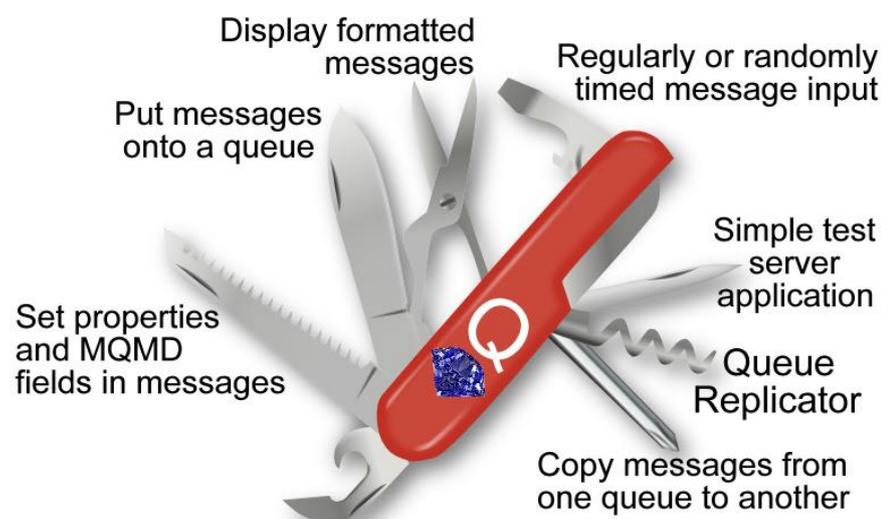# IBM MQ Q Utility

The Q Utility is a veritable pocket knife of features, allowing many of the common tasks when interacting with messages on queues or topics, to be done from this single tool.

The IBM® MQ Q Utility (Q for short), based on the popular MA01 SupportPac, can be used for a huge range of tasks, the most common of which are covered in this document. It is a simple pipe line program which takes messages from one source and outputs to a target. The operation of the 'pipe' is controlled by switches to the program. The source and target can either be the console, a file, or an IBM MQ Queue.

Q runs on a variety of platforms and can connect in client mode or local to any platform.

Highlights

- Move/Copy messages from one queue to another
- Take message data from files or randomly generate it
- Set MQMD fields (persistence, priority, format, etc.)
- Set and pass context fields
- Add message properties to your messages
- Browse or destructively get messages
- Convert messages to required Code Page and Encoding
- Supports MQ user id & password
- Display MQ defined formats
- Display many industry standard message formats
- Echo messages back to ReplyToQ
- Filter by MsgId, CorrelId, string data and message properties
- Output to multiple queues
- Set, and optionally wait on, messages from a ReplyToQ
- Measure Timings of MQ operations
- Use Publish/Subscribe topics
- Many client connection options can be manually set, or alternatively a CCDT can be used

Put messages onto a queue

One of the simplest to understand, and yet most powerful features of the Q program is putting messages onto a queue. In doing so you can set all the Message Descriptor fields (format, persistence, priority...) including context fields, if you have authority, and you can add Message Properties to the messages you put as well.

You can also very easily put multiple messages at once of a specific size or a randomly chosen size. You have much more flexibility than that available with the `amqsput` sample.

Message data can be taken from the console, from files or randomly generated, depending on your requirements.

Display formatted messages

The Q program can display your messages in hex or, more helpfully, formatted appropriately based on the contents. It understands all the MQ defined formats as well as a number of common industry standard formats:-

- XML
- JSON
- EDIFACT
- CSV
- FIX

It can also format and display any message properties on your messages, either natively or forced into an MQRFH2 header.

You have much more flexibility than that available with the `amqsget` and `amqsbcg` samples.

Queue Replicator

You can use the Q program to copy (or move) messages from one queue to another. The target can be a single queue or multiple queues. This allows you to use Q as a queue replicator, taking a feed of messages from one queue and duplicating them onto two or more queues. The target queue(s) can even be on different queue managers.

This can be done without using publish/subscribe and therefore can maintain all the fields in the Message Descriptor as required.

Testing IBM MQ infrastructure

The Q program will be very useful to aid in testing your IBM MQ infrastructure. It can be used to mimic a server application, echoing messages back to the ReplyTo fields in the Message Descriptor. This can be further tuned by configuring a "work time" to mimic the time spent by a server application to do the requested action, and the Q program can be triggered to further mimic expected or existing applications when load testing the infrastructure.

Q can also be used to drive the workload through the system, sending messages at regular or randomised intervals onto queues to be processed. The sizes of these messages can be regulated to match those likely to be used by your own applications.

Publish/subscribe can also be used through Q so you can test the topic tree and subscription management of IBM MQ using this utility as well.

Security

The Q program supports MQ V8 user id and password; it can be run using alternate user ids (assuming the user id running it has authority to do so), and can make client connections using digital certificates and TLS cipher specs.

For more information

To learn more about how Q – the IBM MQ Q Utility, can help you manage your messages and queues, contact us by email on support@mqgem.com, or visit:

www.mqgem.com/q.html

Try it out for free with a no-obligation, one month trial licence. Email support@mqgem.com for yours.