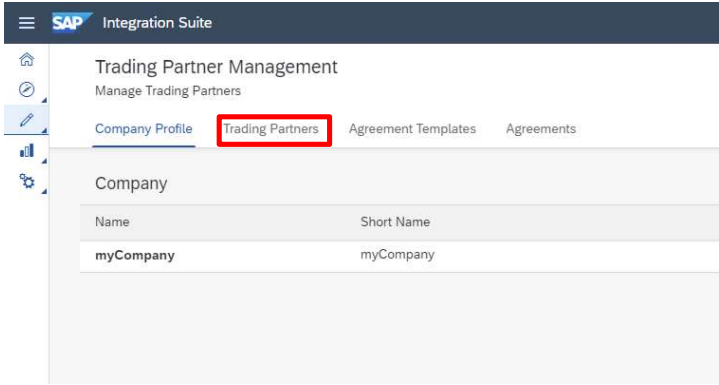
With the usage of the Integration Advisor, developing and documenting of the structures needed will be much easier and faster than before as the Integration Advisor is using a machine learning process on top of the knowledge base, which contains the knowledge of all already implemented integrations and many type libraries. In this first part of the exercise, the creation of the structures and mappings in the Integration Advisor is already done. In a the  part of the exercise you also have to work on the MIG (interface) and on the MAG (mapping).

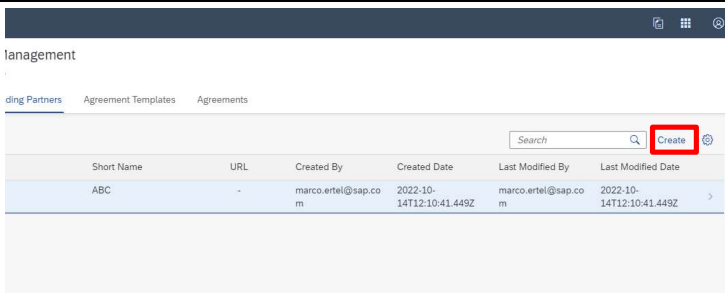
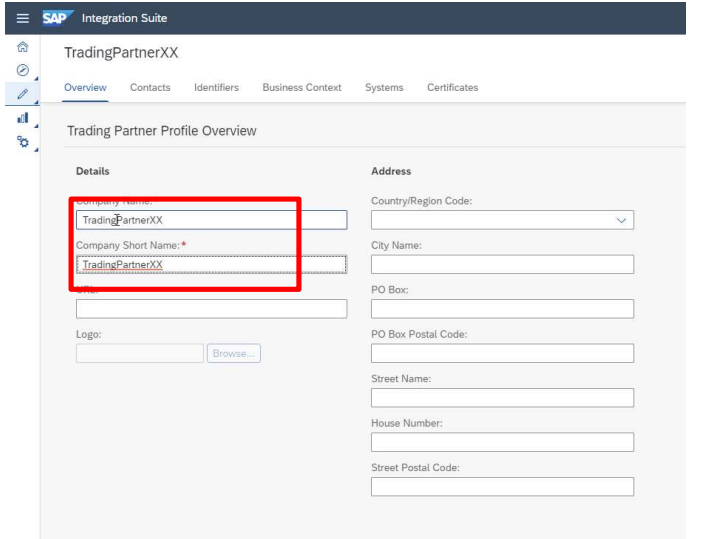

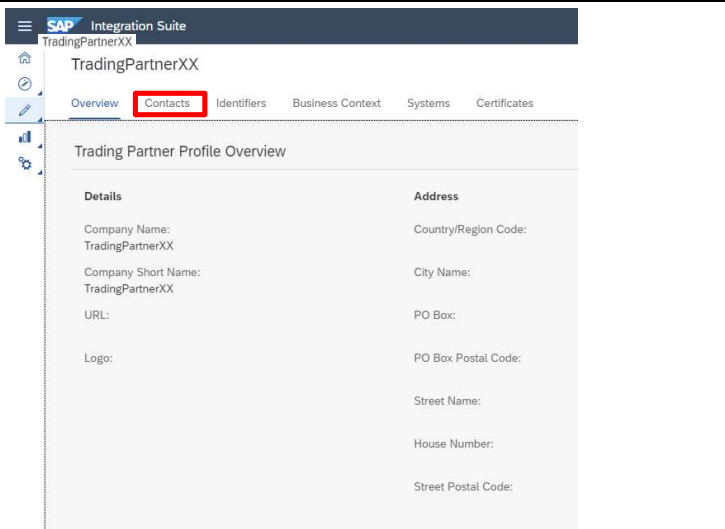
2 EXERCISE 1

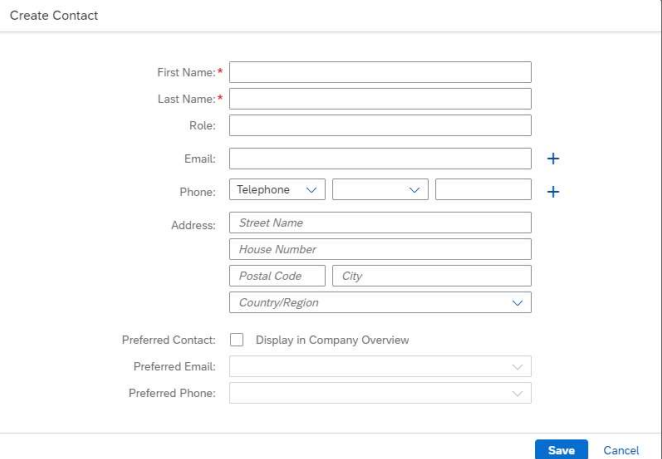
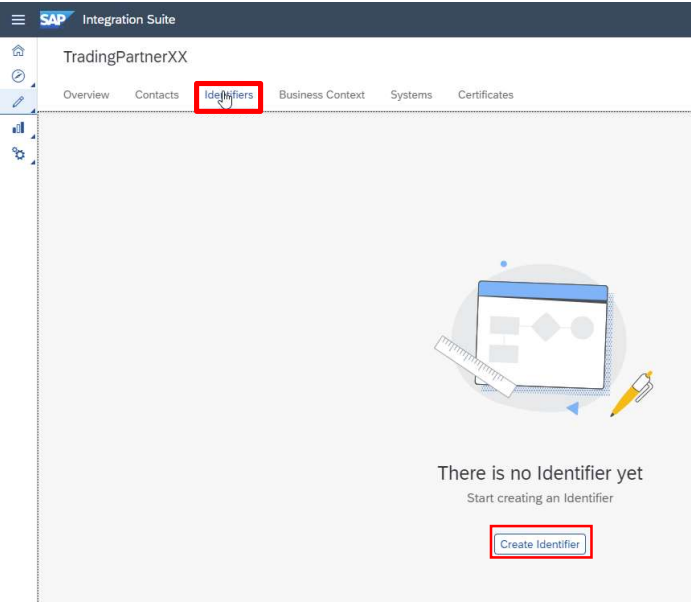
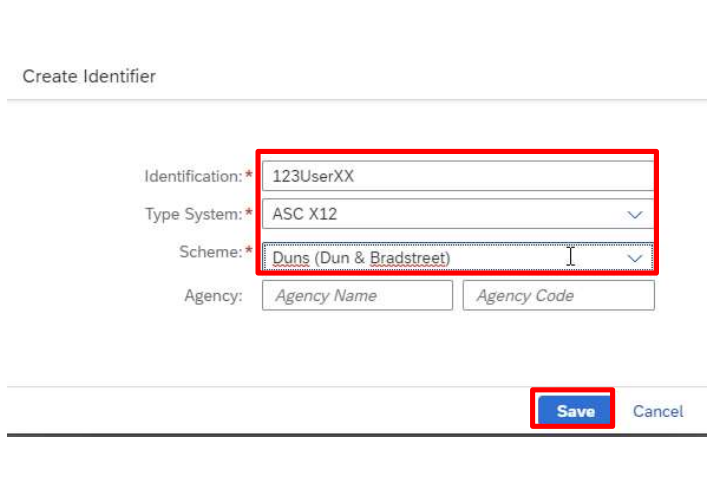
2.1 Create new Trading Partner

