



IBM Software Group

IBM WebSphere Partner Gateway V6.1

Chemical Industry Data Exchange (CIDX) support



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This presentation provides overview of Chemical Industry Data Exchange (CIDX) support.

Goals

- For you to understand the Chemical Industry Data Exchange (CIDX) support in WebSphere® Partner Gateway V6.1

The goal of the presentations is to provide you with the basic understanding of the Chemical Industry Data Exchange (CIDX) support provided and how you can configure WebSphere Partner Gateway for exchanging CIDX documents with your trading partners.

Agenda

- CIDX overview
- CIDX support in WebSphere Partner Gateway V6.1
- Summary and references



The presentation will be cover CIDX overview, CIDX support in WebSphere Partner Gateway V6.1 followed by summary and reference material

Section

CIDX overview

The next section covers the CIDX Overview.

CIDX Overview

CIDX is a global non-profit trade association whose mission is to **improve** the ease, speed and cost of securely **conducting business electronically** between **chemical companies** and their **trading partners**.

By the Industry . . . For the Industry

source: www.cidx.org



CIDX is non-profit membership-based organization serving the chemical industry. CIDX mission is to improve the ease, speed and cost of securely conducting business electronically between chemical companies and their trading partners. CIDX is focused on development of eBusiness standards called Chem eStandards. Chem eStandards have become the default standards for transacting business electronically in the chemical industry.

CIDX and Chem eStandards

- CIDX is responsible for development and maintenance of Chem eStandards
- Chem eStandards™ history
 - ▶ Chem eStandard V1.0 jointly developed by BASF, Dow and DuPont in July 2000
 - ▶ Chem eStandard V2.0 jointly developed by 20 chemical industry companies in March 2001
 - ▶ March 2001 CIDX takes support of Chem eStandard V2.0
 - ▶ Chem eStandard V2.0.1 published by CIDX in June 2001, V2.0.2 in October 2001 and V3.0 in July 2002
 - ▶ Chem eStandard V4.0 is latest version published by CIDX

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CIDX is responsible for development and maintenance of Chem eStandard. Chem eStandard V1.0 is jointly developed by BASF, Dow and DuPont in July 2000. Several versions of the Chem eStandard are released later on. The latest release published by CIDX is V4.0

Chem eStandards

- Provide message formats and business process guidance for set of transactions covering business processes used in chemical industry
- Chem eStandards use RosettaNet Implementation Framework (RNIF) 1.1 for TRP (Transport, Routing and Packaging)



Chem eStandards™ are the eBusiness standards developed specifically for the buying, selling and delivery of chemical products. They are based on the eXtensible Mark-Up Language (XML), the globally-recognized "gold standard" for electronic data exchange. Chem eStandards provide message formats and business process guidance for set of transactions covering business processes used in chemical industry. Chem eStandards use RNIF 1.1 for Transport, Routing and Packaging (TRP), and

[RosettaNet Implementation Framework](#)

Section

CIDX support in WebSphere Partner Gateway V6.1



The next section covers CIDX support in WebSphere Partner Gateway V6.1.

Chem eStandards supported

- WebSphere Partner Gateway 6.1 supports following Chem eStandards
 - ▶ Chem eStandards V4.0 Message Standards
 - ▶ Chem eStandards V3.0 Message Standards
 - ▶ Chem eStandards Envelope and Security V3.0



WebSphere Partner Gateway 6.1 supports V3.0 and V4.0 of Chem eStandards Message Standards and Chem eStandards Envelope and Security V3.0

CIDX Configuration

- Configuration for CIDX is same as that for RosettaNet
- CIDX uses RNIF 1.1 for TRP (Transport, Routing and Packaging) and requires
 - ▶ RNIF packages (shipped with product)
 - Package_RNIF_1.1.zip
 - Package_RNSC_1.0_RNIF_1.1.zip
 - ▶ Partner Interface Process (PIP) document type packages (defined by user)
- CIDX uses Chem eStandards message formats which provide schema and DTD for message formats

WebSphere Partner Gateway V6.1 Configuration for CIDX is the same as that for Rosetta Net. CIDX uses Rosetta Net (RNIF) 1.1 for transport, routing and packaging.

