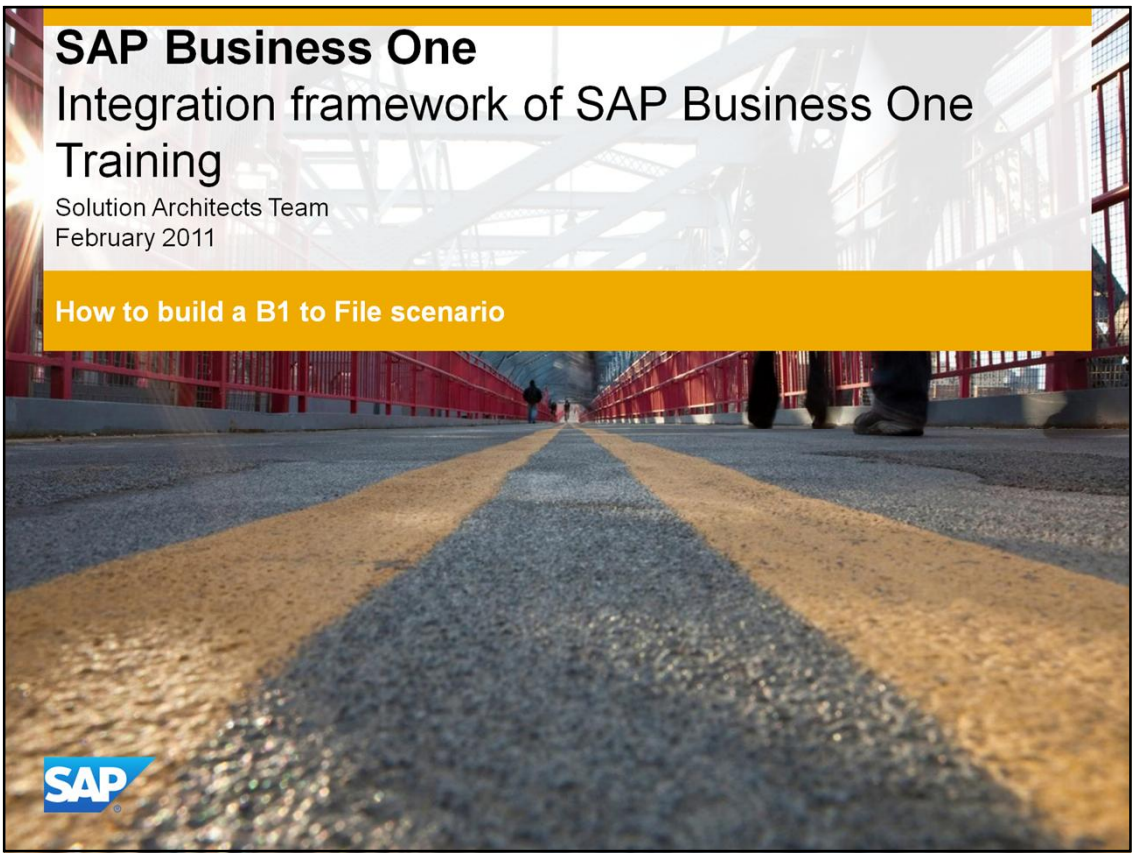
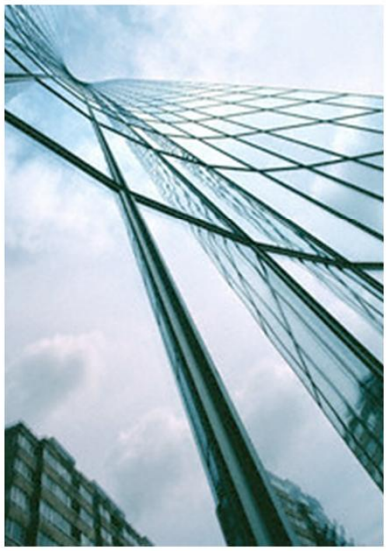

SAP Business One
Integration framework of SAP Business One Training
Solution Architects Team
February 2011
How to build a B1 to File scenario
SAP

B1if Training: How to build a B1 SO to File Scenario

The following training is designed to show you how to build a B1 Sales Order to File integration scenario using the Integration framework. When you end this training you should be able to:

- Build a scenario to create an external file from an SAP Business One Sales Order transaction.
- Setup the scenario and test it for running.



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Agenda

Case Analysis
- BPM Diagram

Integration
- Scenario Package
- Scenario Step
- Inbound
- Outbound
- Processing

Setup
- Create System Landscape
- Steps
- Sender System
- Receiver System
- Activate

Test
- Message Log

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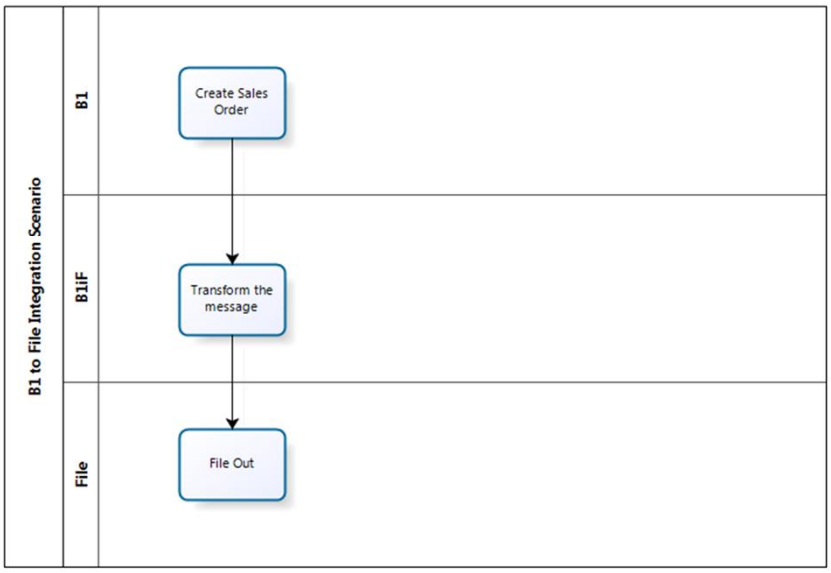
Case Analysis: B1 SO to File Integration BPM Diagram



