



IBM Software Group

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

Basic Configuration

Trading Partners, Receivers and Gateways



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The goal of this presentation is to help you understand basic setup for WebSphere Partner Gateway V6.0, including concepts such as trading partners, receivers, and gateways required for all document flow.

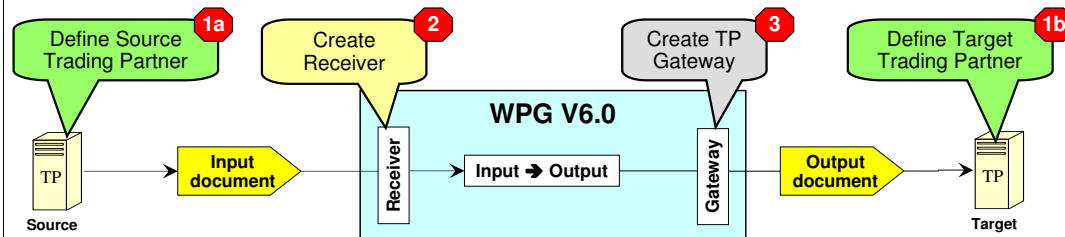
Agenda

- Basic Configuration for all flows
- Profiles (Roles), Users and Trading Partners and Administration Roles
- Receivers (Targets) and Splitters
- Trading Partner's Gateways
- Summary

The following topics will be covered in this presentation:

- Basic Configuration
- Profiles and Roles
- Receivers
- Gateway

Basic Configuration For All Document Flows



Basic configuration required for document flow:

1. Creating Source and Target Trading Partners for document exchange
2. Creating a Receiver to receive the incoming document through one of the many supported protocols, like HTTP(s), FTP, File directory and so on – Receivers are entry points for the documents into the hub
3. The processed document needs to be send to the target trading partner – A Gateway needs to be defined for that target trading partner to send the output document through one of many supported protocols (like HTTP, FTP, File directory and so on)

A minimum configuration must be performed to allow any document flow through the hub. The hub administrator defines the source and the target trading partners and their attributes, as shown in steps 1a and 1b.

For the incoming document, the administrator specifies the receiver or the target where the document is received from the source trading partner into the hub as shown in step 2.

Once the document is processed by the hub, based on the document processing configuration for that document between the source and the target trading partners, the processed output document is sent to the target trading partner. This is done by means of the target trading partner gateways defined by the administrator as shown in step 3.

These configuration components will be discussed in detail later in the presentation.

Section




Profiles (Roles), Users and Trading Partners

Administration Roles

This section will provide more details on the trading partners, their users and administration roles.

WPG: Trading Partner Profile Roles and Users

WPG has 3 main roles or profiles for the users for administrative purpose:

ONE	 Community Operator	<ul style="list-style-type: none"> •Pre-defined – cannot be deleted •“sysadmin” for WPG •Defines and maintains the WPG’s capabilities •Typically does NOT send or receive documents
ONE	 Community Manager	<ul style="list-style-type: none"> •Also a participant, but is the principle one •Can only have one Community Manager in WPG •Operational manager for the community
MANY	 Community Participant	<ul style="list-style-type: none"> •External business partners to WPG •Can be as many defined as desired •Each one is a single connection to WPG

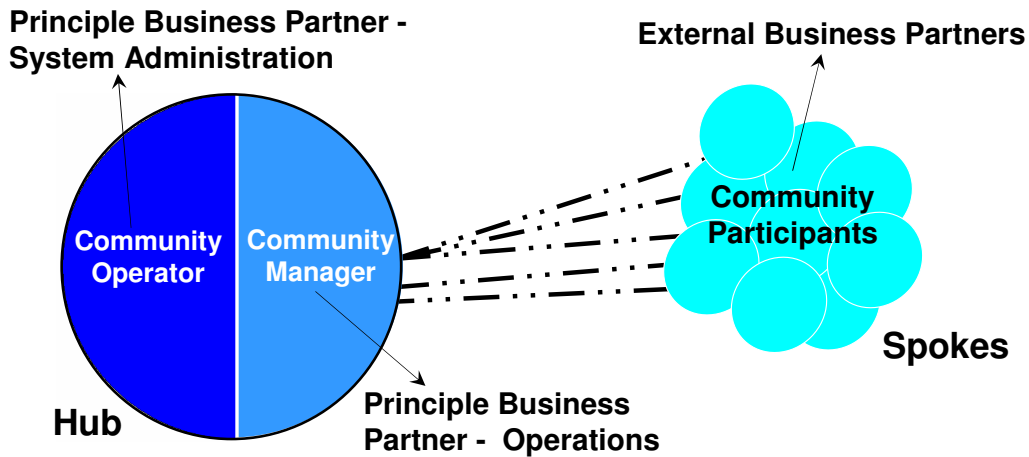
Each of these roles can have multiple login users created - Based on the roles of the user, they have different administration authorization