To support CIDX, WebSphere Partner Gateway provides two sets of zip files called packages.

The *RNIF packages* consist of document definitions required to support the RNIF protocol. These packages are in the Business-to-business Integrate directory. For RNIF V1.1, the packages are Package_RNIF_1.1.zip and Package_RNSC_1.0_RNIF_1.1.zip. The Package_RNIF_1.1.zip provides the document definitions required to support CIDX communications with partners, and the Package_RNSC_1.0_RNIF_1.1.zip provides the document definitions required to support CIDX communications with back-end systems.

The second set of packages consists of PIP document type packages. Each PIP document type package has a Packages directory containing an XML file and a GuidelineMaps directory containing XSD files.

CIDX uses Chem eStandards message formats which provide schema and DTD for message formats

CIDX configuration steps

- Develop CIDX package for the Chem eStandards transaction
- Upload RNIF 1.1 packages
- Upload CIDX package
- Create Document Flow Definitions
- Enable Business-to-business capabilities
- Create Participant Connections

Basic CIDX configuration steps are the same as Rosetta Net. First, you have to develop CIDX package for the Chem eStandards transaction. Then upload RNIF 1.1 packages and upload the CIDX package. You have to create Document Flow Definitions, enable Business-to-business capabilities and create participant connections.

Develop CIDX package

- CIDX package identical in content and structure of Rosetta Net PIP package
- Need to develop CIDX packages for each Chem eStandards transaction
- Steps to develop CIDX package same as for developing Rosetta Net PIP package
- Need to develop two CIDX PIP document type packages for each CIDX transaction to enable WebSphere Partner Gateway to pass messages between partners and back-end
 - ▶ RNIF package
(example: BCG_Package_RNIF1.1_E41V04.00.zip)
 - ▶ Backend integration or RNSC package
(example: BCG_Package_RNSC1.0_RNIF1.1_E41V04.00.zip)
- Each package contains:
 - ▶ GuidelineMaps
 - Contains all the required schema from Chem eStandards
 - If Chem eStandards revision provides DTD, convert it to schema
 - ▶ Packages
 - Contains XML document flow definition file for the CIDX package

Developing CIDX package for the Chem eStandards transaction is the first step to configure CIDX in WebSphere Partner Gateway.

CIDX package is identical in content and structure as that of Rosetta Net PIP package. You need to develop a CIDX PIP document type package for each Chem eStandards transaction you want to use in WebSphere Partner Gateway. Steps to develop CIDX package are the same as that for developing Rosetta Net PIP package. You start with CIDX E41 OrderCreate packages provided with WebSphere Partner Gateway and edit it to create your message format. You need to develop RNIF package and Backend integration package for each CIDX transaction. CIDX PIP document type packages should have the GuidelineMaps and Packages folders. GuidelineMaps contains all the required schema information from Chem eStandards as XSD files. The packages folder contains XML file. The XML file specifies the document definitions that define how WebSphere Partner Gateway handles the PIP and define the exchanged messages and signals. The XSD files in the GuidelineMaps specify the format of the PIP messages and define acceptable values for XML elements in the messages.

Develop CIDX package contd.

