



IBM Software Group

WebSphere® Message Broker Toolkit V6.0.2

Toolkit enhancements part 4: Mapping and testing



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Updated May 30, 2007

This module is the fourth of five presenting the enhancements made to WebSphere Message Broker Toolkit V6.0.2.

Agenda

- Broker Application Development
 - ▶ Mapping
 - ▶ Testing



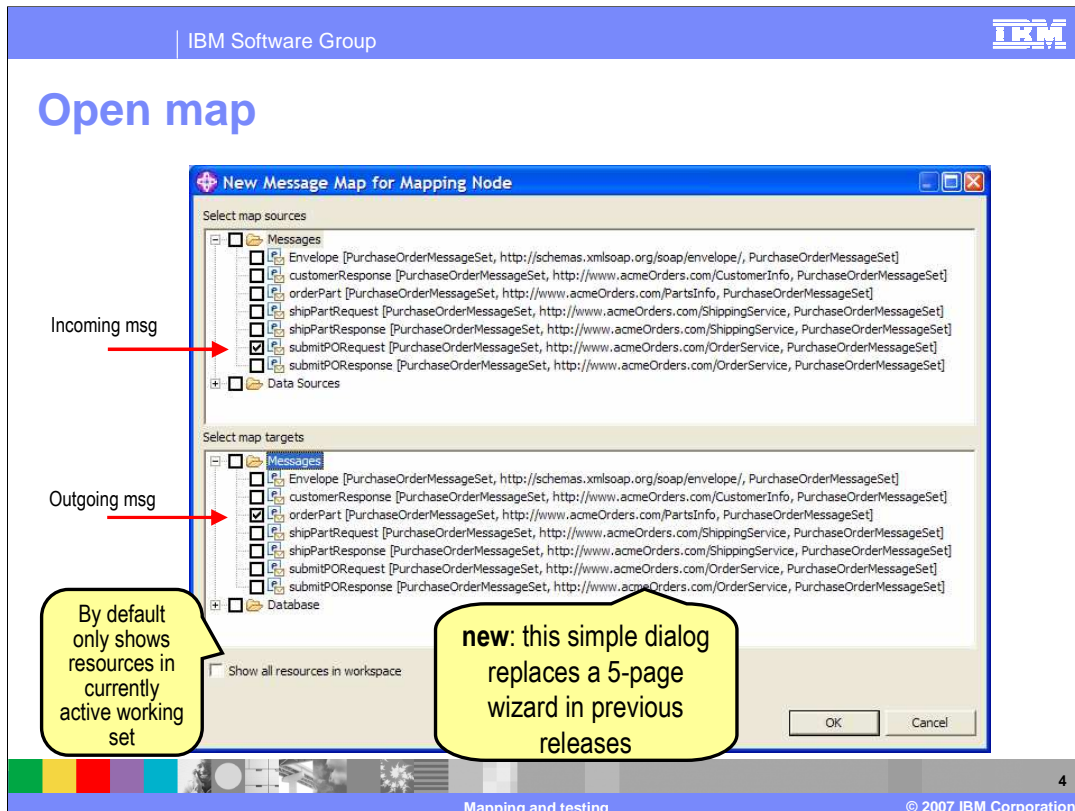
This presentation covers changes to the mapping in the Broker Application Development Perspective and the new testing capabilities of WebSphere Message Broker in Toolkit V6.0.2.

Section

Mapping



Mapping has been enhanced in WebSphere Message Broker Toolkit V6.0.2.



A double click on the Mapping node will open the Map wizard. This replaces the 5 page wizard in previous releases. By default it only shows resources in the current working set.

Properties mapped

The screenshot displays a message mapping configuration in IBM Integration Toolkit. The source message is 'submitPORrequest' and the target message is 'orderPart'. Both messages have a set of properties that are automatically mapped. A 'Map Script' table at the bottom shows the mapping logic for each property.