WebSphere Partner Gateway has 3 primary user roles or profiles used for administrative and document flow purposes:

- 1. Community Operator** – also known as the hub administrator.
 - Responsible for managing the day-to-day operation of the hub community
 - Configuring the capabilities of the hub and new participants
- 2. Community Manager**
 - Manages the hub from the trading partner capabilities – like a business owner of the system
 - Defines what interactions are allowed between trading partners.
- 3. Community Participant**
 - Acts as a trading partner

Each trading partner will have one or more users defined to log in to the hub as the trading partner. All users for a given trading partner have the same rights. However, users for each role will have different authorization capability, with the operator having all rights, and participant users having limited rights.

Community Roles and Trading Partners



- Trading Partners are users that mostly fit one of the 2 roles, Community Manager or Community Participants
 - ▶ Hub Administrator usually do not become Trading Partners

This graphic shows the 3 roles in a hub and community environment in more detail.

Community Participants are business partners with the owner of the hub. For licensing purposes, each Community Participant profile counts as one connection, regardless of how many Gateways and participant connections are defined.

The Community Manager is similar to the Community Participant except that the view includes all document flows for all participants. In addition, the Community Manager can activate and modify the specific allowable document flows called "Participant Connections"

Create New Trading Partner - Console

Profile: New Participant

Company Login Name: TP1

Participant Display Name: Trading Partner 1

Participant Type: Community Participant

Status: Enabled Disabled

Vendor Type: Select a vendor type

Web Site:

Save Cancel

Business ID

Type	Identifier	Remove
DUNS	123456789	<input type="checkbox"/>

New

IP Address or Host Name

Gateway Type	IP Address or Host Name	Remove

New

Used during login by any user of the TP

Could be a Participant or Manager - can have only 1 manager per hub

Extra Info on the TP

TP's Business ID - the document related to this TP must have a matching ID - TP can have multiple IDs

TP address - used only for validating the source IP of an incoming document via HTTP(s)

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The console panel to create a new participant is shown here. The new participant can be a community manager or a participant. There can only be one manager for the hub. The community operator is created when WebSphere Partner Gateway is installed, so there is no option to create an operator.

When a new manager or participant is created, a default user called "admin" is created by the hub. Additional users can be created for the manager or the participant.

Business IDs for the trading partners must be specified. Several different types of IDs are supported, including DUNS, DUNS + 4, and Freeform. The hub determines the source and target IDs from the incoming document. Those IDs are then matched with the business IDs for the defined trading partners to find the source and target trading partner.

The administrator can also specify the IP address or the host name. This is used to validate that the incoming document was sent from the expected partner. This validation applies only for documents received using HTTP transport protocol.

Changing Attributes of Trading Partner

Specify the documents that TP will support as source or target

Create or modify TP's users and groups

Additional TP information

7 Account Admin Viewers | Tools | Admin | Community Participant Simulator | System Administration

Profiles | Participant Connections | Alerts | Exclusion List

Community Participant Gateways B2B Capabilities Certificates Users | Groups Contacts | Addresses

Language Locale: en_US | Format Loc

Profile: TP1

Create or modify TP's Gateways (to send outgoing document to the TP)

Specify the Security certificates used to decrypt incoming document or encrypt outgoing document for this TP

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The console used to modify the trading partner attributes is shown here. The gateway and the B2B capabilities are defined as part of the trading partner profile. The Certificate button is used to specify the digital signature certificates used to decrypt signed incoming documents or encrypt outgoing documents.

