



IBM Software Group

# IBM® WebSphere® Partner Gateway V6.0 Advanced and Enterprise Editions

## *Document Flow Configuration Use Case*

### *EDI to XML or ROD*



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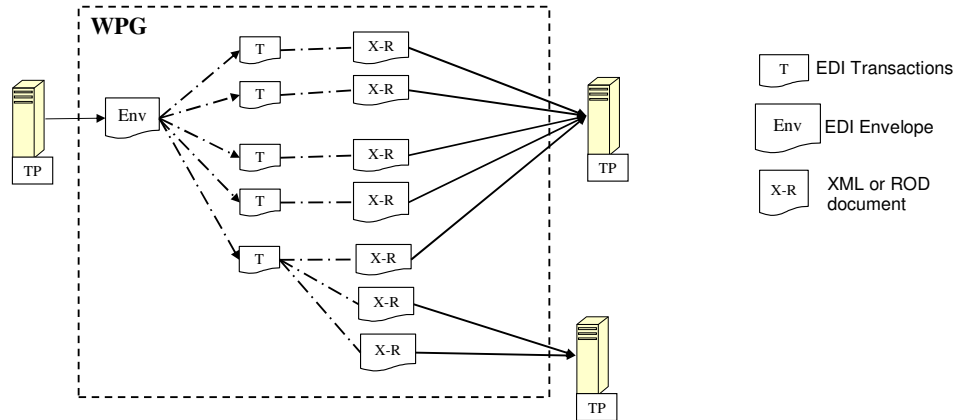
This goal of this presentation is to under the details of document flow configuration of EDI to XML or ROD use case, in WebSphere Partner Gateway V6.0.

## Agenda

- Overview of EDI to XML or ROD
- EDI to XML or ROD document flow stages
  - ▶ De-enveloping
  - ▶ Translation
- Summary

The agenda is shown on the page, starting with the overview to the EDI to XML document flow stages of de-enveloping and translation to XML or ROD. In the end, a view of what appears in the document viewer for EDI to XML or ROD document flow is shown.

## Use Case: EDI to XML or ROD



- De-envelope EDI interchange into individual transactions. The transactions are routed back through WPG for transformation into XML/ROD transactions. If the incoming EDI document contains multiple interchanges, then they are split into individual interchange and processed as separate documents.
- Can have polymorphic maps of one EDI transaction into one or more EDI transactions or XML/ROD transactions
- If EDI transactions are produced, they need to be enveloped back in single EDI envelope (interchange)

This is a high level representation of the actions that take place in an EDI to ROD or XML flow between 2 trading partners.

The 1<sup>st</sup> 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.

Polymorphic maps can be used where one EDI transaction creates multiple output of type XML or ROD or different version EDI.

If during the polymorphic step, EDI transactions are created, they need to be enveloped into an EDI interchange before sending to the target partner.

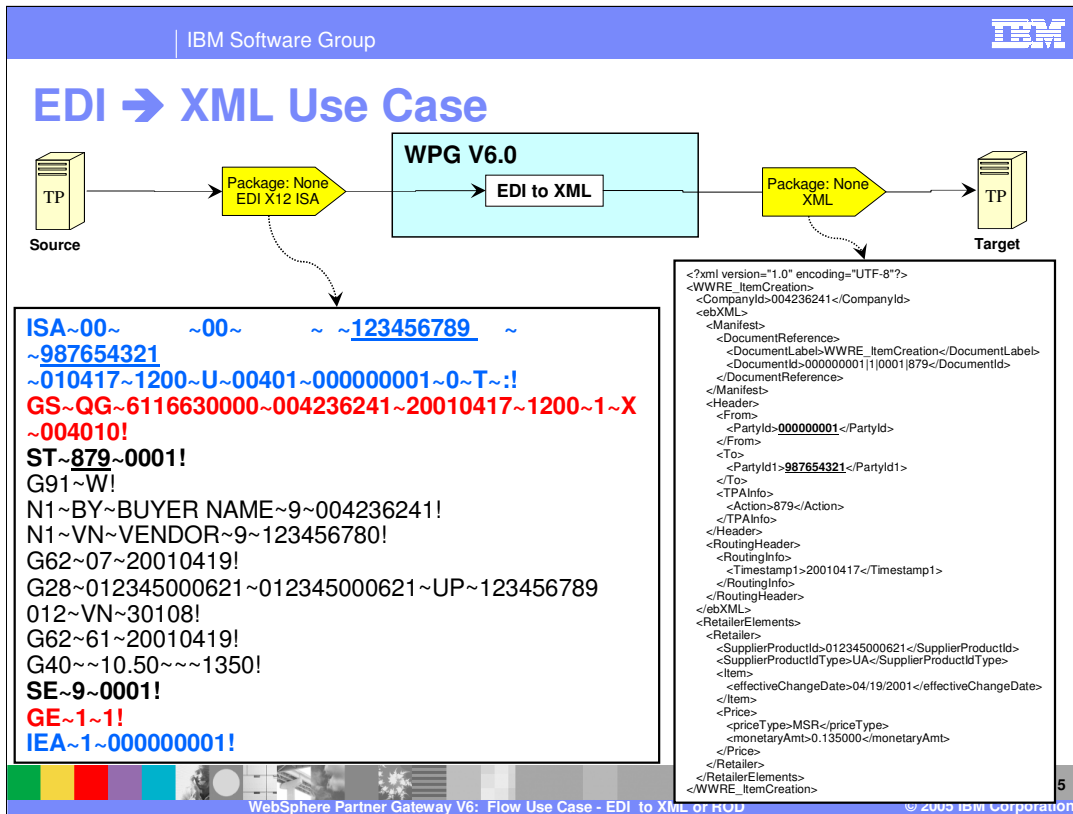
More details follow in the next few pages.

## Similarity between EDI →XML and EDI →ROD

- EDI to XML and EDI to ROD flow configuration are **identical** except for the translation map being imported into WPG from DIS Client tool or using the command line bcgDISImport tool
- The rest of this presentation focuses on EDI to XML flow - These steps will be the same for EDI to ROD configuration



Configuration for EDI to XML and EDI to ROD document flows are similar except for the translation map being used, and as a result the document flow definitions are either XML or ROD. Either one of the document flows can be used as an example to show the detailed configuration steps. This presentation chooses EDI to XML, however, later, the full connections for EDI to ROD is shown.