Auto-set message set, type and format (when applicable)

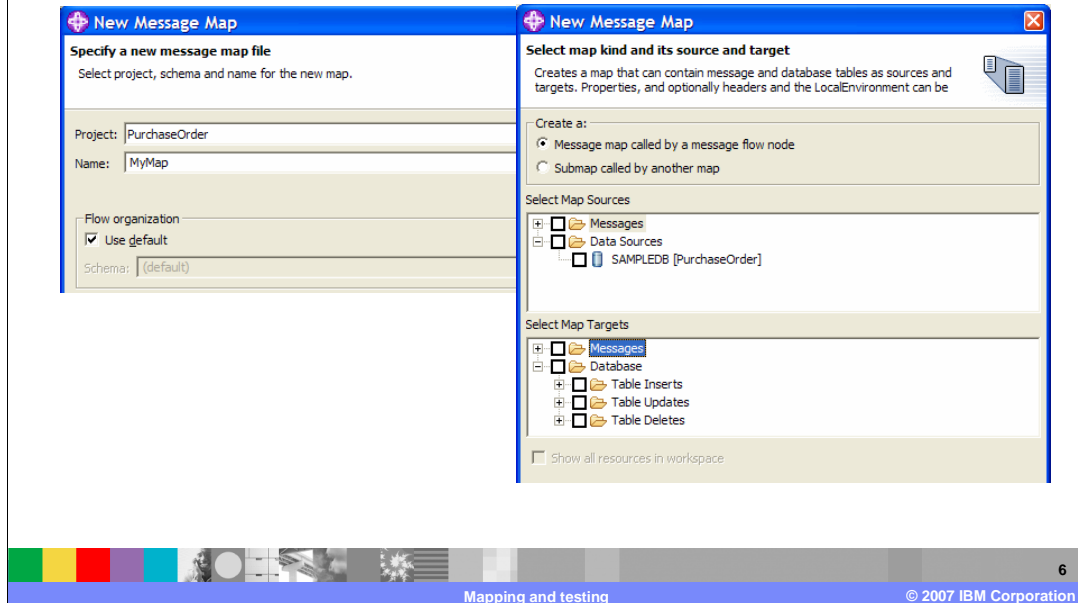
enhanced: Note little 'F' in icon. Indicates this field has been defined with a fixed value

enhanced: For fields defined with default or fixed values, now set mapping to default/fixed value after a map action, and show the default/fixed value in the tree.

Map Script	Value
BuildPartOrderMessage	
Parameters	
target	
Properties	
MessageSet	"IBNOPDO002001"
MessageType	"orderPart"
MessageFormat	\$source/Properties/MessageFormat
Encoding	\$source/Properties/Encoding
CodedCharSetId	\$source/Properties/CodedCharSetId
Transactional	\$source/Properties/Transactional
Persistence	\$source/Properties/Persistence
CreationTime	\$source/Properties/CreationTime
ExpirationTime	\$source/Properties/ExpirationTime

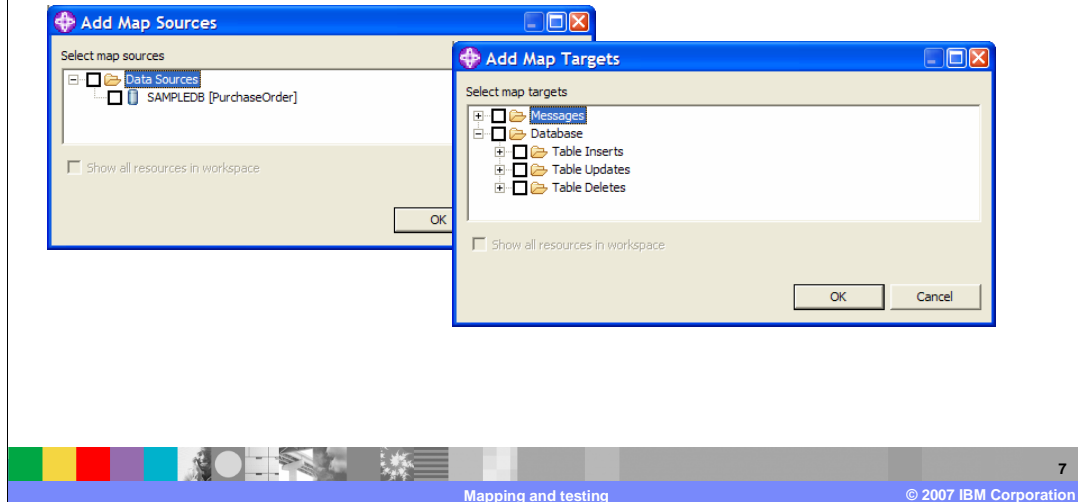
A mapping is generated for all source and target Properties of same name. There is a small 'F' in icons where a field has been defined with a fixed value.