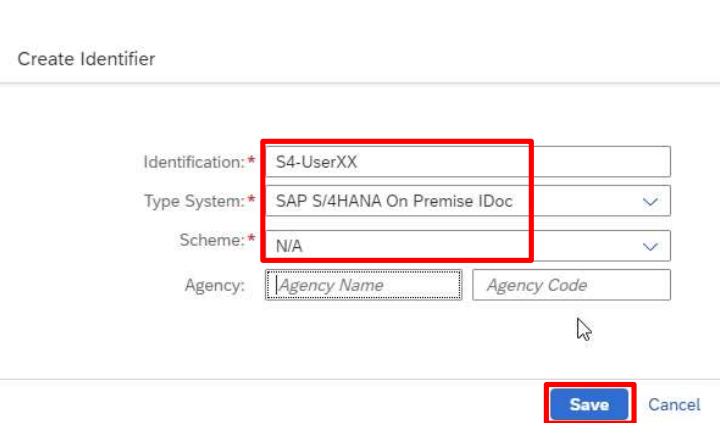
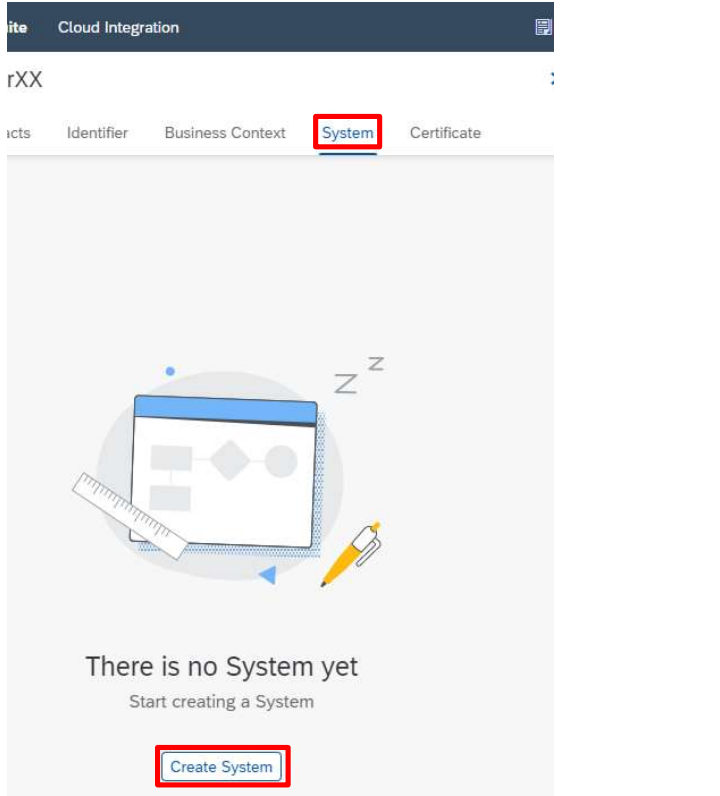
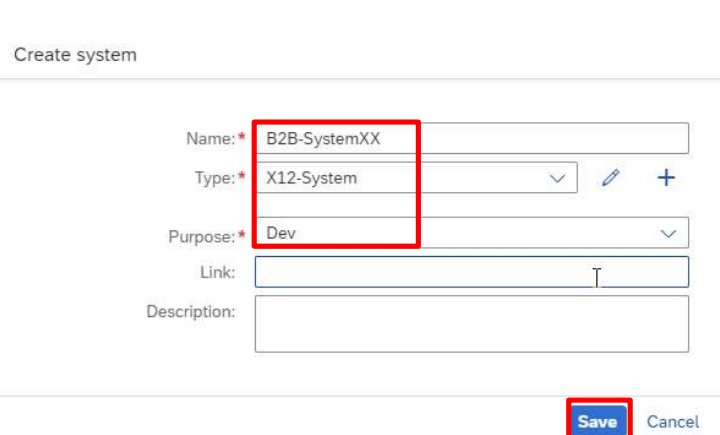
Tenant: <https://cpisuite-europe-08.integrationsuite.cfapps.eu10.hana.ondemand.com/>