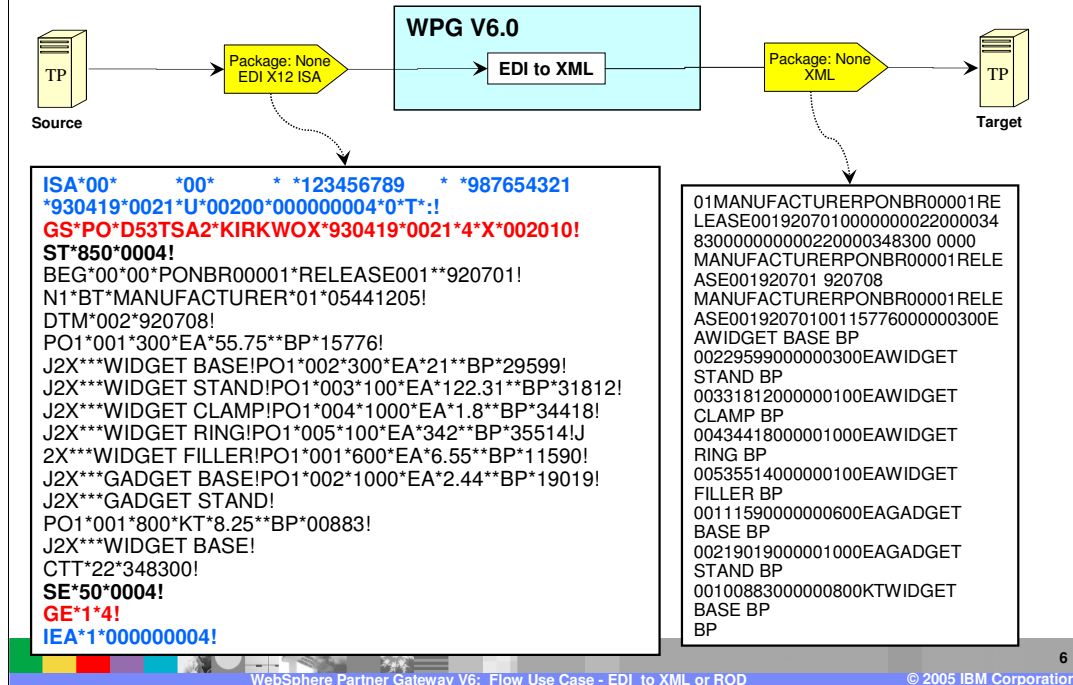


The EDI to XML example involves an incoming EDI X12 ISA with None packaging and it passes through the hub where the EDI is translated to XML.

The EDI document is shown on the page, with the EDI source business ID as **123456789** and the target business ID to be **987654321**.

The output XML is also shown here.

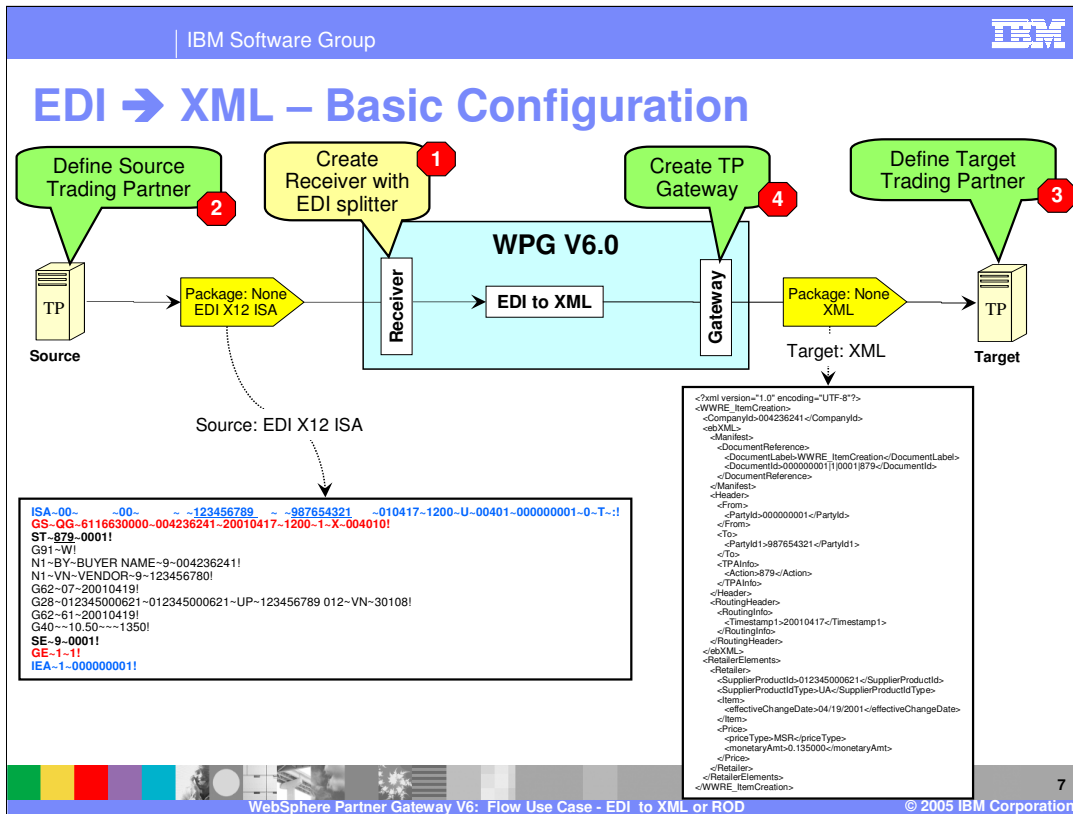
## EDI → ROD Use Case



The EDI to XML example involves an incoming EDI X12 ISA with None packaging and it passes through the hub where the EDI is translated to XML.

The EDI document is shown on the page, with the EDI source business ID as **123456789** and the target business ID to be **987654321**.

The output XML is also shown here.



The initial basic configuration is to create the receiver configured for EDI splitter. Note that the EDI splitter is only needed if the input document with multiple EDI ISA is expected. The next basic steps is to create the source and the target trading partners and its gateways.

The details of these basic configuration steps is covered in another presentation, called basic configuration.

## EDI → XML/ROD: Flow Steps

- EDI X12 ISA is received by the receiver (target)
- EDI X12 is unpackaged if incoming EDI is packaged, like as in AS2
- EDI X12 ISA is validated and then de-enveloped
  - ▶ EDI Transactions extracted by the de-enveloper are send back to the Document Manager for further processing
- EDI Transaction validated and translated to XML or ROD (based on the map)
- XML or ROD is send to the target trading partner via the partner's assigned gateway

The basic steps of EDI to XML or ROD is specified here at a high level. The EDI X12 ISA is received by the receiver. It then flows through the document manager where it gets unpackaged, as part of the fixed work flow. EDI is then validated and de-enveloped. A TA1 is created, if the incoming EDI ISA TA1 flag is ON. The TA1 is then send to the sender trading partner within an enveloped EDI. More on TA1 is covered in a separate presentation.