The users and groups button is used to create new users and groups or modify existing ones.

Section

Receivers (Targets)

This section will provide details on Receivers or Targets.

Target Receiver – Details

- Multiple transport protocols support
- Support for handler
 - ▶ Pre-process – this is where Splitter are assigned and configured
 - ▶ Sync Check - works hand in hand with post process - It checks the incoming request to see if a synchronous response is required. If yes then the connection will be held open for the response
 - ▶ Post-process – is used on the synchronous response

Community Operator

Target Details

Target Name: My Target

Status: Enabled Disabled

Description:

Transport: *

Legend: * Required field

Supported transport protocols:

- Select Transport Type
- FTP Directory
- JMS
- POP3
- HTTP/S
- File Directory
- FTP Scripting

Handlers

Configuration Point Handlers:

Target handlers:

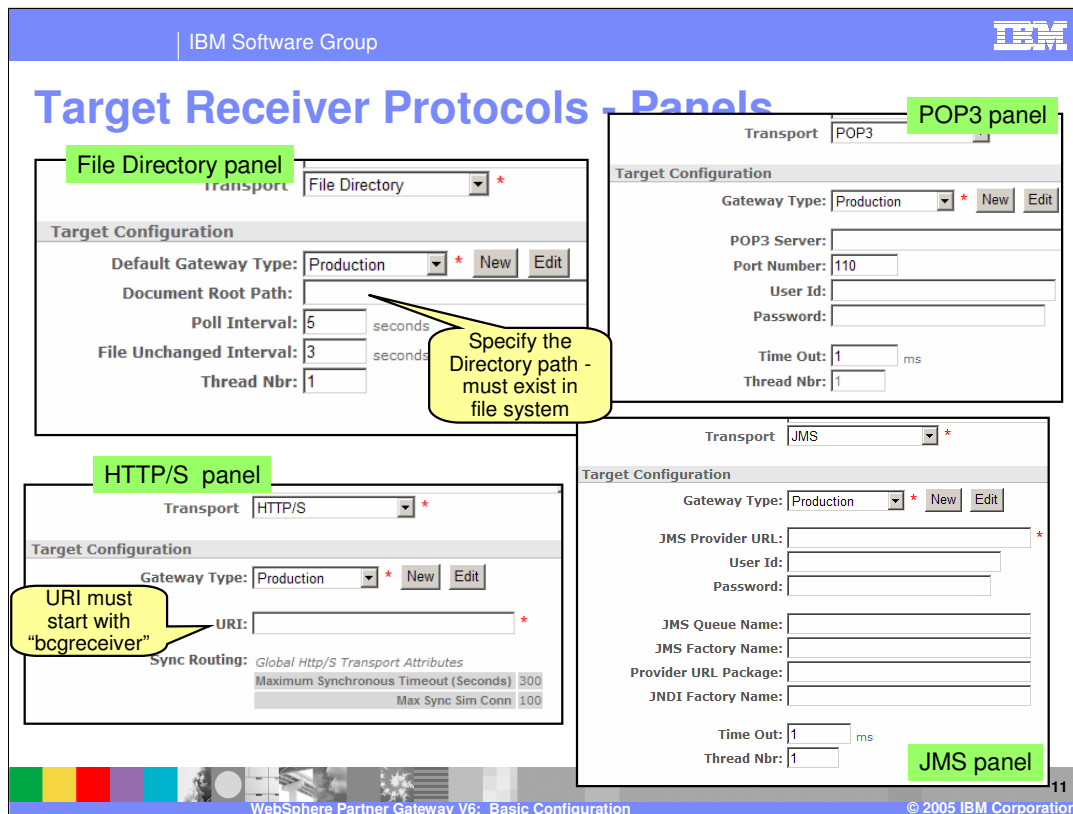
- Select One
- preprocess
- syncCheck
- postprocess

Save Cancel

Following are some attributes of Target Receivers:

- Targets are document entry points into WebSphere Partner Gateway used for receiving files from a trading partner or a back end system.
- Targets must be created for sending documents to partners and are the location where internal back end applications will drop documents to be sent to partners.
- Targets must be created for receiving documents from trading partners.
- Trading partners need the target information to send documents.
- Targets support multiple protocols.
- Targets can be a file directory, a JMS queue, an HTTP URI, POP3 for e-mails, or FTP scripting.
- Targets can have handlers at various levels of processing.
- Targets can only be configured by the Community Operator.
- Handlers can be at pre-process level, before the target processes the document.
- Handlers can be defined at a synchronization level to determine if a synchronous response is required for an incoming request, in conjunction with the post process handler.
- You can add your own handlers for each of the levels.