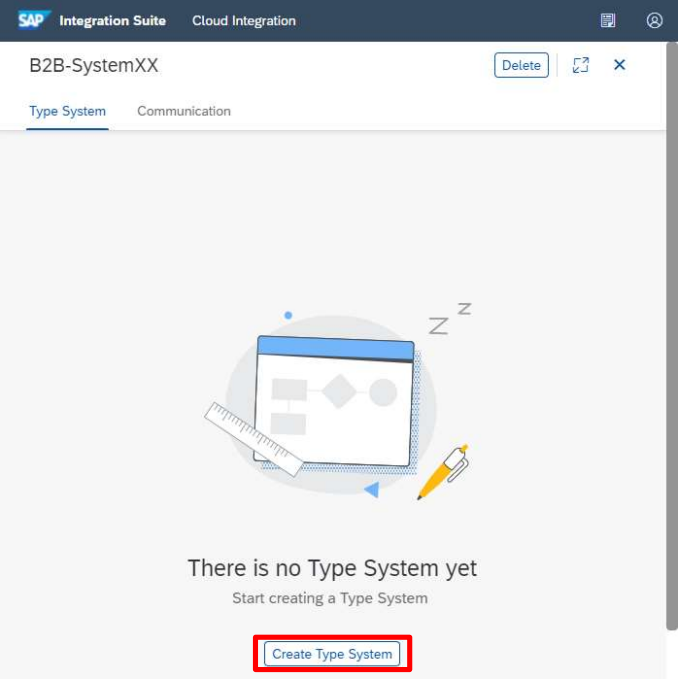

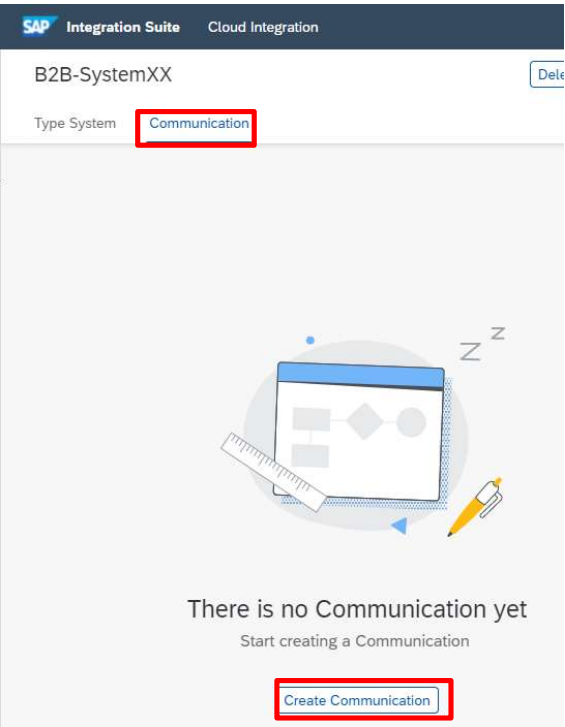
User/Password: UserXX/Welcome

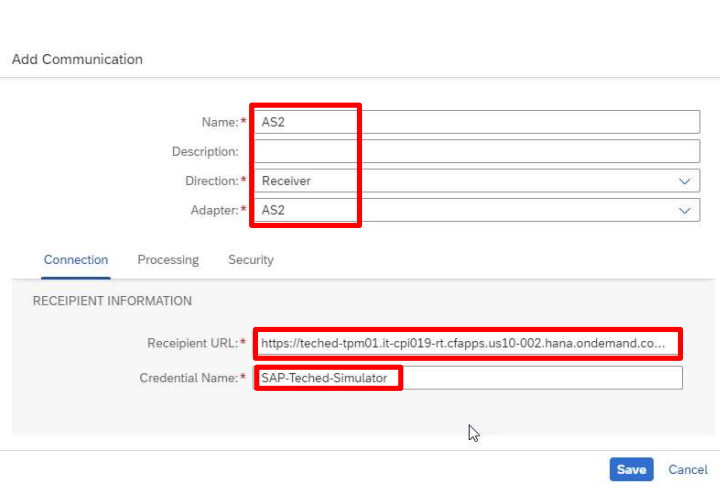
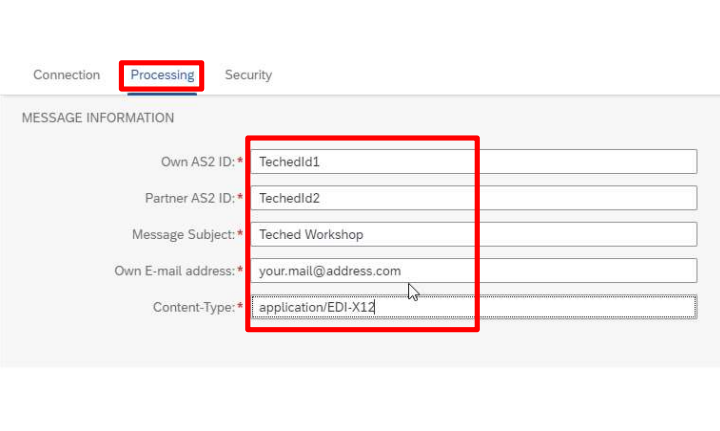
Explanation	Screenshot
1. Log on to the Integration Suite tenant with your system details provided to you by the instructors.	 The screenshot shows the SAP TECHED login interface for SAP Integration Suite - TPM02. It features a dark blue header with the SAP logo and 'TECHED' text. Below the header, there are input fields for 'User ID' and 'Password', a 'Remember me' checkbox, and a blue 'LOG ON' button. The background is a vibrant night cityscape with illuminated buildings and a large fountain.
2. Navigate to <i>Design</i> and select <i>B2B Scenarios</i> .	 The screenshot displays the SAP Integration Suite 'Design' menu. The 'Design' option is selected, opening a dropdown menu. Within this menu, 'B2B Scenarios' is highlighted with a red rectangular box. Other visible options include 'Integrations', 'Custom Type Systems', 'MIGs', and 'MAGs'. The background shows a blurred view of the SAP Integration Suite dashboard.
3. As you want to onboard a new Trading Partner switch to the tab <i>Trading Partners</i> .	 The screenshot shows the 'Trading Partner Management' screen in SAP Integration Suite. The 'Trading Partners' tab is selected and highlighted with a red rectangular box. The screen displays a table with columns for 'Name' and 'Short Name'. The first row of data shows 'myCompany' in both columns. The background is a light gray with a blue sidebar on the left.

Explanation	Screenshot												
4. Select <i>Create</i> to create a new Trading Partner.	 <p>The screenshot shows the 'Trading Partners' list in the SAP Integration Suite. The 'Create' button is highlighted with a red box. The table below shows the data visible in the screenshot:</p> <table><tr><th>Short Name</th><th>URL</th><th>Created By</th><th>Created Date</th><th>Last Modified By</th><th>Last Modified Date</th></tr><tr><td>ABC</td><td>-</td><td>marco.ertel@sap.com</td><td>2022-10-14T12:10:41.449Z</td><td>marco.ertel@sap.com</td><td>2022-10-14T12:10:41.449Z</td></tr></table>	Short Name	URL	Created By	Created Date	Last Modified By	Last Modified Date	ABC	-	marco.ertel@sap.com	2022-10-14T12:10:41.449Z	marco.ertel@sap.com	2022-10-14T12:10:41.449Z
Short Name	URL	Created By	Created Date	Last Modified By	Last Modified Date								
ABC	-	marco.ertel@sap.com	2022-10-14T12:10:41.449Z	marco.ertel@sap.com	2022-10-14T12:10:41.449Z								
5. On the following screen, you need to maintain general data for the new trading partner as follows: Company Name: <i>TradingPartnerXX</i> (with XX your group number) Company Short Name: <i>TradingPartnerXX</i> (with XX your group number) 6. All the other fields are optional.	 <p>The screenshot shows the 'Trading Partner Profile Overview' form. The 'Company Name' and 'Company Short Name' fields are highlighted with a red box. The form contains the following fields:</p> <ul style="list-style-type: none">Company Name: TradingPartnerXXCompany Short Name: TradingPartnerXXCountry/Region Code: (dropdown)City Name: (text box)PO Box: (text box)PO Box Postal Code: (text box)Street Name: (text box)House Number: (text box)Street Postal Code: (text box)												
Please save the newly created Trading Partner.	 <p>The screenshot shows the 'Save' button highlighted with a red box. The button is labeled 'Save' and 'Cancel'.</p>												
7. Switch to the <i>Contacts</i> tab and select <i>Create Contact</i> .	 <p>The screenshot shows the 'Trading Partner Profile Overview' form with the 'Contacts' tab selected. The 'Contacts' tab is highlighted with a red box. The form contains the following fields:</p> <ul style="list-style-type: none">Company Name: TradingPartnerXXCompany Short Name: TradingPartnerXXURL: (text box)Logo: (text box)Country/Region Code: (dropdown)City Name: (text box)PO Box: (text box)PO Box Postal Code: (text box)Street Name: (text box)House Number: (text box)Street Postal Code: (text box)												

