Preface

This manual is intended for anyone designing and building message flows using the iWay WebSphere Business Integration Message Broker Plug-in Suite. It provides installation and configuration information required to use the iWay WebSphere Business Integration Message Broker Plug-in Suite, which helps to integrate information within the enterprise.

How This Manual Is Organized

This manual includes the following chapters:

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<tr>
<th>Chapter/Appendix</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>2</td>
<td>Installing the iWay WebSphere Business Integration Message Broker Plug-ins</td>
</tr>
<tr>
<td>3</td>
<td>Configuring the iWay WebSphere Business Integration Message Broker Plug-in Suite</td>
</tr>
</tbody>
</table>
Documentation Conventions

The following conventions apply throughout this manual:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>THIS TYPEFACE or this typeface</td>
<td>Denotes syntax that you must enter exactly as shown.</td>
</tr>
<tr>
<td>this typeface</td>
<td>Represents a placeholder (or variable) in syntax for a value that you or the system must supply.</td>
</tr>
<tr>
<td>underscore</td>
<td>Indicates a default setting.</td>
</tr>
<tr>
<td>this typeface</td>
<td>Represents a placeholder (or variable) in a text paragraph, a cross-reference, or an important term.</td>
</tr>
<tr>
<td>this typeface</td>
<td>Highlights a file name or command in a text paragraph that must be lowercase.</td>
</tr>
<tr>
<td>this typeface</td>
<td>Indicates a button, menu item, or dialog box option you can click or select.</td>
</tr>
<tr>
<td>Key + Key</td>
<td>Indicates keys that you must press simultaneously.</td>
</tr>
<tr>
<td>{  }</td>
<td>Indicates two or three choices; type one of them, not the braces.</td>
</tr>
<tr>
<td>[  ]</td>
<td>Indicates a group of optional parameters. None are required, but you may select one of them. Type only the parameter in the brackets, not the brackets.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>...</td>
<td>Indicates that you can enter a parameter multiple times. Type only the parameter, not the ellipsis points (...).</td>
</tr>
<tr>
<td>. . .</td>
<td>Indicates that there are (or could be) intervening or additional commands.</td>
</tr>
</tbody>
</table>

Related Publications

To view a current listing of our publications and to place an order, visit our World Wide Web site, http://www.iwaysoftware.com. You can also contact the Publications Order Department at (800) 969-4636.
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Do you have questions about the iWay WebSphere Business Integration Message Broker Plug-in Suite?

If you bought the product from a vendor other than iWay Software, contact your distributor.

If you bought the product directly from iWay Software, call Information Builders Customer Support Service (CSS) at (800) 736-6130 or (212) 736-6130. Customer Support Consultants are available Monday through Friday between 8:00 a.m. and 8:00 p.m. EST to address all your iWay WebSphere Business Integration Message Broker Plug-in Suite questions. Information Builders consultants can also give you general guidance regarding product capabilities and documentation. Please be ready to provide your six-digit site code (xxxx.xx) when you call.

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Help Us to Serve You Better

To help our consultants answer your questions effectively, please be prepared to provide specifications and sample files and to answer questions about errors and problems.

The following tables list the specifications our consultants require.

<table>
<thead>
<tr>
<th>Platform</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td></td>
</tr>
<tr>
<td>OS Version</td>
<td></td>
</tr>
<tr>
<td>Product List</td>
<td></td>
</tr>
<tr>
<td>Adapters</td>
<td></td>
</tr>
<tr>
<td>Adapter Deployment</td>
<td>For example, JCA, Business Services Engine, iWay Adapter Manager</td>
</tr>
</tbody>
</table>
The following table lists components. Specify the version in the column provided.

<table>
<thead>
<tr>
<th>Component</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>iWay Adapter</td>
<td></td>
</tr>
<tr>
<td>EIS (DBMS/APP)</td>
<td></td>
</tr>
<tr>
<td>HOTFIX / Service Pack</td>
<td></td>
</tr>
</tbody>
</table>

The following table lists the types of Application Explorer. Specify the version (and platform, if different than listed previously) in the columns provided.

