

WebSphere MQ Integrator - WebSphere Business Integration Adapter Utility

Version 1.0

26 July 2002

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Take Note!

Before using this report be sure to read the general information under "Notices".

First Edition, July 2002

This edition applies to Version 1.0 of *WebSphere MQ Integrator - WebSphere Business Integration Adapter utility* and to all subsequent releases and modifications unless otherwise indicated in new editions.

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Summary of Amendments

Date	Changes
26 July 2002	Initial release

Preface

This WebSphere MQ Integrator SupportPac provides one command line utility to assist with the shutdown of a remote WebSphere Business Integration Adapter V2.0.

Bibliography

- *MQSeries. Using Java*, IBM Corporation. SC34-5456-06

Chapter 1. Getting Started

This chapter gives an overview of WebSphere MQ Integrator SupportPac io02, WebSphere Business Integration Adapter Utility, (henceforth know as the Adapter utility).

What is the Adapter utility

The Adapter utility is a command that enables a user to shutdown a WebSphere Business Integration Adapter V2.0. The command can be issued on the same machine or a machine remote from the one that the adapter is located on.

Who should use the Adapter utility

Any enterprise that uses WebSphere MQ Integrator in combination with a WebSphere Business Integration Adapter.

Prerequisites

It is recommended that a WebSphere MQ Integrator V2.1 Control Center should be installed on the platform where the Adapter utility is to be used before installing this SupportPac. If this is the case then no other prerequisite products are required.

If only a WebSphere MQ Integrator V2.1 broker or user name server is installed (UNIX platform) where the Adapter utility is to be used then ensure that the following SupportPac is also installed:

- MQSeries SupportPac MA88 - MQSeries classes for Java.

While we would always advise that at least one of the above WebSphere MQ Integrator options be installed, it is possible to use the utility with neither installed. If this is the case then ensure that the following products are installed:

- MQSeries SupportPac MA88 - MQSeries classes for Java.
- Java Runtime Environment (JRE), (at least V1.2.2).

If either MQSeries SupportPac "MQSeries classes for Java" or a JRE need to be installed then environment variables will be required to indicate the installation paths before this utility can be used. Please refer to the section in this documentation that deals with environment variables.

Chapter 2. Installation procedures

This chapter describes how to install the Adapter utility.

Installing the Adapter utility

This SupportPac is supplied as one compressed format file that is available from the MQSeries Web site, <http://www.ibm.com/software/mqseries/txppacs>

io02.zip or io02.tar.Z (platform dependant file) contains the following files:

io02.jar	This file includes all the runtime support.
io02ue.jar	This file is supplied as an example user exit.
io02.properties	This file includes the set of messages issued by this SupportPac.
mq siremotestopadapter	The shell script that initiates the adapter shutdown command.
io02.pdf	This document, a description of the SupportPac.
MQUserExit.java	Source code for the example user exit io02ue.jar.

Note: Windows platforms use the 'zip' suffix and UNIX the 'tar.Z' suffix. The 'executable' file 'mq siremotestopadapter' will have a suffix '.cmd' on windows platforms.

Installation on Windows NT and Windows 2000

This section describes how to install the Adapter utility on the Windows platform.

1. Locate the installation directory for the WebSphere MQ Integrator. For example, this might be "C:\Program Files\IBM\WebSphere MQ Integrator 2.1".
2. Copy file io02.zip to this directory and decompress it.
3. Delete file io02.zip.
4. Follow the instructions in the chapter "Using the Adapter utility".

Installation on UNIX

This section describes how to install the Adapter utility on a UNIX platform.

1. Locate the installation directory for the WebSphere MQ Integrator. This will be "/opt/wmqi/" (On AIX this would be "/usr/opt/wmqi/").
2. Copy file io02.tar.Z to this directory.
3. Unpack and extract the files into this directory: `uncompress -c io02.tar.Z | tar -xvf -`
4. Delete file io02.tar.Z
5. Follow the instructions in the chapter "Using the Adapter utility".

Note: As stated in the prerequisites section this SupportPac does not have to be installed on a machine where there is a previous WebSphere MQ Integrator installation, if this is the case then you must refer to the section in this documentation that deals with environment variables.