Explanation	Screenshot
<p>8. On the <i>Contacts</i> tab, you can optionally add names and details of persons which are responsible on the Trading Partner side.</p>	
<p>9. Navigate to the tab <i>Identifier</i> and select <i>Create Identifier</i>.</p>	
<p>10. 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), select Type System ASC X12, and Scheme Duns (Dun & Bradstreet), then save the new identifier.</p>	

Explanation	Screenshot
<p>Maintain the second identifier as follows: Use Identification <i>S4-UserXX</i> (with <i>XX</i> your group number), select Type <i>System SAP S/4HANA on Premise IDoc</i>, and Scheme <i>N/A</i>, then save the new identifier.</p>	
<p>11. 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 <i>System</i> and select <i>Create System</i>.</p>	
<p>12. Please add the following Details: Name <i>B2B-SystemXX</i> (with <i>XX</i> your group number), Type <i>X12-System</i>, Purpose <i>Dev</i> and save the new system.</p>	

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

Explanation	Screenshot
<p>15. As this Trading Partner will receive a Purchase Orders 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 (<i>SAP-Teched-Simulator</i>) and the Endpoint of that Trading Partner (please use: <i>https://teched-tpm01.it-cpi019-rt.cfapps.us10-002.hana.ondemand.com/as2/as2</i>)</p>	 <p>The screenshot shows the 'Add Communication' configuration window. The 'Name' field is set to 'AS2', 'Description' is empty, 'Direction' is 'Receiver', and 'Adapter' is 'AS2'. Below, the 'RECEIPT INFORMATION' section is visible, showing 'Recipient URL' as 'https://teched-tpm01.it-cpi019-rt.cfapps.us10-002.hana.ondemand.com/as2/as2' and 'Credential Name' as 'SAP-Teched-Simulator'. The 'Save' button is at the bottom right.</p>
<p>16. AS2 needs additional information which you have to maintain on the Tab <i>Processing</i>. The IDs (Own and Partner) have to start with <i>Teched</i>. You can of course add something after that string. As the Trading Partner Simulation will send the X12 output to you via mail you have to enter your Email Address in the field <i>Own E-mail address</i>.</p>	 <p>The screenshot shows the 'Processing' tab of the configuration window. The 'MESSAGE INFORMATION' section contains the following fields: 'Own AS2 ID' (TechedId1), 'Partner AS2 ID' (TechedId2), 'Message Subject' (Teched Workshop), 'Own E-mail address' (your.mail@address.com), and 'Content-Type' (application/EDI-X12).</p>

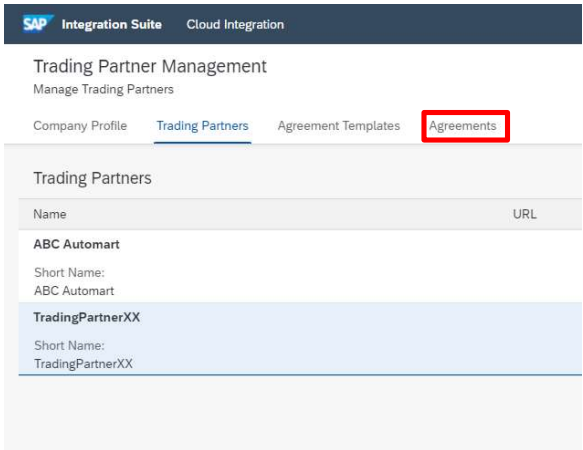
2.2 Use Agreement Template to create an agreement

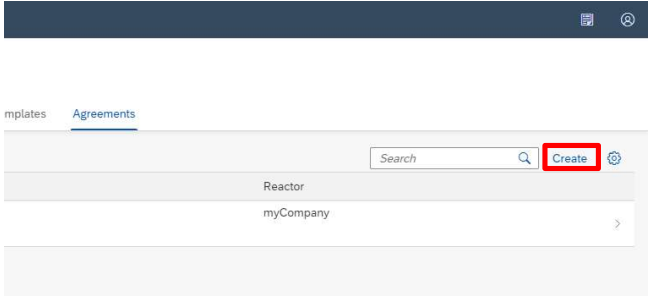
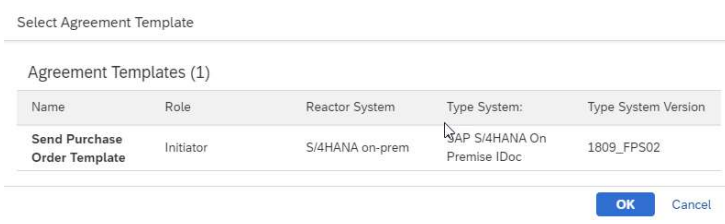
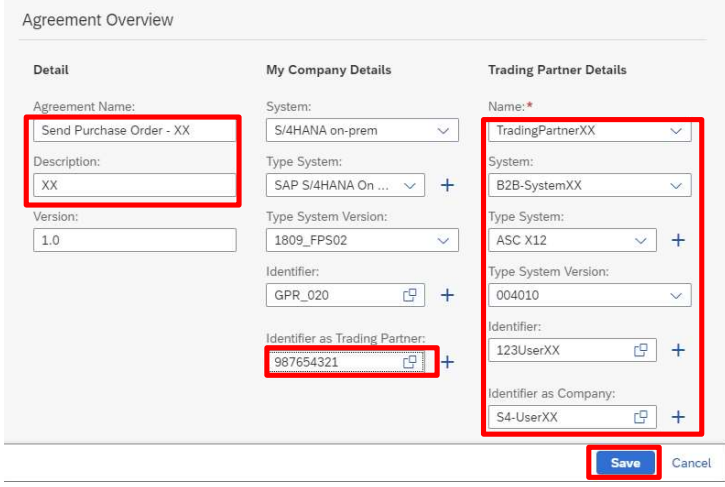
With the Agreement, you instantiate the agreement template where you need to fill out the details of the trading partners. Especially the Identifiers might be irritating if you use TPM for the first time. TPM differentiates between IDs which will be used in the system of the company and IDs which are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

