IBM WEBSPHERE PARTNER GATEWAY V6.0 - LAB EXERCISE

EDI to XML Configuration

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NOTE: Education materials and other documentation as applicable including programming manuals, operating guides, physical planning manuals and installation manuals related to the IBM Products may be early versions subject to change.

What this exercise is about

This document describes how to configure WebSphere Partner Gateway to accept a EDI document, deenvelope it, validate and translate it to xml

Lab Requirements

List of system and software required for the student to complete the lab.

- WebSphere MQ 5.3 with CSD 08 installed
- DB2 8.2 Enterprise server installed
- Data Interchange Services Client 6.0 installed
- WebSphere Partner Gateway V 6.0 (WPG) software installed (This includes the DB loader and the runtime servers)

What you should be able to do

At the end of this lab you should be able to:

 Configure WebSphere Partner Gateway to accept a EDI document, de-envelope it, validate and translate it to XML

Exercise Instructions

Some instructions in this lab may be Windows operating-system specific. If you plan on running the lab on an operating-system other than Windows, you will need to execute the appropriate commands, and use appropriate files (.sh vs. .bat) for your operating system. The directory locations are specified in the lab instructions using symbolic references, for example:

Reference Variable	Windows Location	Linux Location
<wpg_home></wpg_home>	C:\IBM\WPG\bcghub	/opt/IBM/WPG/bcghub
<lab_files></lab_files>	C:\LabfilesWPG	/tmp/LabfilesWPG
<temp></temp>	C:\temp	/tmp

WPG users can be categorized into 3 administrative roles.

Community Operator: The Community Operator is responsible for managing the day-to-day operation of the hub community. Pre-defined user— cannot be deleted. Acts as "sysadmin" for WPG. Defines and maintains the WPG's capabilities. Typically does NOT send or receive documents



Community Participant: External business partners to WPG. Can be as many defined as desired



Community Manager: The Community Manager is the primary driving force within the hub community. Also a participant, but is the principle one. Can only have one Community Manager in WPG. Operational manager for the community



Lab Files

You would need a copy of the following files in your <LAB_FILES>

MAP File: S DT EDI TO XML.eif

Input File: edi2xml.inp

Part 1: Introduction

Objective:

The source trading partner sends an EDI ISA document which needs to be converted to XML and sent to the target trading partner.

Figure-1

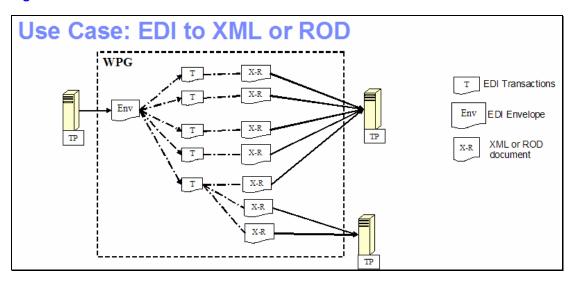


Figure-1 shows the high level representation of the actions that take place in an EDI to ROD or XML flow between 2 trading partners.

Figure-2

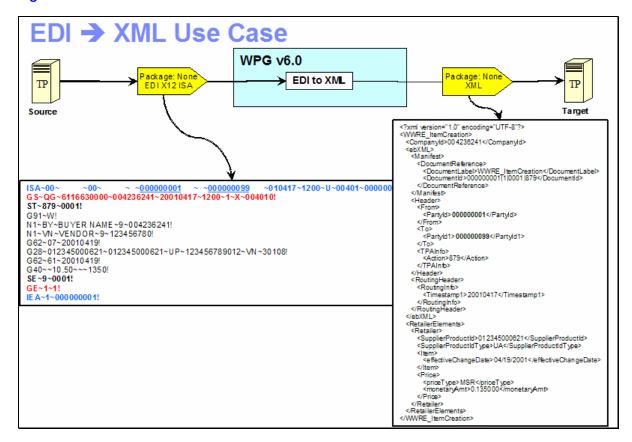


Figure-2 shows the final outcome of the EDI to XML lab. An incoming EDI X12 ISA with None packaging from the source trading partner passes through the hub where the EDI is translated to XML and the XML is sent to the target trading partner.

