



IBM Software Group

Getting Started with WebSphere MQ Message Bindings in WebSphere Process Server and WebSphere Enterprise Service Bus

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WebSphere® Support Technical Exchange



Agenda

- This is a demonstration of creating an MQ binding and using it to connect to WebSphere MQ to generate a response message.

Requirements

- WebSphere MQ
- WebSphere Integration Developer (WID) with test environment
- RFHutil (<http://www.ibm.com/support/docview.wss?uid=swg24000637>)
- Note: WMQ and WID version 7.0 were used to prepare this demonstration

Step 1: Setting up MQ

One Queue Manager

The screenshot displays the IBM WebSphere MQ Explorer interface. The left pane shows a tree view of the Queue Manager structure, with 'testQueue001' selected. The right pane shows the configuration details for 'Queue Manager testQueue001'.

Queue Manager testQueue001

Connection QuickView:

Connection status	Connected
Connection type	Local
Connection name	
Channel name	
Channel definition table	
Last updated: 20:20:47	

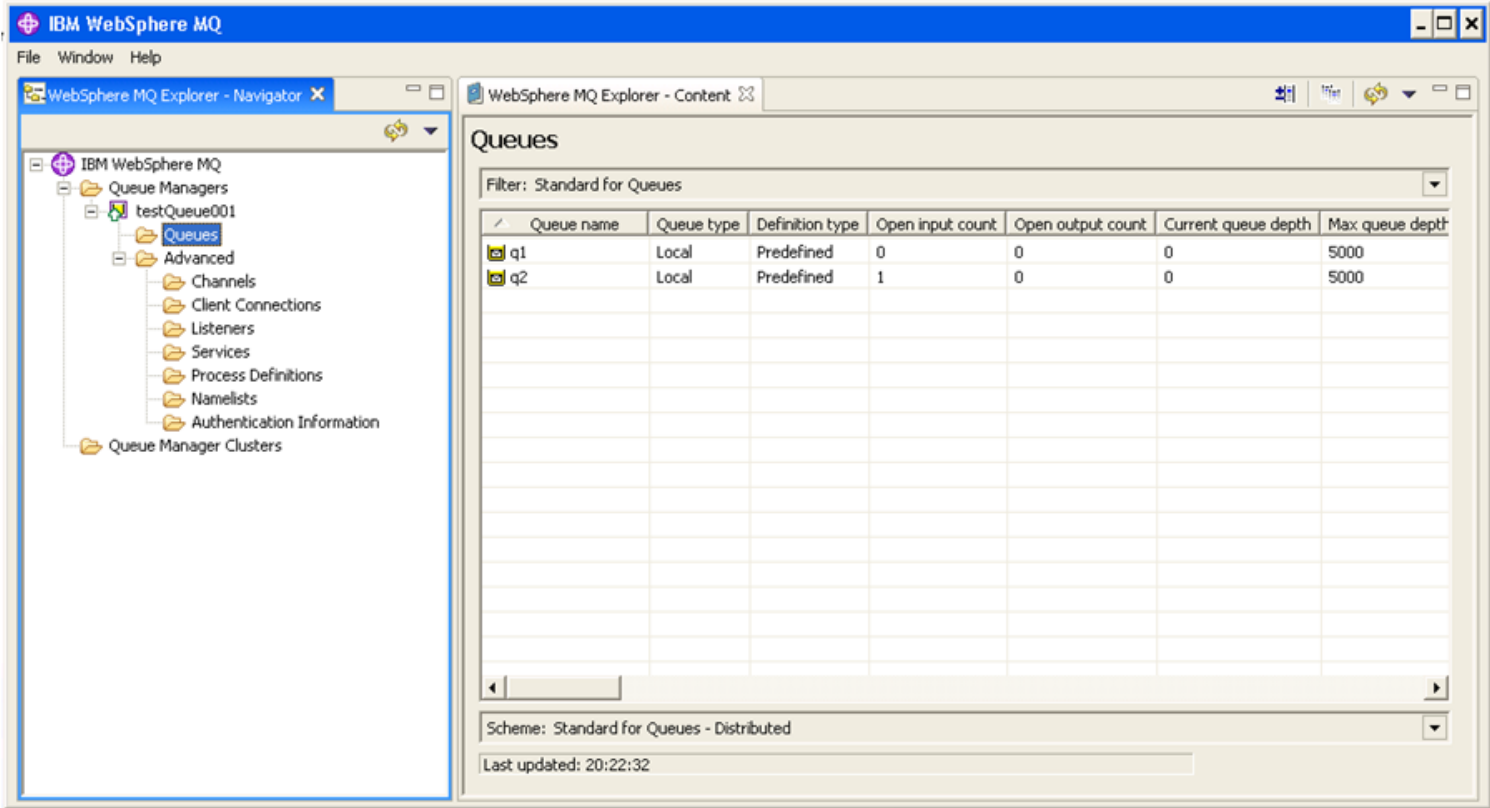
Status QuickView:

Queue manager status	Running
Command server status	Running
Channel initiator status	Running
Connection count	7
Last updated: 20:20:47	

Properties QuickView:

Queue manager name	testQueue001
Description	
Platform	Windows
Command level	600
Default transmission queue	
Last updated: 20:20:47	

Two Queues

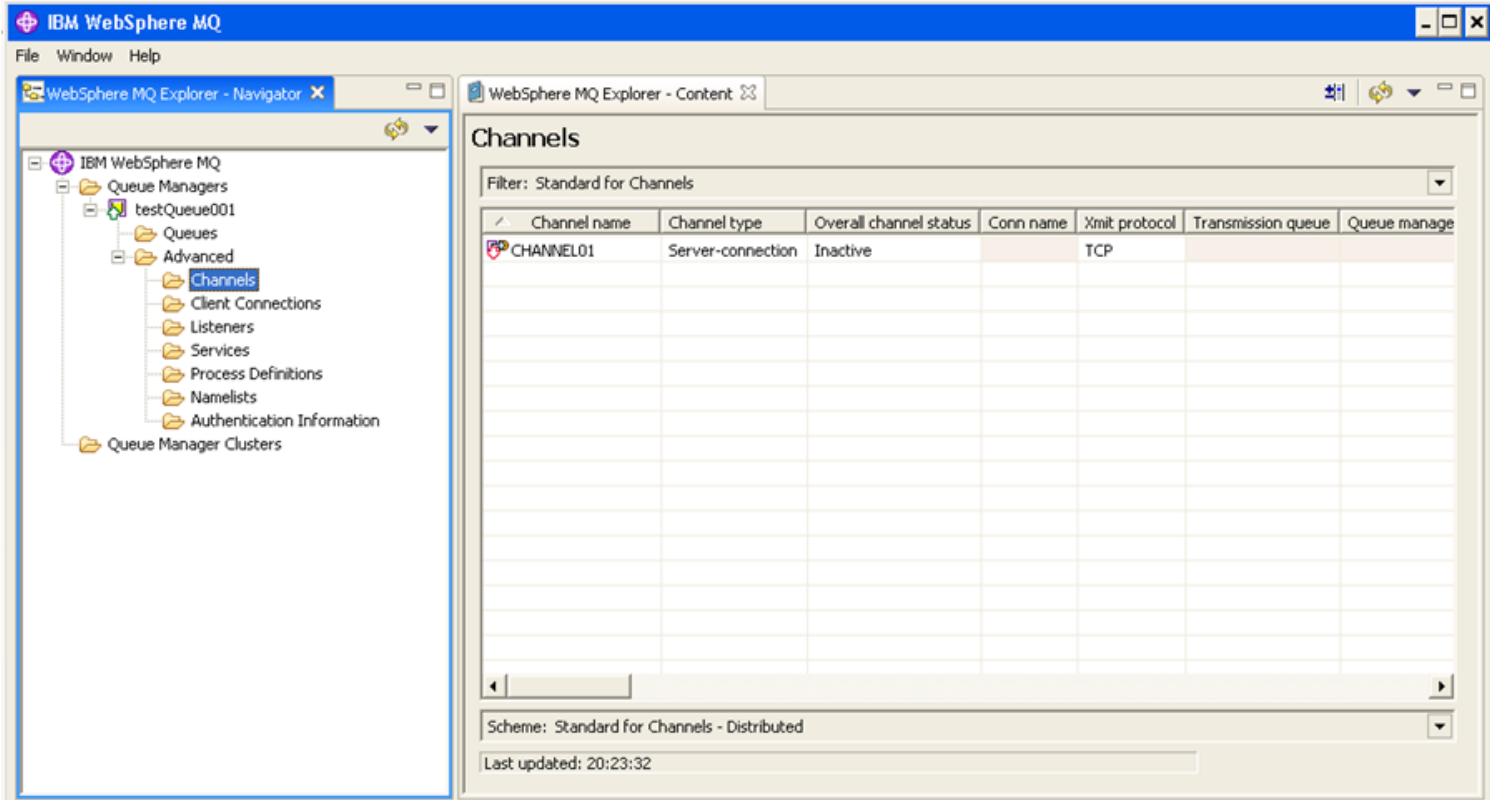


The screenshot displays the IBM WebSphere MQ Explorer interface. The left pane shows a tree view of the queue manager structure, with 'Queues' selected under 'testQueue001'. The right pane shows a table of queues with the following data:

Queue name	Queue type	Definition type	Open input count	Open output count	Current queue depth	Max queue depth
q1	Local	Predefined	0	0	0	5000
q2	Local	Predefined	1	0	0	5000

Additional details from the interface include a filter set to 'Standard for Queues', a scroll bar at the bottom, and a status bar indicating the scheme is 'Standard for Queues - Distributed' and the last update time is '20:22:32'.

One Channel



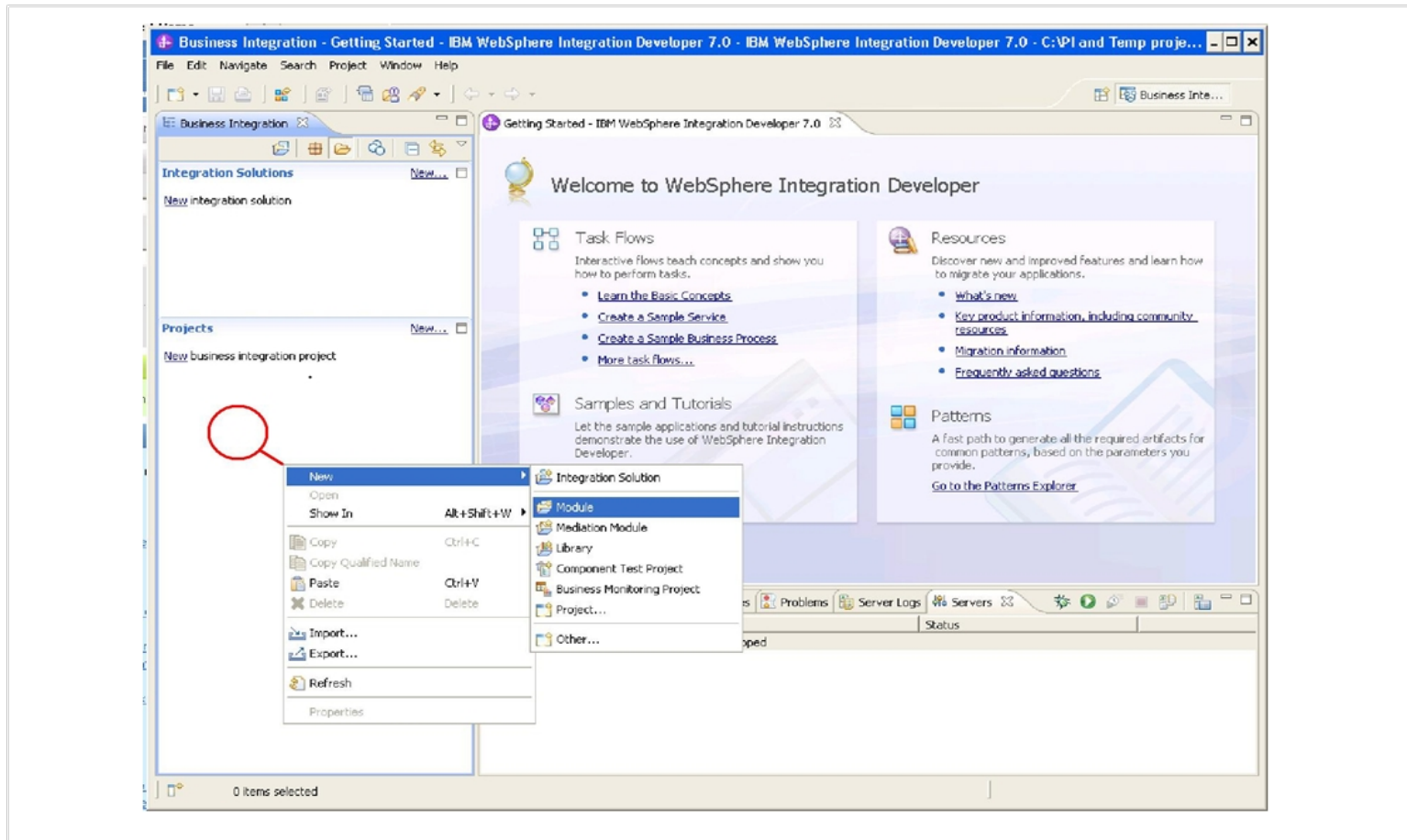
The screenshot displays the IBM WebSphere MQ Explorer interface. The left-hand pane shows a tree view of the queue manager structure, with the 'Channels' folder under the 'Advanced' section selected. The right-hand pane, titled 'Channels', shows a table with the following data:

Channel name	Channel type	Overall channel status	Conn name	Xmit protocol	Transmission queue	Queue manage
CHANNEL01	Server-connection	Inactive		TCP		