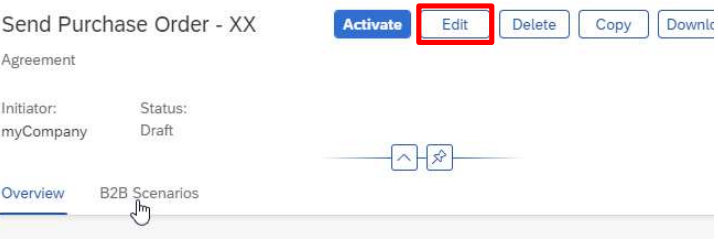

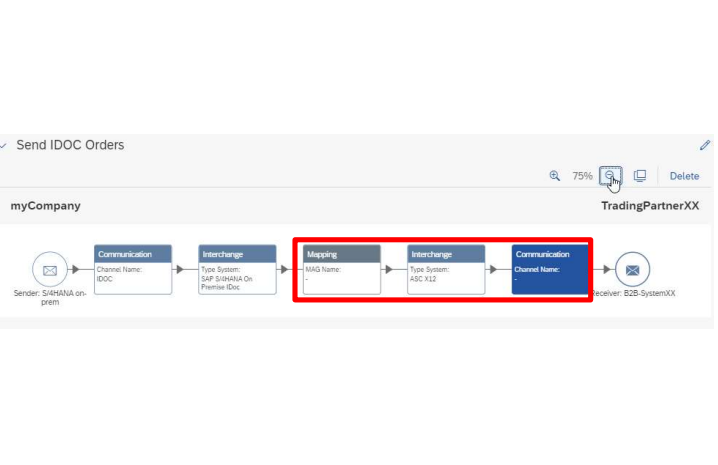
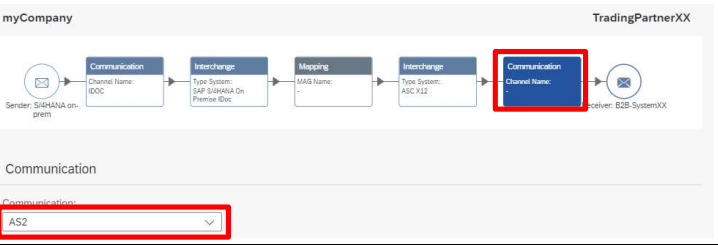
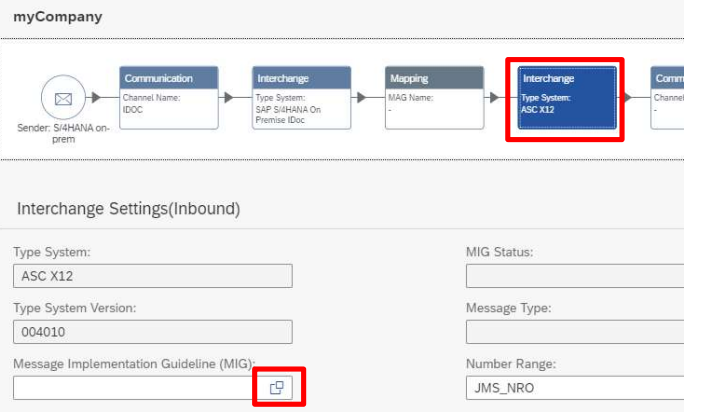
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<ORDERS05 xmlns="urn:sap-com:document:sap:idoc:soap:messages">
  <IDOC BEGIN="1">
    <EDI_DC40 SEGMENT="1">
      <TABNAM>EDI_DC40</TABNAM>
      <DOCNUM>0000000000000002</DOCNUM>
      <DOCREL>1809_FPS02</DOCREL>
      <DIRECT>2</DIRECT>
      <OUTMOD>3</OUTMOD>
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      <MESCOD>EX</MESCOD>
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      <STDMES>850</STDMES>
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      <SNDPRT>KU</SNDPRT>
      <SNDPRN>GPR_020</SNDPRN>
      <RCVPOR>SAPMAT</RCVPOR>
      <RCVPRT>LS</RCVPRT>
      <RCVPRN>S4-UserXX</RCVPRN>
      <CREDAT>20221007</CREDAT>
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      <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 <i>Design</i> → <i>B2B Scenarios</i> , and switch to the tab <i>Agreements</i> .	

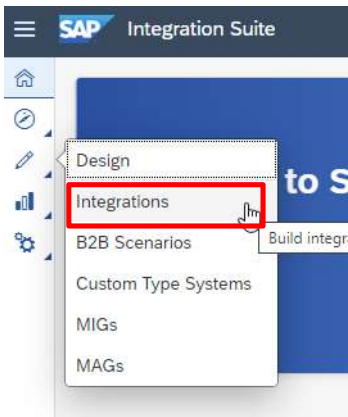
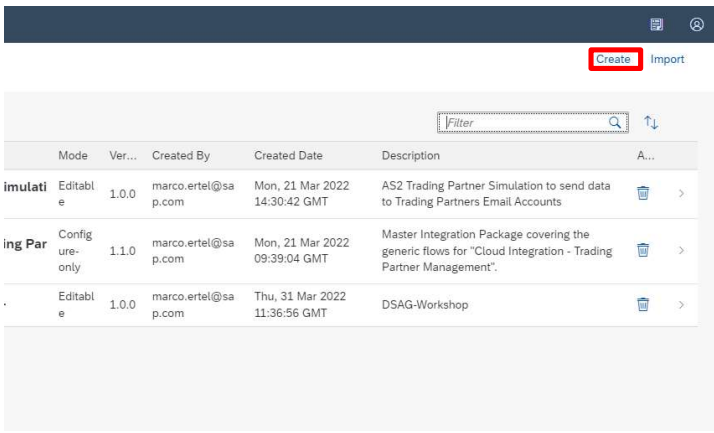
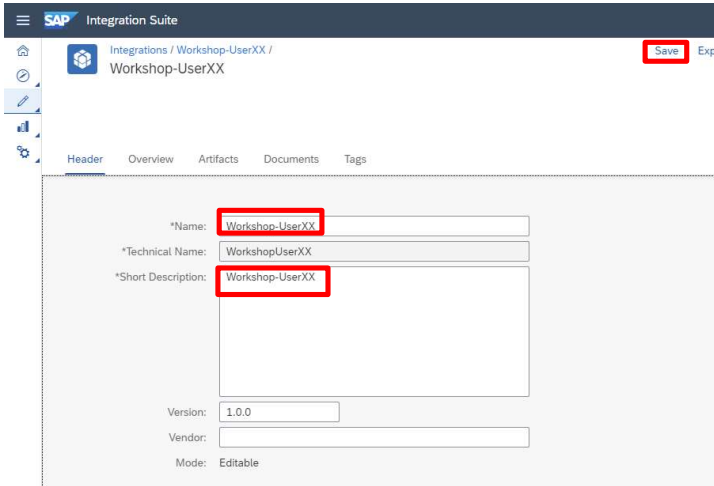
Explanation	Screenshot
2. On the <i>Agreements</i> tab, create a new Agreement.	
3. In the upcoming dialog, select the existing Agreement Template <i>Send Purchase Order Template</i> and select <i>OK</i> .	
4. Please start with renaming the Agreement to <i>Send Purchase Order – XX</i> and also change 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 <i>TradingPartnerXX</i> , System <i>B2B-SystemXX</i> , Type System <i>ASC X12</i> , Type System Version <i>4010</i> , Identifier <i>123UserXX</i> , and Identifier as Company <i>S4XX</i> . Finally, select the Identifier as Trading Partner <i>987654321</i> 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.	