The 1st step in the hub after receiving the EDI document is de-enveloping where the EDI transactions are extracted from EDI interchange. Each of the EDI transaction is routed back into the document manager to be processed, based on the connection configuration for that transaction.

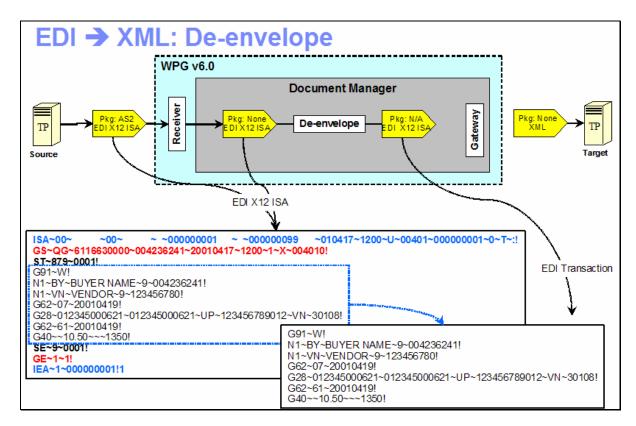
Detailed steps of a simple flow of the incoming EDI document mapped to an outgoing XML or ROD document are as follows.

Step 1:

The target EDI receiver receives the EDI document from Source Trading Partner. If the target needs to process multiple Interchanges in one EDI document file, the target needs to use EDI Splitter. This target can then be used for an EDI file containing multiple EDI Interchanges. The EDI splitter splits the EDI file into individual EDI Interchange envelopes. Each EDI envelope then flows back through the document manager and follows through the next step.

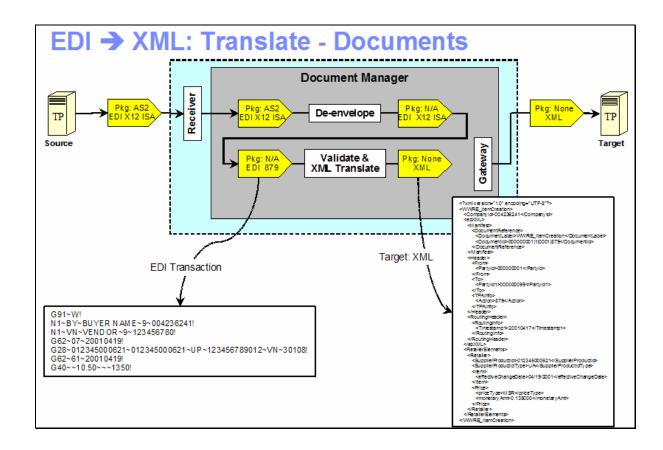
Step 2:

The EDI envelope goes through the EDI de-enveloper action that extracts all the EDI transactions. Each transaction then independently flows through the document manager.



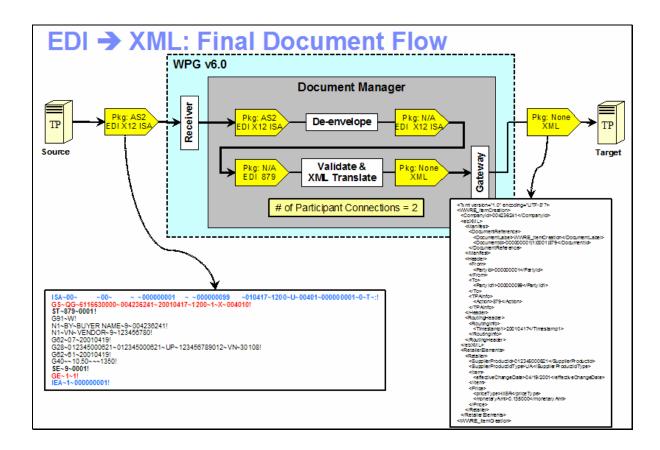
Step 3:

The individual EDI transaction then gets validated and mapped to output XML or ROD. A pre-requisite step is that the map has already been imported using the IBM Data Interchange Services(DIS) client tool or the DIS import function.