Installation Directories

The SupportPac files are installed in the following directories. Note that `install_dir` is the directory in which WebSphere MQ Integrator is installed.

io02.zip (Windows) or io02.tar.Z (UNIX):

Directory	Files
install_dir/bin	mqsiremotestopadapter.cmd (windows) mqsiremotestopadapter (UNIX)
install_dir/classes	io02.jar io02ue.jar
install_dir/messages	io02.properties
install_dir/examples/io02	MQUserExit.java
install_dir/book/io02	io02.pdf

Chapter 3. Adapter utility syntax

This chapter describes the syntax for the Adapter utility:

mqsiremotestopadapter

This command shuts down a WebSphere Business Integration Adapter.

```

— mqsiremotestopadapter  — brokerName  —
— -c adapterName  — -n adapterQueue  —
—
— -h hostName  — -p port  — -q adapterQueueManager  —

```

Required parameters

BrokerName

The name of the broker that the adapter is communicating with.

-c *adapterName*

Identifies the WebSphere Business Integration Adapter to shutdown by its name.

-n *adapterQueue*

The name of the MQSeries queue monitored by the WebSphere Business Integration Adapter for a shutdown message.

Optional parameters

-h *hostName*

The name or IP address of the machine where the MQSeries Queue Manager specified in option 'q' is running. (defaults to the local machine)

-p *port*

The port on which the MQSeries Queue Manager specified in option 'q' is listening for incoming requests. The default value is 1414.

-q *adapterQueueManager*

Identifies the MQSeries Queue Manager that is being used by the WebSphere Business Integration Adapter. The queue named by the **-n** flags argument is defined within this Queue Manager. This Queue Manager is located on the same machine as the WebSphere Business Integration Adapter.

Note: Although options -h, -p and -q are listed as optional, it is expected that they will normally be selected. The expectation is that the Adapter utility will be run on the machine where the broker is installed, it will be directed at the machine where the WebSphere Business Integration Adapter is installed. It is likely, but not required, that these be different machines.

Chapter 4. Runtime prerequisites

Before running the Adapter utility it may be necessary to carry out some or all of the following actions.

MQSeries channel prerequisites (all platforms)

Ensure that an MQSeries 'Server Connection Channel' exists on the queue manager that the Adapter utility selects in the '-q' option.

For example, before executing:

```
mqsiremotestopadapter .... -q qmgr ...
```

make sure that the following channel has been defined on the adapters queue manager:

```
runmqsc qmgr

define channel('SYSTEM.BKR.CONFIG') CHLTYPE(SVRCONN)
```

Environment variables (Windows)

It may be necessary to set environment variable MQSI_HOME before running the Adapter utility. This variable is used by the Adapter utility to locate this SupportPac's installation directory (install_dir). For example:

```
set MQSI_HOME=C:\Program Files\IBM\WebSphere MQ Integrator 2.1
```

If this environment variable is not set then the Adapter utility makes the assumption that this SupportPac was installed in the following directory:

```
C:\Program Files\IBM\WebSphere MQ Integrator 2.1
```

If the WebSphere MQ Integrator product was not installed in the default directory then file mqsiremotestopadapter.cmd could also be modified by hand as a permanent solution, there is a commented out line placed in this file as an example.

Environment variables (all platforms)

As mentioned previously in the 'Prerequisites' section, the ideal installation for this SupportPac would be on a machine with a WebSphere MQ Integrator V2.1 Control Center previously installed. In this case no other environment variables (other than possibly MQSI_HOME) need to be set.

If only a WebSphere MQ Integrator broker or user name server is installed then the following SupportPac must be installed (UNIX platforms only):

- MQSeries SupportPac MA88 – "MQSeries classes for Java".

Environment variable MQSI_MA88_CLASS_HOME must be set to locate the installation path for SupportPac MA88 before the Adapter utility can be run, for example:

```
export MQSI_MA88_CLASS_HOME=/opt/mqm/java/lib
```

If no WebSphere MQ Integrator product is installed (UNIX or Windows) then install the following software:

- MQSeries SupportPac MA88 – "MQSeries classes for Java".