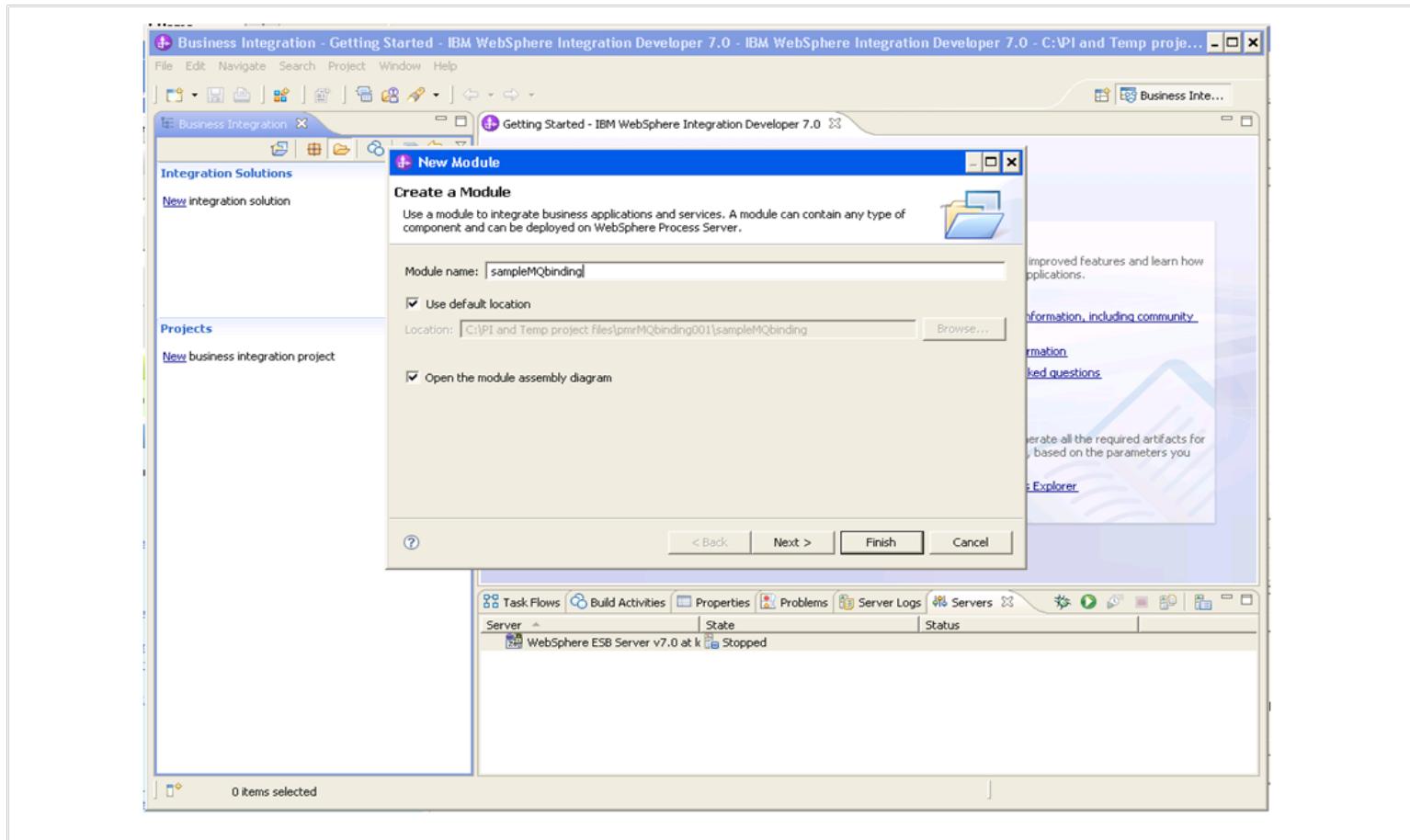
Below the table, the 'Scheme' is set to 'Standard for Channels - Distributed' and the 'Last updated' time is 20:23:32.

Step 2: Setting up WID

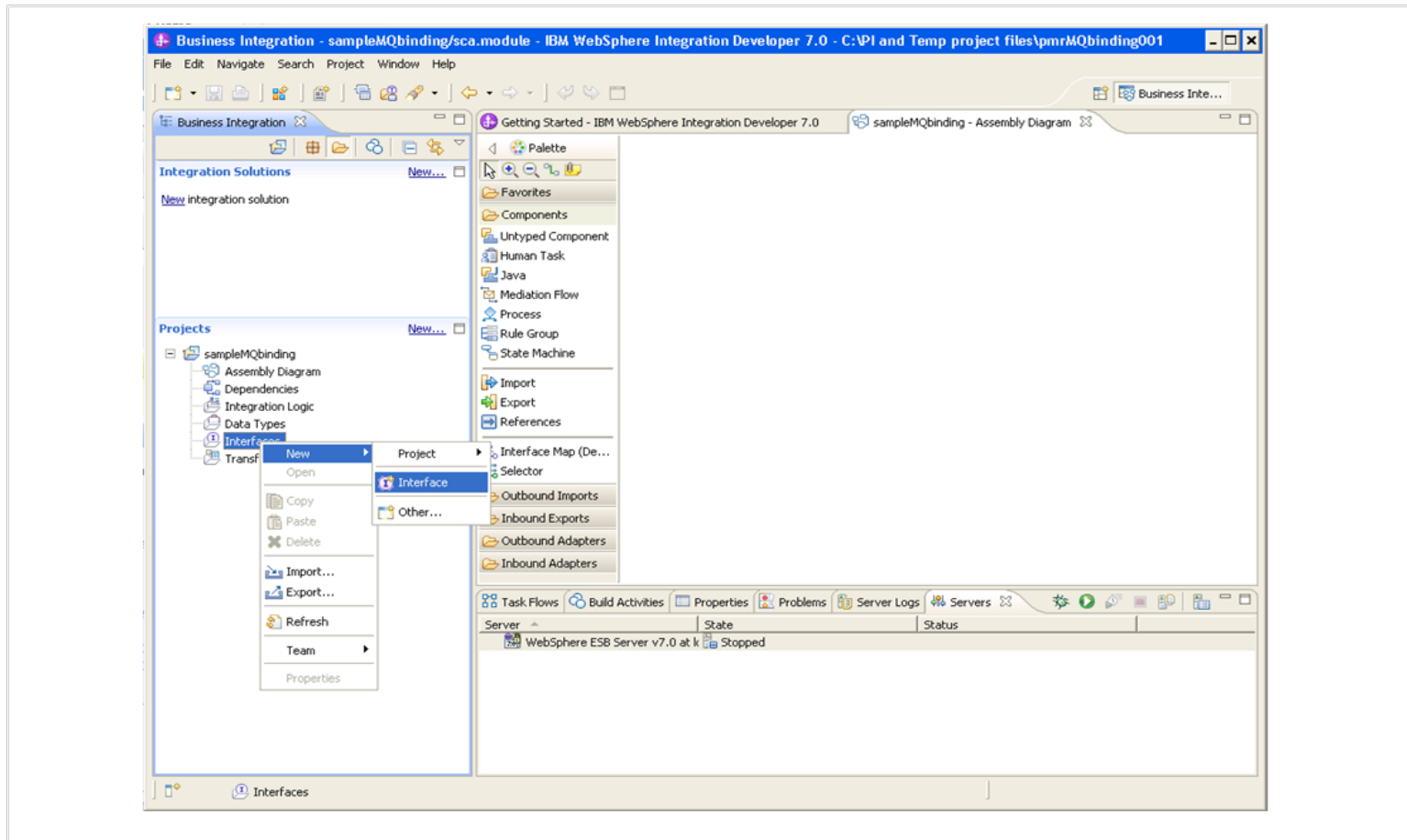
Right-click under Projects, create a new module



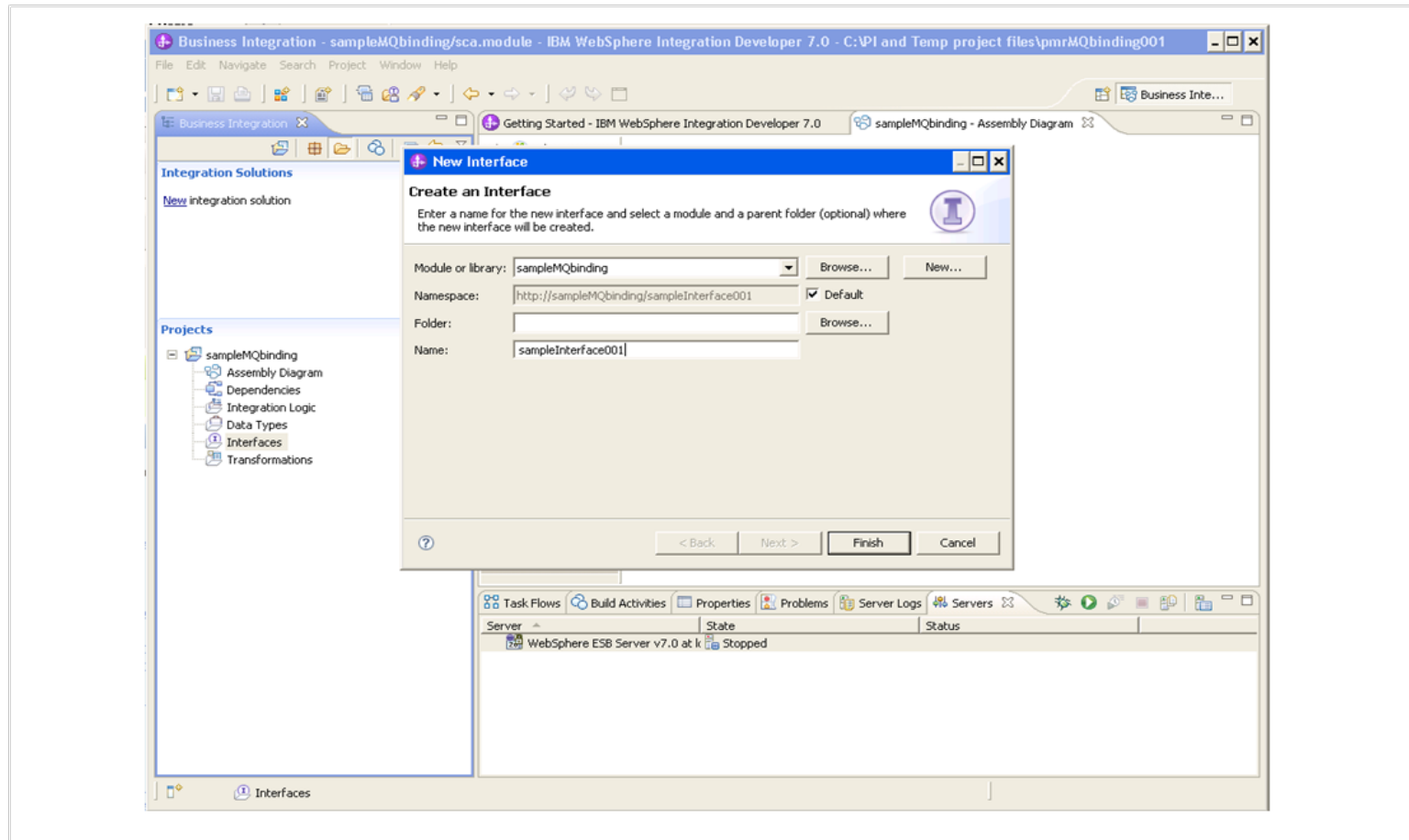
Give the new module a name, click 'Finish'



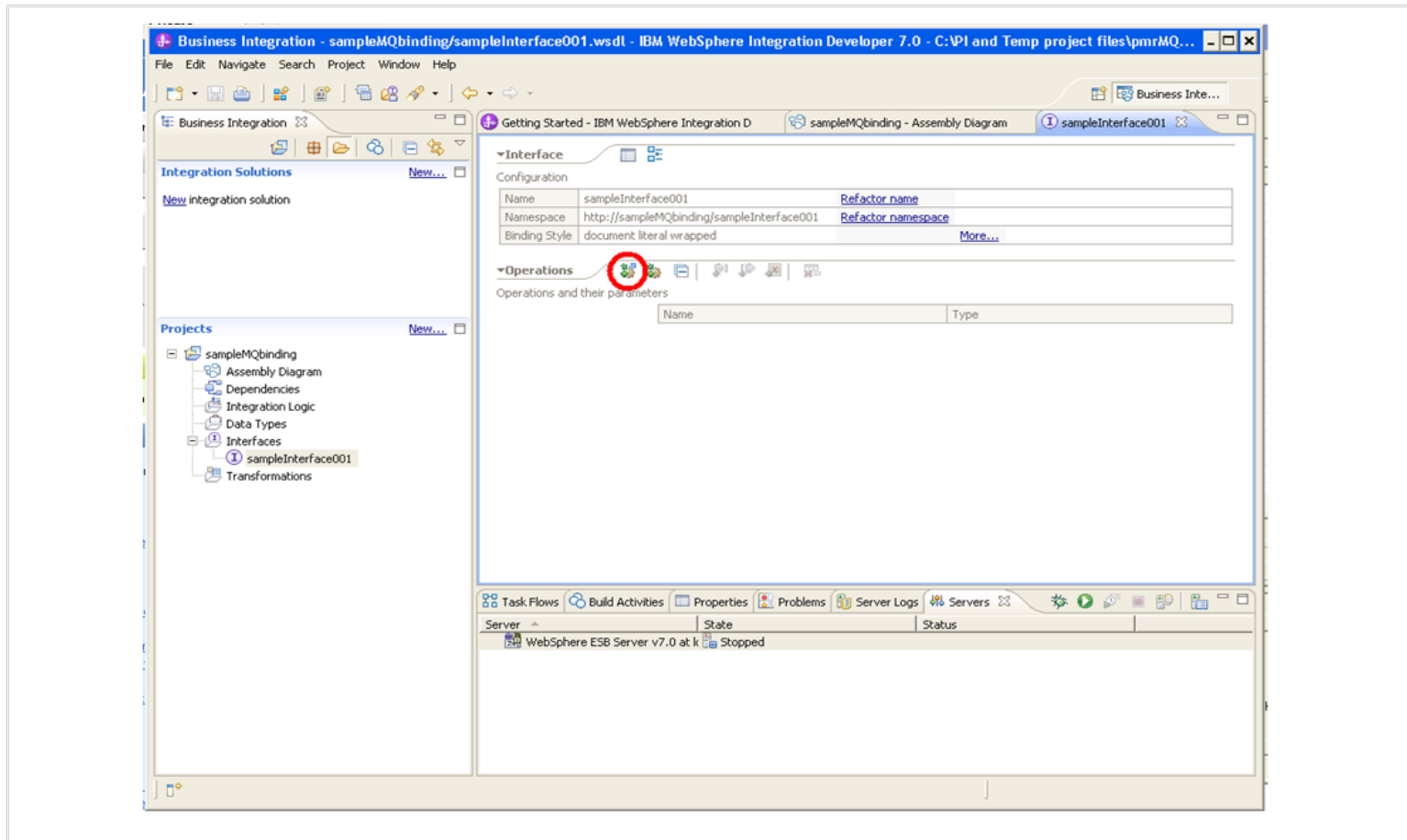
Right-click Interfaces, create a new interface



