



IBM Software Group

IBM WebSphere® Data Interchange V3.3

Integrating WDI with WebSphere Message Broker

WebSphere. software



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WebSphere Data Interchange offers some specialized ways of integrating with WebSphere Message Broker. This presentation explains how they work.

For Discussion

- WDI interfaces with WebSphere Message Broker by using WebSphere MQ
- The WDI / WMQ interface is extended with the Message Content Descriptor (MCD) profile to account for specific WMB features
- RFH2 and MQMD headers are handled with out of the box WDI Network programs, e.g. EDIMQSR and EDIRFH2
- MQMD and RFH2 properties can be manipulated during translation by using getproperty and setproperty mapping commands



WDI interfaces with WebSphere Message Broker by using WebSphere MQ as the vehicle of integration.

The WDI / WMQ interface is extended with the Message Content Descriptor (MCD) profile to account for specific WMB features

RFH2 and MQMD headers are handled with out of the box WDI Network programs, EDIMQSR and EDIRFH2

MQMD and RFH2 properties can be manipulated during translation by using getproperty and setproperty mapping commands

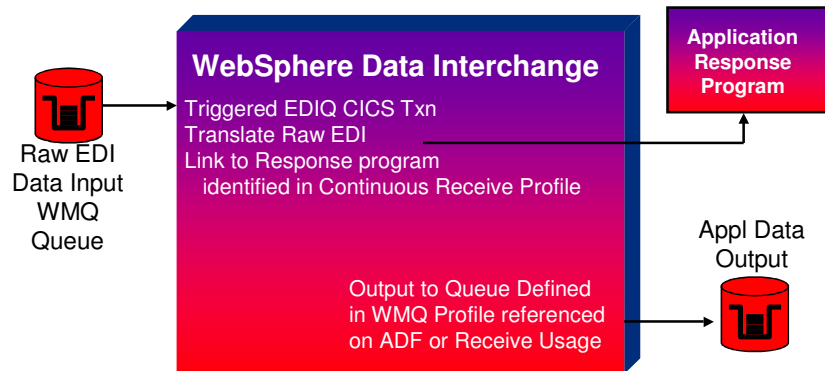
WebSphere MQ Benefits for EDI

- Assured Message Delivery
- Asynchronous Messaging
- Triggered Processing / Control
- Message Distribution Across Operating System Platforms
- Communications Interface
- Distributed CICS Transaction Execution
- Message Repository / Broker / Distributor
- Integrates Batch and CICS Applications

Benefits of using WebSphere MQ for transmission include

- 1) Assured Message Delivery
- 2) Asynchronous Messaging
- 3) Triggered Processing / Control for automated initiation
- 4) Message Distribution Across Operating System Platforms
- 5) Communications Interface
- 6) Distributed CICS Transaction Execution
- 7) Message Repository / Broker / Distributor
- 8) Integrates Batch and CICS Applications

WDI / WMQ Interface



The WDI / WMQ Interface is similar to the WDI Continuous Receive feature in CICS. A WMQ trigger program monitors an WMQ Queue and initiates WDI. WDI uses the Network Profile and the Queue Profile to define WMQ objects.