Step 4:

The generated XML or ROD is then sent to the receiver/target Trading partner through the Gateway for that trading partner.



Two participant connections need to be configured, as shown in the diagram. One for the de-enveloper and another for the EDI transaction transformation to ROD or XML.

This page shows the details of a simple flow of the incoming EDI document mapped to an outgoing XML document. The scenario works the same for XML and ROD output, the only difference being the transformation map used to map the EDI transaction to either XML or ROD. The symbols and nomenclature are shown on the page. TP1 and TP2 denote the sender and the receiving trading partners.

The receiving partner, TP2 could be an external trading partner or the community manager itself. In more common cases of EDI to XML or ROD, the XML or ROD output would be targeted for some back end, and hence the community manager would be the logical receiving target trading partner.

The flow is received by the target receiver and then processed by the Document manager, and the output sent to the gateway which forwards it to the receiving trading partner.

The grey box with the green symbols for the trading partners on the side of grey box represent the Interaction, B2B capabilities and participant connection that needs to be configured for that specific flow.

The document flows through the following steps marked 1 to 4 in yellow boxes.

Step 1:

Part 2: Exporting the Map to WPG Database from DIS Client

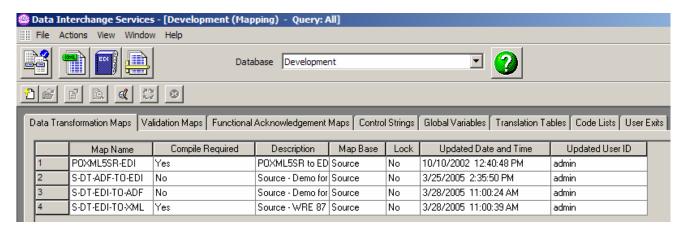
- 1. Launch the DIS Client Application. If you haven't already configured the ODBC data source for the bcgapps DB2 database and created a new database in the DIS Client, refer the lab "Creating DB2 ODBC Data Source Creation and Installation and Configuration of IBM DIS Client V6.0". If you have already finished the configuring ODBC data source and created a new database in DIS Client, follow the instructions below
- 2. Importing the Map into your development database
 - __ a. Select the "Development" database from the Database dropdown menu



- __ 1) Browse to the **<LAB_FILES>/edi_xml** and select **S_DT_EDI_TO_XML.eif**
- ___2) On the import screen select the checkboxes (Selecting the top automatically selects All)
- __ c. Click on the Actions→ Import
 - ___ 1) Select "Development" in the list of available Databases
 - __ 2) Click **Ok**. "**Execution status Window**" will open and the import will start. You should see the message "**Import Completed Successfully**" message once the import is done.
 - __ 3) Click Close
- ____ 3. Click on the icon "Mapping".

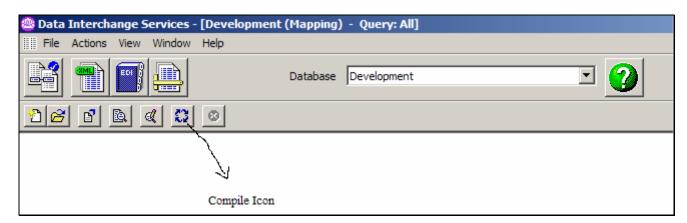


__ a. A new window is opened



- b. Click on the Data Transformation Maps tab.
- c. The Map name S DT EDI TO XML should be listed with the Compile Required as "Yes".
- __ d. Select this map and click on the Compile Icon. Alternatively go to the top menu. Click **Actions > Compile**
 - "Execution status Window" will open and the import will start. You should see the message "Compile Completed Successfully" message once the import is done.

Click Close.



- 4. Importing the compiled map into the WPGDatabase
 - __ a. Go to the "Control Strings" tab
 - __ b. Select the row for the map name "S_DT_EDI_TO_XML". If you do not see the map, refresh the panel (From the DIS Client menu bar, select View and then select Refresh)
 - c. Select Top menu. Click Actions → Export to Other Database
 - __ 1) Select the **WPGDatabase** from the list and Click **Ok**
 - __ 2) If you are prompted for the username and password, provide the DB2 username and password information.