Pre-process handlers are where splitters are assigned. Splitters process incoming documents, splitting them or extracting information needed for downstream processing. WebSphere Partner Gateway comes with built-in splitters for various document formats, including EDI, XML, and ROD.



The target receiver supports many different transport protocols, including the File directory, HTTP, HTTPS, POP3 and JMS protocols shown on this page.

The file directory panel requires the full path of the directory on the file system and the directory must be created before the target will work. The hub will create additional directories based on the gateway type (such as production or test).

For the HTTP protocol, the HTTP target URL must start with the string "bcgreceiver" after the machine and port values. For example, the URL could be **http://<hostname>:57080/bcgreceiver/submit**

JMS protocol requires the JMS queue and connection factory name, the JNDI name for the connection factory and the JMS provider URL. This is standard information required to access a JMS queue.

POP3 requires the IP address or host name and port of the POP3 server along with the user id and password.

Target Receiver Protocols – Panels (cont.)

The screenshot displays two configuration panels for Target Receiver Protocols. The top panel is for 'FTP Scripting' and the bottom panel is for 'FTP Directory'. Both panels have a 'Transport' dropdown menu set to their respective protocol names. The 'FTP Scripting' panel includes a 'Target Configuration' section with fields for Gateway Type (Production), Server IP, User Id, Password, FTPS Mode (Yes/No), Script File (Upload Script File), Connection Timeout (120.0 seconds), and Lock User (Yes/No). It also features a 'Global FTP Scripting Attributes' section with values for Lock Retry Interval (260), Lock Retry Count (3), Maximum Lock Time (240), and Maximum Queue Age (740). The 'FTP Directory' panel includes a 'Target Configuration' section with fields for FTP Root Directory, File Unchanged Interval (3 seconds), Thread Nbr (1), and an Exclude File Ext list with Add/Remove buttons. The bottom of the image shows a footer with 'WebSphere Partner Gateway V6: Basic Configuration' and '© 2005 IBM Corporation'.

Transport: FTP Scripting * **FTP Scripting panel**

Target Configuration

Gateway Type: Production * New Edit

Server IP: _____

User Id: _____

Password: _____ {

FTPS Mode: Yes No

Script File(maximum 2kb): Upload Script File *

Connection Timeout: 120.0 seconds

Lock User: Yes No

Global FTP Scripting Attributes

Lock Retry Interval (Seconds): 260
Lock Retry Count: 3
Maximum Lock Time (Seconds): 240
Maximum Queue Age (Seconds): 740

Transport: FTP Directory * **FTP Directory panel**

Target Configuration

FTP Root Directory: _____ *

File Unchanged Interval: 3 seconds

Thread Nbr: 1

Exclude File Ext: (Omit '.' from file extension (enter '.txt' as 'txt'))

____ (Add) >> _____
____ (Remove) << _____

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The panels for FTP directory and FTP scripting are shown here.

Target Receiver: Splitters

- Splitter are pre-process handlers used for splitting the incoming document that contains multiple business documents into individual business documents
 - ▶ Example: Single input file containing multiple EDI X12 ISAs – each EDI X12 ISA will be extracted and send to the document manager – typical use case would be EDI over VAN
- WPG provides a splitter for each document type – like EDI, XML, ROD and one generic one for custom handling
- In case of ROD splitter, it also creates meta dictionary values to be used later

Few limitations of where Splitters cannot be used is discussed on the next page

WPG provided splitters – EDI, XML, ROD or Generic

Splitter handlers are available as a pre-process handler for all of the supported transports used by the Targets.