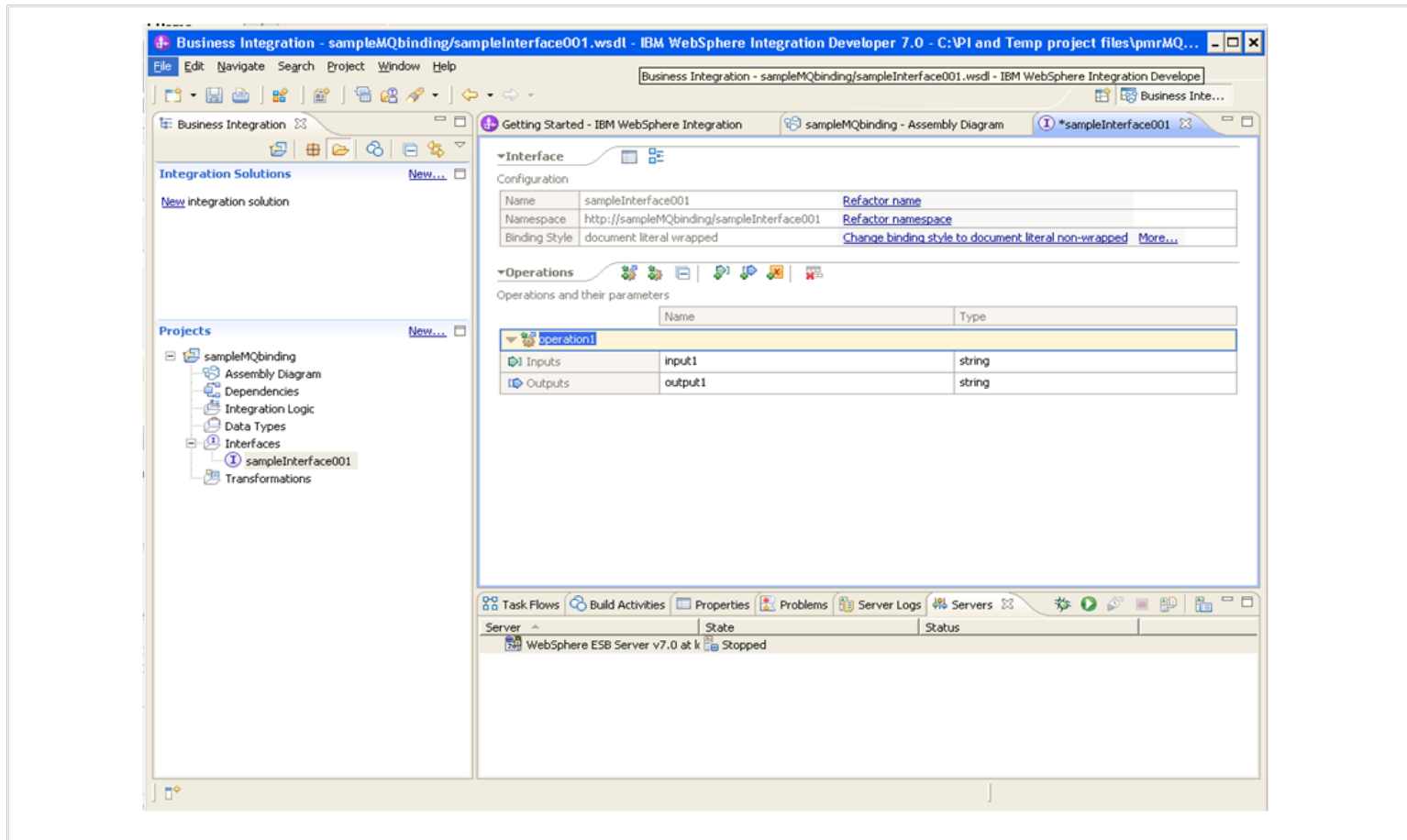
Enter an interface name and click 'Finish'



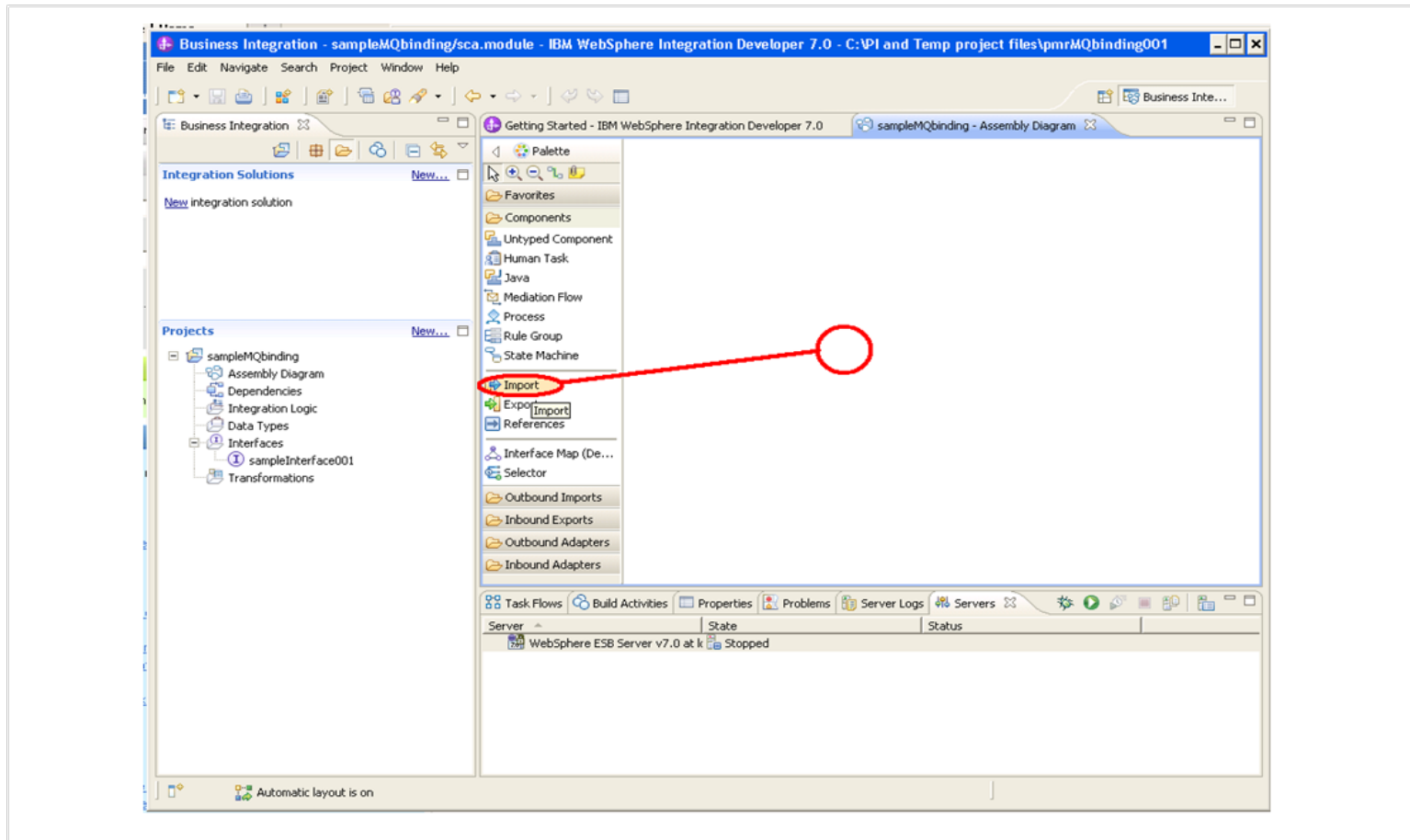
Click 'Add Request Response Operation' button



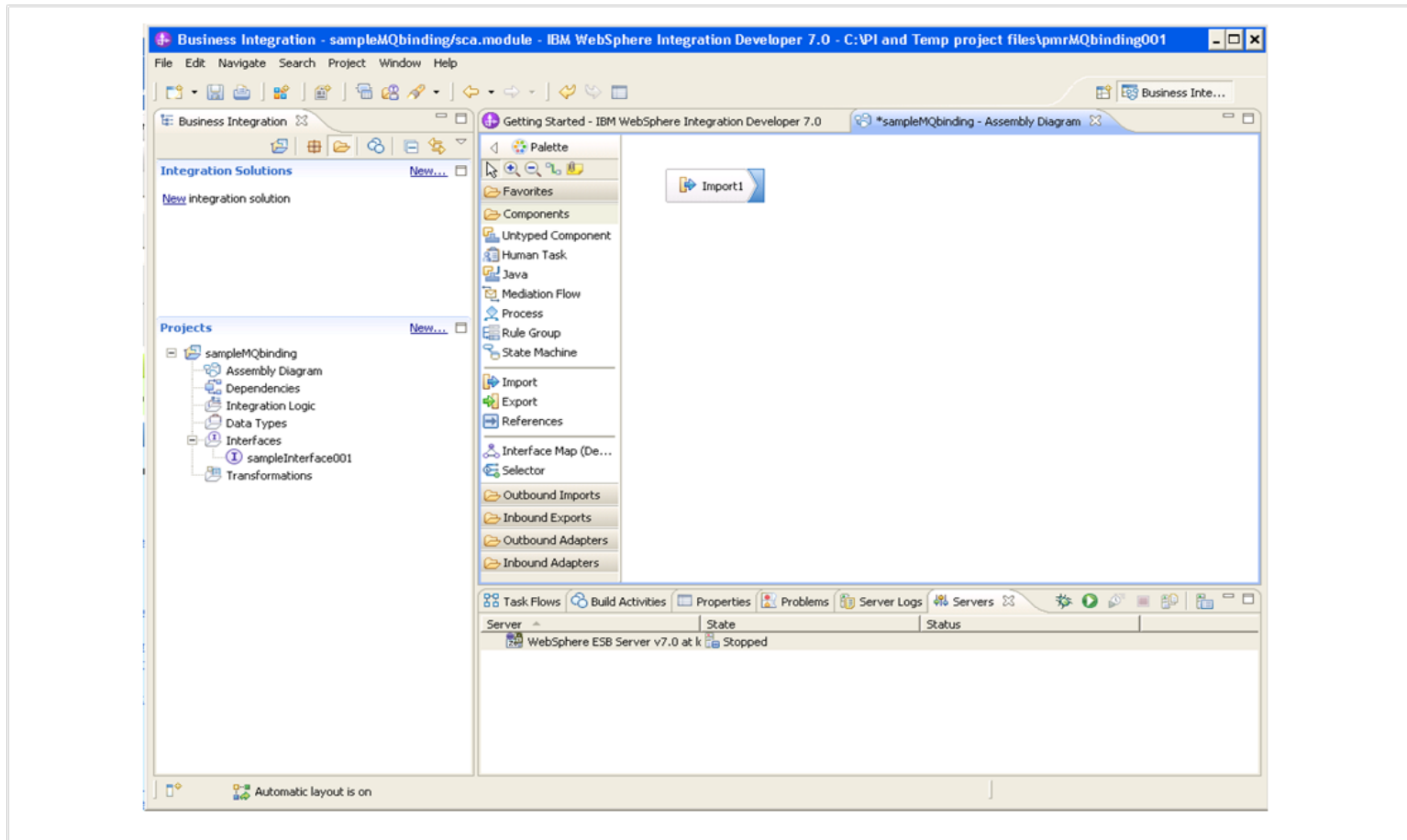
After adding the interface, save and close this tab