For this Lab, the information is as follows:

	User Name: labuser
	Passwd: lab1user
3)	On the "Export with control string" screen
	a) Click Select All and then Ok .
	b) "Execution status Window" will open and the compilation will start. You should see the message "Export Completed Successfully" message once the compiling is done.
	c) Click Close

You have successfully exported the Map into the WPGDatabase.

Part 3: Starting MQ Components and WPG Servers

Note: Make sure that the database server is started

<u>Star</u>	ting the required MQ services:
Open	a command window and issue the following commands.
1.	Start MQ queue manager
	strmqm bcg.queue.manager
2.	Start MQ Broker
	strmqbrk -m bcg.queue.manager
3.	Start services on the Queue manager
	strmqcsv bcg.queue.manager
4.	Run MQ listener (9999 is the default port used by the installer)
	runmqlsr -t tcp -p 9999 -m bcg.queue.manager
<u>Star</u>	ting WPG Servers
Open	a command window and change directories to <wpg_home>/bin</wpg_home>
1.	Starting Console
	bcgstartserver bcgconsole
2.	Starting Receiver
	bcgstartserver bcgreceiver
3.	Starting Doc. Manager
	bcgstartserver bcgdocmgr

Part 4: Logging into Community Console

____ 1. If you have already logged into the Community console previously and followed the instructions in wpgv6_basic_configuration lab, use the following authentication information

User Name: hubadmin

Password: hub1admin

Company Name: Operator

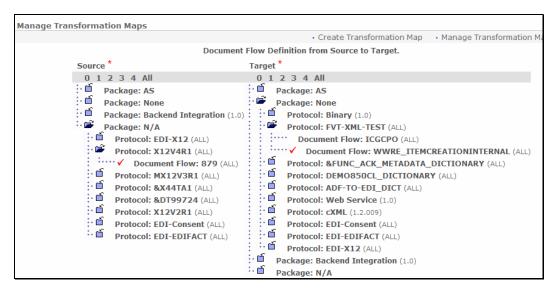
Part 5: Checking the import of maps

Community Operator has the privilege for checking the Map import



_ 1. Checking Map import

- _ a. Hub Admin → Hub Configuration → Maps → Transformation Maps. The map S_DT_EDI_TO_XML should be listed
- __ b. Click on the view igorean icon. The Document Flow Definition from Source to Target is listed as



Note:

The values X12V4R1 for the protocol and 879 for the document flow on source side correspond to the **Dictionary Name** and **Document Definition Name** defined in the **Source Document Definition** of the map **S_DT_EDI_TO_XML** you imported.

The values ICGCPO for the protocol and WWRE_ITEMCREATIONINTERNAL for the document flow on target side correspond to the **Dictionary Name** and **Document Definition Name** defined in the **Target Document Definition** of the map **S_DT_EDI_TO_XML** you imported.

You have successfully verified that the map S_DT_EDI_TO_XML has been imported.

Part 6: Creating Targets

Note: You have already created the "edifiletarget" before in the "WPG Basic Configuration" Lab. If not please complete the "WPG Basic Configuration" Lab before you proceed.

Part 7: Creating Participants

Note: You have already created the Manager and TP1 participants before in the "WPG Basic Configuration" Lab. If not please complete the "WPG Basic Configuration" Lab before you proceed.

Part 8: Creating Gateways for the Participants

Note: You have already created the file gateways for the Manager and TP1 profile before in the "WPG Basic Configuration" Lab. If not please complete the "WPG Basic Configuration" Lab before you proceed.