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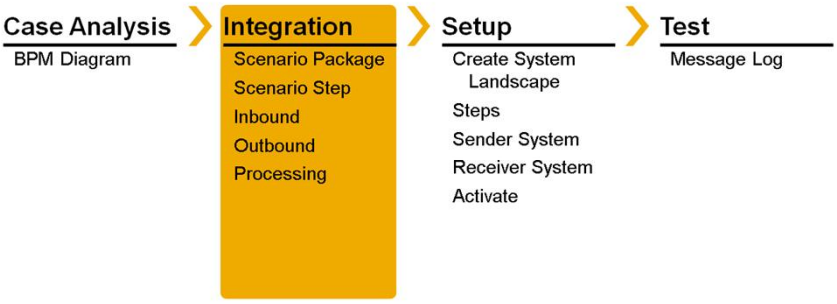
Agenda



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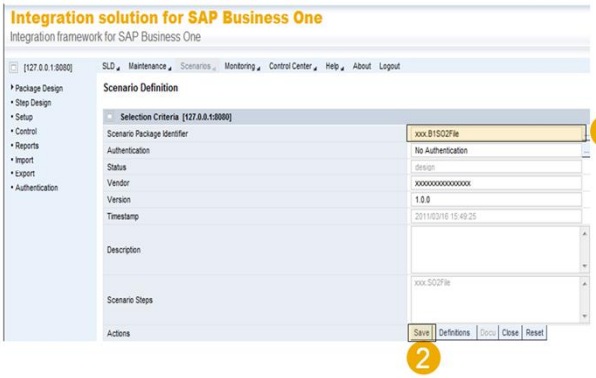
Integration: Scenario Package

Path: Scenarios/Package Design



1. Type the Scenario Package Identifier. Do not use spaces or special characters in the identifier. (B1SO2File)
2. Click on Save

B1i will add a prefix to the Scenario identifier corresponding to your namespace (check"B1if Installation" session).

The package will be created in design mode after save.

If you want to modify the package later on, you can use the ellipsis (…) button next to the Scenario Package Identifier textbox to select your package.

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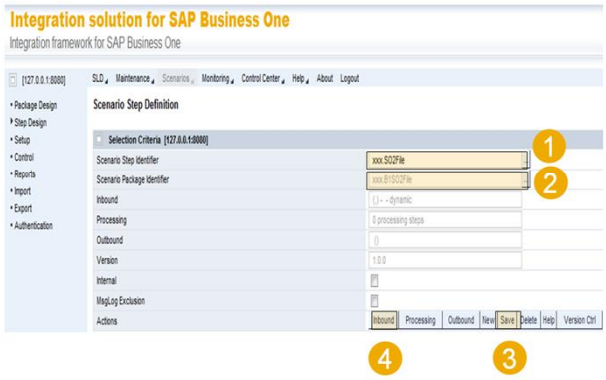
Integration: Scenario Step

Path: Scenarios/Step Design



1	Type the Scenario Step identifier. Do not use spaces or special characters in the identifier. (SO2File)
2	Using the ellipsis button (…) select the Package to which you want to assign the step (xxx.B1SO2File).
3	Click on Save
4	Click on Inbound

B1i will add a prefix to the Scenario identifier corresponding to your namespace.

The step will be empty and a version number will be automatically assigned for version control.

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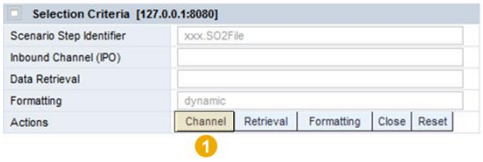
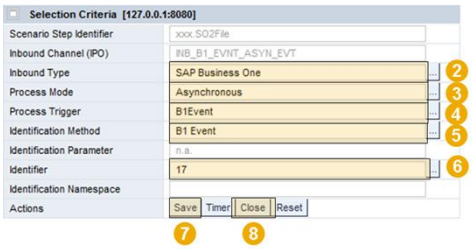
Integration: Inbound (1/2)

Path: Scenarios/Step Design/***Working Step***/[Inbound]

Scenario Step Definition - INBOUND



Scenario Step Definition - INBOUND - CHANNEL



1	Click on Channel
2	Using the ellipsis button (…) select SAP Business One as Inbound Type
3	Using the ellipsis button (…) select Asynchronous as Process Mode
4	Using the ellipsis button (…) select B1 Event as Process Trigger
5	Using the ellipsis button (…) select B1 Event as Identification Method
6	Using the ellipsis button (…) select Sales Order (Object Id 17) as Identifier
7	Click Save
8	Click Close

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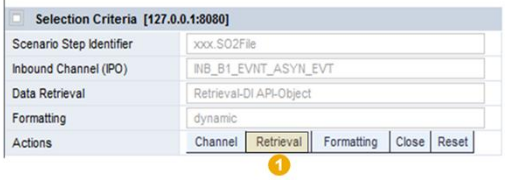
Integration: Inbound (2/2)

Scenario Step Definition - INBOUND



Scenario Step Definition - INBOUND - RETRIEVAL

1	Click on Retrieval
2	Using the ellipsis button (…) select DI API as Retrieval Channel
3	Using the ellipsis button (…) select Object as Retrieval Type
4	Click Save
5	Click Close

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Integration: Outbound

Path: Scenarios/Step Design/***Working Step***/[Outbound]