Splitters perform the basic function of splitting incoming multiple business documents into individual business documents before sending them to the document manager. For example, an incoming EDI document could contain multiple ISAs (envelopes). The EDI Splitter splits the incoming document into separate EDI envelopes for downstream processing by the document manager. Another example would be an incoming XML file with multiple XML documents.

The splitter also extracts the information for cases like ROD and create meta data that is used by subsequent processes to extract information such as source and business target IDs

from the document.

Target Receiver: Splitters – More Details

- **Multiple Splitters (EDI, XML, ROD) on same Target**
 - ▶ Multiple splitters allow the same target to handle multiple types of incoming documents, like EDI, XML, ROD and so on
 - ▶ However, if ROD is one of the expected input document, the ROD splitter must be the last in the order
 - Since ROD documents have nothing inherent in its document to help recognize the data type, in order to properly handle the document
 - ▶ Cannot configure receiver to handle more than one ROD document
- **Some limitations**
 - ▶ When using multiple business documents in a single input file, it should not be packaged (must have packaging = None)
 - For example, EDI ISAs packaged as AS2 cannot contain multiple EDI X12 ISAs in a single file
 - ▶ Reason: Un-packaging is done by Document Manager which occurs later in the document processing, after the target receiver has processed

Multiple splitters can be assigned to a single target, allowing the target to handle multiple types of input documents, such as EDI, XML, and ROD. When defining multiple splitters, the ROD splitter must be the last in the order. An EDI splitter can determine if the incoming document is an EDI document based on the EDI format. If it is not an EDI document, it will not process the document, but pass it on to next splitter in the order. This is true for XML splitters as well. However, ROD splitters are configured to parse the input ROD document of a specific format. If the ROD splitter receives an EDI, XML, or ROD of different format, it will send an error so the ROD splitter must be the last in the order.

There are some limitations using an EDI splitter to split an incoming document with multiple ISAs.

For example, with some packaging, such as AS2, single files containing multiple EDI documents is not supported. When documents are encrypted, the decryption is performed by the document manager. However, the splitting that must take place after decryption occurs in the receiver target. As a result, encrypted multiple documents are not supported by the hub.

Section

Trading Partner Gateways

This section will cover the Trading Partner Gateway, which is part of the trading partner profile.

Trading Partner Gateway



Community Participant

- Gateways are output document exit points to a trading partner (TP)
- TP can have multiple gateways and have one as the default
- Several transport protocols supported
- Can define pre and post process custom handlers for any custom processing of the output document

Trading partner owner of the gateway

Profile: XML Trading Partner > Gateway List

Gateway Name: MyGateWay *

Status: Enabled Disabled

Online/Offline: Online Offline

Description:

Gateway Configuration

Transport: File Directory

Address: Select One

Use Unique File Name:

Handlers

Configuration Point Handlers: File Directory FTPS FTP Scripting JMS SMTP HTTP/1.1 HTTPS/1.0 HTTPS/1.1

Pre and post process custom handlers

Available transports

A Trading Partner Gateway is an exit point for the outgoing documents to the target trading partner. Multiple gateways can be defined for a trading partner. However, for a given document to the target trading partner, a specific gateway must be specified. If a gateway is not specified, the default gateway is used. Like receivers, gateways support multiple transport protocols and pre and post process handlers can be specified on the gateway for custom processing.

Trading Partner Gateway Protocol Panels

HTTP 1.1 and SMTP panels

Gateway Configuration	
Transport	HTTP/1.1
Forward Proxy List	Use default forward proxy
Address	
User Name	
Password	
Retry Count	3
Retry Interval	300 seconds
Number of Threads	3
Validate Client IP	<input checked="" type="radio"/> No <input type="radio"/> Yes
Auto Queue	<input checked="" type="radio"/> No <input type="radio"/> Yes
Connection Timeout	120 seconds

HTTPS 1.0 and HTTPS 1.1 panel

Gateway Configuration	
Transport	HTTPS/1.0
Forward Proxy List	Use default forward proxy
Address	
User Name	
Password	
Retry Count	3
Retry Interval	300 seconds
Number of Threads	3
Validate Client IP	<input checked="" type="radio"/> No <input type="radio"/> Yes
Validate Client SSL Cert	<input checked="" type="radio"/> No <input type="radio"/> Yes
Auto Queue	<input checked="" type="radio"/> No <input type="radio"/> Yes
Connection Timeout	120 seconds