<table>
<thead>
<tr>
<th>Application Explorer Type</th>
<th>Version</th>
<th>Platform</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Servlet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASP</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the following table, specify the JVM version and vendor in the columns provided.

<table>
<thead>
<tr>
<th>Version</th>
<th>Vendor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following table lists additional questions to help us serve you better.

<table>
<thead>
<tr>
<th>Request/Question</th>
<th>Error/Problem Details or Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide usage scenarios or summarize the application that produces the problem.</td>
<td></td>
</tr>
<tr>
<td>Did this happen previously?</td>
<td></td>
</tr>
<tr>
<td>Can you reproduce this problem consistently?</td>
<td></td>
</tr>
</tbody>
</table>
The following table lists error/problem files that might be applicable.

<table>
<thead>
<tr>
<th>Request/Question</th>
<th>Error/Problem Details or Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any <strong>change in the application environment</strong>: software configuration, EIS/</td>
<td></td>
</tr>
<tr>
<td>database configuration, application, and so forth?</td>
<td></td>
</tr>
<tr>
<td>Under what circumstance does the problem <strong>not</strong> occur?</td>
<td></td>
</tr>
<tr>
<td>Describe the <strong>steps</strong> to reproduce the problem.</td>
<td></td>
</tr>
<tr>
<td>Describe the <strong>problem</strong>.</td>
<td></td>
</tr>
<tr>
<td>Specify the <strong>error</strong> message(s).</td>
<td></td>
</tr>
</tbody>
</table>

The following table lists error/problem files that might be applicable.

- XML schema
- XML instances
- Other input documents (transformation)
- Error screen shots
- Error output files
- Trace and log files
- Log transaction

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CHAPTER 1

Introducing the iWay WebSphere Business Integration Message Broker Plug-in Suite

Topics:
- Installation Prerequisites
- Developer Suite Nodes

The iWay WebSphere Business Integration Message Broker Plug-in Suite adds full functionality to a brokered integration architecture. Data transformation and data/application access enable a developer to integrate business processes over a number of applications, which span multiple platforms.

This section provides an overview of the iWay WebSphere Business Integration Message Broker Plug-in Suite that is included with the Developer Suite. References to the iWay Adapter Manager (iAM) are made and more information about this tool can be found in the iWay Adapter Manager User’s Guide included in your product package.
Installation Prerequisites

During the Windows NT® setup program, you can install the Broker and/or the Control Center. Both scenarios require the WebSphere MQ Integrator software to be installed and configured.
Introducing the iWay WebSphere Business Integration

To install the Broker, you need the following:

- WebSphere MQ Series Version 5.3 or CSD03.
- IBM WebSphere Business Integration Message Broker Version 5.0.
- A minimum of 3.12 MB of hard drive space.

To install the Message Broker Toolkit, you need the following:

- WebSphere MQ Series Version 5.3 or higher.
- A minimum of 350 KB of hard drive space.

**Developer Suite Nodes**

The Developer Suite adds the following nodes to complement the standard IBM nodes supplied with the WebSphere Business Integration Message Broker:

- Adapter
- BAI
- Composer
- Formatter
- HIPAA
- SWIFT

For more information on how to configure the nodes, see Chapter 3, *Configuring the iWay WebSphere Business Integration Message Broker Plug-in Suite*.

**Adapter Node**

The Adapter node provides access to applications and information resources using a number of Information and Application Adapters. This adapter interface utilizes iAM to access an adapter.

**Composer Node**

The Composer node is used to build a request. The following types of requests can be built using this node:
**Developer Suite Nodes**

- SQL
- Remote Procedure Call (RPC)
- FOCUS

The Composer node enhances an incoming message with a request, which can then be sent to an adapter using the Adapter node.

![Composer Node Diagram]

**Formatter Node**

The Formatter node sends the input message to iAM, which applies the configured transformation.