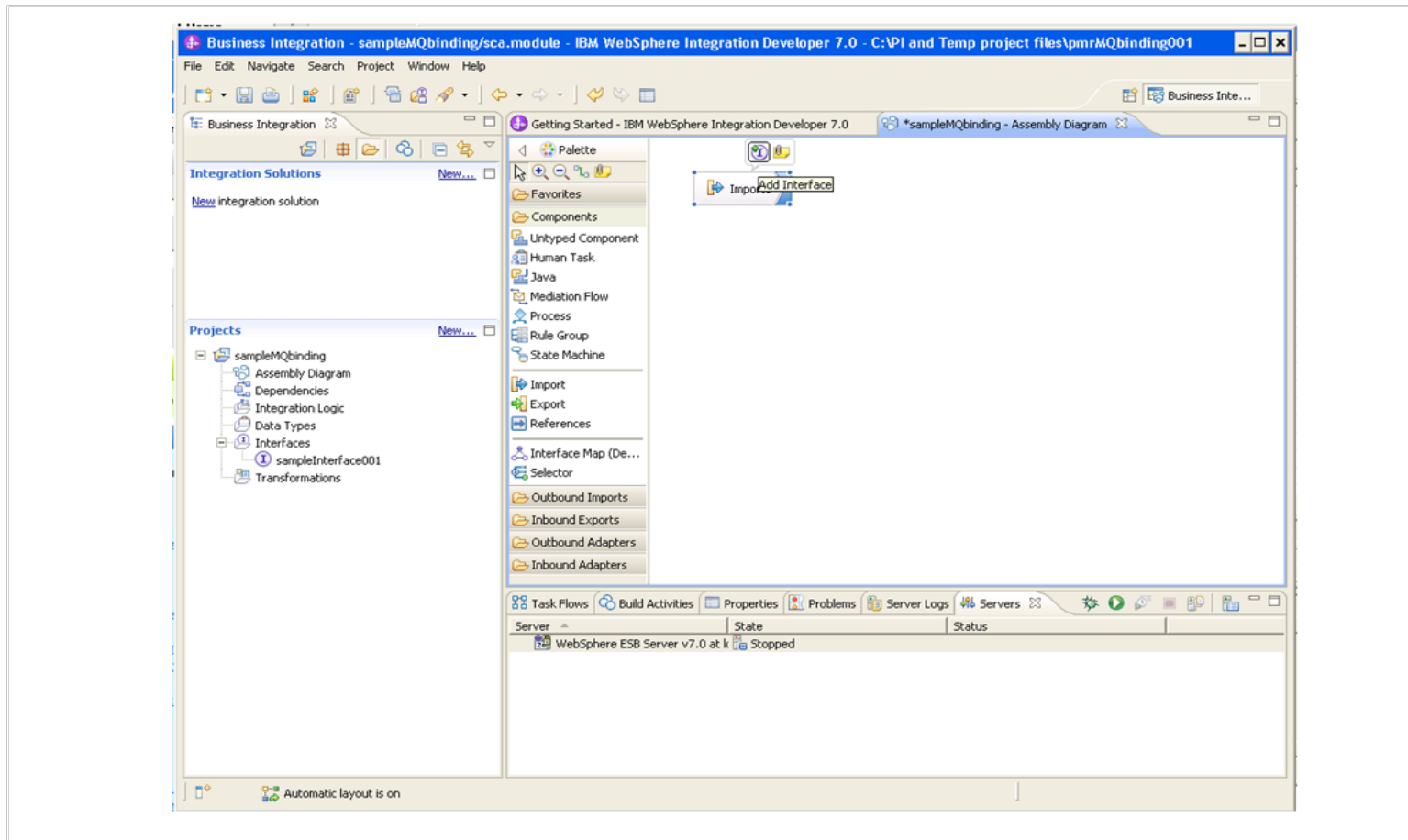
In the Assembly Diagram, click Import, then on the canvas.



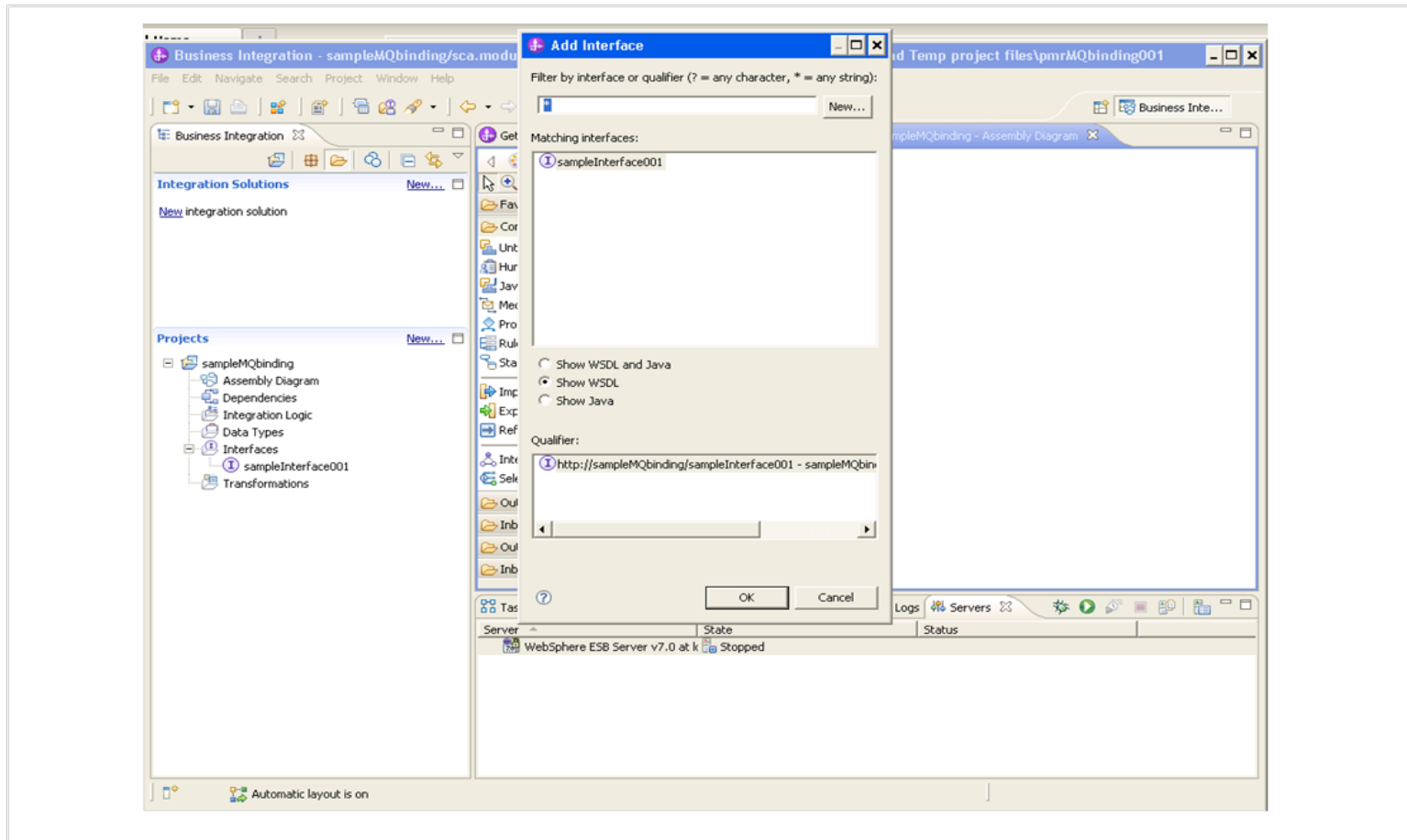
After the import is added to the canvas it looks like this



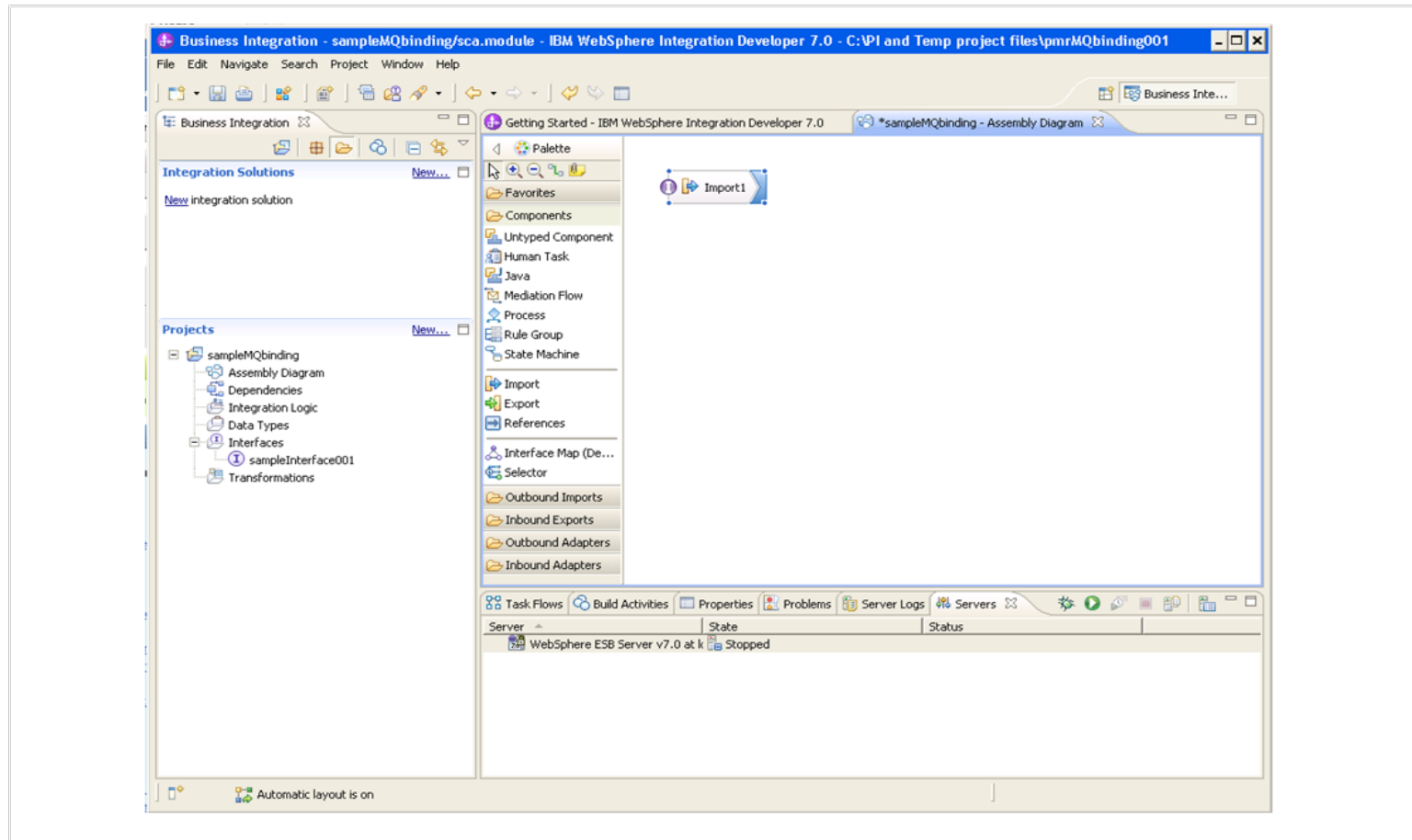
Over the import, click the 'Add Interface' button



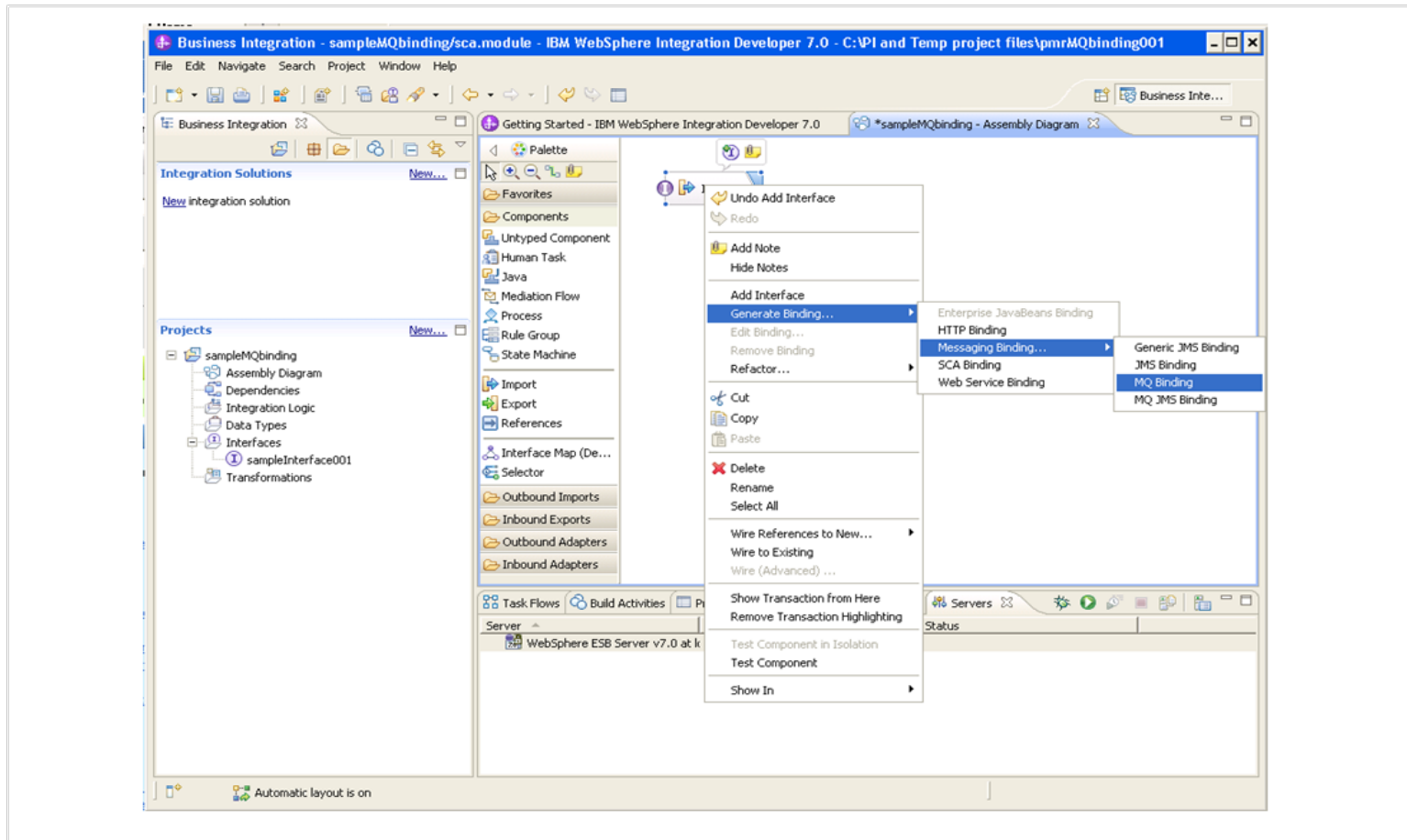
The 'Add Interface' window appears; select the interface that was created in the previous steps and click 'OK'.