WDI Communications

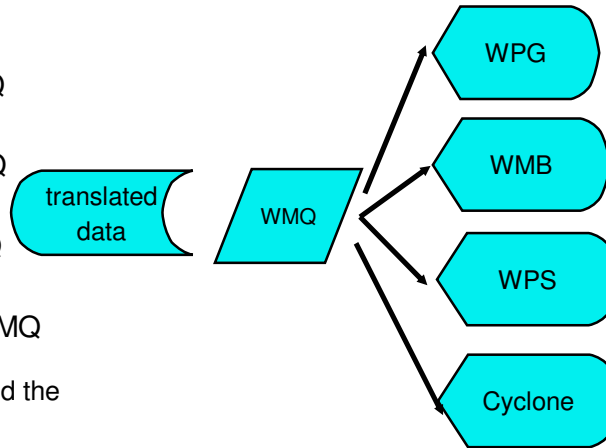
connect to WPG via WMQ

connect to WMB via WMQ

connect to WPS via WMQ

connect to Cyclone via WMQ

WDI uses RFH2 headers and the WDI MCD profile (WMB) to determine flow



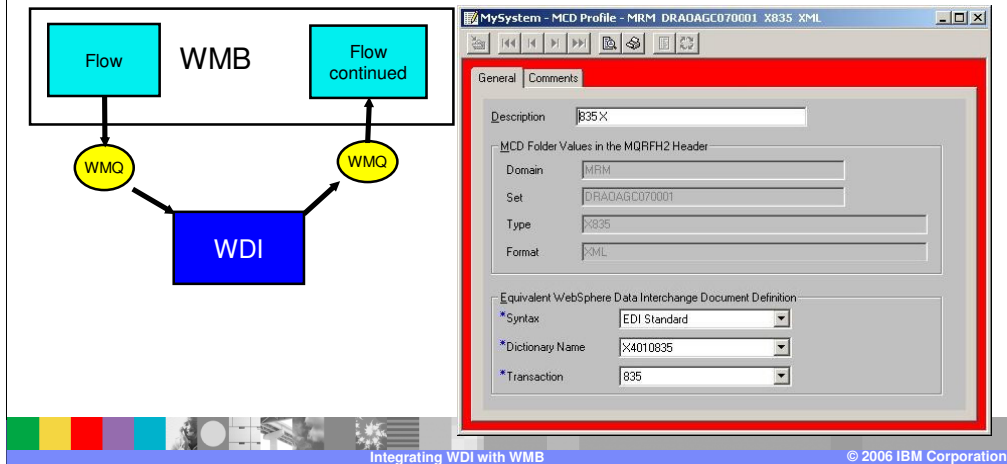
WMB is just one product with which WDI can be integrated. Others include WebSphere Partner Gateway, Cyclone, and WebSphere Process Server.

RFH2 headers are supported with WMQ and the Message Content Descriptor Profile (MCD) contains WMB specific information.

WebSphere Message Broker Integration

Special WDI Consideration for Integration with WMB exists

WMB outputs the message to a WMQ Queue, WDI reads the queue and using the WDI MCD profile supplies information needed for translation and then writes the translated message back to a queue, updating the RFH2 with WMB values



In integrating with WMB, the WMB flow would send message data to a WMQ queue which would route it to WDI. WDI is triggered, more than likely using the WDI Advanced Adapter. The MCD profile uses the Domain, Set, Type, and Format fields to crosswalk to WDI parameters of Syntax, Dictionary Name, and Transaction or Document. WDI sends the translated data back to a WMQ Queue which continues the WMB flow.

WDI Client - MCD Profile

- WebSphere Data Interchange can also exchange documents with applications via message queues or JMS.
- The MQRFH2 header contains a Message Content Descriptor (<mcd>) folder. The Message Content Descriptor contains a set of values that identify the meta-data name associated with the document.
- An MCD profile is used to associate the name of a WebSphere Data Interchange document definition with the values contained in the Message Content Descriptor (mcd) of the MQRFH2 header.
- The name of a WebSphere Data Interchange document definition will occur in an MCD profile along with the corresponding values from the Message Content Descriptor of the MQRFH2 header.



In addition to WebSphere Data Interchange's normal support for WebSphere MQ message queues, WebSphere Data Interchange can exchange documents with applications via message queues or JMS when the message containing the document is prefixed with the MQRFH2 header. Some applications, such as WebSphere Message Broker and WebSphere Process Server (WPS), use these mechanisms to exchange documents with WebSphere Data Interchange. The MQRFH2 header contains a Message Content Descriptor (<mcd>) folder. The Message Content Descriptor contains a set of values that identify the meta-data name associated with the document.

When exchanging documents where the MQRFH2 header is involved, an MCD profile is used to associate the name of a WebSphere Data Interchange document definition with the values contained in the Message Content Descriptor (mcd) of the MQRFH2 header. Document definitions in WebSphere Data Interchange include Data Formats, EDI Standard Transactions, XML schemas and XML DTDs. The MCD profile allows WebSphere Data Interchange to receive a document with an MQRFH2 header associate it with an existing document definition in WebSphere Data Interchange. The name of a WebSphere Data Interchange document definition will occur in an MCD profile along with the corresponding values from the Message Content Descriptor of the MQRFH2 header..