File Directory protocol

Gateway Configuration	
Transport	File Directory
Address	
Retry Count	3
Retry Interval	300 seconds
Number of Threads	3
Validate Client IP	<input checked="" type="radio"/> No <input type="radio"/> Yes
Auto Queue	<input checked="" type="radio"/> No <input type="radio"/> Yes
Use Unique File Name	<input checked="" type="checkbox"/>

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Shown here are the console gateway panels for the HTTP, HTTPS, SMTP, and File directory transport protocols.

Trading Partner Gateway Protocol Panels (cont.)

FTP Scripting panel

Gateway Configuration	
Transport	FTP Scripting
Server IP:	<input type="text"/> * { Script pa
User Id:	<input type="text"/> { Script paramete
Password:	<input type="text"/> { Script parameter
FTPS Mode:	<input checked="" type="radio"/> Yes <input type="radio"/> No
Script File(maximum 2kb):	<input type="button" value="Upload Script File"/> *
Retry Count:	<input type="text" value="3"/>
Retry Interval:	<input type="text" value="300"/> seconds
Connection Timeout:	<input type="text" value="120"/> seconds
Lock User:	<input checked="" type="radio"/> Yes <input type="radio"/> No
Global FTP Scripting Attributes	
Lock Retry Interval (Seconds):	260
Lock Retry Count:	3
Maximum Lock Time (Seconds):	240
Maximum Queue Age (Seconds):	740
User defined attributes	
<input type="button" value="New"/>	
Schedule	
Interval Based Scheduling :	<input checked="" type="radio"/>
Calendar Based Scheduling :	<input type="radio"/>
Interval :	<input type="text" value="60.0"/> seconds

FTP and FTPS panels

Gateway Configuration	
Transport	FTP
Address	<input type="text"/>
User Name	<input type="text"/>
Password	<input type="text"/>
Retry Count	<input type="text" value="3"/>
Retry Interval	<input type="text" value="300"/> seconds
Number of Threads	<input type="text" value="3"/>
Validate Client IP	<input checked="" type="radio"/> No <input type="radio"/> Yes
Auto Queue	<input checked="" type="radio"/> No <input type="radio"/> Yes
Connection Timeout	<input type="text" value="120"/> seconds
Use Unique File Name	<input checked="" type="checkbox"/>

Shown here are the console gateway panels for the FTP, FTPS, and FTP scripting transport protocols.

Trading Partner Gateway Protocol Panels (cont.)

JMS panel

Gateway Configuration	
Transport	JMS
Address	
User Name	
Password	
Retry Count	3
Retry Interval	300 seconds
Number of Threads	3
Validate Client IP	<input checked="" type="radio"/> No <input type="radio"/> Yes
Auto Queue	<input checked="" type="radio"/> No <input type="radio"/> Yes
Authentication Required	<input checked="" type="radio"/> No <input type="radio"/> Yes
JMS Factory Name	
JMS Message Class	
JMS Message Type	
Provider URL Packages	
JMS Queue Name	
JMS JNDI Factory Name	

Shown here is the console gateway panels for the JMS transport protocol.

Using Target Trading Partner's Gateway

- Gateways are used in the participant connection panels on each document flow through the hub – if none specified, default is used

Source: Community Manager | Search | Reset | Target: XML Trading Partner

Enabled | B2B Capabilities | Connection Management | B2B Capabilities | Deactivate

Package: None (N/A) | Protocol: FVT-XML-TEST (ALL) | Document Flow: ICPCPO (ALL) | Attributes | Actions | Gateways | Attributes | Package: N/A (N/A) | Protocol: MX12V3R1 (ALL) | Document Flow: 850 (ALL) | X

Package: N/A (N/A) | Protocol: EDI-X12 (ALL) | Document Flow: ISA (ALL) | Attributes | Add Connection Profile | Actions | Gateways | Attributes | Package: None (N/A) | Protocol: EDI-X12 (ALL) | Document Flow: ISA (ALL) | X

▼ Connection Management Gateways

Gateway Type	Source Gateways	Target Gateways
Production	ManagerFileGateway	TP1FileGateway
Test	Select One	Select One
CPS Participant	Select One	Select One
CPS Manager	Select One	Select One

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The participant connection panel shows the “Gateways” button where the target partner gateways are assigned to the specific connection for a document flow. If no gateway is assigned, the default gateway is used. The connection must have at least one gateway assigned for the document to flow through the hub.