- GuidelineMaps folder
 - ▶ contains all the xsds used by the CIDX transaction
- Specify transaction name and transaction code for Process and Action routing objects in the XML document flow definition file
 - ▶ Process routing object:
 - <ROUTINGOBJNAME> should be specified as Chem eStandards transaction name
 - <ROUTINGOBJCD> should be specified as Chem eStandards transaction code
 - <ROUTINGOBJVER> should be specified as version of Chem eStandards message standard.
 - ▶ Activity routing object:
 - <ROUTINGOBJNAME> should be specified as Chem eStandards transaction name
 - <ROUTINGOBJCD> should be specified as Chem eStandards transaction name
 - <ROUTINGOBJVER> should be specified as N/A
 - ▶ Action routing object
 - <ROUTINGOBJNAME> should be specified as Chem eStandards transaction name
 - <ROUTINGOBJCD> should be specified as Chem eStandards transaction name
 - <ROUTINGOBJVER> should be specified as N/A
 - RNPipMetaData attributes should be correctly specified

This slide provides more detail on the GuidelineMaps folder. GuidelineMaps folder should contain all the XSD files used by the CIDX transaction. XML document flow definition file should correctly specify transaction name and transaction code and for Process, Activity and Action routing objects. For Activity and Action routing objects, the version of Chem eStandards message standard should be left as N/A.

CIDX RNIF package contents

The screenshot shows the XML configuration for the CIDX RNIF package. The XML editor displays the following configuration for the Q1:Process routing object:

Property	Value
ROUTINGOBJNAME	OrderCreate
ROUTINGOBJCD	E41
ROUTINGOBJVER	4.0
CHORGSEQNBR	1
ROUTINGOBJDESC	CIDX Order Create
ACTIVESTATUSCD	1
VISIBILITYCD	7
DOCUMENTFLG	0

The second instance of the routing object is highlighted in blue, showing the following configuration:

Property	Value
ROUTINGOBJNAME	OrderCreate
ROUTINGOBJCD	OrderCreate
ROUTINGOBJVER	N/A
CHORGSEQNBR	1
ROUTINGOBJDESC	OrderCreate
ACTIVESTATUSCD	1
VISIBILITYCD	7
DOCUMENTFLG	0

The third instance of the routing object is highlighted in blue, showing the following configuration:

Property	Value
ROUTINGOBJNAME	OrderCreate
ROUTINGOBJCD	OrderCreate

This slide illustrates CIDX RNIF package content. Process, Activity and Action routing object attribute values are specified in XML configuration file as explained in the previous slide. This screen capture shows the XML configuration file in CIDX RNIF package for E41 message. For the Process routing object, the ROUTINGOBJNAME is OrderCreate. The value E41 provided for the ROUTINGOBJCD refers to the Chem eStandards transaction code for this message. The version of the Chem eStandards message standard is specified for the ROUTINGOBJVER property. For Activity and Action routing objects, both ROUTINGOBJNAME and ROUTINGOBJCD should refer to the Chem eStandards transaction name. So you should see the value "OrderCreate" for both of these properties.

The naming convention of the supplied CIDX packages is the same as the packages supplied for Rosetta Net. For example, the BCG_Package_RNIF1.1_E414.00.zip is for validating documents for V4.0 for the E41 PIP send between partners and WebSphere Partner Gateway using RNIF1.1

CIDX RNIF package - RNIPipMetaData

- CIDX RNIF package: XML document flow definition file Action routing object should have RNIPipMetaData attributes correctly specified
 - ▶ GlobalAdministeringAuthorityCode (new attribute) should be set as CIDX
 - ▶ bcgpip.xpath.* properties should be correctly specified
 - E41 CIDX package shipped with the product illustrates the values to be specified