Part 9: Create Interactions

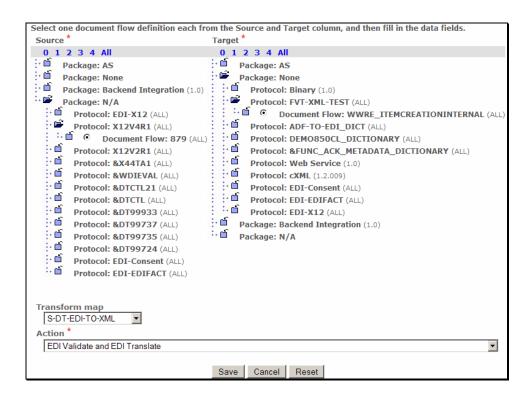
New Interactions can be created only by Community Operators.



For the EDI to XML Scenario, We need to create 2 interactions. One interaction corresponding to the Deenvelope and the second one corresponds to the transformation of the resultant deenveloped message to XML

1.	Create the Interaction For Deenvelope
	a. Go to Hub Admin → Hub Configuration → Document Flow Definition
	1) Click Manage Interactions located at right corner of the screen
	2) Select "Create Interaction"
	3) Create the following source to target interaction
	Package: N/A Protocol: X12V4R1 (ALL) Document Flow: 879 (ALL)
	То
	Package: None Protocol: FVT-XML-TEST (ALL) Document Flow: WWRE_ITEMCREATIONINTERNAL (ALL)
	a) Click on the icon next to Package: N/A under the Source . This should list all the protocols available under Package: N/A .
	b) Click on the icon next to Protocol: X12V4R1 (ALL) under the Source . This should list all the Document Flows available under Protocol: X12V4R1 (ALL) .
	c) Click on the radio button next to Document Flow : 879 (ALL) under the Source .
	d) Click on the icon next to Package: None under the Target . This should list all the protocols available under Package: None .
	— e) Click on the icon next to Protocol: FVT-XML-TEST (ALL) under the Target. This should list all the Document Flows available under Protocol: FVT-XML-TEST (ALL).
	f) Click on the radio button next to Document Flow : WWRE_ITEMCREATIONINTERNAL (ALL) under the Target.
	g) Select the " S_DT_EDI_TO_XML " from the Transformation Map drop down menu

- __ h) Select "EDI Validate and EDI Translate " from the Action drop down menu.
- __ i) Click Save.



2. Create the Interaction For Transformation

- __ a. Go to Hub Admin → Hub Configuration → Document Flow Definition
 - 1) Click **Manage Interactions located** at right corner of the screen
 - 2) Select "Create Interaction"
 - ___ 3) Create the following source to target interaction

Package: None

Protocol: **EDI-X12 (ALL)**Document Flow: **ISA (ALL)**

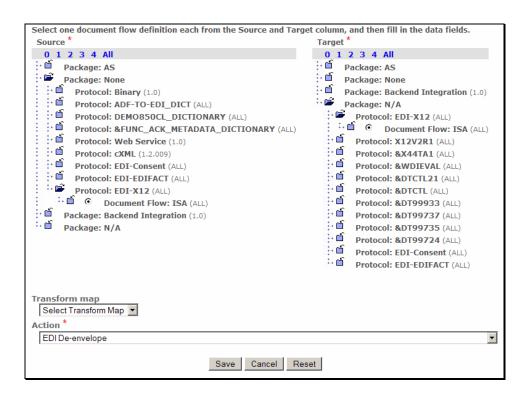
To

Package: N/A

Protocol: **EDI-X12 (ALL)**Document Flow: **ISA (ALL)**

__ a) Click on the icon next to **Package: None** under the **Source**. This should list all the protocols available under **Package: None**.

b) Click on the icon next to Protocol: EDI-X12 (ALL) under the Source. This should list all the Document Flows available under Protocol: EDI-X12 (ALL).
c) Click on the radio button next to Document Flow: ISA (ALL) under the Source.
d) Click on the icon next to Package: N/A under the Target. This should list all the protocols available under Package: N/A.
e) Click on the icon next to Protocol: EDI-X12 (ALL) under the Target. This should list all the Document Flows available under Protocol: EDI-X12 (ALL).
f) Click on the radio button next to Document Flow: ISA (ALL) under the Target.
g) Select "EDI De-envelope" from the Action drop down menu.
h) Click Save.