WDI Client - MCD Profile

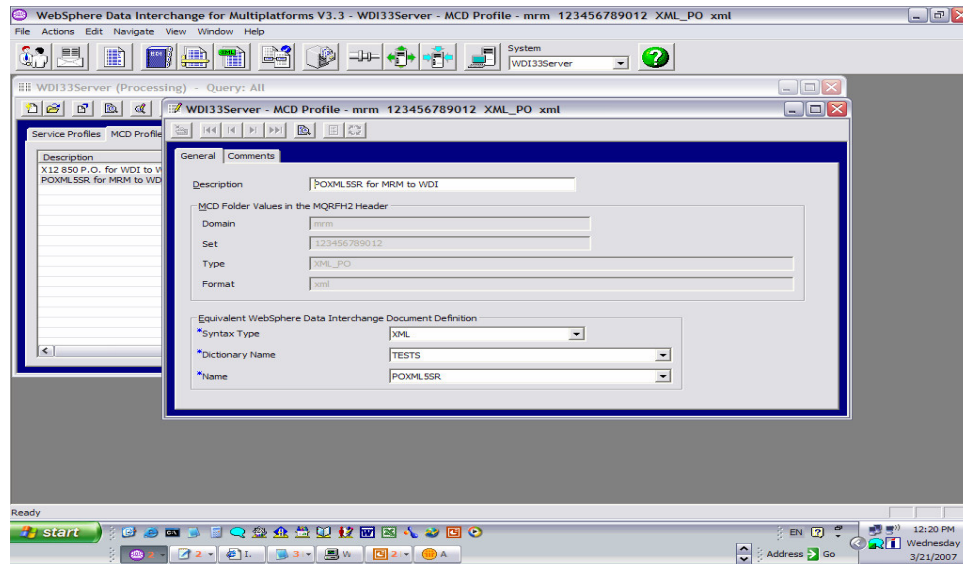
- Outbound
 - ▶ Network Profile with network name EDIRFH2 triggers lookup for MCD Profile matching on Syntax, Dictionary, Document, to create the WMQ MQMD and MQRFH2 headers in the output file.
 - ▶ Network Profile with network name EDICYCL creates WMQ header with extra fields for interfacing with CYCLONE.
 - ▶ If MCD profile NOTFOUND
 - domain = 'wdi'
 - dictionary, document = from map executed.
- Inbound
 - ▶ WMQ headers are parsed and triggers lookup for MCD Profile match.
 - ▶ Syntax, Dictionary, Document, values defined in MCD Profile are used for **substitution** values on Service Profile PERFORM command.
- WMQ user folder may also be accessed: For example: add element COMMAND and use substitution on Service Profile &COMMAND.



With Outbound processing, a Network Profile with network name EDIRFH2 triggers lookup for MCD Profile matching on Syntax, Dictionary, Document, to create the WMQ MQMD and MQRFH2 headers in the output file. Network Profile with network name EDICYCL creates WMQ header with extra fields for interfacing with CYCLONE. If an MCD profile is not found, the domain is 'wdi' and the dictionary and document are taken from the map executed.

Inbound - WMQ headers are parsed and triggers lookup for MCD Profile match. Syntax, Dictionary, Document, values defined in MCD Profile are used for **substitution** values on Service Profile PERFORM command.

WDI Client - MCD Profile



MCD profiles can be added, viewed and changed using the MCD Profile Editor. The editor contains two tab pages; General and Comments. Most information contained in the profile is displayed on the General tab page. Additional comments about the profile can be put in a comment on the Comments tab page.

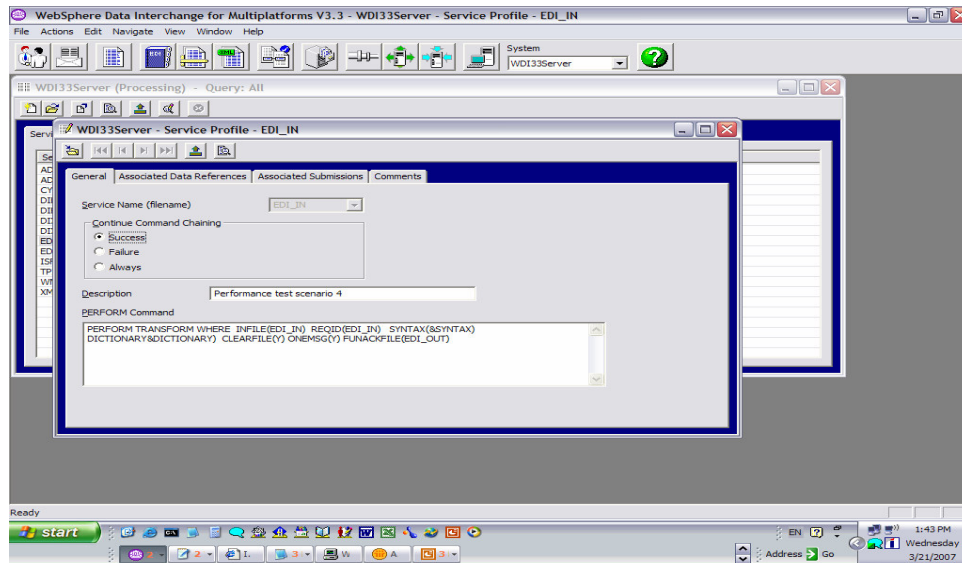
WDI Client - MCD Profile

The screenshot shows the configuration window for a Network Profile in the WDI33Server. The window title is "WebSphere Data Interchange for Multiplatforms V3.3 - WDI33Server - Network Profile - EDI". The main content area is titled "WDI33Server (Adapters) - Query: All" and "WDI33Server - Network Profile - EDI". The configuration is organized into two columns: "General" and "Comments".

