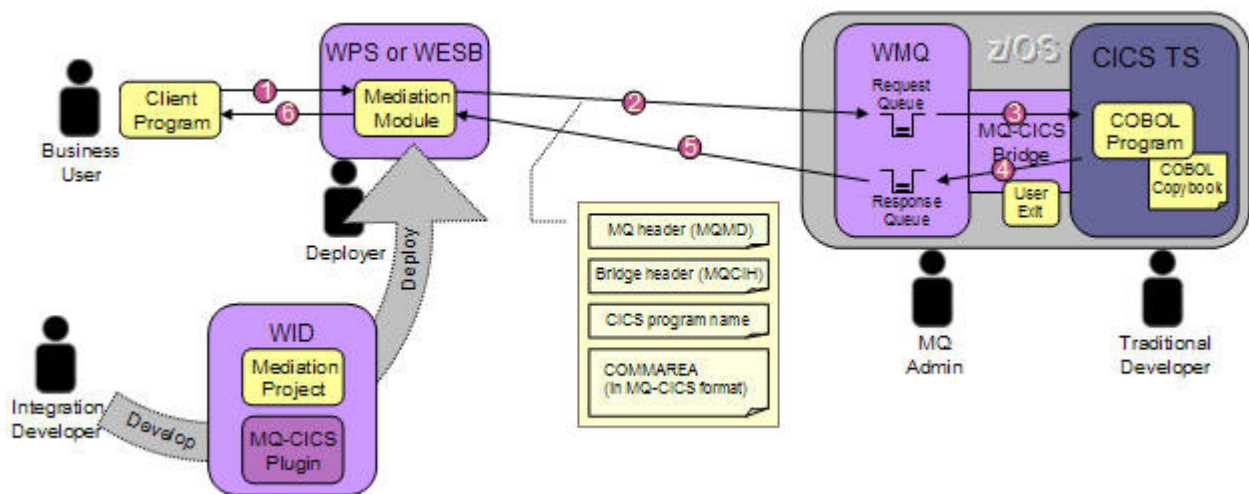


IBM® WebSphere® MQ-CICS Bridge Plug-In for WebSphere Integration Developer

The WebSphere MQ-CICS Bridge Plug-In for WebSphere Integration Developer enables developers to quickly build mediation modules that connect to CICS® applications via the WebSphere MQ-CICS bridge.

The diagram below shows the use of the plug-in. First the developer uses the plug-in to create a mediation module and deploy it into WebSphere Process Server or WebSphere ESB. At runtime a client request passes through the mediation module, and is transformed into a WebSphere MQ message and placed on the Request Queue. The message comprises a MQ header (MQMD), CICS program name, and the COMMAREA with or without Bridge Header(MQCIH). The MQ-CICS Bridge then passes it to the CICS COBOL program for processing. If a response is expected, the mediation module reads the message in, and transforms it for consumption by the client program.



The plug-in provides mediation primitives that allow you to specify the MQ message headers options for MQMD and MQCIH and also provides header binding class for constructing a MQ message that can be handled by the MQ-CICS bridge. Instead of taking days or weeks to develop integration code to access your CICS applications, it should only take about an hour or even less with the plug-in.

Pre-requisites

Development Environment

- [WebSphere Integration Developer 6.1.0.1](#)

Runtime Environment

- [WebSphere Process Server 6.1](#) or [WebSphere ESB 6.1](#)
- [CICS Transaction Server 2.2](#) or later
- [WebSphere MQ 5.3.1](#) or later

It is recommended to check the product's support sites for the current recommended fixes.

Feedback and Support

This plug-in is provided in good faith and AS-IS. There is no warranty or further service implied or committed and any supplied sample code is not supported via IBM product service channels.

All feedback for the plug-in is welcome, but please be aware that a response is NOT guaranteed. Please contact SBPFBack@uk.ibm.com with your comments.

Please read the license file that accompanies the plug-in to determine if you want to use it.

Test Information

The plug-in was tested with WebSphere Integration Developer 6.1.0.1 on Windows® XP.

Generated mediation modules were tested on WebSphere Process Server 6.1 on Linux® and AIX®, connecting to WebSphere MQ 6.0 on z/OS® v1r7 and CICS Transaction Server 3.1.

COBOL copybooks and programs were used.