The EDI de-enveloper stage extracts the EDI transactions from the EDI ISA. Each of the EDI transaction is then flowed back through the document manager and there it gets translated to XML or ROD based on the mapping. The output XML or ROD is then send to the target trading partner through its gateway.

The rest of this presentation will go into more details of these high level steps.



## Section

# *De-envelope EDI*

The next section will provide a brief summary of the de-enveloping phase of the incoming EDI document.

## EDI De-enveloper

- Un-packing single business document (EDI envelope) into multiple business documents (EDI transactions)
- It extracts the following information:
  - ▶ Envelope level
    - Interchange Sender and Receiver qualifier and ID
    - Usage indicator - P for Production, T for Test and I for Information
  - ▶ Group level
    - Application Sender and receiver ID - represents division of company or application
    - Application password – could be any text
  - ▶ Transaction level
    - Document Syntax
    - Protocol (X12, EDIFACT, and so on) and its version (example V4R1)
    - Document Flow - Transaction type (like 850)
    - Document Flow version – transaction version
    - Transaction document ID – example, the transaction control number



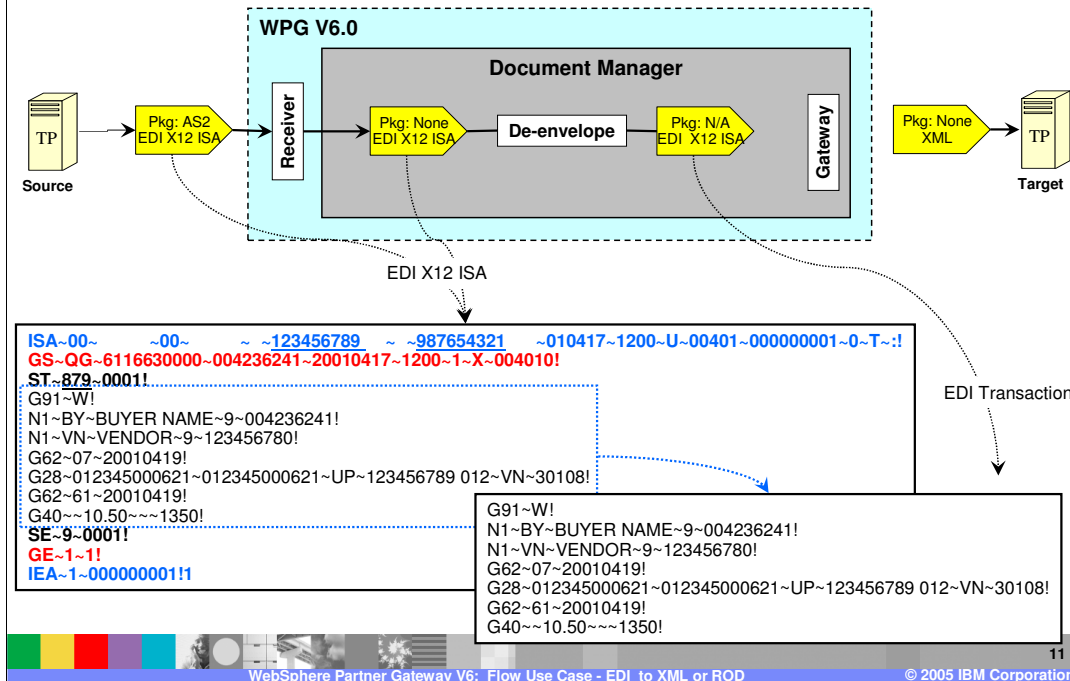
De-Enveloping refers to un-packing single EDI Interchange document into its multiple EDI business documents, called transaction. For EDIFACT, these are called messages.

Each of these transaction flows thru the document manager as individual business document flows. Depending on business protocol requirements, there may be additional constraints on the way document manager needs to process these documents. For example in-sequence processing, discard envelope on error. It is important to note that splitting is different than de-enveloping. Splitting applies when multiple EDI Interchange documents are placed together in a file. The documents may not have any relationship with each other.

EDI De-enveloper extracts the Enveloper level, Group level and Transaction level information.

The EDI usage indicator shown at the Envelope level has no relationship with the gateway type. In the participant connection, the administrator can assign different attributes for different usage type. Based on the EDI usage indicator, the appropriate attributes will be applied. For example, if the incoming EDI had a usage type of T for test, and the administrator had set an EDI attribute for participant connection for Test, then those EDI attributes will be applied. This allows an administrator to test EDI flows that may require special attributes without affecting the configuration of the production EDI flows.

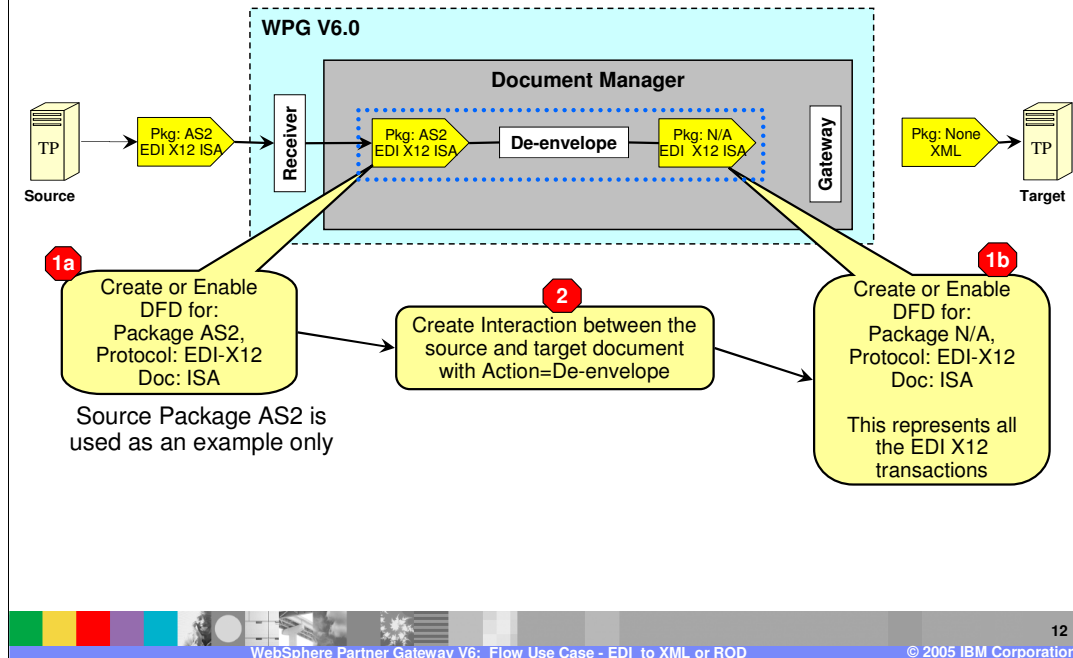
# EDI → XML: De-envelope



The 1<sup>st</sup> stage of the EDI to XML or ROD is the de-enveloping of the EDI ISA document into its individual EDI transactions.