Field	Value	Field	Value
Network ID	EDI	Description	Network program for EDI data
Communication Routine	VANMQ	Network Name	MQSeries
Network Program	EDIMQSR	Input Record Length	
Input File	EDIMQSR	Envelope Record Length	
Envelope File	EDIRFH2	Output File	
Acknowledgement File	EDIPFCMD	Message Handler	
Message Text Header	IEBASE	System Level	
Network Sequence	TPMAIN		
Network Parameters	00817		
System Type	SENDMQ=EDI_OUT RECEIVEMQ=EDI_IN		
Time Zone			

In the Network profile, the Network Program is the physical name of the network program that sends and receives documents, messages, and files. This is the program invoked by the communication routine to process requests.

WDI Client - MCD Profile



Substitution keywords can be used within the **PERFORM** command. The values from the WMQ user folder are accessed and used for the substitution keyword values.

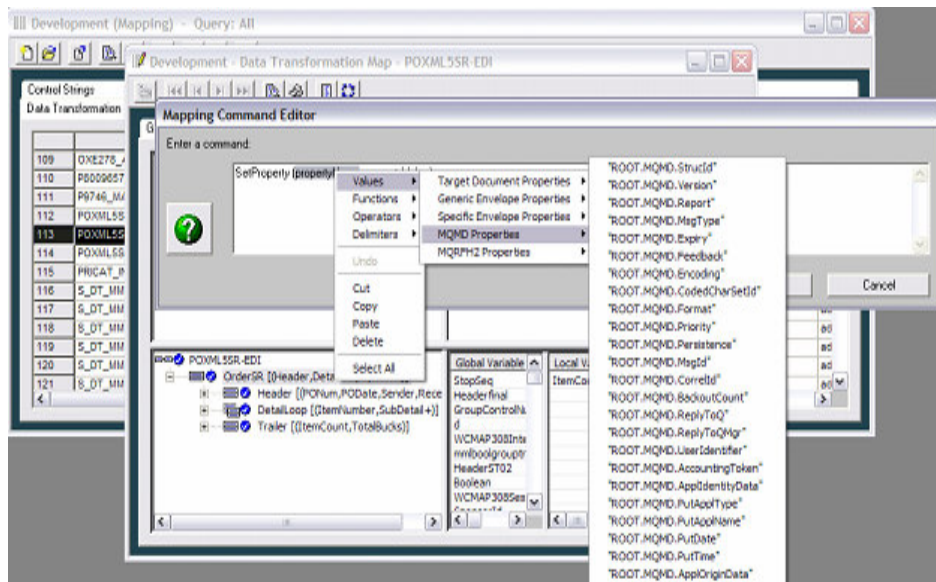
WDI Client - MCD Profile

- MQMD and MQRFH2 mapping properties
- GetProperty() function.
- SetProperty() command.



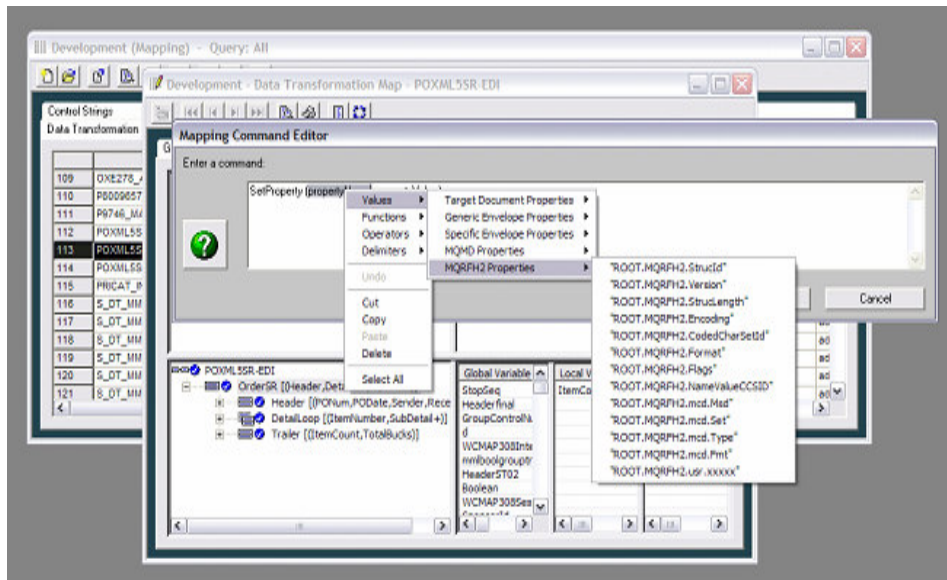
You can get and set the values of the MQMD and MQRFH2 headers used by WebSphere MQ. By allowing you to access the values in these MQ headers from your maps, WebSphere Data Interchange can be more easily integrated with other WebSphere MQ and JMS applications. The WebSphere MQ header values from the source document can now be obtained using the GetProperty() function. The header values on the target document can now be set using the SetProperty() command.

WDI Client - MCD Profile



This is a list of the MQMD properties available.

WDI Client - MCD Profile



This is a list of the MQRPH2 properties available.

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