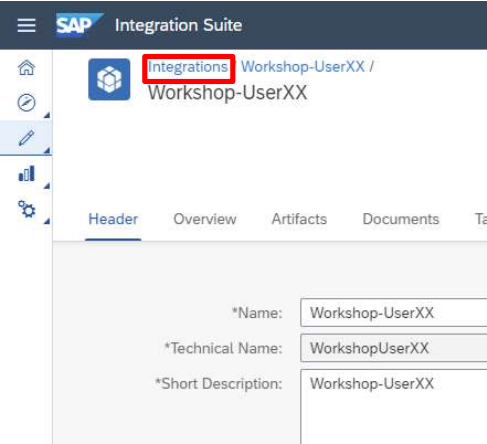
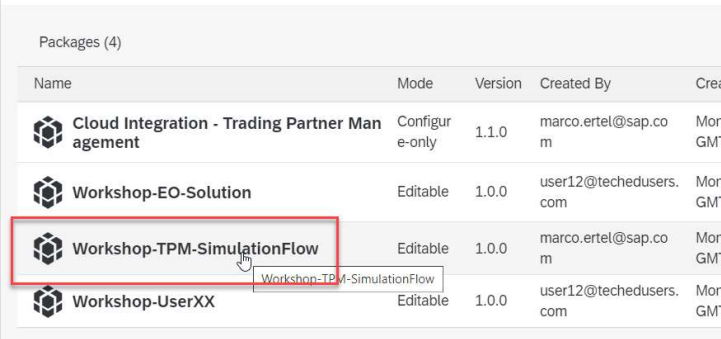
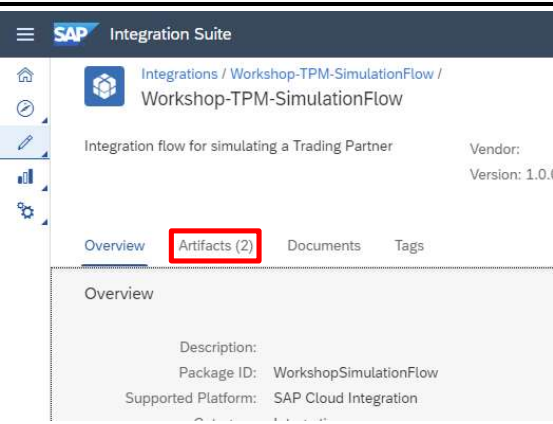
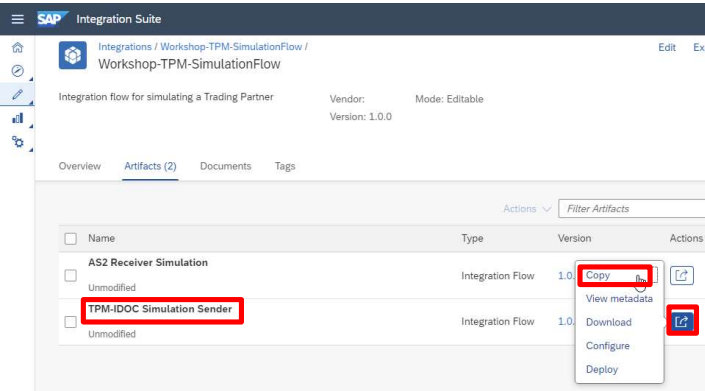
Explanation	Screenshot
5. For the newly created agreement, switch to the <i>Edit Mode</i>	 <p>Send Purchase Order - XX Activate Edit Delete Copy Download</p> <p>Agreement</p> <p>Initiator: myCompany Status: Draft</p> <p>Overview B2B Scenarios</p>
6. Navigate to the tab <i>B2B Scenarios</i> .	 <p>Send Purchase Order - XX Activate Edit Delete Copy Download</p> <p>Agreement</p> <p>Initiator: myCompany Status: Draft</p> <p>Overview B2B Scenarios</p>
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.	 <p>Send IDOC Orders</p> <p>myCompany TradingPartnerXX</p> <p>Sender: S/4HANA on-prem</p> <p>Communication Channel Name: IDOC</p> <p>Interchange Type System: SAP S/4HANA On-Premise IDOC</p> <p>Mapping MAG Name: -</p> <p>Interchange Type System: ASC X12</p> <p>Communication Channel Name: -</p> <p>Receiver: B2B-SystemXX</p>
8. Please start on the right by clicking on the first <i>Communication</i> box within the flow and select AS2 for Communication.	 <p>myCompany TradingPartnerXX</p> <p>Sender: S/4HANA on-prem</p> <p>Communication Channel Name: IDOC</p> <p>Interchange Type System: SAP S/4HANA On-Premise IDOC</p> <p>Mapping MAG Name: -</p> <p>Interchange Type System: ASC X12</p> <p>Communication Channel Name: -</p> <p>Receiver: B2B-SystemXX</p> <p>Communication</p> <p>Communication: AS2</p>
9. Please click now on the <i>Interchange</i> box to define the Message Implementation Guideline. Select the drop-down list.	 <p>myCompany</p> <p>Sender: S/4HANA on-prem</p> <p>Communication Channel Name: IDOC</p> <p>Interchange Type System: SAP S/4HANA On-Premise IDOC</p> <p>Mapping MAG Name: -</p> <p>Interchange Type System: ASC X12</p> <p>Communication Channel Name: -</p> <p>Receiver: B2B-SystemXX</p> <p>Interchange Settings(Inbound)</p> <p>Type System: ASC X12</p> <p>Type System Version: 004010</p> <p>Message Implementation Guideline (MIG): JMS_NRO</p> <p>MIG Status: -</p> <p>Message Type: -</p> <p>Number Range: -</p>