The incoming EDI document along with the extracted EDI transaction is shown on the page, along with the participant connection between the source and the target TPXXX> Next few pages will show how to configure the participant connection for the de-enveloping of the incoming EDI document, and what happens with the extracted EDI transaction.

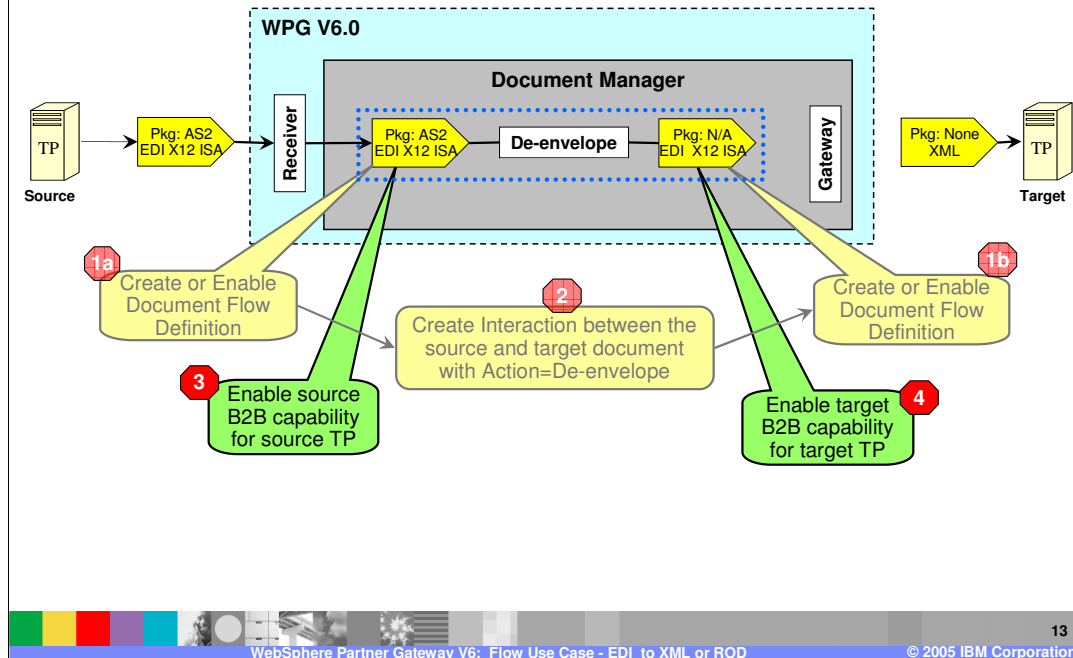
## EDI → XML: De-envelope – Step 1 and 2



Configuration step 1 is to enable the document flow definitions for the source EDI X12 ISA in what ever package it comes in, and the target EDI X12 with N/A packaging. The target document represents all the EDI transactions, and hence there is no need to specify each individual EDI transaction.

Step 2 is to create an interaction between the source and the target EDI documents, with the action being “De-envelope”.

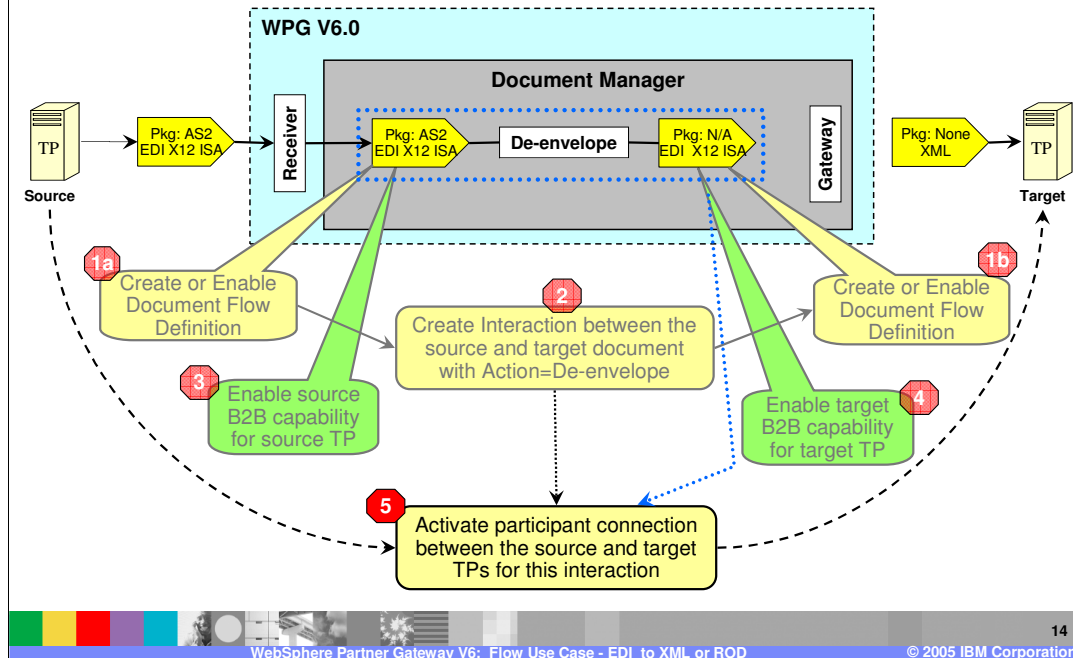
## EDI → XML: De-envelope – Step 3 and 4



The enabling of the B2B capabilities of the source and the target trading partner is shown here, as indicated by steps 3 and 4.