Mapping editor enhancements 1



In WebSphere Message Broker Toolkit V6.0.2, there are a number of enhancements to the Mapping editor. First, the wizard has been simplified. Here are the wizard pages when opened from File > New > Message Map.

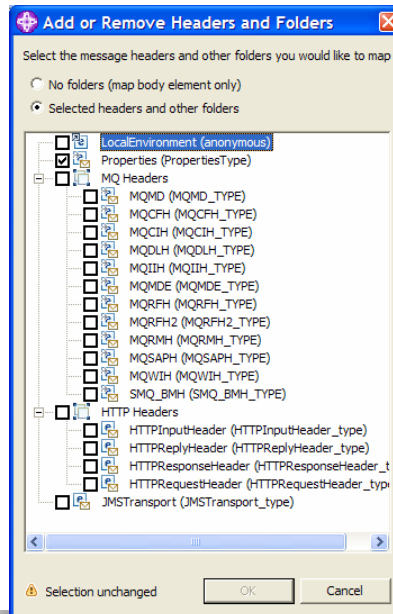
Mapping editor enhancements 2



In the Mapping editor, you can add sources and add targets; right click actions on \$source and \$target roots in trees.

You can also drag roots from the navigator to add sources and targets. For example you could drag a message, a database table, or a global element (in sub-maps).

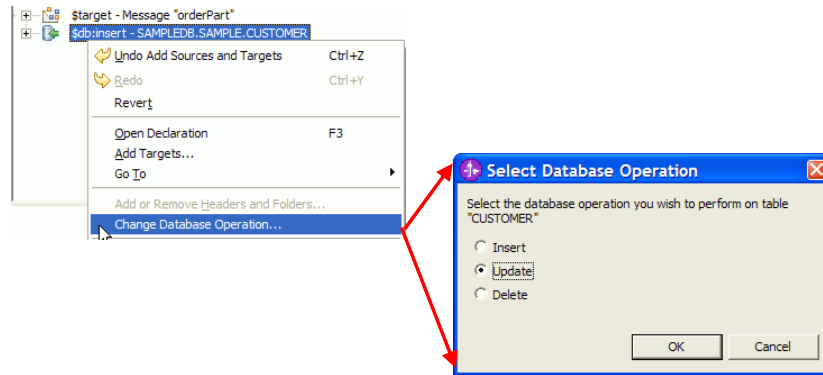
Mapping editor enhancements 3



By default, the Properties folder is shown in the Mapping editor to enable explicit mapping. Also, any headers are automatically copied from input message by default. The Local Environment is not mapped by default.

However, within the Mapping editor you can right click on Source or Target and select "Add/Remove Message Headers..."; the results of doing this are shown in this screen capture.

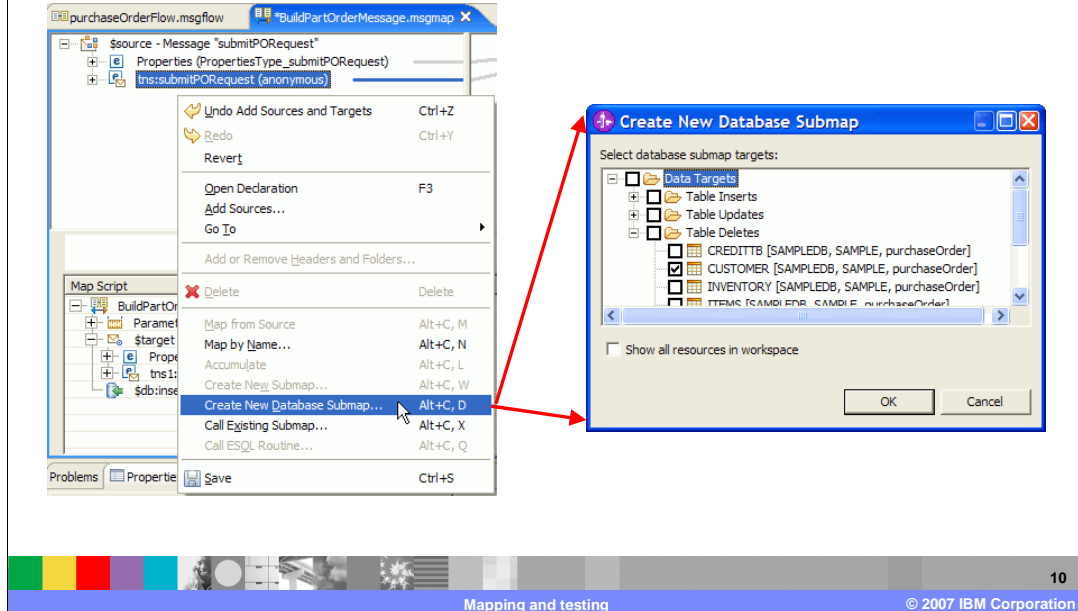
Mapping editor enhancements 4



In V6.0.2, there is a new Select Database Operation shown here.