Q1:RNIPipMetaData	
METAELEMENT	
METAELEMENTDEFINITION	
METAELEMENT	DTDName
METAELEMENTDEFINITION	
METAELEMENT	Sender Role
METAELEMENTDEFINITION	
METAELEMENT	FromService
METAELEMENTDEFINITION	
METAELEMENT	Sender Partner Service
METAELEMENTDEFINITION	
METAELEMENT	ToService
METAELEMENTDEFINITION	
METAELEMENT	Receiver Role
METAELEMENTDEFINITION	
METAELEMENT	FromRole
METAELEMENTDEFINITION	
METAELEMENT	Receiving Partner Service
METAELEMENTDEFINITION	
METAELEMENT	ToRole
METAELEMENTDEFINITION	
METAELEMENT	OrderCreate
METAELEMENTDEFINITION	
METAELEMENT	RootTag
METAELEMENTDEFINITION	
METAELEMENT	ResponseFactorName
METAELEMENTDEFINITION	
METAELEMENT	CIDX
METAELEMENTDEFINITION	
METAELEMENT	GlobalAdministeringAuthorityCode
METAELEMENTDEFINITION	
METAELEMENT	Header[0]ThisDocumentIdentifier[0]DocumentIdentifier[0]
METAELEMENTDEFINITION	
METAELEMENT	bcg.pip.xpath.docid.0
METAELEMENTDEFINITION	
METAELEMENT	Header[0]ThisDocumentDate[0]Date[0]
METAELEMENTDEFINITION	
METAELEMENT	bcg.pip.xpath.dts.0
METAELEMENTDEFINITION	
METAELEMENT	#isMessageIdentifier[0]ProprietaryMessageIdentifier[0]
METAELEMENTDEFINITION	
METAELEMENT	bcg.pip.xpath.docid.1
METAELEMENTDEFINITION	
METAELEMENT	thisMessageDateTime[0]DateTimeStamp[0]
METAELEMENTDEFINITION	
METAELEMENT	bcg.pip.xpath.dts.1
METAELEMENTDEFINITION	
METAELEMENT	Header[0]From[0]PartnerInformation[0]PartnerIdentifier[0]
METAELEMENTDEFINITION	
METAELEMENT	bcg.pip.xpath.fiduns.0
METAELEMENTDEFINITION	
METAELEMENT	Header[0]To[0]PartnerInformation[0]PartnerIdentifier[0]
METAELEMENTDEFINITION	
METAELEMENT	bcg.pip.xpath.fiduns.0
METAELEMENTDEFINITION	

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In addition to specifying ROUTINGOBJNAME, ROUTINGOBJCD and ROUTINGOBJVER properties, the Action Routing object requires values for the RNIPipMetaData attributes. One important metadata property is the GlobalAdministeringAuthorityCode. The GlobalAdministeringAuthorityCode should be set to CIDX. You can refer to the E41 CIDX package shipped with the product to provide values for the rest of the metadata properties which have a bcgpip.xpath prefix.

CIDX RosettaNet Service Content (RNSC) package contents

Routing Object	ROUTINGOBJNAME	ROUTINGOBJCD	ROUTINGOBJVER	ROUTINGOBJDESC	ACTIVESTATUSCD	VISIBILITYCD	DOCUMENTFLG
Q1-Process	OrderCreate	E41	4.0	CIDX Order Create	1	7	0
Q1-Activity	OrderCreate	OrderCreate	N/A	OrderCreate	1	7	0
Q1-Action	OrderCreate	OrderCreate	N/A	OrderCreate	1	7	0

This slide illustrates CIDX RosettaNet Service Content (RNSC) or Backend package content. Process, Activity and Action routing object attribute values are specified in XML configuration file as explained previously. This slide illustrates XML configuration file in CIDX RNSC package for E41 message.

This screen capture shows the XML configuration file in CIDX RNSC package for E41 message. For the Process routing object, the ROUTINGOBJNAME is OrderCreate. The value E41 provided for the ROUTINGOBJCD refers to the Chem eStandards transaction code for this message. The version of the Chem eStandards message standard is specified for the ROUTINGOBJVER property. For Activity and Action routing objects, both ROUTINGOBJNAME and ROUTINGOBJCD should refer to the Chem eStandards transaction name. So you should see the value "OrderCreate" for both of these properties.