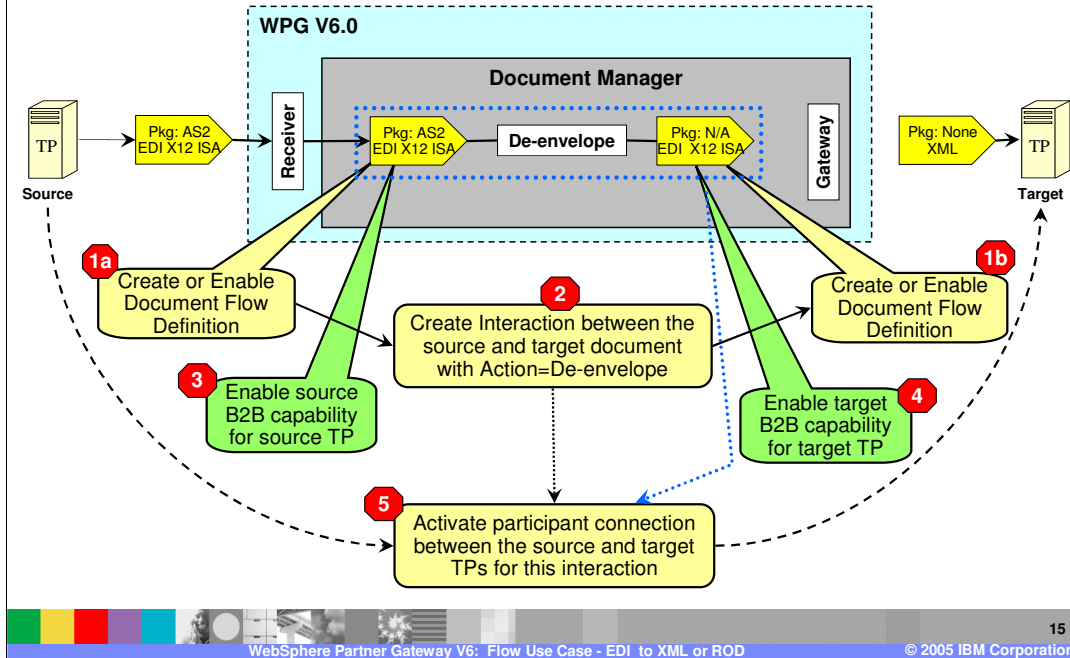
B2B capabilities specify the types of documents that will be supported by the trading partner to send or receive from the hub. Hence the source trading partner must enable the source document type, and the target trading partner need to enable the target document type.

## EDI → XML: De-envelope – Step 5



Once the interaction has been created and the trading partner have enabled the source document, and the target trading partner have enabled the target document, a participant connection can be activated between the source and the target trading partner, as shown in step 5.

# EDI → XML: De-envelope – All Steps



This summarizes all the configuration steps for the EDI to XML de-envelope phase.

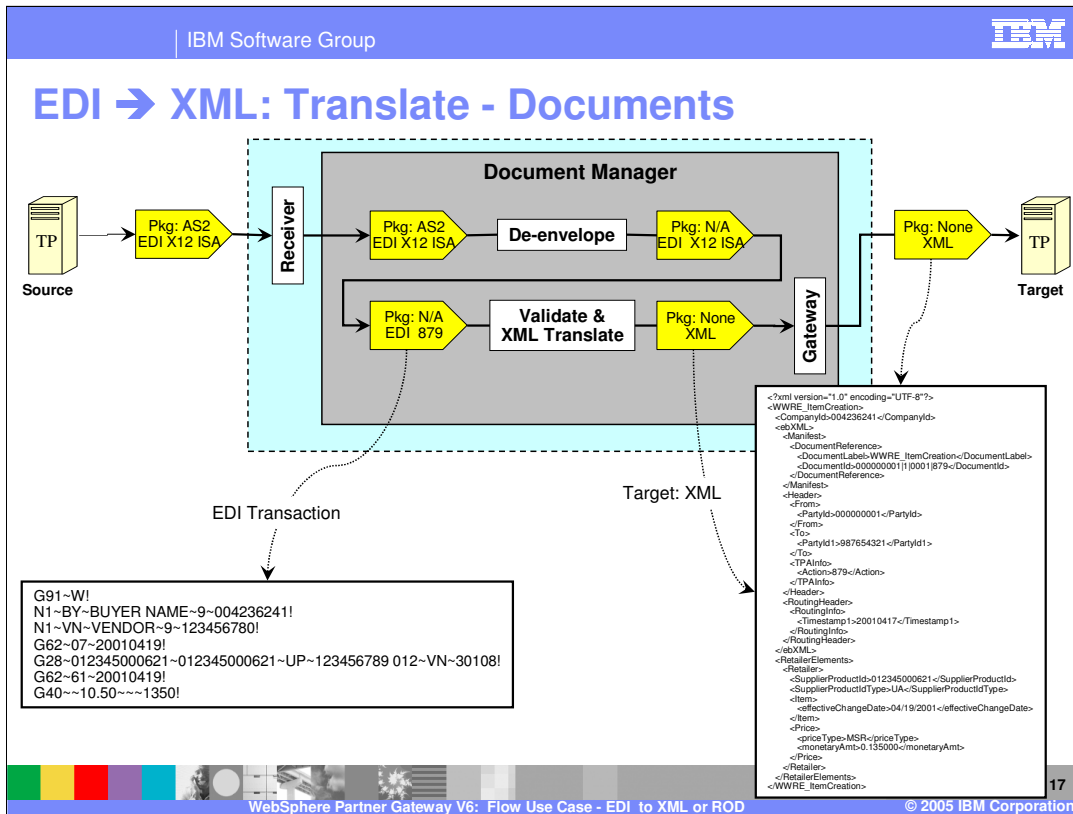
The next phase will describe the processing on the de-enveloped EDI transactions.

## Section

# ***EDI Transactions translation to target XML or ROD***

The next section will provide a description of the translation of EDI transaction to XML or ROD.