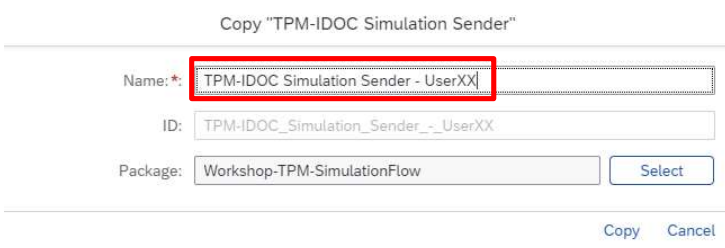
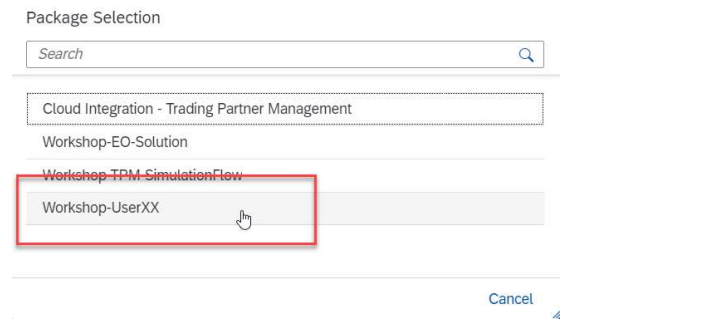
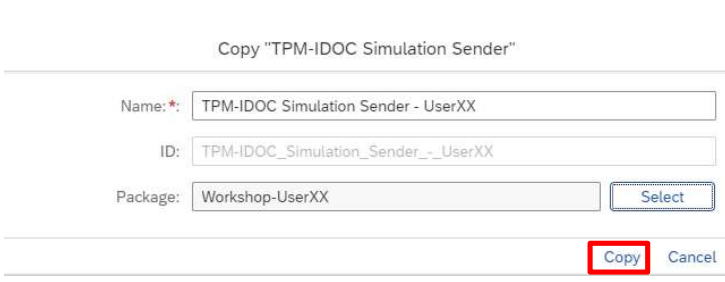
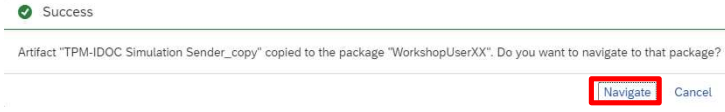
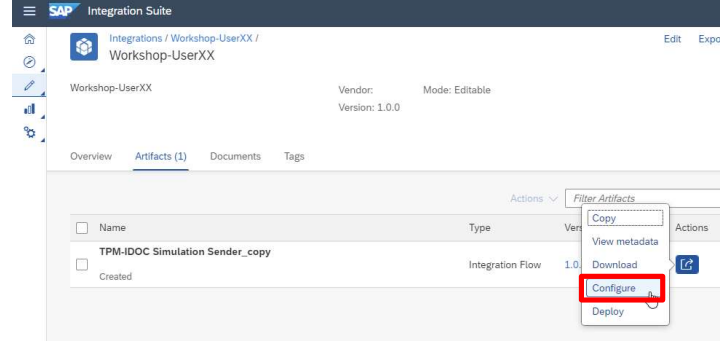
Explanation	Screenshot
10. In the pop up select <i>TradingPartner – X12 MIG Tched</i> and select <i>Choose</i> .	
11. Last step for the definition of the Agreement is to select the <i>Mapping</i> box (which is also prepared by using the Integration Advisor). Select the drop-down list.	
12. In the pop up select <i>[SAP] Mapping myCompany IDoc MIG Tched to TradingPartner - X12 MIG Tched</i> and select <i>Choose</i> .	
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 <i>Draft</i> to <i>Active</i> .	

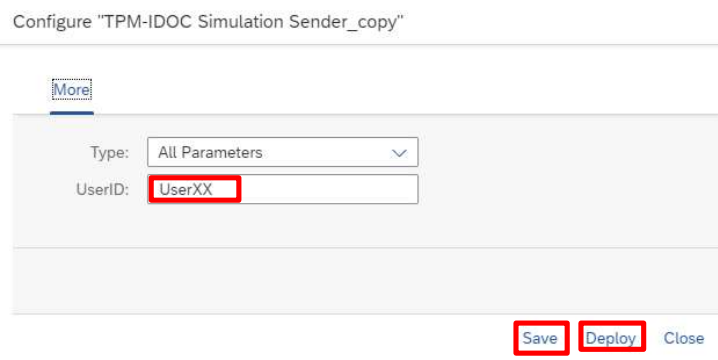
2.3 Prepare Simulation Flow and send a message

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 send as soon as the integration flow is deployed.

Explanation	Screenshot
1. Navigate to <i>Design</i> -> <i>Integrations</i> .	 The screenshot shows the SAP Integration Suite interface. A navigation menu is open, displaying options: Design, Integrations (highlighted with a red box), B2B Scenarios, Custom Type Systems, MIGs, and MAGs. A mouse cursor is pointing at the 'Integrations' option.
2. If you haven't done so before, create a new Package by clicking <i>Create</i> .	 The screenshot shows the 'Integrations' list in SAP Integration Suite. At the top right, there are 'Create' and 'Import' buttons. The 'Create' button is highlighted with a red box. Below the buttons is a table with columns: Mode, Ver..., Created By, Created Date, Description, and A... The table contains three entries: 'imulati', 'ing Par', and 'DSAG-Workshop'.
3. Use <i>Workshop-UserXX</i> for Name and Short Description with XX your user Id and save the package.	 The screenshot shows the 'Workshop-UserXX' form in SAP Integration Suite. The form has fields for *Name, *Technical Name, *Short Description, Version, Vendor, and Mode. The *Name, *Technical Name, and *Short Description fields are highlighted with red boxes. The *Name field contains 'Workshop-UserXX', the *Technical Name field contains 'WorkshopUserXX', and the *Short Description field contains 'Workshop-UserXX'. The Version field contains '1.0.0'.