Scenario Step Definition - OUTBOUND - CHANNEL

Scenario Step Definition - OUTBOUND - FILE - FORMATTING

-	Select Outbound from the Scenario Step Definition
1	Using the ellipsis button (…) select Flat File as Outbound Channel
2	Using the ellipsis button (…) select File as Outbound Format
3	Click on Details
4	Using the ellipsis button (…) select XML, DSV or Text … choose DSV for this exercise
5	Using the ellipsis button (…) select the Mode as Write
6	Click on Save
7	Click on Close
8	Click on Save
9	Click on Close

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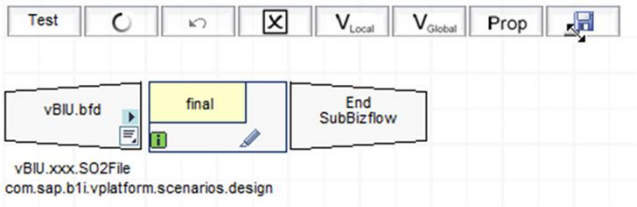
Integration: Processing

Path: Scenarios/Step Design/***Working Step***/[Processing]

The processing is the part in which B1if transforms the inbound message to the outbound message in order to get the desired results.

Each processing unit inside the scenario step is called atom and can do different actions.

By default all scenario steps have one atom (called final) associated to an XSLT file to perform the last transformation.



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Integration: Processing

Path: Scenarios/Step Design/***Working Step***/[Processing]

Additional considerations for the xForm atoms

- The XSL file of each atom will be modified outside B1if.
- The description of the configuration is meant for reference, the information needed for the modification is the name of the atom XSLT file that is found on each xForm atom.

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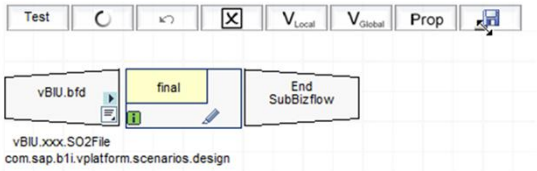
Integration: Processing

Path: Scenarios/Step Design/***Working Step***/[Processing]

The next step is to modify the XSLT file of the xForm atom using your preferred XML Editor.

In order to have access to the XSLT file you should give full access to the BizStore using WebDAV. For instruction please see B1if Installation guide.



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Integration: Processing (atom0 - final) – defines flat file format

Path: http://localhost:8080/B1iXcellerator/exec/dummy/com.sap.b1i.vplatform.scenarios.design/vBIU.xxx.SO2File/atom0.xsl

```
1   <?xml version="1.0" encoding="UTF-8"?>
2   <xsl:stylesheet xmlns:b1e="urn:com.sap.b1i.sim:b1event" xmlns:b1ie="urn:com.sap.b1i.sim:b1ievent" xmlns:bfa="urn:com.sap.b1i.bizprocessor.bizatoms" xmlns:jdbc="
    urn:com.sap.b1i.adapter.jdbcadapter" xmlns:rfc="urn:sap-com:document:sap:rfc:functions" xmlns:sim="urn:com.sap.b1i.sim:entity" xmlns:vpf="urn:com.sap.b1i.vplatform:entity"
    xmlns:xci="urn:com.sap.b1i.xcellerator:intdoc" xmlns:xsl="http://www.w3.org/1999/XSL/Transform" version="1.0" bfa:force="" vpf:force="" jdbc:force="" rfc:force="" b1ie:force=""
    b1e:force="" xci:force="" sim:force="">
3     <xsl:output method="xml" encoding="UTF-8" indent="yes"/>
4     <xsl:param name="atom"/>
5     <xsl:param name="sessionid"/>
6     <xsl:variable name="msg" select="/vpf:Msg/vpf:Body/vpf:Payload[./@Role=&apos;S&apos;]"/>
7     <xsl:variable name="vpSender" select="/vpf:Msg/vpf:Header/vpf:Sender/@Id"/>
8     <xsl:variable name="vpObject" select="/vpf:Msg/vpf:Header/vpf:Sender/@ObjId"/>
9     <xsl:variable name="vpReceiver" select="/vpf:Msg/vpf:Header/vpf:Receiver/@Id"/>
10    <xsl:template match="/">
11      <Msg xmlns="urn:com.sap.b1i.vplatform:entity">
12        <xsl:copy-of select="/vpf:Msg/@*"/>
13        <xsl:copy-of select="/vpf:Msg/vpf:Header"/>
14        <Body>
15          <xsl:copy-of select="/vpf:Msg/vpf:Body/*"/>
16          <Payload Role="R" id="{$atom}">
```

Define a <Fileout type = "file"> element and add the row and columns with the data to add to the text file as shown in the shaded area below.

```
22    <xsl:template name="transform">
23      <Fileout type="file">
24        <xsl:for-each select="$msg/BOM/BO/Document_Lines/*">
25          <row>
26            <col>
27                                                    "/>
28              <xsl:value-of select="$msg/BOM/BO/Documents/row/CardCode"/>
29            </col>
30            <col>
31              <xsl:value-of select="ItemCode"/>
32            </col>
33            <col>
34              <xsl:value-of select="Quantity"/>
35            </col>
36            <col>
37              <xsl:value-of select="LineNum"/>
38            </col>
39            <col>
40              <xsl:value-of select="Price"/>
41            </col>
42          </row>
43        </xsl:for-each>
44    </
45      </Fileout>
46
```

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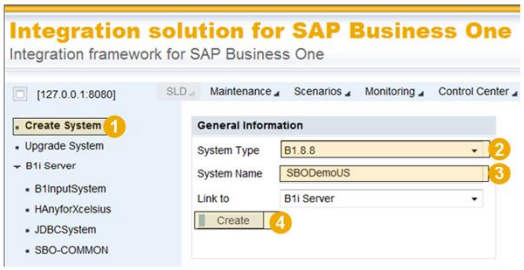
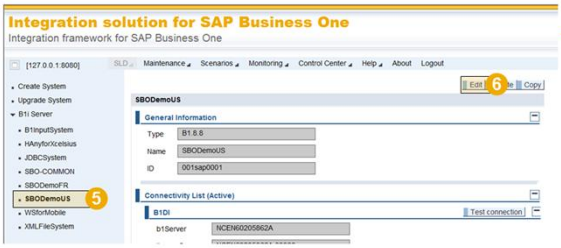
Setup SLD: Create B1 system (1/2)