Additionally, you can now map from database to database. Previously, you could only map from database to message or message to database.

Mapping editor enhancements 5



You can Create New Database Submap using a right click action as shown here.

Mapping editor enhancements 6

The screenshot displays the Mapping editor interface. On the left, a tree diagram shows the structure of a MIME message. The root node is 'Root', which branches into 'Properties', 'Transport headers', and 'MIME'. 'MIME' further branches into 'MIME-Version', 'Content-Type', 'Content-Description', and 'Parts'. 'Parts' branches into 'Optional preamble', 'Part', and 'Optional epilogue'. 'Part' branches into 'Content-Type', 'Content-Transfer-Encoding', 'Content-ID', and 'Data'. 'Data' branches into 'BLOB'.

On the right, the 'Map Script' table shows the mapping rules for the message structure. The table has two columns: 'Map Script' and 'Value'.

Map Script	Value
MIME_Msg	\$source/MIME_Msg
MIME-Version	\$source/MIME_Msg/MIME-Version
Content-Type	\$source/MIME_Msg/Content-Type
Content-Transfer-Encoding	\$source/MIME_Msg/Content-Transfer-Encoding
Content-ID	\$source/MIME_Msg/Content-ID
Parts	\$source/MIME_Msg/Parts
Part	\$source/MIME_Msg/Parts/Part
Content-Type	'text/xml, charset=UTF-8'
Content-Transfer-Encoding	'8bit'
Content-ID	'<part1@example.com>'
Data	\$source/MIME_Msg/Parts/Part
for	
if	
condition	msgmap:occurrence(\$source/MIME_Msg/Parts/Part) = 1
BLOB	\$source/MIME_Msg/Parts/Part/Data/BLOB
Part	\$source/MIME_Msg/Parts/Part
Content-Type	'application/octet-stream'
Content-Transfer-Encoding	'binary'
Content-ID	'<part2@example.com>'
Data	\$source/MIME_Msg/Parts/Part
BLOB	xs:hexBinary(1234567890)

You can now use the Mapping editor to map messages in a MIME domain. Domains supported are MRM, MIME, XML, XMLNS, XMLNSC, JMSMap, JMSStream.

Section

Testing

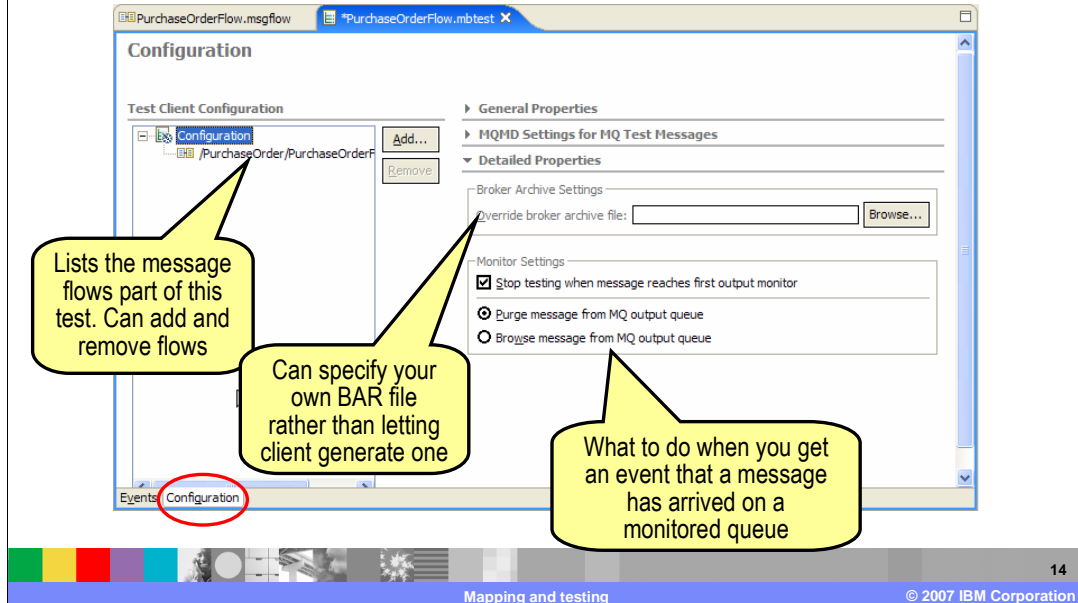
This section covers enhancements made to message flow testing.