![Formatter Node Diagram]
CHAPTER 2

Installing the iWay WebSphere Business Integration Message Broker Plug-ins

Topics:

• Installing the WebSphere Business Integration Message Broker Plug-ins

This section describes how to install the WebSphere Business Integration Message Broker plug-ins for your Broker and Control Center environment.
Installing the WebSphere Business Integration Message Broker Plug-ins

You must install the WebSphere Business Integration Message Broker and create the Broker and Configuration Manager before installing the iWay plug-ins.

After WebSphere Business Integration Message Broker has been installed and the Broker and Configuration Manager are created, you are ready to install the plug-ins.

Procedure How to Install the Plug-ins for WebSphere Business Integration Message Broker

1. Start the configuration utility for your platform. Its name and location vary according to your platform. On Windows, the default location is:

   C:\Program Files\iway55\etc\setup\deploy.win32.exe

   For other platforms, use the corresponding location and file. If you do not have an X Server, execute the file with the -console options, for example:

   ./deploy.linux.bin -console

   If a deploy file does not appear for your platform, you may be able to download it from:

   http://iwse.ibi.com/iway55/support/deploy/
2. Launch the executable file.
   The InstallShield Wizard appears.

   ![Image of InstallShield Wizard]
   
   **Welcome to iWay 5.5 SP3 Setup**
   
   Application Server Deployment
   
   This setup program helps you to properly deploy iWay 5.5 SP3 into a variety of application server environments.

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   All Rights Reserved
   http://www.iwaysoftware.com

3. Click Next.
Installing the WebSphere Business Integration Message Broker Plug-ins

The Application Server Deployment Setup window opens.

4. Select *IBM WebSphere BI Message Broker*. 
5. Click Next.
6. Specify or browse to the directory in which WBI Message Broker/Toolkit is installed.
7. Click Next.
   The setup type window opens.

8. Select Message Brokers Toolkit and/or broker to determine which components will be installed and click Next.
The installation summary information window opens.

9. After you review your setup configuration, click Next.

10. When the installation is complete, click Next.

Note: If you are installing WBI Plug-ins on a machine other than the one on which iWay55 is installed, you will be prompted for an iWay location where some additional iWay files will be placed.
CHAPTER 3

Configuring the iWay WebSphere Business Integration Message Broker Plug-in Suite

**Topics:**
- Configuring the Adapter Node
- Configuring the Composer Node
- Configuring the Formatter Node

This section describes how to configure the iWay WebSphere Business Integration Message Broker Plug-in Suite:
- Adapter Node
- Composer Node
- Formatter Node

Other iWay nodes are available; the HIPAA and SWIFT nodes. For additional information, see Chapter 3, *Configuration for the Websphere MQ Integrator* in the *iWay Adapter for HIPAA User’s Manual*, and Chapter 2, *Configuring the iWay Adapter for SWIFT* in the *iWay Adapter for SWIFT User’s Guide*. 
Configuring the Adapter Node

The Adapter node allows requests in XML format to be passed to a data or application adapter. The adapter processes the request and returns the answer to the message flow. Only the XML portion is processed, the rest of the message remains unaffected.

**Note:** You can code this information manually, or use the Composer node to automatically build the XML request.

The Adapter node accesses iWay Adapter Manager (iAM) which hosts the adapters. All information required to connect to the adapter can be configured through the iAM console, or overwritten.

**Basic Settings**

You must provide values for the following fields in the Basic tab of the Adapter node:

- **msgDomain.** Specifies the message descriptor of the incoming message. Select XML or BLOB (for all non-XML messages) from the drop-down list.
  
  **Note:** The outgoing message will have the same format.

- **iAM Server (required).** Specifies the host name or TCP/IP address of the XML Integration Server.
• **iAM Server Port (required)**. Specifies the port number for iAM.

• **transformTimeout (required)**. Specifies the time in seconds that the MQ Integration Broker will wait for a response from iAM before failing.

• **agent**. iAM execution agent. Available agents include:
  - XDColAgent (default)
  - XDFieldAgent
  - XDRowAgent
  - For more information, see Chapter 6, *Configuring iAM Using the Console* in the *iWay Adapter Manager User’s Guide*.