Path: SLD/Create System





1	Click Create System
2	Select System Type B1.8.8 (or your B1 version)
3	Enter a System Name
4	Click Create
5	Select the new system
6	Click Edit

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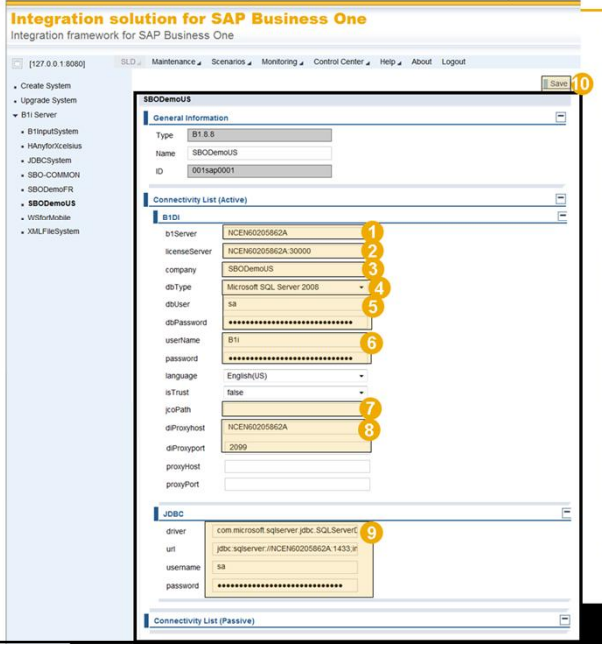
Setup SLD: Create B1 system (2/2)

Path: SLD/Create System/Select the new system

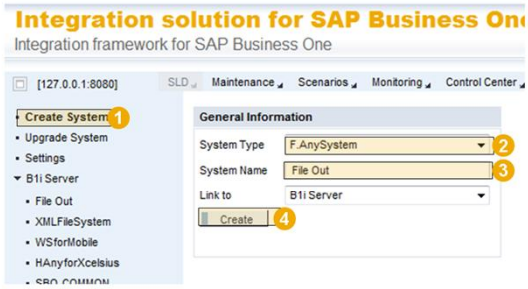


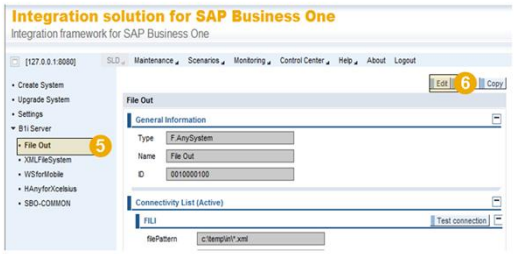
1	Enter B1 server
2	Enter B1 license server
3	Enter B1 company database
4	Select Server Type
5	Enter database user and password
6	Enter B1i user name and password
7	Enter B1 DI API jcoPath (blank should work if DI Proxy correctly configured)
8	Enter B1i DI Proxy host and port
9	Enter JDBC driver, url, username and password
10	Click Save

18

Setup SLD: Create File system (1/2)

Path: SLD/Create System





1	Click Create System
2	Select System Type F.AnySystem
3	Enter a System Name
4	Click Create
5	Click Save
6	Select the new system
7	Click Edit

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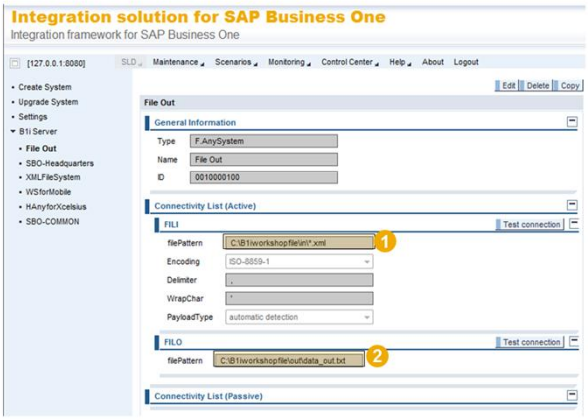
Setup SLD: Create File system (2/2)

Path: SLD/Create System/Select the new system



1	Enter a valid path for the xml file in FILI > filePattern
2	Enter a valid path for the text output file, FILO > filePattern
3	Click Save

Make sure you have created the directories specified in the filePatterns and click Test Connection for the system after pressing Save.

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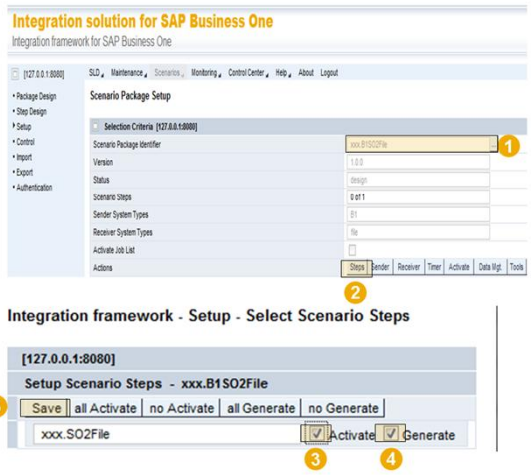
Filename_????.csv

Setup: Steps

Path: Scenarios/Setup



1	Select your Scenario Package Identifier
2	Click on Steps
3	Click on the Activate checkbox
4	Click on the Generate checkbox
5	Click on Save
	Close the Select Scenario Steps window