Install

To install the plug-in on WebSphere Integration Developer 6.1.0.1

1. If a previous version of the plug-in is installed, follow Uninstall steps below before installing the new version
2. Download the latest plugin zip file from the [SupportPac website](#)
3. Unzip the file into `${WID_INSTALL_DIR}/`
4. Restart WebSphere Integration Developer using the '-clean' option to pick up the plug-in, for example `${WID_INSTALL_DIR}/wid.exe -clean`

Uninstall

To uninstall the plug-in from WebSphere Integration Developer 6.1:

1. Delete all subdirectories of `${WID_INSTALL_DIR}/features` that begin with 'com.ibm.sal.mqcics'
2. Delete all subdirectories of `${WID_INSTALL_DIR}/plugins` that begin with 'com.ibm.sal.mqcics'
3. Restart WebSphere Integration Developer V6.1 using the '-clean' option to clear any references to the plug-in, for example on Windows® XP, `${WID_INSTALL_DIR}/wid.exe -clean`

Documentation

Getting started

To help users get started with the plug-in, a cheat sheet is included. It can be accessed via the Help menu in WebSphere Integration Developer once the plug-in is installed:

Help > Cheat Sheets > Enterprise Integration > Access CICS applications through MQ-CICS bridge

Plug-in Details

The plug-in provides two mediation primitives and a MQCIH header data binding class. For body data binding, please use the function provided by WID 6.1.0.1 (refer to the cheat sheet on how to access this function).

The two mediation primitives are: AddMQInfo and DetachCIH.

The AddMQInfo mediation primitive allows you to add information of the MQ message descriptor (MQMD) and optionally add a configurable MQCIH header to the SMO message from input terminal. The SMO message at the output terminal will carry the desired MQ header information. Additional control over these fields can be achieved by using a custom mediation primitive.

The DetachCIH mediation primitive allows you to detach a MQCIH header from the incoming SMO message. It is used in conjunction with AddMQInfo mediation primitive with the option of adding MQCIH header. The DetachCIH mediation primitive has three output terminals: out, header and fail. The SMO message from the out terminal doesn't carry a MQCIH header. The SMO message from the header terminal conforms to the wsdl message shown in `${WID_INSTALL_DIR}/plugins/com.ibm.sal.mqcics/schema/CIHinterface.wsdl` .

Logging and Tracing

The plug-in will automatically log errors into the WebSphere Integration Developer workspace log, i.e. `<WORKSPACE>/metadata/.log`

At runtime, server errors are logged to the server's SystemOut.log. Detailed tracing of the mediation primitives can be enabled by specifying `com.ibm.sal.*=all` in the server's log and trace settings. Tracing in the generated data binding classes can be enabled by specifying `<data binding class name>=all`

Limitations

Known limitations and restrictions of the plug-in are listed below:

- The body data binding class generated by MQ adapter language data binding generator provided by WID 6.1.0.1 needs to work in conjunction with the AddMQInfo mediation primitive and the field of CICS Program name should be set. Otherwise a custom mediation primitive is needed to set the MQMD.ApplOriginData field to the target CICS program name in order for the body data binding class to work.
- Only CICS Distributed Program Link (DPL) programs are supported.

References

Information on the WebSphere Integration Developer external data wizard:

- <http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r1mx/index.jsp?topic=/com.ibm.wbit.610.help.adapter.emd.ui.doc/topics/tdiscdata.html>

Information on how WebSphere MQ works with CICS is in WebSphere MQ v6 InfoCenter, section "WebSphere MQ and CICS":

- <http://publib.boulder.ibm.com/infocenter/wmqv6/v6r0/index.jsp?topic=/com.ibm.mq.csqsat.doc/csqsat82dz.htm>

Details of the WebSphere MQ MQMD (Message Descriptor) header:

- <http://publib.boulder.ibm.com/infocenter/wmqv6/v6r0/index.jsp?topic=/com.ibm.mq.csqzak.doc/mqmd.htm>

Details of the WebSphere MQ CIH (CICS Bridge) header:

- <http://publib.boulder.ibm.com/infocenter/wmqv6/v6r0/index.jsp?topic=/com.ibm.mq.csqzak.doc/mqcih.htm>

InfoCenters and Documentation:

- WID 6.1, WPS 6.1, WESB 6.1 InfoCenter:
<http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r1mx/index.jsp>
- WebSphere MQ v5.3 Documentation:
<http://www.ibm.com/software/integration/wmq/library/library53.html>
- WebSphere MQ v6 InfoCenter:

<http://publib.boulder.ibm.com/infocenter/wmqv6/v6r0/index.jsp>

- CICS TS 2.2 InfoCenter:

<http://publib.boulder.ibm.com/infocenter/cicsts/v2r2/index.jsp>

- CICS TS 3.1 InfoCenter:

<http://publib.boulder.ibm.com/infocenter/cicsts/v3r1/index.jsp>

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