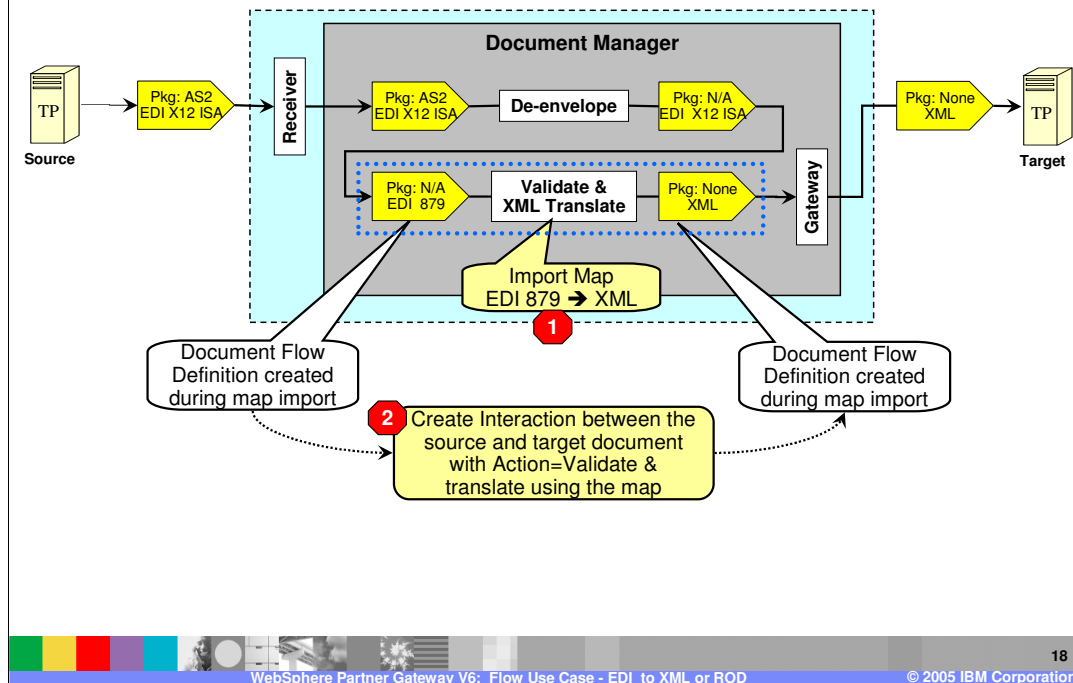
Each EDI transaction that were extracted in the previous de-enveloping stage, will now go through the translation stage. The EDI transactions are flowed back in to the document manager of the hub and based on the map, they are translated to ROD or XML.

The generated XML or ROD document is then send to the target trading partner through its assigned gateway.

An example of the EDI 879 transaction and the output XML file is shown on the page.

The next few pages will go into the details of how to configure the translation flow.

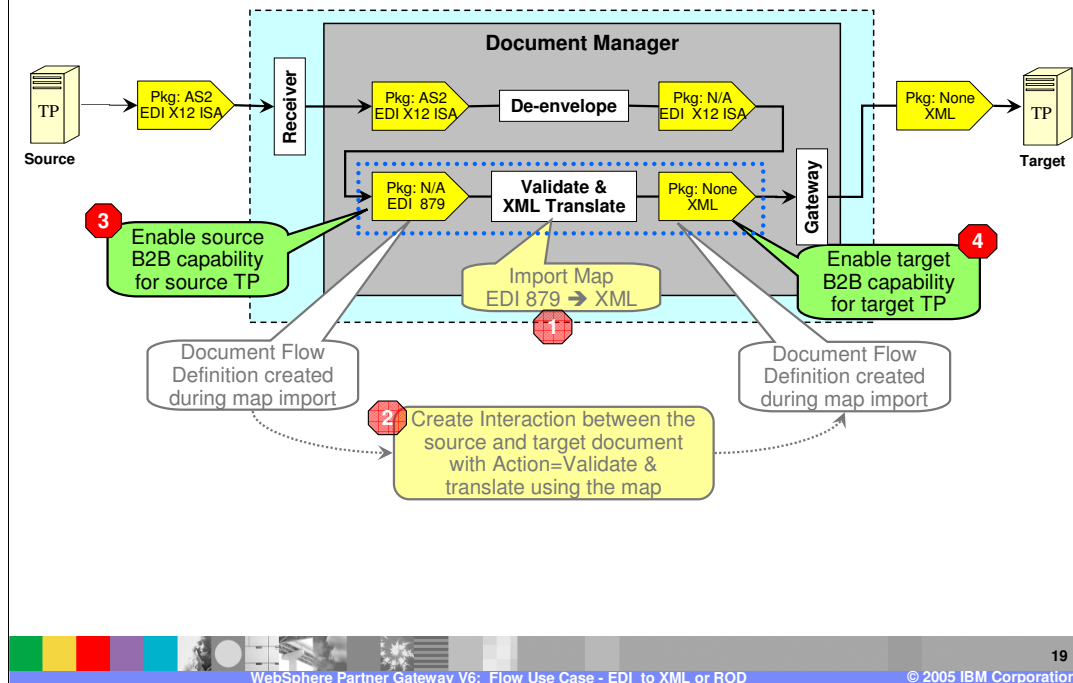
## EDI → XML: Translate – Steps 1 and 2



The 1<sup>st</sup> configuration step is to import the map for the specific EDI transaction to XML using the DIS client tool or use the `bcgDISImport` command. This is indicated by step 1. When the map is imported into the WPG database, the document flow definitions for the source EDI transaction and the target XML are already created.

The next step is to create an interaction between the source EDI transaction and the target XML document, as shown by step 2.

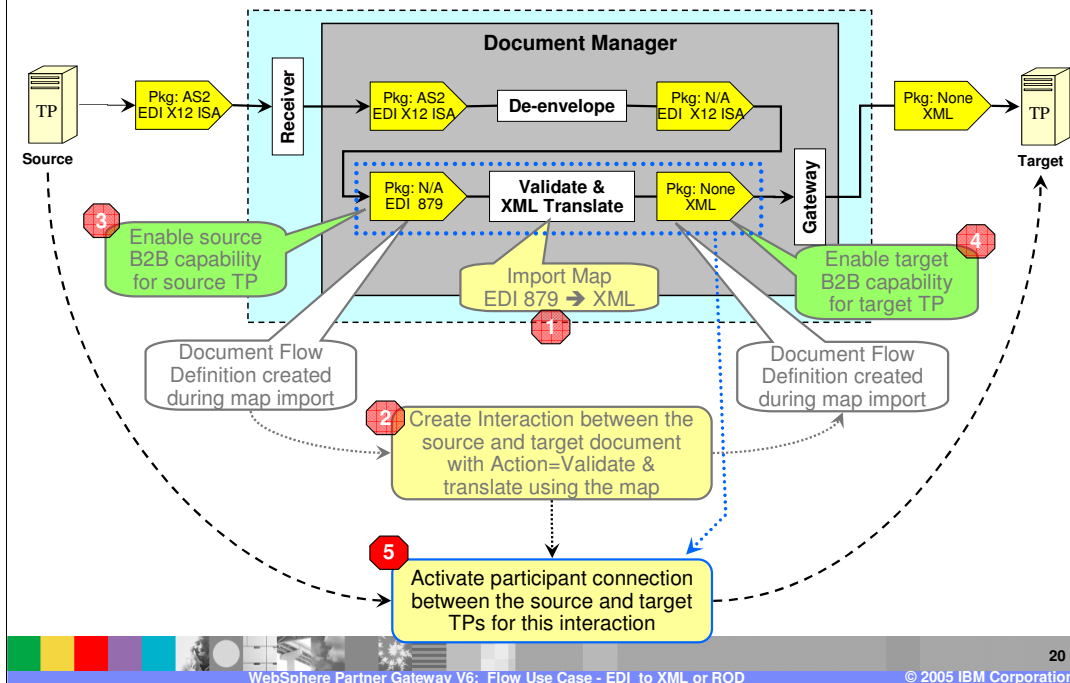
## EDI → XML: Translate - Steps 3 and 4



The enabling of the B2B capabilities of the source and the target trading partner is shown here, as indicated by steps 3 and 4.