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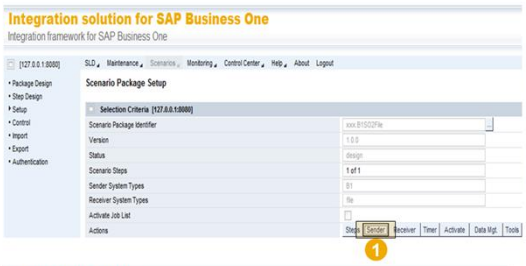
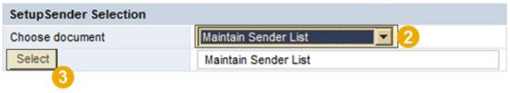
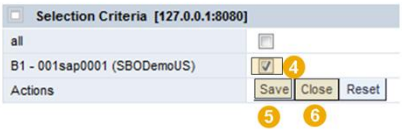
Setup: Sender

Path: Scenarios/Setup





Scenario Setup - Sender List



1	Click on Sender
2	Select Maintain Sender List from the dropdown Choose document
3	Click on Select
4	Check the B1 system in the list
5	Click Save
6	Click Close

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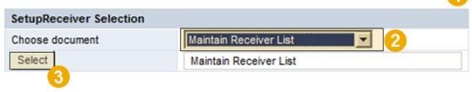
Setup: Receiver

Path: Scenarios/Setup



Scenario Setup - Receiver List

1	Click on Receiver
2	Select Maintain Receiver List from the dropdown Choose document
3	Click on Select
4	Check the file system in the list
5	Click Save
6	Click Close

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Setup: Activate

Path: Scenarios/Setup

Integration framework - Scenario Setup Result

Integration framework - Scenario Setup Result

1	Click on Activate
2	Click on Activate on the Scenario Setup Result window
3	Confirm Operation

After the operation is completed the status of the Package is changed from design to active

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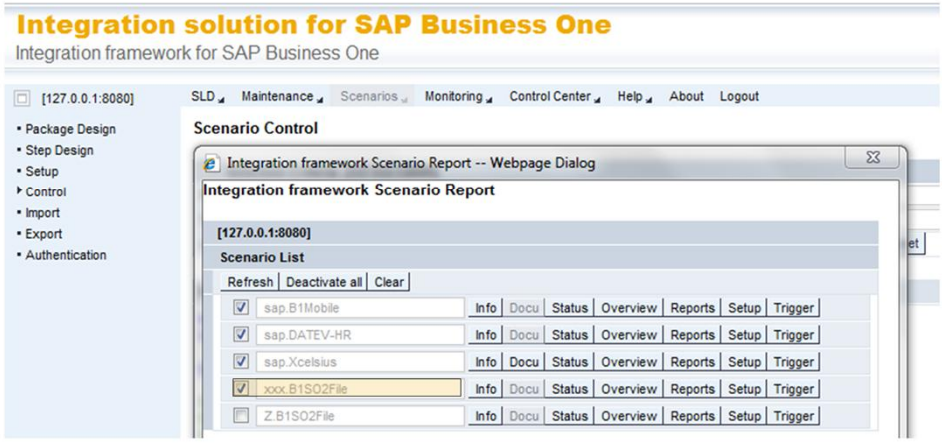
Setup: Check activation

Path: Scenarios/Control



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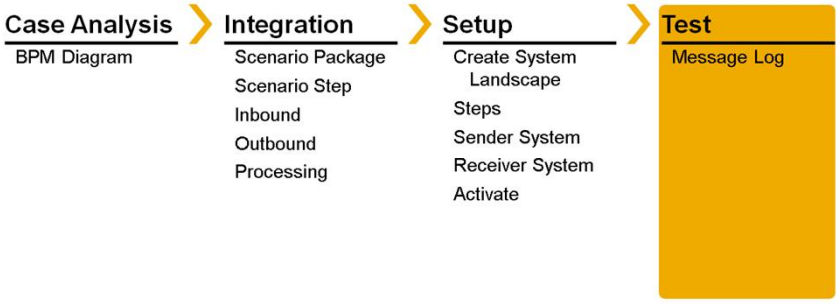

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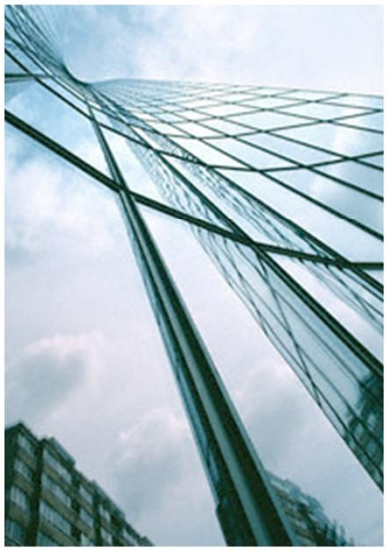
Test

After everything is completed you can perform the following test:

- Log into the SBO system and create a Sales Order for the company (SBODemoUS)
- Choose to Add the Sales Order



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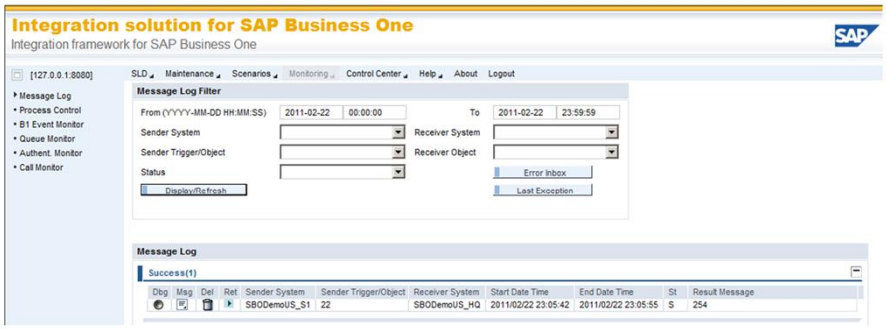
Test: Message Log

Path: Monitoring/Message Log



The result of the tests will be displayed in the message log

- Select the date and time you want to check.
- Click on Display/Refresh button to check results
- For more information about debugging check the B1if Monitoring and Debugging presentation.

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Test2: Create an XML file instead of a CSV file

Path: Monitoring/Message Log

1. **Deactivate the scenario (See “Setup: Activate” slide)**
2. **Change the Outbound file format**
3. **Change de output file format in SLD**
4. **Activate the scenario**
5. **Resend the same message again**

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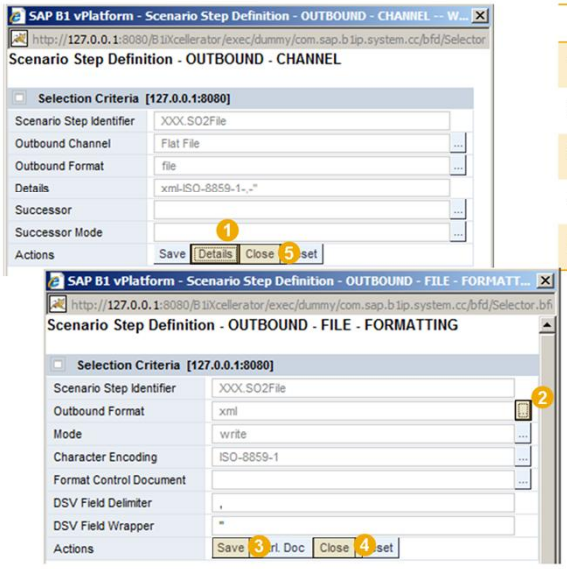
Test2: Change Outbound file format (1)

Path: Scenarios/Step Design/Outbound/Details



1	Click on Details
2	Change the Outbound format to XML
3	Click on Save
4	Click on Close
5	Click on Close

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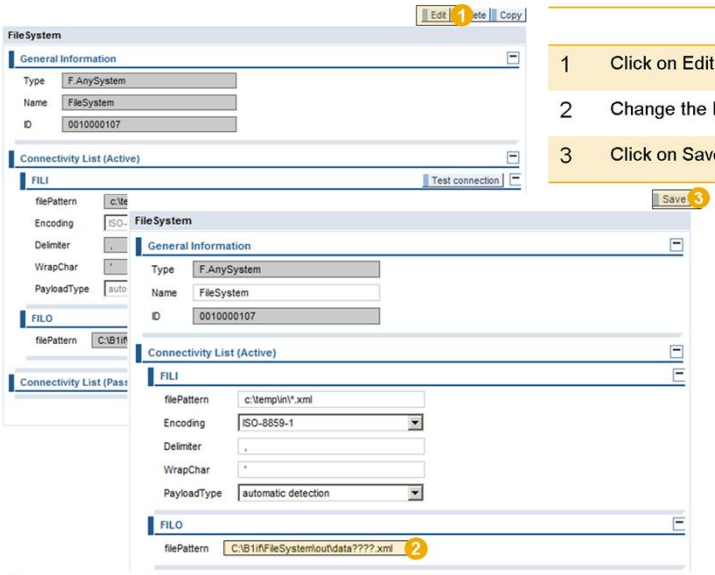
Test2: Change output file extension in SLD (2)

Path: SLD/Select your F.AnySystem system



1	Click on Edit
2	Change the FILO filePattern extension to xml
3	Click on Save

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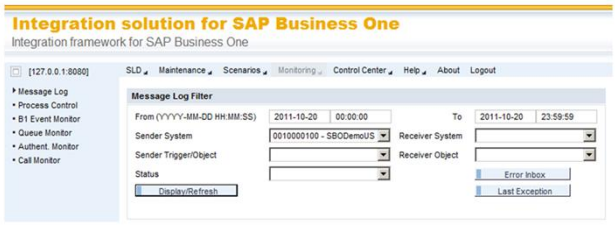
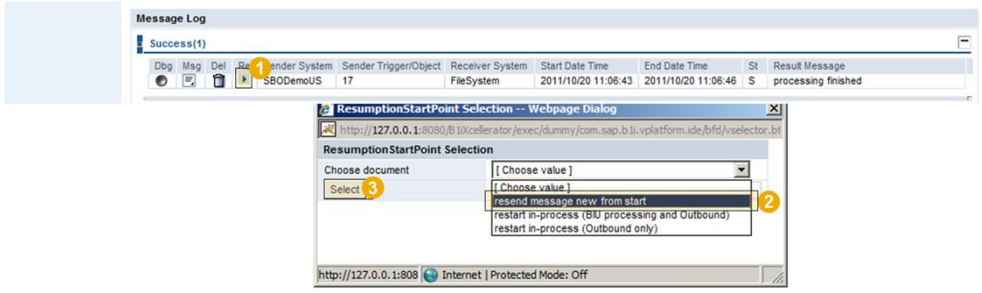
Test2: Resend the message (3)

Path: Monitoring/Message Log



1. Click on the Resend arrow
2. Select “resend message new from start”
3. Click on Select



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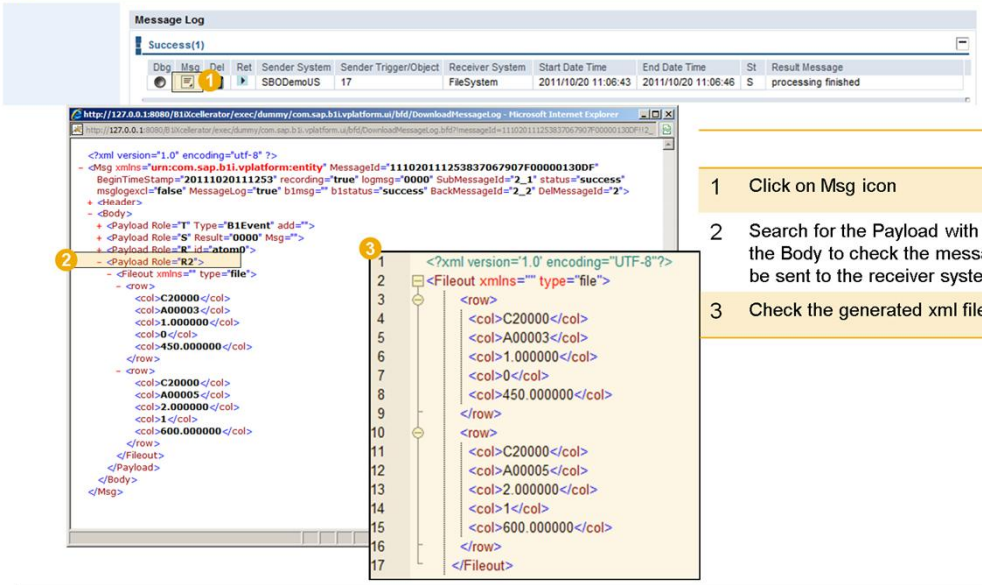
Test2: Check the result (4)

Path: Monitoring/Message Log/Msg column



1 Click on Msg icon

2 Search for the Payload with Role R2 in the Body to check the message that will be sent to the receiver system.

3 Check the generated xml file.

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Test3: Create a TXT file

Path: Monitoring/Message Log

1. **Deactivate the scenario (See Setup: Activate slide)**
2. **Change output file extension in SLD**
3. **Change Xslt transformation to better fit txt format**
4. **Create a Rule Document to define your txt format and upload it in B1if**
5. **Change the Outbound format to TXT and link it to your Rule Document**
6. **Activate the scenario**
7. **Resend the same message again**

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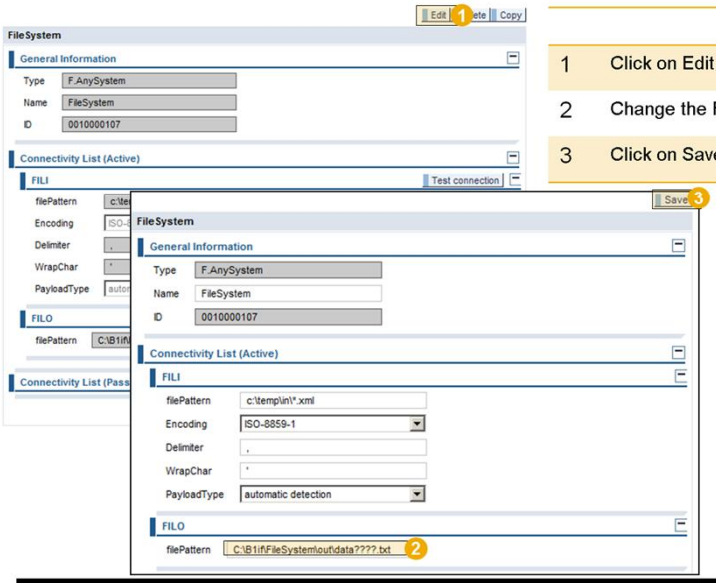
Test3: Change output file extension in SLD (1)

Path: SLD/Select your F.AnySystem system



1	Click on Edit
2	Change the FILO filePattern extension to txt
3	Click on Save

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Test3: Change xsl transformation (2)

Path: http://localhost:8080/B1iXcellerator/exec/dummy/com.sap.b1i.vplatform.scenarios.design/vBIU.xxx.SO2File/atom0.xsl

Define a <Fileout type = "file"> element and add the row and columns with the data to add to the text file as shown in the shaded area below.

```
<xsl:template name="transform">
  <SalesOrder xmlns="">
    <Header>
      <DocEntry><xsl:value-of select="$msg/BOM/BO/Documents/row/DocEntry"/></DocEntry>
      <BPCode><xsl:value-of select="$msg/BOM/BO/Documents/row/CardCode"/></BPCode>
      <BPName><xsl:value-of select="$msg/BOM/BO/Documents/row/CardName"/></BPName>
      <DueDate><xsl:value-of select="$msg/BOM/BO/Documents/row/DocDueDate"/></DueDate>
    </Header>
    <Lines>
      <xsl:for-each select="$msg/BOM/BO/Document_Lines/row">
        <row>
          <ItemCode><xsl:value-of select="ItemCode"/></ItemCode>
          <ItemDescription><xsl:value-of select="ItemDescription"/></ItemDescription>
          <Price><xsl:value-of select="Price"/></Price>
          <Quantity><xsl:value-of select="Quantity"/></Quantity>
        </row>
      </xsl:for-each>
    </Lines>
  </SalesOrder>
</xsl:template>
```

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Test3: Define a Rule Document (3)

```
<?xml version="1.0" encoding="UTF-8"?>
<FileOutbound>
  <segment id="SalesOrder">
    <segment id="Header">
      <field id="DocEntry" from="1" len="10" default="" justify="L" fillchar="0"/>
      <field id="BPCode" from="11" len="20" default="" justify="L" fillchar=""/>
      <field id="BPName" from="31" len="20" default="" justify="L" fillchar=""/>
      <field id="DueDate" from="51" len="10" default="" justify="R" fillchar=""/>
    </segment>
    <segment id="Lines">
      <segment id="row">
        <field id="ItemCode" from="1" len="10" default="" justify="L" fillchar="0"/>
        <field id="ItemDescription" from="11" len="20" default="" justify="L" fillchar=""/>
        <field id="Price" from="31" len="10" default="" justify="L" fillchar=""/>
        <field id="Quantity" from="41" len="10" default="" justify="R" fillchar=""/>
      </segment>
    </segment>
  </segment>
</FileOutbound>
```