Section

Summary

This section will provide a summary of the topics covered in this presentation.

Summary

- This presentation covered basic configuration of Trading Partners, receivers (targets) and its splitters, and Trading partner's Gateways
- All document flows require this minimum configuration, besides the configuration needed specific for that document flow
 - ▶ The document flow configuration steps are described in other presentations



This presentation covered the basics of trading partners, receivers and gateways. These are minimum configuration components needed for all documents flowing through the hub.

Other presentations cover more detailed document flows of various types with examples.

Appendix

Extra Material



This section provides some additional material concerning splitters and handlers.

Target - EDI Splitter

- EDI splitter is needed for target where incoming EDI document may contain multiple Interchange (ISA)
- EDI has a known structure, so the EDI splitter can derive the information it needs from the EDI data itself
- Attributes that can be set on handler instance
 - ▶ Character encoding
 - Default is the local file encoding for the system the product



If the receiver target expects to receive EDI documents containing multiple ISA (envelopes), an EDI splitter should be configured for the target.

The EDI splitter can recognize the EDI document, since EDI format has a known structure.

Attributes such as character encoding can be specified for the EDI splitter on the target.

Target - XML Splitter

- XML has a known structure, the XML splitter can derive the information it needs from the XML data itself
- Applies to all transport type
- Needs capability to detect if the received document contains multiple XML documents – done by:
 - ▶ By checking for XML Prologue tags
 - ▶ If no XML prologue then by checking for basic XML syntax



The XML splitter can derive the information needed from the XML data. Documents containing multiple XML documents can be detected by checking for XML prologue tags, or if no prologue tag exists, by checking for basic XML syntax.

Target - ROD Splitter

- ROD documents has nothing inherent in its document to help recognize the data type, in order to properly handle the document
- Hence, there needs to be a mechanism provided to identify the data ahead of time
 - ▶ This is done by using Receiver Targets that are specific to the ROD document data being received
 - The Receiver Targets are made specific by having one instance of a Target per ROD data format
 - ▶ The attributes of the ROD Splitter Handler are set to the Packaging, Protocol and Document Type that is expected
- ROD Splitter Handler will assign the Meta-dictionary values that are used by the Document Manager (fixed inbound workflow) for extracting the business ids



For efficiency, the ROD Splitter Handler will always return true to the `isApplies()` method. To parse the data to determine if the ROD Splitter Handler applies is not very practical for the following reasons:

1. The entire data may need to be processed before a determination can be made.
2. Often there is not one thing that identifies to the handler if it applies. Instead, the splitter is just informed about certain fields, record lengths, and other items to split the data on.

Target - ROD Splitter Attributes

- From Document Flow Definition attributes
 - ▶ Package and its version
 - ▶ Protocol and its version
 - ▶ Document type (Process Code)
- Encoding – Optional

FromPackagingName	<input type="text"/>
FromPackagingVersion	<input type="text"/>
FromProtocolName	<input type="text"/>
FromProtocolVersion	<input type="text"/>
FromProcessCode	<input type="text"/>
FromProcessVersion	<input type="text"/>
METADictionary	<input type="text"/>
METADOCUMENT	<input type="text"/>
METASYN TAX	<input type="text"/>
ENCODING	ascii
BCG_BATCHDOCS	ON

For the Documents Flow Definition attributes, there is no way to enable the Administrator to view the available document flow definitions when setting this attribute from within the attribute view itself (for example, there is no drop down list), but the values can be determined from the Document flow definitions

Target - Generic Data Handler

- Generic Data Handler is used to allow users to add support for their own packages and protocols with their own user exits

The Generic Data Handler allows you to add support for your own packages and protocols.

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