• **agentParm**. Additional parameters to be passed to the agent.

• **nodeTraceOutfile**. Specifies the name and location of the file where you want trace output to be written.

• **nodeTracesetting**. Select None, Info, Debug, or Error.

**Advanced Agent Properties**

The Advanced Agent Properties tab is used to specify or override adapter settings for the data and application. This is used if the adapter settings are not configured in the iAM data source configuration file or the settings need to be overridden.
Configuring the Adapter Node

- **agentServerDSN.** Specifies the name of the adapter (as referenced in the iWay XML request - `<DSN>` tag).
- **agentServerHost.** Specifies the host name or TCP/IP port of the adapter.
- **agentServerPort.** Specifies the port number of the adapter.
- **agentServerOther.** Specifies additional data source configuration parameters. For more information, see the *iWay Adapter Manager User’s Guide*. 
Relay Settings

The Relay tab allows the use of MQ Series to route requests from one iAM to another.

- **relay**. Select this check box to enable the relay protocol.
- **relayRequestQ**. Specifies the queue that the remote iAM is listening on.
- **relayReplyQ**. Specifies the queue that the response document is sent too.
- **relayTimeout (sec)**. Specifies the time in seconds that the message flow will wait for a response before failing.
The Composer node is designed to shield the message flow designer from having to understand the structure of the EDA DTD that describes how an iWay request is built. This node allows a designer to easily build SQL, RPC, or FOCUS requests using the information in the incoming XML document to help build the request.

For example, an XML document containing automobile information can be used to build a request that can be sent to the relevant adapter:

```xml
<root_tag>
  <make>JAGUAR
    <model>XJ12</model>
  </make>
</root_tag>
```

To build a query using this information in the incoming XML doc, your SQL request will look like the following:

```sql
SELECT WARRANTY FROM CAR WHERE CAR = 'root_tag.make' AND MODEL = 'root_tag.make.model'
```

The request is translated into:

```sql
SELECT WARRANTY FROM CAR WHERE CAR = 'JAGUAR' AND MODEL = 'XJS AUTO'
```

**Note:** The two back slashes (\) are important since it tells the node that a variable is being supplied from the body of the incoming message. Make sure to end the path with another set of back slashes (\).

You can use the path to point to where that variable exists within the XML document. This is similar to the ESQL syntax, without having to specify MQMD information, since the assumption here is that all queries will be on the message body itself.
Basic Settings

The following settings must be set in the Basic tab of the Composer node:

- **type.** Specifies what type of iWay `<eda>` request will be built. The available options include Procedure (RPC), SQL request, or FOCUS.

- **location.** Specifies the XPATH location of where in the incoming XML document you require the `<eda>` request to be embedded.

  For example, if the following XML request is to be embedded at the model level, the XPATH to that level is `\root_tag.make.model\`.

  ```xml
  <root_tag>
    <make>JAGUAR
      <model>XJ12</model>
    </make>
  </root_tag>
  ```

- **server.** Specifies the name (as defined in the Adapter node) for the adapter server that the iWay request is being routed to.

- **user.** Valid user ID for the iWay adapter server.

- **nodeTraceSetting.** Enter 1 to turn tracing on, enter 0 to turn tracing off.
Configuring the Formatter Node

- **nodeTraceOutput file** Specifies the name and location of the output file where you want trace output to be written.

  **Note:** If no location is supplied, the output file is written to the following directory:

  `drive:\Program Files\IBM\MQSeries Integrator 2.0\Bin`

  where:

  `drive`

  Is the location where the MQSeries Integrator is installed.

- **procName.** Specifies the procedure name to be run that is hosted by an iWay adapter server.

- **procParms.** Specifies the parameters to be passed to the RPC.

  **Note:** Xpath syntax surrounded by two back slashes `\` passes parameters from the body of the incoming document to the RPC.

- **sql.** Allows you to write the SQL request you require to send to the iWay adapter server. In addition, XPath syntax (surrounded by two back slashes `\`) can be used to substitute values from the incoming document. For example:

  `select model from car where country eq \"root_tag.country\"`

- **focus.** Passes FOCUS code to an iWay Adapter server. FOCUS is a 4GL specific to Information Builders.