Help -> Ref 05 - Schemas ->1.4. vBIU Outbound Schemas for File -> 1.4.4 Text

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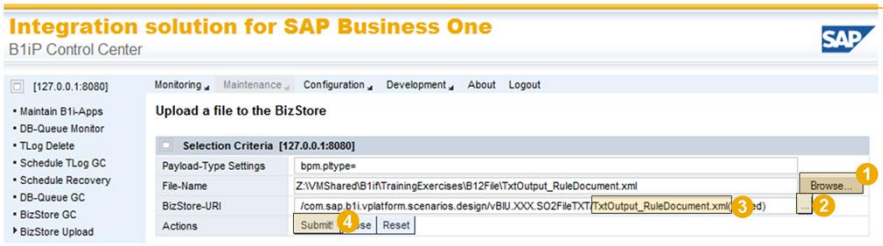
Test3: Upload the Rule Document (4)

Path: Control Center / Maintenance / BizStore Upload

1	Select the path where you saved the RuleDocument
2	Select your vBIU path from the different combo boxes and no matter which file on your vBIU
3	Manually change the name of the file you selected by the name of your rule document, it will be created during the upload
4	Click on Submit



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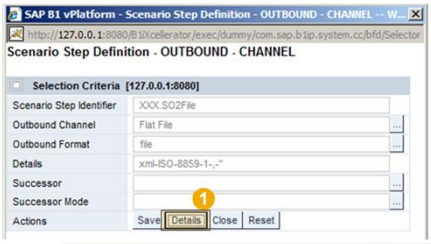
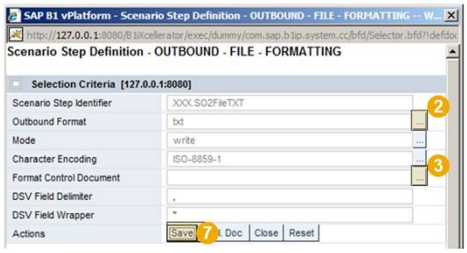
Test3: Change Outbound file format (5)

Path: Scenarios/Step Design/Outbound/Details





1	Click on Details
2	Change the Outbound format to TXT
3	Click on … button
4	Select your Format Control Document
5	Click on Select
6	Close the window
7	Click on Save

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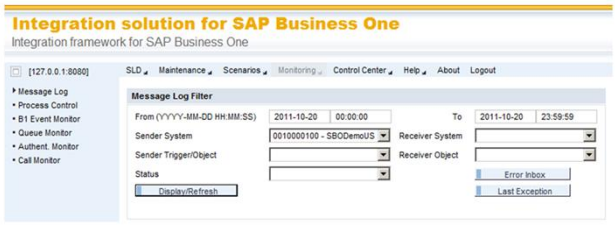
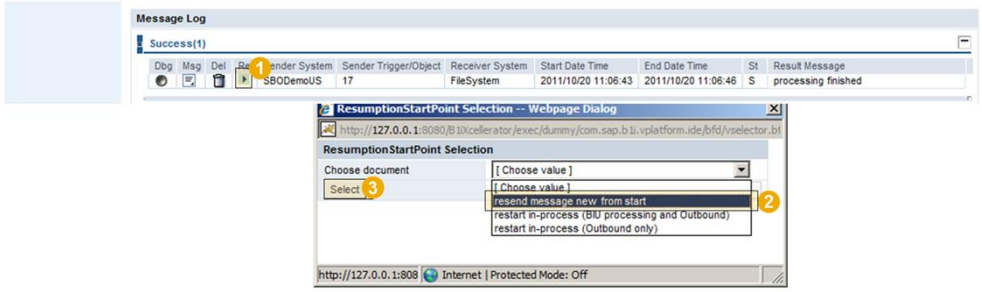
Test2: Resend the message (6)

Path: Monitoring/Message Log



1. Click on the Resend arrow
2. Select “resend message new from start”
3. Click on Select



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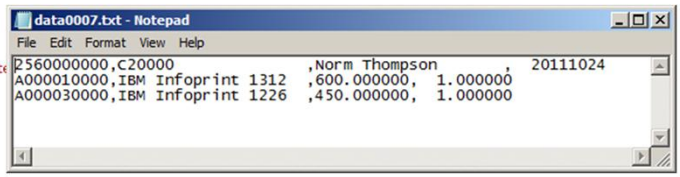
Test3: Check the result (7)

```
- <Payload Role="R" id="atom0">
  - <SalesOrder xmlns="">
    - <Header>
        <DocEntry>256</DocEntry>
        <BPCode>C20000</BPCode>
        <BPName>Norm Thompson</BPName>
        <DueDate>20111024</DueDate>
      </Header>
    - <Lines>
      - <row>
          <ItemCode>A00001</ItemCode>
          <ItemDescription>IBM Infoprint 1312</ItemDescription>
          <Price>600.000000</Price>
          <Quantity>1.000000</Quantity>
        </row>
      - <row>
          <ItemCode>A00003</ItemCode>
          <ItemDescription>IBM Infoprint 1226</Ite
          <Price>450.000000</Price>
          <Quantity>1.000000</Quantity>
        </row>
      </Lines>
    </SalesOrder>
  </Payload>
- <Payload Role="R2">
    <io xmlns="urn:com.sap.b1i.bizprocessor:bizatoms">==== data-length: 160 ====</io>
  </Payload>
```



Payload with Role R contains the XML output from the xslt transformation.
Payload with Role “R2” contains the length of the generated txt file.

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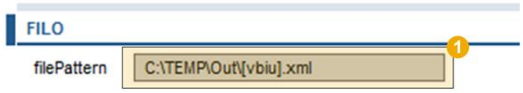
Annex: Output file dynamic naming



1	Use [vbiu] as the name of the file in the SDL file system path definition
2	Declare an attribute inside the xslt transform element

2

```
<xsl:attribute name="b1im_filename">
  SAP_B1_EmployeeXML_
  <xsl:value-of select="$vpSender" />
  <xsl:value-of select=
      "/vpf:Msg/vpf:Body/vpf:Payload[./@id='atom1']/jdbc:ResultSet/jdbc:Row/jdbc:TransferID" />
  </xsl:attribute>
```

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