Testing

- In previous releases, there was no built-in way to test a flow that starts with HTTPInput.
- New in 602 is support for a new “Test client” for testing flows that are started with HTTPInput or MQInput nodes.

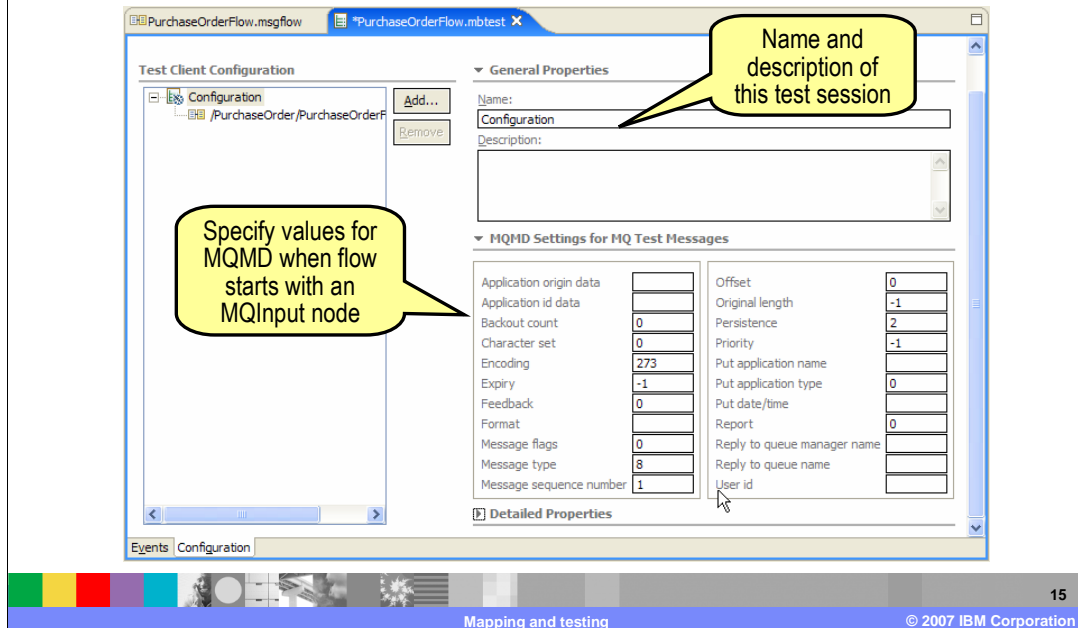
In WebSphere Message Broker Toolkit V6.0.2 is a new capability for testing flows that begin with HTTPInput or MQInput nodes.

Test Client



The Configuration view of the Test Client is for configuring your test session. There are several options available. You can add and remove flows. In the detailed properties, you can specify a BAR file rather than having the Test Client generate one. When a message has arrived on a monitored queue you can elect to purge the message or to browse the message.

Test Client



In the General Properties you can specify the name and description of the test session. In MQMD Settings, you can specify values when the flow starts with an MQInput node.

Test Client

The screenshot displays the IBM Business Process Manager interface. The 'Active Working Set' is 'PurchaseOrder'. The 'PurchaseOrder' project is expanded, showing 'Flows', 'Maps', 'ESQLs', 'Database Connections', 'Flow Tests', and 'PurchaseOrderFlow.mstest'. A context menu is open over 'PurchaseOrderFlow.mstest', with 'Test Client' selected. The 'Events' pane shows 'Message Flow Test Events' with a tree view of 'Invoke Message Flow' events. The 'Detailed Properties' pane shows 'Message flow' set to 'PurchaseOrder/PurchaseOrderFlow.msgflow' and 'Input node' set to 'ws__OrderService'. The 'Message content' is 'XML Structure'.

Name	Type	Value
Envelope	Envelope	
Header	Header	<unset>
Body	Body	
Fault	Fault	<unset>
submitPORquest	submitPORquest	

A saved test configuration can be opened and reused.

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