You have successfully created the interactions required for the EDI to XML scenario

Part 10: Enabling B2B Capabilities

B2B capabilities can be enabled by Community Operators, Community Manager and Community Participants







Community Operator: Can enable B2B Capabilities for all the participants including the

Community Manager Profile

Community Manager: Can enable B2B Capabilities for its own profile

Community Participant: Can enable B2B Capabilities for its own profile

Note: Some of the B2B Capabilities for the participants may have already been enabled from previous scenarios.

B2B Capabilities specify what particular Package, Protocol, and Document Flows the Participant Supports. Enabled B2B capabilities for a participant define the types of documents the participant will be allowed to send and/or receive. The B2B capabilities for a partner are a subset of the Package, Protocol, and Document Flows that Hub supports.

	1.	Enable	B2B	Capabilities	for the	Source	Trading	Partner
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- __ a. Go to **Account Admin** → **Profiles** → **Community Participant** and click on Search button. This should list all the Participants created
 - __ 1) Select the Source Trading Partner, **TP1** and click on the Picon. This activates the **TP1** profile
- b. Click on **B2B Capabilities** menu item.

Since we are enabling the B2B capabilities of the source trading partner, we only need to enable the Package, Protocol and Document Flow for source side.

Enable the following **Package**, **Protocol**, **and Document Flow** by following the instructions below

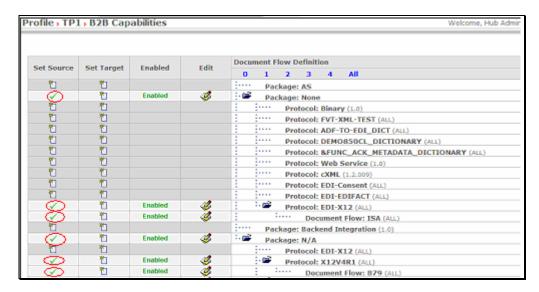
Package: None

Protocol: **EDI-X12 (ALL)**Document Flow: **ISA (ALL)**

Perform the following steps under the "Set Source" column of the B2B Capabilities

- __ 1) Click on the icon in the row corresponding to changed to \(\sqrt{} \)
- __ 2) Click on the icon next to **Package: None**. This should list all the protocols available under **Package: None**.

3) Click on the icon in the row corresponding to Protocol: EDI-X12 (ALL). icon in the row corresponding to Protocol:
changed to 🗸
4) Click on the icon next to Protocol : EDI-X12 (ALL) . This should list all the Document Flows available under Protocol : EDI-X12 (ALL)
5) Click on the icon in the row corresponding to Document Flow: ISA (ALL). should be changed to
Enable the following Package , Protocol , and Document Flow by following the instructions below
Package: N/A (N/A) Protocol: X12V4R1 (ALL) Document Flow: 879 (ALL)
Perform the following steps under the "Set Source" column of the B2B Capabilities
1) Click on the icon in the row corresponding to Package : N/A. should be changed to
1) Click on the ¹ icon in the row corresponding to Package : N/A. ¹ should be changed
 1) Click on the icon in the row corresponding to Package: N/A. should be changed to ✓ 2) Click on the icon next to Package: N/A. This should list all the protocols available
1) Click on the icon in the row corresponding to Package: N/A. is should be changed to ✓2) Click on the icon next to Package: N/A. This should list all the protocols available under Package:N/A3) Click on the icon in the row corresponding to Protocol: X12V4R1 (ALL). is should
1) Click on the icon in the row corresponding to Package: N/A. is should be changed to



2. Enable B2B Capabilities for the Target Trading Partner

- __ a. Go to **Account Admin** → **Profiles** → **Community Participant** and click on Search button. This should list all the Participants created
 - __ 1) Select the Target Trading Partner you created for this scenario by clicking on the Ficon. In this document the Target Trading Partner is "Manager"

__ b. Click on **B2B Capabilities** menu item

Since we are enabling the B2B capabilities of the target trading partner, we only need to enable the Package, Protocol and Document Flow for target side.

Enable the following **Package**, **Protocol**, **and Document Flow** by following the instructions below

Package: N/A

Protocol: EDI-X12 (ALL)
Document Flow: ISA (ALL)

Perform the following steps under the "Set Target" column of the B2B Capabilities

- __ 1) Click on the icon in the row corresponding to **Package**: **N/A**. should be changed to
- ___2) Click on the icon next to **Package: N/A**. This should list all the protocols available under **Package:N/A**.
- __ 3) Click on the icon in the row corresponding to **Protocol**: **EDI-X12 (ALL).** should be changed to
- __ 4) Click on the icon next to **Protocol**: **EDI-X12 (ALL)**. This should list all the Document Flows available under **Protocol**: **EDI-X12 (ALL)**
- __ 5) Click on the icon in the row corresponding to Document Flow: **ISA (ALL).** should be changed to

Enable the following **Package**, **Protocol**, **and Document Flow** by following the instructions below

Package: None (N/A)

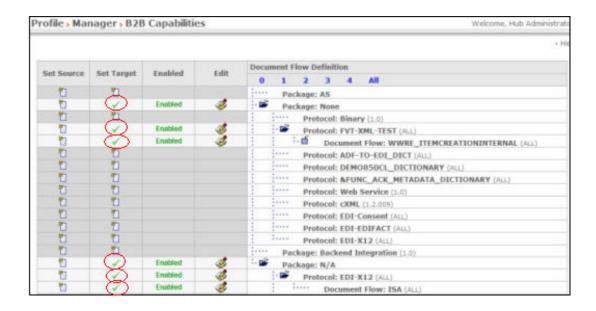
Protocol: FVT-XML-TEST (ALL)

Document Flow: WWRE ITEMCREATIONINTERNAL (ALL)

Perform the following steps under the "Set Target" column of the B2B Capabilities

- __ 1) Click on the icon in the row corresponding to **Package**: **None**. should be changed to
- ___2) Click on the icon next to **Package: None**. This should list all the protocols available under **Package: None**.
- __ 3) Click on the icon in the row corresponding to **Protocol**: **FVT-XML-TEST (ALL)**. should be changed to
- ___ 4) Click on the icon next to **Protocol**: **FVT-XML-TEST (ALL)**. This should list all the Document Flows available under **Protocol**: **FVT-XML-TEST (ALL)**
- __ 5) Click on the icon in the row corresponding to **Document Flow**:

 WWRE_ITEMCREATIONINTERNAL (ALL). should be changed to



Part 11: Creating Participant Connections

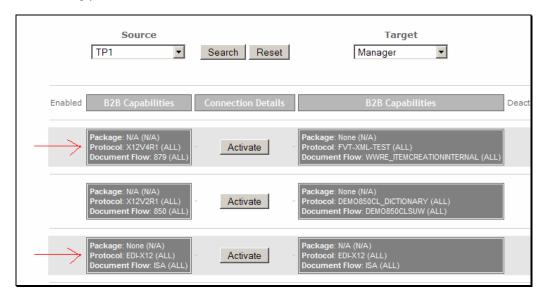
Participant Connections can be enabled by Community Operators and Community Manager





1. Creating Participant connections

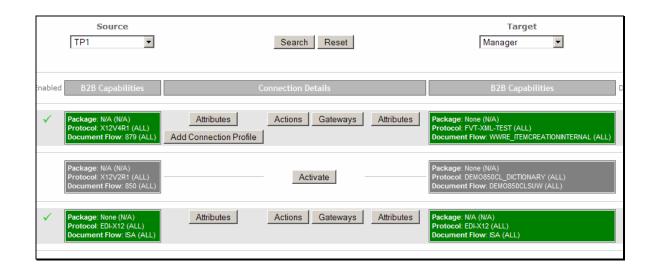
- __ a. Go to Account Admin Participant Connections
 - ___ 1) Select **TP1** from the Source drop down menu.
 - __ 2) Select **Manager** from the Target drop down menu.
 - __ 3) Click on Search.
 - __ 4) Based on prior connections, there may be other connections that are not needed for this scenario.
 - ___ 5) De Activate the Connections those are green by clicking on the xicon. The connections should turn to grey when deactivated.
 - ___ 6) You should atleast have the two connections that are highlighted by red arrow in the following picture.