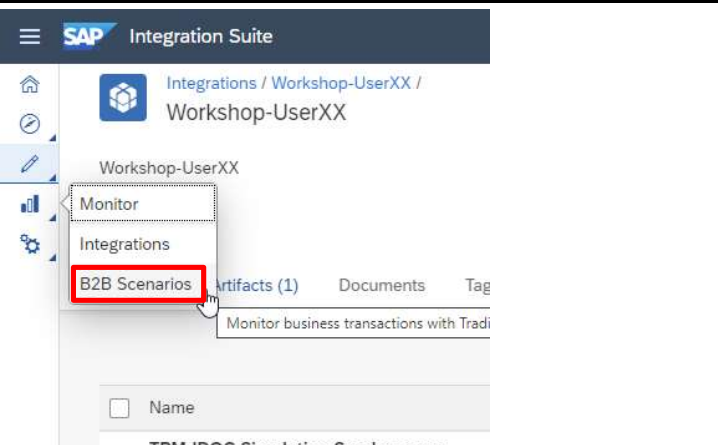
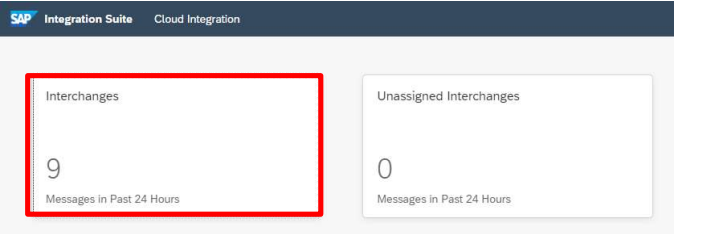
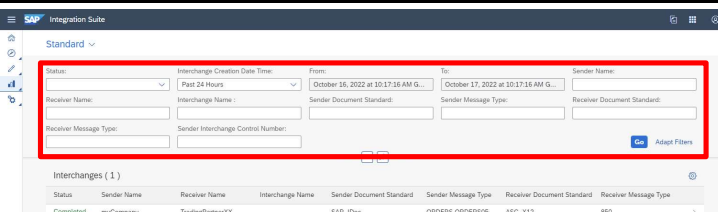
Explanation	Screenshot
4. Navigate back to the list of existing packages by clicking <i>Integrations</i> .	
5. Open the package <i>Workshop-TPM-SimulationFlow</i> .	
6. In the package, switch to tab <i>Artifacts</i> .	
7. Copy the integration flow <i>TPM-IDOC Simulation Sender</i> to your own package. Select <i>Copy</i> from the <i>Actions</i> menu of the <i>TPM-IDOC Simulation Sender</i> integration flow.	

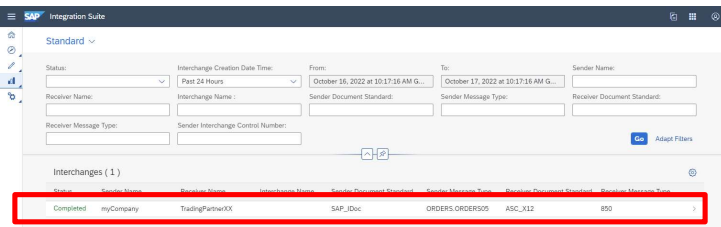
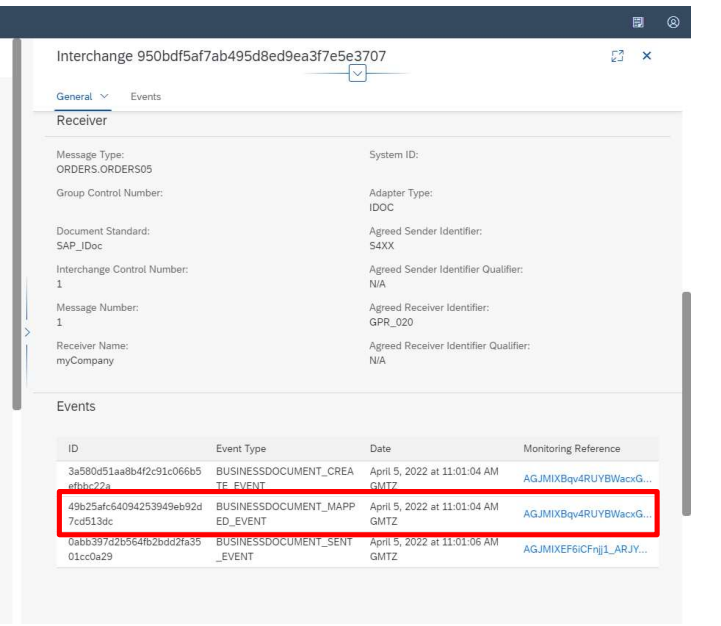
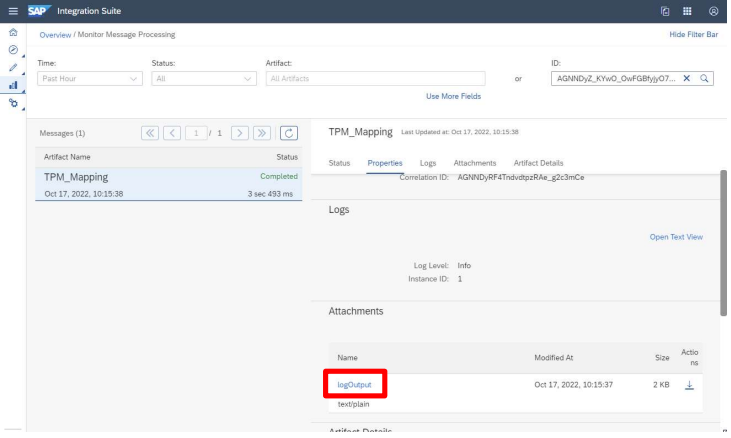
Explanation	Screenshot
8. In the popup, change the name to <i>TPM-AS2 Simulation Sender - UserXX</i> (with <i>UserXX</i> using your ID). Then select <i>Select</i> to change the target package.	
9. In the upcoming package selection screen, select your package <i>Workshop-UserXX</i> .	
10. Next, select <i>Copy</i> .	
11. On the next dialog, select <i>Navigate</i> to open your package.	
12. You now have to <i>Configure</i> the integration flow. Select <i>Configure</i> from the <i>Actions</i> menu of the <i>TPM-IDOC Simulation Sender - UserXX</i> integration flow.	

Explanation	Screenshot
13. Please configure the integration flow with your User <i>UserXX</i> . Then select <i>Save</i> and <i>Deploy</i> . Once the integration flow is successfully deployed, the message is sent and should appear in your mailbox a few seconds later.	

2.4 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 <i>Monitor</i> → <i>B2B Scenarios</i> .	
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.	

Explanation	Screenshot
4. Click on one of your <i>Completed</i> interchanges.	
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.	
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.

3 OPTIONAL: EXERCISE 2

3.1 update MIG of the Trading Partner to a new Version

copy MIG auf neues MIG
umbenennen
cancel
migrate auf 5010
DTM duplicate 999 mit time

3.2 create NEW MAG to fit the updated MIG

copy MAG auf eigenes MAG (und umbenennen)
austausch des Target MIG durch das neu erstellte MIG
ändern des mappings
-löschen des Mappings von credat nach BEG 374
-anlegen E1EDK02_001->DATUM nach BEG373
-anlegen E1EDK03_002->DTM(374=002)->373
-anlegen E1EDK03_12 DATUM->DTM(374=999)->373
-anlegen E1EDK03_12 UZEIT->DTM(374=999)->374
Datumsformat ändern

3.3 Simulate new MAG in IA

4 OPTIONAL: EXERCISE 3

4.1 use new MIG and MAG in TPM

change tp NEW VERSION

Note: In upcoming version it will be possible to manually overwrite the version for each transaction

4.2 send new test message

5 OPTIONAL: EXERCISE 4...IRGENDWAS IM MONITORING MIT DEN ACKS