WebSphere MQ Integrator - WebSphere Business Integration Adapter utility

- Java Runtime Environment (JRE), (at least V1.2.2).

Set environment variables MQSI_MA88_CLASS_HOME and MQSI_JRE_HOME to locate the installation paths for these items, for example:

```
export MQSI_MA88_CLASS_HOME=/opt/mqm/java/lib
```

```
export MQSI_JRE_HOME=/usr/local/jdk1.2.2/jre/bin
```

Note: the shell script provided attempts to locate the following files based on the settings supplied by these environment variables:

MQSI_MA88_CLASS_HOME	com.ibm.mq.jar
MQSI_JRE_HOME	java.exe or java (windows or UNIX)

Chapter 5. Using the Adapter utility

The Adapter utility is similar in operation to local broker commands (e.g. `mqsichangetrace`).

Issuing the following Adapter utility command would result in the Adapter named 'clarify' that was running on machine `xworlds` to be shutdown.

```
mqsiremotestopadapter MQSI_SAMPLE -c clarify -n xworldsQueue  
-q xworldsQueueManager -h xworlds -p 1414
```

Note: `xworldsQueueManager` is local to the machine 'xworlds'.

Alternatively, the following command could be issued on the `xworlds` machine.

```
mqsiremotestopadapter MQSI_SAMPLE -c clarify -n xworldsQueue  
-q xworldsQueueManager
```

Note: this command assumes that the MQSeries Queue Manager 'xworldsQueueManager' has been configured so that its listener monitors port '1414'.

Chapter 6. User Exits

This product makes use of SupportPac, "MQSeries Classes for Java", which has three user exits: security, send and receive. If required, these user exits can be invoked by setting the following environment variables to indicate the location of the user exit code.

For example (windows):

```
set MQSI_SECEXIT=com.ibm.broker.wmqcmds.userexit.MQUserExit  
  
set MQSI_RECEXIT=com.ibm.broker.wmqcmds.userexit.MQUserExit  
  
set MQSI_SENDEXIT=com.ibm.broker.wmqcmds.userexit.MQUserExit  
  
mqsi remotestopadapter MQSI_SAMPLE ....
```

In the example all three exits were used. There is no requirement that all three be specified together or that they use the same program. The source code for the above example can be found in file 'example\io02\MQUserExit.java' and may be altered or replaced as required. The supplied example simply outputs a text message to indicate that it has been called. By default these exits are not enabled.

The environment variables that control the user exits can be added to the mqsi remotestopadapter shell scripts if required, a commented out line making reference to the supplied example exists for each user exit.

Please note that modification of the example user exit code may require a suitable alteration to the CLASSPATH environment variable.

Appendix A. Tracing the command

If a command does not operate normally or fails unexpectedly then its operation can be traced in order to discover the reason for this behavior. Setting the environment variable MQSI_UTILITY_TRACE before running the command enables trace. This environment variable can be set to either 'normal' or 'debug'. Trace is written to the file 'cmdtrace.log'.

```
set MQSI_UTILITY_TRACE=normal
```

```
mqsiremote.... ....
```

Additionally, options can be set to trace the prerequisite product, "MQSeries Classes for Java".

Within a file called 'wmqima88.properties' in the current working directory, add a line indicating the level of trace required (1 to 5, as documented in the manual, "MQSeries Classes for Java").

For example:

```
trace=1
```

This results in a file named 'wmqima88.log' being created that contains the MQSeries classes for Java trace.

Appendix B. Message Catalogues

If a message is displayed indicating that a message catalogue could not be located then this message catalogue should be available on the machine where the broker is running. The message will indicate the name of the message catalogue file (i.e. MQSiv202 would mean the following file names, MQSiv202*.properties). Take a copy of these files from the broker's machine and place them in the "messages" directory on the platform where the remote command is issued.

These types of file (*.properties) have exactly the same format on all platforms, if FTP is used to transfer these files then ensure that the "ASCII" rather than "BINARY" form of transfer is used.