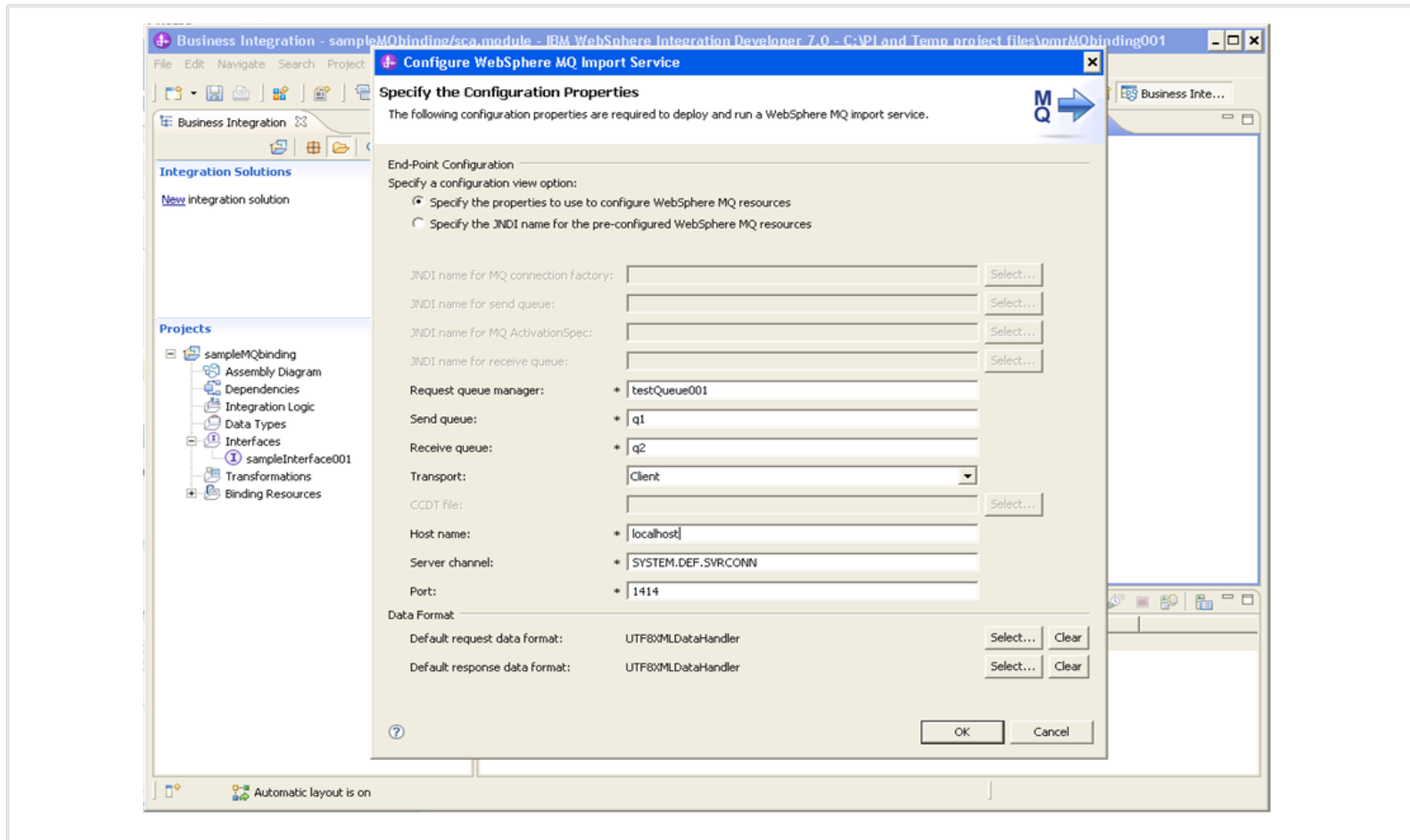
After the interface is attached to the import it looks like this



Right click on the import, choose:
Generate Binding -> Messaging Binding->MQ Binding

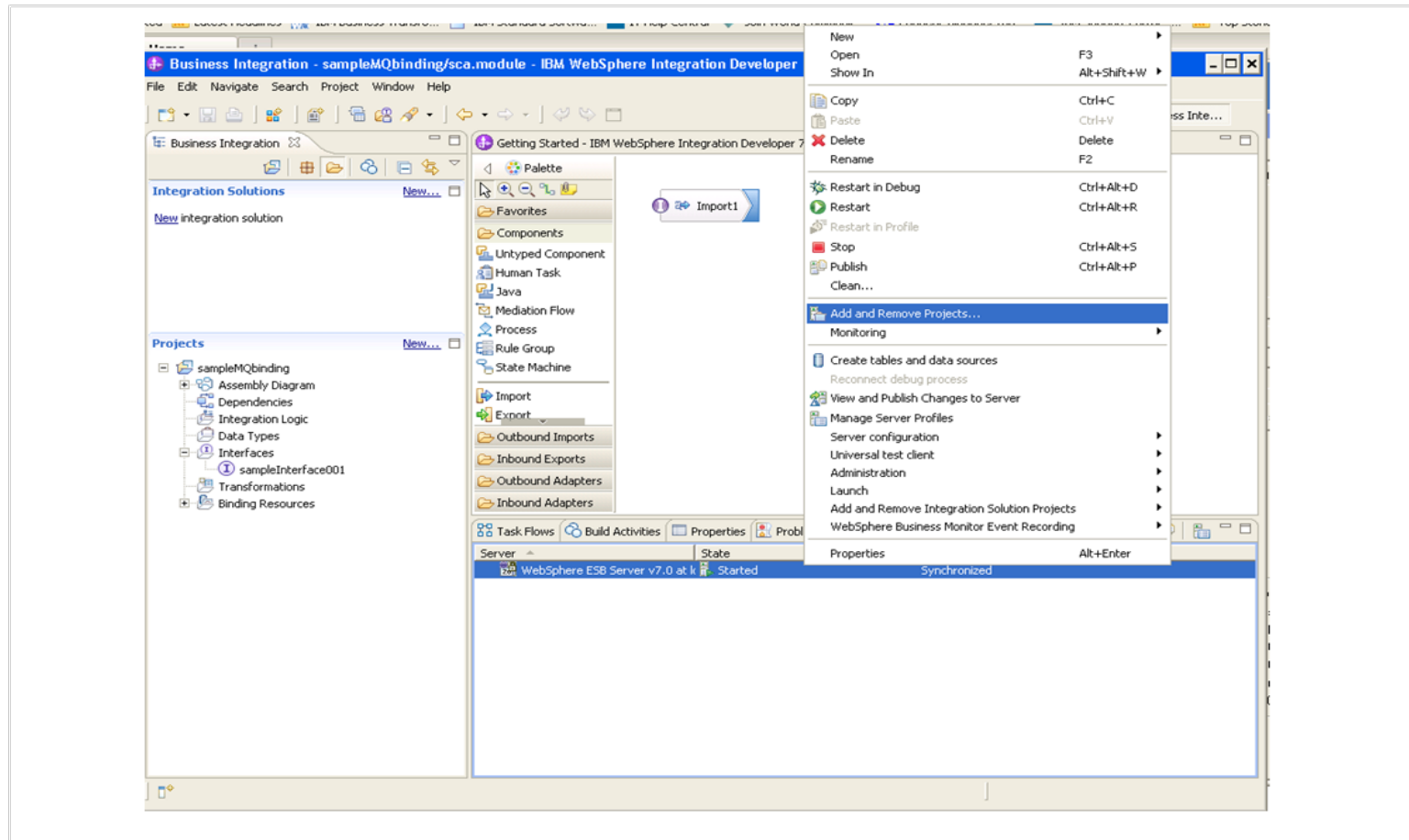


Enter the Queue Manager and Queue names which were previously defined in MQ, set Hostname to 'localhost', click OK

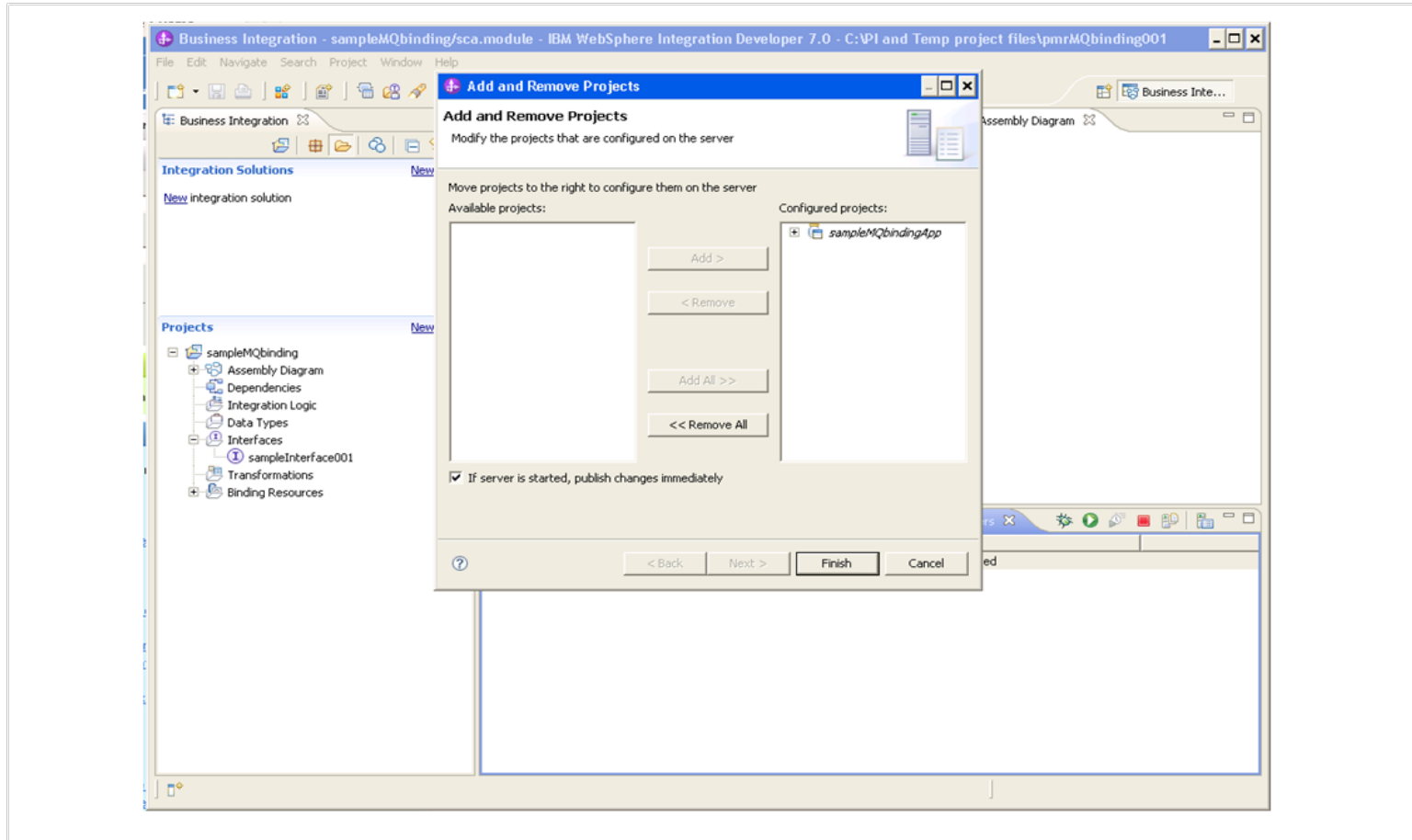


Step 3: Testing

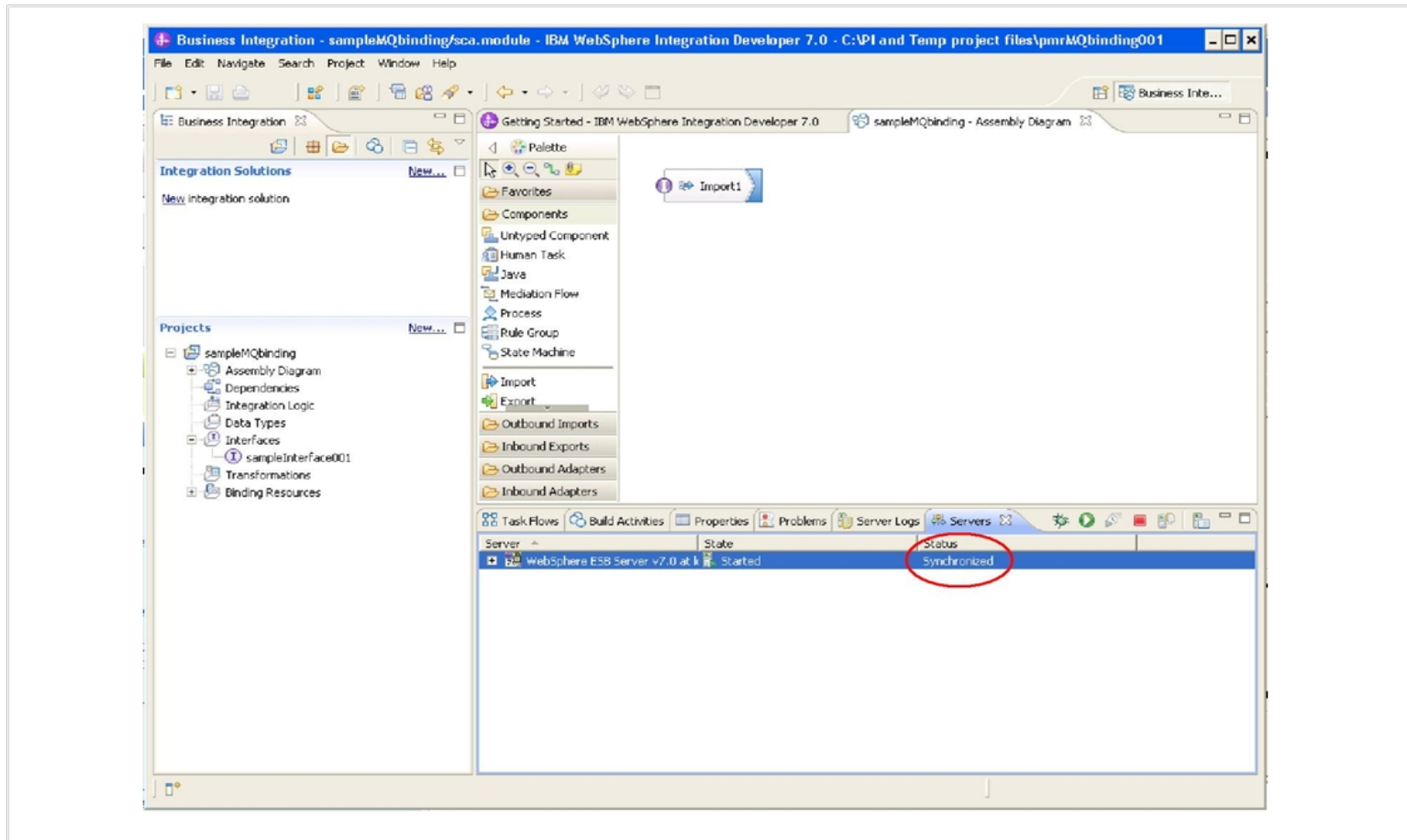
Start the server, add the project to the server