The participant connection None(N/A): EDI-X12(ALL): ISA(ALL) to N/A(N/A): EDI-X12(ALL): ISA(ALL) is used for deenveloping the incoming EDI document.

The participant connection N/A(N/A): X12V4R1(ALL): 879(ALL) to None(N/A): FVT-XML-TEST(ALL): WWRE_ITEMCREATIONINTERNAL(ALL) is used for transformation of the 879 message to XML.

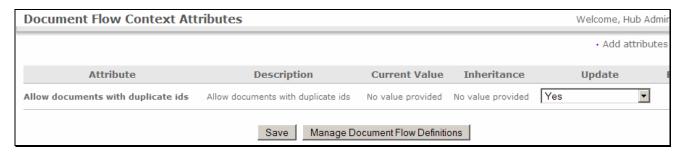
_ b. Select **Activate** on both the connections. It should turn to green indicating it is activated.



Part 12: Allow Elements With Duplicate IDs

Each enveloped EDI document has a control number associated with it as part of the ISA segment. The control number is used to uniquely identify the incoming document. In order for us to use the same input document more than once, we need to tell the WPG system that it is ok to allow duplicate control numbers. This is done by setting the "Allow documents with Duplicate id's" attribute to Yes. With out the "Allow documents with Duplicate id's" set to Yes, the WPG would not process the document and throw an error saying that it found an duplicate interchange.

- ____ 1. Go to Hub Admin → Hub Configuration → Document Flow Definition
 - __ a. Click on the icon next to **Package: None**. This should list all the protocols available under **Package: None**.
 - b. Click on ki icon next to Protocol: EDI-X12 (ALL)
 - __ c. Locate the "Allow documents with duplicate ids" attribute listed under the Document Flow Context Attributes and select "Yes" as the value from the drop down menu.
 - d. Click Save



6.

Part 13: Running the Scenario

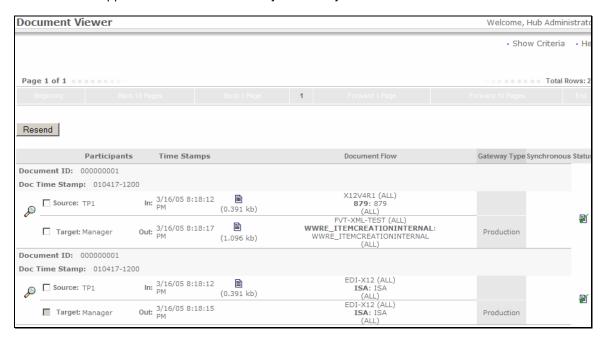
1.	Go to <lab_files> directory</lab_files>					
2.	Open the edi2xml.inp file.					
3.	The Source and Target participant id's are located at the 7 th and 9 th fields in the ISA segment. The first id is the source ID(TP1) and the second the target ID(Manager)					
	ISA*00* *00* * *987654321 * *123456789 *930419*0021*U*00200*00000004*1*T*:!					
4.	Place the edi2adf.inp in the C:\WPGLabs\edifiletarget\Documents\Production directory.					
5.	The EDI document should be de-enveloped and waiting to be translated to xml					

The status of the document in the system can be viewed by using the Document Viewer

Go to Viewers → Document Viewer

After this, the document will be translated to xml

Provide the approximate start time when you actually started this transaction and click on Search.



____ 7. The xml document is sent to the destination filegateway

The destination file gateway location is C:\WPGLabs\Manager\filegateway

What you did in this exercise

In this exercise, you have enabled B2B capabilities and created participant connections necessary for source trading partner to be able to send an EDI document and transform it into an XML document using a Map. The input EDI will be an ISA envelope which gets de-enveloped into an EDI Transaction. The resultant transaction is then transformed into an XML document and sent the target gateway.

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