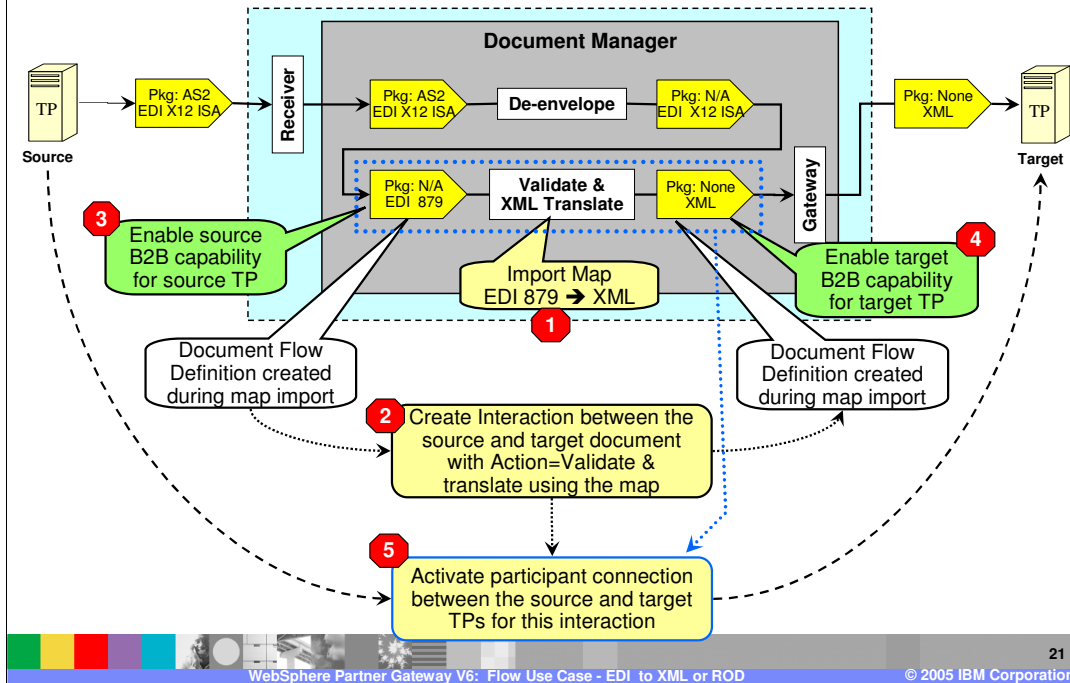
B2B capabilities specify the types of documents that will be supported by the trading partner to send or receive from the hub. Hence the source trading partner must enable the source document type, and the target trading partner need to enable the target document type.

## EDI → XML: Translate - Step 5



Once the interaction has been created and the trading partner have enabled the source document, and the target trading partner have enabled the target document, a participant connection can be activated between the source and the target trading partner, as shown in step 5.

## EDI → XML: Translate – All Steps At a Glance



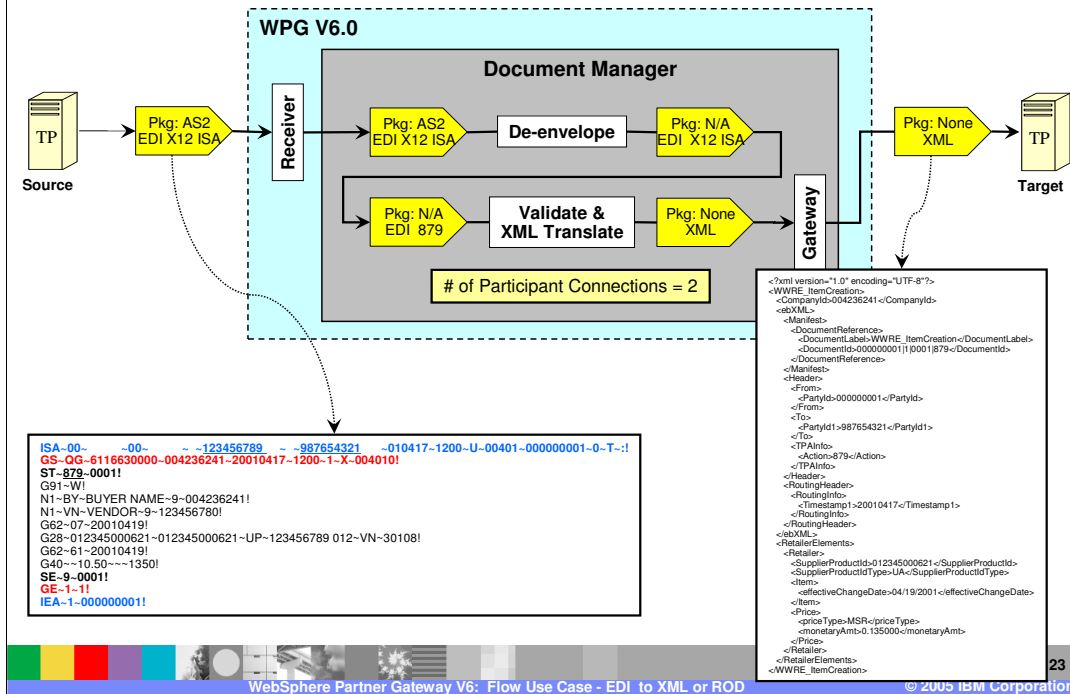
This summarizes all the configuration steps for the EDI transaction to XML document translation phase. The output XML document is now ready to be send to the target trading partner through its assigned gateway.

## Section

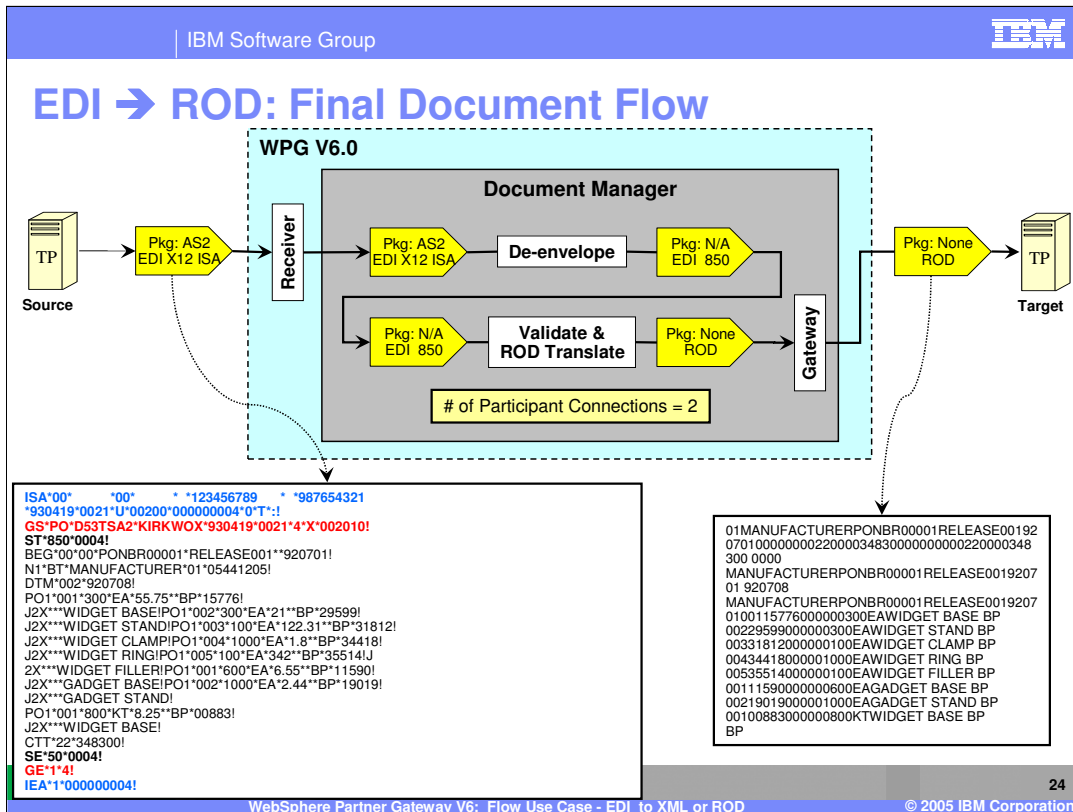
# ***EDI to XML or ROD*** ***Final Document Flow***

The next section will provide a brief summary of the final document flow of EDI to XML or ROD.

# EDI → XML: Final Document Flow



All the participant connections for the EDI to XML document flow along with the incoming EDI X12 ISA document and the outgoing XML is shown on this page. This summarizes the EDI to XML flow and the connections required for enabling a EDI document flow and generate a XML document.



Similar to the EDI to XML flow, here the EDI to ROD flow is shown. The only different is the map used to translate the EDI transaction and generate ROD. This example uses EDI containing a 850 transaction. That is taken care by the map, and the configuration steps remain identical.

All the participant connections for the EDI to ROD document flow along with the incoming EDI X12 ISA document and the outgoing XML is shown on this page. This summarizes the EDI to ROD flow and the connections required for enabling a EDI document flow and generate a ROD document.



The screenshot displays the 'Manage Connections' interface in IBM WebSphere Partner Gateway V6. It shows two connections between a Source Trading Partner (TP1) and a Target Trading Partner (Manager). The top connection is labeled 'EDI 850 Translation to ROD'. Its source capabilities are 'EDI 850' and its target capabilities are 'ROD'. The bottom connection is labeled 'De-enveloping EDI'. Its source capabilities are 'EDI ISA' and its target capabilities are 'EDI ISA'. The interface includes fields for Source and Target, B2B Capabilities, and connection details like Package, Protocol, and Document Flow. The interface also includes buttons for 'Attributes', 'Actions', and 'Gateways' for each connection.

The participant connections for EDI to ROD is shown on this page. There are 2 connections. The bottom one is the de-enveloping EDI connection. The top one is the translation of the EDI 850 transaction to the ROD document.

The attributes on the source or the target can be modified. So can the target gateway and the actions on the connections.

The screenshot displays the 'Document Viewer' interface for EDI to ROD. At the top, it shows 'IBM Software Group' and the 'IBM' logo. The main title is 'Document Viewer for EDI to ROD'. The interface is divided into several sections:

- Document Viewer Header:** Shows 'Page 1 of 1', navigation buttons, and a 'Resend' button.
- Document Details:** Displays 'Document ID: 000000004' and 'Doc Time Stamp: 930419-0021'. It lists participants (Source: TP1, Target: Manager) and document flows (X12V2R1 (ALL) 850: 850 (ALL), EDI-X12 (ALL) ISA: ISA (ALL)).
- Raw Document Viewer:** A callout box shows the raw document content, including a 'Translated Document' section with a long alphanumeric string.
- Callouts:** Yellow callout boxes highlight 'View details' (pointing to a magnifying glass icon), 'EDI 850 Translation to ROD' (pointing to the X12V2R1 flow), 'Raw Document Viewer' (pointing to the raw document content), and 'De-enveloping EDI' (pointing to the EDI-X12 flow).

At the bottom of the screenshot, it says 'WebSphere Partner Gateway V6: Flow Use Case - EDI to XML or ROD' and '© 2005 IBM Corporation'.

The document Viewer shows the example of the EDI to ROD documents as they are processed by the document manager. The bottom document shows the EDI de-enveloping document, and the upper one shows the translation of the EDI 850 transaction to the ROD document. Using the Document viewer, the administrator can view the raw documents, see the status of the document flow, look at the events associated with the documents, and be able to resend the documents.

The document viewer is the primary tool for an EDI administrator to view the status of the EDI documents being processed through the hub. The View details button shows more details on that document flow, including children, events associated with those documents that are helpful for problem determination.

## Section

# *Summary*

The next section will provide a brief summary.

## Summary

- EDI to XML or ROD have 2 basic flow steps
  - ▶ De-enveloping of EDI ISA into its transactions
  - ▶ Transformation of EDI transactions to XML or ROD
- This presentation covered the details of the 2 flow steps of the EDI to XML or ROD flow use cases showing the configuration needed for the flow and the document views that appear in the document viewer of the product



The presentation focused on the EDI to XML or ROD flow. There are tutorials available for some hands on experience with the EDI to XML and EDI to ROD flows. Going through the tutorials is encouraged and they will give the basic understanding of the configuration needed for these flows.

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