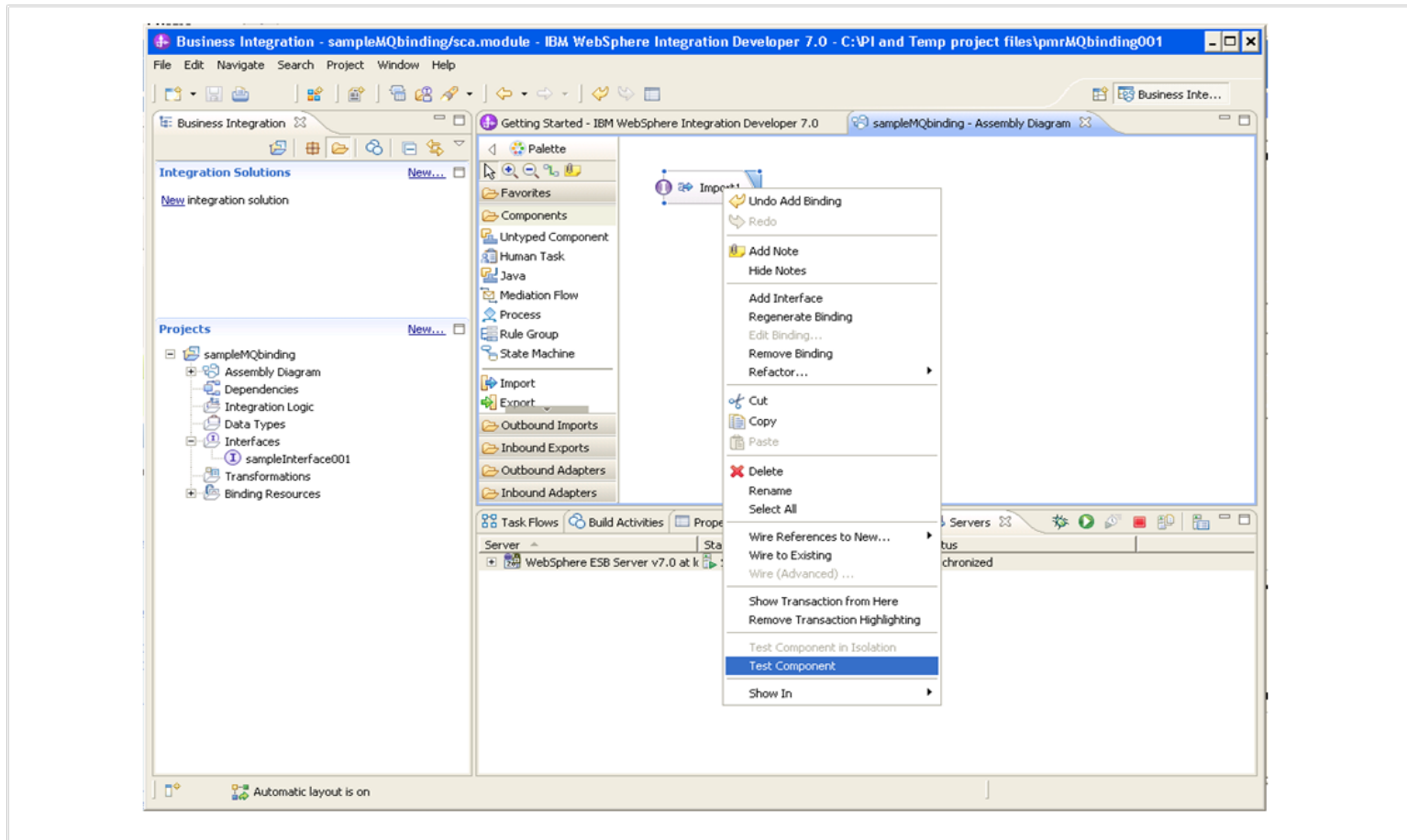
Add the new module to the server, click 'Finish'



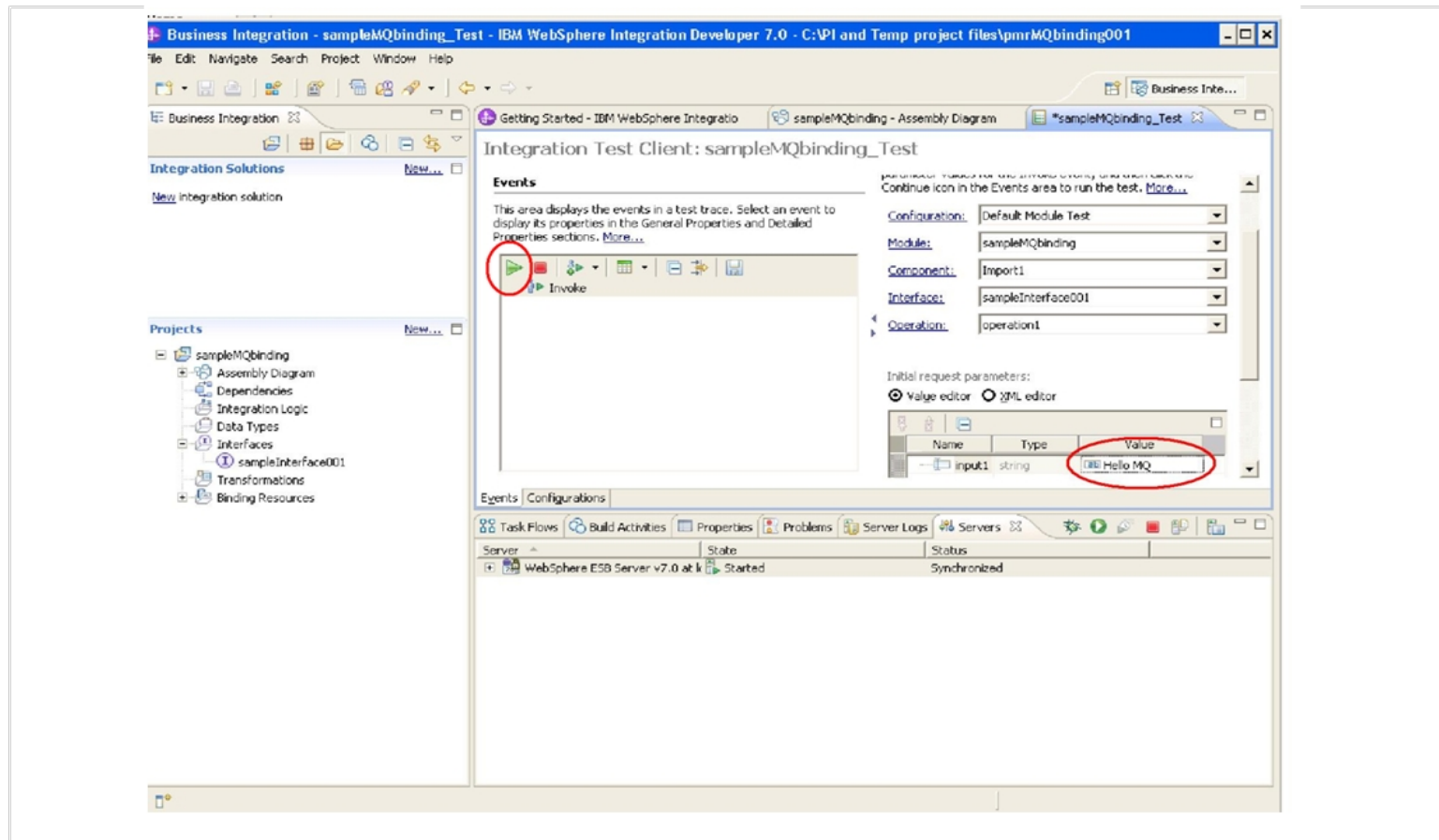
When published successfully, the status shows 'Synchronized'



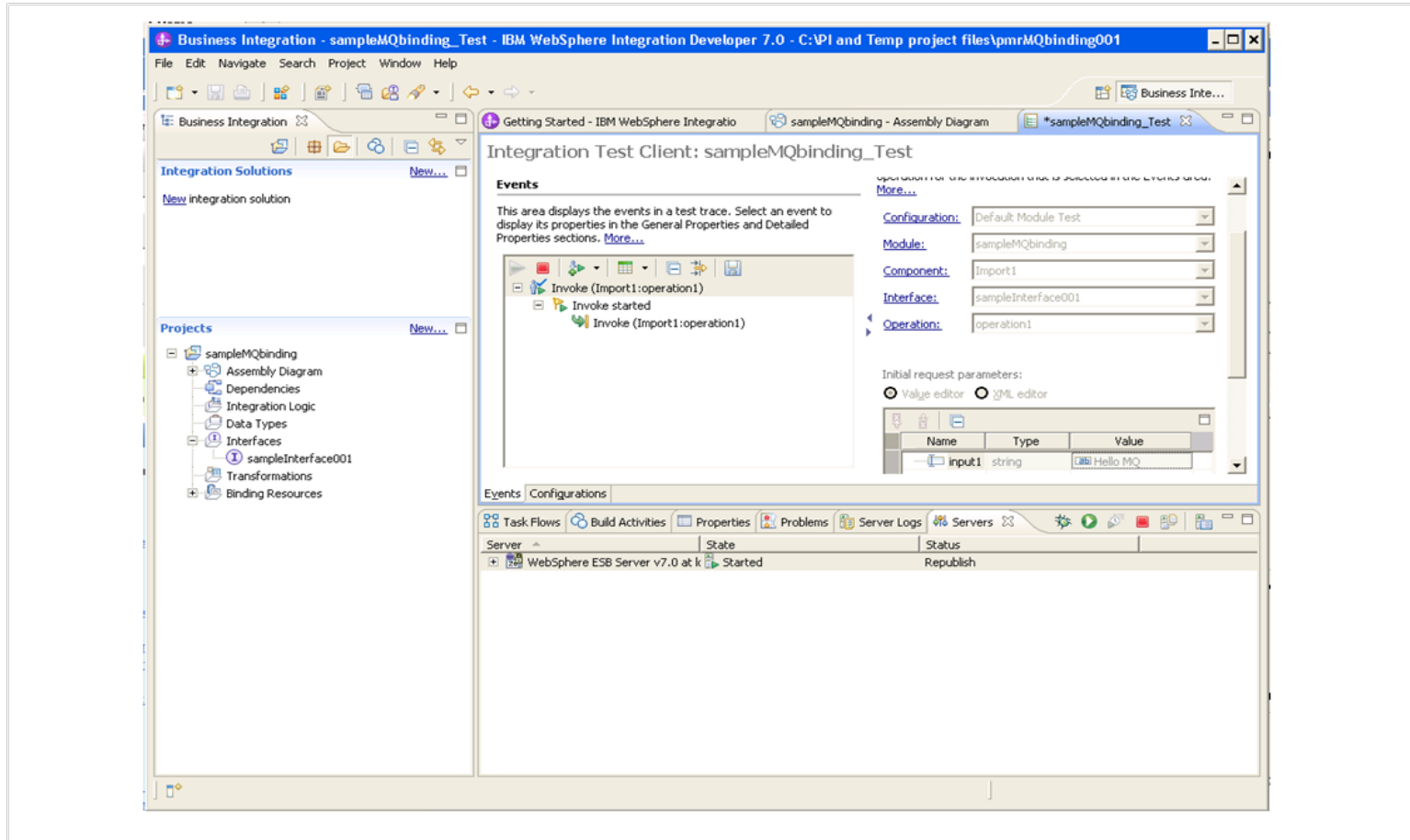
Right-click the import, choose 'Test Component'



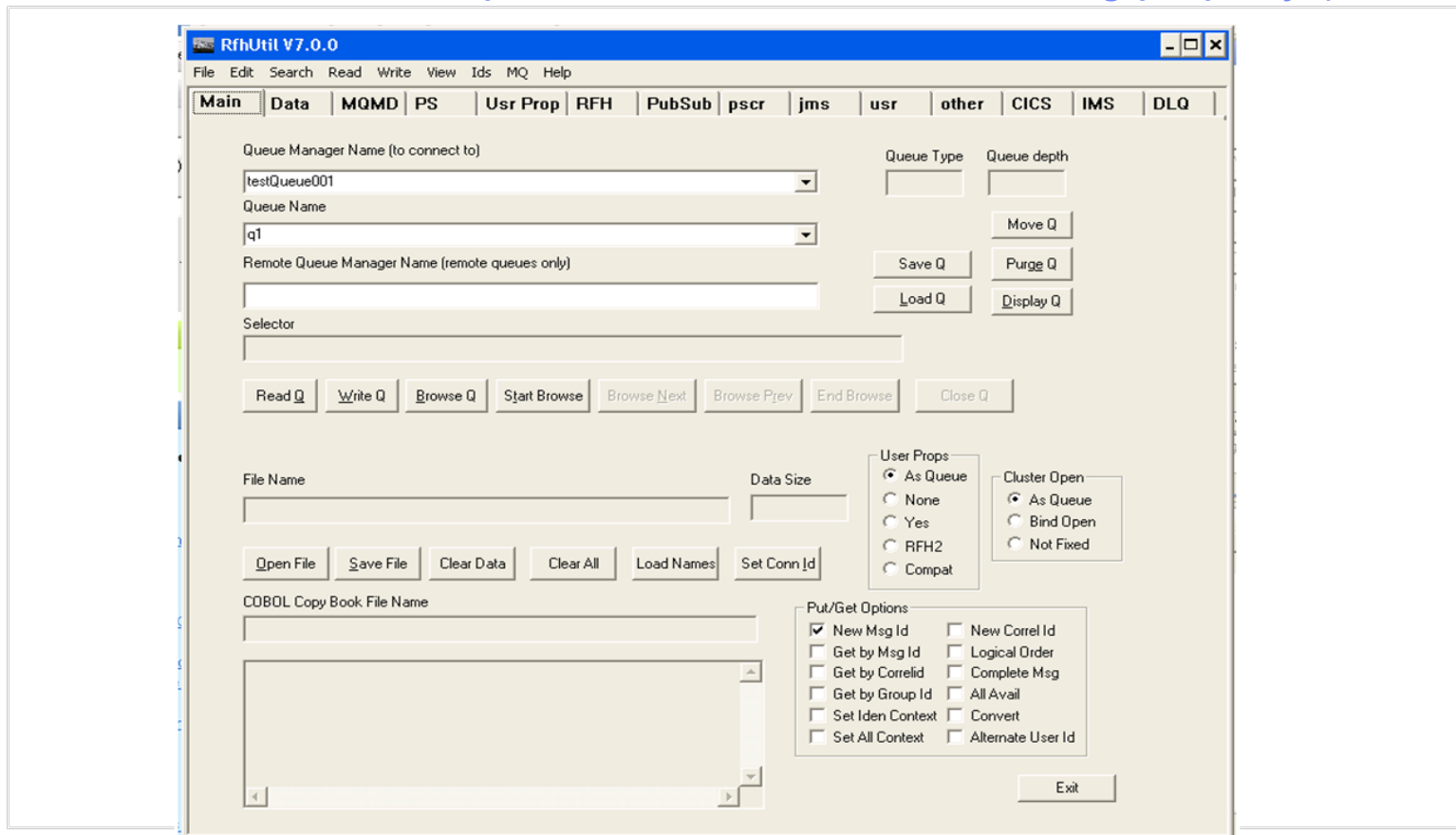
Enter a value in the Value field, click the green triangle button to start testing



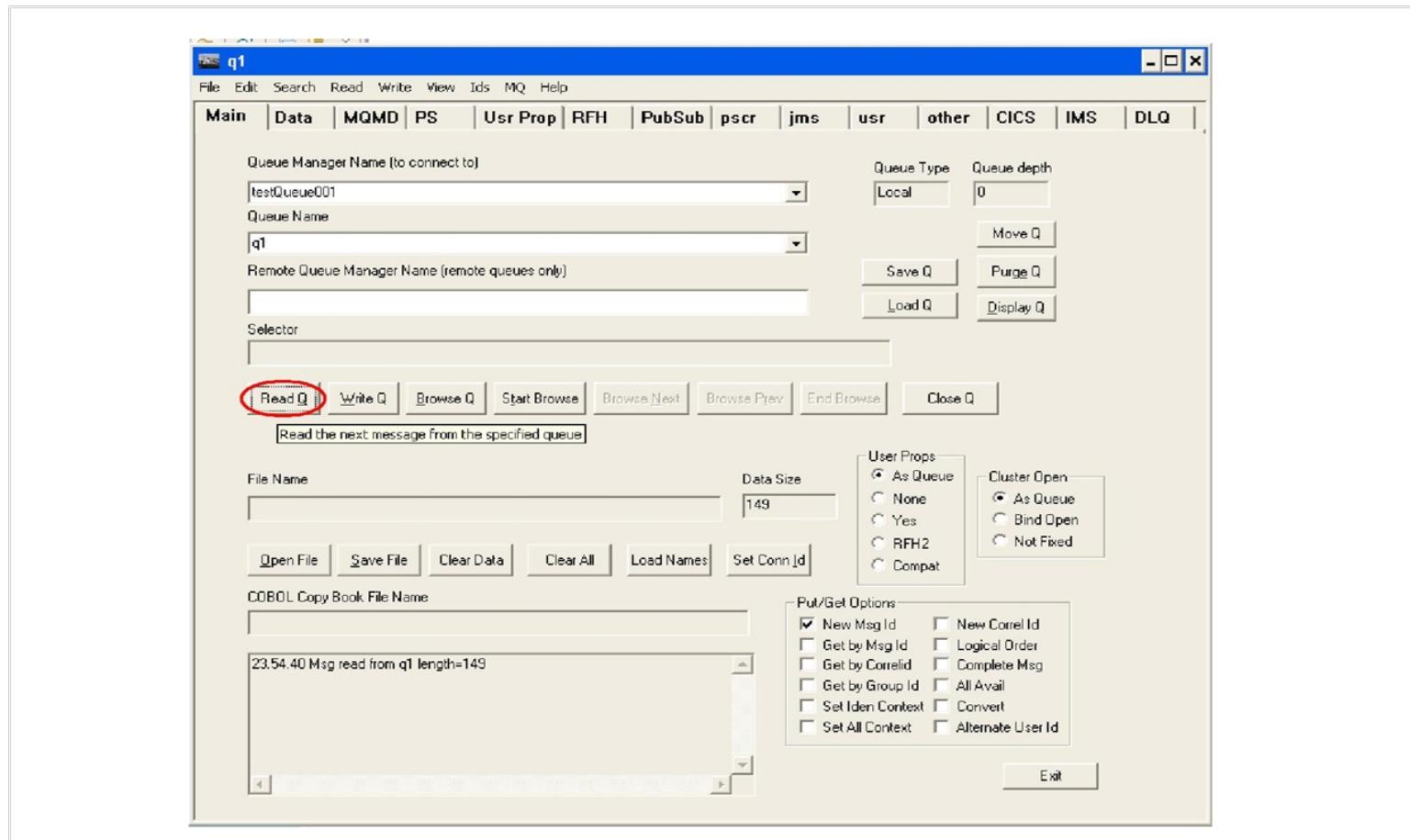
The message is being sent to MQ



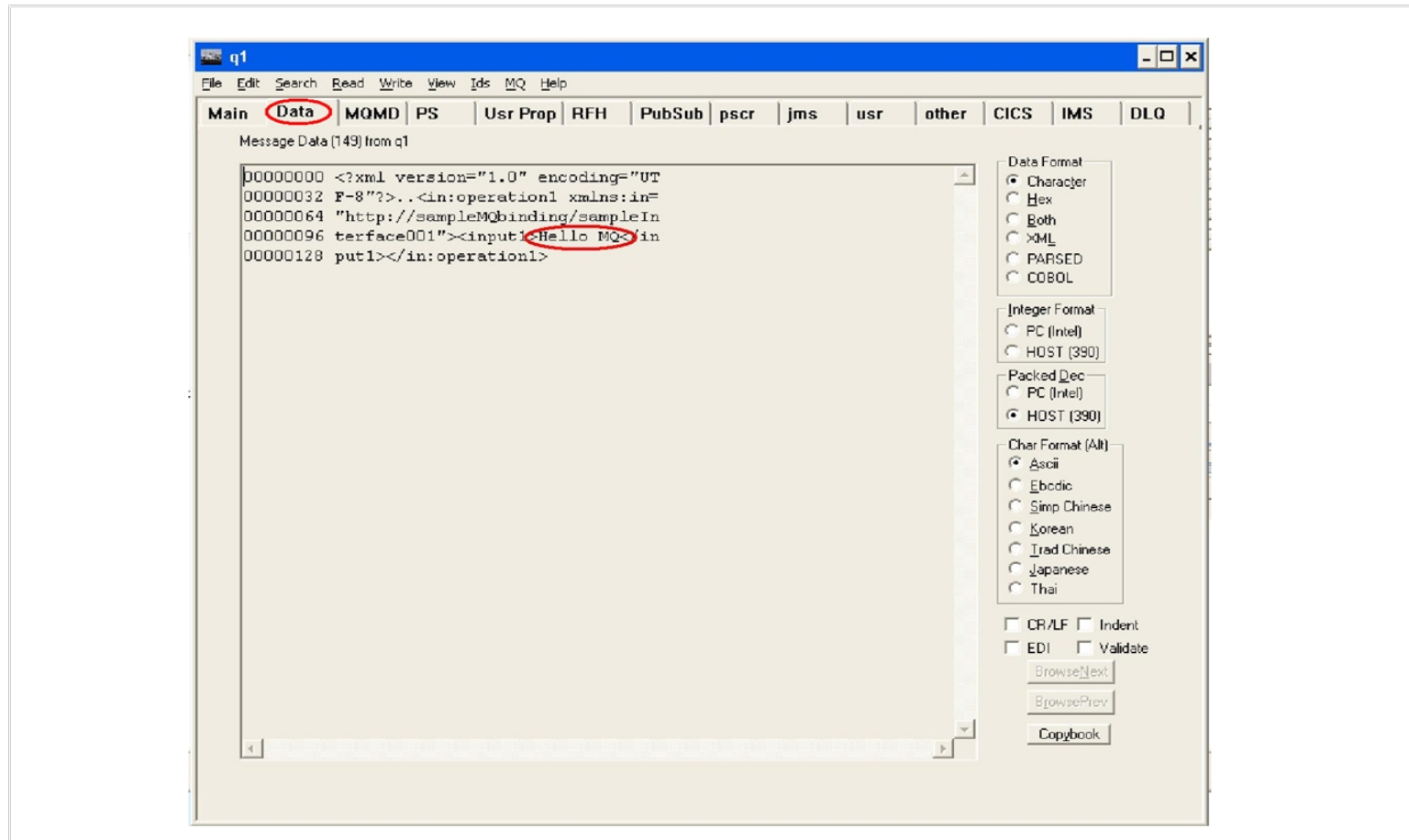
Start RfHutil to read the message and create a response message. The Queue Manager and Queue Name should be automatically detected when RfHutil is on the machine where MQ is installed. You may need to change the queue name to the Send queue defined in the MQ binding property (slide 21)



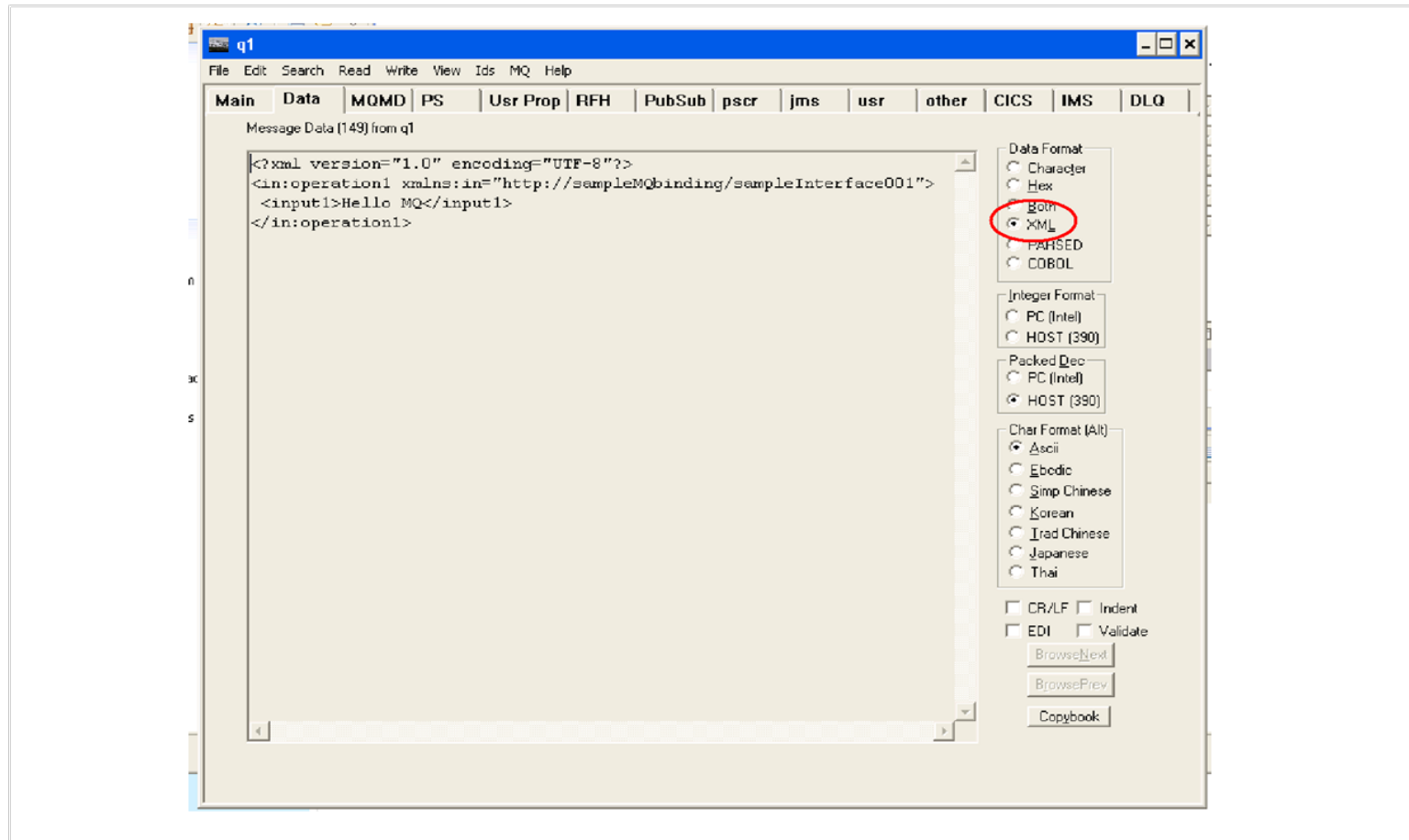
Click 'Read Q' once to read the message from the Send queue where the message was sent from the MQ binding (slide 28)



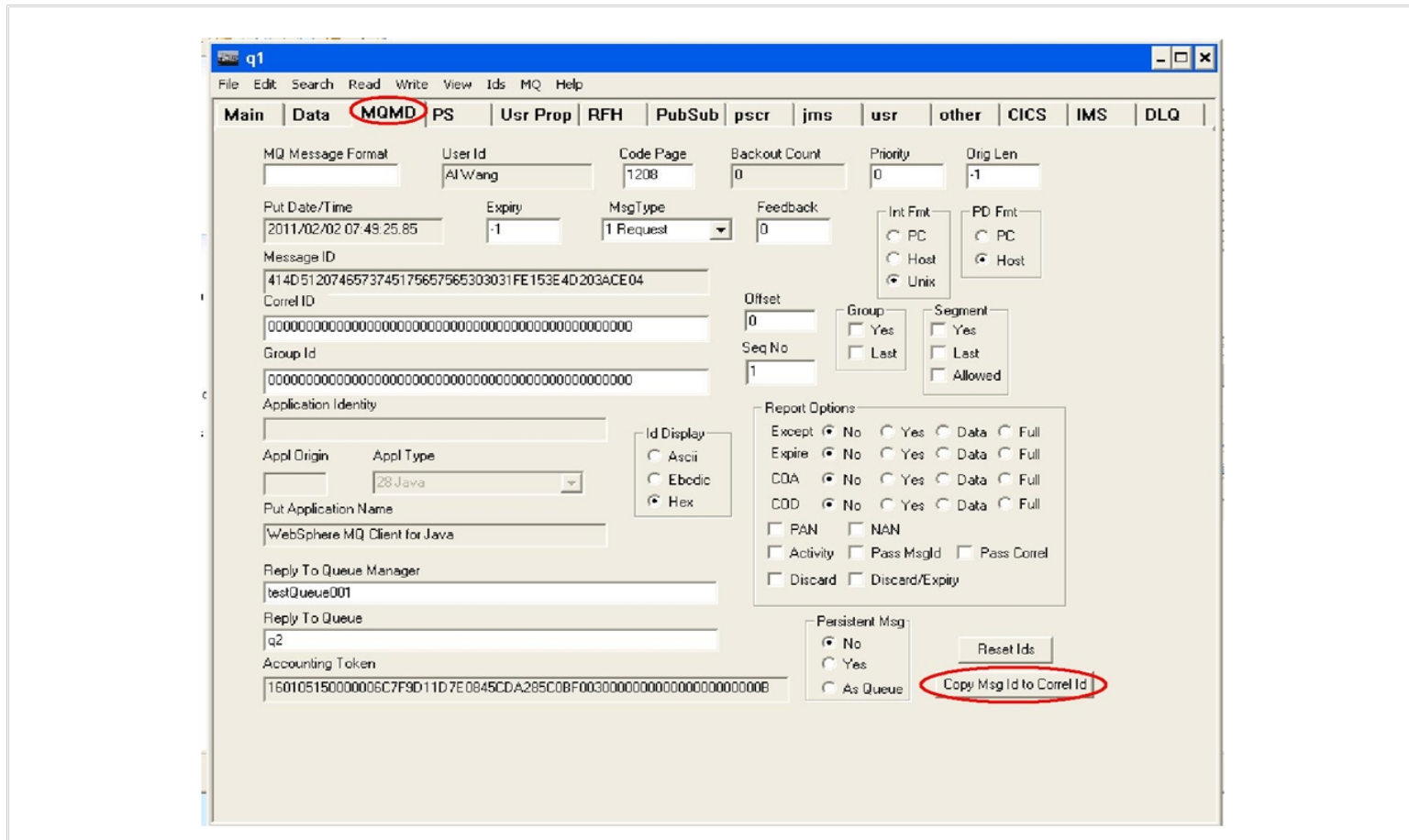
Select the Data tab. What was entered as input value can be seen here



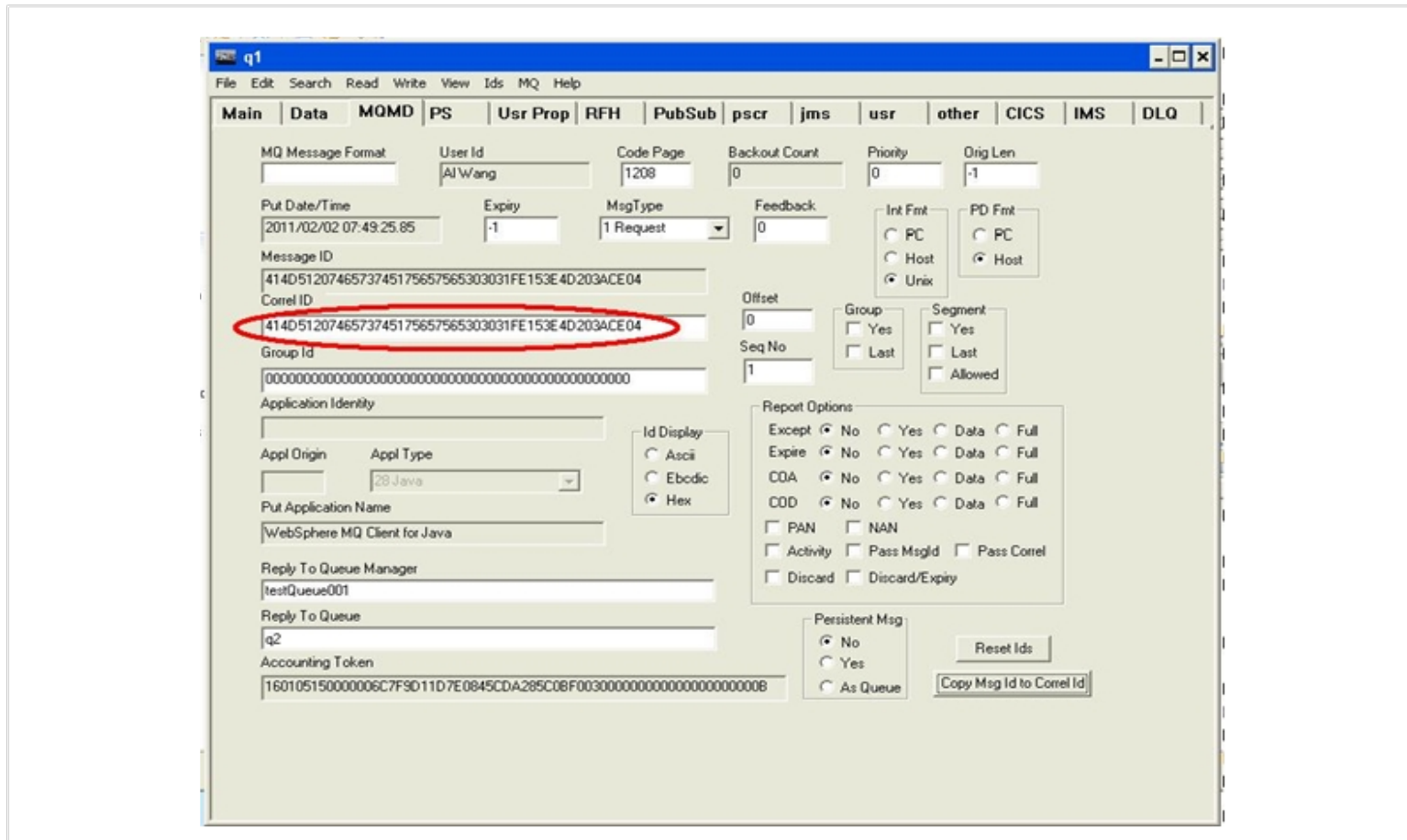
It can be helpful to change the Data Format to XML



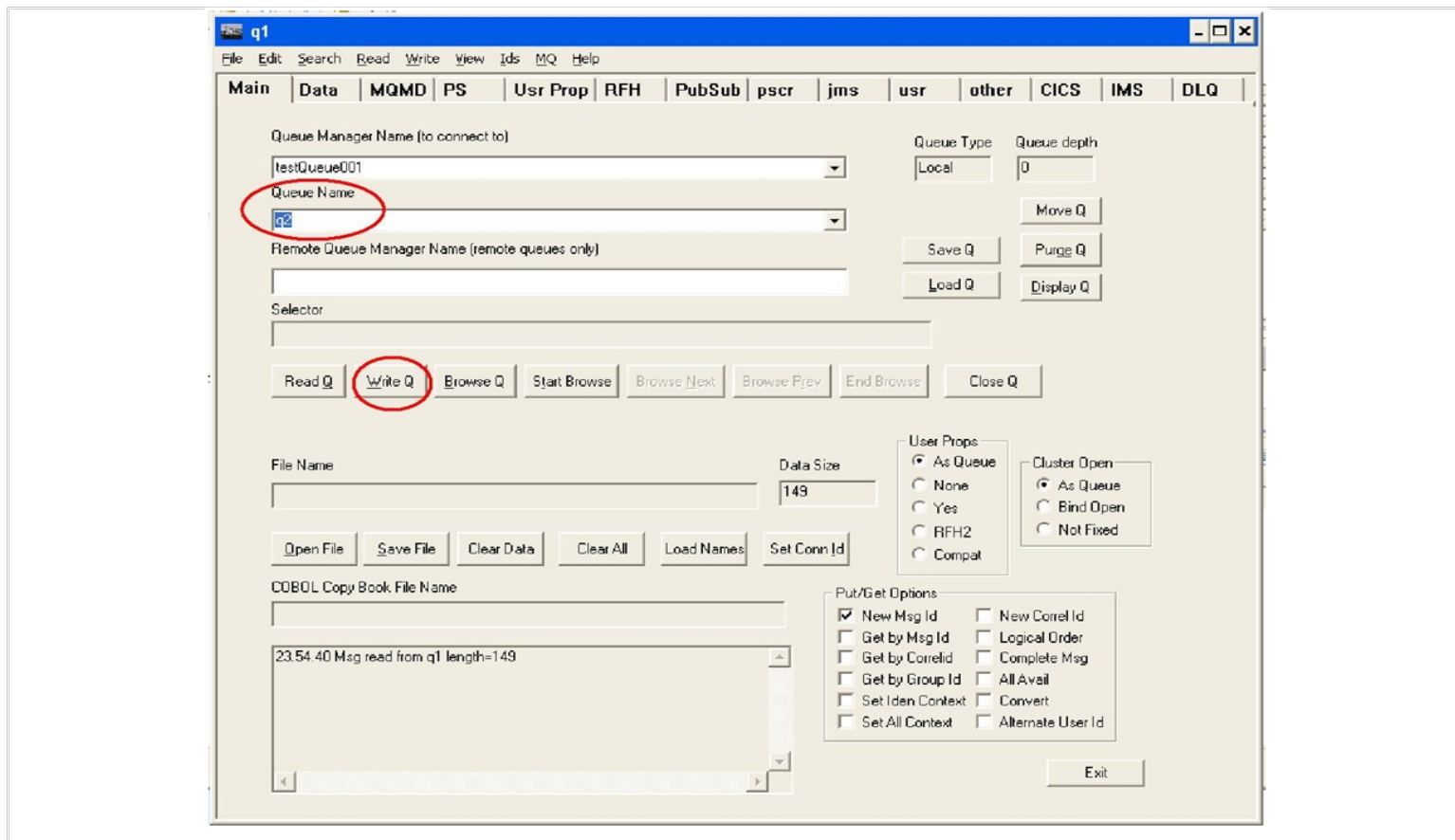
To generate a correlation ID on the response message, select the MQMD tab and click “Copy Msg Id to Correl Id”



After the button is clicked, the 'Correl ID' text box is filled



To write a message back to the Receive queue for the binding to receive the response, select the Main tab, change the queue name to what was defined in the binding as the Receive Queue, and click 'Write Q'.



WID should receive the response message, which completes the testing.

The screenshot displays the IBM WebSphere Integration Developer 7.0 interface. The main window is titled "Integration Test Client: sampleMQbinding_Test". The "Events" pane shows a sequence of events for the "Invoke (Import1:operation1)" operation:

- Invoke started
- Invoke (Import1:operation1)
- Return (Import1:operation1)
- Invoke returned

The "Return parameters" table shows the following data:

Name	Type	Value
out...	string	Hello MQ

The bottom of the interface shows a "Servers" pane with one server listed: "WebSphere ESB Server v7.0 at k", which is in the "Started" state.

Summary

This demonstration shows that it is fairly simple to configure the MQ Binding in WID and show that it is working, using WebSphere MQ and RFHutil.

Additional WebSphere Product Resources

- Learn about upcoming WebSphere Support Technical Exchange webcasts, and access previously recorded presentations at:
http://www.ibm.com/software/websphere/support/supp_tech.html
- Discover the latest trends in WebSphere Technology and implementation, participate in technically-focused briefings, webcasts and podcasts at:
<http://www.ibm.com/developerworks/websphere/community/>
- Join the Global WebSphere Community:
<http://www.websphereusergroup.org>
- Access key product show-me demos and tutorials by visiting IBM® Education Assistant:
<http://www.ibm.com/software/info/education/assistant>
- View a webcast replay with step-by-step instructions for using the Service Request (SR) tool for submitting problems electronically:
<http://www.ibm.com/software/websphere/support/d2w.html>
- Sign up to receive weekly technical My Notifications emails:
<http://www.ibm.com/software/support/einfo.html>

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