Import RNIF 1.1 packages

- Upload RNIF 1.1 packages using WebSphere Partner Gateway console
 - ▶ Click **Hub Admin > Hub Configuration > Document Definition**.
 - ▶ Click **Upload/Download Packages**.
 - ▶ Select **No** for **WSDL Package**.
 - ▶ Click **Browse** and select the RNIF package for communicating with partners
- RNIF 1.1 packages are provided in Business-to-business Integrate/rosettanet directory:
 - ▶ Package_RNIF_1.1.zip
 - ▶ Package_RNSC_1.0_RNIF_1.1.zip



Importing RNIF 1.1 packages is next step to configure CIDX in WebSphere Partner Gateway. These packages are shipped with the product and located in Business-to-business Integrate/rosettanet directory of your installation. You can make use of the WebSphere Partner Gateway community console to import these packages.

Upload CIDX packages

- Upload CIDX packages using WebSphere Partner Gateway console
 - ▶ CIDX RNIF package
 - ▶ CIDX RNSC package

- Verify RosettaNet attributes are correctly set

The screenshot displays the 'Manage Document Definitions' interface. It features a table with columns for 'Status' and 'Actions'. The table lists several document definitions, including those for 'Protocol: RNSC (1.0)' and 'Protocol: RosettaNet (1.1)'. Red circles highlight specific entries in the table, and an arrow points from one of these circles to a detailed view of a document definition below the table.

For each PIP you want to support, upload the PIP document type package for the PIP and for the RNIF version you are supporting using WebSphere Partner Gateway console. Uploading CIDX RNIF package enables WebSphere Partner Gateway to send PIP to a partner and the CIDX RNSC enables the PIP to be sent to the back-end application

CIDX configuration contd.

- Create interaction for the CIDX transaction
- Enable Business-to-business capabilities for source
- Enable Business-to-business capabilities for target
- Create participant connection

The screenshots illustrate the configuration steps in the IBM WebSphere Partner Gateway:

- Package Details:** Two screenshots show package information for 'Backend Integration (1.0)' and 'RNIF (1.1)'. Both packages are configured with Protocol: RNIF (1.1), Document Type: OrderCreate (4.0), and Action: OrderCreate (N/A).
- Interaction Tables:** Two tables show the configuration of interactions. Each table has columns for a package icon, a checkmark, the status 'Enabled', and a warning icon. The right-hand column lists the configuration details: Package: RNIF (1.1), Protocol: RosettaNet (1.1), Document Type: E41 (4.0) 'OrderCreate', Activity: OrderCreate, and Action: OrderCreate.
- Participant Connection:** A screenshot shows the 'Attributes' tab for a participant connection. It displays details for 'Backend Integration (1.0)' and 'RNIF (1.1)', including Protocol: RNIF (1.1), Document Type: E41 (4.0), and Action: OrderCreate (N/A).

Once you finish uploading the necessary packages, create interactions, enable Business-to-business capabilities on the source and target trading participants and finally create the participant connections.

Section

Summary and references

The next section covers the summary and references.

Summary

- WebSphere Partner Gateway supports CIDX specification
 - ▶ Chem eStandards V4.0 Message Standards
 - ▶ Chem eStandards V3.0 Message Standards
 - ▶ Chem eStandards Envelope and Security Version 3.0
- WebSphere Partner Gateway CIDX package structure and content are identical to WebSphere Partner Gateway RNIF package

WebSphere Partner Gateway supports CIDX specification Chem eStandards V3.0 and V4.0 Message Standards and Chem eStandards Envelope and Security V3.0

WebSphere Partner Gateway CIDX package structure and content are identical to WebSphere Partner Gateway RNIF package

References

- CIDX www.cidix.org
- CIDX envelope and security profile
http://www.cidix.org/Portals/0/Publications/Envelope_and_Security_v3.0.pdf
- CIDX Chem eStandards
<http://www.cidix.org/Default.aspx?tabid=78>
- WebSphere Partner Gateway Administration Guide

This slide lists some of the reference material that you can use for more information on CIDX and how it is supported in WebSphere Partner Gateway.

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