  **Note:** iWay adapters for Java technologies do not support the FOCUS language. This tab is for customers who have Information Builders legacy applications written in FOCUS or use iWay data adapters (which support the FOCUS language).

  As with the SQL tab, FOCUS code can be written in freeform, passing values from the incoming document using XPath (surrounded by two back slashes `\`) as follows:

  ```
  TABLE FILE CAR
  PRINT MODEL
  WHERE COUNTRY EQ \"root_tag.country\"
  END
  ```

**Configuring the Formatter Node**

The Formatter node is used to transform incoming messages. The transformations must be published to iAM. For more information on how to publish a transformation, see the *iWay Adapter Transformer User’s Guide*.

**Note:** For any transformation involving non-XML, the message domain must be changed to BLOB. It can be reset by using a ResetContentDescriptor node.
**Basic Settings**

You must provide values for the following fields in the Basic tab of the Formatter node:

![Screenshot of iWayFormatter Node Properties - iWayFormatter1 dialog box]

- **msgDomain.** Specifies the message descriptor of the incoming message. Select XML or BLOB (for all non-XML messages) from the drop-down list.

  **Note:** The outgoing message will have the same format.

- **iAM Server (required).** Specifies the host name or TCP/IP address of the XML Integration Server.

- **iAM Server Port (required).** Specifies the port number for iAM.

- **transformTimeout (required).** Specifies the time in seconds that WebSphere Business Integration Message Broker waits for a response from iAM before failing.

- **nodeTraceOutfile.** Specifies the name and location of the file where you want trace output to be written.

- **nodeTraceSetting.** Select None, Info, Debug, or Error.

**XML to XML Settings**

For basic XML to XML type transformation using either XSLT or transform projects, select the XML to XML tab.
**Configuring the Formatter Node**

Transform name. The name of the transform as published to iAM. For more information, see the *iWay Adapter Transformer User’s Guide*.

**Transform parm.** This field is for iWay internal use only.
Non-XML to XML Settings

Non-XML (BLOB) to XML settings are called from this tab.

- **inputFormat.** Specifies which format parser to call. This is defined in iAM through the console. For more information, see the iWay Adapter Manager User’s Guide.

- **inputFormatOtherName.** Required if the input format Other (any preparser other than the standard formats) is selected. For more information, see the iWay Adapter Manager User’s Guide.

- **inputParm.** The name or alias for the transform. This is defined in iAM through the console. For more information, see the iWay Adapter Manager User’s Guide.

**Note:** The Basic tab must have the message domain set to BLOB to use non-XML to XML settings.
**Example**  **Calling Another Preparser**

To call another preparser:

1. From the inputFormat drop-down list, select *Other*.
2. In the inputFormatOtherName field, type the name of the preparser, for example, XDEDIpreParser.
3. In the inputParm field, enter the alias for the transform.
4. Click OK.
XML to Non-XML Settings

For XML to non-XML transformations select the XML to Non-XML tab.

- **outputFormat.** Specifies which format parser to call. This is defined in iAM through the console. For more information, see the *iWay Adapter Manager User’s Guide*.

- **outputFormatOtherName.** Required if the output format Other (any preparser other than the standard formats) is selected. For more information, see the *iWay Adapter Manager User’s Guide*.

- **outputParm.** The name or alias for the transform. This is defined in iAM through the console. For more information, see the *iWay Adapter Manager User’s Guide*.

**Note:** The Basic tab must have the message domain set to BLOB to use XML to non-XML settings.
Example  Calling Another Preemitter

To call another preemitter:

1. From the outputFormat drop-down list, select Other.
2. In the outputFormatOtherName field, type the name of the preemitter, for example, BAIpreEmitter.
3. In the outputParm field, enter the alias for the transform.
4. Click OK.
Reader Comments

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Mail: Documentation Services - Customer Support
      Information Builders, Inc.
      Two Penn Plaza
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Comments: